77 COMMERCIAL STREET

BROOKLYN, NEW YORK

DRAFT Remedial Action Work Plan

NYC VCP Project Number: 15CVCP103K

OER Project Number: 15EHAN033K

Prepared for:

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REMEDIAL ACTION WORK PLAN

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LIST OF ACRONYMS

Acronym	Definition
AOC	Area of Concern
AS/SVE	Air Sparging/Soil Vapor Extraction
BOA	Brownfield Opportunity Area
CAMP	Community Air Monitoring Plan
C&D	Construction and Demolition
CEQR	City Environmental Quality Review
CFR	Code of Federal Regulations
CHASP	Construction Health and Safety Plan
COC	Certificate of Completion
CQAP	Construction Quality Assurance Plan
CSOP	Contractors Site Operation Plan
DCR	Declaration of Covenants and Restrictions
ECs/ICs	Engineering Controls and Institutional Controls
ELAP	Environmental Laboratory Accreditation Program
HASP	Health and Safety Plan
HAZWOPER	Hazardous Waste Operations Emergency Response
IRM	Interim Remedial Measure
BCA	Brownfield Cleanup Agreement
MNA	Monitored Natural Attenuation
NOC	Notice of Completion
NYS DEC	New York State Department of Environmental Conservation
NYC DEP	New York City Department of Environmental Protection
NYC DOHMH	New York State Department of Health and Mental Hygiene
NYC OER	New York City Office of Environmental Remediation
NYC VCP	New York City Voluntary Cleanup Program
NYCRR	New York Codes Rules and Regulations
NYS DEC	New York State Department of Environmental Conservation
NYS DEC DER	New York State Department of Environmental Conservation Division of Environmental Remediation

Acronym	Definition
NYS DOH	New York State Department of Health
NYS DOT	New York State Department of Transportation
ORC	Oxygen-Release Compound
OSHA	United States Occupational Health and Safety Administration
PCBs	Professional Engineer Polychlorinated Biphenyls
PE	Professional Engineer
PID	Photo Ionization Detector
QEP	Qualified Environmental Professional
QHHEA	Qualitative Human Health Exposure Assessment
RAOs	Remedial Action Objectives
RAR	Remedial Action Report
RAWP	Remedial Action Work Plan or Plan
RCA	Recycled Concrete Aggregate
RD	Remedial Design
RI	Remedial Investigation
RMZ	Residual Management Zone
SCOs	Soil Cleanup Objectives
SCG	Standards, Criteria and Guidance
SMP	Site Management Plan
SPDES	State Pollutant Discharge Elimination System
SSDS	Sub-Slab Depressurization System
SVOC	Semi-Volatile Organic Compound
TAL	Target Analyte List
TCL	Target Compound List
USGS	United States Geological Survey
UST	Underground Storage Tank
VOC	Volatile Organic Compound

CERTIFICATION

I, Michelle Lapin, am currently a registered professional engineer licensed by the State of New York. I performed professional engineering services and had primary direct responsibility for designing the remedial program for the 77 Commercial Street Site, OER Project number 15EHAN033K and NYC VCP Project Number 15CVCP103K. I certify to the following:

- I have reviewed this document and the Stipulation List, to which my signature and seal are affixed.
- Engineering Controls developed for this remedial action were designed by me or a person under my direct supervision and designed to achieve the goals established in this Remedial Action Work Plan for this site.
- The Engineering Controls to be constructed during this remedial action are accurately reflected in the text and drawings of the Remedial Action Work Plan and are of sufficient detail to enable proper construction.
- This Remedial Action Work Plan (RAWP) has a plan for handling, transport and disposal of soil, fill, fluids and other materials removed from the property in accordance with applicable City, State and Federal laws and regulations. Importation of all soil, fill and other material from off-Site will be in accordance with all applicable City, State and Federal laws and requirements. This RAWP has provisions to control nuisances during the remediation and all invasive work, including dust and odor suppression.

Michelle Lapin

Name

NYS PE License Number

Signature

Date

PE Stamp

I, Stephen Malinowski, am a qualified Environmental Professional. I will have primary direct responsibility for implementation of the remedial program for the 77 Commercial Street Site, OER Project number 15EHAN033K and NYC VCP Project Number 15CVCP103K. I certify to the following:

- This Remedial Action Work Plan (RAWP) has a plan for handling, transport and disposal of soil, fill, fluids and other materials removed from the property in accordance with applicable City, State and Federal laws and regulations. Importation of all soil, fill and other material from off-Site will be in accordance with all applicable City, State and Federal laws and requirements. This RAWP has provisions to control nuisances during the remediation and all invasive work, including dust and odor suppression.

Stephen Malinowski

QEP Name

QEP Signature

Date

EXECUTIVE SUMMARY

Waterview at Greenpoint, LLC is working with the NYC Office of Environmental Remediation (OER) to investigate and remediate an approximately 110,519-square foot Site located at 77 Commercial Street in Brooklyn, New York. A remedial investigation (RI) was performed to compile and evaluate data and information necessary to develop this Remedial Action Work Plan (RAWP). The remedial action described in this document provides for the protection of public health and the environment consistent with the intended property use, complies with applicable environmental standards, criteria and guidance and conforms to applicable laws and regulations.

Site Location and Current Usage

The Site is located at 77 Commercial Street in the Greenpoint section of Brooklyn, New York and is identified as Block 729, Lot 50 on the New York City Tax Map. Figure 1 shows the Site location. The Site is approximately 110,519 square feet and currently contains an approximately 84,200-square foot vacant warehouse that is being prepared for demolition. The Site is abutted to the east-southeast by a one to four-story mixed commercial/residential buildings, to the south-southeast by Commercial Street, to the west-southwest by MTA Office of Emergency Response, and to the north-northwest by Newtown Creek. The larger surrounding area is occupied by primarily industrial uses, with some commercial and residential use. Newtown Creek is listed on the United States Environmental Protection Agency's (USEPA) National Priority List (NPL) due to years of heavy industrial use since the mid-1800s.

Summary of Proposed Redevelopment Plan

The proposed development plan consists of a mixed-use commercial/residential development with three connecting mixed use buildings: a two- to seven-story base building (Base Building - Building 1), a 30-story residential tower (South Tower - Building 2), and a 40-story residential tower (North Tower – Building 3). The proposed building footprint at grade is approximately 76,762 square feet. The proposed building will include: a sub-cellar mechanical and storage area of approximately 37,505 square feet and two parking areas with 330 spaces; a residential parking area of approximately 25,102 square feet; and potentially, an MTA parking area of approximately 7,840 square feet. Excavation for the cellar and sub-cellar will be completed to 29.5 feet below grade across approximately 65 percent of the site. The ground level of Building 1 will include commercial/retail uses and potential future MTA offices. The second story of Building 1 will include residential lobbies and dwelling units. Floors 2 and above in all three buildings will contain residential uses. Landscaped terraces are planned for the first and second floors in the northern portion of Building 1 facing Newtown Creek. A landscaped plaza is included on the second floor in the eastern-central portion of the Building 1, and an outdoor landscaped area is planned for the second story along the southern portion of the Building 1 facing Commercial Street. The estimated gross square footage of the redevelopment is 762,919 square feet. Architectural drawings of the proposed redevelopment are included in Appendix 1. The remaining 23,757 square feet of the site is dedicated to outdoor waterfront access along Newtown Creek and will link to the Shore Public Walkway along the Brooklyn waterfront. The future grade of the Shore Public Walkway will be at approximately elevation 14.5' and will be fully landscaped.

It is estimated that approximately 90,000 tons of soil will require excavation and off-site disposal during the foundation excavation. It is anticipated that the excavation will be advanced into the water table, which is approximately 5 to 11 feet below grade surface (bgs). A Site Plan depicting the current lot boundaries and proposed buildings is provided as Figure 2. The current zoning designation is R-6 and R-6/C2-4 (residential and residential with a commercial overlay, respectively). The proposed use is consistent with existing zoning for the property. The remedial action contemplated under this RAWP may be implemented independently of the proposed redevelopment plan.

Summary of Findings of Environmental Investigations

1. Elevation of the Site ranges from 8.66 to 11.05 feet above the North American Vertical Datum of 1988.
2. Depth to groundwater ranges from 5 to 11 feet below grade at the Site.
3. Groundwater flow beneath the Site is generally from south to northwest towards Newtown Creek.
4. Bedrock was not encountered during the remedial investigation.
5. The stratigraphy of the Site, from the surface down, consists of roughly three to seven feet of historic fill, characterized by crushed rock, brick, asphalt, wood, and gravel. Below the historic fill is a sand and silt stratum to the termination of each boring.
6. Soil/fill samples collected during the RI showed that volatile organic compounds (VOCs) were detected in 21 of the 39 soil samples analyzed with acetone being the only VOC detected above the New York State Department of Environmental Conservation's (NYSDEC's) Unrestricted Use Soil Cleanup Objectives (UUSCOs). Acetone is a common laboratory contaminant and was also detected in the laboratory method blank; therefore, the presence of acetone does not appear to be representative of Site conditions. Twenty-four semivolatile organic compounds (SVOCs) were detected in one or more of the soil samples analyzed at concentrations ranging from an estimated concentration of 10 micrograms per kilogram (µg/Kg) to 20,000 µg/Kg. Three SVOCs (4-methylphenol, benzo(k)fluoranthene, and chrysene) were detected in at least one soil sample at concentrations above their respective UUSCOs but below their respective Restricted Residential Soil Cleanup Objectives (RRSCOs). Benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenz(a,h)anthracene, and/or indeno(1,2,3-cd)pyrene were detected above their respective RRSCOs in 18 of the 39 samples collected during the field investigation at concentrations ranging from 470 µg/Kg to 20,000 µg/Kg. The SVOC exceedances were polycyclic aromatic hydrocarbons (PAHs), which are a class of compounds found in some petroleum products, coal ash, and in other combustion products that are commonly found in historic fill.

   Twenty-two metals were detected in one or more of the soil samples analyzed ranging from 0.02 milligrams per kilogram (mg/Kg) to 145,000 mg/Kg. Arsenic (maximum of 33.9 mg/Kg), barium (maximum of 566 mg/Kg), chromium (maximum 117 mg/Kg), copper (maximum 115 mg/Kg), lead (maximum 2,300 mg/Kg), mercury (maximum 26 mg/Kg), nickel (maximum 182 mg/Kg), selenium (maximum 4.8 ppm), and/or zinc (maximum 277 mg/Kg) were detected above their respective UUSCOs and/or RRSCOs in 22 of the 38 soil samples. The metals concentrations are most likely attributable to historic fill materials, which often contain highly variable concentrations of metals.

   The polychlorinated biphenyl (PCB) Aroclor 1262 was detected in soil sample SB-9(1-2') at a concentration of 1,000 µg/Kg, above its UUSCO of 100 µg/Kg and equal to its RRSCO of 1,000 µg/Kg. Aroclor 1262 was also detected in soil samples SB-5(1-2') and SB-7(1-2') at estimated concentrations below its UUSCO. No other PCBs were detected in any of the soil samples. The presence of PCB Aroclor 1262 is most likely attributable to the presence of historic fill material in the upper two feet where the samples with PCB detections were collected at the Site, and is not indicative of a spill or a release.

   No pesticides were detected in any of the soil samples collected during the RI.
7. Groundwater samples collected during the RI showed that no VOCs were detected in any of the groundwater samples above their respective NYSDEC Class GA Ambient Water Quality Standards (AWQS). Two SVOCs, benzo[b]fluoranthene and benzo[k]fluoranthene were detected

in groundwater sample TW-5 at concentrations ranging between an estimated 0.24 micrograms per liter (µg/L) and 0.55 µg/L, above their respective AWQS. The presence of the SVOCs in the groundwater sample is likely attributable to sediment entrained in the water sample and not indicative of groundwater conditions. No other SVOCs were detected in the six groundwater samples above their respective Class GA standards.

Nineteen metals were detected in both the unfiltered groundwater samples (total metals analysis) and filtered samples (dissolved metals analysis). Twelve metals (arsenic, barium, beryllium, chromium, copper, iron, manganese, lead, nickel, sodium, zinc, and mercury) were detected above the Class GA standards in one or more of the total groundwater samples. Four of these metals, which naturally occur in groundwater (magnesium, iron, manganese, and sodium), were detected above the Class GA standards in one or more of the dissolved groundwater samples. The presence of the remaining six metals in the dissolved groundwater is typical of groundwater quality in Brooklyn, and does not appear to be related to a spill or release at the Site.

No PCBs or pesticides were detected in any of the groundwater samples.

8. Soil vapor sample analytical results identified 37 VOCs detected in the seven samples. VOCs associated with petroleum [including benzene, toluene, ethylbenzene, xylenes (collectively referred to as BTEX), 1,2,4- and 1,3,5-trimethylbenzene, cyclohexane, heptane, hexane, methyl ethyl ketone (MEK), 4-ethyltoluene, and 2,2,4-trimethylpentane] were detected at concentrations from 0.95 micrograms per cubic meter ($\mu g/m^3$) to 830 $\mu g/m^3$. Solvent-related VOCs [including acetone, chloroform, tetrachloroethene (PCE), and trichloroethene (TCE)], were detected at concentrations up to 490 $\mu g/m^3$. PCE (maximum 40 $\mu g/m^3$) was detected in SV-1, SV-5, SV-6, and SV-7 at concentrations above its New York State Department of Health (NYSDOH) Air Guidance Value (AGV) of 30 $\mu g/m^3$. PCE was detected at 30 $\mu g/m^3$ in soil vapor sample SV-3. TCE was detected in sample SV-7 at a concentration of 94 $\mu g/m^3$, above its AGV of 5 $\mu g/m^3$.

Summary of the Remedy

The proposed remedial action achieves protection of public health and the environment for the intended use of the Site. The proposed remedial action achieves all of the remedial action objectives established for the project and addresses applicable standards, criterion, and guidance; is effective in both the short-term and long-term and reduces mobility, toxicity and volume of contaminants; is cost effective and implementable; and uses standards methods that are well established in the industry.

The proposed remedial action achieves all of the remedial action goals established for the project. The proposed remedial action is effective in both the short-term and long-term and reduces mobility, toxicity and volume of contaminants and uses standard methods that are well established in the industry. The proposed remedial action will consist of:

1. Preparation of a Community Protection Statement and performance of all required NYC VCP Citizen Participation activities according to an approved Citizen Participation Plan.
2. Performance of all activities required for the remedial action, including permitting requirements and pretreatment requirements, in compliance with applicable laws and regulations.
3. Establishment of Site Specific Track 4 Soil Cleanup Objectives (SCOs).
4. Site mobilization involving Site security setup, equipment mobilization, utility mark outs and marking & staking excavation areas.
5. Perform additional Site characterization sampling of soil, groundwater, or soil vapor if required.

6. Completion of a Waste Characterization Study prior to excavation activities. Waste characterization soil samples will be collected at a frequency dictated by disposal facility(s).
7. Excavation and removal of soil/fill exceeding Track 2 Site Specific SCOs except where site-specific Track 4 SCOs have been established. Approximately 50 percent of the building footprint would be excavated to 29.5 feet to accommodate the sub-cellar, 15 feet for approximately 30 percent of the building footprint for a parking garage, and to 10 feet below grade for approximately 10 percent of the building footprint to accommodate for a future proposed additional parking garage. The remainder of the Site will be excavated sufficiently and graded for the installation of engineered composite cover systems for paved pathways and landscaping areas. Approximately, 90,000 tons of soil will be excavated and removed from this project.
8. Screening of excavated soil/fill during intrusive work for indications of contamination by visual means, odor, and monitoring with a PID. Appropriate segregation of excavated media on-site.
9. Management of excavated materials, in accordance with the Soil and Materials Management Plan, including temporarily stockpiling and segregating in accordance with defined material types and to prevent co-mingling of contaminated material and non-contaminated materials.
10. Removal of one 15,000-gallon fuel oil UST and one 550-gallon UST and any additional USTs (if encountered) and closure of petroleum spills in compliance with applicable local, State and Federal laws and regulations.
11. Transportation and off-site disposal of all soil/fill material at permitted facilities in accordance with applicable laws and regulations for handling, transport, and disposal, and this plan. Sampling and analysis of excavated media as required by disposal facilities. Appropriate segregation of excavated media on-site.
12. Collection and analysis of six end-point samples to determine the performance of the remedy with respect to attainment of SCOs.
13. Demarcation of residual soil/fill in landscaped areas.
14. Import of materials to be used for backfill and cover in compliance with this plan and in accordance with applicable laws and regulations.
15. A passive sub-slab depressurization system (SSDS) will be designed and installed beneath the waterproofing/vapor barrier system in areas of the building where the slab is installed above the water table and where the use is a non-parking use, i.e., indoor space, including occupied space, mechanical space, common corridors, etc., except where the bottom of the slab is within two feet above the groundwater table or below the groundwater table.
16. Installation of a vapor barrier system beneath the building slab as well as behind foundation sidewalls up to grade level of the proposed building. The vapor barrier will consist of Grace Preprufe® 300R (or equivalent). Other areas of the building will extend into the groundwater table and sub-slab depressurization in those areas is not feasible.
17. Construction and maintenance of an engineered composite cover consisting of a 3-foot thick concrete slab for the sub-cellar, a 12-inch concrete slab for the parking garage, landscaped areas with 2 feet of clean soil, and asphalt or concrete-paved walkways to prevent human exposure to residual soil/fill remaining under the Site.
18. Construction and operation of a ventilated parking garage as per NYC Building Department's codes and requirements.

19. Import of materials to be used for backfill and cover in compliance with this plan and in accordance with applicable laws and regulations.
20. Performance of all activities required for the remedial action, including permitting requirements and pretreatment requirements, in compliance with applicable laws and regulations.
21. Implementation of stormwater pollution prevention measures in compliance with applicable laws and regulations.
22. Submission of an approved Site Management Plan (SMP) in the Remedial Action Plan (RAR) for long-term management of residual contamination, including plans for operation, maintenance, monitoring, inspection and certification of Engineering and Institutional Controls and reporting at a specified frequency.
23. Submission of a P.E. certified RAR that describes the remedial activities, certifies that the remedial requirements have been achieved, defines the Site boundaries, lists any changes from this RAWP, and describes all Engineering and Institutional Controls to be implemented at the Site.
24. The Site will continue to be registered with an E-Designation at the NYC Buildings Department. Establishment of Engineering Controls and Institutional Controls in this RAWP and a requirement that management of these controls must be in compliance with an approved SMP. Institutional Controls will include prohibition of the following: (1) vegetable gardening and farming; (2) use of groundwater without treatment rendering it safe for the intended use; (3) disturbance of residual contaminated material unless it is conducted in accordance with the SMP; and (4) higher level of land usage without OER-approval.

COMMUNITY PROTECTION STATEMENT

NYC VOLUNTARY CLEANUP PROGRAM

77 COMMERCIAL STREET

NYC VCP SITE NUMBER: TBD

Affiliation	Name	Phone	Email address
OER Project Manager	Zachariah Schreiber	(212) 788-3056	ZSchreiber@dep.nyc.gov
Site Project Manager	Mark Moseson	(212) 228-1682	mm@clipperequity.com
Consultant	Stephen Malinowski, AKRF, Inc.	(631) 574-3724	smalinowski@akrf.com
Property Owner	David Bistricer	(212) 228-1682	david@clipperequity.com
Construction Manager	TBD	TBD	TBD
Document Repository	Greenpoint Library 107 Norman Ave. Brooklyn, NY	(718) 349-8504	http://www.bklynlibrary.org/locations/greenpoint
Link to OER Website	http://www.nyc.gov/html/oer/html/repository/RBrooklyn.shtml		

COMMUNITY PROTECTION STATEMENT

The NYC Office of Environmental Remediation (OER) provides governmental oversight for the cleanup of contaminated properties in NYC. This Remedial Action Work Plan ("cleanup plan") describes the findings of prior environmental studies that show the location of contamination at the Site, and describes the plans to clean up the Site to protect public health and the environment.

This cleanup plan provides a very high level of protection for neighboring communities and also includes many other elements that address common community concerns, such as community air monitoring, odor, dust and noise controls, hours of operation, good housekeeping and cleanliness, truck management and routing, and opportunities for community participation. The purpose of this Community Protection Statement is to explain these community protection measures in non-technical language to simplify community review.

Remedial Investigation and Cleanup Plan: Under the oversight of the NYC OER, a thorough cleanup study of this property (called a remedial investigation) has been performed to identify past Site usage, to sample and test soil, groundwater, and soil vapor, and identify contaminant sources present on the property. The cleanup plan has been designed to address all contaminant sources that have been identified during the study of the Site.

Identification of Sensitive Land Uses: Prior to selecting a cleanup, the neighborhood was evaluated to identify sensitive land uses nearby, such as schools, day care facilities, hospitals and residential areas. The cleanup program was then tailored to address the special conditions of this community.

Qualitative Human Health Exposure Assessment: An important part of the cleanup planning for the Site is the performance of a study to find all of the ways that people might come in contact with contaminants at the Site now or in the future. This study is called a Qualitative Human Health Exposure Assessment (QHHEA). A QHHEA was performed for this project. This assessment has considered all known contamination at the Site and evaluated the potential for people to come in contact with this contamination. All identified public exposures will be addressed under this cleanup plan.

Health and Safety Plan: This cleanup plan includes a Construction Health and Safety Plan (CHASP) that is designed to protect community residents and on-site workers. The elements of this plan are in compliance with safety requirements of the United States Occupational Safety and Health Administration (OSHA). This plan includes many protective elements including those discussed below.

Site Safety Coordinator: This project has a designated Site safety coordinator to implement the CHASP. The safety coordinator maintains an emergency contact sheet and protocol for management of emergencies. The Site safety coordinator is identified at the beginning of the Community Protection Statement.

Worker Training: Workers participating in cleanup of contaminated material on this project are required to be trained in a 40-hour hazardous waste operators training course and to take annual refresher training. This pertains to workers performing specific tasks including removing contaminated material and installing cleanup systems in contaminated areas.

Community Air Monitoring Plan: Community air monitoring will be performed during this cleanup project to ensure that the community is properly protected from contaminants, dust and odors. Air samples will be tested in accordance with a detailed plan called the Community Air Monitoring Plan or CAMP. Results will be regularly reported to the NYC Office of Environmental Remediation. This cleanup plan also has a plan to address any unforeseen problems that might occur during the cleanup (called a 'Contingency Plan').

Odor, Dust and Noise Control: This cleanup plan includes actions for odor and dust control. These actions are designed to prevent off-site odor and dust nuisances and include steps to be taken if nuisances

are detected. Generally, dust is managed by application of physical covers and by water sprays. Odors are controlled by limiting the area of open excavations, physical covers, spray foams, and by a series of other actions (called operational measures). The project is also required to comply with NYC noise control standards. If you observe problems in these areas, please contact the on-site Project Manager or NYC Office of Environmental Remediation Project Manager listed on the first page of this Community Protection Statement document.

Quality Assurance: This cleanup plan requires that evidence be provided to illustrate that all cleanup work required under the plan has been completed properly. This evidence will be summarized in the final report, called the Remedial Action Report. This report will be submitted to the NYC Office of Environmental Remediation and will be thoroughly reviewed.

Stormwater Management: To limit the potential for soil erosion and discharge, this cleanup plan has provisions for stormwater management. The main elements of the stormwater management include physical barriers such as tarp covers and erosion fencing, and a program for frequent inspection.

Hours of Operation: The hours for operation of cleanup will comply with the NYC Department of Buildings construction code requirements or according to specific variances issued by that agency. For this cleanup project, the hours of operation will conform to requirements of Department of Buildings and will be conveyed to OER before the start of the remedial action.

Signage: While the cleanup is in progress, a placard will be prominently posted at the main entrance of the property with a laminated project Fact Sheet that states that the project is in the NYC Voluntary Cleanup Program, provides project contact names and numbers, and locations of project documents can be viewed.

Complaint Management: The contractor performing this cleanup is required to address all complaints. If you have any complaints, you can call the facility Project Manager, the NYC Office of Environmental Remediation Project Manager listed on the first page of this Community Protection Statement document, or call 311 and mention the Site is in the NYC Voluntary Cleanup Program.

Utility Mark-outs: To promote safety during excavation in this cleanup, the contractor is required to first identify all utilities and must perform all excavation and construction work in compliance with NYC Department of Buildings regulations.

Soil and Liquid Disposal: All soil and liquid material removed from the Site as part of the cleanup will be transported and disposed of in accordance with all applicable City, State and Federal regulations and required permits will be obtained.

Soil Chemical Testing and Screening: All excavations will be supervised by a trained and properly qualified environmental professional. In addition to extensive sampling and chemical testing of soils on the Site, excavated soil will be screened continuously using hand-held instruments, by sight, and by smell to ensure proper material handling and management, and community protection.

Stockpile Management: Soil stockpiles will be kept covered with tarps to prevent dust, odors and erosion. Stockpiles will be frequently inspected. Damaged tarp covers will be promptly replaced. Stockpiles will be protected with silt fences. Hay bales will be used, as needed to protect storm water catch basins and other discharge points.

Trucks and Covers: Loaded trucks leaving the Site will be covered in compliance with applicable laws and regulations to prevent dust and odor. Trucks will be properly recorded in logs and records and placarded in compliance with applicable City, State, and Federal laws, including those of the New York State Department of Transportation. If loads contain wet material that can leak, truck liners will be used. All transport of materials will be performed by licensed truckers and in compliance with all laws and regulations.

Imported Material: All fill materials proposed to be brought onto the Site will comply with rules outlined in this cleanup plan and will be inspected and approved by a qualified worker located on-site. Waste materials will not be brought onto the Site. Trucks entering the Site with imported clean materials will be covered in compliance with applicable laws and regulations.

Equipment Decontamination: All equipment used for cleanup work will be inspected and washed, if needed, before it leaves the Site. Trucks will be cleaned at a truck inspection station on the property before leaving the Site.

Housekeeping: Locations where trucks enter or leave the Site will be inspected every day and cleaned regularly to ensure that they are free of dirt and other materials from the Site.

Truck Routing: Truck routes have been selected to: (a) limit transport through residential areas and past sensitive nearby properties; (b) maximize use of city-mapped truck routes; (c) limit total distance to major highways; (d) promote safety in entry to highways; (e) promote overall safety in trucking; and (f) minimize off-site line-ups (queuing) of trucks entering the Site. Operators of loaded trucks leaving the Site will be instructed not to stop or idle in the local neighborhood.

Final Report: The results of all cleanup work will be fully documented in a final report (called a Remedial Action Report) that will be available for public review online. A link to the online document repository and the public library with Internet access nearest the Site are listed on the first page of this Community Protection Statement document

Long-Term Site Management: If long-term protection after the cleanup is needed, the property owner will be required to comply with an ongoing Site Management Plan (if Track 1 is not achieved) that calls for continued inspection of protective controls, such as Site covers. The Site Management Plan is evaluated and approved by the NYC Office of Environmental Remediation. Requirements that the property owner must comply with are established through a city environmental designation. A certification of continued protectiveness of the cleanup will be required from time to time to show that the approved cleanup is still effective.

REMEDIAL ACTION WORK PLAN

1.0 SITE BACKGROUND

Waterview at Greenpoint, LLC is working with the Office of Environmental Remediation (OER) to investigate and remediate a property located at 77 Commercial Street in the Greenpoint section of Brooklyn, New York (the "Site"). A Remedial Investigation (RI) was performed to compile and evaluate data and information necessary to develop this Remedial Action Work Plan (RAWP) in a manner that will render the Site protective of public health and the environment consistent with the contemplated end use. This RAWP establishes remedial action objectives, provides a remedial alternatives analysis that includes consideration of a permanent cleanup, and provides a description of the selected remedial action. The remedial action described in this document provides for the protection of public health and the environment, complies with applicable environmental standards, criteria and guidance and applicable laws and regulations.

1.1 SITE LOCATION AND CURRENT USAGE

The Site is located at 77 Commercial Street in the Greenpoint section of Brooklyn, New York and is identified as Block 729, Lot 50 on the New York City Tax Map. Figure 1 shows the Site location. The Site is 110,519 square feet and currently contains an approximately 84,200-square foot vacant warehouse that is being demolished in preparation of the redevelopment. The Site is abutted to the east-southeast by one to four mixed commercial and residential buildings, to the south-southeast by Commercial Street, to the west-southwest by MTA Office of Emergency Response, and to the north-northwest by Newtown Creek.

1.2 PROPOSED REDEVELOPMENT PLAN

The proposed development plan consists of a mixed-use commercial/residential development with three connecting mixed use buildings: a two- to seven-story base building (Base Building - Building 1), a 30-story residential tower (South Tower - Building 2), and a 40-story residential tower (North Tower – Building 3). The proposed building footprint at grade is approximately 76,762 square feet. The proposed building will include: a sub-cellar mechanical and storage area of approximately 37,505 square feet and two parking areas with 330 spaces; a residential parking area of approximately 25,102 square feet; and potentially, an MTA parking area of approximately 7,840 square feet. Excavation for the cellar and sub-cellar will be completed to 29.5 feet below grade across approximately 65 percent of the site. The ground level of Building 1 will include commercial/retail uses and potential future MTA offices. The second story of Building 1 will include residential lobbies and dwelling units. Floors 2 and above in all three buildings will contain residential uses. Landscaped terraces are planned for the first and second floors in the northern portion of Building 1 facing Newtown Creek. A landscaped plaza is included on the second floor in the eastern-central portion of the Building 1, and an outdoor landscaped area is planned for the second story along the southern portion of the Building 1 facing Commercial Street. The estimated gross square footage of the redevelopment is 762,919 square feet. Architectural drawings of the proposed redevelopment are included in Appendix 1. The remaining 23,757 square feet of the Site is dedicated to outdoor waterfront access along Newtown Creek and will link to the Shore Public Walkway along the Brooklyn waterfront. The future grade of the Shore Public Walkway will be at approximately elevation 14.5' and will be fully landscaped.

It is estimated that approximately 90,000 tons of soil will require excavation and off-site disposal during the foundation excavation. It is anticipated that the excavation will be advanced into the water table, which is approximately 5 to 11 feet below grade surface (bgs). A Site Plan depicting the current lot boundaries and proposed buildings is provided as Figure 2. The current zoning

designation is R-6 and R-6/C2-4 (residential and residential with a commercial overlay, respectively). The proposed use is consistent with existing zoning for the property.

1.3 DESCRIPTION OF SURROUNDING PROPERTY

The Site is abutted to the east-southeast by one to four-story mixed commercial/residential buildings, to the south-southeast by Commercial Street, to the west-southwest by an MTA Office of Emergency Response site, and to the north-northwest by Newtown Creek. The larger surrounding area is occupied primarily by industrial uses, with some commercial and residential uses. Newtown Creek is listed on the United States Environmental Protection Agency's (USEPA) National Priority List (NPL) due to years of heavy industrial use since the mid to late 1800s. The larger surrounding area is occupied with primarily industrial uses, with some commercial and residential use. According to OER's SPEED database application, no day care facilities, schools, or hospitals are located within a 500-foot radius of the Site. Figure 3 depicts surrounding land usage.

1.4 ENVIRONMENTAL INVESTIGATION REPORTS

The following environmental work plans and reports were developed for the Site:

- *Phase I ESA*, 77 Commercial Street, Brooklyn, NY, May 2011, Merritt Consulting Corp.
- *Remedial Investigation Work Plan*, 77 Commercial Street, Brooklyn, NY, October 2014, AKRF, Inc.
- *Remedial Investigation Report*, 77 Commercial Street, Brooklyn, NY, January 2015, AKRF, Inc.

Digital (PDF) copies of the above referenced environmental documents are included as Appendix 2.

1.5 SUMMARY OF REGULATORY CORRESPONDENCE

AKRF prepared a Phase II (Subsurface Investigation) Work Plan dated October 23, 2014, which was submitted to OER and approved in an email dated October 23, 2014. AKRF prepared a Phase II (Remedial Investigation) Report dated January 16, 2015, which was submitted to OER and approved in an email dated January 26, 2015.

1.6 FINDINGS OF ENVIRONMENTAL INVESTIGATIONS

1. Elevation of the Site ranges from 8.66 to 11.05 feet above the North American Vertical Datum of 1988.
2. Depth to groundwater ranges from 5 to 11 feet below grade at the Site.
3. Groundwater flow beneath the Site is generally from south to northwest towards Newtown Creek.
4. Bedrock was not encountered during the remedial investigation.
5. The stratigraphy of the Site, from the surface down, consists of roughly three to seven feet of historic fill, characterized by crushed rock, brick, asphalt, wood, and gravel. Below the historic fill is a sand and silt stratum to the termination of each boring.
6. Soil/fill samples collected during the RI showed that volatile organic compounds (VOCs) were detected in 21 of the 39 soil samples analyzed with acetone being the only VOC detected above the New York State Department of Environmental Conservation's (NYSDEC's) Unrestricted Use Soil Cleanup Objectives (UUSCOs). Acetone is a common laboratory contaminant and was also detected in the laboratory method blank; therefore, the

presence of acetone does not appear to be representative of Site conditions. Twenty-four semivolatile organic compounds (SVOCs) were detected in one or more of the soil samples analyzed at concentrations ranging from an estimated concentration of 10 micrograms per kilogram (µg/Kg) to 20,000 µg/Kg. Three SVOCs (4-methylphenol, benzo(k)fluoranthene, and chrysene) were detected in at least one soil sample at concentrations above their respective UUSCOs but below their respective Restricted Residential Soil Cleanup Objectives (RRSCOs). Benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenz(a,h)anthracene, and/or indeno(1,2,3-cd)pyrene were detected above their respective RRSCOs in 18 of the 39 samples collected during the field investigation at concentrations ranging from 470 µg/Kg to 20,000 µg/Kg. The SVOC exceedances were polycyclic aromatic hydrocarbons (PAHs), which are a class of compounds found in some petroleum products, coal ash, and in other combustion products that are commonly found in historic fill.

Twenty-two metals were detected in one or more of the soil samples analyzed ranging from 0.02 milligrams per kilogram (mg/Kg) to 145,000 mg/Kg. Arsenic (maximum of 33.9 mg/Kg), barium (maximum of 566 mg/Kg), chromium (maximum 117 mg/Kg), copper (maximum 115 mg/Kg), lead (maximum 2,300 mg/Kg), mercury (maximum 26 mg/Kg), nickel (maximum 182 mg/Kg), selenium (maximum 4.8 ppm), and/or zinc (maximum 277 mg/Kg) were detected above their respective UUSCOs and/or RRSCOs in 22 of the 38 soil samples. The metals concentrations are most likely attributable to historic fill materials, which often contain highly variable concentrations of metals.

The polychlorinated biphenyl (PCB) Aroclor 1262 was detected in soil sample SB-9(1-2') at a concentration of 1,000 µg/Kg, above its UUSCO of 100 µg/Kg and equal to its RRSCO of 1,000 µg/Kg. Aroclor 1262 was also detected in soil samples SB-5(1-2') and SB-7(1-2') at estimated concentrations below its UUSCO. No other PCBs were detected in any of the soil samples. The presence of PCB Aroclor 1262 is most likely attributable to the presence of historic fill material in the upper two feet where the samples with PCB detections were collected at the Site, and is not indicative of a spill or a release.

No pesticides were detected in any of the soil samples collected during the RI.

7. Groundwater samples collected during the RI showed that no VOCs were detected in any of the groundwater samples above their respective NYSDEC Class GA Ambient Water Quality Standards (AWQS). Two SVOCs, benzo[b]fluoranthene and benzo[k]fluoranthene were detected in groundwater sample TW-5 at concentrations ranging between an estimated 0.24 micrograms per liter (µg/L) and 0.55 µg/L, above their respective AWQS. The presence of the SVOCs in the groundwater sample is likely attributable to sediment entrained in the water sample and not indicative of groundwater conditions. No other SVOCs were detected in the six groundwater samples above their respective Class GA standards.

   Nineteen metals were detected in both the unfiltered groundwater samples (total metals analysis) and filtered samples (dissolved metals analysis). Twelve metals (arsenic, barium, beryllium, chromium, copper, iron, manganese, lead, nickel, sodium, zinc, and mercury) were detected above the Class GA standards in one or more of the total groundwater samples. Four of these metals, which naturally occur in groundwater (magnesium, iron, manganese, and sodium), were detected above the Class GA standards in one or more of the dissolved groundwater samples. The presence of the remaining six metals in the dissolved groundwater is typical of groundwater quality in Brooklyn, and does not appear to be related to a spill or release at the Site.

   No PCBs or pesticides were detected in any of the groundwater samples.

8. Soil vapor sample analytical results identified 37 VOCs detected in the seven samples. VOCs associated with petroleum [including benzene, toluene, ethylbenzene, xylenes (collectively referred to as BTEX), 1,2,4- and 1,3,5-trimethylbenzene, cyclohexane, heptane, hexane, methyl ethyl ketone (MEK), 4-ethyltoluene, and 2,2,4-trimethylpentane] were detected at concentrations from 0.95 micrograms per cubic meter ($\mu g/m^3$) to 830 $\mu g/m^3$. Solvent-related VOCs [including acetone, chloroform, tetrachloroethene (PCE), and trichloroethene (TCE)], were detected at concentrations up to 490 $\mu g/m^3$. PCE (maximum 40 $\mu g/m^3$) was detected in SV-1, SV-5, SV-6, and SV-7 at concentrations above its New York State Department of Health (NYSDOH) Air Guidance Value (AGV) of 30 $\mu g/m^3$. PCE was detected at 30 $\mu g/m^3$ in soil vapor sample SV-3. TCE was detected in sample SV-7 at a concentration of 94 $\mu g/m^3$, above its AGV of 5 $\mu g/m^3$.

For more detailed results, consult the RIR included in Appendix 2. Based on an evaluation of the data and information from the RIR and this RAWP, disposal of significant amounts of hazardous waste is not suspected at this Site.

2.0 REMEDIAL ACTION OBJECTIVES

Based on the results of the RI, the following Remedial Action Objectives (RAOs) have been identified for this Site:

Groundwater

- Prevent direct exposure to contaminated groundwater.
- Prevent exposure to contaminants volatilizing from contaminated groundwater.

Soil

- Prevent direct contact with contaminated soil.
- Prevent migration of contaminants that would result in groundwater or surface water contamination.

Soil Vapor

- Prevent exposure to contaminants in soil vapor.
- Prevent migration of soil vapor into dwelling and other occupied structures.

3.0 REMEDIAL ALTERNATIVES ANALYSIS

The goal of the remedy selection process below is to select a remedy that is protective of human health and the environment taking into consideration the current, intended and reasonably anticipated future use of the Site. The remedy selection process begins by establishing Remedial Action Objectives (RAOs) for media in which chemical constituents were found in exceedance of applicable standards, criteria and guidance values (SCGs).

A remedy is then developed based on the following ten criteria:

- Protection of human health and the environment;
- Compliance with SCGs;
- Short-term effectiveness and impacts;
- Long-term effectiveness and permanence;
- Reduction of toxicity, mobility, or volume of contaminated material;
- Implementability;
- Cost effectiveness;
- Community Acceptance;
- Land use; and
- Sustainability.

The following is a detailed description of the alternatives analysis and remedy selection to address impacted media at the Site. As required, a minimum of two remedial alternatives (including a Track 1 scenario) are evaluated, as follows:

Alternative 1 involves:

- Selection of NYSDEC 6NYCRR Part 375 Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs).
- Removal of all soil/fill exceeding Track 1 Unrestricted Use SCOs throughout the Site and confirmation that Track 1 Unrestricted Use SCOs have been achieved with post-excavation endpoint sampling. Excavation for construction of the new building's sub-cellar level would take place to a depth of approximately 29.5 feet across approximately 50 percent of the building footprint to accommodate a partial cellar, 10 feet across approximately 40 percent of the building footprint for a parking garage, and 14.5 feet across approximately 10 percent of the building footprint for an additional parking area. Additional excavation to approximately seven feet below grade would be required to remove the historic fill in areas outside the building footprint. If soil/fill containing analytes at concentrations above Unrestricted Use SCOs is still present at the base of the excavation after removal of all soil required for construction for the new building's cellar level is complete and fill material outside of the building footprint has been removed, additional excavation would be performed to ensure complete removal of soil that does not meet Track 1 Unrestricted Use SCOs.
- No Engineering or Institutional Controls are required for a Track 1 cleanup, but a vapor and waterproofing barrier would be installed beneath the basement foundation, along foundation walls to grade where the corresponding indoor space is not associated with parking uses, and portions of the foundation sidewalls in remaining areas of the new building as a part of development, for waterproofing purposes. A ventilated parking garage would be present beneath a portion of the building. The

remaining portion of the building will extend into the groundwater table, therefore, soil vapor accumulation in that area is extremely unlikely and sub-slab depressurization would not be required.

- Placement of a final cover over the entire Site as part of construction.

Alternative 2 involves

- Establishment of Site-Specific (Track 4) SCOs (listed in Section 4.2).
- Removal of all soil/fill exceeding Track 4 Site-Specific SCOs and confirmation that Track 4 Site-Specific SCOs have been achieved with post-excavation endpoint sampling. Excavation for construction of the new building's sub-cellar level would take place to a depth of 29.5 feet across the approximately 50 percent of the building footprint to accommodate for a sub-cellar, to 10 feet for approximately 40 percent of the building footprint to accommodate a parking garage, and 15 feet below grade for approximately 10 percent of the building footprint for an additional parking area. The remainder of the Site would be graded for landscaped areas. Additional excavation would be required to two feet below grade for grading purposes on the southern portion of the property and for structural piles adjacent to the northern building line. If soil/fill containing analytes at concentrations above Track 4 Site-Specific SCOs is still present at the base of the excavation (and above the water table), additional excavation would be performed to meet Track 4 Site-Specific SCOs.
- A ventilated parking garage would be present beneath a portion of the building and therefore sub-slab depressurization to mitigate soil vapor intrusion is not necessary in this area. The remaining portion of the building will extend into the groundwater table, therefore soil vapor accumulation in that area is extremely unlikely and sub-slab depressurization is not feasible.
- Installation of a waterproofing/vapor barrier system beneath the building slab and along foundation side walls to grade level to prevent potential exposures from soil vapor.
- Placement of a cover system over the entire Site to prevent exposure to remaining soil/fill.
- Establishment of use restrictions including prohibitions on the use of groundwater from the Site; prohibitions of sensitive Site uses, such as farming or vegetable gardening, to prevent future exposure pathways; and prohibition of a higher level of land use without OER approval.
- Establishment of an approved Site Management Plan (SMP) to ensure long-term management of these Engineering and Institutional Controls including the performance of periodic inspections and certification that the controls are performing as they were intended. The SMP will note that the property owner and property owner’s successors and assigns must comply with the approved SMP.
- The property will continue to be registered with an E-Designation at the NYC Buildings Department.

3.1 THRESHOLD CRITERIA

3.1.1 Protection of Public Health and the Environment

This criterion is an evaluation of the remedy's ability to protect public health and the environment, and an assessment of how risks posed through each existing or potential pathway of exposure are eliminated, reduced or controlled through removal, treatment, and implementation of Engineering Controls or Institutional Controls. Protection of public health and the environment must be achieved for all approved remedial actions.

Alternative 1 would be protective of human health and the environment through removal of contaminated soil/fill exceeding Track 1 Unrestricted Use SCOs and groundwater protection standards, thus eliminating potential for direct contact with contaminated soil/fill once construction is complete and eliminating the risk of contamination leaching into groundwater. Waterproofing/vapor barrier would be installed along foundation walls to grade where the corresponding indoor space is not associated with parking uses, but not necessarily in all sub-grade sidewalls to grade, for example where corresponding indoor space is associated with parking. However, in the parking areas, the exposure pathway associated with subsurface vapors migrating into the buildings would be mitigated by the high volume flow rate ventilation required for indoor parking areas.

Alternative 2 would achieve comparable protections of human health and the environment through excavating and removing the historic fill from the Site and by ensuring that remaining soil/fill on-site meets Track 4 Site-Specific SCOs, as well as by placement of Institutional and Engineering controls, including a composite cover system and vapor barrier for all subgrade portions of the building with the vapor barrier extending up foundation sidewalls to grade. The composite cover system would prevent direct contact with any remaining on-site soil/fill. Implementing Institutional Controls including a Site Management Plan and continued "E" designation property would ensure that the composite cover system and vapor barrier remain intact and protective. Establishment of Track 4 Site-Specific SCOs would minimize the risk of contamination leaching into groundwater.

For both Alternatives, potential exposure to contaminated soil or groundwater during construction would be minimized by implementing a Construction Health and Safety Plan (CHASP), an approved Soil/Materials Management Plan and Community Air Monitoring Plan (CAMP). Potential contact with contaminated groundwater would be prevented as its use is prohibited by city laws and regulations. During dewatering, groundwater will be contained within the dewatering treatment system until discharge to the NYC sewer system, in accordance with the applicable NYCDEP permit. Potential future migration of off-site soil vapors into the new building would be prevented by installing a waterproofing/vapor barrier below for the entire sub-grade building elements for Alternative 2.

3.2 BALANCING CRITERIA

3.2.1 Compliance with Standards, Criteria and Guidance (SCGs)

This evaluation criterion assesses the ability of the alternative to achieve applicable standards, criteria and guidance.

Alternative 1 would achieve compliance with the remedial goals, chemical-specific SCGs and RAOs for soil through removal of soil to achieve Track 1 Unrestricted Use SCOs and Protection of Groundwater SCOs. Compliance with SCGs for soil vapor would not

necessarily be achieved since some or all of the soil vapor contamination may originate from off-site sources.

Alternative 2 would achieve compliance with the remedial goals, chemical-specific SCGs and RAOs for soil through removal of soil to meet Track 4 Site-Specific SCOs. Compliance with SCGs for soil vapor would not necessarily be achieved since some or all of the soil vapor contamination may originate from off-site sources A Site Management Plan would ensure that these controls remained protective for the long term.

Health and safety measures contained in the CHASP and Community Air Monitoring Plan (CAMP) that comply with the applicable SCGs would be implemented during Site redevelopment under this RAWP. For both alternatives, focused attention on means and methods employed during the remedial action would ensure that handling and management of contaminated material would be in compliance with applicable SCGs. These measures will protect on-site workers and the surrounding community from exposure to Site-related contaminants.

3.2.2 Short-Term Effectiveness and Impacts

This evaluation criterion assesses the effects of the alternative during the construction and implementation phase until remedial action objectives are met. Under this criterion, alternatives are evaluated with respect to their effects on public health and the environment during implementation of the remedial action, including protection of the community, environmental impacts, time until remedial response objectives are achieved, and protection of workers during remedial actions.

Both Alternatives 1 and 2 have similar short-term effectiveness during their respective implementations, as each requires excavation of historic fill material. Both alternatives could result in short-term dust generation impacts associated with excavation, handling, load out of materials, and truck traffic. Short-term impacts could potentially be higher for Alternative 1 if excavation of greater amounts of historical fill material below the excavation depth of the proposed building were encountered. However, focused attention to means and methods during the remedial action during a Track 1 removal action, including community air monitoring and appropriate truck routing, would minimize or negate the overall impact of these activities.

An additional short-term adverse impact and risks to the community associated with both remedial alternatives is increased truck traffic. Approximately 3,600, 25-ton capacity truck trips would be necessary to transport fill and soil excavated during Site development for Alternative 2, the Track 4 remedy. Additional truck traffic would be necessary for the removal of additional material as part of the Alternative 1, Track 1 remedy. Truck traffic will be routed on the most direct course using major thoroughfares where possible and flaggers will be used to protect pedestrians at Site entrances and exits.

The effects of these potential adverse impacts to the community, workers and the environment would be minimized through implementation of corresponding control plans including a CHASP, a CAMP and a Soil/Materials Management Plan (SMMP), during all on-site soil disturbance activities and would minimize the release of contaminants into the environment. Both alternatives provide short-term effectiveness in protecting the surrounding community by decreasing the risk of contact with on-site contaminants. Construction workers operating under appropriate management procedures and the CHASP would be protected from on-site contaminants (personal protective equipment would be worn consistent with the documented risks within the respective work zones).

3.2.3 Long-Term Effectiveness and Permanence

This evaluation criterion addresses the results of a remedial action in terms of its permanence and quantity/nature of waste or residual contamination remaining at the Site after response objectives have been met, such as permanence of the remedial alternative, magnitude of remaining contamination, adequacy of controls including the adequacy and suitability of Engineering Controls/Institutional Controls (ECs/ICs) that may be used to manage contaminant residuals that remain at the Site and assessment of containment systems and ICs that are designed to eliminate exposures to contaminants, and long-term reliability of ECs.

Alternative 1 would achieve long-term effectiveness and permanence related to on-site contamination by permanently removing all contaminated soil/fill above Track 1 Unrestricted Use SCOs. Removal of on-site contaminant sources will prevent future groundwater contamination. Long-term protection of building occupants from exposure to soil vapor contamination resulting from vapor intrusion from potential off-site sources would be accomplished through installation of a waterproofing/vapor barrier beneath the building foundation and along foundation walls to grade in all areas where the corresponding indoor space is not associated with parking uses. However, a vapor barrier may not necessarily be installed to grade along all sub-grade sidewalls, for example where corresponding indoor space is associated with parking. However, in the parking areas, the exposure pathway associated with subsurface vapors migrating into the building would be mitigated by the high volume flow rate ventilation required by the NYC Mechanical Code for indoor parking areas.

Alternative 2 would provide long-term effectiveness by removing most on-site soil contamination and attaining Track 4 Site-Specific SCOs; installation of a composite cover system across the Site, maintaining use restrictions, establishing an SMP to ensure long-term management of ICs/ECs, and maintaining continued registration as an E-designated property to memorialize these controls for the long term. The SMP would ensure long-term effectiveness of all ECs and ICs by requiring periodic inspection and certification that these controls and restrictions continue to be in place and are functioning as they were intended assuring that protections designed into the remedy will provide continued high level of protection in perpetuity. Long-term protection of building occupants from exposure to soil vapor contamination resulting from vapor intrusion from potential off-site sources would be accomplished through installation of a waterproofing/vapor barrier beneath the building foundation and along foundation walls to grade.

Both alternatives would result in removal of soil contamination exceeding respective SCOs, providing the highest level, most effective and permanent remedy over the long-term with respect to a remedy for contaminated soil, which will eliminate any migration to groundwater. Potential sources of soil vapor and groundwater contamination that have been or are identified will also be eliminated as part of the remedy.

3.2.4 Reduction of Toxicity, Mobility, or Volume of Contaminated Material

This evaluation criterion assesses the remedial alternatives' use of remedial technologies that permanently and significantly reduce toxicity, mobility, or volume of contaminants as their principal element. The following is the hierarchy of source removal and control measures that are to be used to remediate a Site, ranked from most preferable to least preferable: removal and/or treatment, containment, elimination of exposure, and treatment of source at the point of exposure. It is preferred to use treatment or removal to eliminate contaminants at a Site, reduce the total mass of toxic contaminants, cause

irreversible reduction in contaminants mobility, or reduce of total volume of contaminated media.

Alternative 1 would permanently eliminate the toxicity, mobility, and volume of contaminants from on-site soil by removing all soil in excess of Track 1 Unrestricted Use SCOs.

Alternative 2 would remove most of the historic fill at the Site, and any remaining on-site soil beneath the new building will meet Track 4 Site-Specific SCOs.

Alternative 1 would eliminate a greater total mass of contaminants on-site. The removal of soil to between 12 and 29.5 feet below grade for the new development for Alternative 2 would likely result in relatively minor differences between these two alternatives.

Future presence of contaminants on-site resulting from the migration from off-site sources via soil vapor or ground water is considered as part of both remedial alternatives.

3.2.5 Implementability

This evaluation criterion addresses the technical and administrative feasibility of implementing an alternative and the availability of various services and materials required during its implementation, including technical feasibility of construction and operation, reliability of the selected technology, ease of undertaking remedial action, monitoring considerations, administrative feasibility (e.g. obtaining permits for remedial activities), and availability of services and materials.

The techniques, materials and equipment to implement both remedial Alternatives 1 and 2 are readily available and have been proven effective in remediating the contaminants associated with the Site. They use standard materials and services that are well established technology. The reliability of each remedy is also high. There are no special difficulties associated with any of the activities proposed.

3.2.6 Cost effectiveness

This evaluation criterion addresses the cost of alternatives, including capital costs (such as construction costs, equipment costs, and disposal costs, engineering expenses) and Site management costs (costs incurred after remedial construction is complete) necessary to ensure the continued effectiveness of a remedial action.

Since historic fill at the Site was found during the RI to extend to a depth of up to 7 feet below grade, and the Alternative 2 approach to new building construction would require excavation specific to the development plan of 29.5 feet across approximately 50 percent of the building footprint to accommodate a sub-cellar, 10 feet for approximately 40 percent of the building footprint for a parking garage, and 15 feet below grade for approximately 10 percent of the building footprint to accommodate additional parking, and limited 2-foot excavation for grading, structural piles and landscaping; the costs associated with the greater amount of excavation and removal of soil exceeding UUSCOs that would be required for the Alternative 1 remedy, would likely be greater. Additional costs would include excavation outside the building footprint to approximately seven feet below grade, additional shoring/underpinning, disposal of additional soil, and import of clean soil for backfill.

The remedial plan creates an approach that combines the remedial action with the redevelopment of the Site, including the construction of the building foundation and subgrade structures. The remedial plan is also cost effective in that it will take into

consideration the selection of the closest and most appropriate disposal facilities to reduce transportation and disposal costs during the excavation of historic fill and other soil during the redevelopment of the Site.

3.2.7 Community Acceptance

This evaluation criterion addresses community opinion and support for the remedial action. Observations here will be supplemented by public comment received on the RAWP.

Based on the overall goals of the remedial program and initial permitting associated with the proposed Site development, no adverse community opinion is anticipated for either alternative. This RAWP will be subject to a public review under the NYC VCP and will provide the opportunity for detailed public input on the remedial alternatives and the selected remedy. This public comment will be considered by OER prior to approval of this plan. The Citizen Participation Plan for the project is provided in Appendix 3. Observations here will be supplemented by public comment received on the RAWP.

3.2.8 Land Use

This evaluation criterion addresses the proposed use of the Site. This evaluation has considered reasonably anticipated future uses of the Site and takes into account: current use and historical and/or recent development patterns; applicable zoning laws and maps; NYS Department of State's Brownfield Opportunity Areas (BOA) pursuant to section 970-r of the general municipal law; applicable land use plans; proximity to real property currently used for residential use, and to commercial, industrial, agricultural, and/or recreational areas; environmental justice impacts, Federal or State land use designations; population growth patterns and projections; accessibility to existing infrastructure; proximity of the Site to important cultural resources and natural resources, potential vulnerability of groundwater to contamination that might emanate from the site, proximity to flood plains, geography and geology; and current Institutional Controls applicable to the Site.

The current, intended, and reasonably anticipated future land use of the Site and its surroundings are compatible with the selected remedy.

The proposed development plan consists of a mixed-use commercial/residential development with three connecting mixed use buildings: a two- to seven-story base building (Base Building - Building 1), a 30-story residential tower (South Tower - Building 2), and a 40-story residential tower (North Tower – Building 3). The proposed building footprint at grade is approximately 76,762 square feet. The proposed building will include: a sub-cellar mechanical and storage area of approximately 37,505 square feet and two parking areas with 330 spaces; a residential parking area of approximately 25,102 square feet; and a potential future MTA parking area of approximately 7,840 square feet. The ground level of Building 1 includes commercial/retail uses and future MTA offices. The second story of Building 1 includes residential lobbies and dwelling units. Floors 3 and above in all three buildings are designed for residential use. Landscaped terraces are planned for the first and second floors in the northern portion of Building 1 facing Newtown Creek. A landscaped plaza is included on the second floor in the eastern-central portion of the Building 1, and an outdoor landscaped area is planned for the second story along the southern portion of the Building 1 facing Commercial Street. The estimated gross square footage of the redevelopment is 762,919 square feet. Architectural drawings of the proposed redevelopment are included in Appendix 1.

The reasonably anticipated future use of the Site and its surroundings will be documented by the applicant in the NYC VCP application, which will include the following conclusions:

- The proposed redevelopment of the Site is compatible with its current zoning and is consistent with recent development patterns. The areas surrounding the Site are occupied by primarily industrial uses, with some commercial and residential use in zoning districts designated for commercial and residential uses. The development would replace an underutilized Site with a modern mixed-use residential/commercial building. The proposed development would create new employment opportunities, living space, and economic and fiscal benefits to the City and State in the form of economic revitalization and tax revenue.
- Temporary short-term project impacts are being mitigated through Site management controls and truck traffic controls during remediation activities. Following remediation, the Site will meet either the Alternative 1 Track 1 or Alternative 2 Track 4 Site-Specific SCOs, which is appropriate for its planned residential use.
- The Site is located southeast-adjacent to Newtown Creek. The Site is not in close proximity to important cultural resources, including federal or state historic or heritage sites or Native American religious sites, wildlife refuges, or critical habitats of endangered or threatened species. Both alternatives would prevent any potential exposure pathways of contaminant migration affecting fish or wildlife in or adjacent to Newtown Creek. Municipal water supply wells are not present in this part of City; therefore, groundwater from the Site cannot affect municipal water supply wells or recharge areas. A portion of the Site is within the Federal Emergency Management Agency (FEMA)-designated flood plain. Both alternatives are equally protective of natural resources and cultural resources.

Improvements in the current environmental condition of the property achieved by both alternatives are also consistent with the City's goals for cleanup of contaminated land and bringing such properties into productive reuse.

3.2.9 Sustainability of the Remedial Action

This criterion evaluates the overall sustainability of the remedial action alternatives and the degree to which sustainable means are employed to implement the remedial action including those that take into consideration NYC's sustainability goals defined in PlaNYC: A Greener, Greater New York. Sustainability goals may include: maximizing the recycling and reuse of non-virgin materials; reducing the consumption of virgin and non-renewable resources; minimizing energy consumption and greenhouse gas emissions; improving energy efficiency; and promotion of the use of native vegetation and enhancing biodiversity during landscaping associated with Site development.

While Alternative 2 would potentially result in lower energy usage based on reducing the volume of material transported off-site, both remedial alternatives are comparable with respect to the opportunity to achieve sustainable remedial action. The remedial plan would take into consideration the shortest trucking routes during off-site disposal of historic fill and other soil, which would reduce greenhouse gas emissions and conserve energy used to fuel trucks. The New York City Clean Soil Bank program may be utilized for reuse of native soil. To the extent practicable, energy efficient building materials, appliances, and equipment will be utilized to complete the development. A complete list of green remedial activities considered as part of the NYC VCP is included in the Sustainability Statement, included as Appendix 4.

4.0 REMEDIAL ACTION

4.1 SUMMARY OF PREFERRED REMEDIAL ACTION

The preferred remedial action alternative is Alternative 2 attaining the Site-specific Track 4 SCOs. The preferred remedial action alternative achieves protection of public health and the environment for the intended use of the Site. The preferred remedial action alternative will achieve all of the remedial action objectives established for the project and addresses applicable SCGs. The preferred remedial action alternative is effective in both the short-term and long-term and reduces mobility, toxicity and volume of contaminants. The preferred remedial action alternative is cost effective and implementable and uses standards methods that are well established in the industry.

The proposed remedial action will consist of:

1. Preparation of a Community Protection Statement and performance of all required NYC VCP Citizen Participation activities according to an approved Citizen Participation Plan.
2. Performance of all activities required for the remedial action, including permitting requirements and pretreatment requirements, in compliance with applicable laws and regulations.
3. Establishment of Site Specific Track 4 Soil Cleanup Objectives (SCOs).
4. Site mobilization involving Site security setup, equipment mobilization, utility mark outs and marking & staking excavation areas.
5. Perform additional Site characterization sampling of soil, groundwater, or soil vapor if required.
6. Completion of a Waste Characterization Study prior to excavation activities. Waste characterization soil samples will be collected at a frequency dictated by disposal facility(s).
7. Excavation and removal of soil/fill above Track 4 Site Specific SCOs. Approximately 50 percent of the building footprint would be excavated to 29.5 feet to accommodate the sub-cellar, 15 feet for approximately 30 percent of the building footprint for a parking garage, and to 10 feet below grade for approximately 10 percent of the building footprint to accommodate for a future proposed additional parking garage. The remainder of the Site will be excavated sufficiently and graded for the installation of engineered composite cover systems for paved pathways and landscaping areas.
8. Screening of excavated soil/fill during intrusive work for indications of contamination by visual means, odor, and monitoring with a PID. Appropriate segregation of excavated media on-site.
9. Management of excavated materials, in accordance with the Soil and Materials Management Plan, including temporarily stockpiling and segregating in accordance with defined material types and to prevent co-mingling of contaminated material and non-contaminated materials.
10. Removal of one 15,000-gallon fuel oil UST and one 550-gallon UST and any additional USTs (if encountered) and closure of any petroleum spills in compliance with applicable local, State and Federal laws and regulations.
11. Transportation and off-site disposal of all soil/fill material at permitted facilities in accordance with applicable laws and regulations for handling, transport, and disposal, and this plan. Sampling and analysis of excavated media as required by disposal facilities. Appropriate segregation of excavated media on-site.
12. Collection and analysis of end-point samples to determine the performance of the remedy with respect to attainment of SCOs.
13. Demarcation of residual soil/fill in landscaped areas.

14. Import of materials to be used for backfill and cover in compliance with this plan and in accordance with applicable laws and regulations.

15. A passive sub-slab depressurization system (SSDS) will be designed and installed beneath the waterproofing/vapor barrier system in areas of the building where the slab is installed above the water table and where the use is a non-parking use, i.e., indoor space, including occupied space, mechanical space, common corridors, etc., except where the bottom of the slab is within two feet above the groundwater table, or below the groundwater table. At this time, this is limited to a 6,500-square foot area in the northwestern portion of the property.

16. Installation of a vapor barrier system beneath the building slab as well as behind foundation sidewalls up to grade level of the proposed building. The vapor barrier will consist of Grace Preprufe® 300R (or equivalent). Other areas of the building will extend into the groundwater table, therefore, sub-slab depressurization in those areas is not feasible.

17. Construction and maintenance of an engineered composite cover consisting of a 3-foot thick concrete slab for the sub-cellar, a 12-inch concrete slab for the parking garage, landscaped areas with 2 feet of clean soil, and asphalt or concrete-paved walkways to prevent human exposure to residual soil/fill remaining under the Site.

18. Construction and operation of a ventilated parking garage as per NYC Building Department's codes and requirements.

19. Import of materials to be used for backfill and cover in compliance with this plan and in accordance with applicable laws and regulations.

20. Performance of all activities required for the remedial action, including permitting requirements and pretreatment requirements, in compliance with applicable laws and regulations.

21. Implementation of stormwater pollution prevention measures in compliance with applicable laws and regulations.

22. Submission of an approved Site Management Plan (SMP) in the Remedial Action Plan (RAR) for long-term management of residual contamination, including plans for operation, maintenance, monitoring, inspection and certification of Engineering and Institutional Controls and reporting at a specified frequency.

23. Submission of a P.E. certified RAR that describes the remedial activities, certifies that the remedial requirements have been achieved, defines the Site boundaries, lists any changes from this RAWP, and describes all Engineering and Institutional Controls to be implemented at the Site.

24. The Site will continue to be registered with an E-Designation at the NYC Buildings Department. Establishment of Engineering Controls and Institutional Controls in this RAWP and a requirement that management of these controls must be in compliance with an approved SMP. Institutional Controls will include prohibition of the following: (1) vegetable gardening and farming; (2) use of groundwater without treatment rendering it safe for the intended use; (3) disturbance of residual contaminated material unless it is conducted in accordance with the SMP; and (4) higher level of land usage without OER-approval.

4.2 SOIL CLEANUP OBJECTIVES AND SOIL/FILL MANAGEMENT

Track 4 SCOs are proposed for this project. The Site-Specific Track 4 SCOs are:

Table 1: Site-Specific Track 4 SCOs

Contaminant	Track 2 SCOs (parts per million)
Lead	1,000 ppm
Total Semivolatile Organic Compounds (SVOCs)	250 ppm
Barium	700 ppm
Arsenic	23 ppm
Mercury	2.8 ppm

Soil and materials management on-site and off-site, including excavation, handling and disposal, will be conducted in accordance with the Soil/Materials Management Plan in Appendix 5. The location of planned excavations is shown on Figure 4.

Discrete contaminant sources (such as hotspots) identified during the remedial action will be identified by GPS or surveyed. This information will be provided in the Remedial Action Report.

4.2.1 Soil/Fill Removal Quantities

The total quantity of soil/fill expected to be excavated and disposed off-site is approximately 90,000 tons. Disposal facilities will be reported to OER when they are identified and prior to the start of remedial action.

4.2.2 End-point Sampling

End-point samples will be analyzed for compounds and elements as described below utilizing the following methodology. Soil analytical methods will include:

- Volatile organic compounds by EPA Method 8260;
- Semi-volatile organic compounds by EPA Method 8270; and
- Target Analyte List metals by EPA 6000 series.

New York State ELAP certified labs will be used for all end-point sample analyses. Labs performing end-point sample analyses will be reported in the RAR. The RAR will provide a tabular and map summary of all end-point sample results and will include all data including non-detects and applicable standards and/or guidance values.

Confirmation End-point Sampling: Removal actions for development purposes under this plan will be performed in conjunction with confirmation soil sampling. Six confirmation samples will be collected from the base of the excavation at the approximate locations shown on Figure 2. To evaluate attainment of Track 4 Site-specific SCOs, analytes will include those for which SCOs have been developed, including VOCs, Total SVOCs, and TAL Metals according to analytical methods previously described.

Additional Hotspot Sampling: If hotspots are identified during the remedial program, hotspot removal actions will be performed to ensure that hot-spots are fully removed. Analytes for end-point sampling will be those parameters that are driving the hot-spot

removal action and will be approved by OER. Analysis will be performed according to analytical methods previously described. Frequency for hot-spot end-point sample collection is as follows:

1. For excavations less than 20 feet in total perimeter, at least one bottom sample and one sidewall sample biased in the direction of surface runoff.
2. For excavations 20 to 300 feet in perimeter:
    - For surface removals, one sample from the top of each sidewall for every 30 linear feet of sidewall and one sample from the excavation bottom for every 900 square feet of bottom area.
    - For subsurface removals, one sample from each sidewall for every 30 linear feet of sidewall and one sample from the excavation bottom for every 900 square feet of bottom area.
3. For sampling of volatile organics, bottom samples should be taken within 24 hours of excavation, and should be taken from the zero to six-inch interval at the excavation floor. Samples taken after 24 hours should be taken at six to twelve inches.
4. For contaminated soil removal, post remediation soil samples for laboratory analysis should be taken immediately after contaminated soil removal. If the excavation is enlarged horizontally, additional soil samples will be taken pursuant to bullets 1-3 above.

    Post-remediation end-point sample locations and depth will be biased towards the areas and depths of highest contamination identified during previous sampling episodes unless field indicators such as field instrument measurements or visual contamination identified during the remedial action indicate that other locations and depths may be more heavily contaminated. In all cases, post-remediation samples should be biased toward locations and depths of the highest expected contamination.

    If either light non-aqueous phase liquid (LNAPL) and/or dense non-aqueous phase liquid (DNAPL) are detected, appropriate samples will be collected for characterization and “finger print analysis” and required regulatory reporting (i.e., spills hotline) will be performed.

4.2.3 Quality Assurance/Quality Control (QA/QC)

The fundamental QA objective with respect to accuracy, precision, and sensitivity of analysis for laboratory analytical data is to achieve the QC acceptance of the analytical protocol. The accuracy, precision and completeness requirements will be addressed by the laboratory for all data generated.

One blind duplicate sample for every 20 samples collected will be submitted to the approved laboratory for analysis of the same parameters. Trip blanks will be used whenever samples are transported to the laboratory for analysis of VOCs. One trip blank will be submitted to the laboratory with each shipment of soil samples. Trip blanks will not be used for samples to be analyzed for SVOCs or metals.

Collected samples will be appropriately packaged, placed in coolers and shipped via overnight courier or delivered directly to the analytical laboratory by field personnel. Samples will be containerized in appropriate laboratory provided glassware and shipped

in plastic coolers. Samples will be preserved through the use of ice or "cold-packs" to maintain a temperature of 4 °C.

Dedicated disposable sampling materials will be used for the collection endpoint samples, eliminating the need to prepare field equipment (rinsate) blanks. However, if non-disposable equipment is used, (stainless steel scoop, etc.) field rinsate blanks will be prepared at the rate of 1 for every 20 samples collected. Decontamination of non-dedicated sampling equipment will consist of the following:

- Gently tap or scrape to remove adhered soil
- Rinse with tap water
- Wash with Alconox® detergent solution and scrub
- Rinse with tap water
- Rinse with distilled or deionized water

Field blanks will be prepared by pouring distilled or deionized water over decontaminated equipment and collecting the water in laboratory provided containers.

4.2.4 Import and Reuse of Soil

Import of soil onto the Site and reuse of soil already on-site will be performed in conformance with the Soil/Materials Management Plan in Appendix 5. The current redevelopment plans include importing soil for landscaped areas at grade along the western and northern property boundaries of the Site. The elevation of the northern property boundary is less than the remainder of the property and on-site soil may reused to grade the area.

4.3 ENGINEERING CONTROLS

Engineering Controls will be employed in the remedial action to address residual contamination remaining at the site. The Site will have three primary Engineering Control Systems, including a composite cover system and a vapor barrier.

4.3.1 Composite Cover

An engineered composite cover system will cover the entire Site. This cover system will be composed of the proposed new building foundation, landscaped areas with a two-foot clean fill/topsoil cap, and asphalt or concrete paved walkways. The foundation will consist of foundation walls and a 3-foot thick concrete slab for the sub-cellar and 12-inch thick concrete-building slabs beneath the parking areas. The waterfront esplanade area will require backfill to reach the desired pre-cap elevation. Once the area has been graded, a demarcation barrier and a cap consisting of a two-foot clean fill/topsoil and concrete or asphalt paved walkways will be constructed. Upland areas outside of the building footprint will require excavation to reach the desired pre-cap elevation. Once the area has been backfilled, the cap consisting of a two-foot clean fill/topsoil and concrete paved walkways will be constructed. Landscaped areas will include placement of a demarcation layer. Figure 4 shows the excavation required in the areas of the Site outside of the building footprint. Figure 5 shows the extent of the composite cover system.

The composite cover system is a permanent engineering control for the Site. The system will be inspected and reported at specified intervals as required by this RAWP and the SMP. A Soil Management Plan will be included in the SMP and will outline the procedures to be followed in the event that the composite cover system and underlying

residual soil/fill is disturbed after the remedial action is complete. Maintenance of this composite cover system will be described in the SMP in the RAR. Figure 5 shows the typical design for each remedial cover type used on this Site and the location of each cover type built at the Site.

4.3.2 Vapor Barrier

In order to mitigate potential migration of soil vapors into the building, a vapor barrier will be installed below the foundation slab and along sub-grade sidewalls up to grade. The waterproofing membrane/vapor barrier will consist of Grace Preprufe® 300R (or equivalent) along the foundation walls up to grade and below the lowest level horizontal slab; at grade, cellar or sub-cellar areas of the building. Figure 5 shows the proposed extent of the vapor barrier system. The vapor barrier will be installed in accordance with the manufacturer's specifications, including those for sealing penetrations through the foundation. Proof of installation of the barrier will be included in the Professional Engineer (P.E.) certified RAR. The vapor barrier specifications are provided in Appendix 6. The barrier system is a permanent engineering control for the Site.

4.3.3 Sub-Slab Depressurization System

A passive sub-slab depressurization system (SSDS) will be designed and installed beneath the waterproofing/vapor barrier system in areas of the building where the slab is installed above the water table and where the use is a non-parking use, i.e., indoor space, including occupied space, mechanical space, common corridors, etc., except where the bottom of the slab is within two feet above the groundwater table or below the groundwater table. The current building design is such that approximately 6,500 square feet located in the northwestern corner of the first floor of the building base will be completed at grade. This at-grade area of the building will contain a children's room, a pet spa and a community facility. Post-excavation confirmatory soil vapor sampling may be conducted to determine whether on-site excavation has addressed the identified soil vapor contamination.

The SSDS will consist of two sets of 4-inch diameter slotted PVC pipe encased with a filter fabric located in an 18-inch wide by 18-inch deep trench filled with aggregate beneath the waterproofing membrane/vapor barrier and new building slab (if the slab is greater than two feet above the water table). Each set of pipes will be configured in a loop beneath approximately 50 percent of the section of the building and vented to the roof through a 4-inch diameter galvanized steel pipe. The location of the SSDS is shown on Figure 7. Additional design details will be provided prior to approval of the RAWP.

4.4 INSTITUTIONAL CONTROLS

Institutional Controls (IC) have been incorporated in this remedial action to manage residual soil/fill and other media and render the Site protective of public health and the environment. Institutional Controls are listed below. Long-term employment of EC/ICs will be implemented under a Site-specific Site Management Plan (SMP) that will be included in the RAR. The Site will continue to be registered with an E-Designation at the NYC Buildings Department.

Institutional Controls for this remedial action are:

- Continued registration of the E-Designation for the Site. This RAWP includes a description of all ECs and ICs and summarizes the requirements of the SMP which will note that the

property owner and property owner's successors and assigns must comply with the approved SMP.

- Submittal of a SMP in the RAR for approval by OER that provides procedures for appropriate operation, maintenance, inspection, and certification of ECs and IC's. SMP will require that the property owner and property owner's successors and assigns will submit to OER a periodic written statement that certifies that: (1) controls employed at the Site are unchanged from the previous certification or that any changes to the controls were approved by OER; and, (2) nothing has occurred that impairs the ability of the controls to protect public health and environment or that constitute a violation or failure to comply with the SMP. OER retains the right to enter the Site in order to evaluate the continued maintenance of any controls. This certification shall be submitted at a frequency to be determine by OER in the SMP and will comply with RCNY §43-1407(l)(3).
- Vegetable gardens and farming on the Site are prohibited in contact with residual soil materials.
- Use of groundwater underlying the Site is prohibited without treatment rendering it safe for its intended use.
- All future activities on the Site that will disturb residual material must be conducted pursuant to the soil management provisions in an approved SMP.
- The Site will be used for residential and commercial uses and will not be used for a higher level of use without prior approval by OER.

4.5 SITE MANAGEMENT PLAN

Site Management is not required for Track 1 remedial actions. However, if Track 1 SCOs are not achieved, Site Management will be the last phase of remediation and begins with the approval of the Remedial Action Report and issuance of the Notice of Completion (NOC) for the Remedial Action. The Site Management Plan (SMP) describes appropriate methods and procedures to ensure implementation of all ECs and ICs that are required by this RAWP and the E-Designation that will remain in-place. The SMP is submitted as part of the RAR but will be written in a manner that allows its use as an independent document. Site Management continues until terminated in writing by OER. The property owner is responsible to ensure that all Site Management responsibilities defined in the DCR and the SMP are implemented.

The SMP will provide a detailed description of the procedures required to manage residual soil/fill left in place following completion of the remedial action in accordance with the Brownfield Cleanup Agreement with OER. This includes a plan for: (1) implementation of EC's and ICs; (2) implementation of monitoring programs; (3) operation and maintenance of EC's; (4) inspection and certification of EC's; and (5) reporting.

Site management activities, reporting, and EC/IC certification will be scheduled by OER on a periodic basis to be established in the SMP and will be subject to review and modification by OER. The SMP will be based on a calendar year and certification reports will be due for submission to OER by July 31 of the year following the reporting period.

4.6 QUALITATIVE HUMAN HEALTH EXPOSURE ASSESSMENT

The objective of the qualitative exposure assessment is to identify potential receptors and pathways for human exposure to the contaminants of concern (COC) that are present at, or migrating from, the Site. The identification of exposure pathways describes the route that the COC takes to travel from the source to the receptor. An identified pathway indicates that the potential for exposure exists; it does not imply that exposures actually occur.

Data and information reported in the Remedial Investigation Report (RIR) are sufficient to complete a Qualitative Human Health Exposure Assessment (QHHEA). As part of the VCP process, a QHHEA was performed to determine whether the Site poses an existing or future health hazard to the Site's exposed or potentially exposed population. The sampling data from the RI were evaluated to determine whether there is any health risk under current and future conditions by characterizing the exposure setting, identifying exposure pathways, and evaluating contaminant fate and transport. This QHHEA was prepared in accordance with Appendix 3B and Section 3.3 (b) 8 of the NYSDEC Draft DER-10 Technical Guidance for Site Investigation and Remediation.

4.6.1 Known and Potential Contaminant Sources

Based on the results of the RIR, the contaminants of concern are:

- Soil: VOCs, SVOCs, and metals above NYSDEC UUSCOs and RRSCOs
- Groundwater: SVOCs and total and dissolved metals above NYSDEC AWQS
- Soil Vapor: PCE and TCE above NYSDOH AGVs

4.6.2 Nature, Extent, Fate and Transport of Contaminants

Soil: SVOCs including benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene, phenol and several metals were detected in shallow and deep samples across the Site at concentrations above UUSCOs and RRSCOs. The SVOC exceedances were PAHs, which are a class of compounds found in some petroleum products, coal ash, and in other combustion products that are commonly found in historic fill, which will be excavated for foundation elements during construction over the majority of the Site. Two of SVOCs (benzo(b)fluoranthene and benzo(k)fluoranthene) were also detected in groundwater. Naturally occur metals (magnesium, iron, manganese, and sodium) were also detected in dissolved groundwater samples. Soil vapor samples detected several petroleum related compounds and TCE. These VOCs compounds were not detected in soil and groundwater.

4.6.3 Receptor Populations

On-Site Receptors: The Site is currently vacant and capped with a vacant warehouse building. Access to Site during construction will be restricted by an eight-foot high, chained and locked, perimeter fence. On-site receptors are limited to trespassers and Site representatives and visitors granted access to the Site. During construction, potential on-site receptors include construction workers, Site representatives, and visitors. Under proposed future conditions, potential on-site receptors include adult and child building residents, workers, and visitors.

Off-Site Receptors: Potential off-site receptors within a 400 foot radius of the Site include: adult and child residents; commercial and construction workers; pedestrians; trespassers; and passerby based on the following:

1. Commercial Businesses (up to 400 foot) – existing and future
2. Residential Buildings (up to 400 foot) – existing and future
3. Building Construction/ Renovation (up to 400 foot) – existing and future
4. Pedestrians, Trespassers, Cyclists (up to 400 foot) – existing and future
5. Schools (up to 400 foot) – future

4.6.4 Potential Routes of Exposure

Three potential primary routes exist by which chemicals can enter the body: ingestion, inhalation, and dermal absorption. Exposure can occur based on the following potential media:

- Ingestion of groundwater or fill/ soil;
- Inhalation of vapors or particulates; and
- Dermal absorption of groundwater or fill/ soil.

4.6.5 Potential Exposure Points

Current Conditions: The Site is currently capped with a vacant warehouse building and asphalt. Therefore, there are no potential exposure pathways from ingestion, inhalation, or dermal absorption of soil/ fill. Groundwater is marginally contaminated and is not exposed at the Site, and because the Site is served by the public water supply, groundwater is not used at the Site and there are no potential for exposure. The Site is currently developed with a vacant warehouse building; however, the on-site structure is properly ventilated.

Construction/ Remediation Activities: During the remedial action, on-site workers will come into direct contact with soil and groundwater, as a result of on-site construction and excavation activities. Due to the depth of groundwater, contact with groundwater is expected during excavation for the proposed building foundation elements. On-site construction workers potentially could ingest, inhale, or have dermal contact with any exposed impacted soil and fill. Similarly, off-site receptors could be exposed to dust and vapors from on-site activities. During construction, on-site and off-site exposures to contaminated dust from on-site will be addressed through the Soil/Materials Management Plan, dust controls, and through the implementation of the CAMP and a CHASP.

Proposed Future Conditions: Under future remediated conditions, all soils in excess of Track 4 SCOs will be removed from above the water table. The Site will be fully capped, limiting potential direct exposure to soil and groundwater remaining in place, and engineering controls (composite cover system, vapor barrier and passive SSDS (if necessary) will prevent any exposure to potential for inhalation via soil vapor intrusion. The Site is served by the public water supply, and groundwater is not used at the Site. There are no plausible off-site pathways for oral, inhalation, or dermal exposure to contaminants derived from the Site.

4.6.6 Overall Human Health Exposure Assessment

There are potential exposure pathways for the current Site condition. There is a potential complete exposure pathway that requires mitigation during implementation of the remedy. There is no complete exposure pathway under future conditions after the Site is developed. This assessment takes into consideration the reasonably anticipated use of the Site, which includes a vapor barrier beneath the mixed-use residential/commercial buildings. Landscaped areas will be capped with at least two feet of clean fill underlain by a demarcation layer. Under current conditions, on-site exposure pathways exist for those given access to the Site or trespassers. During remedial construction, on-site and off-site exposures to contaminated dust from historic fill material will be addressed through dust controls, and through the implementation of the CAMP, the Soil/Materials Management Plan, and a CHASP. Potential post-construction use of groundwater is not considered an option because groundwater in this area of New York City is not used as a

potable water source. Impacts to Newtown Creek will be prevented through the implementation of a Stormwater Pollution Prevention Plan.

Environmental Media & Exposure Route	Human Exposure Assessment
Direct contact with surface soil (and incidental ingestion)	• People are not coming into contact because contaminated surface soils are covered with a vapor barrier and a concrete cap beneath the building and a clean fill cover in landscaped areas; • People are not coming into contact because public access to the Site is restricted by fencing; • People can come into contact if they trespass on the Site.
Direct contact with subsurface soil (and incidental ingestion)	• People can come into contact if they complete ground-intrusive work on the Site.
Ingestion of groundwater	• Contaminated groundwater is not being used for drinking water, as the area is served by the public water supply and use of groundwater is prohibited.
Direct contact with groundwater	• People can come into contact if they complete ground-intrusive work at the Site; • Due to the depth of the excavation, direct contact with groundwater is possible for construction workers installing and operating the dewatering system. Once operational, the groundwater level will be lowered to reduce the potential for contact in the excavation area.
Inhalation of air (exposures related to soil vapor intrusion)	• A vapor barrier system will be installed beneath the on-site building to prevent the indoor air quality from being affected by the contamination.

5.0 REMEDIAL ACTION MANAGEMENT

5.1 PROJECT ORGANIZATION AND OVERSIGHT

Principal personnel who will participate in the remedial action include:

Michelle Lapin	New York State Professional Engineer
Marc Godick	AKRF Project Director
Stephen Malinowski	AKRF Project Manager and Quality Assurance Officer
Amy Jordan	AKRF Field Team Leader and Site Safety Officer
Mark Jepsen	Alternate Site Safety Officer

5.2 SITE SECURITY

Site access will be controlled by construction fencing with gated entrances to the Site. Barriers will be installed as needed to delineate and restrict access to the work areas. If there are any work areas of limited size, barrier tape will be sufficient to delineate and restrict access.

5.3 WORK HOURS

The hours for operation of remedial construction will conform to the New York City Department of Buildings (DOB) construction code requirements or according to specific variances approved by DOB. The hours of operation will be conveyed to OER during the pre-construction meeting.

5.4 CONSTRUCTION HEALTH AND SAFETY PLAN

The Site-specific Construction Health and Safety Plan (CHASP) is included in Appendix 7. The Site Safety Coordinator will be Amy Jordan of AKRF. Remedial work performed under this RAWP will be in full compliance with applicable health and safety laws and regulations, including Site and OSHA worker safety requirements and HAZWOPER requirements. Confined space entry, if any, will comply with OSHA requirements and industry standards and will address potential risks. The parties performing the remedial construction work will ensure that performance of work is in compliance with the CHASP and applicable laws and regulations. The CHASP pertains to remedial and invasive work performed at the Site until the issuance of the Notice of Satisfaction.

All field personnel involved in remedial activities will participate in training required under 29 CFR 1910.120, including 40-hour hazardous waste operator training and annual 8-hour refresher training. Site Safety Officer will be responsible for maintaining workers training records.

Personnel entering any exclusion zone will be trained in the provisions of the CHASP and be required to sign a CHASP acknowledgment. Site-specific training will be provided to field personnel. Additional safety training may be added depending on the tasks performed. Emergency telephone numbers will be posted at the site location before any remedial work begins. A safety meeting will be conducted before each shift begins. Topics to be discussed include task hazards and protective measures (physical, chemical, environmental); emergency procedures; PPE levels and other relevant safety topics. Meetings will be documented in a log book or specific form. An emergency contact sheet with names and phone numbers is included in the CHASP. That document will define the specific project contacts for use in case of emergency.

5.5 COMMUNITY AIR MONITORING PLAN

Real-time air monitoring for volatile organic compounds (VOCs) and particulate levels at the perimeter of the exclusion zone or work area will be performed. Continuous monitoring will be performed for all ground intrusive activities and during the handling of contaminated or potentially contaminated media. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pit excavation or trenching, and the installation of soil borings or monitoring wells.

Periodic monitoring for VOCs will be performed during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. Periodic monitoring during sample collection, for instance, will consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or overturning soil, monitoring during well bailing/purging, and taking a reading prior to leaving a sample location. Depending upon the proximity of potentially exposed individuals, continuous monitoring may be performed during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence. Exceedances of action levels observed during performance of the Community Air Monitoring Plan (CAMP) will be reported to the OER Project Manager and included in the Daily Report.

5.5.1 VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) will be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis during invasive work. Upwind concentrations will be measured at the start of each workday and periodically thereafter to establish background conditions. The monitoring work will be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment will be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment will be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

- If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities will be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities will resume with continued monitoring.
- If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities will be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities will resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.
- If the organic vapor level is above 25 ppm at the perimeter of the work area, activities will be shutdown.

All 15-minute readings must be recorded and be available for OER personnel to review. Instantaneous readings, if any, used for decision purposes will also be recorded.

5.5.2 Particulate Monitoring, Response Levels, and Actions

Particulate concentrations will be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring will be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM_{10}) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment will be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

- If the downwind PM_{10} particulate level is 100 micrograms per cubic meter ($\mu g/m^3$) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques will be employed. Work will continue with dust suppression techniques provided that downwind PM_{10} particulate levels do not exceed 150 $\mu g/m^3$ above the upwind level and provided that no visible dust is migrating from the work area.
- If, after implementation of dust suppression techniques, downwind PM_{10} particulate levels are greater than 150 $\mu g/m^3$ above the upwind level, work will be stopped and a re-evaluation of activities initiated. Work will resume provided that dust suppression measures and other controls are successful in reducing the downwind PM_{10} particulate concentration to within 150 $\mu g/m^3$ of the upwind level and in preventing visible dust migration.

All readings will be recorded and be available for OER personnel to review.

5.6 AGENCY APPROVALS

All permits or government approvals required for remedial construction have been or will be obtained prior to the start of remedial construction. Approval of this RAWP by OER does not constitute satisfaction of these requirements and will not be a substitute for any required permit.

5.7 SITE PREPARATION

5.7.1 Pre-Construction Meeting

OER will be invited to attend the pre-construction meeting at the Site with all parties involved in the remedial process prior to the start of remedial construction activities.

5.7.2 Mobilization

Mobilization will be conducted as necessary for each phase of work at the Site. Mobilization includes field personnel orientation, equipment mobilization (including securing all sampling equipment needed for the field investigation), marking/staking sampling locations and utility mark-outs. Each field team member will attend an orientation meeting to become familiar with the general operation of the Site, health and safety requirements, and field procedures.

5.7.3 Utility Marker Layouts, Easement Layouts

The presence of utilities and easements on the Site will be fully investigated prior to the performance of invasive work such as excavation or drilling under this plan by using, at a minimum, the One-Call System (811). Underground utilities may pose an electrocution, explosion, or other hazard during excavation or drilling activities. All invasive activities will be performed incompliance with applicable laws and regulations to assure safety. Utility companies and other responsible authorities will be contacted to locate and mark

the locations, and a copy of the Mark-Out Ticket will be retained by the contractor prior to the start of drilling, excavation or other invasive subsurface operations. Overhead utilities may also be present within the anticipated work zones. Electrical hazards associated with drilling in the vicinity of overhead utilities will be prevented by maintaining a safe distance between overhead power lines and drill rig masts.

Proper safety and protective measures pertaining to utilities and easements, and compliance with all laws and regulations will be employed during invasive and other work contemplated under this RAWP. The integrity and safety of on-Site and off-Site structures will be maintained during all invasive, excavation or other remedial activity performed under the RAWP.

5.7.4 Dewatering

Dewatering would be required in order to excavate the contaminated soil and fill material below the saturated zone or water table (expected to be 5 to 11 feet below grade). Dewatering for this Site would require a pumping system, settling tanks, possibly a treatment system, and the appropriate New York City Department of Environmental Protection (NYCDEP) to permit discharge the groundwater into the sewer system.

5.7.5 Equipment and Material Staging

Equipment and materials will be stored and staged in a manner that complies with applicable laws and regulations.

5.7.6 Stabilized Construction Entrance

Steps will be taken to ensure that trucks departing the Site will not track soil, fill or debris off-site. Such actions may include use of cleaned asphalt or concrete roads or use of stone or other aggregate-based egress paths between the truck inspection station and the property exit. Measures will be taken to ensure that adjacent roadways will be kept clean of project related soils, fill and debris.

5.7.7 Truck Inspection Station

An outbound-truck inspection station will be set up close to the Site exit. Before exiting the NYC VCP Site, trucks will be required to stop at the truck inspection station and will be examined for evidence of contaminated soil on the undercarriage, body, and wheels. Soil and debris will be removed. Brooms, shovels and potable water will be utilized for the removal of soil from vehicles and equipment, as necessary.

5.7.8 Extreme Storm Preparedness and Response Contingency Plan

Damage from flooding or storm surge can include dislocation of soil and stockpiled materials, dislocation of Site structures and construction materials and equipment, and dislocation of support of excavation structures. Damage from wind during an extreme storm event can create unsafe or unstable structures, damage safety structures and cause downed power lines creating dangerous site conditions and loss of power. In the event of emergency conditions caused by an extreme storm event, the enrollee will undertake the following steps for site preparedness prior to the event and response after the event.

5.7.9 Storm Preparedness

Preparations in advance of an extreme storm event will include the following: containerized hazardous materials and fuels will be removed from the Site; loose materials will be secured to prevent dislocation and blowing by wind or water; heavy equipment such as excavators and generators will be removed from holes, trenches and

depressions on the property to high ground or removed from the property; an inventory of the property with photographs will be performed to establish conditions for the site and equipment prior to the event; stockpile covers for soil and fill will be secured by adding weights such as sandbags for added security and worn or ripped stockpile covers will be replaced with competent covers; stockpiled hazardous wastes will be removed from the property; stormwater management systems will be inspected and fortified, including, as necessary: clean and reposition silt fences, hay bales; clean storm sewer filters and tarps; and secure and protect pumps and hosing.

5.7.10 Storm Response

At the conclusion of an extreme storm event, as soon as it is safe to access the property, a complete inspection of the property will be performed. A Site inspection report will be submitted to OER at the completion of Site inspection and after the Site security is assessed. Site conditions will be compared to the inventory of Site conditions and material performed prior to the storm event and significant differences will be noted. Damage from storm conditions that result in acute public safety threats, such as downed power lines or imminent collapse of buildings, structures or equipment will be reported to public safety authorities via appropriate means such as calling 911. Petroleum spills will be reported to NYS DEC within 2 hours of identification and consistent with State regulations. Emergency and spill conditions will also be reported to OER. Public safety structures, such as construction security fences will be repaired promptly to eliminate public safety threats. Debris will be collected and removed. Dewatering will be performed in compliance with existing laws and regulations and consistent with emergency notifications, if any, from proper authorities. Eroded areas of soil including unsafe slopes will be stabilized and fortified. Dislocated materials will by collected and appropriately managed. Support of excavation structure will be inspected and fortified as necessary. Impacted stockpiles will be contained and damaged stockpile covers will be replaced. Stormwater control systems and structures will be inspected and maintained as necessary. If soil or fill materials are discharged off site to adjacent properties, property owners and OER will be notified and corrective measure plan designed to remove and clean dislocated material will be submitted to OER and implemented following approval by OER and granting of site access by the property owner. Impacted off-site areas may require characterization based on site conditions, at the discretion of OER. If on-site petroleum spills are identified, a qualified environmental professional will determine the nature and extent of the spill and report to NYS DEC's spill hotline at DEC 800-457-7362. If the source of the spill is ongoing and can be identified, it should be stopped it this can be done safely. Potential hazards will be addressed immediately, consistent with guidance issued by NYS DEC.

5.7.11 Storm Response Reporting

A Site inspection report will be submitted to OER at the completion of Site inspection. An inspection report established by OER is available on OER's website (www.nyc.gov/oer) and will be used for this purpose. Site conditions will be compared to the inventory of site conditions and material performed prior to the storm event and significant differences will be noted. The site inspection report will be sent to the OER project manager and will include the site name, address, tax block and lot, site primary and alternate contact name and phone number. Damage and soil release assessment will include: whether the project had stockpiles; whether stockpiles were damaged; photographs of damage and notice of plan for repair; report of whether soil from the site was dislocated and whether any of the soil left the site; estimates of the volume of soil that left the site, nature of impact, and photographs; description of erosion damage;

description of equipment damage; description of damage to the remedial program or the construction program, such as damage to the support of excavation; presence of onsite or offsite exposure pathways caused by the storm; presence of petroleum or other spills and status of spill reporting to NYS DEC; description of corrective actions; schedule for corrective actions. This report should be completed and submitted to OER project manager with photographs within 24 hours of the time of safe entry to the property after the storm event.

5.8 TRAFFIC CONTROL

Drivers of trucks leaving the Site with soil/fill will be instructed to proceed without stopping in the vicinity of the Site to prevent neighborhood impacts. The planned route on local roads for trucks leaving the Site will be established and provided to OER prior to the commencement of remedial action.

5.9 DEMOBILIZATION

Demobilization will include:

- As necessary, restoration of temporary access areas and areas that may have been disturbed to accommodate support areas (e.g., staging areas, decontamination areas, storage areas, temporary water management areas, and access area);
- Removal of sediment from erosion control measures and truck wash and disposal of materials in accordance with applicable laws and regulations;
- Equipment decontamination; and
- General refuse disposal.

Equipment will be decontaminated and demobilized at the completion of all field activities. Investigation equipment and large equipment (*e.g.*, soil excavators) will be washed at the truck inspection station as necessary. In addition, all investigation and remediation derived waste will be appropriately disposed.

5.10 REPORTING AND RECORD KEEPING

5.10.1 Daily Reports

Daily reports providing a general summary of activities for each day of *active remedial work* will be emailed to the OER Project Manager by the end of the following day. Those reports will include:

- Project number and statement of the activities and an update of progress made and locations of work performed;
- Quantities of material imported and exported from the Site;
- Status of on-site soil/fill stockpiles;
- A summary of all citizen complaints, with relevant details (basis of complaint; actions taken; etc.);
- A summary of CAMP excursions, if any; and
- Photograph of notable Site conditions and activities.

The frequency of the reporting period may be revised in consultation with OER project manager based on planned project tasks. Daily email reports are not intended to be the primary mode of communication for notification to OER of emergencies (accidents,

spills), requests for changes to the RAWP or other sensitive or time critical information. However, such information will be included in the daily reports. Emergency conditions and changes to the RAWP will be communicated directly to the OER project manager by personal communication. Daily reports will be included as an Appendix in the Remedial Action Report.

An alpha-numeric site map will be used to identify locations described in reports submitted to OER and is shown on Figure 6.

5.10.2 Record Keeping and Photo Documentation

Job-site record keeping for all remedial work will be performed. These records will be maintained on-site during the project and will be available for inspection by OER staff. Representative photographs will be taken of the Site prior to any remedial activities and during major remedial activities to illustrate remedial program elements and contaminant source areas. Photographs will be submitted at the completion of the project in the RAR in digital format (i.e., jpeg files).

5.11 COMPLAINT MANAGEMENT

All complaints from citizens will be promptly reported to OER. Complaints will be addressed and outcomes will also be reported to OER in daily reports. Notices to OER will include the nature of the complaint, the party providing the complaint, and the actions taken to resolve any problems.

5.12 DEVIATIONS FROM THE REMEDIAL ACTION WORK PLAN

All changes to the RAWP will be reported to the OER Project Manager and will be documented in daily reports and reported in the Remedial Action Report. The process to be followed if there are any deviations from the RAWP will include a request for approval for the change from OER noting the following:

- Reasons for deviating from the approved RAWP;
- Effect of the deviations on overall remedy; and
- Determination that the remedial action with the deviation(s) is protective of public health and the environment.

6.0 REMEDIAL ACTION REPORT

A Remedial Action Report (RAR) will be submitted to OER following implementation of the remedial action defined in this RAWP. The RAR will document that the remedial work required under this RAWP has been completed and has been performed in compliance with this plan. The RAR will include:

- Information required by this RAWP.
- As-built drawings for all constructed remedial elements, required certifications, manifests and other written and photographic documentation of remedial work performed under this remedy.
- Site Management Plan (if Track 1 is not achieved).
- Description of any changes in the remedial action from the elements provided in this RAWP and associated design documents.
- A tabulated summary of all end point sampling results and all material characterization results, QA/QC results for end-point sampling, and other sampling and chemical analysis performed as part of the remedial action.
- Test results or other evidence demonstrating that remedial systems are functioning properly.
- Account of the source area locations and characteristics of all contaminated material removed from the Site including a map showing source areas.
- Account of the disposal destination of all contaminated material removed from the Site. Documentation associated with disposal of all material will include transportation and disposal records, and letters approving receipt of the material.
- Account of the origin and required chemical quality testing for material imported onto the Site.
- Continue registration of the property with an E-Designation by the NYC Department of Buildings.
- Reports and supporting material will be submitted in digital form.

ATTACHMENT A **Remedial Action Report Certification**

I, [name], am currently a registered professional engineer licensed by the State of New York. I performed professional engineering services and had primary direct responsibility for implementation of the remedial program for the [site name (address)] site, site number [VCP site number]. I certify to the following:

- I have reviewed this document, to which my signature and seal are affixed.
- Engineering Controls implemented during this remedial action were designed by me or a person under my direct supervision and achieve the goals established in the Remedial Action Work Plan for this site.
- The Engineering Controls constructed during this remedial action were professionally observed by me or by a person under my direct supervision and (1) are consistent with the Engineering Control design established in the Remedial action Work Plan and (2) are accurately reflected in the text and drawings for as-built design reported in this Remedial Action Report.
- The OER-approved Remedial Action Work Plan dated [date] and Stipulations in a letter dated [date] were implemented and that all requirements in those documents have been substantively complied with. I certify that contaminated soil, fill, liquids or other material from the property were taken to facilities licensed to accept this material in full compliance with applicable laws and regulations.

Name

PE Stamp

PE License Number

Signature

Date

I, [name], am a Qualified Environmental Professional. I had primary direct responsibility for implementation of the remedial program for the [site name (address)] site, site number [VCP site number]. I certify to the following:

- The OER-approved Remedial Action Work Plan dated August 15, 2012 and Stipulations in a letter dated September 10, 2014 were implemented and that all requirements in those documents have been substantively complied with. I certify that contaminated soil, fill, liquids or other material from the property were taken to facilities licensed to accept this material in full compliance with applicable laws and regulations.

QEP Name

QEP Signature

Date

7.0 SCHEDULE

The following table presents a schedule for the proposed remedial action and reporting. If the schedule for remediation and development activities changes, it will be updated and submitted to OER. Currently, an 18 month remediation period is anticipated.

Schedule Milestone	Weeks from Remedial Action Start	Duration (weeks)
OER Approval of RAWP	0	-
Fact Sheet 2 announcing start of remedy	1	1
Mobilization of Security	3	2
Soil Waste Classification Testing	8	4
Mobilization of Heavy Equipment Security	12	1
Remedial Excavation	13	28
Demobilization	TBD	2
Submit Remedial Action Report for Track 4 Cleanup	43	6
Submit Remedial Action Report	49	TBD

FIGURES

SOURCE
USGS 7.5 Minute Topographic Map
Brooklyn Quad 2011

0 1,000 2,000 Feet

77 Commercial Street
Brooklyn, New York

SITE LOCATION

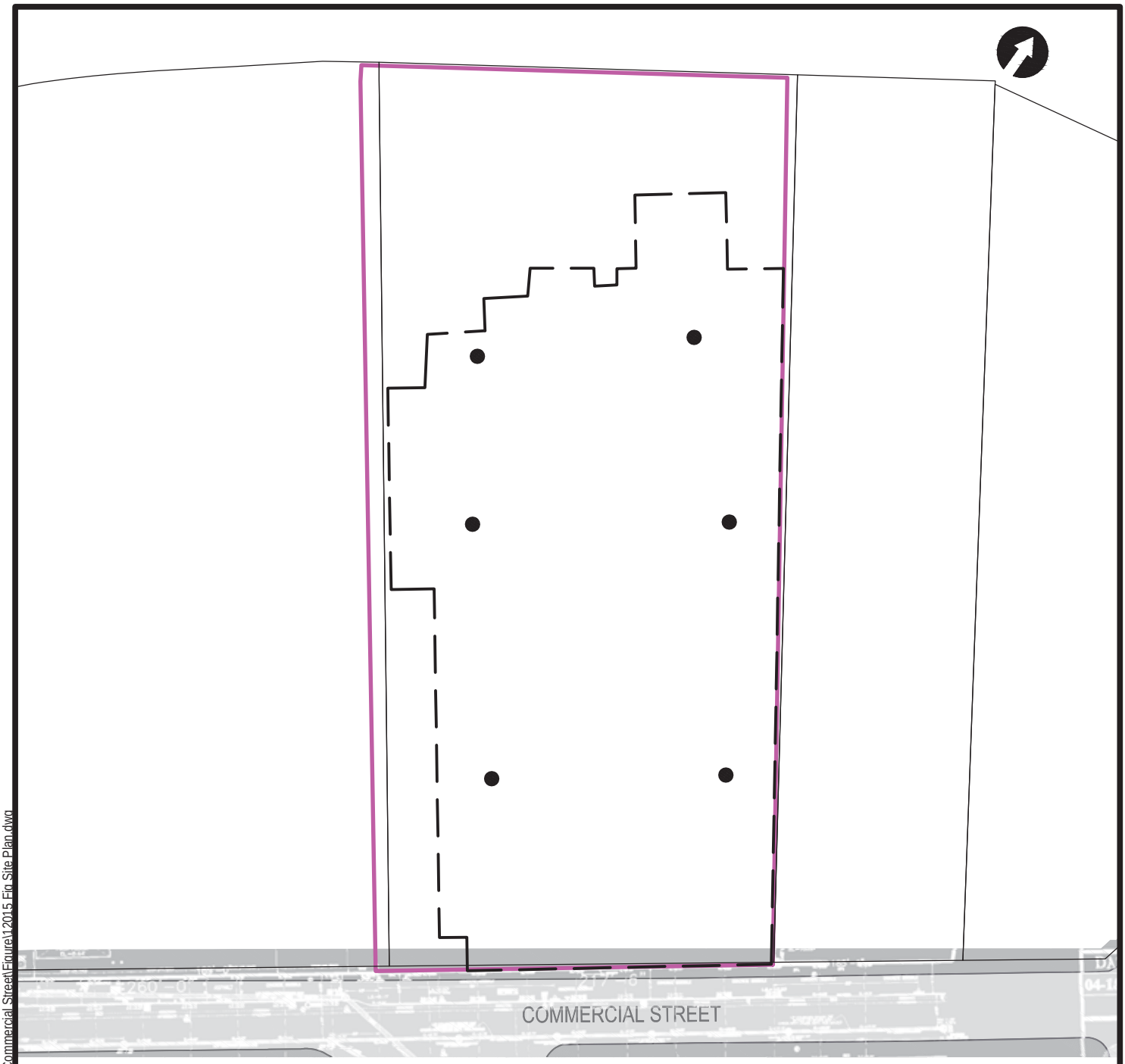
AKRF
Environmental Consultants
440 Park Avenue South, New York, N.Y. 10016

DATE
3/20/2015

PROJECT No.
12015

FIGURE
1

© 2014 AKRF, Inc. Environmental Consultants O:\Projects\12015 - 77 COMMERCIAL ST\hazmat\12015 Fig 1 Site Location map.mxd



LEGEND:

SITE BOUNDARY

APPROXIMATE EXTENT OF PROPOSED BUILDING

PROPOSED ENDPOINT SAMPLE LOCATIONS

0' 40' 80' 160'

SCALE IN FEET

77 Commercial Street

Brooklyn, New York

SITE PLAN WITH PROPOSED ENDPOINT SAMPLE LOCATIONS

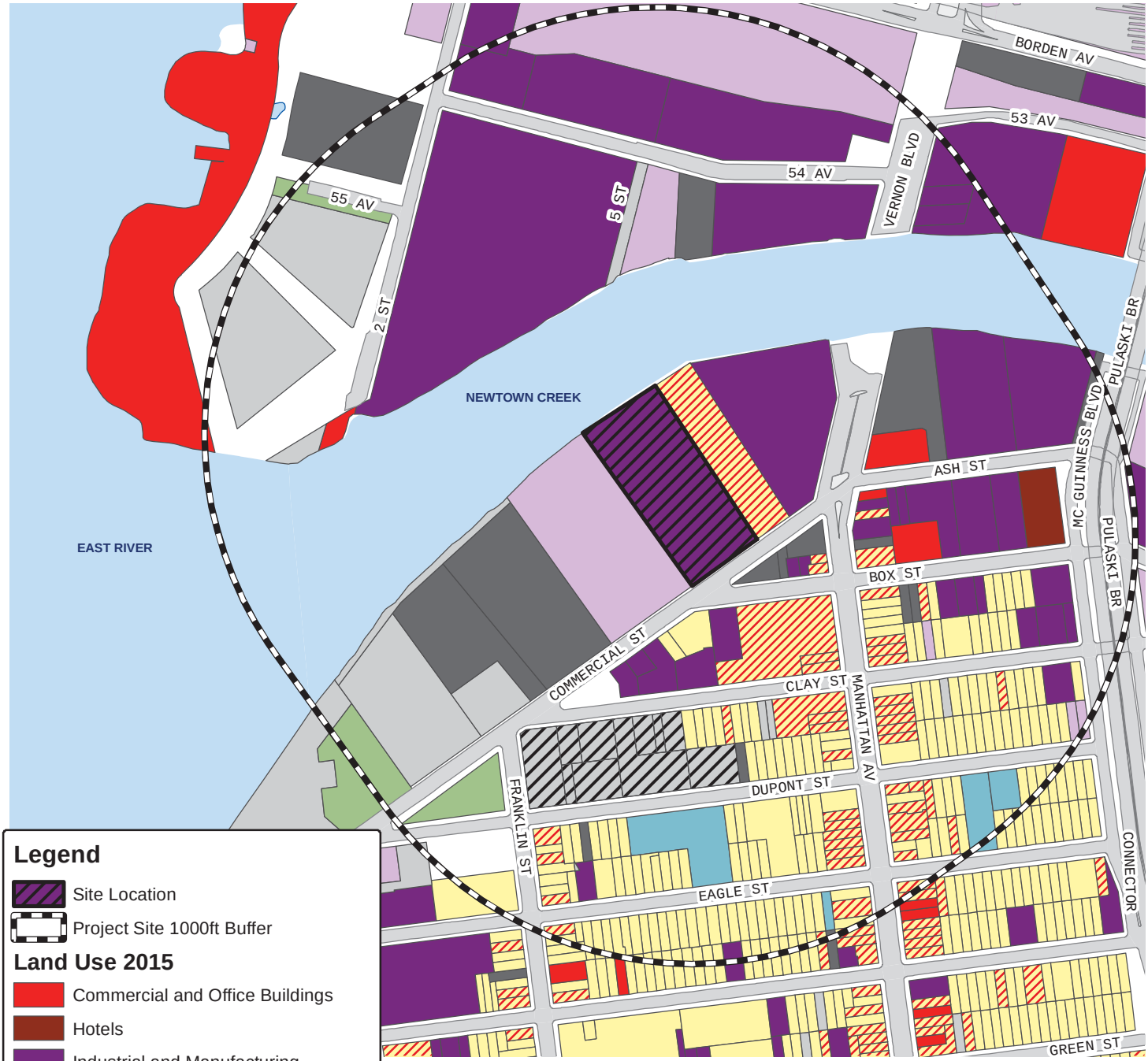
AKRF

Environmental Consultants

440 Park Avenue South, New York, N.Y. 10016

DATE	4.24.2015
PROJECT No.	12015
SCALE	as shown
FIGURE	2

© 2015 AKRF, Inc. Environmental Consultants M:\AKRF Project Files\12015 - 77 Commercial Street\Figure\12015 Fig Site Plan.dwg



Source:
NYCDCP (NYC Dept. of City Planning) GIS database

Legend

- Site Location
- Project Site 1000ft Buffer

Land Use 2015

- Commercial and Office Buildings
- Hotels
- Industrial and Manufacturing
- Open Space and Outdoor Recreation
- Parking Facilities
- Public Facilities and Institutions
- Residential
- Residential with Commercial Below
- Transportation and Utility
- Vacant Land
- Vacant Building
- Under Construction

0 125 250 500
Feet

77 Commercial Street
Brooklyn, New York

SURROUNDING LAND USE

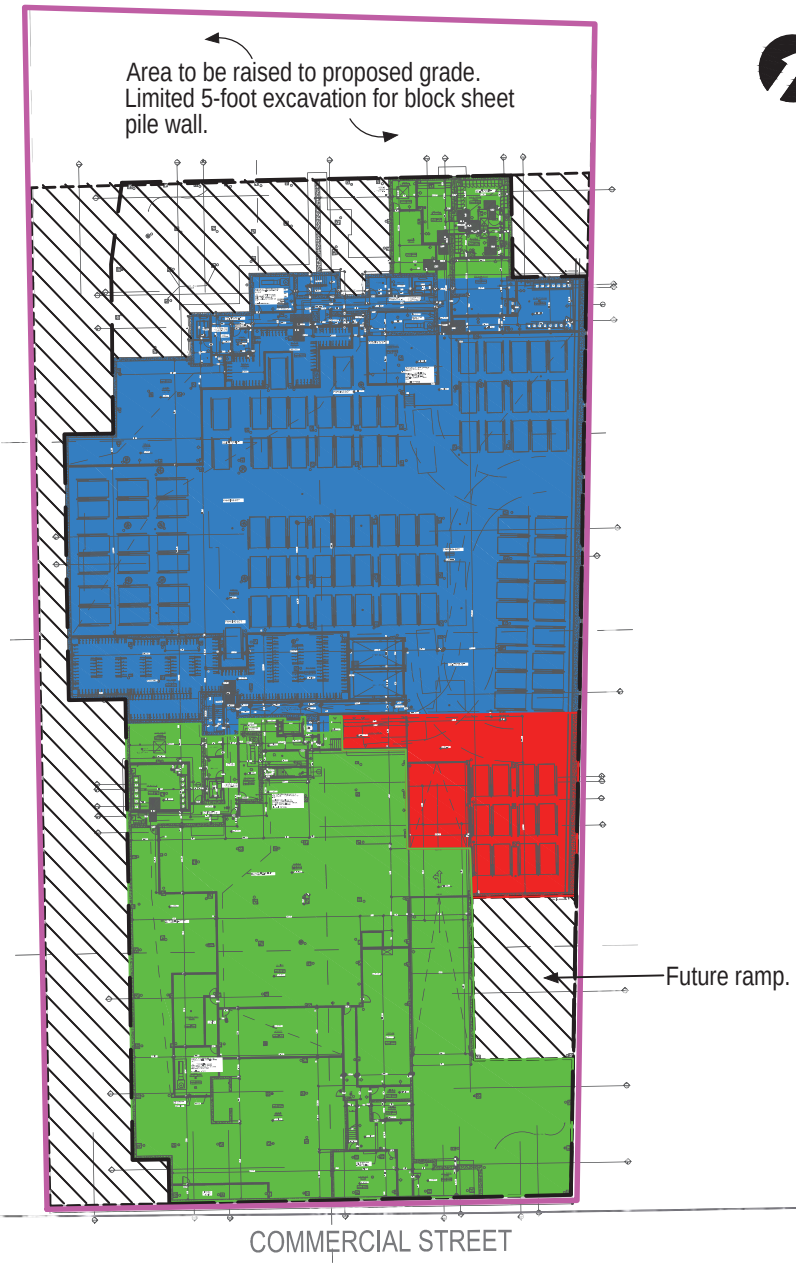
AKRF
Environmental Consultants
440 Park Avenue South, New York, N.Y. 10016

DATE
3/21/2015

PROJECT No.
12015

FIGURE
3

© 2011 AKRF, Inc. Environmental Consultants O:\Projects\12015 - 77 COMMERCIAL ST\hazmat\12015 Fig 3 Surrounding LandUse Map.mxd



SOURCE:
Based on Drawing A-101, *Subcellar and Parking Level - Key Plans*
Prepared by CETRARUDDY ARCHITECTURE D.P.C.
584 BROADWAY NEW YORK, NY 10012
Feb 2015

Note:
1. Elevations are in NAVD 88.

0' 40' 80'
SCALE IN FEET

LEGEND:

- SITE BOUNDARY
- EXTENT OF PROPOSED EXCAVATION
- APPROXIMATE EXTENT OF PROPOSED BUILDING
- APPROXIMATE EXTENT OF EXCAVATION FOR PARKING AREA (10' 3" BELOW GRADE)
- APPROXIMATE EXTENT OF ADDITIONAL EXCAVATION OUTSIDE BUILDING FOUNDATION (2' TO 3' BELOW GRADE)
- APPROXIMATE EXTENT OF EXCAVATION FOR ADDTIONAL PARKING (14' 6" BELOW GRADE)
- APPROXIMATE EXTENT OF FOUNDATION EXCAVATION FOR SUBCELLAR (29' 6" BELOW GRADE)

77 Commercial Street

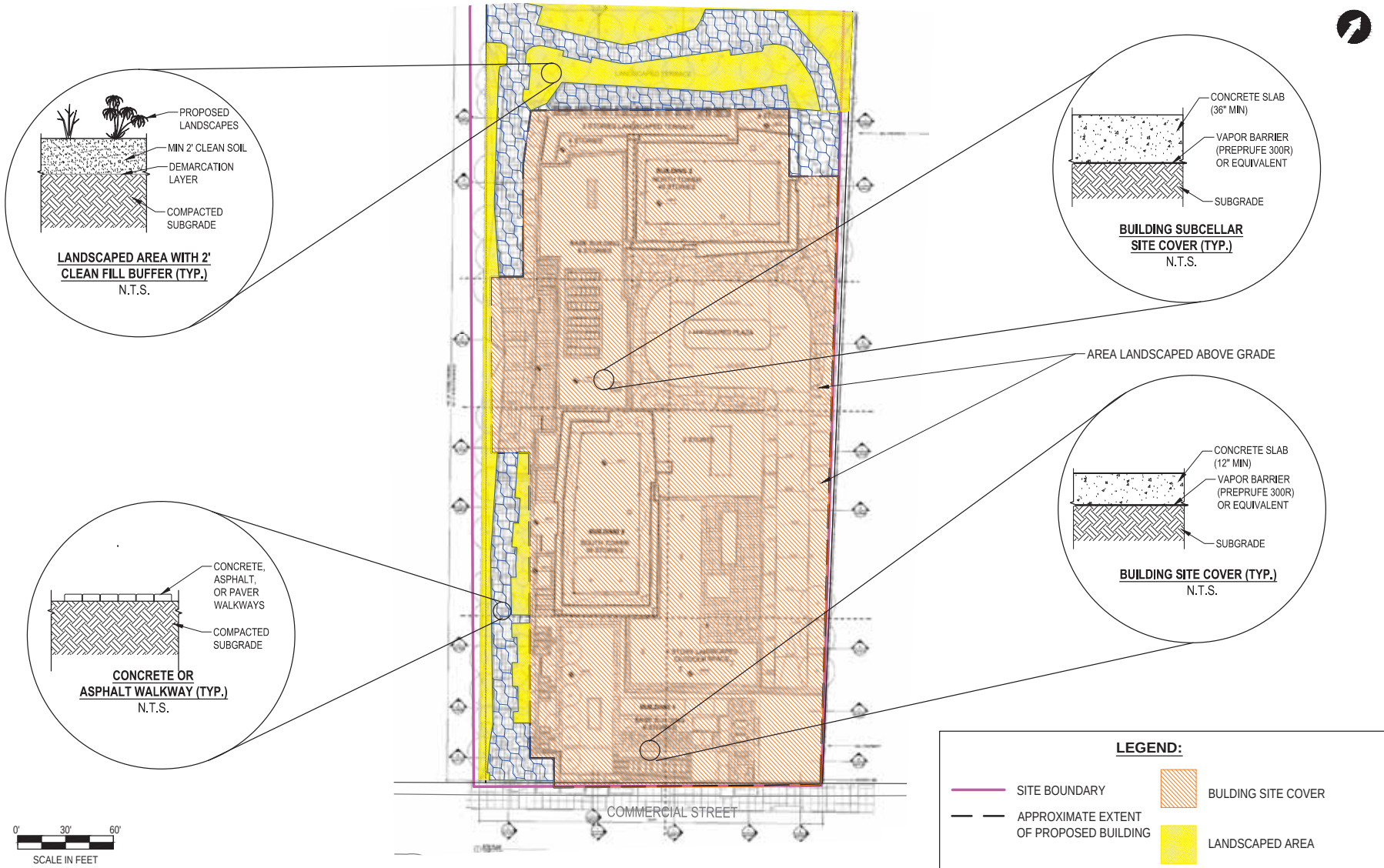
Brooklyn, New York

PROPOSED EXCAVATION AREA

AKRF
Environmental Consultants
440 Park Avenue South, New York, N.Y. 10016

DATE	4.24.2015
PROJECT No.	12015
SCALE	as shown
FIGURE	4

© 2014 AKRF, Inc. Environmental Consultants M:\AKRF Project Files\12015 - 77 Commercial Street\Figures\12015 Fig 4&5 Site Cover & Excavation.dwg



SOURCE:
Based on Drawing A-101, *Subcellar and Parking Level - Key Plans*
Prepared by CETRARUDDY ARCHITECTURE D.P.C.
584 BROADWAY NEW YORK, NY 10012
Feb 2015

AKRF Environmental Consultants
440 Park Avenue South, New York, NY 10016

77 Commercial Street
Brooklyn, New York

COMPOSITE SITE COVER SYSTEM

DATE	3.18.2015
PROJECT NO.	12015
SCALE	as shown
FIGURE	5

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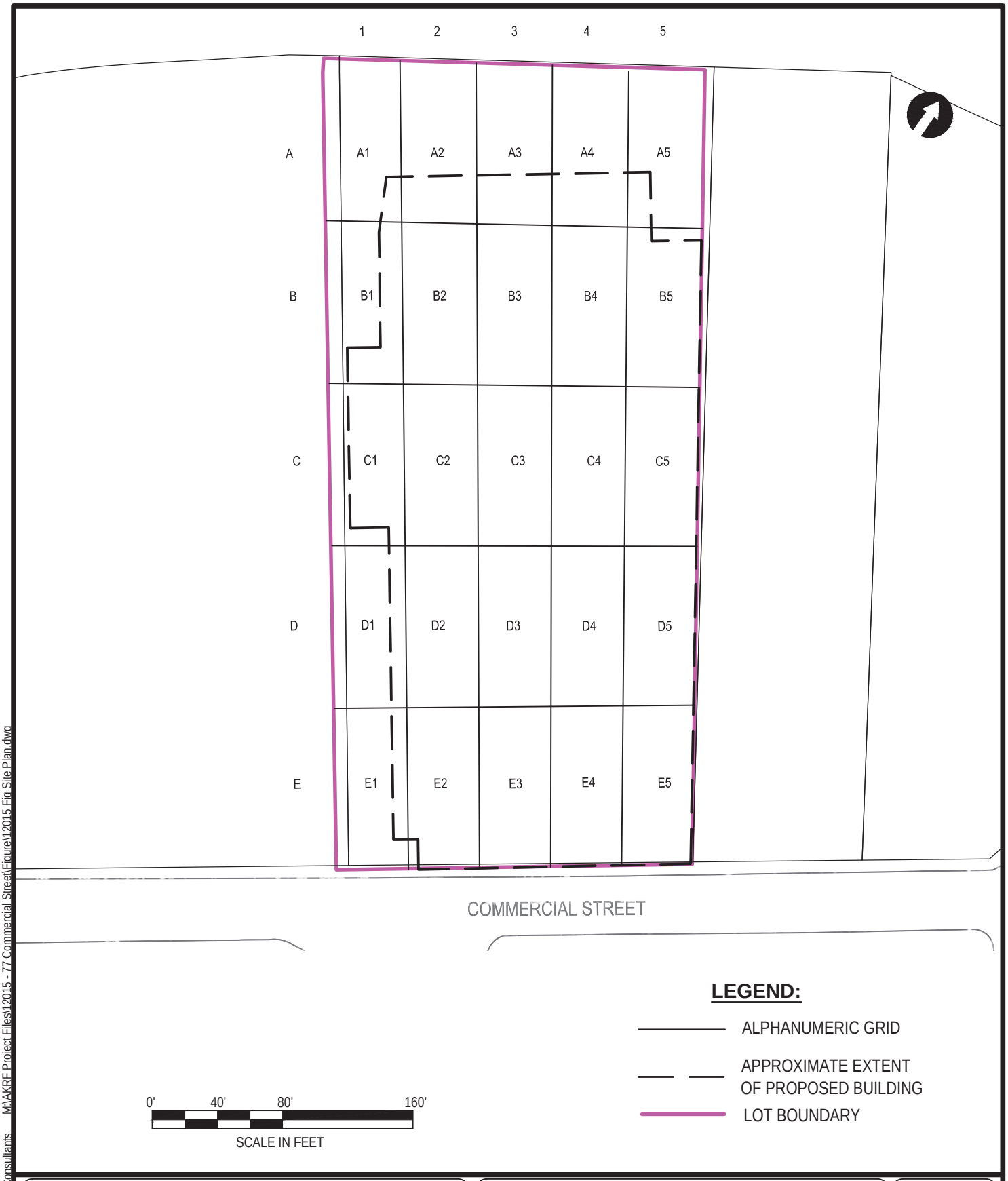

77 Commercial Street

Brooklyn, New York

SITE PLAN WITH ALPHANUMERIC GRID

AKRF

Environmental Consultants

440 Park Avenue South, New York, N.Y. 10016

DATE	3.4.2015
PROJECT No.	12015
SCALE	as shown
FIGURE	6

© 2015 AKRF, Inc. Environmental Consultants M:\AKRF Project Files\12015 - 77 Commercial Street\Figure\12015 Fig Site Plan.dwg

APPENDIX 1

PROPOSED DEVELOPMENT PLANS

(see Appendix 1 PDF)

APPENDIX 2

PREVIOUS REPORTS

planYC

NYC Office of Environmental Remediation

"E" Designation Program

Hazardous Materials

Remedial Investigation Work Plan

For

77 Commercial Street

Brooklyn, NY

Block 2472, Lot 410

OER Project Number 15EHAN033K

E-Designation E-318

CEQR Number 14DCP010K

Prepared for:

Waterview at Greenpoint LLC

4611 12th Avenue

Brooklyn, NY 11219

Prepared by:

AKRF, Inc.

440 Park Avenue South

New York, NY 10016

OCTOBER 2014

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Figure 1. Site Location

Figure 2. Site Plan and Proposed Sample Locations

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Appendix A. Foundation Plans and Architectural Drawings

Appendix B. Phase I Environmental Site Assessment

Appendix C. Investigation Health and Safety Plan

1.0 INTRODUCTION

This Remedial Investigation Work Plan has been developed for the 77 Commercial Street project site (the Site) located within the Greenpoint neighborhood of Brooklyn. The following work scope has been developed in response to Merritt Environmental Consulting Corporation's 2011 Phase I Environmental Site Assessment (ESA) findings, and a meeting with representatives of the New York City Mayor's Office of Environmental Remediation (OER) on July 29, 2014 in connection with the proposed development project.

Site Location and Current Use

The Site is an approximately 110,519-square foot parcel located in the Greenpoint neighborhood of Brooklyn and is identified as Block 2472 and Lot 410. Currently, the Site contains an approximately 84,200-square foot vacant warehouse. According to the Phase I, the Site has historically been occupied for industrial and commercial uses including; a sugar refinery, coal and dock corporation, sand and gravel company, and general commercial and warehousing purposes. The Site location is shown on Figure 1.

Proposed Development Plan

The proposed development plan consists of a mixed-use commercial/residential development with three connecting mixed use buildings: a two- to eight-story base building (Base Building - Building 1), a 30-story residential tower (South Tower - Building 2), and a 40-story residential tower (North Tower – Building 3). The proposed building footprint at grade is approximately 76,762 square feet with a cellar area of approximately 38,244 square feet. The cellar will contain 330 parking spaces for residential use and potentially an additional 15 spaces for use by the MTA. The ground level of Building 1 includes commercial/retail uses and MTA offices. The second story of Building 1 includes residential lobbies and dwellings. Floors 3 through 40 in all three buildings are designed for residential use. Landscaped terraces are planned for first and second floors in the northern portion of Building 1 facing Newtown Creek. A landscaped plaza is included on the first floor in the eastern-central portion of the building, and an outdoor landscaped area is planned for the second story along the southern portion of the building facing Commercial Street. The estimated gross square footage of the redevelopment is 762,919 square feet.

The construction plan includes a full build-out of the Site with excavation to 10 feet below grade for approximately 50 percent of the building footprint to accommodate the parking garage, and to four feet below grade for the remainder of the building footprint. It is estimated that approximately 20,000 tons of soil will require excavation and off-site disposal during the foundation excavation. The water table is expected at approximately 5 to 6 feet below grade surface (bgs). Layout of the proposed site development is included in Figure 2. Foundation plans and architectural drawing of the proposed building are included in Appendix A.

Description of Surrounding Properties

The Site is abutted to the east by a four-story mixed commercial/residential building, to the south by Commercial Street, to the southwest by MTA Office of Emergency Response, and to the northwest by Newtown Creek. The larger surrounding area is occupied with primarily industrial uses, with some commercial and residential use. Newtown Creek is listed on the United States Environmental Protection Agency's (USEPA) National Priority List (NPL) due to years of heavy industrial use since the mid to late 1800s.

Phase I Environmental Site Assessment Summary

Phase I Environmental Site Assessment of 77 Commercial Street, Brooklyn, NY, Merritt Environmental Consulting Corporation, May 25, 2011

Merritt Environmental Consulting Corporation (MECC) completed a Phase I Environmental Site Assessment (ESA) in May 2011. The investigation included a site inspection, historical research, and a regulatory review for the Site. The report did not identify any Recognized Environmental Conditions (RECs) for the Site, but identified the following Historical Recognized Environmental Conditions (HRECs) for the Site:

- There is a 15,000-gallon underground storage tank (UST) and a 550-gallon UST registered to the Site with closed in place status.

- On-site Spill Numbers 0211097 and 9811015, closed in April 2003 and July 1998, respectively.

Though not identified as a REC in the Phase I ESA, the report noted that according to the New York City Department of Building (NYCDOB) database, the Site was assigned an (E) designation for hazardous materials, air quality, and noise. Therefore, if the Site is to be redeveloped, a Remedial Investigation must be performed in accordance with the OER's requirements. Based on the findings of the Remedial Investigation, a Remedial Action Work Plan would need to be submitted to OER that would be implemented during the planned redevelopment.

The Phase I ESA is included in Appendix B.

2.0 REMEDIAL INVESTIGATION WORK SCOPE

2.1 Geophysical Survey

A geophysical survey, including ground-penetrating radar (GPR) and magnetometry, will be performed across accessible indoor and outdoor areas to determine the location of underground utilities and the registered abandoned underground storage tanks (USTs), and to investigate for the presence of potential additional USTs. GPR uses electromagnetic wave propagation and scattering to image and identify changes in electrical and magnetic properties in the ground. Magnetometers measure irregularities in the magnetic field in a given area. According to the Phase I ESA site reconnaissance and the 2013 property survey, the USTs are anticipated to be in the exterior western portion of the Site. The area will be marked out and the location of any anomalies will be added to the site plan. If UST or subsurface utility location interferes with the sampling plan, OER will be notified to discuss necessary modifications to the sampling plan.

2.2 Soil, Groundwater and Soil Vapor Summary

An investigation of soil, soil vapor and groundwater will be performed to properly characterize the site for potential environmental impacts from historic on-site/off-site uses, operations, etc. The proposed sampling event will address both RECs and historic fill, as well as to provide general horizontal/vertical characterization across the site for development purposes. The sampling procedures of this investigation will be performed in accordance with the NYSDEC Technical Guidance for Site Investigation and Remediation DER-10. Field work will be conducted under the site-specific Health and Safety Plan (HASP) provided in Appendix C. Emergency contact information is provided in Section 3.2 of the HASP. The proposed sampling locations are shown on Figure 2.

Nineteen soil borings will be completed at the site. Please see attached site plan depicting sample point locations, where soil, groundwater, and soil vapor samples will be collected. A total of 38 soil samples and six groundwater groundwater samples will be collected from the 19 boring locations. A total of seven soil gas samples and one outdoor ambient air sample will also be collected. The depth of groundwater is expected to be encountered at approximately 5 to 6 feet bgs and regional groundwater is expected to flow in a westerly direction toward Newtown Creek. Each sample point location at the site will be accurately measured to fixed benchmarks (i.e., select properly lines, adjacent structures, etc.) or by a precision GPS that is capable of coordinating a fixed point with within +/- 1 foot.

2.2.1 Soil Sampling

AKRF proposes to advance the nineteen borings using a Geoprobe® Direct-Push Probe (DPP) drill rig and/or a remote DPP at the locations shown on Figure 2. If necessary, more advanced drilling technology will be used to complete the site investigation. The exact sampling locations will be finalized in the field based on geophysical survey results, access considerations, utilities, etc. Utility mark outs in public areas will be requested from the New York City/Long Island One Call Center prior to the commencement of drilling.

The borings will be advanced to the anticipated depth of the proposed building foundation, which is approximately 10 feet below existing grade. At each boring, AKRF field personnel [geologist, engineer, Qualified Environmental Professional (QEP), or Environmental Scientist working under the direction of a QEP] will prepare DER-10 compliant boring logs and will screen the soil samples using headspace analysis during borehole advancement for organic vapors with a photo-ionization detector (PID) and evaluated for visual and olfactory impacts prior to collecting environmental samples. All field work will be recorded in a field log.

Soil cores will be obtained in a stainless steel, macro-core sampler with an internal acetate liner. In accordance with the OER's standard protocols, two discrete (grab) samples will be selected for laboratory analysis from each of the borings: one sample from the upper two feet of soil and one from the two foot interval at the bottom of the proposed excavation depth or just about the groundwater table, whichever is shallower. If elevated PID, visual, or olfactory evidence of contamination is encountered during borehole advancement, the soil sample depths may be adjusted.

Soil samples will be selected for laboratory analysis and analyzed by a New York State Department of Health (NYSDOH)-certified laboratory for target compound list (TCL) volatile organic compounds (VOCs) by EPA Method 8260, TCL semivolatile organic compounds (SVOCs) by EPA Method 8270, polychlorinated biphenyls (PCBs) by EPA Method 8082, pesticides by EPA Method 8081, and Target Analyte List (TAL) metals (EPA Method SW-846 6000/7000 series).

2.2.2 Monitoring Well Installation and Groundwater Sampling

Groundwater samples will be collected from six borings by installing one-inch temporary PVC well points and using low flow sampling techniques. The PVC well points will be installed approximately five feet into the groundwater table and constructed with a 10-foot screen and j-plug. The temporary wells will be sampled utilizing new poly tubing and a peristaltic pump. The wells will be purged of three to five times its volume prior to sampling using a peristaltic pump and dedicated polyethylene tubing. Field measurements will be recorded on a Horibia multi-meter but since the samples are being collected from temporary well points it may not be possible to achieve stabilization prior

to sampling. The samples will be field-screened for evidence of contamination (i.e., odor, sheen). Sampling will be conducted in accordance with NYSDEC Draft DER-10 Technical Guidance for Site Investigation and Remediation, dated May 2010, and Sampling Guidelines and Protocols, dated March 1991. Groundwater wells will be gauged with a water level meter to record a depth to groundwater reading (1/100 foot), and if necessary, an interface meter to determine the thickness of light non aqueous phase liquid (LNAPL). The well casings will be surveyed by a trained QEP and/or NYS licensed surveyor to facilitate preparation of a groundwater contour map and determine the direction of groundwater flow. The planned locations of the groundwater samples are shown on Figure 2.

Samples will be analyzed by a New York State Department of Health-certified laboratory for VOCs using EPA Method 8260, SVOCs using EPA Method 8270, pesticides using EPA Method 8081, PCBs using EPA Method 8082, and the TAL list of metals using the (EPA Method SW-846 6000/7000 series). The groundwater analyses for metals will be conducted on both filtered and unfiltered samples.

2.2.3 Soil Vapor Point Installation and Sampling

Soil vapor samples will be collected from seven locations as shown on Figure 2. The proposed vapor points will be installed approximately 4 to 5 feet below the existing grade.

Soil vapor and sub-slab soil vapor samples will be collected using a Geoprobe® DPP unit. Approximately 24 hours following soil vapor probe installation, one to three implant volumes will be purged prior to the collection of any soil-gas samples. Samples will be collected into six-liter stainless steel Summa canisters that have been certified clean by the laboratory, each with a flow controller calibrated for a sample collection over two hours. Flow rate of both purging and sampling will not exceed 0.2 liters per minute (L/min). Samples will be collected in accordance with the Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York (NYSDOH October 2006). Conditions in the field may require adjustment of sampling locations. Groundwater is expected to be encountered at a depth of 5 to 6 feet.

A sample log sheet will be maintained summarizing sample identification, date and time of sample collection, sampling depth, identity of samplers, sampling methods and devices, soil vapor purge volumes, volume of the soil vapor extracted, vacuum of canisters before and after the samples are collected, apparent moisture content of the sampling zone, and chain of custody protocols.

As part of the vapor intrusion evaluation, a tracer gas will be used in accordance with NYSDOH protocols to serve as a quality assurance/quality control (QA/QC) device to verify the integrity of the soil vapor probe seal. A container (box, plastic pail, etc.) will serve to keep the tracer gas in contact with the probe during testing. A portable monitoring device will be used to analyze a sample of soil vapor for the tracer gas prior to sampling. If the tracer sample results show a significant presence of the tracer, the probe seals will be adjusted to prevent infiltration. At the conclusion of the sampling round, tracer monitoring will be performed a second time to confirm the integrity of the probe seals. One outdoor ambient air sample will be collected for QA purposes.

Canisters will be analyzed by a NYSDOH-certified laboratory for VOCs by EPA Method TO-15.

2.2.4 Sample Analysis

Soil, groundwater, and soil vapor samples will be submitted to a NYSDOH Environmental Laboratory Accreditation Program (ELAP)-certified laboratory for the following analysis:

Volatile organic compounds by EPA Method 8260;

Semi-volatile organic compounds by EPA Method 8270;

Pesticides/PCBs by EPA Method 8081/8082; and

Target Analyte List metals by EPA Method SW 846 6000/7000 series;

Soil vapor samples will be analyzed for VOCs by using USEPA Method TO-15.

All groundwater samples will be analyzed for both filtered (dissolved) and unfiltered (total) metals.

If either LNAPL and/or dense non aqueous phase liquids (DNAPL) are detected, appropriate samples will be collected for characterization and "fingerprint analysis" and required regulatory reporting (i.e., NYSDEC spills hotline) will be performed.

3.0 QUALITY ASSURANCE/QUALITY CONTROL PROCEDURES

QA/QC procedures will be used to provide performance information with regard to accuracy, precision, sensitivity, representation, completeness, and comparability associated with the sampling and analysis (of VOCs, SVOCs, and metals) for this investigation. Field QA/QC procedures will be used to 1. document that samples are representative of actual conditions at the Site and; 2. identify possible cross-contamination from field activities or sample transit. Laboratory QA/QC procedures and analyses will be used to demonstrate whether analytical results have been biased either by interfering compounds in the sample matrix, or by laboratory techniques that may have introduced systematic or random errors to the analytical process QA/QC samples.

For the soil samples collected in this investigation, one trip blank for VOCs and one field duplicate for VOCs, SVOCs, and metals will be collected and analyzed at an ELAP-certified laboratory. For the groundwater samples, one trip blank for VOCs will be collected and analyzed at an ELAP-certified laboratory. A data review summary for the QA/QC samples will be included in the investigation report. The summary will include a discussion of the significant findings as part of the Lab/Case Narrative for each lab reports including holding times, calibration standards, and blanks as well as the usability of the results based on a comparison of detection limits to applicable standards.

Cuttings may be disposed at the site within the borehole that generated them to within 24 inches of the surface unless:

- Free product or grossly contaminated soil, are present in the cuttings;
- The borehole has penetrated an aquitard, aquiclude or other confining layer; or extends significantly into bedrock;
- Backfilling the borehole with cuttings will create a significant path for vertical movement of contaminants. Soil additives (bentonite) may be added to the cuttings to reduce permeability; or
- The soil cannot fit into the borehole.

Those soil cuttings needing to be managed on-site will be containerized in properly labeled DOT approved 55-gallon drums for future off-site disposal at a permitted facility. All boreholes which require drill cuttings disposal would ultimately be filled with bentonite chips (hydrated) and asphalt/concrete capping. Disposable sampling equipment including, spoons, gloves, bags, paper towels, etc. that came in

contact with environmental media will be double bagged and disposed as municipal trash in a facility trash dumpster as non-hazardous refuse.

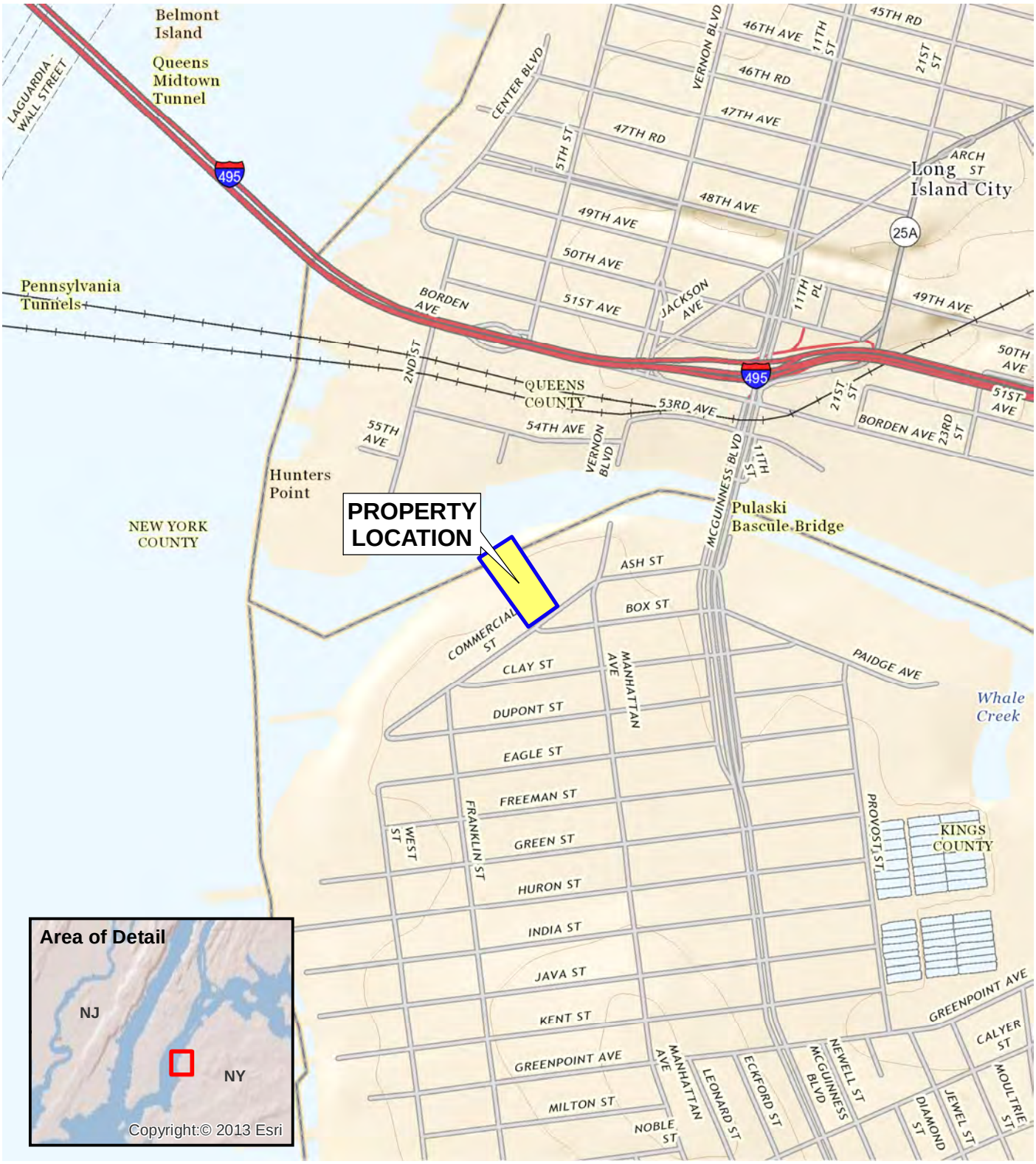
4.0 REPORTING

A Remedial Investigation Report (template version) will be prepared following completion of the field activities and receipt of the laboratory data. The report will provide detailed summaries of the investigative findings. Soil, groundwater, and soil vapor analytical results will be compared to the NYSDEC Part 375-6.8(a) Unrestricted Used Soil Cleanup Objectives, appropriate Part 375-6.8(b) Restricted Soil Cleanup Objectives and NYSDEC Part 703 Groundwater Quality Standards (GQS) (class GA) or Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards (AWQS), and NYSDOH October 2006 Final Guidance for Evaluating Soil Vapor Intrusion Matrices. The report will include an updated sampling plan, spider diagrams, analytical data tables for all reported constituent compounds (including non-detectable concentrations), and remedial recommendations, as warranted.

4.1 Investigation HASP

An OSHA compliant Health and Safety Plan that meets all OSHA HAZWOPER requirements will be implemented during the site work to protect worker safety. The OSHA compliant investigation Health and Safety Plan (HASP) is included in Appendix C. The Site Safety Coordinator will be determined prior to the initiation of the field work. The Site Safety Coordinator will ensure full compliance of the HASP in accordance with applicable health and safety laws and regulations. All field personnel involved in investigation activities will participate in training required under OSHA HAZWOPER 29 CFR 1910.120, including 40-hour hazardous waste operator training and annual 8-hour refresher training. Emergency telephone numbers will be posted at the site location before any work begins. A safety meeting will be conducted before each shift begins. Topics to be discussed include task hazards and protective measures (physical, chemical, environmental); emergency procedures; personal protective equipment (PPE) levels, and other relevant safety topics including a highlighted route map to the nearest hospital/emergency room. Meetings will be documented in a log book or specific form. Given the location of the Site along the Greenpoint waterfront, potential on-site chemicals of concern include fuel oil, historic/construction fill, and metals (specifically lead, arsenic, and mercury). Information fact sheets and/or summary tables for each contaminant group are included in the HASP. A copy of this HASP will be on-site during each sampling event.

FIGURES

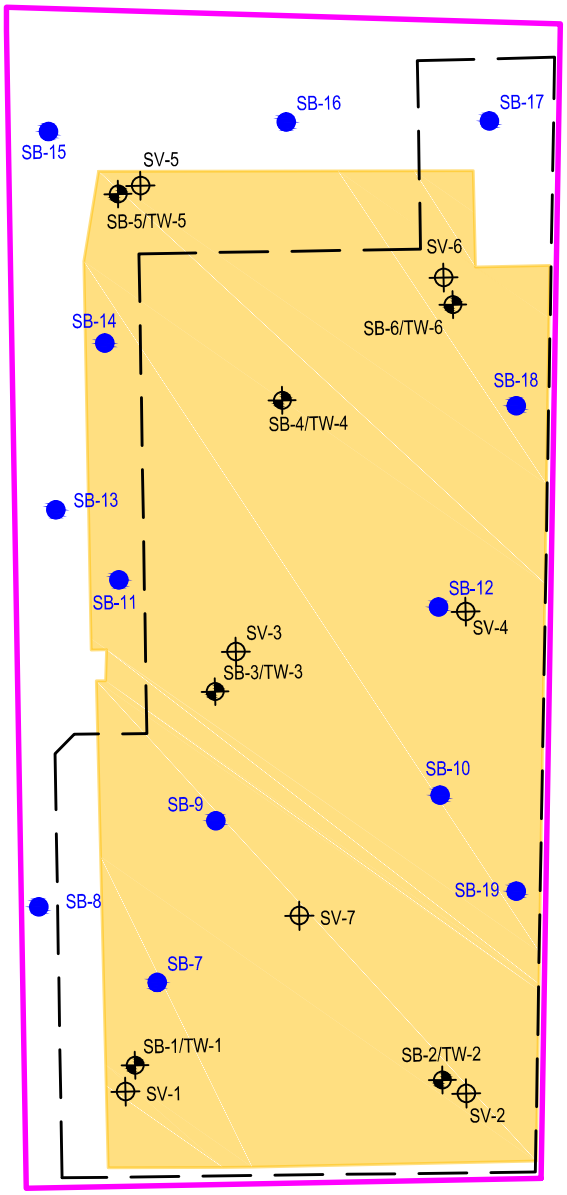


SOURCE
USGS 7.5 Minute Topographic Map
Brooklyn Quad 2011

0 1,000 2,000 Feet

77 Commerical Street Brooklyn, New York	AKRF Environmental Consultants 440 Park Avenue South, New York, N.Y. 10016	DATE **8/11/2014**
PROPERTY LOCATION		PROJECT No. **12015**
		FIGURE **1**

© 2013 AKRF, Inc. Environmental Consultants O:\Projects\12015 - 77 COMMERCIAL ST\12015 Fig 1 loc map.mxd



0' 40' 80' 160'

SCALE IN FEET

LEGEND:

APPROXIMATE EXTENT OF PROPOSED BUILDING

LOT BOUNDARY

EXISTING BUILDING EXTENT

SB-11 PROPOSED SOIL BORING

SB-2/MW-2 PROPOSED MONITORING WELL

SV-2 PROPOSED SOIL GAS POINT

77 Commercial Street

Brooklyn, New York

SITE PLAN & PROPOSED SAMPLE LOCATIONS

AKRF

Environmental Consultants

440 Park Avenue South, New York, N.Y. 10016

DATE 9.25.2014

PROJECT No. 12015

SCALE as shown

FIGURE 2

©2014 AKRF, Inc. Environmental Consultants M:\AKRF Project Files\12015 - 77 Commercial Street\Figure\12015 Fig Sample Locations.dwg

APPENDIX A

Foundation Plans and Architectural Drawings

APPENDIX B

Phase I Environmental Site Assessment

APPENDIX C

Health and Safety Plan

77 COMMERCIAL STREET

BROOKLYN, NEW YORK

Remedial Investigation Report

OER Project Number 15EHAN033K

CEQR Number 14DCP010K

E-Designation E-318

Prepared for:

Waterview at Greenpoint, LLC

4611 12th Avenue

Brooklyn, NY 11219

Prepared by:

AKRF, Inc.

440 Park Avenue South

New York, NY 10016

January 2015

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LIST OF ACRONYMS

Acronym	Definition
AOC	Area of Concern
CAMP	Community Air Monitoring Plan
COC	Contaminant of Concern
CPP	Citizen Participation Plan
CSM	Conceptual Site Model
DER-10	New York State Department of Environmental Conservation Technical Guide 10
FID	Flame Ionization Detector
GPS	Global Positioning System
HASP	Health and Safety Plan
HAZWOPER	Hazardous Waste Operations and Emergency Response
IRM	Interim Remedial Measure
NAPL	Non-aqueous Phase Liquid
NYC VCP	New York City Voluntary Cleanup Program
NYC DOHMH	New York City Department of Health and Mental Hygiene
NYC OER	New York City Office of Environmental Remediation
NYS DOH ELAP	New York State Department of Health Environmental Laboratory Accreditation Program
OSHA	Occupational Safety and Health Administration
PID	Photoionization Detector
QEP	Qualified Environmental Professional
RI	Remedial Investigation
RIR	Remedial Investigation Report
SCO	Soil Cleanup Objective
SPEED	Searchable Property Environmental Electronic Database

CERTIFICATION

I, Stephen Malinowski, am a Qualified Environmental Professional, as defined in RCNY § 43-1402(ar). I have primary direct responsibility for implementation of the Remedial Investigation for the 77 Commercial Street Site, (NYCOER Site No. 15EHAN033K). I am responsible for the content of this Remedial Investigation Report (RIR), have reviewed its contents and certify that this RIR is accurate to the best of my knowledge and contains all available environmental information and data regarding the property.

Stephen Malinowski 2/22/15

Qualified Environmental Professional Date Signature

EXECUTIVE SUMMARY

This Remedial Investigation Report (RIR) provides sufficient information for establishment of remedial action objectives, evaluation of remedial action alternatives, and selection of a remedy pursuant to RCNY§ 43-1407(f). The remedial investigation (RI) described in this document is consistent with applicable guidance.

Site Location and Current Usage

The Site is located at 77 Commercial Street in the Greenpoint section of Brooklyn, New York and is identified as Block 729, Lot 50 on the New York City Tax Map. Figure 1 shows the Site location. The Site is 110,519 square feet and currently contains an approximately 84,200-square foot vacant warehouse that is being prepared for demolition. The Site is abutted to the east by a four-story mixed commercial/residential building, to the south by Commercial Street, to the southwest by MTA Office of Emergency Response, and to the northwest by Newtown Creek. The larger surrounding area is occupied by primarily industrial uses, with some commercial and residential use. Newtown Creek is listed on the United States Environmental Protection Agency's (USEPA) National Priority List (NPL) due to years of heavy industrial use since the mid to late 1800s.

Summary of Proposed Redevelopment Plan

The proposed development plan consists of a mixed-use commercial/residential development with three connecting mixed-use buildings: a two- to eight-story base building (Base Building - Building 1), a 30-story residential tower (South Tower - Building 2), and a 40-story residential tower (North Tower – Building 3). The proposed building footprint at grade is approximately 76,762 square feet with a cellar area of approximately 38,244 square feet. The cellar will contain 330 parking spaces for residential use and potentially an additional 15 spaces for use by the MTA. The ground level of Building 1 includes commercial/retail uses and MTA offices. The second story of Building 1 includes residential lobbies and dwellings. Floors 3 and above in all three buildings are designed for residential use. Landscaped terraces are planned for the first and second floors in the northern portion of Building 1 facing Newtown Creek. A landscaped plaza is included on the first floor in the eastern-central portion of the Building 1, and an outdoor landscaped area is planned for the second story along the southern portion of the Building 1

facing Commercial Street. The estimated gross square footage of the redevelopment is 762,919 square feet. Architectural drawings of the proposed redevelopment are included in Appendix A.

The construction plan includes excavation to 10 feet below grade for approximately 50 percent of the building footprint to accommodate the parking garage, and to four feet below grade for the remainder of the building footprint. It is estimated that approximately 20,000 tons of soil will require excavation and off-site disposal during the foundation excavation. It is anticipated that the excavation will be advanced into the water table which is approximately 5 to 11 feet below grade surface (bgs). A Site Plan depicting the current lot boundaries and proposed buildings is provided as Figure 2. The current zoning designation is R-6 and R-6/C2-4 (residential and residential with a commercial overlay, respectively). The proposed use is consistent with existing zoning for the property.

Summary of Past Uses of Site and Areas of Concern

Historical Sanborn maps indicated that the Site was formerly a sugar refinery in 1905, commercial buildings by 1916, a storage warehouse for the French government in 1922, and a vacant lot in 1928. In 1942, the Site was owned and operated by Carter Coal & Dock Corporation and by Metropolitan Sand & Gravel Corporation in 1952. By 1965, the Site was in its current configuration as a warehouse. The Site is currently owned by Waterview of Greenpoint, LLC.

The following environmental issues were considered Area of Concerns (AOCs) identified for this investigation:

1. Historic reports identified the presence of a closed-in-place 15,000-gallon fuel oil underground storage tank (UST) and a second closed in-place 550-gallon UST registered at the Site;

2. Historic reports identified two closed-status spills for the Site in April 2003 and July 1998; and

3. Historical fill may be present at the Site.

Summary of the Work Performed under the Remedial Investigation

AKRF performed the following scope of work on behalf of Waterview at Greenpoint, LLC:

1. Conducted a Site inspection to identify AOCs and physical obstructions (i.e., structures, buildings, etc.);
2. Conducted a geophysical investigation across the entire project Site to locate subsurface structures, including potential USTs, and utilities and to clear the proposed sampling locations;
3. Installed 19 soil borings across the entire Site, and collected 38 soil samples for chemical analysis from the soil borings to evaluate soil quality;
4. Installed six temporary groundwater monitoring wells throughout the Site to establish groundwater flow direction and collected six groundwater samples for chemical analysis to evaluate groundwater quality;
5. Installed seven soil gas probes and collected seven soil gas samples for chemical analysis.

Summary of Environmental Findings

1. Elevation of the property ranges from 8.66 to 11.05 feet above the North American Vertical Datum of 1988.
2. Depth to groundwater ranges from 5 to 11 feet below grade at the Site.
3. Groundwater flow beneath the Site is generally from south to northwest towards Newtown Creek.
4. Bedrock was not encountered during the remedial investigation.
5. The stratigraphy of the Site, from the surface down, consists of roughly three to seven feet of historic fill, characterized by crushed rock, and brick, little asphalt, trace wood and gravel. Below the historic fill is a brown sand and silt stratum to the termination of each boring.
6. Soil/fill samples collected during the RI showed that volatile organic compounds (VOCs) were detected in 21 of the 39 soil samples analyzed with acetone being the only VOC

detected above the New York State Department of Environmental Conservation's (NYSDEC's) Unrestricted Use Soil Cleanup Objective (UUSCO). Acetone is a common laboratory contaminant and was also detected in the laboratory method blank. Therefore, the presence of acetone does not appear to be representative of Site conditions. Twenty-four semivolatile organic compounds (SVOCs) were detected in one or more of the soil samples analyzed at concentrations ranging from an estimated concentration of 10 micrograms per kilogram (µg/Kg) to 20,000 µg/Kg. Three SVOCs (4-methylphenol, benzo(k)fluoranthene, and chrysene) were detected in at least one soil sample at concentrations above their respective UUSCOs but below their respective Restricted Residential Soil Cleanup Objectives (RRSCOs). Benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenz(a,h)anthracene, and/or 8indeno(1,2,3-cd)pyrene were detected above their respective RRSCOs in 18 of the 39 samples collected during the field investigation at concentrations ranging from 470 µg/Kg to 20,000 µg/Kg. The SVOC exceedances were polycyclic aromatic hydrocarbons (PAHs), which are a class of compounds found in some petroleum products, coal ash, and in other combustion products that are commonly found in historic fill.

Twenty-two metals were detected in one or more of the soil samples analyzed ranging from 0.02 milligrams per kilogram (mg/Kg) to 145,000 mg/Kg. The metals arsenic (maximum of 33.9 mg/Kg), barium (maximum of 566 mg/Kg), chromium (maximum 117 mg/Kg), copper (maximum 115 mg/Kg), lead (maximum 2,300 mg/Kg), mercury (maximum 26 mg/Kg), nickel (maximum 182 mg/Kg), selenium (maximum 4.8 ppm), and/or zinc (maximum 277 mg/Kg) were detected above their respective UUSCOs and/or RRSCOs in 22 of the 38 soil samples. The metals concentrations are most likely attributable to historic fill materials, which often contain highly variable concentrations of metals.

The polychlorinated biphenyl (PCB) Aroclor 1262 was detected in soil sample SB-9(1-2') at a concentration of 1,000 µg/Kg, above its UUSCO of 100 µg/Kg and equal to its RRSCO of 1,000 µg/Kg. Aroclor 1262 was also detected in soil samples SB-5(1-2') and SB-7(1-2') at estimated concentrations below its respective UUSCOs No other PCBs were detected in any of the soil samples. The presence of PCB Aroclor 1262 is most likely attributable to the presence of historic fill material in the upper two feet where the

samples with PCB detections were collected at the Site, and is not indicative of a spill or a release.

No pesticides were not detected in any of the soil samples collected during the RI.

7. Groundwater samples collected during the RI showed that no VOCs were detected in any of the groundwater samples above their respective NYSDEC Class GA Ambient Water Quality Standards (AWQS). Two SVOCs benzo[b]fluoranthene and benzo[k]fluoranthene) were detected in groundwater sample TW-5 at concentrations ranging between an estimated 0.24 micrograms per liter (µg/L) and 0.55 µg/L, above their respective AWQS. The presence of the SVOCs in the groundwater sample is likely attributable to sediment entrained in the water sample and not indicative of Site conditions. No other SVOCs were detected in the six groundwater samples above their respective Class GA standards.

   Nineteen metals were detected in both the unfiltered groundwater samples (total metals analysis) and filtered samples (dissolved metals analysis). Twelve metals (arsenic, barium, beryllium, chromium, copper, iron, manganese, lead, nickel, sodium, zinc, and mercury) were detected above the Class GA standards in one or more of the total groundwater samples. Four of these metals which naturally occur in groundwater (magnesium, iron, manganese, and sodium) were detected above the Class GA standards in one or more of the dissolved groundwater samples. The presence of remaining six metals in the dissolved groundwater are typical of groundwater quality in Brooklyn, and does not appear to be related to a spill or release at the Site.

   No PCBs or pesticides were detected in any of the groundwater samples.

8. Soil vapor sample analytical results identified 37 VOCs detected in the seven samples. VOCs associated with petroleum [including benzene, toluene, ethylbenzene, xylenes (collectively referred to as BTEX), 1,2,4- and 1,3,5-trimethylbenzene, cyclohexane, heptane, hexane, methyl ethyl ketone (MEK), 4-ethyltoluene, and 2,2,4-trimethylpentane] were detected at concentrations from 0.95 micrograms per cubic meter (µg/m^3) to 830 µg/m^3. Solvent-related VOCs [including acetone, chloroform, tetrachloroethene (PCE), and trichloroethene (TCE)], were detected at concentrations up to 490 µg/m^3. PCE

(maximum 40 µg/m^3) was detected in SV-1, SV-5, SV-6, and SV-7 at concentrations above its New York State Department of Health (NYSDOH) Air Guidance Value (AGV) of 30 µg/m^3. PCE was detected at 30 µg/m^3 in soil vapor sample SV-3. T CE was detected in sample SV-7 at a concentration of 94 µg/m^3, above its AGV of 5 µg/m^3.

REMEDIAL INVESTIGATION REPORT

1.0 SITE BACKGROUND

Waterview of Greenpoint LLC is participating in the New York City Mayor's Office of Environmental Remediation (NYCOER's) (E) Designation Program to investigate and remediate an approximately 110,520-square foot parcel located at 77 Commercial Street in the Greenpoint section of Brooklyn, New York (the Site). A mixed-use commercial and residential development is proposed for the property. The RI work was performed between October 22 and 28, 2014. This RIR summarizes the nature and extent of contamination at the Site and provides sufficient information for establishment of remedial action objectives, evaluation of remedial action alternatives, and selection of a remedy that is protective of human health and the environment consistent with the use of the property pursuant to RCNY§ 43-1407(f).

1.1 Site Location and Current Usage

The Site is located at 77 Commercial Street in the Greenpoint section of Brooklyn, New York and is identified as Block 729, Lot 50 on the New York City Tax Map. Figure 1 shows the Site location. The Site is 110,519 square feet and currently contains an approximately 84,200-square foot vacant warehouse that is being prepared for demolition. The Site is abutted to the east by a four-story mixed commercial/residential building, to the south by Commercial Street, to the southwest by MTA Office of Emergency Response, and to the northwest by Newtown Creek. The larger surrounding area is occupied by primarily industrial uses, with some commercial and residential use. Newtown Creek is listed on the United States Environmental Protection Agency's (USEPA) National Priority List (NPL) due to years of heavy industrial use since the mid to late 1800s.

1.2 Proposed Redevelopment Plan

The proposed development plan consists of a mixed-use commercial/residential development with three connecting mixed use buildings: a two- to eight-story base building (Base Building - Building 1), a 30-story residential tower (South Tower - Building 2), and a 40-story residential tower (North Tower – Building 3). The proposed building footprint at grade is approximately 76,762 square feet with a cellar area of approximately 38,244 square feet. The cellar will contain

330 parking spaces for residential use and potentially an additional 15 spaces for use by the MTA. The ground level of Building 1 includes commercial/retail uses and MTA offices. The second story of Building 1 includes residential lobbies and dwellings. Floors 3 and above in all three buildings are designed for residential use. Landscaped terraces are planned for the first and second floors in the northern portion of Building 1 facing Newtown Creek. A landscaped plaza is included on the first floor in the eastern-central portion of the Building 1, and an outdoor landscaped area is planned for the second story along the southern portion of the Building 1 facing Commercial Street. The estimated gross square footage of the redevelopment is 762,919 square feet. Architectural drawings of the proposed redevelopment are included in Appendix A.

The construction plan include excavation to 10 feet below grade for approximately 50 percent of the building footprint to accommodate the parking garage, and to four feet below grade for the remainder of the building footprint. It is estimated that approximately 20,000 tons of soil will require excavation and off-site disposal during the foundation excavation. It is anticipated that the excavation will be advanced into the water table which is approximately 5 to 11 feet below grade surface (bgs). A Site Plan depicting the current lot boundaries and proposed buildings is provided as Figure 2. The current zoning designation is R-6 and R-6/C2-4 (residential and residential with a commercial overlay, respectively). The proposed use is consistent with existing zoning for the property.

1.3 Description of Surrounding Property

The Site is abutted to the east by a mixed commercial and residential building, to the south by Commercial Street, to the southwest by MTA Office of Emergency Response, and to the northwest by Newtown Creek. The larger surrounding area is occupied with primarily industrial uses, with some commercial and residential use. According to OER's *SPEED database* application, no day care facilities, schools, or hospitals are located within a 500-foot radius of the Site. Figure 3 depicts surrounding land usage.

2.0 SITE HISTORY

2.1 Past Uses and Ownership

Historical Sanborn maps indicated that the Site was formerly a sugar refinery in 1905, commercial buildings by 1916, a storage warehouse for the French government in 1922, and a vacant lot in 1928. In 1942, the Site was owned and operated by Carter Coal & Dock Corporation and by Metropolitan Sand & Gravel Corporation in 1952. By 1965, the Site was in its current configuration as a warehouse. The Site is currently owned by Waterview of Greenpoint, LLC.

2.2 Previous Investigations

Phase I Environmental Site Assessment, 77 Commercial Street, Brooklyn, NY, prepared by Merritt Environmental Consulting Corporation, May 25, 2011.

A Phase I Environmental Site Assessment (ESA) conducted by Merritt Environmental Consulting Corporation included a site inspection, historical research, and a regulatory review for the Site. No Recognized Environmental Conditions (RECs) were identified, but the following Historical Recognized Environmental Conditions (HRECs) were identified for the Site:

- There is a 15,000-gallon underground fuel oil storage tank (UST) and a 550-gallon UST registered to the Site with closed in-place status.
- On-site NYSDEC Spill Numbers 0211097 and 9811015 closed in April 2003 and July 1998, respectively.

A copy of the Phase I ESA is included as Appendix B.

2.3 Site Inspection

A Site inspection was performed by Stephen Malinowski, QEP and Mark Jepsen of AKRF on October 21, 2014. The inspection included a visual inspection of the concrete and asphalt-paved driveway, loading bay area, interior of the building, and sidewalk frontage. The Site inspection identified pipes, fillports, and access covers in the paved area along the western side of the building which are presumably the closed-in-place USTs.

2.4 Areas of Concern

The following environmental issues discussed in Section 2.2. were considered Area of Concerns (AOCs) identified for this investigation:

1. Historic reports identified the presence of a closed-in-place 15,000-gallon UST and closed-in-place 550-gallon UST registered at the Site.
2. Historic reports identified two closed-status spills for the Site in April 2003 and July 1998.
3. Historical fill may be present at the Site.

3.0 PROJECT MANAGEMENT

3.1 Project Organization

The Qualified Environmental Profession (QEP) responsible for preparation of this RIR is Stephen Malinowski. Mr. Malinowski also serves as the Quality Assurance Officer. The Project Director and AKRF's Senior Officer is Marc Godick, LEP. The Site Safety Officer and Sample Technician is Mark Jepsen.

3.2 Health and Safety

All work described in this RIR was performed in full compliance with applicable laws and regulations, including Site and Occupation Safety and Health Administration (OSHA) worker safety requirements and Hazardous Waste Operations and Emergency Response (HAZWOPER) requirements.

3.3 Materials Management

All material encountered during the RI was managed in accordance with applicable laws and regulations.

4.0 REMEDIAL INVESTIGATION ACTIVITIES

AKRF performed the following scope of work on behalf of Waterview at Greenpoint, LLC:

1. Conducted a Site inspection to identify AOCs and physical obstructions (i.e., structures, buildings, etc.);
2. Conducted a geophysical investigation across the entire project Site to locate subsurface structures, including potential USTs and utilities and to clear the proposed sampling locations;
3. Installed 19 soil borings across the entire project Site, and collected 38 soil samples for chemical analysis from the soil borings to evaluate soil quality;
4. Installed six temporary groundwater monitoring wells throughout the Site to establish groundwater flow direction and collected six groundwater samples for chemical analysis to evaluate groundwater quality;
5. Installed seven soil vapor probes and collected seven samples for chemical analysis.

4.1 Geophysical Investigation

On October 23, 2014, a geophysical survey was conducted throughout the Site by Enviroprobe Service, Inc. (Enviroprobe) to clear the proposed boring locations for subsurface utilities and to locate other potential buried structures. The geophysical survey included both electromagnetic (EM) and ground penetrating radar (GPR) methods. All utility locations were marked out with spray paint prior to the commencement of drilling activities. An anomaly consistent with that of a UST was identified during the survey. The anomaly was observed outside of the loading bay area on the western portion of the Site and is assumed to be the closed-in-place 15,000-gallon UST. A small area directly north of the suspected UST was unable to be surveyed due to ponded water on the surface of the Site. This area is suspected to contain the closed-in-place 550-gallon UST. A copy of the geophysical investigation report is provided in Appendix C. The approximate locations of the USTs are shown on Figure 2.

4.2 Borings and Monitoring Wells

Drilling and Soil Logging

Between October 22 and 24, 2014, AKRF advanced nineteen borings (SB-1 through SB-19) using a track mounted Geoprobe® Direct-Push Probe (DPP) drill rig at the locations shown on Figure 2. These locations were selected to obtain a representative sampling of the area of proposed soil disturbance. Utility mark outs were requested from the New York City/Long Island One Call Center prior to the commencement of drilling. Additional pre-drilling utility clearance activities were conducted as part of the geophysical survey by scanning a ten foot area around each proposed location for subsurface anomalies and utilities.

The borings were advanced to 15 feet below grade at each location, 5 feet below the anticipated depth of the proposed building foundation, which is approximately 10 feet below existing grade. At each boring, AKRF field personnel prepared DER-10 compliant boring logs and screened the soil samples using headspace analysis during borehole advancement for organic vapors with a photo-ionization detector (PID) and evaluated for visual and olfactory impacts prior to collecting environmental samples. All field work was recorded in a field log.

Soil cores were obtained in a stainless steel, macro-core sampler with an internal acetate liner. In accordance with the OER's standard protocols, two discrete (grab) samples were selected for laboratory analysis from each of the borings: one sample from the upper two feet of soil and one from the two foot interval at the bottom of the proposed excavation depth or just about the groundwater table, whichever is shallower. If elevated PID, visual, or olfactory evidence of contamination was encountered during borehole advancement, the soil sample depths were adjusted.

Boring logs prepared by a geologist are attached in Appendix D. The location of the soil borings are shown on Figure 2.

Groundwater Monitoring Well Construction

Groundwater samples were collected from six borings by installing one-inch temporary PVC well points and using low-flow sampling techniques. The PVC well points were installed approximately five feet into the groundwater table and constructed with a 10-foot screen and j-plug. The temporary wells were sampled utilizing new poly tubing and a peristaltic pump. The

wells were purged of three to five times its volume prior to sampling using a peristaltic pump and dedicated polyethylene tubing. Field measurements were recorded on a Horibia multi-meter, but since the samples were collected from temporary well points, it was not possible to achieve stabilization prior to sampling at every well location. The samples were field screened for evidence of contamination (i.e., PID, odor, sheen). Sampling was conducted in accordance with NYSDEC Draft DER-10 Technical Guidance for Site Investigation and Remediation, dated May 2010, and Sampling Guidelines and Protocols, dated March 1991. Groundwater wells were gauged with a water level meter to record a depth to groundwater reading (1/100 foot), and if necessary, an interface probe to determine the thickness of light non-aqueous phase liquid (LNAPL). The well casings were surveyed by a NYS licensed surveyor to facilitate preparation of a groundwater contour map and determine the direction of groundwater flow.

The locations of the groundwater samples are shown on Figure 2. Groundwater well construction and development details are provided in Table 1, and a summary of water levels measurements is provided in Table 2. Groundwater sampling logs are included in Appendix E.

Soil Gas Probe Installation

Seven soil gas probes (SV-1, SV-2, SV-3, SV-4, SV-5, SV-6, and SV-7) were installed approximately 4.5 feet below the concrete surface of the indoor and outdoor area of the Site. The soil vapor sampling points were installed using a DPP by advancing a 2-inch diameter hollow probe rod fitted with an expendable 6-inch long stainless steel screened drive point to 4.5 to 5 feet below grade. Dedicated Teflon-lined polyethylene tubing with threaded fittings was connected to the stainless steel probe. The hollow probe rod was then removed, and the borings were backfilled with clean silica sand. Hydrated bentonite was used to fill the remaining void around the sampling tubing to the ground surface.

The locations of the soil vapor sampling points are shown on Figure 2. Soil vapor construction details are summarized in Table 3. Soil vapor sampling logs are attached as Appendix F.

Survey

The locations and elevation of the six groundwater wells installed during the investigation were surveyed by the McLaren Engineering Group on October 31, 2014. A copy of the elevation survey is included in Appendix G. The locations of the soil borings and soil vapor points were

verified in the field using both field measurements and the Site survey. All sample locations are shown on Figure 2.

Water Level Measurement

Groundwater levels were recorded from all six wells on December 4, 2014 using a Solinist 122 oil/water interface probe. The measurements were taken from a permanent black mark on top of each new well casing. The depth to water and casing elevations were utilized to determine the groundwater elevation and flow direction. The elevation and water level data are provided in Table 2, and illustrated on Figure 4.

4.3 Sample Collection and Chemical Analysis

Sampling performed as part of the field investigation was conducted for all AOCs and also considered other means for bias of sampling based on professional judgment, area history, discolored soil, stressed vegetation, drainage patterns, field instrument measurements, odor, or other field indicators. All media including soil, groundwater, and soil vapor have been sampled and evaluated in the RIR. The sampling performed and presented in this RIR provides sufficient basis for evaluation of remedial action alternatives, establishment of a qualitative human health exposure assessment, and selection of a final remedy.

Soil Sampling

A total of 38 soil samples were collected for chemical analysis during this RI. In accordance with the NYCOER's standard protocols, one soil sample was taken from the upper two feet of soil and one from the two-foot interval at the bottom of the proposed excavation depth or just above the groundwater table, whichever was shallower. There were PID readings, staining, and odors observed in three soil borings (SB-4, SB-6, and SB-18) during the soil sampling activities. The staining appeared to be limited to dark colored wood fragments observed in borings SB-4, SB-6, and SB-18. Soil boring SB-6 revealed PID readings and a sulfur-like odor, which may be attributable to decomposition of organic material below the groundwater table.

Sample containers were labeled and placed in ice-filled coolers and shipped to the laboratory via courier with appropriate chain-of-custody documentation. Soil samples selected for laboratory analysis were submitted to Test America Laboratories, Inc. (Test America) of Edison, New Jersey, a New York State Department of Health (NYSDOH)-certified laboratory for volatile

organic compounds (VOCs) by EPA Method 8260, semi-volatile organic compounds (SVOCs) by EPA Method 8270, pesticides by EPA Method 8081, polychlorinated biphenyls (PCBs) by EPA Method 8082, and Target Analyte List (TAL) metals. A blind field duplicate (SB-X (7'-8')) was collected from the same location as soil sample SB-4 (7-8') for quality assurance and quality control (QA/QC) purposes for VOCs, SVOCs and metals. Two trip blanks for VOCs and one field blank for SVOCs, VOCs, and TAL Metals were included with the sample shipments for QA/QC purposes.

Data on soil sample collection for chemical analyses, including dates of collection and sample depths are reported in Tables 4 through 7, and on the boring logs in Appendix D. Figure 2 shows the location of samples collected during this investigation.

Groundwater Sampling

On October 22 through October 28, 2014, one groundwater sample was collected from each of the six temporary monitoring wells (TW-1, TW-2, TW-3, TW-4, TW-5, and TW-6) using low-flow sampling techniques. Some of the temporary wells were unable to achieve stabilization prior to sampling. Sample containers were labeled and placed in an ice-filled cooler and shipped to the laboratory via courier with appropriate chain-of-custody documentation.

Samples were analyzed by Test America, a NYSDOH certified laboratory, for VOCs using EPA Method 8260, SVOCs using EPA Method 8270, pesticides using EPA Method 8081, PCBs using EPA Method 8082, and TAL metals (6000/7000 series). The groundwater analyses for metals were conducted on both filtered and unfiltered samples. The samples were submitted along with one trip blank for analysis of VOCs.

Groundwater sample collection data is reported in Tables 8 through 11. Sampling logs with information on purging and sampling of the groundwater monitor wells are included in Appendix E. Figure 2 shows the locations of samples collected during this investigation.

Soil Gas Sampling

Seven soil vapor probes were installed and seven soil vapor samples were collected for chemical analysis during this RI. Methodologies used for soil vapor assessment conform to the *NYS DOH Final Guidance on Soil Vapor Intrusion, October 2006.* Soil vapor sample SV-7 was relocated to

the east of the proposed location in the approved Remedial Investigation Work Plan after several attempts to advance the point with the drill rig encountering refusal.

Between October 23 and 28, 2014, the soil vapor points were sampled. Prior to collection, each sampling point was purged of three sample volumes using a peristaltic pump at a flow rate of approximately 0.1 liters/minute. During purging, an inverted five-gallon bucket was placed over each sampling point and helium gas was introduced through a small hole in the bucket to saturate the atmosphere around the sample port. Purged vapors were collected in a Tedlar bag and field-screened for organic vapors using a PID. The purged air was also monitored using a portable helium detector to check for short-circuiting of ambient air into the vapor sampling point. All soil vapor points were considered to pass the seal integrity tests. PID readings were recorded at all soil gas locations ranging from 0.3 to 3.5 parts per million (ppm).

After purging, each probe was connected via Teflon-lined polyethylene tubing to a laboratory-supplied 6-liter SUMMA canister equipped with a flow regulator set to collect a sample over a two-hour sampling period. Immediately after opening the flow control valve, the initial SUMMA canister vacuum (inches of mercury) was noted. After approximately two hours, the flow controller valve was closed, the final vacuum noted, and the canister placed in a shipping carton for delivery to Test America for analysis of VOCs via EPA Method TO-15. Each Summa can was labeled to identify the sample ID, date, time and vacuum readings. The identification numbers for both the Summa can and flow controller were noted on the chain-of-custody documentation and the samples were transported by courier directly to Test America's Knoxville, Tennessee laboratory.

Soil vapor point construction and sampling details are reported in Table 2. Soil vapor sample collection data is reported in Table 12. Soil vapor sampling logs are included in Appendix F. Soil gas air sampling locations are shown in Figure 2. Methodologies used for soil vapor assessment conform to the *NYS DOH Final Guidance on Soil Vapor Intrusion, October 2006.*

Chemical Analysis

Chemical analytical work presented in this RIR has been performed in the following manner:

Factor	Description
Quality Assurance Officer	The chemical analytical quality assurance is directed by Stephen Malinowski
Chemical Analytical Laboratory	The chemical analytical laboratory used for soil and groundwater samples in the RI is NYS ELAP certified Test America Laboratories of Edison, New Jersey. The chemical analytical laboratory used for the soil gas samples in the RI is NYS ELAP certified Test America Laboratories of Knoxville, Tennessee.
Chemical Analytical Methods	Soil analytical methods: • VOCs by EPA Method 8260C (rev. 2006); • SVOCs by EPA Method 8270D (rev. 2007); • PCBs by EPA Method 8082A (rev. 2000); • Pesticides by EPA Method 8081B (rev. 2000); • TAL Metals by EPA Method 6010C (rev. 2007); Groundwater analytical methods: • VOCs by EPA Method 8260C (rev. 2006); • SVOCs by EPA Method 8270D (rev. 2007); • PCBs by EPA Method 8082A (rev. 2000); • Pesticides by EPA Method 8081B (rev. 2000); • TAL Metals by EPA Method 6010C (rev. 2007); Soil gas analytical methods: • VOCs by TO-15

Quality Assurance/Quality Control Sampling

QA/QC procedures were used to provide performance information with regard to accuracy, precision, sensitivity, representation, completeness, and comparability associated with the sampling and analysis for this investigation. Field QA/QC procedures were used (1) to document that samples are representative of actual conditions at the site and (2) to identify possible cross-contamination from field activities or sample transit. Laboratory QA/QC procedures and analyses were used to demonstrate whether analytical results have been biased either by interfering compounds in the sample matrix, or by laboratory techniques that may have introduced systematic or random errors to the analytical process.

QA/QC samples were analyzed at an ELAP-certified laboratory. QA/QC sampling consisted of the following:

- Three aqueous trip blank samples;
- One aqueous field blank sample; and
- One blind duplicate soil sample.

QA/QC samples were submitted with the collected soil and groundwater samples. The trip blank samples were submitted for laboratory analysis for VOCs by EPA Method 8260. The field blank and field duplicate were analyzed for VOCs, SVOCs, and metals.

No VOCs were detected in either of the trip blanks or the field blank. The field blank did not detect any SVOCs, but the metal sodium was detected at a value of 723 mg/Kg. The presence of sodium in the field blank does not affect the validity of the groundwater results for sodium, since the Site is located adjacent to Newtown Creek, sodium is expected within the shallow groundwater and is not a contaminant of concern. The method detection limit (MDL) for ethylene dibromide, 1,2-dichloroethane, and 1,2-dibromo-3-chloropropane was higher than the NYCDEC TOGs guidance values for these compounds in all six groundwater samples, and the trip and field blanks. These compounds were not detected in any of the groundwater samples are not considered contaminants of concern, and are not anticipated to have an effect on the quality of the data.

The field duplicate sample had a high relative percent difference for barium and lead; however, soil samples are expected to have a greater variance due to variable contaminant properties in soil, particularly in non-homogenous fill material as was identified in the soil sample SB-4(7-8') and many other samples collected during this investigation. In general, the compounds detected in the parent and duplicate sample were consistent for VOCs and SVOCs, and the remaining metals.

Results of Chemical Analyses

Laboratory data for soil, groundwater, and soil vapor are summarized in Table 4 through 12, respectively. Laboratory data deliverables for all samples evaluated in this RIR are provided in digital form in Appendix H and I.

5.0 ENVIRONMENTAL EVALUATION

5.1 Geological and Hydrogeological Conditions

The topography of the area is generally level with a slight slope from the south near Commercial Street to the north towards Newtown Creek. The Site is approximately 8 to 11 feet above the North American Vertical Datum (an approximation of mean sea level) according to a survey dated November 20, 2014 by the McLaren Engineering Group. A copy of the Hydrographic, Topographic and Boundary Survey for 77 Commercial Street is provided in Appendix J.

Stratigraphy

Stratigraphy at the Site consists of roughly three to seven feet of historic fill characterized by crushed rock, and brick, little asphalt, trace wood and gravel. Brown sand containing some silt underlies the historic fill.

Hydrogeology

Groundwater was encountered between approximately 5 and 11 feet below ground surface during the RI. The groundwater level elevations with groundwater contours and inferred flow lines are shown in Figure 4. Based on site-specific groundwater level measurements obtained on December 4, 2014, inferred groundwater flow is from the south to the northwest towards Newtown Creek. Groundwater in Brooklyn is not used as a source of drinking water.

5.2 Soil Chemistry

Thirty-eight soil samples were collected for laboratory analysis from soil borings SB-1 through SB-19. Soil sample analytical results were compared to NYSDEC 6 NYCRR Part 375 Unrestricted Use Soil Cleanup Objectives (UUSCOs) and Part 375 Soil Cleanup Objectives for Restricted-Residential Use (RRSCOs). The complete laboratory analytical data sheets are provided in Appendix H. Analytical results of the soil samples are summarized on Tables 4 through 8. Exceedances of applicable standards are noted on the tables. Figure 5 shows the locations and concentrations for soil/fill that exceed the UUSCOS and RRUSCOs.

Volatile Organic Compounds (VOCs)

VOCs were detected in 21 of the 39 soil samples analyzed. One VOC, acetone, was detected above the UUSCOs but below the RRSCOs in four of the 39 soil samples. Acetone is a common laboratory contaminant and was also detected in the laboratory method blank. Therefore, the presence of acetone does not appear to be representative of Site conditions. Soil analytical results for VOCs are presented in Table 4.

Semivolatile Organic Compounds (SVOCs)

SVOCs were detected in each of the soil samples analyzed during the investigation. Twenty-four SVOCs were detected in one or more of the soil samples analyzed at concentrations ranging from an estimated concentration of 10 micrograms per kilogram (µg/Kg) to 20,000 µg/Kg. Three SVOCs (4-methylphenol, benzo(k)fluoranthene, and chrysene) were detected in at least one soil sample at concentrations above their respective UUSCOs, but below their respective RRSCOs. Benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene were detected above their respective RRSCOs in 18 of the 39 samples collected during the field investigation at concentrations ranging from 470 µg/Kg to 20,000 µg/Kg. The SVOC exceedances were polycyclic aromatic hydrocarbons (PAHs), which are a class of compounds found in some petroleum products, coal ash, and in other combustion products that are commonly found in urban fill. In addition, potential creosote-covered wood fragments displaying odors and PID readings were observed in soil borings SB-4, SB-5, and SB-18. Soil analytical results for SVOCs are presented in Table 5.

Metals

Twenty-two metals were detected in one or more of the soil samples analyzed ranging from 0.02 milligrams per kilogram (mg/Kg) to 145,000 mg/Kg. The metals arsenic (maximum of 33.9 mg/Kg), barium (maximum of 566 mg/Kg), chromium (maximum 117 mg/Kg), copper (maximum 115 mg/Kg), lead (maximum 2,300 mg/Kg, mercury (maximum 26 mg/Kg), nickel (maximum 182 mg/Kg), selenium (maximum 4.8 ppm), and/or zinc (maximum 277 mg/Kg) were detected above their respective UUSCOs and/or RRSCOs in 22 of the 38 soil samples. The metals concentrations are most likely attributable to historic fill materials, which often contain

highly variable concentrations of metals.

Soil analytical results for metals are presented in Table 6.

PCBs

The PCB Aroclor1262 was detected in soil sample SB-9(1-2') at a concentration of 1,000 µg/Kg, above its UUSCO of 100 µg/Kg and equal to its RRSCO of 1,000 µg/Kg. Aroclor 1262 was also detected in soil samples SB-5(1-2') and SB-7(1-2') at estimated concentrations below their respective UUSCOs. No other PCBs were detected in any of the soil samples. The presence of PCB Aroclor 1262 is most likely attributable to the presence of historic fill material in the upper two feet where the samples with PCB detections were collected at the Site, and is not indicative of a spill or a release.

Soil analytical results for PCBs are presented in Table 7.

Pesticides

Pesticides were not detected in any of the soil samples collected during the RI. Soil analytical results for pesticides are presented in Table 7.

Data collected during the RI is sufficient to delineate the vertical and horizontal distribution of contaminants in soil/fill at the Site. Summary tables of data for chemical analyses performed on soil samples are included in Tables 4 through 8. Figure 4 shows the locations and concentrations for soil/fill that exceed the UUSCOS and RRSCOs.

5.3 Groundwater Chemistry

A summary table of data for chemical analyses performed on groundwater samples is included in Tables 8 through 11. Figure 6 shows the locations and concentrations for groundwater that exceed the New York State 6 NYCRR Part 703.5 Class GA Ambient Water Quality Standards.

Volatile Organic Compounds

No VOCs were detected in any of the groundwater samples above their respective NYSDEC Class GA Ambient Water Quality Standards (AWQS). Two VOCs, 1,4-Dioxane and o-xylene, were detected a at concentrations of 2,200 and an estimated value of 0.22 micrograms per liter (µg/L) in groundwater samples TW-2 and TW-1, respectively. 1,4-Dioxane does not have an

AWQS and o-xylene was detected below its respective AWQS of 5 µg/L. The VOC 4-methyl-2-pentanone was detected at an estimated concentration of 2.0 µg/L in sample TW-1. For all groundwater samples, the method detection limit (MDL) was higher than their respective Class GA standards for three VOCs: ethylene dibromide, 1,2-dichloroethane, and 1,2-dibromo-3-chloropropane. For all samples, these VOCs were not detected at 1.0 µg/L, which is above the NYSDEC Class GA Ambient Water Quality Standards of 0.0006 µg/L, 0.6 µg/L, and 0.04 µg/L, respectively. Chloroform was detected in the field blank at an estimated concentration of 0.69 µg/L, below its applicable AWQS of 7 µg/L. Chloroform was not detected in any of the groundwater samples collected as part of the RI. No other VOCs were detected in the groundwater samples.

Groundwater analytical results for VOCs are presented in Table 8.

Semivolatile Organic Compounds

Twenty-three SVOCs had a MDL higher than their respective Class GA standards for all six groundwater samples. Two SVOCs benzo[b]fluoranthene and benzo[k]fluoranthene) were detected in groundwater sample TW-5 at concentrations ranging between an estimated 0.24 µg/L and 0.55 µg/L, above their respective AWQS. During the sampling of temporary well TW-5, the turbidity did not stabilize before sample collection and the presence of the SVOCs in the groundwater sample is likely attributable to sediment entrained in the water sample. No other SVOCs were detected in the six groundwater samples above their respective Class GA standards.

Groundwater analytical results for SVOCs are presented in Table 9.

Metals

Nineteen metals were detected in the unfiltered groundwater samples (total metals analysis) and the filtered samples (dissolved metals analysis). Twelve metals (arsenic, barium, beryllium, chromium, copper, iron, manganese, manganese, lead, mercury, nickel, sodium, and zinc) were detected above the Class GA standards in one or more of the total groundwater samples. Four of these metals which naturally occur in groundwater (magnesium, iron, manganese, and sodium) were detected above the Class GA standards in one or more of the dissolved groundwater samples. The presence of the remaining six metals in the dissolved groundwater are

typical of groundwater quality in Brooklyn, and does not appear to be related to a spill or release at the Site.

Groundwater analytical results for metals are presented in Table 10.

PCBs and Pesticides

Total PCBs had a MDL of 0.4 µg/kg, higher than the NYSDEC Class GA standard of 0.09 µg/L in all six groundwater samples. Four pesticides, alpha-BHC, chlordane, dieldrin, and toxaphene, had MDLs that were higher than their respective NYSDEC Class GA standards in all six groundwater samples. No PCBs or pesticides were detected in any of the groundwater samples. Groundwater analytical results for PCBs and pesticides are presented in Table 11.

5.4 Soil Vapor Chemistry

Data collected during the RI is sufficient to delineate the distribution of contaminants in soil vapor at the Site. A summary table of data for chemical analyses performed on soil vapor samples is included as Table 12. Figure 7 shows the location and posts the values for soil vapor samples with detections above the NYSDOH soil vapor intrusion air guidance values (AGVs). A complete copy of the laboratory report for the soil vapor samples is provided in Appendix I.

Concentrations of VOCs detected in the soil gas samples were compared to the NYSDOH 2006 Guidance for Evaluating Soil Vapor Intrusion AGVs and matrices, and the September 2013 NYSDOH Fact Sheet update for tetrachloroethene (PCE). These values provide a means of comparison; however, since the AGVs are intended to be protective of indoor air, the comparison assumes that any soil vapor detected would completely penetrate into the building, a condition that does not typically occur. In addition, AGVs have only been established for five VOCs [carbon tetrachloride, methylene chloride, 1,1,1-trichloroethane (1,1,1-TCA), TCE, and PCE] and matrices have only been established for carbon tetrachloride, PCE, 1,1,1-TCA, trichloroethene (TCE), vinyl chloride, 1,1-dichloroethene, and cis-1,2-dichloroethene.

A review of the soil vapor sample analytical results identified 37 VOCs detected in the seven samples. VOCs associated with petroleum [including benzene, toluene, ethylbenzene, xylenes (collectively referred to as BTEX), 1,2,4- and 1,3,5-trimethylbenzene, cyclohexane, heptane, hexane, methyl ethyl ketone (MEK), 4-ethyltoluene, and 2,2,4-trimethylpentane] were detected

at concentrations from 0.95 micrograms per cubic meter (µg/m^3) to 830 µg/m^3. Solvent-related VOCs [including acetone, chloroform, PCE, and TCE] were detected at concentrations up to 490 µg/m^3. PCE (maximum 40 µg/m^3) was detected in SV-1, SV-5, SV-6, and SV-7 at concentrations above its AGV of 30 µg/m3. PCE was detected at 30 TCE µg/m^3 in groundwater sample TW-3. TCE was detected in SV-7 at a concentration of 94 µg/m3 above its AGV of 5 µg/m3. Methylene chloride was detected at the same order of magnitude in both the laboratory blank and soil vapor samples SV-1, SV-2, and SV-4, below its AGV of 60 µg/m^3. This compound is a common laboratory contaminant, and its presence is not likely indicative of Site conditions.

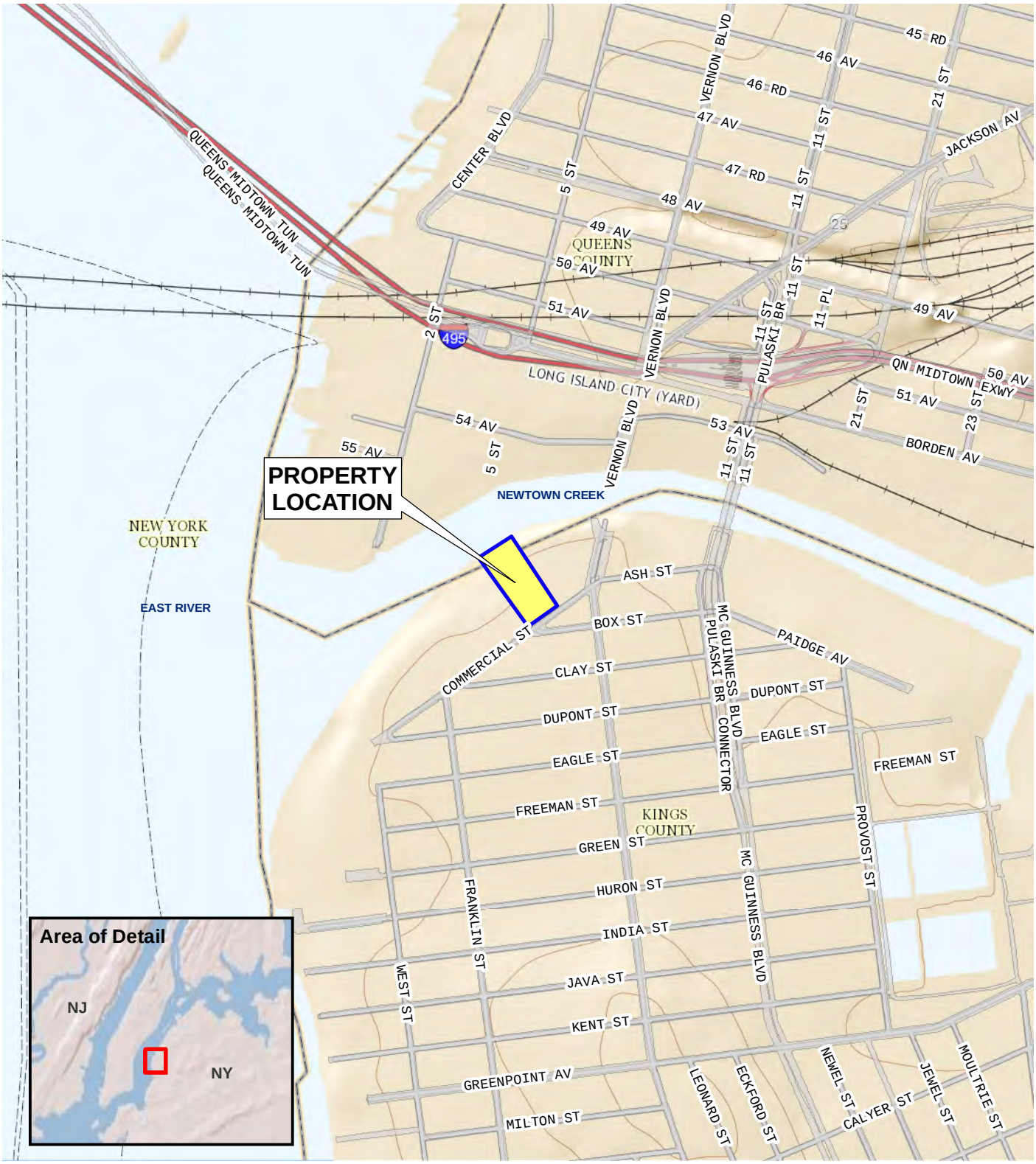
5.5 Prior Activity

Based on an evaluation of the data and information from the RIR, disposal of significant amounts of hazardous waste is not suspected at this site.

5.6 Impediments to Remedial Action

There are no known impediments to remedial action at this property.

FIGURES



SOURCE
USGS 7.5 Minute Topographic Map
Brooklyn Quad 2011

0 1,000 2,000 Feet

77 Commercial Street
Brooklyn, New York

SITE LOCATION

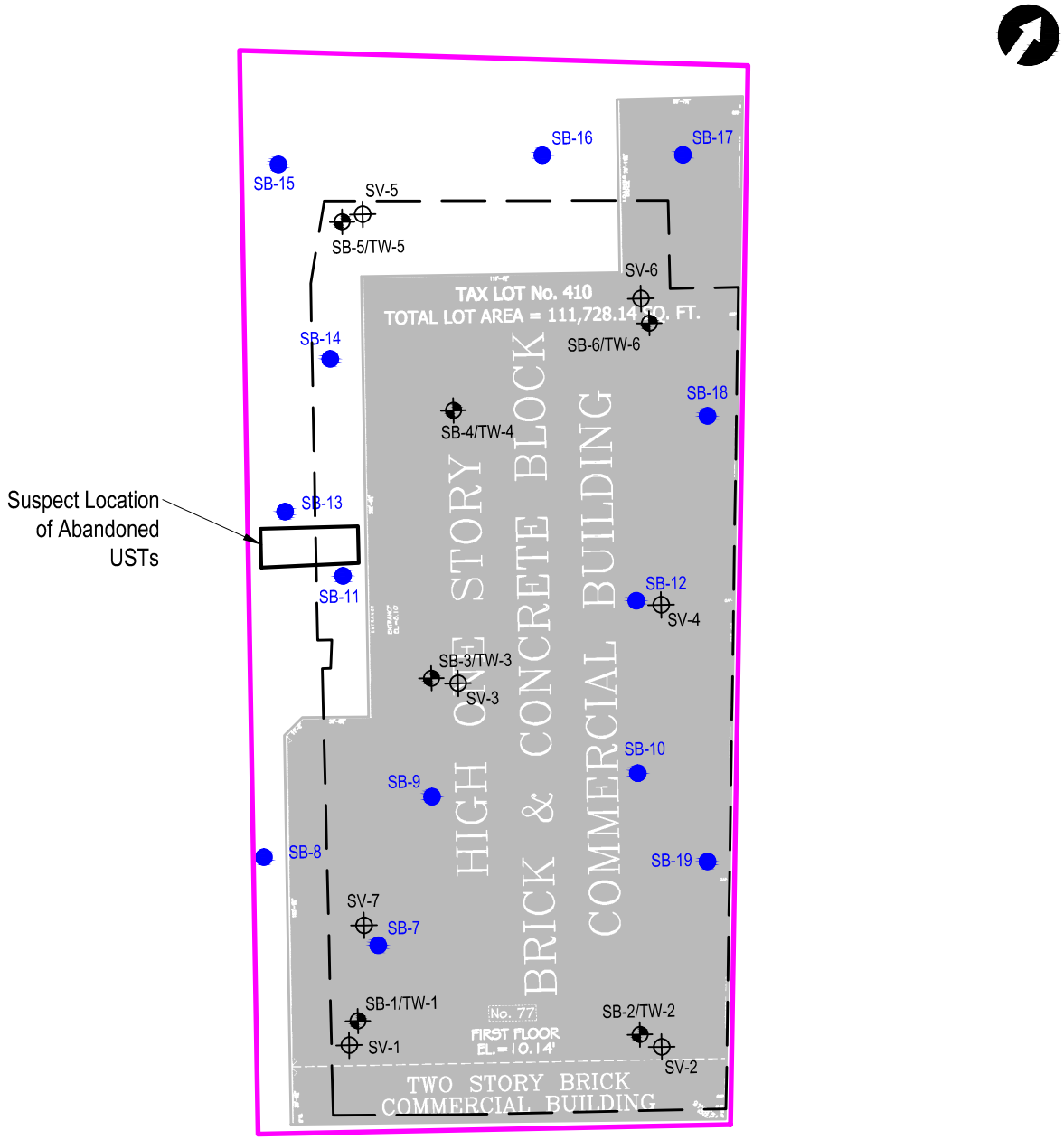
AKRF
Environmental Consultants
440 Park Avenue South, New York, N.Y. 10016

DATE
12/2/2014

PROJECT No.
12015

FIGURE
1

© 2014 AKRF, Inc. Environmental Consultants O:\Projects\12015 - 77 COMMERCIAL ST\hazmat\new 12015 Fig 1 loc map.mxd



LEGEND:

0' 40' 80' 160'

SCALE IN FEET

EXISTING BUILDING EXTENT

LOT BOUNDARY

APPROXIMATE EXTENT OF PROPOSED BUILDING

SB-11 SOIL BORING

SB-2/TW-2 SOIL BORING/TEMPOARARY WELL

SV-2 SOIL GAS POINT

77 Commercial Street

Brooklyn, New York

SITE PLAN & SAMPLE LOCATIONS

AKRF

Environmental Consultants

440 Park Avenue South, New York, N.Y. 10016

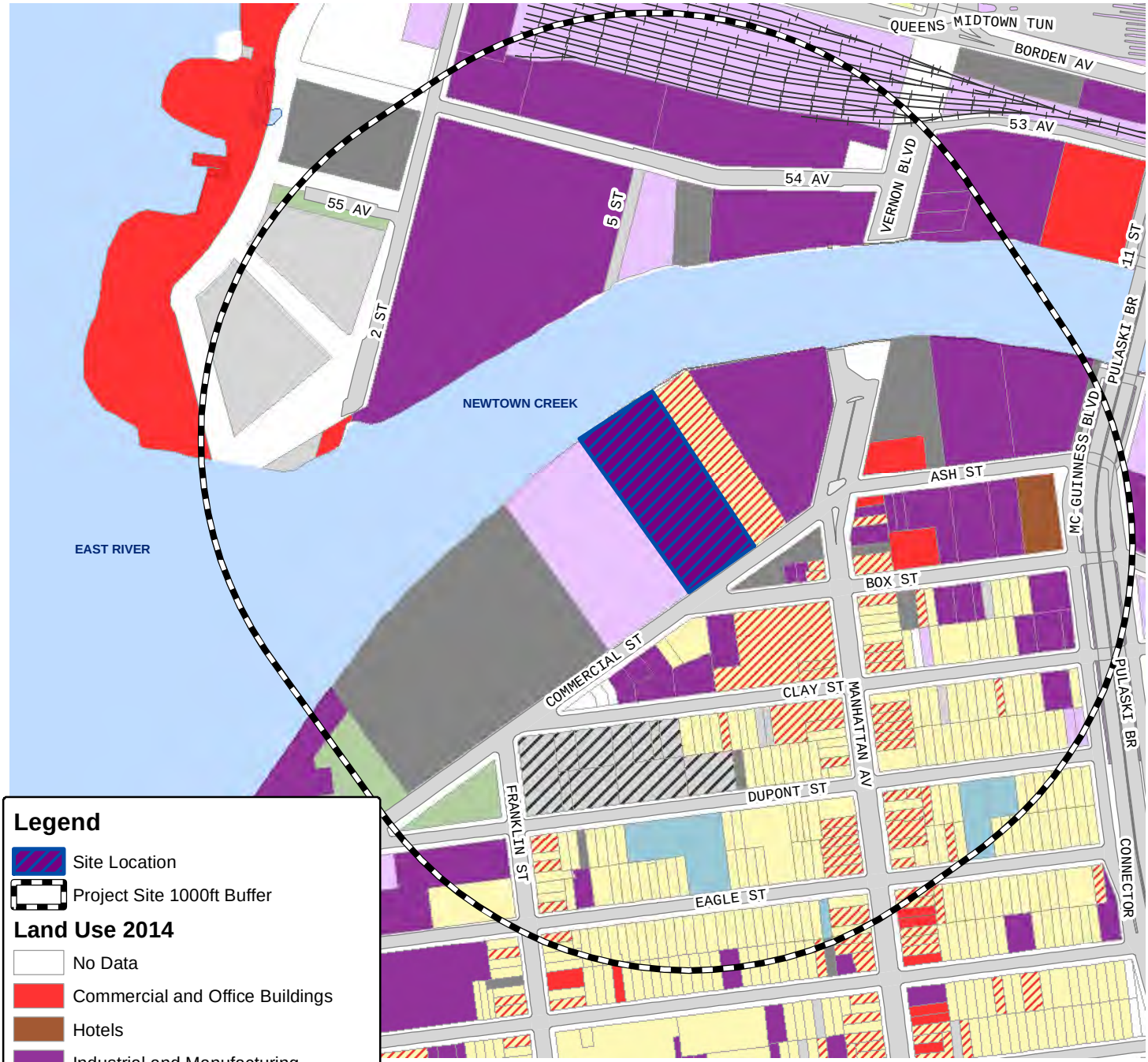
DATE 12.18.2014

PROJECT No. 12015

SCALE as shown

FIGURE 2

©2014 AKRF, Inc. Environmental Consultants M:\AKRF Project Files\12015 - 77 Commercial Street\Figure\12015 Fig 2 Sample Locations.dwg



Source:
NYCDCP (NYC Dept. of City Planning) GIS database

Legend

- Site Location
- Project Site 1000ft Buffer

Land Use 2014

- No Data
- Commercial and Office Buildings
- Hotels
- Industrial and Manufacturing
- Open Space and Outdoor Recreation
- Parking Facilities
- Public Facilities and Institutions
- Residential
- Residential with Commercial Below
- Transportation and Utility
- Vacant Land
- Vacant Building
- Under Construction

0 125 250 500
Feet

77 Commercial Street
Brooklyn, New York

EXISITING LAND USE

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DATE
12/15/2014

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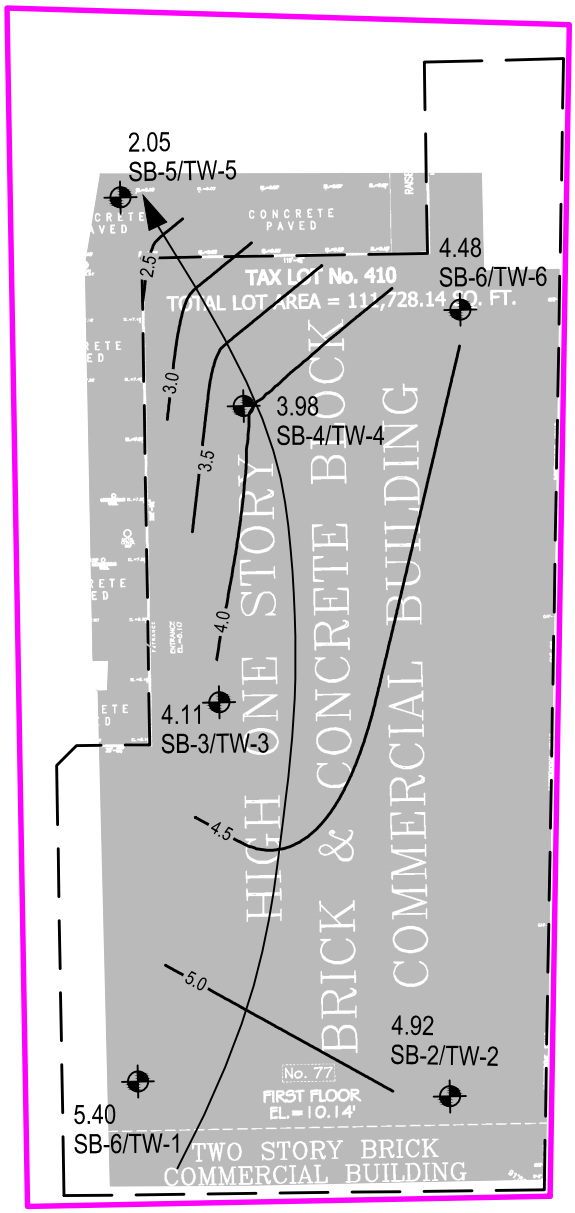
12015

FIGURE
3

© 2011 AKRF, Inc. Environmental Consultants O:\Projects\12015 - 77 COMMERCIAL ST\hazmat\12015 Fig 3 Land Use Map.mxd



Notes
1. Elevations are in NAVD 88.

0' 40' 80' 160'
SCALE IN FEET

LEGEND:

EXISTING BUILDING EXTENT

LOT BOUNDARY

APPROXIMATE EXTENT OF PROPOSED BUILDING

4.92 SB-2/TW-2 MONITORING WELL WATER TABLE ELEVATION IN FEET

4 ELEVATION CONTOUR IN FEET

GROUNDWATER FLOW DIRECTION

77 Commercial Street

Brooklyn, New York

GROUNDWATER ELEVATION CONTOURS 12/4/14

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DATE 12.15.2014

PROJECT No. 12015

SCALE as shown

FIGURE 4

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Sample ID Date Sampled	NYSDEC UUSCOS	NYSDEC RRSCOS	SB-15(1-2') 10/24/2014	SB-15(5-6') 10/24/2014
VOCs	µg/Kg	µg/Kg	µg/Kg	µg/Kg
Acetone	50	100,000	47 B	98 B
SVOCs	µg/Kg	µg/Kg	µg/Kg	µg/Kg
Benzo[a]anthracene	1,000	1,000	2,100	2,700
Benzo[a]pyrene	1,000	1,000	2,000	2,700
Benzo[b]fluoranthene	1,000	1,000	2,700	3,400
Benzo[k]fluoranthene	800	3,900	1,000	1,200
Chrysene	1,000	3,900	2,400	3,000
Dibenz(a,h)anthracene	330	330	280	500
Indeno[1,2,3-cd]pyrene	500	500	1,000	1,800
Metals	mg/kg	mg/kg	mg/kg	mg/kg
Arsenic	13	16	6.6	13.2
Chromium	30	180	16	35.9
Copper	50	270	46.2	85
Lead	63	400	175	188
Mercury	0.18	0.81	0.61	0.51
Zinc	109	10,000	171	179

Sample ID Date Sampled	NYSDEC UUSCOS	NYSDEC RRSCOS	SB-11(1-2') 10/24/2014	SB-11(5-6') 10/24/2014
SVOCs	µg/Kg	µg/Kg	µg/Kg	µg/Kg
4-Methylphenol	330	100,000	1,900 U	690 J
Benzo[a]anthracene	1,000	1,000	6,900	12,000
Benzo[a]pyrene	1,000	1,000	9,100	7,000
Benzo[b]fluoranthene	1,000	1,000	10,000	20,000
Benzo[k]fluoranthene	800	3,900	4,200	6,500
Chrysene	1,000	3,900	7,600	18,000
Dibenz(a,h)anthracene	330	330	1,500	1,600
Indeno[1,2,3-cd]pyrene	500	500	5,400	5,300
Phenol	330	100,000	1,900 U	880 J
Metals	mg/kg	mg/kg	mg/kg	mg/kg
Copper	50	270	56.1	27.7
Lead	63	400	149	77.6
Mercury	0.18	0.81	0.36	0.13
Zinc	109	10,000	94.9	126

Sample ID Date Sampled	NYSDEC UUSCOS	NYSDEC RRSCOS	SB-16(7-8') 10/24/2014
VOCs	µg/Kg	µg/Kg	µg/Kg
Acetone	50	100,000	220 B
SVOCs	µg/Kg	µg/Kg	µg/Kg
Benzo[a]anthracene	1,000	1,000	2,000
Benzo[a]pyrene	1,000	1,000	1,500
Benzo[b]fluoranthene	1,000	1,000	1,800
Chrysene	1,000	3,900	2,100
Indeno[1,2,3-cd]pyrene	500	500	950
Metals	mg/kg	mg/kg	mg/kg
Lead	63	400	366
Nickel	30	310	32.9
Zinc	109	10,000	134

Sample ID Date Sampled	NYSDEC UUSCOS	NYSDEC RRSCOS	SB-17 (1-2') 10/22/2014	SB-17 (11-12') 10/22/2014
SVOCs	µg/Kg	µg/Kg	µg/Kg	µg/Kg
Benzo[a]anthracene	1,000	1,000	310	2,700
Benzo[a]pyrene	1,000	1,000	280 *	1,300 *
Benzo[b]fluoranthene	1,000	1,000	370	4,400
Benzo[k]fluoranthene	800	3,900	150	1,600
Chrysene	1,000	3,900	370 J	3,300
Dibenz(a,h)anthracene	330	330	43	470
Indeno[1,2,3-cd]pyrene	500	500	220	1,400
Metals	mg/kg	mg/kg	mg/kg	mg/kg
Lead	63	400	98.8	79.9
Mercury	0.18	0.81	0.24 ^	0.11 ^
Nickel	30	310	12.3	37

Sample ID Date Sampled	NYSDEC UUSCOS	NYSDEC RRSCOS	SB-6 (1-2') 10/22/2014	SB-6 (10-11') 10/22/2014
SVOCs	µg/Kg	µg/Kg	µg/Kg	µg/Kg
Benzo[a]anthracene	1,000	1,000	800	3,100
Benzo[a]pyrene	1,000	1,000	730 *	3,700 *
Benzo[b]fluoranthene	1,000	1,000	990	4,400
Benzo[k]fluoranthene	800	3,900	340	1,600
Chrysene	1,000	3,900	900	2,900
Dibenz(a,h)anthracene	330	330	120	770
Indeno[1,2,3-cd]pyrene	500	500	610	3,700
Metals	mg/kg	mg/kg	mg/kg	mg/kg
Arsenic	13	16	13.1	4.9
Lead	63	400	398	65
Mercury	0.18	0.81	0.19	0.027
Zinc	109	10,000	262	77.4

Sample ID Date Sampled	NYSDEC UUSCOS	NYSDEC RRSCOS	SB-4 (1-2') 10/23/2014	SB-4 (7-8') 10/23/2014
Metals	mg/kg	mg/kg	mg/kg	mg/kg
Lead	63	400	110	8.6
Mercury	0.18	0.81	0.023	0.33
Zinc	109	10,000	123	53.8

Sample ID Date Sampled	NYSDEC UUSCOS	NYSDEC RRSCOS	SB-5(1-2') 10/24/2014	SB-5(6-7') 10/24/2014
SVOCs	µg/Kg	µg/Kg	µg/Kg	µg/Kg
Benzo[a]anthracene	1,000	1,000	1,400	780
Benzo[a]pyrene	1,000	1,000	1,300	770
Benzo[b]fluoranthene	1,000	1,000	1,500	1,100
Chrysene	1,000	3,900	1,700	970
Indeno[1,2,3-cd]pyrene	500	500	790	410
Metals	mg/kg	mg/kg	mg/kg	mg/kg
Copper	50	270	20.7	66.1
Lead	63	400	43.8	94.2
Mercury	0.18	0.81	0.77	0.16
Zinc	109	10,000	40.7	114

Sample ID Date Sampled	NYSDEC UUSCOS	NYSDEC RRSCOS	SB-12 (1-2') 10/22/2014	SB-12 (11-12') 10/22/2014
Metals	mg/kg	mg/kg	mg/kg	mg/kg
Chromium	30	180	8	33.6
Copper	50	270	23.4	52.2
Lead	63	400	86.2	102
Selenium	3.9	180	4.8	4.6 U
Zinc	109	10,000	48.3	236

Sample ID Date Sampled	NYSDEC UUSCOS	NYSDEC RRSCOS	SB-18 (1-2') 10/22/2014	SB-18 (12-13') 10/22/2014
VOCs	µg/Kg	µg/Kg	µg/Kg	µg/Kg
Acetone	50	100,000	4.2 J B	82 B
SVOCs	µg/Kg	µg/Kg	µg/Kg	µg/Kg
Indeno[1,2,3-cd]pyrene	500	500	680	40 J
Metals	mg/kg	mg/kg	mg/kg	mg/kg
Lead	63	400	122	27
Mercury	0.18	0.81	0.23 ^	0.021 U
Zinc	109	10,000	119	50

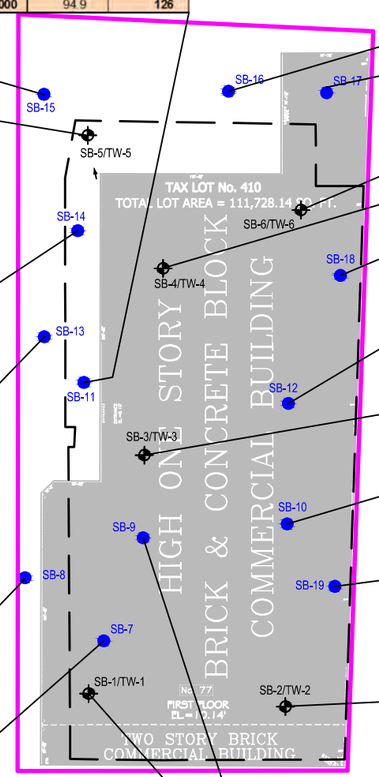
Sample ID Date Sampled	NYSDEC UUSCOS	NYSDEC RRSCOS	SB-14(1-2') 10/24/2014	SB-14(6-7') 10/24/2014
SVOCs	µg/Kg	µg/Kg	µg/Kg	µg/Kg
Benzo[a]anthracene	1,000	1,000	1,100	51
Benzo[a]pyrene	1,000	1,000	1,300	41
Benzo[b]fluoranthene	1,000	1,000	2,000	62
Benzo[k]fluoranthene	800	3,900	820	37 U
Chrysene	1,000	3,900	1,400	57 J
Indeno[1,2,3-cd]pyrene	500	500	1,100	29 J
Metals	mg/kg	mg/kg	mg/kg	mg/kg
Arsenic	13	16	33.9	0.88 J
Lead	63	400	64.8	51.8
Mercury	0.18	0.81	0.29	0.14
Nickel	30	310	11.1	182

Sample ID Date Sampled	NYSDEC UUSCOS	NYSDEC RRSCOS	SB-10 (1-2') 10/23/2014
Metals	mg/kg	mg/kg	mg/kg
Lead	63	400	127
Mercury	0.18	0.81	10.5

Sample ID Date Sampled	NYSDEC UUSCOS	NYSDEC RRSCOS	SB-3 (1-2') 10/23/2014	SB-3 (8-9') 10/23/2014
SVOCs	µg/Kg	µg/Kg	µg/Kg	µg/Kg
Benzo[b]fluoranthene	1,000	1,000	300	6,200 *
Benzo[k]fluoranthene	800	3,900	130	2,600 *
Dibenz(a,h)anthracene	330	330	36 J	580 *
Indeno[1,2,3-cd]pyrene	500	500	140	1,300 *
Metals	mg/kg	mg/kg	mg/kg	mg/kg
Arsenic	13	16	17	5
Lead	63	400	32.3	163
Mercury	0.18	0.81	0.6	0.17

Sample ID Date Sampled	NYSDEC UUSCOS	NYSDEC RRSCOS	SB-19 (1-2') 10/23/2014	SB-19 (7-8') 10/23/2014
Metals	mg/kg	mg/kg	mg/kg	mg/kg
Lead	63	400	135	66
Zinc	109	10,000	68.5	116

Sample ID Date Sampled	NYSDEC UUSCOS	NYSDEC RRSCOS	SB-2 (1-2') 10/23/2014	SB-2 (6-7') 10/23/2014
SVOCs	µg/Kg	µg/Kg	µg/Kg	µg/Kg
Benzo[b]fluoranthene	1,000	1,000	1,100	200
Indeno[1,2,3-cd]pyrene	500	500	670	110
Metals	mg/kg	mg/kg	mg/kg	mg/kg
Arsenic	13	16	10.8	15.1
Copper	50	270	63.4	46.7
Lead	63	400	192	123
Mercury	0.18	0.81	26	0.019 U
Zinc	109	10,000	277	102



0' 40' 80' 160'

SCALE IN FEET

Sample ID Date Sampled	NYSDEC UUSCOS	NYSDEC RRSCOS	SB-7 (1-2') 10/23/2014
Metals	mg/kg	mg/kg	mg/kg
Copper	50	270	59.9
Lead	63	400	335
Zinc	109	10,000	223

Sample ID Date Sampled	NYSDEC UUSCOS	NYSDEC RRSCOS	SB-9 (1-2') 10/23/2014	SB-9 (8-9') 10/23/2014
SVOCs	µg/Kg	µg/Kg	µg/Kg	µg/Kg
Benzo[a]anthracene	1,000	1,000	570	11,000
Benzo[a]pyrene	1,000	1,000	520 *	9,000 *
Benzo[b]fluoranthene	1,000	1,000	690	9,900
Benzo[k]fluoranthene	800	3,900	230	4,100
Chrysene	1,000	3,900	650	12,000
Dibenz(a,h)anthracene	330	330	74	1,900
Indeno[1,2,3-cd]pyrene	500	500	480	7,700
Metals	mg/kg	mg/kg	mg/kg	mg/kg
Arsenic	13	16	6.8	15
Copper	50	270	52.3	104
Lead	63	400	131	613
Mercury	0.18	0.81	0.25	0.14
Zinc	109	10,000	140	85.3
PCBs	µg/Kg	µg/Kg	µg/Kg	µg/Kg
Total PCBs	100	1,000	1,000	ND

Sample ID Date Sampled	NYSDEC UUSCOS	NYSDEC RRSCOS	SB-8(1-2') 10/24/2014
SVOCs	µg/Kg	µg/Kg	µg/Kg
Benzo[a]anthracene	1,000	1,000	2,300
Benzo[a]pyrene	1,000	1,000	2,100
Benzo[b]fluoranthene	1,000	1,000	2,700
Benzo[k]fluoranthene	800	3,900	1,100
Chrysene	1,000	3,900	2,400
Indeno[1,2,3-cd]pyrene	500	500	1,300
Metals	mg/kg	mg/kg	mg/kg
Copper	50	270	68.8
Lead	63	400	269
Mercury	0.18	0.81	0.38
Zinc	109	10,000	253

Sample ID Date Sampled	NYSDEC UUSCOS	NYSDEC RRSCOS	SB-1 (1-2') 10/23/2014
SVOCs	µg/Kg	µg/Kg	µg/Kg
Indeno[1,2,3-cd]pyrene	500	500	680
Metals	mg/kg	mg/kg	mg/kg
Lead	63	400	173
Mercury	0.18	0.81	0.2
Zinc	109	10,000	423

Sample ID Date Sampled	NYSDEC UUSCOS	NYSDEC RRSCOS	SB-13(1-2') 10/24/2014	SB-13(3-4') 10/24/2014
VOCs	µg/Kg	µg/Kg	µg/Kg	µg/Kg
Acetone	50	100,000	5.2 U	98 B
SVOCs	µg/Kg	µg/Kg	µg/Kg	µg/Kg
Benzo[a]anthracene	1,000	1,000	520	13,000
Benzo[a]pyrene	1,000	1,000	460	13,000
Benzo[b]fluoranthene	1,000	1,000	770	18,000
Benzo[k]fluoranthene	800	3,900	250	6,300
Chrysene	1,000	3,900	710	14,000
Dibenz(a,h)anthracene	330	330	110	2,100
Indeno[1,2,3-cd]pyrene	500	500	350	7,900
Metals	mg/kg	mg/kg	mg/kg	mg/kg
Arsenic	13	16	16.2	6.9
Barium	350	400	108	566
Chromium	30	180	117	51.8
Copper	50	270	90.6	115
Lead	63	400	247	2,300
Mercury	0.18	0.81	0.54	0.83
Nickel	30	310	18.6	36.2
Zinc	109	10,000	127	161

Part 375 Soil
Cleanup Objectives:Soil Clean-up Objectives listed in NYSDEC
(New York State Department of Environmental Conservation)
"Part 375" Regulations (6 NYCRR Part 375).
SOIL
Exceedences of Part 375 Unrestricted SCOs (UUSCOS) are highlighted in bold font.
Exceedences of Part 375 Restricted Residential (RRSCOS) are highlighted in gray.

Ôg/kg:micrograms per kilogram = parts per billion (ppb)
mg/kg:micrograms per kilogram = parts per million (ppm)

* : Laboratory Control Standard or Laboratory Control Standard Duplicate exceeds the control limits.
B: Compound was found in the blank and Sample.
U: The analyte was not detected at the indicated concentration.
J: The concentration given is an estimated value.
^: Instrument related QC exceeds the control limits.
ND: No Detect

LEGEND:

- EXISTING BUILDING EXTENT
- LOT BOUNDARY
- APPROXIMATE EXTENT OF PROPOSED BUILDING
- SB-11 SOIL BORING
- SB-1/TW-2 SOIL BORING/TEMPORARY WELL

Sample ID Date Sampled	NYSDEC UUSCOS	NYSDEC RRSCOS	SB-10 (1-2') 10/23/2014
Metals	mg/kg	mg/kg	mg/kg
Lead	63	400	127
Mercury	0.18	0.81	10.5

Sample ID number
Sample Date
Concentration in Soil
Analyte/Compound in Soil

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77 Commercial Street
Brooklyn, New York
SOIL CONCENTRATIONS ABOVE NYSDEC SCOS

DATE
12.19.2014

PROJECT NO.
12015

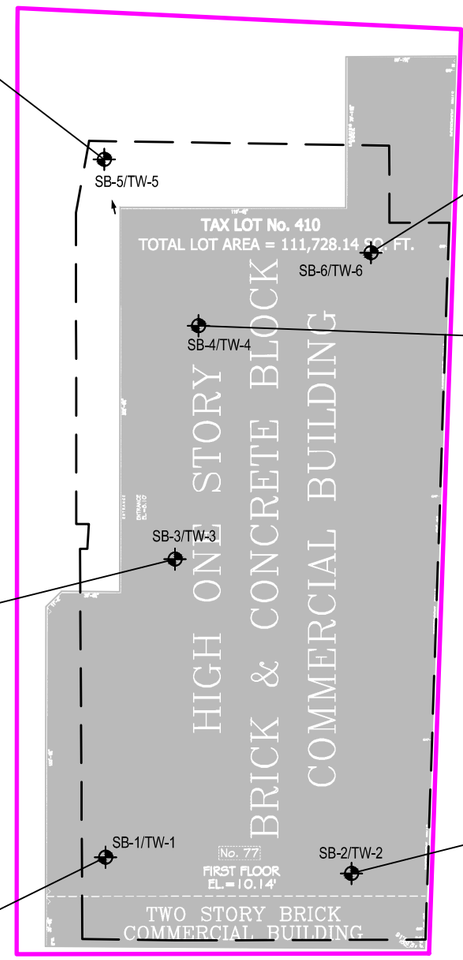
SCALE
as shown

FIGURE
5

Sample ID Date Sampled	NYSDEC AWQS	TW-5 10/24/2014
SVOCs	µg/L	µg/L
Benzo[b]fluoranthene	0.002	0.55 J
Benzo[k]fluoranthene	0.002	0.24 J
Total Metals - µg/L	µg/L	µg/L
Arsenic	25	1,440
Barium	1,000	11,500
Beryllium	3	76.3
Chromium	50	2,940
Copper	200	8,260
Iron	300	3,050,000
Lead	25	44,600
Magnesium	35,000	388,000
Manganese	300	47,300
Mercury	0.7	7.3
Nickel	100	3,460
Sodium	20,000	232,000
Zinc	2,000	21,700
Dissolved Metals - µg/L	µg/L	µg/L
Manganese	300	376
Sodium	20,000	196,000

Sample ID Date Sampled	NYSDEC AWQS	TW-6 10/23/2014
Total Metals - µg/L	µg/L	µg/L
Iron	300	15,700
Magnesium	35,000	126,000
Manganese	300	2,670
Sodium	20,000	595,000
Dissolved Metals - µg/L	µg/L	µg/L
Magnesium	35,000	125,000
Manganese	300	2,660
Sodium	20,000	597,000

Sample ID Date Sampled	NYSDEC AWQS	TW-4 10/24/2014
Total Metals - µg/L	µg/L	µg/L
Iron	300	35,900
Lead	25	813
Magnesium	35,000	78,300
Manganese	300	1,030
Sodium	20,000	325,000
Dissolved Metals - µg/L	µg/L	µg/L
Magnesium	35,000	85,100
Manganese	300	769
Sodium	20,000	359,000



Sample ID Date Sampled	NYSDEC AWQS	TW-2 10/24/2014
Total Metals - µg/L	µg/L	µg/L
Iron	300	9,190
Magnesium	35,000	48,000
Manganese	300	2,920
Sodium	20,000	204,000
Dissolved Metals - µg/L	µg/L	µg/L
Magnesium	35,000	47,400
Manganese	300	2,650
Sodium	20,000	221,000

Sample ID Date Sampled	NYSDEC AWQS	TW-3 10/23/2014
Total Metals - µg/L	µg/L	µg/L
Iron	300	27,800
Manganese	300	1,130
Sodium	20,000	490,000
Dissolved Metals - µg/L	µg/L	µg/L
Manganese	300	698
Sodium	20,000	484,000

Sample ID Date Sampled	NYSDEC AWQS	TW-1 10/28/2014
Total Metals - µg/L	µg/L	µg/L
Iron	300	25,300
Lead	25	36
Magnesium	35,000	77,000
Manganese	300	2,580
Sodium	20,000	96,100
Dissolved Metals - µg/L	µg/L	µg/L
Iron	300	974
Magnesium	35,000	78,500
Manganese	300	2,280
Sodium	20,000	101,000

LEGEND:

- EXISTING BUILDING EXTENT
- LOT BOUNDARY
- APPROXIMATE EXTENT OF PROPOSED BUILDING
- SB-1/TW-2 SOIL BORING/TEMPORARY WELL

GROUNDWATER

NYSDEC Class GA Ambient Standard:
New York State Department of Environmental Conservation Technical and Operational Guidance Series (1.1.1): Class GA Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. (AWQS)

Only parameters with exceedances of NYSDEC Class GA Ambient Standards are shown.

(Õg/L) - micrograms per Liter = parts per billion (ppb)

Sample ID Date Sampled	NYSDEC AWQS	TW-3 10/23/2014
Total Metals - µg/L	µg/L	µg/L
Iron	300	27,800
Manganese	300	1,130
Sodium	20,000	490,000
Dissolved Metals - µg/L	µg/L	µg/L
Manganese	300	698
Sodium	20,000	484,000

Sample ID number

Sample Date

Compound/Analyte in Groundwater

Concentration in water (Õg/L) - micrograms per Liter = parts per billion (ppb)

0' 40' 80' 160'

SCALE IN FEET

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440 Park Avenue South, New York, NY 10016

77 Commercial Street
Brooklyn, New York

GROUNDWATER CONCENTRATIONS ABOVE NYSDEC AWQS

DATE 12.18.2014

PROJECT NO. 12015

SCALE as shown

FIGURE 6

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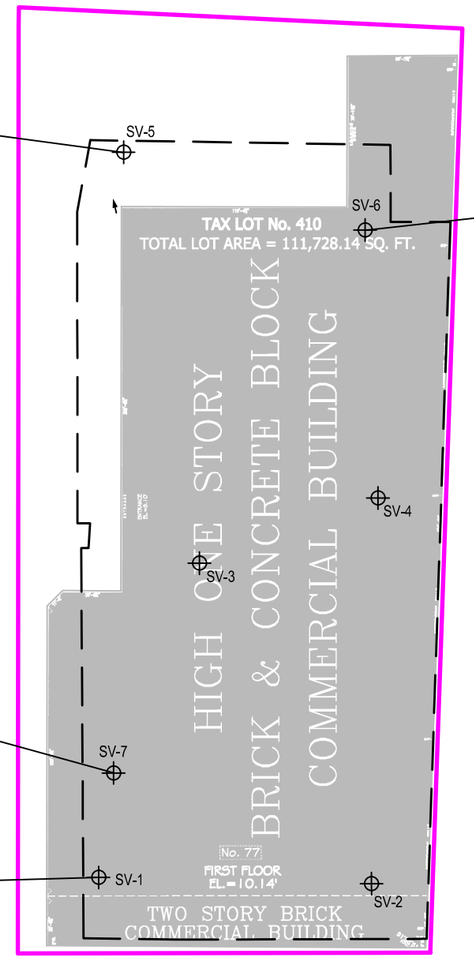
Sample ID Date Sampled	NYSDOH AGVS	SV-5 10/28/2014
VOCs	µg/m³	µg/m³
Tetrachloroethene	30	32

Sample ID Date Sampled	NYSDOH AGVS	SV-6 10/23/2014
VOCs	µg/m³	µg/m³
Tetrachloroethene	30	40

Sample ID Date Sampled	NYSDOH AGVS	SV-7 10/24/2014
VOCs	µg/m³	µg/m³
Tetrachloroethene	30	39
Trichloroethene	5	94

Sample ID Date Sampled	NYSDOH AGVS	SV-1 10/24/2014
VOCs	µg/m³	µg/m³
Tetrachloroethene	30	35



LEGEND:

- EXISTING BUILDING EXTENT
- LOT BOUNDARY
- APPROXIMATE EXTENT OF PROPOSED BUILDING
- SV-2 SOIL GAS POINT

SOIL VAPOR

NYSDOH Soil Vapor Intrusion Air Guidance Value:
NYSDOH Air Guideline Values (AGVs) presented in the Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York, dated October 2006 (ìNYSDOH Vapor Intrusion Guidance Documentî).

Exceedences of NYSDOH Soil Vapor Intrusion Air Guandance Values are highlighted in bold font.

(Õg/mî): micrograms per cubic meter

Sample ID Date Sampled	NYSDOH AGVS	SV-1 10/24/2014
VOCs	µg/m³	µg/m³
Tetrachloroethene	30	35

Sample ID number
Sample Date
Compound in Soil Vapor
Concentration in Soil Vapor

0' 40' 80' 160'
SCALE IN FEET

AKRF
Environmental Consultants
440 Park Avenue South, New York, NY 10016

77 Commercial Street
Brooklyn, New York

SOIL GAS CONCENTRATIONS ABOVE NYSDOH AIR GUIDELINE VALUES

DATE
12.18.2014

PROJECT NO.
12015

SCALE
as shown

FIGURE
7

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TABLES

Table 1
77 Commercial St.
Brooklyn, NY
Groundwater Well Construction and Development Details

Well ID/ Sample ID	Date Installed	Well Diameter	Screened Interval (feet b.g.s.)	Date Developed	Purge Method	Sample Collection Date
TW-1	10/23/2014	1-inch	5-15 feet	10/24/2014	Peristaltic pump	10/28/2014
TW-2	10/23/2014	1-inch	5-15 feet	10/24/2014	Peristaltic pump	10/24/2014
TW-3	10/23/2014	1-inch	5-15 feet	10/23/2014	Peristaltic pump	10/23/2014
TW-4	10/23/2014	1-inch	5-15 feet	10/24/2014	Peristaltic pump	10/24/2014
TW-5	10/24/2014	1-inch	5-15 feet	10/24/2014	Peristaltic pump	10/24/2014
TW-6	10/22/2014	1-inch	5-15 feet	10/23/2014	Peristaltic pump	10/23/2014

Table 2
77 Commercial St.
Brooklyn, NY
Summary of Water Level Measurements

Well ID/ Sample ID	Date	Well Diameter	Total Depth of Well	Elevation of Top of Well Casing	Depth to Water	Groundwater Elevation
TW-1	12/4/2014	1-inch	15.05	12.81	7.41	5.40
TW-2	12/4/2014	1-inch	14.90	13.06	8.14	4.92
TW-3	12/4/2014	1-inch	13.48	12.65	8.54	4.11
TW-4	12/4/2014	1-inch	14.10	12.50	8.52	3.98
TW-5	12/4/2014	1-inch	15.20	9.49	7.44	2.05
TW-6	12/4/2014	1-inch	15.07	15.61	11.13	4.48

The monitoring well elevations were obtained by McLaren Engineering Group on October 31, 2014.
Elevations shown are referenced to the North American Datum of 1988.

Table 3
77 Commercial St.
Brooklyn, NY
Soil Vapor Point Construction Details

Vapor Point ID	Date Installed	Screened Interval (feet b.g.s.)	Location	Sample Collection Date	Chemical Parameters
SV-1	10/23/2014	4.5'-5'	southern corner of the site	10/24/2014	VOCs (TO-15)
SV-2	10/23/2014	4.5'-5'	southeastern corner of the site	10/24/2014	VOCs (TO-15)
SV-3	10/22/2014	4.5'-5'	central portion of the site	10/23/2014	VOCs (TO-15)
SV-4	10/22/2014	4.5'-5'	central portion of the site	10/23/2014	VOCs (TO-15)
SV-5	10/24/2014	4.5'-5'	northwest portion of the site	10/28/2014	VOCs (TO-15)
SV-6	10/22/2014	4.5'-5'	northern portion of the site	10/23/2014	VOCs (TO-15)
SV-7	10/23/2014	4.5'-5'	southern-central portion of the site	10/24/2014	VOCs (TO-15)

Table 4
77 Commercial Street
Brooklyn, NY
Remedial Investigation Soil Analytical Results
Volatile Organic Compounds

Client ID Lab Sample ID Date Sampled µg/Kg	NYSDEC Part 375 Unrestricted SCO µg/Kg	NYSDEC Part 375 Restricted Residential SCO µg/Kg	SB-1 (1-2') 460-85054-11 10/23/2014	SB-1 (8-9') 460-85054-12 10/23/2014	SB-2 (1-2') 460-85054-13 10/23/2014	SB-2 (6-7') 460-85054-14 10/23/2014	SB-3 (1-2') 460-85054-1 10/23/2014	SB-3 (8-9') 460-85054-2 10/23/2014
1,1,1-Trichloroethane	680	100,000	0.98 U	0.99 U	1.2 U	0.87 U	1.2 U	1.4 U
1,1,2,2-Tetrachloroethane	NS	NS	0.98 U	0.99 U	1.2 U *	0.87 U	1.2 U *	1.4 U
1,1,2-Trichloro-1,2,2-trifluoroethane	NS	NS	0.98 U	0.99 U	1.2 U	0.87 U	1.2 U	1.4 U
1,1,2-Trichloroethane	NS	NS	0.98 U	0.99 U	1.2 U	0.87 U	1.2 U	1.4 U
1,1-Dichloroethane	270	26,000	0.98 U	0.99 U	1.2 U	0.87 U	1.2 U	1.4 U
1,1-Dichloroethene	330	100,000	0.98 U	0.99 U	1.2 U	0.87 U	1.2 U	1.4 U
1,2,3-Trichlorobenzene	NS	NS	0.98 U	0.99 U	1.2 U *	0.87 U	1.2 U *	1.4 U
1,2,4-Trichlorobenzene	NS	NS	0.98 U	0.99 U	1.2 U *	0.87 U	1.2 U *	1.4 U
1,2-Dibromo-3-Chloropropane	NS	NS	0.98 U	0.99 U	1.2 U *	0.87 U	1.2 U *	1.4 U
1,2-Dichlorobenzene	1,100	100,000	0.98 U	0.99 U	1.2 U *	0.87 U	1.2 U *	1.4 U
1,2-Dichloroethane	20	3,100	0.98 U	0.99 U	1.2 U	0.87 U	1.2 U	1.4 U
1,2-Dichloropropane	NS	NS	0.98 U	0.99 U	1.2 U	0.87 U	1.2 U	1.4 U
1,3-Dichlorobenzene	2,400	49,000	0.98 U	0.99 U	1.2 U *	0.87 U	1.2 U *	1.4 U
1,4-Dichlorobenzene	1,800	13,000	0.98 U	0.99 U	1.2 U *	0.87 U	1.2 U *	1.4 U
1,4-Dioxane	100	13,000	20 U	20 U	24 U	17 U	23 U	27 U
2-Butanone (MEK)	120	100,000	4.9 U *	5 U *	6.1 U *	4.4 U *	5.8 U *	6.8 U *
2-Hexanone	NS	NS	4.9 U	5 U	6.1 U	4.4 U	5.8 U	6.8 U
4-Methyl-2-pentanone (MIBK)	NS	NS	4.9 U	5 U	6.1 U	4.4 U	5.8 U	6.8 U
Acetone	50	100,000	4.9 U	5.2	6.1 U	4.4 U	5.8 U	30
Benzene	60	4,800	0.98 U	0.99 U	1.2 U	0.87 U	1.2 U	1.4 U
Bromoform	NS	NS	0.98 U	0.99 U	1.2 U	0.87 U	1.2 U	1.4 U
Bromomethane	NS	NS	0.98 U	0.99 U	1.2 U	0.87 U	1.2 U	1.4 U
Carbon disulfide	NS	NS	0.98 U	0.99 U	1.2 U	0.87 U	0.31 J	1.4 U
Carbon tetrachloride	760	2,400	0.98 U	0.99 U	1.2 U	0.87 U	1.2 U	1.4 U
Chlorobenzene	1,100	100,000	0.98 U	0.99 U	1.2 U	0.87 U	1.2 U	1.4 U
Chlorobromomethane	NS	NS	0.98 U	0.99 U	1.2 U	0.87 U	1.2 U	1.4 U
Chlorodibromomethane	NS	NS	0.98 U	0.99 U	1.2 U	0.87 U	1.2 U	1.4 U
Chloroethane	NS	NS	0.98 U	0.99 U	1.2 U	0.87 U	1.2 U	1.4 U
Chloroform	370	49,000	0.98 U	0.99 U	1.2 U	0.87 U	1.2 U	1.4 U
Chloromethane	NS	NS	0.98 U	0.99 U	1.2 U	0.87 U	1.2 U	1.4 U
cis-1,2-Dichloroethene	250	100,000	0.98 U	0.99 U	1.2 U	0.87 U	1.2 U	1.4 U
cis-1,3-Dichloropropene	NS	NS	0.98 U	0.99 U	1.2 U	0.87 U	1.2 U	1.4 U
Cyclohexane	NS	NS	0.98 U	0.99 U	1.2 U	0.87 U	1.2 U	1.4 U
Dichlorobromomethane	NS	NS	0.98 U	0.99 U	1.2 U	0.87 U	1.2 U	1.4 U
Dichlorodifluoromethane	NS	NS	0.98 U	0.99 U	1.2 U	0.87 U	1.2 U	1.4 U
Ethylbenzene	1,000	41,000	0.98 U	0.99 U	1.2 U	0.87 U	1.2 U	1.4 U
Ethylene Dibromide	NS	NS	0.98 U	0.99 U	1.2 U	0.87 U	1.2 U	1.4 U
Isopropylbenzene	NS	NS	0.98 U	0.99 U	1.2 U	0.87 U	1.2 U	1.4 U
Methyl acetate	NS	NS	4.9 U *	5 U *	6.1 U *	4.4 U *	5.8 U *	6.8 U *
Methyl tert-butyl ether	930	100,000	0.98 U	0.99 U	1.2 U	0.87 U	1.2 U	1.4 U
Methylcyclohexane	NS	NS	0.98 U	0.99 U	1.2 U	0.87 U	1.2 U	1.4 U
Methylene Chloride	50	100,000	0.98 U	0.99 U	1.2 U	0.87 U	1.2 U	1.4 U
m-Xylene & p-Xylene	260	100,000	0.98 U	0.99 U	1.2 U	0.87 U	1.2 U	1.4 U
o-Xylene	260	100,000	0.98 U	0.99 U	1.2 U	0.87 U	1.2 U	1.4 U
Styrene	NS	NS	0.98 U	0.99 U	1.2 U	0.87 U	1.2 U	1.4 U
Tetrachloroethene	1,300	19,000	0.98 U	0.99 U	1.2 U	0.87 U	1.2 U	1.4 U
Toluene	700	100,000	0.24 J	0.99 U	1.2 U	0.87 U	1.2 U	1.4 U
trans-1,2-Dichloroethene	190	100,000	0.98 U	0.99 U	1.2 U	0.87 U	1.2 U	1.4 U
trans-1,3-Dichloropropene	NS	NS	0.98 U	0.99 U	1.2 U	0.87 U	1.2 U	1.4 U
Trichloroethene	470	21,000	0.98 U	0.99 U	1.2 U	0.87 U	1.2 U	1.4 U
Trichlorofluoromethane	NS	NS	0.98 U	0.99 U	1.2 U	0.87 U	1.2 U	1.4 U
Vinyl chloride	20	900	0.98 U	0.99 U	1.2 U	0.87 U	1.2 U	1.4 U
Total VOCs	NS	NS	0.24	5.2	ND	ND	0.31	30

Table 4
77 Commercial Street
Brooklyn, NY
Remedial Investigation Soil Analytical Results
Volatile Organic Compounds

Client ID Lab Sample ID Date Sampled µg/Kg	NYSDEC Part 375 Unrestricted SCO µg/Kg	NYSDEC Part 375 Restricted Residential SCO µg/Kg	SB-4 (1-2') 460-85054-15 10/23/2014	SB-4 (7-8') 460-85054-16 10/23/2014	SB-5(1-2') 460-85120-1 10/24/2014	SB-5(6-7') 460-85120-2 10/24/2014	SB-6 (1-2') 460-84965-5 10/22/2014	SB-6 (10-11') 460-84965-6 10/22/2014
1,1,1-Trichloroethane	680	100,000	1.1 U	1.4 U	1.1 U	1.1 U	1.2 U	1.1 U
1,1,2,2-Tetrachloroethane	NS	NS	1.1 U	1.4 U *	1.1 U	1.1 U	1.2 U *	1.1 U
1,1,2-Trichloro-1,2,2-trifluoroethane	NS	NS	1.1 U	1.4 U	1.1 U	1.1 U	1.2 U	1.1 U
1,1,2-Trichloroethane	NS	NS	1.1 U	1.4 U *	1.1 U	1.1 U *	1.2 U	1.1 U
1,1-Dichloroethane	270	26,000	1.1 U	1.4 U	1.1 U	1.1 U	1.2 U	1.1 U
1,1-Dichloroethene	330	100,000	1.1 U	1.4 U	1.1 U	1.1 U	1.2 U	1.1 U
1,2,3-Trichlorobenzene	NS	NS	1.1 U	1.4 U *	1.1 U	1.1 U	1.2 U *	1.1 U
1,2,4-Trichlorobenzene	NS	NS	1.1 U	1.4 U *	1.1 U	1.1 U	1.2 U *	1.1 U
1,2-Dibromo-3-Chloropropane	NS	NS	1.1 U	1.4 U *	1.1 U	1.1 U *	1.2 U *	1.1 U
1,2-Dichlorobenzene	1,100	100,000	1.1 U	1.4 U *	1.1 U	1.1 U	1.2 U *	1.1 U
1,2-Dichloroethane	20	3,100	1.1 U	1.4 U	1.1 U	1.1 U	1.2 U	1.1 U
1,2-Dichloropropane	NS	NS	1.1 U	1.4 U	1.1 U	1.1 U	1.2 U	1.1 U
1,3-Dichlorobenzene	2,400	49,000	1.1 U	1.4 U *	1.1 U	1.1 U	1.2 U *	1.1 U
1,4-Dichlorobenzene	1,800	13,000	1.1 U	1.4 U *	1.1 U	1.1 U	1.2 U *	1.1 U
1,4-Dioxane	100	13,000	21 U	27 U	21 U *	22 U	24 U	22 U
2-Butanone (MEK)	120	100,000	5.3 U	6.8 U	5.3 U	5.4 U	6.1 U	5.5 U
2-Hexanone	NS	NS	5.3 U	6.8 U *	5.3 U	5.4 U	6.1 U	5.5 U
4-Methyl-2-pentanone (MIBK)	NS	NS	5.3 U	6.8 U *	5.3 U	5.4 U	6.1 U	5.5 U
Acetone	50	100,000	5.3 U	6.8 U	5.3 U	5.4 U	5.3 J B	16 B
Benzene	60	4,800	1.1 U	1.4 U *	1.1 U	1.1 U	1.2 U	1.1 U
Bromoform	NS	NS	1.1 U	1.4 U *	1.1 U	1.1 U	1.2 U	1.1 U
Bromomethane	NS	NS	1.1 U	1.4 U	1.1 U	1.1 U	1.2 U	1.1 U
Carbon disulfide	NS	NS	1.1 U	1.4 U	1.1 U	1.1 U	1.2 U	1.1 U
Carbon tetrachloride	760	2,400	1.1 U	1.4 U	1.1 U	1.1 U	1.2 U	1.1 U
Chlorobenzene	1,100	100,000	1.1 U	1.4 U *	1.1 U	1.1 U	1.2 U	1.1 U
Chlorobromomethane	NS	NS	1.1 U	1.4 U	1.1 U	1.1 U	1.2 U	1.1 U
Chlorodibromomethane	NS	NS	1.1 U	1.4 U *	1.1 U	1.1 U	1.2 U	1.1 U
Chloroethane	NS	NS	1.1 U	1.4 U	1.1 U	1.1 U	1.2 U	1.1 U
Chloroform	370	49,000	1.1 U	1.4 U	1.1 U	1.1 U	1.2 U	1.1 U
Chloromethane	NS	NS	1.1 U	1.4 U	1.1 U	1.1 U	1.2 U	1.1 U
cis-1,2-Dichloroethene	250	100,000	1.1 U *	1.4 U *	1.1 U	1.1 U	1.2 U	1.1 U
cis-1,3-Dichloropropene	NS	NS	1.1 U	1.4 U *	1.1 U	1.1 U	1.2 U	1.1 U
Cyclohexane	NS	NS	1.1 U	1.4 U	1.1 U	1.1 U	1.2 U	1.1 U
Dichlorobromomethane	NS	NS	1.1 U	1.4 U	1.1 U	1.1 U	1.2 U	1.1 U
Dichlorodifluoromethane	NS	NS	1.1 U	1.4 U	1.1 U	1.1 U	1.2 U	1.1 U
Ethylbenzene	1,000	41,000	1.1 U	1.4 U *	1.1 U	1.1 U	1.2 U	1.1 U
Ethylene Dibromide	NS	NS	1.1 U	1.4 U *	1.1 U	1.1 U	1.2 U	1.1 U
Isopropylbenzene	NS	NS	1.1 U	1.4 U *	1.1 U	1.1 U	1.2 U	1.1 U
Methyl acetate	NS	NS	5.3 U	6.8 U	5.3 U	5.4 U	6.1 U	5.5 U
Methyl tert-butyl ether	930	100,000	1.1 U	1.4 U	1.1 U	1.1 U	1.2 U	1.1 U
Methylcyclohexane	NS	NS	1.1 U	1.4 U	1.1 U	1.1 U	1.2 U	1.1 U
Methylene Chloride	50	100,000	1.1 U	1.4 U	1.1 U	1.1 U	1.2 U	1.1 U
m-Xylene & p-Xylene	260	100,000	1.1 U	1.4 U *	1.1 U	1.1 U	1.2 U	1.1 U
o-Xylene	260	100,000	1.1 U	1.4 U *	1.1 U	1.1 U	1.2 U	1.1 U
Styrene	NS	NS	1.1 U	1.4 U *	1.1 U	1.1 U	1.2 U	1.1 U
Tetrachloroethene	1,300	19,000	1.1 U	1.4 U *	1.1 U	1.1 U	1.2 U	1.1 U
Toluene	700	100,000	1.1 U	1.4 U *	1.1 U	1.1 U	1.2 U	1.1 U
trans-1,2-Dichloroethene	190	100,000	1.1 U	1.4 U	1.1 U	1.1 U	1.2 U	1.1 U
trans-1,3-Dichloropropene	NS	NS	1.1 U	1.4 U *	1.1 U	1.1 U	1.2 U	1.1 U
Trichloroethene	470	21,000	1.1 U	1.4 U	1.1 U	1.1 U	1.2 U	1.1 U
Trichlorofluoromethane	NS	NS	1.1 U	1.4 U	1.1 U	1.1 U	1.2 U	1.1 U
Vinyl chloride	20	900	1.1 U	1.4 U	1.1 U	1.1 U	1.2 U	1.1 U
Total VOCs	NS	NS	ND	ND	ND	ND	5.3	16

Table 4
77 Commercial Street
Brooklyn, NY
Remedial Investigation Soil Analytical Results
Volatile Organic Compounds

Client ID Lab Sample ID Date Sampled µg/Kg	NYSDEC Part 375 Unrestricted SCO µg/Kg	NYSDEC Part 375 Restricted Residential SCO µg/Kg	SB-7 (1-2') 460-85054-9 10/23/2014	SB-7 (7-8') 460-85054-10 10/23/2014	SB-8(1-2') 460-85120-13 10/24/2014	SB-8(9-10') 460-85120-14 10/24/2014	SB-9 (1-2') 460-85054-7 10/23/2014	SB-9 (8-9') 460-85054-8 10/23/2014
1,1,1-Trichloroethane	680	100,000	1 U	1.1 U	1 U	1.1 U	1.2 U	1.3 U
1,1,2,2-Tetrachloroethane	NS	NS	1 U	1.1 U	1 U	1.1 U	1.2 U	1.3 U
1,1,2-Trichloro-1,2,2-trifluoroethane	NS	NS	1 U	1.1 U	1 U	1.1 U	1.2 U	1.3 U
1,1,2-Trichloroethane	NS	NS	1 U	1.1 U	1 U *	1.1 U *	1.2 U	1.3 U
1,1-Dichloroethane	270	26,000	1 U	1.1 U	1 U	1.1 U	1.2 U	1.3 U
1,1-Dichloroethene	330	100,000	1 U	1.1 U	1 U	1.1 U	1.2 U	1.3 U
1,2,3-Trichlorobenzene	NS	NS	1 U	1.1 U	1 U	1.1 U	1.2 U	1.3 U
1,2,4-Trichlorobenzene	NS	NS	1 U	1.1 U	1 U	1.1 U	1.2 U	1.3 U
1,2-Dibromo-3-Chloropropane	NS	NS	1 U	1.1 U	1 U *	1.1 U *	1.2 U	1.3 U
1,2-Dichlorobenzene	1,100	100,000	1 U	1.1 U	1 U	1.1 U	1.2 U	1.3 U
1,2-Dichloroethane	20	3,100	1 U	1.1 U	1 U	1.1 U	1.2 U	1.3 U
1,2-Dichloropropane	NS	NS	1 U	1.1 U	1 U	1.1 U	1.2 U	1.3 U
1,3-Dichlorobenzene	2,400	49,000	1 U	1.1 U	1 U	1.1 U	1.2 U	1.3 U
1,4-Dichlorobenzene	1,800	13,000	1 U	1.1 U	1 U	1.1 U	1.2 U	1.3 U
1,4-Dioxane	100	13,000	21 U	23 U	20 U	21 U	23 U	25 U
2-Butanone (MEK)	120	100,000	5.1 U *	5.6 U *	5.1 U	5.3 U	5.8 U *	6.3 U *
2-Hexanone	NS	NS	5.1 U	5.6 U	5.1 U	5.3 U	5.8 U	6.3 U
4-Methyl-2-pentanone (MIBK)	NS	NS	5.1 U	5.6 U	5.1 U	5.3 U	1.7 J	6.3 U
Acetone	50	100,000	5.1 U	5.6 U	5.1 U	5.3 U	5.4 J	6.3 U
Benzene	60	4,800	1 U	1.1 U	1 U	1.1 U	1.2 U	1.3 U
Bromoform	NS	NS	1 U	1.1 U	1 U	1.1 U	1.2 U	1.3 U
Bromomethane	NS	NS	1 U	1.1 U	1 U	1.1 U	1.2 U	1.3 U
Carbon disulfide	NS	NS	1 U	1.1 U	1 U	1.1 U	1.2 U	1.3 U
Carbon tetrachloride	760	2,400	1 U	1.1 U	1 U	1.1 U	1.2 U	1.3 U
Chlorobenzene	1,100	100,000	1 U	1.1 U	1 U	1.1 U	1.2 U	1.3 U
Chlorobromomethane	NS	NS	1 U	1.1 U	1 U	1.1 U	1.2 U	1.3 U
Chlorodibromomethane	NS	NS	1 U	1.1 U	1 U	1.1 U	1.2 U	1.3 U
Chloroethane	NS	NS	1 U	1.1 U	1 U	1.1 U	1.2 U	1.3 U
Chloroform	370	49,000	1 U	1.1 U	1 U	1.1 U	1.2 U	1.3 U
Chloromethane	NS	NS	1 U	1.1 U	1 U	1.1 U	1.2 U	1.3 U
cis-1,2-Dichloroethene	250	100,000	1 U	1.1 U	1 U	1.1 U	1.2 U	1.3 U
cis-1,3-Dichloropropene	NS	NS	1 U	1.1 U	1 U	1.1 U	1.2 U	1.3 U
Cyclohexane	NS	NS	1 U	1.1 U	1 U	1.1 U	1.2 U	1.3 U
Dichlorobromomethane	NS	NS	1 U	1.1 U	1 U	1.1 U	1.2 U	1.3 U
Dichlorodifluoromethane	NS	NS	1 U	1.1 U	1 U	1.1 U	1.2 U	1.3 U
Ethylbenzene	1,000	41,000	1 U	1.1 U	1 U	1.1 U	1.2 U	1.3 U
Ethylene Dibromide	NS	NS	1 U	1.1 U	1 U	1.1 U	1.2 U	1.3 U
Isopropylbenzene	NS	NS	1 U	1.1 U	1 U	1.1 U	1.2 U	1.3 U
Methyl acetate	NS	NS	5.1 U *	5.6 U *	5.1 U	5.3 U	5.8 U *	6.3 U *
Methyl tert-butyl ether	930	100,000	1 U	1.1 U	1 U	1.1 U	1.2 U	1.3 U
Methylcyclohexane	NS	NS	1 U	1.1 U	1 U	1.1 U	1.2 U	1.3 U
Methylene Chloride	50	100,000	1 U	1.1 U	1 U	1.1 U	1.2 U	1.3 U
m-Xylene & p-Xylene	260	100,000	1 U	1.1 U	1 U	1.1 U	1.2 U	1.3 U
o-Xylene	260	100,000	1 U	1.1 U	1 U	1.1 U	1.2	1.3 U
Styrene	NS	NS	1 U	1.1 U	1 U	1.1 U	1.2 U	1.3 U
Tetrachloroethene	1,300	19,000	1 U	1.1 U	1 U	1.1 U	1.2 U	1.3 U
Toluene	700	100,000	1 U	1.1 U	1 U	1.1 U	1.2 U	1.3 U
trans-1,2-Dichloroethene	190	100,000	1 U	1.1 U	1 U	1.1 U	1.2 U	1.3 U
trans-1,3-Dichloropropene	NS	NS	1 U	1.1 U	1 U	1.1 U	1.2 U	1.3 U
Trichloroethene	470	21,000	0.99 J	1.1 U	1 U	1.1 U	1.2 U	1.3 U
Trichlorofluoromethane	NS	NS	1 U	1.1 U	1 U	1.1 U	1.2 U	1.3 U
Vinyl chloride	20	900	1 U	1.1 U	1 U	1.1 U	1.2 U	1.3 U
Total VOCs	NS	NS	0.99	ND	ND	ND	8.3	ND

Table 4
77 Commercial Street
Brooklyn, NY
Remedial Investigation Soil Analytical Results
Volatile Organic Compounds

Client ID Lab Sample ID Date Sampled µg/Kg	NYSDEC Part 375 Unrestricted SCO µg/Kg	NYSDEC Part 375 Restricted Residential SCO µg/Kg	SB-10 (1-2') 460-85054-3 10/23/2014	SB-10 (7-8') 460-85054-4 10/23/2014	SB-11(1-2') 460-85120-11 10/24/2014	SB-11(5-6') 460-85120-12 10/24/2014	SB-12 (1-2') 460-84965-7 10/22/2014	SB-12 (11-12') 460-84965-8 10/22/2014
1,1,1-Trichloroethane	**680**	**100,000**	1.2 U	1 U	1.2 U	1 U	1.2 U	1 U
1,1,2,2-Tetrachloroethane	**NS**	**NS**	1.2 U	1 U	1.2 U	1 U	1.2 U	1 U
1,1,2-Trichloro-1,2,2-trifluoroethane	**NS**	**NS**	1.2 U	1 U	1.2 U	1 U	1.2 U	1 U
1,1,2-Trichloroethane	**NS**	**NS**	1.2 U	1 U	1.2 U	1 U	1.2 U	1 U
1,1-Dichloroethane	**270**	**26,000**	1.2 U	1 U	1.2 U	1 U	1.2 U	1 U
1,1-Dichloroethene	**330**	**100,000**	1.2 U	1 U	1.2 U	1 U	1.2 U	1 U
1,2,3-Trichlorobenzene	**NS**	**NS**	1.2 U	1 U	1.2 U	1 U	1.2 U	1 U
1,2,4-Trichlorobenzene	**NS**	**NS**	1.2 U	1 U	1.2 U	1 U	1.2 U	1 U
1,2-Dibromo-3-Chloropropane	**NS**	**NS**	1.2 U	1 U	1.2 U	1 U	1.2 U	1 U
1,2-Dichlorobenzene	**1,100**	**100,000**	1.2 U	1 U	1.2 U	1 U	1.2 U	1 U
1,2-Dichloroethane	**20**	**3,100**	1.2 U	1 U	1.2 U	1 U	1.2 U	1 U
1,2-Dichloropropane	**NS**	**NS**	1.2 U	1 U	1.2 U	1 U	1.2 U	1 U
1,3-Dichlorobenzene	**2,400**	**49,000**	1.2 U	1 U	1.2 U	1 U	1.2 U	1 U
1,4-Dichlorobenzene	**1,800**	**13,000**	1.2 U	1 U	1.2 U	1 U	1.2 U	1 U
1,4-Dioxane	**100**	**13,000**	24 U	20 U	24 U *	21 U *	24 U	21 U
2-Butanone (MEK)	**120**	**100,000**	5.9 U *	5 U *	6 U	5.2 U	6.1 U	5.1 U
2-Hexanone	**NS**	**NS**	5.9 U	5 U	6 U	5.2 U	6.1 U	5.1 U
4-Methyl-2-pentanone (MIBK)	**NS**	**NS**	5.9 U	5 U	6 U	5.2 U	6.1 U	5.1 U
Acetone	**50**	**100,000**	5.9 U	5 U	6 U	5.2 U	37 B	6.7 B
Benzene	**60**	**4,800**	1.2 U	1 U	0.75 J	4.9	1.2 U	1 U
Bromoform	**NS**	**NS**	1.2 U	1 U	1.2 U	1 U	1.2 U	1 U
Bromomethane	**NS**	**NS**	1.2 U	1 U	1.2 U	1 U	1.2 U	1 U
Carbon disulfide	**NS**	**NS**	1.2 U	1 U	1.2 U	1 U	1.2 U	1 U
Carbon tetrachloride	**760**	**2,400**	1.2 U	1 U	1.2 U	1 U	1.2 U	1 U
Chlorobenzene	**1,100**	**100,000**	1.2 U	1 U	1.2 U	1 U	1.2 U	1 U
Chlorobromomethane	**NS**	**NS**	1.2 U	1 U	1.2 U	1 U	1.2 U	1 U
Chlorodibromomethane	**NS**	**NS**	1.2 U	1 U	1.2 U	1 U	1.2 U	1 U
Chloroethane	**NS**	**NS**	1.2 U	1 U	1.2 U	1 U	1.2 U	1 U
Chloroform	**370**	**49,000**	1.2 U	1 U	1.2 U	1 U	1.2 U	1 U
Chloromethane	**NS**	**NS**	1.2 U	1 U	1.2 U	1 U	1.2 U	1 U
cis-1,2-Dichloroethene	**250**	**100,000**	1.2 U	1 U	1.2 U	1 U	1.2 U	1 U
cis-1,3-Dichloropropene	**NS**	**NS**	1.2 U	1 U	1.2 U	1 U	1.2 U	1 U
Cyclohexane	**NS**	**NS**	1.2 U	1 U	1.2 U	5.4	1.2 U	1 U
Dichlorobromomethane	**NS**	**NS**	1.2 U	1 U	1.2 U	1 U	1.2 U	1 U
Dichlorodifluoromethane	**NS**	**NS**	1.2 U	1 U	1.2 U	1 U	1.2 U	1 U
Ethylbenzene	**1,000**	**41,000**	1.2 U	1 U	1.2 U	5.7	0.31 J	1 U
Ethylene Dibromide	**NS**	**NS**	1.2 U	1 U	1.2 U	1 U	1.2 U	1 U
Isopropylbenzene	**NS**	**NS**	1.2 U	1 U	1.2 U	3.5	1.2 U	1 U
Methyl acetate	**NS**	**NS**	5.9 U *	5 U *	6 U	5.2 U	6.1 U	5.1 U
Methyl tert-butyl ether	**930**	**100,000**	1.2 U	1 U	1.2 U	1 U	1.2 U	1 U
Methylcyclohexane	**NS**	**NS**	1.2 U	1 U	1.2 U	4	0.41 J	1 U
Methylene Chloride	**50**	**100,000**	1.2 U	1 U	1.2 U	1 U	1.2 U	1 U
m-Xylene & p-Xylene	**260**	**100,000**	1.2 U	1 U	1.2 U	23	1 J	1 U
o-Xylene	**260**	**100,000**	1.2 U	1 U	1.2 U	15	0.31 J	1 U
Styrene	**NS**	**NS**	1.2 U	1 U	1.2 U	1 U	1.2 U	1 U
Tetrachloroethene	**1,300**	**19,000**	1.2 U	1 U	1.2 U	1 U	1.2 U	1 U
Toluene	**700**	**100,000**	1.2 U	1 U	1.2 U	3.1	0.63 J	1 U
trans-1,2-Dichloroethene	**190**	**100,000**	1.2 U	1 U	1.2 U	1 U	1.2 U	1 U
trans-1,3-Dichloropropene	**NS**	**NS**	1.2 U	1 U	1.2 U	1 U	1.2 U	1 U
Trichloroethene	**470**	**21,000**	1.2 U	1 U	0.97 J	1 U	1.2 U	1 U
Trichlorofluoromethane	**NS**	**NS**	1.2 U	1 U	1.2 U	1 U	1.2 U	1 U
Vinyl chloride	**20**	**900**	1.2 U	1 U	1.2 U	1 U	1.2 U	1 U
Total VOCs	**NS**	**NS**	ND	ND	1.72	64.6	39.66	6.7

Table 4
77 Commercial Street
Brooklyn, NY
Remedial Investigation Soil Analytical Results
Volatile Organic Compounds

Client ID Lab Sample ID Date Sampled µg/Kg	NYSDEC Part 375 Unrestricted SCO µg/Kg	NYSDEC Part 375 Restricted Residential SCO µg/Kg	SB-13(1-2') 460-85120-9 10/24/2014	SB-13(3-4') 460-85120-10 10/24/2014	SB-14(1-2') 460-85120-7 10/24/2014	SB-14(6-7') 460-85120-8 10/24/2014	SB-15(1-2') 460-85120-5 10/24/2014	SB-15(5-6') 460-85120-6 10/24/2014
1,1,1-Trichloroethane	680	100,000	1 U	1.5 U	1.2 U	1.3 U	1.3 U	0.97 U
1,1,2,2-Tetrachloroethane	NS	NS	1 U	1.5 U	1.2 U	1.3 U	1.3 U	0.97 U
1,1,2-Trichloro-1,2,2-trifluoroethane	NS	NS	1 U	1.5 U	1.2 U	1.3 U	1.3 U	0.97 U
1,1,2-Trichloroethane	NS	NS	1 U *	1.5 U	1.2 U *	1.3 U *	1.3 U	0.97 U
1,1-Dichloroethane	270	26,000	1 U	1.5 U	1.2 U	1.3 U	0.88 J	0.97 U
1,1-Dichloroethene	330	100,000	1 U	1.5 U	1.2 U	1.3 U	1.3 U	0.97 U
1,2,3-Trichlorobenzene	NS	NS	1 U	1.5 U	1.2 U	1.3 U	1.3 U	0.97 U
1,2,4-Trichlorobenzene	NS	NS	1 U	1.5 U	1.2 U	1.3 U	1.3 U	0.97 U
1,2-Dibromo-3-Chloropropane	NS	NS	1 U *	1.5 U	1.2 U *	1.3 U *	1.3 U	0.97 U
1,2-Dichlorobenzene	1,100	100,000	1 U	1.5 U	1.2 U	1.3 U	1.3 U	0.97 U
1,2-Dichloroethane	20	3,100	1 U	1.5 U	1.2 U	1.3 U	1.3 U	0.97 U
1,2-Dichloropropane	NS	NS	1 U	1.5 U	1.2 U	1.3 U	1.3 U	0.97 U
1,3-Dichlorobenzene	2,400	49,000	1 U	1.5 U	1.2 U	1.3 U	1.3 U	0.97 U
1,4-Dichlorobenzene	1,800	13,000	1 U	1.5 U	1.2 U	1.3 U	1.3 U	0.97 U
1,4-Dioxane	100	13,000	21 U	30 U *	24 U	26 U	25 U *	19 U *
2-Butanone (MEK)	120	100,000	5.2 U	12	6 U	6.4 U	6.3 U	4.9 U
2-Hexanone	NS	NS	5.2 U	7.5 U	6 U	6.4 U	6.3 U	4.9 U
4-Methyl-2-pentanone (MIBK)	NS	NS	5.2 U	7.5 U	6 U	6.4 U	6.3 U	4.9 U
Acetone	50	100,000	5.2 U	**98** B	6 U	44 B	47 B	**98** B
Benzene	60	4,800	1 U	0.39 J	1.2 U	1.3 U	0.26 J	0.37 J
Bromoform	NS	NS	1 U	1.5 U	1.2 U	1.3 U	1.3 U	0.97 U
Bromomethane	NS	NS	1 U	1.5 U	1.2 U	1.3 U	1.3 U	0.97 U
Carbon disulfide	NS	NS	1 U	1.5 U	1.2 U	1.2 J	1.3 U	0.97 U
Carbon tetrachloride	760	2,400	1 U	1.5 U	1.2 U	1.3 U	1.3 U	0.97 U
Chlorobenzene	1,100	100,000	1 U	1.5 U	1.2 U	1.3 U	1.3 U	0.97 U
Chlorobromomethane	NS	NS	1 U	1.5 U	1.2 U	1.3 U	1.3 U	0.97 U
Chlorodibromomethane	NS	NS	1 U	1.5 U	1.2 U	1.3 U	1.3 U	0.97 U
Chloroethane	NS	NS	1 U	1.5 U	1.2 U	1.3 U	1.3 U	0.97 U
Chloroform	370	49,000	1 U	1.5 U	1.2 U	1.3 U	1.3 U	0.97 U
Chloromethane	NS	NS	1 U	1.5 U	1.2 U	1.3 U	1.3 U	0.97 U
cis-1,2-Dichloroethene	250	100,000	1 U	1.5 U	1.2 U	1.3 U	1.3 U	0.97 U
cis-1,3-Dichloropropene	NS	NS	1 U	1.5 U	1.2 U	1.3 U	1.3 U	0.97 U
Cyclohexane	NS	NS	1 U	1.5 U	1.2 U	1.3 U	1.3 U	0.74 J
Dichlorobromomethane	NS	NS	1 U	1.5 U	1.2 U	1.3 U	1.3 U	0.97 U
Dichlorodifluoromethane	NS	NS	1 U	1.5 U	1.2 U	1.3 U	1.3 U	0.97 U
Ethylbenzene	1,000	41,000	1 U	1.5 U	1.2 U	1.3 U	1.3 U	0.97 U
Ethylene Dibromide	NS	NS	1 U	1.5 U	1.2 U	1.3 U	1.3 U	0.97 U
Isopropylbenzene	NS	NS	1 U	1.5 U	1.2 U	1.3 U	1.3 U	0.97 U
Methyl acetate	NS	NS	5.2 U	7.5 U	6 U	6.4 U	6.3 U	4.9 U
Methyl tert-butyl ether	930	100,000	1 U	1.5 U	1.2 U	1.3 U	1.3 U	0.97 U
Methylcyclohexane	NS	NS	1 U	1.5 U	1.2 U	1.3 U	0.78 J	0.81 J
Methylene Chloride	50	100,000	1 U	1.5 U	1.2 U	1.3 U	1.3 U	0.97 U
m-Xylene & p-Xylene	260	100,000	1 U	1.5 U	1.2 U	1.3 U	1.3 U	0.97 U
o-Xylene	260	100,000	1 U	1.5 U	1.2 U	1.3 U	1.3 U	0.19 J
Styrene	NS	NS	1 U	1.5 U	1.2 U	1.3 U	1.3 U	0.97 U
Tetrachloroethene	1,300	19,000	1 U	1.5 U	1.2 U	1.3 U	1.3 U	0.97 U
Toluene	700	100,000	1 U	1.5 U	1.2 U	1.3 U	1.3 U	0.97 U
trans-1,2-Dichloroethene	190	100,000	1 U	1.5 U	1.2 U	1.3 U	1.3 U	0.97 U
trans-1,3-Dichloropropene	NS	NS	1 U	1.5 U	1.2 U	1.3 U	1.3 U	0.97 U
Trichloroethene	470	21,000	1 U	1.5 U	1.2 U	1.3 U	1.3 U	0.97 U
Trichlorofluoromethane	NS	NS	1 U	1.5 U	1.2 U	1.3 U	1.3 U	0.97 U
Vinyl chloride	20	900	1 U	1.5 U	1.2 U	1.3 U	1.3 U	0.97 U
Total VOCs	NS	NS	ND	110.39	ND	45.2	48.92	100.11

Table 4
77 Commercial Street
Brooklyn, NY
Remedial Investigation Soil Analytical Results
Volatile Organic Compounds

Client ID Lab Sample ID Date Sampled µg/Kg	NYSDEC Part 375 Unrestricted SCO µg/Kg	NYSDEC Part 375 Restricted Residential SCO µg/Kg	SB-16(1-2') 460-85120-3 10/24/2014	SB-16(7-8') 460-85120-4 10/24/2014	SB-17 (1-2') 460-84965-1 10/22/2014	SB-17 (11-12') 460-84965-2 10/22/2014	SB-18 (1-2') 460-84965-3 10/22/2014	SB-18 (12-13') 460-84965-4 10/22/2014
1,1,1-Trichloroethane	680	100,000	1 U	1.1 U	1.7 U	1.1 U	1 U	1.1 U
1,1,2,2-Tetrachloroethane	NS	NS	1 U	1.1 U	1.7 U *	1.1 U	1 U	1.1 U
1,1,2-Trichloro-1,2,2-trifluoroethane	NS	NS	1 U	1.1 U	1.7 U	1.1 U	1 U	1.1 U
1,1,2-Trichloroethane	NS	NS	1 U	1.1 U	1.7 U *	1.1 U	1 U	1.1 U
1,1-Dichloroethane	270	26,000	1 U	1.1 U	1.7 U	1.1 U	1 U	1.1 U
1,1-Dichloroethene	330	100,000	1 U	1.1 U	1.7 U	1.1 U	1 U	1.1 U
1,2,3-Trichlorobenzene	NS	NS	1 U	1.1 U	1.7 U *	1.1 U	1 U	1.1 U
1,2,4-Trichlorobenzene	NS	NS	1 U	1.1 U	1.7 U *	1.1 U	1 U	1.1 U
1,2-Dibromo-3-Chloropropane	NS	NS	1 U	1.1 U	1.7 U *	1.1 U	1 U	1.1 U
1,2-Dichlorobenzene	1,100	100,000	1 U	1.1 U	1.7 U *	1.1 U	1 U	1.1 U
1,2-Dichloroethane	20	3,100	1 U	1.1 U	1.7 U	1.1 U	1 U	1.1 U
1,2-Dichloropropane	NS	NS	1 U	1.1 U	1.7 U	1.1 U	1 U	1.1 U
1,3-Dichlorobenzene	2,400	49,000	1 U	1.1 U	1.7 U *	1.1 U	1 U	1.1 U
1,4-Dichlorobenzene	1,800	13,000	1 U	1.1 U	1.7 U *	1.1 U	1 U	1.1 U
1,4-Dioxane	100	13,000	21 U *	21 U *	34 U	23 U	20 U	23 U *
2-Butanone (MEK)	120	100,000	5.1 U	9.6	8.4 U	5.7 U	5.1 U	5.7 U
2-Hexanone	NS	NS	5.1 U	5.4 U	8.4 U *	5.7 U	5.1 U	5.7 U
4-Methyl-2-pentanone (MIBK)	NS	NS	5.1 U	5.4 U	8.4 U *	5.7 U	5.1 U	5.7 U
Acetone	50	100,000	5.1 U	**220** B	8.4 U	4.7 J B	4.2 J B	**82** B
Benzene	60	4,800	1 U	3.6	1.7 U *	1.1 U	1 U	1.1 U
Bromoform	NS	NS	1 U	1.1 U	1.7 U *	1.1 U	1 U	1.1 U
Bromomethane	NS	NS	1 U	1.1 U	1.7 U	1.1 U	1 U	1.1 U
Carbon disulfide	NS	NS	1 U	2.1	1.7 U	1.1 U	1 U	0.99 J
Carbon tetrachloride	760	2,400	1 U	1.1 U	1.7 U	1.1 U	1 U	1.1 U
Chlorobenzene	1,100	100,000	1 U	1.1 U	1.7 U *	1.1 U	1 U	1.1 U
Chlorobromomethane	NS	NS	1 U	1.1 U	1.7 U	1.1 U	1 U	1.1 U
Chlorodibromomethane	NS	NS	1 U	1.1 U	1.7 U *	1.1 U	1 U	1.1 U
Chloroethane	NS	NS	1 U	1.1 U	1.7 U	1.1 U	1 U	1.1 U
Chloroform	370	49,000	1 U	1.1 U	1.7 U	1.1 U	1 U	1.1 U
Chloromethane	NS	NS	1 U	1.1 U	1.7 U	1.1 U	1 U	1.1 U
cis-1,2-Dichloroethene	250	100,000	1 U	1.1 U	1.7 U	1.1 U	1 U	1.1 U
cis-1,3-Dichloropropene	NS	NS	1 U	1.1 U	1.7 U *	1.1 U	1 U	1.1 U
Cyclohexane	NS	NS	1 U	1 J	1.7 U	1.1 U	1 U	1.1 U
Dichlorobromomethane	NS	NS	1 U	1.1 U	1.7 U	1.1 U	1 U	1.1 U
Dichlorodifluoromethane	NS	NS	1 U	1.1 U	1.7 U	1.1 U	1 U	1.1 U
Ethylbenzene	1,000	41,000	1 U	0.9 J	1.7 U *	1.1 U	1 U	1.1 U
Ethylene Dibromide	NS	NS	1 U	1.1 U	1.7 U *	1.1 U	1 U	1.1 U
Isopropylbenzene	NS	NS	1 U	0.56 J	1.7 U *	1.1 U	1 U	1.1 U
Methyl acetate	NS	NS	5.1 U	5.4 U	8.4 U	5.7 U	5.1 U	5.7 U
Methyl tert-butyl ether	930	100,000	1 U	1.1 U	1.7 U	1.1 U	1 U	1.1 U
Methylcyclohexane	NS	NS	1 U	2	1.3 J	1.1 U	1 U	1.1 U
Methylene Chloride	50	100,000	1 U	1.1 U	1.7 U	1.1 U	1 U	1.1 U
m-Xylene & p-Xylene	260	100,000	1 U	3.8	1.7 U *	1.1 U	1 U	1.1 U
o-Xylene	260	100,000	1 U	3.8	1.7 U *	1.1 U	1 U	1.1 U
Styrene	NS	NS	1 U	1.1 U	1.7 U *	1.1 U	1 U	1.1 U
Tetrachloroethene	1,300	19,000	1 U	1.1 U	1.7 U *	0.16 J	1 U	1.1 U
Toluene	700	100,000	1 U	4.9	1.7 U *	1.1 U	1 U	1.1 U
trans-1,2-Dichloroethene	190	100,000	1 U	1.1 U	1.7 U	1.1 U	1 U	1.1 U
trans-1,3-Dichloropropene	NS	NS	1 U	1.1 U	1.7 U *	1.1 U	1 U	1.1 U
Trichloroethene	470	21,000	1 U	1.1 U	1.7 U	1.1 U	1 U	1.1 U
Trichlorofluoromethane	NS	NS	1 U	1.1 U	1.7 U	1.1 U	1 U	1.1 U
Vinyl chloride	20	900	1 U	1.1 U	1.7 U	1.1 U	1 U	1.1 U
Total VOCs	NS	NS	ND	252.26	1.3	4.86	4.2	82.99

Table 4
77 Commercial Street
Brooklyn, NY
Remedial Investigation Soil Analytical Results
Volatile Organic Compounds

Client ID Lab Sample ID Date Sampled µg/Kg	NYSDEC Part 375 Unrestricted SCO µg/Kg	NYSDEC Part 375 Restricted Residential SCO µg/Kg	SB-19 (1-2') 460-85054-5 10/23/2014	SB-19 (7-8') 460-85054-6 10/23/2014	SB-X (7-8')* 460-85054-17 10/23/2014
1,1,1-Trichloroethane	680	100,000	1 U	0.96 U	1.3 U
1,1,2,2-Tetrachloroethane	NS	NS	1 U	0.96 U	1.3 U *
1,1,2-Trichloro-1,2,2-trifluoroethane	NS	NS	1 U	0.96 U	1.3 U
1,1,2-Trichloroethane	NS	NS	1 U	0.96 U	1.3 U
1,1-Dichloroethane	270	26,000	1 U	0.96 U	1.3 U
1,1-Dichloroethene	330	100,000	1 U	0.96 U	1.3 U
1,2,3-Trichlorobenzene	NS	NS	1 U	0.96 U	1.3 U
1,2,4-Trichlorobenzene	NS	NS	1 U	0.96 U	1.3 U
1,2-Dibromo-3-Chloropropane	NS	NS	1 U	0.96 U	1.3 U
1,2-Dichlorobenzene	1,100	100,000	1 U	0.96 U	1.3 U
1,2-Dichloroethane	20	3,100	1 U	0.96 U	1.3 U
1,2-Dichloropropane	NS	NS	1 U	0.96 U	1.3 U
1,3-Dichlorobenzene	2,400	49,000	1 U	0.96 U	1.3 U
1,4-Dichlorobenzene	1,800	13,000	1 U	0.96 U	1.3 U
1,4-Dioxane	100	13,000	21 U	19 U	26 U
2-Butanone (MEK)	120	100,000	5.2 U *	4.8 U *	6.5 U
2-Hexanone	NS	NS	5.2 U	4.8 U	6.5 U
4-Methyl-2-pentanone (MIBK)	NS	NS	5.2 U	4.8 U	6.5 U
Acetone	50	100,000	5.2 U	4.8 U	25
Benzene	60	4,800	1 U	0.96 U	1.3 U
Bromoform	NS	NS	1 U	0.96 U	1.3 U
Bromomethane	NS	NS	1 U	0.96 U	1.3 U
Carbon disulfide	NS	NS	1 U	0.96 U	1.3 U
Carbon tetrachloride	760	2,400	1 U	0.96 U	1.3 U
Chlorobenzene	1,100	100,000	1 U	0.96 U	1.3 U
Chlorobromomethane	NS	NS	1 U	0.96 U	1.3 U
Chlorodibromomethane	NS	NS	1 U	0.96 U	1.3 U
Chloroethane	NS	NS	1 U	0.96 U	1.3 U
Chloroform	370	49,000	1 U	0.96 U	1.3 U
Chloromethane	NS	NS	1 U	0.96 U	1.3 U
cis-1,2-Dichloroethene	250	100,000	1 U	0.96 U	1.3 U *
cis-1,3-Dichloropropene	NS	NS	1 U	0.96 U	1.3 U
Cyclohexane	NS	NS	1 U	0.96 U	1.3 U
Dichlorobromomethane	NS	NS	1 U	0.96 U	1.3 U
Dichlorodifluoromethane	NS	NS	1 U	0.96 U	1.3 U
Ethylbenzene	1,000	41,000	1 U	0.96 U	1.3 U
Ethylene Dibromide	NS	NS	1 U	0.96 U	1.3 U
Isopropylbenzene	NS	NS	1 U	0.96 U	1.3 U
Methyl acetate	NS	NS	5.2 U *	4.8 U *	6.5 U
Methyl tert-butyl ether	930	100,000	1 U	0.96 U	1.3 U
Methylcyclohexane	NS	NS	1 U	0.96 U	1.3 U
Methylene Chloride	50	100,000	1 U	0.96 U	1.3 U
m-Xylene & p-Xylene	260	100,000	1 U	0.96 U	1.3 U
o-Xylene	260	100,000	1 U	0.96 U	1.3 U
Styrene	NS	NS	1 U	0.96 U	1.3 U
Tetrachloroethene	1,300	19,000	1 U	0.96 U	1.3 U
Toluene	700	100,000	1 U	0.96 U	1.3 U
trans-1,2-Dichloroethene	190	100,000	1 U	0.96 U	1.3 U
trans-1,3-Dichloropropene	NS	NS	1 U	0.96 U	1.3 U
Trichloroethene	470	21,000	1 U	0.96 U	1.3 U
Trichlorofluoromethane	NS	NS	1 U	0.96 U	1.3 U
Vinyl chloride	20	900	1 U	0.96 U	1.3 U
Total VOCs	NS	NS	ND	ND	25

Table 5
77 Commercial Street
Brooklyn, NY
Remedial Investigation Soil Analytical Results
Semivolatile Organic Compounds

Client ID Lab Sample ID Date Sampled Dilution µg/Kg	NYSDEC Part 375 Unrestricted SCO µg/Kg	NYSDEC Part 375 Restricted Residential SCO µg/Kg	SB-1 (1-2') 460-85054-11 10/23/2014 1	SB-1 (8-9') 460-85054-12 10/23/2014 1	SB-2 (1-2') 460-85054-13 10/23/2014 1	SB-2 (6-7') 460-85054-14 10/23/2014 1	SB-3 (1-2') 460-85054-1 10/23/2014 1	SB-3 (8-9') 460-85054-2 10/23/2014 1
1,1'-Biphenyl	**NS**	**NS**	370 U	400 U	390 U	370 U	53 J	90 J
1,2,4,5-Tetrachlorobenzene	**NS**	**NS**	370 U	400 U	390 U	370 U	370 U	370 U
2,2'-oxybis[1-chloropropane]	**NS**	**NS**	370 U	400 U	390 U	370 U	370 U	370 U
2,3,4,6-Tetrachlorophenol	**NS**	**NS**	370 U	400 U	390 U	370 U	370 U	370 U
2,4,5-Trichlorophenol	**NS**	**NS**	370 U	400 U	390 U	370 U	370 U	370 U
2,4,6-Trichlorophenol	**NS**	**NS**	150 U	160 U	160 U	150 U	150 U	150 U
2,4-Dichlorophenol	**NS**	**NS**	370 U	400 U	390 U	370 U	370 U	370 U
2,4-Dimethylphenol	**NS**	**NS**	370 U	400 U	390 U	370 U	370 U	370 U
2,4-Dinitrophenol	**NS**	**NS**	300 U	320 U	320 U	300 U	300 U	300 U
2,4-Dinitrotoluene	**NS**	**NS**	75 U	80 U	80 U	75 U	75 U	75 U
2,6-Dinitrotoluene	**NS**	**NS**	75 U	80 U	80 U	75 U	75 U	75 U
2-Chloronaphthalene	**NS**	**NS**	370 U	400 U	390 U	370 U	370 U	160 J
2-Chlorophenol	**NS**	**NS**	370 U	400 U	390 U	370 U	370 U	370 U
2-Methylnaphthalene	**NS**	**NS**	22 J	400 U	46 J	11 J	150 J	68 J
2-Methylphenol	**330**	**100,000**	370 U	400 U	390 U	370 U	370 U	370 U
2-Nitroaniline	**NS**	**NS**	370 U	400 U	390 U	370 U	370 U	370 U
2-Nitrophenol	**NS**	**NS**	370 U	400 U	390 U	370 U	370 U	370 U
3,3'-Dichlorobenzidine	**NS**	**NS**	150 U	160 U	160 U	150 U	150 U	150 U
3-Nitroaniline	**NS**	**NS**	370 U	400 U	390 U	370 U	370 U	370 U
4,6-Dinitro-2-methylphenol	**NS**	**NS**	300 U	320 U	320 U	300 U	300 U	300 U
4-Bromophenyl phenyl ether	**NS**	**NS**	370 U	400 U	390 U	370 U	370 U	370 U
4-Chloro-3-methylphenol	**NS**	**NS**	370 U	400 U	390 U	370 U	370 U	370 U
4-Chloroaniline	**NS**	**NS**	370 U	400 U	390 U	370 U	370 U	370 U
4-Chlorophenyl phenyl ether	**NS**	**NS**	370 U	400 U	390 U	370 U	370 U	370 U
4-Methylphenol	**330**	**100,000**	370 U	400 U	390 U	370 U	370 U	370 U
4-Nitroaniline	**NS**	**NS**	370 U	400 U	390 U	370 U	370 U	370 U
4-Nitrophenol	**NS**	**NS**	750 U	800 U	800 U	750 U	750 U	750 U
Acenaphthene	**20,000**	**100,000**	43 J	400 U	72 J	24 J	220 J	48 J
Acenaphthylene	**100,000**	**100,000**	21 J	400 U	31 J	370 U	12 J	240 J
Acetophenone	**NS**	**NS**	370 U	400 U	390 U	370 U	370 U	370 U
Anthracene	**100,000**	**100,000**	140 J	400 U	210 J	52 J	570	150 J
Atrazine	**NS**	**NS**	150 U	160 U	160 U	150 U	150 U	150 U
Benzaldehyde	**NS**	**NS**	370 U	400 U	390 U	370 U	370 U	370 U
Benzo[a]anthracene	**1,000**	**1,000**	750	40 U	870	170	420	580
Benzo[a]pyrene	**1,000**	**1,000**	810 *	16 J *	820 *	140 *	190 *	37 U *
Benzo[b]fluoranthene	**1,000**	**1,000**	880	15 J	**1,100**	200	300	**6,200** *
Benzo[g,h,i]perylene	**100,000**	**100,000**	660	400 U	700	100 J	130 J	790 *
Benzo[k]fluoranthene	**800**	**3,900**	390	40 U	390	87	130	**2,600** *
Bis(2-chloroethoxy)methane	**NS**	**NS**	370 U	400 U	390 U	370 U	370 U	370 U
Bis(2-chloroethyl)ether	**NS**	**NS**	37 U	40 U	39 U	37 U	37 U	37 U
Bis(2-ethylhexyl) phthalate	**NS**	**NS**	59 J	400 U	62 J	500	56 J	370 U
Butyl benzyl phthalate	**NS**	**NS**	370 U	400 U	390 U	370 U	370 U	370 U
Caprolactam	**NS**	**NS**	370 U	400 U	390 U	370 U	370 U	370 U
Carbazole	**NS**	**NS**	57 J	400 U	73 J	20 J	260 J	10 J
Chrysene	**1,000**	**3,900**	860	20 J	1,000	180 J	420	890
Dibenz(a,h)anthracene	**330**	**330**	170	40 U	160	39	36 J	**580** *
Dibenzofuran	**7,000**	**59,000**	37 J	400 U	59 J	18 J	500	59 J
Diethyl phthalate	**NS**	**NS**	370 U	400 U	390 U	370 U	370 U	370 U
Dimethyl phthalate	**NS**	**NS**	370 U	400 U	390 U	370 U	370 U	370 U
Di-n-butyl phthalate	**NS**	**NS**	370 U	400 U	19 J	370 U	370 U	370 U
Di-n-octyl phthalate	**NS**	**NS**	370 U	400 U	390 U	370 U	370 U	370 U *
Fluoranthene	**100,000**	**100,000**	1,200	38 J	1,600	320 J	2,400	1,300
Fluorene	**30,000**	**100,000**	46 J	400 U	67 J	22 J	250 J	60 J
Hexachlorobenzene	**330**	**1,200**	37 U	40 U	39 U	37 U	37 U	37 U
Hexachlorobutadiene	**NS**	**NS**	75 U	80 U	80 U	75 U	75 U	75 U
Hexachlorocyclopentadiene	**NS**	**NS**	370 U	400 U	390 U	370 U	370 U	370 U
Hexachloroethane	**NS**	**NS**	37 U	40 U	39 U	37 U	37 U	37 U
Indeno[1,2,3-cd]pyrene	**500**	**500**	**680**	40 U	**670**	110	140	**1,300** *
Isophorone	**NS**	**NS**	150 U	160 U	610	13 J	150 U	49 J
Naphthalene	**12,000**	**100,000**	41 J	400 U	65 J	20 J	91 J	800
Nitrobenzene	**NS**	**NS**	37 U	40 U	39 U	37 U	37 U	37 U
N-Nitrosodi-n-propylamine	**NS**	**NS**	37 U	40 U	39 U	37 U	37 U	37 U
N-Nitrosodiphenylamine	**NS**	**NS**	370 U	400 U	390 U	370 U	370 U	370 U
Pentachlorophenol	**800**	**6,700**	300 U	320 U	320 U	300 U	300 U	300 U
Phenanthrene	**100,000**	**100,000**	840	37 J	1,200	270 J	4,700	860
Phenol	**330**	**100,000**	370 U	400 U	390 U	370 U	370 U	370 U
Pyrene	**100,000**	**100,000**	1,600	43 J	1,800	380	1,700	1,300
Total SVOCs	**NS**	**NS**	9,306	169	11,624	2,676	12,728	18,134

Table 5
77 Commercial Street
Brooklyn, NY
Remedial Investigation Soil Analytical Results
Semivolatile Organic Compounds

Client ID Lab Sample ID Date Sampled Dilution µg/Kg	NYSDEC Part 375 Unrestricted SCO µg/Kg	NYSDEC Part 375 Restricted Residential SCO µg/Kg	SB-4 (1-2') 460-85054-15 10/23/2014 1	SB-4 (7-8') 460-85054-16 10/23/2014 1	SB-5(1-2') 460-85120-1 10/24/2014 2	SB-5(6-7') 460-85120-2 10/24/2014 1	SB-6 (1-2') 460-84965-5 10/22/2014 1	SB-6 (10-11') 460-84965-6 10/22/2014 1
1,1'-Biphenyl	NS	NS	410 U	380 U	70 J	39 J	67 J	86 J
1,2,4,5-Tetrachlorobenzene	NS	NS	410 U	380 U	730 U	380 U	370 U	420 U
2,2'-oxybis[1-chloropropane]	NS	NS	410 U	380 U	730 U	380 U	370 U	420 U
2,3,4,6-Tetrachlorophenol	NS	NS	410 U	380 U	730 U	380 U	370 U	420 U
2,4,5-Trichlorophenol	NS	NS	410 U	380 U	730 U	380 U	370 U	420 U
2,4,6-Trichlorophenol	NS	NS	170 U	150 U	290 U	150 U	150 U	170 U
2,4-Dichlorophenol	NS	NS	410 U	380 U	730 U	380 U	370 U	420 U
2,4-Dimethylphenol	NS	NS	410 U	380 U	730 U	380 U	370 U	420 U
2,4-Dinitrophenol	NS	NS	330 U	310 U	590 U	300 U	300 U	340 U
2,4-Dinitrotoluene	NS	NS	83 U	78 U	150 U	77 U	75 U	84 U
2,6-Dinitrotoluene	NS	NS	83 U	78 U	150 U	77 U	75 U	84 U
2-Chloronaphthalene	NS	NS	410 U	380 U	730 U	16 J	370 U	420 U
2-Chlorophenol	NS	NS	410 U	380 U	730 U	380 U	370 U	420 U
2-Methylnaphthalene	NS	NS	230 J	130 J	290 J	110 J	210 J	200 J
2-Methylphenol	330	100,000	410 U	380 U	730 U	380 U	370 U	420 U
2-Nitroaniline	NS	NS	410 U	380 U	730 U	380 U	370 U	420 U
2-Nitrophenol	NS	NS	410 U	380 U	730 U	380 U	370 U	420 U
3,3'-Dichlorobenzidine	NS	NS	170 U	150 U	290 U	150 U	150 U	170 U
3-Nitroaniline	NS	NS	410 U	380 U	730 U	380 U	370 U	420 U
4,6-Dinitro-2-methylphenol	NS	NS	330 U	310 U	590 U	300 U	300 U	340 U
4-Bromophenyl phenyl ether	NS	NS	410 U	380 U	730 U	380 U	370 U	420 U
4-Chloro-3-methylphenol	NS	NS	410 U	380 U	730 U	380 U	370 U	420 U
4-Chloroaniline	NS	NS	410 U	380 U	730 U	380 U	370 U	420 U
4-Chlorophenyl phenyl ether	NS	NS	410 U	380 U	730 U	380 U	370 U	420 U
4-Methylphenol	330	100,000	410 U	380 U	730 U	380 U	370 U	43 J
4-Nitroaniline	NS	NS	410 U	380 U	730 U	380 U	370 U	420 U
4-Nitrophenol	NS	NS	830 U	780 U	1,500 U	770 U	750 U	840 U
Acenaphthene	20,000	100,000	67 J	52 J	200 J	48 J	100 J	580
Acenaphthylene	100,000	100,000	16 J	10 J	33 J	67 J	21 J	180 J
Acetophenone	NS	NS	27 J	380 U	730 U	380 U	24 J	420 U
Anthracene	100,000	100,000	120 J	110 J	570 J	250 J	270 J	1,500
Atrazine	NS	NS	170 U	150 U	290 U	150 U	150 U	170 U
Benzaldehyde	NS	NS	410 U	380 U	730 U	380 U	370 U	420 U
Benzo[a]anthracene	1,000	1,000	340	300	**1,400**	780	800	**3,100**
Benzo[a]pyrene	1,000	1,000	320 *	280 *	**1,300**	770	730 *	**3,700** *
Benzo[b]fluoranthene	1,000	1,000	420	360	**1,500**	**1,100**	990	**4,400**
Benzo[g,h,i]perylene	100,000	100,000	270 J	260 J	800	350 J	550	3,900
Benzo[k]fluoranthene	800	3,900	180	140	470	460	340	**1,600**
Bis(2-chloroethoxy)methane	NS	NS	410 U	380 U	730 U	380 U	370 U	420 U
Bis(2-chloroethyl)ether	NS	NS	41 U	38 U	73 U	38 U	37 U	42 U
Bis(2-ethylhexyl) phthalate	NS	NS	48 J	54 J	130 J	650	540	240 J
Butyl benzyl phthalate	NS	NS	410 U	380 U	730 U	380 U	370 U	420 U
Caprolactam	NS	NS	63 J	380 U	730 U	380 U	370 U	420 U
Carbazole	NS	NS	56 J	58 J	66 J	53 J	95 J	690
Chrysene	1,000	3,900	390 J	400	**1,700**	970	900	**2,900**
Dibenz(a,h)anthracene	330	330	49	76	250	110	120	**770**
Dibenzofuran	7,000	59,000	87 J	59 J	170 J	78 J	210 J	570
Diethyl phthalate	NS	NS	410 U	380 U	730 U	380 U	370 U	420 U
Dimethyl phthalate	NS	NS	410 U	380 U	730 U	380 U	370 U	420 U
Di-n-butyl phthalate	NS	NS	410 U	380 U	730 U	380 U	370 U	420 U
Di-n-octyl phthalate	NS	NS	410 U	380 U	730 U	380 U	370 U	420 U
Fluoranthene	100,000	100,000	650	600	2,300	1,500	1,600	6,800
Fluorene	30,000	100,000	80 J	80 J	270 J	56 J	97 J	710
Hexachlorobenzene	330	1,200	41 U	38 U	73 U	38 U	37 U	42 U
Hexachlorobutadiene	NS	NS	83 U	78 U	150 U	77 U	75 U	84 U
Hexachlorocyclopentadiene	NS	NS	410 U	380 U	730 U	380 U	370 U	420 U
Hexachloroethane	NS	NS	41 U	38 U	73 U	38 U	37 U	42 U
Indeno[1,2,3-cd]pyrene	500	500	270	230	**790**	410	**610**	**3,700**
Isophorone	NS	NS	170	1,900	1,900	190	150	170 U
Naphthalene	12,000	100,000	110 J	120 J	290 J	400	250 J	430
Nitrobenzene	NS	NS	41 U	38 U	73 U	38 U	37 U	42 U
N-Nitrosodi-n-propylamine	NS	NS	41 U	38 U	73 U	38 U	37 U	42 U
N-Nitrosodiphenylamine	NS	NS	410 U	380 U	730 U	380 U	370 U	420 U
Pentachlorophenol	800	6,700	330 U	310 U	590 U	300 U	300 U	340 U
Phenanthrene	100,000	100,000	760	680	2,500	1,200	1,700	6,900
Phenol	330	100,000	410 U	380 U	730 U	380 U	370 U	420 U
Pyrene	100,000	100,000	740	620	3,500	1,500	1,600	5,900
Total SVOCs	NS	NS	5,463	6,519	20,499	11,107	11,974	48,899

Table 5
77 Commercial Street
Brooklyn, NY
Remedial Investigation Soil Analytical Results
Semivolatile Organic Compounds

Client ID Lab Sample ID Date Sampled Dilution µg/Kg	NYSDEC Part 375 Unrestricted SCO µg/Kg	NYSDEC Part 375 Restricted Residential SCO µg/Kg	SB-7 (1-2') 460-85054-9 10/23/2014 2	SB-7 (7-8') 460-85054-10 10/23/2014 1	SB-8(1-2') 460-85120-13 10/24/2014 2	SB-8(9-10') 460-85120-14 10/24/2014 1	SB-9 (1-2') 460-85054-7 10/23/2014 1	SB-9 (8-9') 460-85054-8 10/23/2014 5
1,1'-Biphenyl	NS	NS	730 U	380 U	780 U	400 U	360 U	270 J
1,2,4,5-Tetrachlorobenzene	NS	NS	730 U	380 U	780 U	400 U	360 U	2,100 U
2,2'-oxybis[1-chloropropane]	NS	NS	730 U	380 U	780 U	400 U	360 U	2,100 U
2,3,4,6-Tetrachlorophenol	NS	NS	730 U	380 U	780 U	400 U	360 U	2,100 U
2,4,5-Trichlorophenol	NS	NS	730 U	380 U	780 U	400 U	360 U	2,100 U
2,4,6-Trichlorophenol	NS	NS	300 U	160 U	320 U	160 U	140 U	830 U
2,4-Dichlorophenol	NS	NS	730 U	380 U	780 U	400 U	360 U	2,100 U
2,4-Dimethylphenol	NS	NS	730 U	380 U	780 U	400 U	360 U	2,100 U
2,4-Dinitrophenol	NS	NS	590 U	310 U	630 U	320 U	290 U	1,700 U
2,4-Dinitrotoluene	NS	NS	150 U	78 U	160 U	81 U	73 U	420 U
2,6-Dinitrotoluene	NS	NS	150 U	78 U	160 U	81 U	73 U	420 U
2-Chloronaphthalene	NS	NS	730 U	380 U	780 U	400 U	360 U	2,100 U
2-Chlorophenol	NS	NS	730 U	380 U	780 U	400 U	360 U	2,100 U
2-Methylnaphthalene	NS	NS	730 U	49 J	210 J	400 U	41 J	850 J
2-Methylphenol	330	100,000	730 U	380 U	780 U	400 U	360 U	2,100 U
2-Nitroaniline	NS	NS	730 U	380 U	780 U	400 U	360 U	2,100 U
2-Nitrophenol	NS	NS	730 U	380 U	780 U	400 U	360 U	2,100 U
3,3'-Dichlorobenzidine	NS	NS	300 U	160 U	320 U	160 U	140 U	830 U
3-Nitroaniline	NS	NS	730 U	380 U	780 U	400 U	360 U	2,100 U
4,6-Dinitro-2-methylphenol	NS	NS	590 U	310 U	630 U	320 U	290 U	1,700 U
4-Bromophenyl phenyl ether	NS	NS	730 U	380 U	780 U	400 U	360 U	2,100 U
4-Chloro-3-methylphenol	NS	NS	730 U	380 U	780 U	400 U	360 U	2,100 U
4-Chloroaniline	NS	NS	730 U	380 U	780 U	400 U	360 U	2,100 U
4-Chlorophenyl phenyl ether	NS	NS	730 U	380 U	780 U	400 U	360 U	2,100 U
4-Methylphenol	330	100,000	730 U	380 U	780 U	400 U	360 U	2100 U
4-Nitroaniline	NS	NS	730 U	380 U	780 U	400 U	360 U	2,100 U
4-Nitrophenol	NS	NS	1,500 U	780 U	1,600 U	810 U	730 U	4,200 U
Acenaphthene	20,000	100,000	71 J	140 J	590 J	400 U	100 J	2,300
Acenaphthylene	100,000	100,000	30 J	380 U	52 J	400 U	15 J	130 J
Acetophenone	NS	NS	730 U	380 U	780 U	400 U	360 U	2,100 U
Anthracene	100,000	100,000	200 J	250 J	1,100	400 U	230 J	6,900
Atrazine	NS	NS	300 U	160 U	320 U	160 U	140 U	830 U
Benzaldehyde	NS	NS	730 U	380 U	780 U	400 U	360 U	2,100 U
Benzo[a]anthracene	1,000	1,000	690	390	**2,300**	81	570	**11,000**
Benzo[a]pyrene	1,000	1,000	670 *	370 *	**2,100**	65	520 *	**9,000** *
Benzo[b]fluoranthene	1,000	1,000	980	420	**2,700**	80	690	**9,900**
Benzo[g,h,i]perylene	100,000	100,000	270 J	290 J	1,000	37 J	460	7,500
Benzo[k]fluoranthene	800	3,900	320	180	**1,100**	40 U	230	**4,100**
Bis(2-chloroethoxy)methane	NS	NS	730 U	380 U	780 U	400 U	360 U	2,100 U
Bis(2-chloroethyl)ether	NS	NS	73 U	38 U	78 U	40 U	36 U	210 U
Bis(2-ethylhexyl) phthalate	NS	NS	730 U	62 J	71 J	430	160 J	2,100 U
Butyl benzyl phthalate	NS	NS	730 U	380 U	780 U	400 U	360 U	2,100 U
Caprolactam	NS	NS	730 U	380 U	780 U	400 U	360 U	2,100 U
Carbazole	NS	NS	58 J	92 J	400 J	400 U	72 J	2,400
Chrysene	1,000	3,900	740	390	**2,400**	79 J	650	**12,000**
Dibenz(a,h)anthracene	330	330	78	64	320	40 U	74	**1,900**
Dibenzofuran	7,000	59,000	28 J	90 J	320 J	400 U	72 J	1,800 J
Diethyl phthalate	NS	NS	730 U	380 U	780 U	400 U	360 U	2,100 U
Dimethyl phthalate	NS	NS	730 U	380 U	780 U	400 U	360 U	2,100 U
Di-n-butyl phthalate	NS	NS	730 U	380 U	780 U	400 U	360 U	2,100 U
Di-n-octyl phthalate	NS	NS	730 U	380 U	780 U	400 U	360 U	2,100 U
Fluoranthene	100,000	100,000	1,500	910	4,300	120 J	1,200	22,000
Fluorene	30,000	100,000	61 J	120 J	450 J	400 U	88 J	3,100
Hexachlorobenzene	330	1,200	73 U	38 U	78 U	40 U	36 U	210 U
Hexachlorobutadiene	NS	NS	150 U	78 U	160 U	81 U	73 U	420 U
Hexachlorocyclopentadiene	NS	NS	730 U	380 U	780 U	400 U	360 U	2,100 U
Hexachloroethane	NS	NS	73 U	38 U	78 U	40 U	36 U	210 U
Indeno[1,2,3-cd]pyrene	500	500	310	280	**1,300**	31 J	480	**7,700**
Isophorone	NS	NS	300 U	160 U	25 J	160 U	140 U	830 U
Naphthalene	12,000	100,000	28 J	87 J	280 J	400 U	65 J	1,500 J
Nitrobenzene	NS	NS	73 U	38 U	78 U	40 U	36 U	210 U
N-Nitrosodi-n-propylamine	NS	NS	73 U	38 U	78 U	40 U	36 U	210 U
N-Nitrosodiphenylamine	NS	NS	730 U	380 U	780 U	400 U	360 U	2,100 U
Pentachlorophenol	800	6,700	590 U	310 U	630 U	320 U	290 U	1,700 U
Phenanthrene	100,000	100,000	940	1,100	5,100	66 J	1,300	29,000
Phenol	330	100,000	730 U	380 U	780 U	400 U	360 U	2,100 U
Pyrene	100,000	100,000	1,300	990	5,300	160 J	1,300	23,000
Total SVOCs	NS	NS	8,274	6,274	31,418	1,149	8,317	156,350

Table 5
77 Commercial Street
Brooklyn, NY
Remedial Investigation Soil Analytical Results
Semivolatile Organic Compounds

Client ID Lab Sample ID Date Sampled Dilution µg/Kg	NYSDEC Part 375 Unrestricted SCO µg/Kg	NYSDEC Part 375 Restricted Residential SCO µg/Kg	SB-10 (1-2') 460-85054-3 10/23/2014 1	SB-10 (7-8') 460-85054-4 10/23/2014 1	SB-11(1-2') 460-85120-11 10/24/2014 5	SB-11(5-6') 460-85120-12 10/24/2014 10	SB-12 (1-2') 460-84965-7 10/22/2014 1	SB-12 (11-12') 460-84965-8 10/22/2014 1
1,1'-Biphenyl	NS	NS	370 U	400 U	310 J	1200 J	82 J	52 J
1,2,4,5-Tetrachlorobenzene	NS	NS	370 U	400 U	1,900 U	4,000 U	350 U	380 U
2,2'-oxybis[1-chloropropane]	NS	NS	370 U	400 U	1,900 U	4,000 U	350 U	380 U
2,3,4,6-Tetrachlorophenol	NS	NS	370 U	400 U	1,900 U	4,000 U	350 U	380 U
2,4,5-Trichlorophenol	NS	NS	370 U	400 U	1,900 U	4,000 U	350 U	380 U
2,4,6-Trichlorophenol	NS	NS	150 U	160 U	760 U	1600 U	140 U	150 U
2,4-Dichlorophenol	NS	NS	370 U	400 U	1,900 U	4,000 U	350 U	380 U
2,4-Dimethylphenol	NS	NS	370 U	400 U	1,900 U	4,000 U	350 U	380 U
2,4-Dinitrophenol	NS	NS	300 U	320 U	1,500 U	3,200 U	280 U	300 U
2,4-Dinitrotoluene	NS	NS	75 U	81 U	380 U	810 U	72 U	77 U
2,6-Dinitrotoluene	NS	NS	75 U	81 U	380 U	810 U	72 U	77 U
2-Chloronaphthalene	NS	NS	370 U	400 U	1,900 U	420 J	350 U	70 J
2-Chlorophenol	NS	NS	370 U	400 U	1,900 U	4,000 U	350 U	380 U
2-Methylnaphthalene	NS	NS	24 J	400 U	740 J	2,400 J	420	59 J
2-Methylphenol	330	100,000	370 U	400 U	1,900 U	4,000 U	350 U	380 U
2-Nitroaniline	NS	NS	370 U	400 U	1,900 U	4,000 U	350 U	380 U
2-Nitrophenol	NS	NS	370 U	400 U	1,900 U	4,000 U	350 U	380 U
3,3'-Dichlorobenzidine	NS	NS	150 U	160 U	760 U	1600 U	140 U	150 U
3-Nitroaniline	NS	NS	370 U	400 U	1,900 U	4,000 U	350 U	380 U
4,6-Dinitro-2-methylphenol	NS	NS	300 U	320 U	1,500 U	3,200 U	280 U	300 U
4-Bromophenyl phenyl ether	NS	NS	370 U	400 U	1,900 U	4,000 U	350 U	380 U
4-Chloro-3-methylphenol	NS	NS	370 U	400 U	1,900 U	4,000 U	350 U	380 U
4-Chloroaniline	NS	NS	370 U	400 U	1,900 U	4,000 U	350 U	380 U
4-Chlorophenyl phenyl ether	NS	NS	370 U	400 U	1,900 U	4,000 U	350 U	380 U
4-Methylphenol	330	100,000	370 U	400 U	1900 U	**690** J	350 U	380 U
4-Nitroaniline	NS	NS	370 U	400 U	1,900 U	4,000 U	350 U	380 U
4-Nitrophenol	NS	NS	750 U	810 U	3,800 U	8,100 U	720 U	770 U
Acenaphthene	20,000	100,000	30 J	400 U	760 J	5,100	350 U	21 J
Acenaphthylene	100,000	100,000	13 J	400 U	1200 J	880 J	350 U	180 J
Acetophenone	NS	NS	10 J	400 U	1,900 U	4,000 U	350 U	380 U
Anthracene	100,000	100,000	78 J	400 U	2,600	6,800	350 U	41 J
Atrazine	NS	NS	150 U	160 U	760 U	1600 U	140 U	150 U
Benzaldehyde	NS	NS	370 U	400 U	1,900 U	4,000 U	350 U	380 U
Benzo[a]anthracene	1,000	1,000	390	40 U	**6,900**	**12,000**	210	63
Benzo[a]pyrene	1,000	1,000	330 *	19 J *	**9,100**	**7,000**	200 *	49 *
Benzo[b]fluoranthene	1,000	1,000	500	40 U	**10,000**	**20,000**	320	81
Benzo[g,h,i]perylene	100,000	100,000	280 J	400 U	4,100	4,200	170 J	50 J
Benzo[k]fluoranthene	800	3,900	170	40 U	**4,200**	**6,500**	92	20 J
Bis(2-chloroethoxy)methane	NS	NS	370 U	400 U	1,900 U	4,000 U	350 U	380 U
Bis(2-chloroethyl)ether	NS	NS	37 U	40 U	190 U	400 U	35 U	38 U
Bis(2-ethylhexyl) phthalate	NS	NS	61 J	400 U	78 J	4,000 U	98 J	230 J
Butyl benzyl phthalate	NS	NS	370 U	400 U	1,900 U	4,000 U	350 U	380 U
Caprolactam	NS	NS	370 U	400 U	1,900 U	4,000 U	350 U	380 U
Carbazole	NS	NS	28 J	400 U	310 J	490 J	350 U	11 J
Chrysene	1,000	3,900	450	31 J	**7,600**	**18,000**	310 J	86 J
Dibenz(a,h)anthracene	330	330	91	40 U	**1,500**	**1,600**	38	38 U
Dibenzofuran	7,000	59,000	18 J	400 U	1,500 J	4,100	350 U	14 J
Diethyl phthalate	NS	NS	370 U	400 U	1,900 U	4,000 U	350 U	380 U
Dimethyl phthalate	NS	NS	370 U	400 U	1,900 U	4,000 U	350 U	380 U
Di-n-butyl phthalate	NS	NS	370 U	400 U	1,900 U	4,000 U	350 U	380 U
Di-n-octyl phthalate	NS	NS	370 U	400 U	1,900 U	4,000 U	350 U	380 U
Fluoranthene	100,000	100,000	730	57 J	9,400	35,000	380	160 J
Fluorene	30,000	100,000	28 J	400 U	550 J	5,100	80 J	40 J
Hexachlorobenzene	330	1,200	37 U	40 U	190 U	400 U	35 U	38 U
Hexachlorobutadiene	NS	NS	75 U	81 U	380 U	810 U	72 U	77 U
Hexachlorocyclopentadiene	NS	NS	370 U	400 U	1,900 U	4,000 U	350 U	380 U
Hexachloroethane	NS	NS	37 U	40 U	190 U	400 U	35 U	38 U
Indeno[1,2,3-cd]pyrene	500	500	270	40 U	**5,400**	**5,300**	200	43
Isophorone	NS	NS	92 J	160 U	760 U	210 J	140 U	8700
Naphthalene	12,000	100,000	42 J	400 U	3,100	8,200	100 J	470
Nitrobenzene	NS	NS	37 U	40 U	190 U	400 U	35 U	38 U
N-Nitrosodi-n-propylamine	NS	NS	37 U	40 U	190 U	400 U	35 U	38 U
N-Nitrosodiphenylamine	NS	NS	370 U	400 U	1,900 U	4,000 U	350 U	380 U
Pentachlorophenol	800	6,700	300 U	320 U	1,500 U	3,200 U	280 U	300 U
Phenanthrene	100,000	100,000	540	69 J	3,200	52,000	590	300 J
Phenol	330	100,000	370 U	400 U	1,900 U	**880** J	350 U	380 U
Pyrene	100,000	100,000	930	72 J	11,000	28,000	410	170 J
Total SVOCs	NS	NS	5,105	248	83,548	226,070	3,700	10,910

Table 5
77 Commercial Street
Brooklyn, NY
Remedial Investigation Soil Analytical Results
Semivolatile Organic Compounds

Client ID Lab Sample ID Date Sampled Dilution µg/Kg	NYSDEC Part 375 Unrestricted SCO µg/Kg	NYSDEC Part 375 Restricted Residential SCO µg/Kg	SB-13(1-2') 460-85120-9 10/24/2014 1	SB-13(3-4') 460-85120-10 10/24/2014 5	SB-14(1-2') 460-85120-7 10/24/2014 1	SB-14(6-7') 460-85120-8 10/24/2014 1	SB-15(1-2') 460-85120-5 10/24/2014 1	SB-15(5-6') 460-85120-6 10/24/2014 5
1,1'-Biphenyl	NS	NS	52 J	510 J	160 J	370 U	270 J	1900 U
1,2,4,5-Tetrachlorobenzene	NS	NS	370 U	2,200 U	390 U	370 U	410 U	1,900 U
2,2'-oxybis[1-chloropropane]	NS	NS	370 U	2,200 U	390 U	370 U	410 U	1,900 U
2,3,4,6-Tetrachlorophenol	NS	NS	370 U	2,200 U	390 U	370 U	410 U	1,900 U
2,4,5-Trichlorophenol	NS	NS	370 U	2,200 U	390 U	370 U	410 U	1,900 U
2,4,6-Trichlorophenol	NS	NS	150 U	890 U	160 U	150 U	160 U	760 U
2,4-Dichlorophenol	NS	NS	370 U	2,200 U	390 U	370 U	410 U	1,900 U
2,4-Dimethylphenol	NS	NS	370 U	2,200 U	390 U	370 U	410 U	1,900 U
2,4-Dinitrophenol	NS	NS	300 U	1,800 U	310 U	300 U	330 U	1,500 U
2,4-Dinitrotoluene	NS	NS	75 U	450 U	78 U	75 U	82 U	390 U
2,6-Dinitrotoluene	NS	NS	75 U	450 U	78 U	75 U	82 U	390 U
2-Chloronaphthalene	NS	NS	370 U	2,200 U	43 J	370 U	410 U	1,900 U
2-Chlorophenol	NS	NS	370 U	2,200 U	390 U	370 U	410 U	1,900 U
2-Methylnaphthalene	NS	NS	180 J	1,200 J	670	17 J	3,000	650 J
2-Methylphenol	330	100,000	370 U	2,200 U	390 U	370 U	61 J	1,900 U
2-Nitroaniline	NS	NS	370 U	2,200 U	390 U	370 U	410 U	1,900 U
2-Nitrophenol	NS	NS	370 U	2,200 U	390 U	370 U	410 U	1,900 U
3,3'-Dichlorobenzidine	NS	NS	150 U	890 U	160 U	150 U	160 U	760 U
3-Nitroaniline	NS	NS	370 U	2,200 U	390 U	370 U	410 U	1,900 U
4,6-Dinitro-2-methylphenol	NS	NS	300 U	1,800 U	310 U	300 U	330 U	1,500 U
4-Bromophenyl phenyl ether	NS	NS	370 U	2,200 U	390 U	370 U	410 U	1,900 U
4-Chloro-3-methylphenol	NS	NS	370 U	2,200 U	390 U	370 U	410 U	1,900 U
4-Chloroaniline	NS	NS	370 U	2,200 U	390 U	370 U	410 U	1,900 U
4-Chlorophenyl phenyl ether	NS	NS	370 U	2,200 U	390 U	370 U	410 U	1,900 U
4-Methylphenol	330	100,000	370 U	110 J	63 J	370 U	67 J	1900 U
4-Nitroaniline	NS	NS	370 U	2,200 U	390 U	370 U	410 U	1,900 U
4-Nitrophenol	NS	NS	750 U	4,500 U	780 U	750 U	820 U	3,900 U
Acenaphthene	20,000	100,000	110 J	2,400	130 J	370 U	310 J	330 J
Acenaphthylene	100,000	100,000	37 J	820 J	370 J	370 U	150 J	220 J
Acetophenone	NS	NS	22 J	2,200 U	160 J	370 U	320 J	1,900 U
Anthracene	100,000	100,000	160 J	6,400	510	370 U	880	1,100 J
Atrazine	NS	NS	150 U	890 U	160 U	150 U	160 U	760 U
Benzaldehyde	NS	NS	370 U	2,200 U	390 U	370 U	410 U	1,900 U
Benzo[a]anthracene	1,000	1,000	520	**13,000**	**1,100**	51	**2,100**	**2,700**
Benzo[a]pyrene	1,000	1,000	460	**13,000**	**1,300**	41	**2,000**	**2,700**
Benzo[b]fluoranthene	1,000	1,000	770	**18,000**	**2,000**	62	**2,700**	**3,400**
Benzo[g,h,i]perylene	100,000	100,000	340 J	6,500	960	39 J	810	1,600 J
Benzo[k]fluoranthene	800	3,900	250	**6,300**	**820**	37 U	**1,000**	**1,200**
Bis(2-chloroethoxy)methane	NS	NS	370 U	2,200 U	390 U	370 U	410 U	1,900 U
Bis(2-chloroethyl)ether	NS	NS	37 U	220 U	39 U	37 U	41 U	190 U
Bis(2-ethylhexyl) phthalate	NS	NS	130 J	2,200 U	390 U	190 J	75 J	1,900 U
Butyl benzyl phthalate	NS	NS	370 U	2,200 U	390 U	370 U	410 U	1,900 U
Caprolactam	NS	NS	370 U	2,200 U	390 U	370 U	410 U	1,900 U
Carbazole	NS	NS	57 J	2,300	61 J	370 U	340 J	280 J
Chrysene	1,000	3,900	710	**14,000**	**1,400**	57 J	**2,400**	**3,000**
Dibenz(a,h)anthracene	330	330	110	**2,100**	320	37 U	280	**500**
Dibenzofuran	7,000	59,000	81 J	2,400	190 J	370 U	800	390 J
Diethyl phthalate	NS	NS	370 U	2,200 U	390 U	370 U	410 U	1,900 U
Dimethyl phthalate	NS	NS	370 U	2,200 U	390 U	370 U	410 U	1,900 U
Di-n-butyl phthalate	NS	NS	370 U	2,200 U	390 U	370 U	14 J	1,900 U
Di-n-octyl phthalate	NS	NS	370 U	2,200 U	390 U	370 U	410 U	1,900 U
Fluoranthene	100,000	100,000	1,000	22,000	2,000	89 J	3,700	5,400
Fluorene	30,000	100,000	79 J	3,100	240 J	10 J	320 J	450 J
Hexachlorobenzene	330	1,200	37 U	220 U	39 U	37 U	41 U	190 U
Hexachlorobutadiene	NS	NS	75 U	450 U	78 U	75 U	82 U	390 U
Hexachlorocyclopentadiene	NS	NS	370 U	2,200 U	390 U	370 U	410 U	1,900 U
Hexachloroethane	NS	NS	37 U	220 U	39 U	37 U	41 U	190 U
Indeno[1,2,3-cd]pyrene	500	500	350	**7,900**	**1,100**	29 J	**1,000**	**1,800**
Isophorone	NS	NS	31 J	890 U	26 J	270	160 U	6600
Naphthalene	12,000	100,000	190 J	2,800	1,300	18 J	2,900	720 J
Nitrobenzene	NS	NS	37 U	220 U	39 U	37 U	41 U	190 U
N-Nitrosodi-n-propylamine	NS	NS	37 U	220 U	39 U	37 U	41 U	190 U
N-Nitrosodiphenylamine	NS	NS	370 U	2,200 U	390 U	370 U	410 U	1,900 U
Pentachlorophenol	800	6,700	300 U	1,800 U	310 U	300 U	330 U	1,500 U
Phenanthrene	100,000	100,000	1,000	24,000	2,100	93 J	4,400	5,500
Phenol	330	100,000	370 U	2,200 U	390 U	370 U	410 U	1,900 U
Pyrene	100,000	100,000	1,500	24,000	2,300	140 J	4,200	6,000
Total SVOCs	NS	NS	8,139	172,840	19,323	1,106	34,097	44,540

Table 5
77 Commercial Street
Brooklyn, NY
Remedial Investigation Soil Analytical Results
Semivolatile Organic Compounds

Client ID Lab Sample ID Date Sampled Dilution µg/Kg	NYSDEC Part 375 Unrestricted SCO µg/Kg	NYSDEC Part 375 Restricted Residential SCO µg/Kg	SB-16(1-2') 460-85120-3 10/24/2014 1	SB-16(7-8') 460-85120-4 10/24/2014 2	SB-17 (1-2') 460-84965-1 10/22/2014 1	SB-17 (11-12') 460-84965-2 10/22/2014 5	SB-18 (1-2') 460-84965-3 10/22/2014 1	SB-18 (12-13') 460-84965-4 10/22/2014 1
1,1'-Biphenyl	NS	NS	350 U	130 J	380 U	300 J	36 J	450 U
1,2,4,5-Tetrachlorobenzene	NS	NS	350 U	760 U	380 U	2,000 U	370 U	450 U
2,2'-oxybis[1-chloropropane]	NS	NS	350 U	760 U	380 U	2,000 U	370 U	450 U
2,3,4,6-Tetrachlorophenol	NS	NS	350 U	760 U	380 U	2,000 U	370 U	450 U
2,4,5-Trichlorophenol	NS	NS	350 U	760 U	380 U	2,000 U	370 U	450 U
2,4,6-Trichlorophenol	NS	NS	140 U	310 U	150 U	810 U	150 U	180 U
2,4-Dichlorophenol	NS	NS	350 U	760 U	380 U	2,000 U	370 U	450 U
2,4-Dimethylphenol	NS	NS	350 U	760 U	380 U	2,000 U	370 U	450 U
2,4-Dinitrophenol	NS	NS	280 U	610 U	300 U	1,600 U	300 U	370 U
2,4-Dinitrotoluene	NS	NS	71 U	150 U	76 U	410 U	76 U	92 U
2,6-Dinitrotoluene	NS	NS	71 U	150 U	76 U	410 U	76 U	92 U
2-Chloronaphthalene	NS	NS	350 U	34 J	380 U	190 J	370 U	450 U
2-Chlorophenol	NS	NS	350 U	760 U	380 U	2,000 U	370 U	450 U
2-Methylnaphthalene	NS	NS	350 U	350 J	59 J	580 J	71 J	18 J
2-Methylphenol	330	100,000	350 U	760 U	380 U	2,000 U	370 U	450 U
2-Nitroaniline	NS	NS	350 U	760 U	380 U	2,000 U	370 U	450 U
2-Nitrophenol	NS	NS	350 U	760 U	380 U	2,000 U	370 U	450 U
3,3'-Dichlorobenzidine	NS	NS	140 U	310 U	150 U	810 U	150 U	180 U
3-Nitroaniline	NS	NS	350 U	760 U	380 U	2,000 U	370 U	450 U
4,6-Dinitro-2-methylphenol	NS	NS	280 U	610 U	300 U	1,600 U	300 U	370 U
4-Bromophenyl phenyl ether	NS	NS	350 U	760 U	380 U	2,000 U	370 U	450 U
4-Chloro-3-methylphenol	NS	NS	350 U	760 U	380 U	2,000 U	370 U	450 U
4-Chloroaniline	NS	NS	350 U	760 U	380 U	2,000 U	370 U	450 U
4-Chlorophenyl phenyl ether	NS	NS	350 U	760 U	380 U	2,000 U	370 U	450 U
4-Methylphenol	330	100,000	350 U	46 J	380 U	2000 U	370 U	450 U
4-Nitroaniline	NS	NS	350 U	760 U	380 U	2,000 U	370 U	450 U
4-Nitrophenol	NS	NS	710 U	1,500 U	760 U	4,100 U	760 U	920 U
Acenaphthene	20,000	100,000	350 U	620 J	44 J	840 J	69 J	450 U
Acenaphthylene	100,000	100,000	350 U	230 J	11 J	640 J	28 J	450 U
Acetophenone	NS	NS	350 U	760 U	380 U	2,000 U	370 U	450 U
Anthracene	100,000	100,000	350 U	1,400	99 J	1,800 J	190 J	450 U
Atrazine	NS	NS	140 U	310 U	150 U	810 U	150 U	180 U
Benzaldehyde	NS	NS	350 U	760 U	380 U	2,000 U	370 U	270 J
Benzo[a]anthracene	1,000	1,000	35	**2,000**	310	**2,700**	750	45 U
Benzo[a]pyrene	1,000	1,000	27 J	**1,500**	280 *	**1,300** *	720 *	55 *
Benzo[b]fluoranthene	1,000	1,000	36	**1,800**	370	**4,400**	1,000	59
Benzo[g,h,i]perylene	100,000	100,000	350 U	800	200 J	1,000 J	570	45 J
Benzo[k]fluoranthene	800	3,900	35 U	76 U	150	**1,600**	340	29 J
Bis(2-chloroethoxy)methane	NS	NS	350 U	760 U	380 U	2,000 U	370 U	450 U
Bis(2-chloroethyl)ether	NS	NS	35 U	76 U	38 U	200 U	37 U	45 U
Bis(2-ethylhexyl) phthalate	NS	NS	350 U	760 U	33 J	2,000 U	2,100	450 U
Butyl benzyl phthalate	NS	NS	350 U	760 U	380 U	2,000 U	370 U	450 U
Caprolactam	NS	NS	350 U	760 U	380 U	2,000 U	370 U	450 U
Carbazole	NS	NS	350 U	490 J	37 J	130 J	70 J	12 J
Chrysene	1,000	3,900	35 J	**2,100**	370 J	**3,300**	830	450 U
Dibenz(a,h)anthracene	330	330	35 U	240	43	**470**	160	45 U
Dibenzofuran	7,000	59,000	350 U	530 J	43 J	840 J	96 J	30 J
Diethyl phthalate	NS	NS	350 U	760 U	380 U	2,000 U	370 U	450 U
Dimethyl phthalate	NS	NS	350 U	760 U	380 U	2,000 U	370 U	450 U
Di-n-butyl phthalate	NS	NS	350 U	760 U	380 U	2,000 U	370 U	450 U
Di-n-octyl phthalate	NS	NS	350 U	760 U	380 U	2,000 U	370 U	450 U
Fluoranthene	100,000	100,000	54 J	4,400	680	7,400	1,400	87 J
Fluorene	30,000	100,000	350 U	830	42 J	1,100 J	60 J	21 J
Hexachlorobenzene	330	1,200	35 U	76 U	38 U	200 U	37 U	45 U
Hexachlorobutadiene	NS	NS	71 U	150 U	76 U	410 U	76 U	92 U
Hexachlorocyclopentadiene	NS	NS	350 U	760 U	380 U	2,000 U	370 U	450 U
Hexachloroethane	NS	NS	35 U	76 U	38 U	200 U	37 U	45 U
Indeno[1,2,3-cd]pyrene	500	500	35 U	**950**	220	**1,400**	**680**	40 J
Isophorone	NS	NS	19 J	300 J	150 U	810 U	53 J	180 U
Naphthalene	12,000	100,000	350 U	1,100	73 J	2,700	71 J	450 U
Nitrobenzene	NS	NS	35 U	76 U	38 U	200 U	37 U	45 U
N-Nitrosodi-n-propylamine	NS	NS	35 U	76 U	38 U	200 U	37 U	45 U
N-Nitrosodiphenylamine	NS	NS	350 U	760 U	380 U	2,000 U	370 U	450 U
Pentachlorophenol	800	6,700	280 U	610 U	300 U	1,600 U	300 U	370 U
Phenanthrene	100,000	100,000	46 J	5,400	640	9,300	940	61 J
Phenol	330	100,000	350 U	45 J	380 U	2,000 U	370 U	450 U
Pyrene	100,000	100,000	73 J	5,000	630	4,700	1,300	81 J
Total SVOCs	NS	NS	325	30,295	4,334	46,690	11,534	808

Table 5
77 Commercial Street
Brooklyn, NY
Remedial Investigation Soil Analytical Results
Semivolatile Organic Compounds

Client ID Lab Sample ID Date Sampled Dilution µg/Kg	NYSDEC Part 375 Unrestricted SCO µg/Kg	NYSDEC Part 375 Restricted Residential SCO µg/Kg	SB-19 (1-2') 460-85054-5 10/23/2014 1	SB-19 (7-8') 460-85054-6 10/23/2014 5	SB-X (7-8')* 460-85054-17 10/23/2014 1
1,1'-Biphenyl	NS	NS	350 U	1900 U	380 U
1,2,4,5-Tetrachlorobenzene	NS	NS	350 U	1,900 U	380 U
2,2'-oxybis[1-chloropropane]	NS	NS	350 U	1,900 U	380 U
2,3,4,6-Tetrachlorophenol	NS	NS	350 U	1,900 U	380 U
2,4,5-Trichlorophenol	NS	NS	350 U	1,900 U	380 U
2,4,6-Trichlorophenol	NS	NS	140 U	770 U	150 U
2,4-Dichlorophenol	NS	NS	350 U	1,900 U	380 U
2,4-Dimethylphenol	NS	NS	350 U	1,900 U	380 U
2,4-Dinitrophenol	NS	NS	280 U	1,500 U	300 U
2,4-Dinitrotoluene	NS	NS	71 U	390 U	76 U
2,6-Dinitrotoluene	NS	NS	71 U	390 U	76 U
2-Chloronaphthalene	NS	NS	350 U	160 J	380 U
2-Chlorophenol	NS	NS	350 U	1,900 U	380 U
2-Methylnaphthalene	NS	NS	110 J	120 J	10 J
2-Methylphenol	330	100,000	350 U	1,900 U	380 U
2-Nitroaniline	NS	NS	350 U	1,900 U	380 U
2-Nitrophenol	NS	NS	350 U	1,900 U	380 U
3,3'-Dichlorobenzidine	NS	NS	140 U	770 U	150 U
3-Nitroaniline	NS	NS	350 U	1,900 U	380 U
4,6-Dinitro-2-methylphenol	NS	NS	280 U	1,500 U	300 U
4-Bromophenyl phenyl ether	NS	NS	350 U	1,900 U	380 U
4-Chloro-3-methylphenol	NS	NS	350 U	1,900 U	380 U
4-Chloroaniline	NS	NS	350 U	1,900 U	380 U
4-Chlorophenyl phenyl ether	NS	NS	350 U	1,900 U	380 U
4-Methylphenol	330	100,000	350 U	1900 U	380 U
4-Nitroaniline	NS	NS	350 U	1,900 U	380 U
4-Nitrophenol	NS	NS	710 U	3,900 U	760 U
Acenaphthene	20,000	100,000	88 J	110 J	36 J
Acenaphthylene	100,000	100,000	30 J	180 J	380 U
Acetophenone	NS	NS	12 J	93 J	380 U
Anthracene	100,000	100,000	330 J	190 J	79 J
Atrazine	NS	NS	140 U	770 U	150 U
Benzaldehyde	NS	NS	350 U	1,900 U	380 U
Benzo[a]anthracene	1,000	1,000	670	520	250
Benzo[a]pyrene	1,000	1,000	590 *	310 *	240 *
Benzo[b]fluoranthene	1,000	1,000	620	950	350
Benzo[g,h,i]perylene	100,000	100,000	460	1,900 U	240 J
Benzo[k]fluoranthene	800	3,900	200	340	150
Bis(2-chloroethoxy)methane	NS	NS	350 U	1,900 U	380 U
Bis(2-chloroethyl)ether	NS	NS	35 U	190 U	38 U
Bis(2-ethylhexyl) phthalate	NS	NS	340 J	1,900 U	380 U
Butyl benzyl phthalate	NS	NS	350 U	1,900 U	380 U
Caprolactam	NS	NS	350 U	1,900 U	380 U
Carbazole	NS	NS	51 J	1,900 U	37 J
Chrysene	1,000	3,900	780	530 J	350 J
Dibenz(a,h)anthracene	330	330	120	190 U	43
Dibenzofuran	7,000	59,000	67 J	73 J	21 J
Diethyl phthalate	NS	NS	350 U	1,900 U	380 U
Dimethyl phthalate	NS	NS	350 U	1,900 U	380 U
Di-n-butyl phthalate	NS	NS	350 U	1,900 U	380 U
Di-n-octyl phthalate	NS	NS	350 U	1,900 U	380 U
Fluoranthene	100,000	100,000	1,400	1,200 J	550
Fluorene	30,000	100,000	150 J	120 J	37 J
Hexachlorobenzene	330	1,200	35 U	190 U	38 U
Hexachlorobutadiene	NS	NS	71 U	390 U	76 U
Hexachlorocyclopentadiene	NS	NS	350 U	1,900 U	380 U
Hexachloroethane	NS	NS	35 U	190 U	38 U
Indeno[1,2,3-cd]pyrene	500	500	500	470	260
Isophorone	NS	NS	140 U	89 J	150 U
Naphthalene	12,000	100,000	96 J	770 J	23 J
Nitrobenzene	NS	NS	35 U	190 U	38 U
N-Nitrosodi-n-propylamine	NS	NS	35 U	190 U	38 U
N-Nitrosodiphenylamine	NS	NS	350 U	1,900 U	380 U
Pentachlorophenol	800	6,700	280 U	1,500 U	300 U
Phenanthrene	100,000	100,000	1,500	1,200 J	510
Phenol	330	100,000	350 U	1,900 U	380 U
Pyrene	100,000	100,000	1,200	1,000 J	710
Total SVOCs	NS	NS	9,314	8,425	3,896

Table 6
77 Commercial Street
Brooklyn, NY
Remedial Investigation Soil Analytical Results
Metals

Client ID Lab Sample ID Date Sampled Dilution mg/kg	NYSDEC Part 375 Unrestricted SCO mg/kg	NYSDEC Part 375 Restricted Residential SCO mg/kg	SB-1 (1-2') 460-85054-11 10/23/2014 4/1 †	SB-1 (8-9') 460-85054-12 10/23/2014 4/1 †	SB-2 (1-2') 460-85054-13 10/23/2014 4/50 ‡	SB-2 (6-7') 460-85054-14 10/23/2014 4/1 †	SB-3 (1-2') 460-85054-1 10/23/2014 4/20/1 ‡	SB-3 (8-9') 460-85054-2 10/23/2014 4/1 †	SB-4 (1-2') 460-85054-15 10/23/2014 4/10/1 ‡	SB-4 (7-8') 460-85054-16 10/23/2014 4/1 †	SB-5(1-2') 460-85120-1 10/24/2014 4/1 †	SB-5(6-7') 460-85120-2 10/24/2014 4/10/1 ‡
Aluminum	**NS**	**NS**	9,020	9,790	8,200	7,310	9,410	4,400	4,820	1,940	2,690	7,060
Antimony	**NS**	**NS**	3.9 U	4.4 U	4.2 U	3.6 U	3.7 U	3.5 U	3.9 U	3.3 U	4.3 U	4.5 U
Arsenic	**13**	**16**	6.5	3.9	10.8	**15.1**	**17**	5	10.5	2.5 U	6.5	2.1 J
Barium	**350**	**400**	103	89.6	189	88.4	140	80	122	16.7 J	53.6	110
Beryllium	**7.2**	**72**	0.43	0.44 U	0.42 U	0.27 J	0.75	0.27 J	0.42	0.33 U	0.43 U	0.7
Cadmium	**2.5**	**4.3**	0.74 J	0.88 U	0.82 J	0.59 J	0.74 U	0.69 U	0.42 J	0.66 U	0.86 U	0.91 U
Calcium	**NS**	**NS**	8,680	42,500	10,600	15,500	145,000	2,760	56,600	27,000	18,000	5,130
Chromium	**30**	**180**	23.3	17.7	18	23.8	15.5	10	18.2	2.9	6.8	15
Cobalt	**NS**	**NS**	5.6 J	6 J	8.6 J	9.3	4 J	14.1	4.6 J	0.8 J	3 J	6.9 J
Copper	**50**	**270**	46.3	20.6	**63.4**	46.7	22.1	21	39.3	10.1	20.7	**66.1**
Iron	**NS**	**NS**	29,800	19,200	20,300	26,900	13,300	16,200	16,700	2,370	11,300	61,600
Lead	**63**	**400**	**173**	31.3	**192**	**123**	32.3	**163**	**110**	8.6	43.8	**94.2**
Magnesium	**NS**	**NS**	2,660	20,400	3,730	3,690	34,700	2,200	4,460	1,680	5,140	2,110
Manganese	**1,600**	**2,000**	230	1100	236	384	205	388	221	65.1	262	1,060
Mercury	**0.18**	**0.81**	**0.2**	0.019 U	**26**	0.019 U	**0.6**	0.17	0.023	**0.33**	**0.77**	0.16
Nickel	**30**	**310**	16.8	13.1	24.7	19.5	11.7	21.2	12.3	2.7 J	7.8 J	20.1
Potassium	**NS**	**NS**	1,260	1,050 J	2,590	1,740	1,520	656 J	716 J	245 J	400 J	733 J
Selenium	**3.9**	**180**	3.9 U	4.4 U	4.2 U	3.6 U	2 J	3.5 U	3.9 U	3.3 U	4.3 U	11.4 U
Silver	**2**	**180**	1.9 U	2.2 U	2.1 U	1.8 U	1.9 U	1.7 U	1.9 U	1.6 U	2.1 U	0.76 J
Sodium	**NS**	**NS**	970 U	344 J	220 J	253 J	641 J	156 J	264 J	822 U	111 J	155 J
Thallium	**NS**	**NS**	3.9 U	4.4 U	4.2 U	3.6 U	3.7 U	3.5 U	3.9 U	3.3 U	4.3 U	4.5 U
Vanadium	**NS**	**NS**	31.2	24.3	27.2	30.7	33	16.5	19	2.6 J	12.2	22.4
Zinc	**109**	**10,000**	**423**	31.2	**277**	102	48.1	96.5	**123**	53.8	40.7	**114**

Notes: † = The dilution factor for Mercury is 1.
‡ = Dilution factor varies.

Table 6
77 Commercial Street
Brooklyn, NY
Remedial Investigation Soil Analytical Results
Metals

Client ID Lab Sample ID Date Sampled Dilution mg/kg	NYSDEC Part 375 Unrestricted SCO mg/kg	NYSDEC Part 375 Restricted Residential SCO mg/kg	SB-6 (1-2') 460-84965-5 10/22/2014 4/1 †	SB-6 (10-11') 460-84965-6 10/22/2014 4/1 †	SB-7 (1-2') 460-85054-9 10/23/2014 4/1 †	SB-7 (7-8') 460-85054-10 10/23/2014 4/1 †	SB-8(1-2') 460-85120-13 10/24/2014 4/1 †	SB-8(9-10') 460-85120-14 10/24/2014 4/1 †	SB-9 (1-2') 460-85054-7 10/23/2014 4/1 †	SB-9 (8-9') 460-85054-8 10/23/2014 4/20/1 ‡	SB-10 (1-2') 460-85054-3 10/23/2014 4/50 ‡	SB-10 (7-8') 460-85054-4 10/23/2014 4/1 †
Aluminum	**NS**	**NS**	5,170	5,720	7,350	6,720	6,750	7,530	6,970	6,270	4,740	7,840
Antimony	**NS**	**NS**	4.3 U	5 U	3.4 U	3.7 U	4.2 U	4.1 U	3.9 U	4 U	3.6 U	3.8 U
Arsenic	**13**	**16**	**13.1**	4.9	11.2	5.8	12.2	3.4	6.8	**15**	12	8.2
Barium	**350**	**400**	155	71.9	163	44.3	124	44	96.3	110	74.8	44.1
Beryllium	**7.2**	**72**	0.43 U	0.5 U	0.46	0.27 J	0.51	0.37 J	0.37 J	0.33 J	0.25 J	0.37 J
Cadmium	**2.5**	**4.3**	1	0.94 J	0.68 U	0.75 U	0.85 U	0.82 U	0.78 U	0.79 U	0.73 U	0.76 U
Calcium	**NS**	**NS**	34,700	21,800	16,500	32,200	25,200	18,100	27,600	76,700	5,940	3,200
Chromium	**30**	**180**	15.2	13.7	18	13.7	22.3	14	18.6	18.5	13.2	17.4
Cobalt	**NS**	**NS**	7.7 J	7.4 J	7.3 J	4.9 J	7 J	6.2 J	6.7 J	7.8 J	5.4 J	7.4 J
Copper	**50**	**270**	47.7	18.9	**59.9**	17.2	**68.8**	18.6	**52.3**	**104**	37.3	21.4
Iron	**NS**	**NS**	15,200	17,100	23,600	14,000	19,500	14,000	20,000	12,400	16,800	21,300
Lead	**63**	**400**	**398**	**65**	**335**	42.4	**269**	36.3	**131**	**613**	**127**	40.5
Magnesium	**NS**	**NS**	6,870	2,350	3,050	4,250	3,680	11,100	4,880	10,700	1,900	2,570
Manganese	**1,600**	**2,000**	282	283	505	363	283	469	332	614	272	291
Mercury	**0.18**	**0.81**	**0.19**	0.027	0.18	0.079	**0.38**	0.03	**0.25**	0.14	**10.5**	0.044
Nickel	**30**	**310**	13.4	17.2	16.9	12	16.6	15.6	15.2	23.5	14.8	13.7
Potassium	**NS**	**NS**	916 J	1,050 J	974	1,090	902 J	940 J	1,430	806 J	748 J	1,020
Selenium	**3.9**	**180**	4.3 U	5 U	1 J	3.7 U	4.2 U	4.1 U	1.4 J	2.2 J	1.5 J	1.1 J
Silver	**2**	**180**	2.2 U	2.5 U	1.7 U	1.9 U	2.1 U	2.1 U	2 U	2 U	1.8 U	1.9 U
Sodium	**NS**	**NS**	205 J	444 J	172 J	370 J	232 J	251 J	291 J	415 J	151 J	113 J
Thallium	**NS**	**NS**	4.3 U	5 U	1.7 J	3.7 U	4.2 U	4.1 U	3.9 U	4 U	3.6 U	3.8 U
Vanadium	**NS**	**NS**	26.6	21	29	20.8	22.5	19.7	24.9	32.2	22.4	25
Zinc	**109**	**10,000**	**262**	77.4	**223**	49.3	**253**	77.6	**140**	85.3	104	52.5

Notes: † = The dilution factor for Mercury is 1.
‡ = Dilution factor varies.

Table 6
77 Commercial Street
Brooklyn, NY
Remedial Investigation Soil Analytical Results
Metals

Client ID Lab Sample ID Date Sampled Dilution mg/kg	NYSDEC Part 375 Unrestricted SCO mg/kg	NYSDEC Part 375 Restricted Residential SCO mg/kg	SB-11(1-2') 460-85120-11 10/24/2014 4/1 †	SB-11(5-6') 460-85120-12 10/24/2014 4/1 †	SB-12 (1-2') 460-84965-7 10/22/2014 4/1 †	SB-12 (11-12') 460-84965-8 10/22/2014 4/1 †	SB-13(1-2') 460-85120-9 10/24/2014 4/1 †	SB-13(3-4') 460-85120-10 10/24/2014 4/1 †	SB-14(1-2') 460-85120-7 10/24/2014 4/1 †	SB-14(6-7') 460-85120-8 10/24/2014 4/1 †	SB-15(1-2') 460-85120-5 10/24/2014 4/1 †	SB-15(5-6') 460-85120-6 10/24/2014 4/1 †
Aluminum	**NS**	**NS**	6,070	4,860	4,260	4,720	4,230	6,020	2,010	6,900	6,050	5,480
Antimony	**NS**	**NS**	4.2 U	4.7 U	4.3 U	4.6 U	4.2 U	4.8 U	4.2 U	4.2 U	4.4 U	4.1 U
Arsenic	**13**	**16**	7.7	7.4	9.1	8.5	**16.2**	6.9	**33.9**	0.88 J	6.6	**13.2**
Barium	**350**	**400**	69.7	39.7 J	64	98.7	108	**566**	61.6	103	109	108
Beryllium	**7.2**	**72**	0.38 J	0.47 U	0.43 U	0.46 U	0.45	0.48 U	0.42 U	0.37 J	0.35 J	0.32 J
Cadmium	**2.5**	**4.3**	0.83 U	0.51 J	0.72 J	1.2	0.84 U	0.95 U	0.84 U	0.85 U	1.3	0.82 U
Calcium	**NS**	**NS**	5,630	12,400	45,000	25,200	2,290	2,310	1,170	2,350	27,300	6,530
Chromium	**30**	**180**	18.1	6.4	8	**33.6**	**117**	**51.8**	11.8	25.8	16	**35.9**
Cobalt	**NS**	**NS**	5.1 J	2.8 J	2.7 J	4.9 J	6.1 J	7.2 J	2.6 J	24.8	5.1 J	7.3 J
Copper	**50**	**270**	**56.1**	27.7	23.4	**52.2**	**90.6**	**115**	30.4	24.3	46.2	**85**
Iron	**NS**	**NS**	16,200	6,580	10,100	24,800	16,500	34,000	17,500	19,200	16,600	23,900
Lead	**63**	**400**	**149**	**77.6**	**86.2**	**102**	**247**	**2,300**	**64.8**	51.8	**175**	**188**
Magnesium	**NS**	**NS**	1,830	1,880	3,880	2,230	1,020 J	2,620	353 J	7,270	5,040	1,790
Manganese	**1,600**	**2,000**	127	212	152	179	135	229	22.4	731	353	228
Mercury	**0.18**	**0.81**	**0.36**	0.13	0.065	0.093	**0.54**	**0.83**	**0.29**	0.14	**0.61**	**0.51**
Nickel	**30**	**310**	13.6	9.2 J	9.2	15.3	18.6	**36.2**	11.1	**182**	22.2	16.6
Potassium	**NS**	**NS**	925 J	503 J	682 J	899 J	499 J	887 J	357 J	1,270	821 J	773 J
Selenium	**3.9**	**180**	4.2 U	4.7 U	**4.8**	4.6 U	4.2 U	4.8 U	4.2 U	4.2 U	4.4 U	4.1 U
Silver	**2**	**180**	2.1 U	2.4 U	2.1 U	2.3 U	1.5 J	0.52 J	2.1 U	0.47 J	0.55 J	2.1 U
Sodium	**NS**	**NS**	125 J	569 J	284 J	324 J	101 J	391 J	203 J	236 J	211 J	378 J
Thallium	**NS**	**NS**	4.2 U	4.7 U	4.3 U	4.6 U	4.2 U	4.8 U	4.2 U	4.2 U	4.4 U	4.1 U
Vanadium	**NS**	**NS**	21.1	18.3	19.2	16.4	16	14.4	16.5	16.4	67.5	25.3
Zinc	**109**	**10,000**	94.9	**126**	48.3	**236**	**127**	**161**	22.4	67.7	**171**	**179**

Notes: † = The dilution factor for Mercury is 1.

‡ = Dilution factor varies.

Table 6
77 Commercial Street
Brooklyn, NY
Remedial Investigation Soil Analytical Results
Metals

Client ID Lab Sample ID Date Sampled Dilution mg/kg	NYSDEC Part 375 Unrestricted SCO mg/kg	NYSDEC Part 375 Restricted Residential SCO mg/kg	SB-16(1-2') 460-85120-3 10/24/2014 4/1 †	SB-16(7-8') 460-85120-4 10/24/2014 4/1 †	SB-17 (1-2') 460-84965-1 10/22/2014 4/1 †	SB-17 (11-12') 460-84965-2 10/22/2014 4/1 †	SB-18 (1-2') 460-84965-3 10/22/2014 4/1 †	SB-18 (12-13') 460-84965-4 10/22/2014 4/1 †	SB-19 (1-2') 460-85054-5 10/23/2014 4/1 †	SB-19 (7-8') 460-85054-6 10/23/2014 4/1 †	SB-X (7-8')* 460-85054-17 10/23/2014 4/1 †
Aluminum	**NS**	**NS**	2,510	5,610	5,580	4,950	6,120	11,500	7,280	5,060	5,780
Antimony	**NS**	**NS**	4 U	4.4 U	4.3 U	4.4 U	4.3 U	4.9 U	3.7 U	3.6 U	3.3 U
Arsenic	**13**	**16**	1.9 J	11.6	7	11.1	6.2	3.6 J	4.9	8.9	5.3
Barium	**350**	**400**	51.7	63	82.3	61.3	80.9	43.8 J	77	55.6	**2,560**
Beryllium	**7.2**	**72**	0.4 U	0.57	0.31 J	0.37 J	0.31 J	0.4 J	0.32 J	0.39	0.33 U
Cadmium	**2.5**	**4.3**	0.8 U	0.88 U	0.88	1.2	1.3	1.1	0.74 U	0.72 U	0.44 J
Calcium	**NS**	**NS**	11,200	3,180	22,000	1,250	22,600	1,530	21,700	2,310	25,400
Chromium	**30**	**180**	5.8	29.8	17.9	18.2	17.4	15.7	27.9	16.9	19.8
Cobalt	**NS**	**NS**	2 J	10.8 J	5.3 J	15.2	5.1 J	8.2 J	5.3 J	9.5	4.9 J
Copper	**50**	**270**	7.4	42.5	31.8	39.5	41	18	28.9	42.7	28.8
Iron	**NS**	**NS**	5,450	21,100	14,700	21,300	19,000	23,900	13,800	24,500	12,200
Lead	**63**	**400**	55.7	**366**	**98.8**	**79.9**	**122**	27	**135**	**66**	**641**
Magnesium	**NS**	**NS**	1,060	1,850	2,920	1,970	4,080	3,320	4,420	2,170	2,760
Manganese	**1,600**	**2,000**	125	698	186	110	261	298	243	313	194
Mercury	**0.18**	**0.81**	0.03	0.095	**0.24** ^	0.11 ^	**0.23** ^	0.021 U	0.16	0.02	**0.36**
Nickel	**30**	**310**	5.9 J	**32.9**	12.3	**37**	12.5	19	17.6	15.3	**33.9**
Potassium	**NS**	**NS**	396 J	831 J	858 J	1,100	1,200	945 J	876 J	819 J	1,000
Selenium	**3.9**	**180**	4 U	4.4 U	4.3 U	4.4 U	4.3 U	4.9 U	3.7 U	1.1 J	3.3 U
Silver	**2**	**180**	2 U	0.48 J	2.1 U	2.2 U	2.1 U	2.4 U	1.8 U	1.8 U	1.6 U
Sodium	**NS**	**NS**	998 U	648 J	309 J	1700	301 J	372 J	346 J	599 J	105 J
Thallium	**NS**	**NS**	4 U	4.4 U	4.3 U	4.4 U	4.3 U	4.9 U	3.7 U	3.6	3.3 U
Vanadium	**NS**	**NS**	10.8	32	17.1	30.1	25.7	20.6	28.1	26	17.2
Zinc	**109**	**10,000**	18.2	**134**	72.7	66.8	**119**	50	68.5	**116**	**504**

Notes: † **=** The dilution factor for Mercury is 1.
‡ **=** Dilution factor varies.

Table 7
77 Commercial Street
Brooklyn, NY
Remedial Investigation Soil Analytical Results
Polychlorinated Biphenyls & Pesticides

Client ID Lab Sample ID Date Sampled Polychlorinated Biphenyls - µg/Kg	NYSDEC Part 375 Unrestricted SCO µg/Kg	NYSDEC Part 375 Restricted Residential SCO µg/Kg	SB-1 (1-2') 460-85054-11 10/23/2014	SB-1 (8-9') 460-85054-12 10/23/2014	SB-2 (1-2') 460-85054-13 10/23/2014	SB-2 (6-7') 460-85054-14 10/23/2014	SB-3 (1-2') 460-85054-1 10/23/2014	SB-3 (8-9') 460-85054-2 10/23/2014	SB-4 (1-2') 460-85054-15 10/23/2014	SB-4 (7-8') 460-85054-16 10/23/2014	SB-5(1-2') 460-85120-1 10/24/2014	SB-5(6-7') 460-85120-2 10/24/2014
Aroclor 1016	**NS**	**NS**	75 U	80 U	80 U	75 U	75 U	74 U	83 U	78 U	74 U	77 U
Aroclor 1221	**NS**	**NS**	75 U	80 U	80 U	75 U	75 U	74 U	83 U	78 U	74 U	77 U
Aroclor 1232	**NS**	**NS**	75 U	80 U	80 U	75 U	75 U	74 U	83 U	78 U	74 U	77 U
Aroclor 1242	**NS**	**NS**	75 U	80 U	80 U	75 U	75 U	74 U	83 U	78 U	74 U	77 U
Aroclor 1248	**NS**	**NS**	75 U	80 U	80 U	75 U	75 U	74 U	83 U	78 U	74 U	77 U
Aroclor 1254	**NS**	**NS**	75 U	80 U	80 U	75 U	75 U	74 U	83 U	78 U	74 U	77 U
Aroclor 1260	**NS**	**NS**	75 U	80 U	80 U	75 U	75 U	74 U	83 U	78 U	74 U	77 U
Aroclor 1262	**NS**	**NS**	75 U	80 U	80 U	75 U	75 U	74 U	83 U	78 U	57 J	77 U
Aroclor 1268	**NS**	**NS**	75 U	80 U	80 U	75 U	75 U	74 U	83 U	78 U	74 U	77 U
Total PCBs	**100**	**1,000**	ND	ND	ND	ND	ND	ND	ND	ND	57 J	ND

Pesticides - µg/Kg

4,4'-DDD	**3.3**	**13,000**	7.5 U	8 U	8 U	7.5 U	7.5 U	7.4 U	8.3 U	7.7 U	7.4 U	7.7 U
4,4'-DDE	**3.3**	**8,900**	7.5 U	8 U	8 U	7.5 U	7.5 U	7.4 U	8.3 U	7.7 U	7.4 U	7.7 U
4,4'-DDT	**3.3**	**7,900**	7.5 U	8 U	8 U	7.5 U	7.5 U	7.4 U	8.3 U	7.7 U	7.4 U	7.7 U
Aldrin	**5**	**97**	7.5 U	8 U	8 U	7.5 U	7.5 U	7.4 U	8.3 U	7.7 U	7.4 U	7.7 U
alpha-BHC	**20**	**480**	2.2 U	2.4 U	2.4 U	2.2 U	2.2 U	2.2 U	2.5 U	2.3 U	2.2 U	2.3 U
beta-BHC	**36**	**360**	2.2 U	2.4 U	2.4 U	2.2 U	2.2 U	2.2 U	2.5 U	2.3 U	2.2 U	2.3 U
Chlordane (technical)	**94**	**4,200**	75 U	80 U	80 U	75 U	75 U	74 U	83 U	77 U	74 U	77 U
delta-BHC	**40**	**100,000**	2.2 U	2.4 U	2.4 U	2.2 U	2.2 U	2.2 U	2.5 U	2.3 U	2.2 U	2.3 U
Dieldrin	**5**	**200**	2.2 U	2.4 U	2.4 U	2.2 U	2.2 U	2.2 U	2.5 U	2.3 U	2.2 U	2.3 U
Endosulfan I	**2,400**	**24,000**	7.5 U	8 U	8 U	7.5 U	7.5 U	7.4 U	8.3 U	7.7 U	7.4 U	7.7 U
Endosulfan II	**2,400**	**24,000**	7.5 U	8 U	8 U	7.5 U	7.5 U	7.4 U	8.3 U	7.7 U	7.4 U	7.7 U
Endosulfan sulfate	**2,400**	**24,000**	7.5 U	8 U	8 U	7.5 U	7.5 U	7.4 U	8.3 U	7.7 U	7.4 U	7.7 U
Endrin	**14**	**11,000**	7.5 U	8 U	8 U	7.5 U	7.5 U	7.4 U	8.3 U	7.7 U	7.4 U	7.7 U
Endrin aldehyde	**NS**	**NS**	7.5 U	8 U	8 U	7.5 U	7.5 U	7.4 U	8.3 U	7.7 U	7.4 U	7.7 U
Endrin ketone	**NS**	**NS**	7.5 U	8 U	8 U	7.5 U	7.5 U	7.4 U	8.3 U	7.7 U	7.4 U	7.7 U
gamma-BHC (Lindane)	**100**	**1,300**	2.2 U	2.4 U	2.4 U	2.2 U	2.2 U	2.2 U	2.5 U	2.3 U	2.2 U	2.3 U
Heptachlor	**42**	**2,100**	7.5 U	8 U	8 U	7.5 U	7.5 U	7.4 U	8.3 U	7.7 U	7.4 U	7.7 U
Heptachlor epoxide	**NS**	**NS**	7.5 U	8 U	8 U	7.5 U	7.5 U	7.4 U	8.3 U	7.7 U	7.4 U	7.7 U
Methoxychlor	**NS**	**NS**	7.5 U	8 U	8 U	7.5 U	7.5 U	7.4 U	8.3 U	7.7 U	7.4 U	7.7 U
Toxaphene	**NS**	**NS**	75 U	80 U	80 U	75 U	75 U	74 U	83 U	77 U	74 U	77 U

Table 7
77 Commercial Street
Brooklyn, NY
Remedial Investigation Soil Analytical Results
Polychlorinated Biphenyls & Pesticides

Client ID Lab Sample ID Date Sampled Polychlorinated Biphenyls - µg/Kg	NYSDEC Part 375 Unrestricted SCO µg/Kg	NYSDEC Part 375 Restricted Residential SCO µg/Kg	SB-6 (1-2') 460-84965-5 10/22/2014	SB-6 (10-11') 460-84965-6 10/22/2014	SB-7 (1-2') 460-85054-9 10/23/2014	SB-7 (7-8') 460-85054-10 10/23/2014	SB-8(1-2') 460-85120-13 10/24/2014	SB-8(9-10') 460-85120-14 10/24/2014	SB-9 (1-2') 460-85054-7 10/23/2014	SB-9 (8-9') 460-85054-8 10/23/2014	SB-10 (1-2') 460-85054-3 10/23/2014	SB-10 (7-8') 460-85054-4 10/23/2014
Aroclor 1016	**NS**	**NS**	75 U	85 U	74 U	78 U	79 U	80 U	72 U	83 U	74 U	80 U
Aroclor 1221	**NS**	**NS**	75 U	85 U	74 U	78 U	79 U	80 U	72 U	83 U	74 U	80 U
Aroclor 1232	**NS**	**NS**	75 U	85 U	74 U	78 U	79 U	80 U	72 U	83 U	74 U	80 U
Aroclor 1242	**NS**	**NS**	75 U	85 U	74 U	78 U	79 U	80 U	72 U	83 U	74 U	80 U
Aroclor 1248	**NS**	**NS**	75 U	85 U	74 U	78 U	79 U	80 U	72 U	83 U	74 U	80 U
Aroclor 1254	**NS**	**NS**	75 U	85 U	74 U	78 U	79 U	80 U	72 U	83 U	74 U	80 U
Aroclor 1260	**NS**	**NS**	75 U	85 U	74 U	78 U	79 U *	80 U *	72 U	83 U	74 U	80 U
Aroclor 1262	**NS**	**NS**	75 U	85 U	69 J	78 U	79 U	80 U	1,000	83 U	74 U	80 U
Aroclor 1268	**NS**	**NS**	75 U	85 U	74 U	78 U	79 U	80 U	72 U	83 U	74 U	80 U
Total PCBs	**100**	**1,000**	ND	ND	69 J	ND	ND	ND	**1,000**	ND	ND	ND

Pesticides - µg/Kg

4,4'-DDD	**3.3**	**13,000**	7.5 U	8.5 U	7.4 U	7.8 U	7.9 U	8.1 U	7.2 U	8.3 U	7.4 U	8 U
4,4'-DDE	**3.3**	**8,900**	7.5 U	8.5 U	7.4 U	7.8 U	7.9 U	8.1 U	7.2 U	8.3 U	7.4 U	8 U
4,4'-DDT	**3.3**	**7,900**	7.5 U	8.5 U	7.4 U	7.8 U	7.9 U	8.1 U	7.2 U	8.3 U	7.4 U	8 U
Aldrin	**5**	**97**	7.5 U	8.5 U	7.4 U	7.8 U	7.9 U	8.1 U	7.2 U	8.3 U	7.4 U	8 U
alpha-BHC	**20**	**480**	2.2 U	2.5 U	2.2 U	2.3 U	2.4 U	2.4 U	2.2 U	2.5 U	2.2 U	2.4 U
beta-BHC	**36**	**360**	2.2 U	2.5 U	2.2 U	2.3 U	2.4 U	2.4 U	2.2 U	2.5 U	2.2 U	2.4 U
Chlordane (technical)	**94**	**4,200**	75 U	85 U	74 U	78 U	79 U	81 U	72 U	83 U	74 U	80 U
delta-BHC	**40**	**100,000**	2.2 U	2.5 U	2.2 U	2.3 U	2.4 U	2.4 U	2.2 U	2.5 U	2.2 U	2.4 U
Dieldrin	**5**	**200**	2.2 U	2.5 U	2.2 U	2.3 U	2.4 U	2.4 U	2.2 U	2.5 U	2.2 U	2.4 U
Endosulfan I	**2,400**	**24,000**	7.5 U	8.5 U	7.4 U	7.8 U	7.9 U	8.1 U	7.2 U	8.3 U	7.4 U	8 U
Endosulfan II	**2,400**	**24,000**	7.5 U	8.5 U	7.4 U	7.8 U	7.9 U	8.1 U	7.2 U	8.3 U	7.4 U	8 U
Endosulfan sulfate	**2,400**	**24,000**	7.5 U	8.5 U	7.4 U	7.8 U	7.9 U	8.1 U	7.2 U	8.3 U	7.4 U	8 U
Endrin	**14**	**11,000**	7.5 U	8.5 U	7.4 U	7.8 U	7.9 U	8.1 U	7.2 U	8.3 U	7.4 U	8 U
Endrin aldehyde	**NS**	**NS**	7.5 U	8.5 U	7.4 U	7.8 U	7.9 U	8.1 U	7.2 U	8.3 U	7.4 U	8 U
Endrin ketone	**NS**	**NS**	7.5 U	8.5 U	7.4 U	7.8 U	7.9 U	8.1 U	7.2 U	8.3 U	7.4 U	8 U
gamma-BHC (Lindane)	**100**	**1,300**	2.2 U	2.5 U	2.2 U	2.3 U	2.4 U	2.4 U	2.2 U	2.5 U	2.2 U	2.4 U
Heptachlor	**42**	**2,100**	7.5 U	8.5 U	7.4 U	7.8 U	7.9 U	8.1 U	7.2 U	8.3 U	7.4 U	8 U
Heptachlor epoxide	**NS**	**NS**	7.5 U	8.5 U	7.4 U	7.8 U	7.9 U	8.1 U	7.2 U	8.3 U	7.4 U	8 U
Methoxychlor	**NS**	**NS**	7.5 U	8.5 U	7.4 U	7.8 U	7.9 U	8.1 U	7.2 U	8.3 U	7.4 U	8 U
Toxaphene	**NS**	**NS**	75 U	85 U	74 U	78 U	79 U	81 U	72 U	83 U	74 U	80 U

Table 7
77 Commercial Street
Brooklyn, NY
Remedial Investigation Soil Analytical Results
Polychlorinated Biphenyls & Pesticides

Client ID Lab Sample ID Date Sampled Polychlorinated Biphenyls - µg/Kg	NYSDEC Part 375 Unrestricted SCO µg/Kg	NYSDEC Part 375 Restricted Residential SCO µg/Kg	SB-11(1-2') 460-85120-11 10/24/2014	SB-11(5-6') 460-85120-12 10/24/2014	SB-12 (1-2') 460-84965-7 10/22/2014	SB-12 (11-12') 460-84965-8 10/22/2014	SB-13(1-2') 460-85120-9 10/24/2014	SB-13(3-4') 460-85120-10 10/24/2014	SB-14(1-2') 460-85120-7 10/24/2014	SB-14(6-7') 460-85120-8 10/24/2014	SB-15(1-2') 460-85120-5 10/24/2014	SB-15(5-6') 460-85120-6 10/24/2014
Aroclor 1016	**NS**	**NS**	77 U	81 U	72 U	77 U	75 U	90 U	78 U	74 U	82 U	77 U
Aroclor 1221	**NS**	**NS**	77 U	81 U	72 U	77 U	75 U	90 U	78 U	74 U	82 U	77 U
Aroclor 1232	**NS**	**NS**	77 U	81 U	72 U	77 U	75 U	90 U	78 U	74 U	82 U	77 U
Aroclor 1242	**NS**	**NS**	77 U	81 U	72 U	77 U	75 U	90 U	78 U	74 U	82 U	77 U
Aroclor 1248	**NS**	**NS**	77 U	81 U	72 U	77 U	75 U	90 U	78 U	74 U	82 U	77 U
Aroclor 1254	**NS**	**NS**	77 U	81 U	72 U	77 U	75 U	90 U	78 U	74 U	82 U	77 U
Aroclor 1260	**NS**	**NS**	77 U *	81 U *	72 U	77 U	75 U	90 U	78 U	74 U	82 U	77 U
Aroclor 1262	**NS**	**NS**	77 U	81 U	72 U	77 U	75 U	90 U	78 U	74 U	82 U	77 U
Aroclor 1268	**NS**	**NS**	77 U	81 U	72 U	77 U	75 U	90 U	78 U	74 U	82 U	77 U
Total PCBs	**100**	**1,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Pesticides - µg/Kg

4,4'-DDD	**3.3**	**13,000**	7.7 U	8.1 U	7.2 U	7.7 U	7.5 U *	9 U *	7.8 U	7.4 U	8.2 U *	7.7 U *
4,4'-DDE	**3.3**	**8,900**	7.7 U	8.1 U	7.2 U	7.7 U	7.5 U	9 U	7.8 U	7.4 U	8.2 U	7.7 U
4,4'-DDT	**3.3**	**7,900**	7.7 U	8.1 U	7.2 U	7.7 U	7.5 U	9 U	7.8 U	7.4 U	8.2 U	7.7 U
Aldrin	**5**	**97**	7.7 U	8.1 U	7.2 U	7.7 U	7.5 U	9 U	7.8 U	7.4 U	8.2 U	7.7 U
alpha-BHC	**20**	**480**	2.3 U	2.4 U	2.1 U	2.3 U	2.2 U	2.7 U	2.3 U	2.2 U	2.5 U	2.3 U
beta-BHC	**36**	**360**	2.3 U	2.4 U	2.1 U	2.3 U	2.2 U	2.7 U	2.3 U	2.2 U	2.5 U	2.3 U
Chlordane (technical)	**94**	**4,200**	77 U	81 U	72 U	77 U	75 U	90 U	78 U	74 U	82 U	77 U
delta-BHC	**40**	**100,000**	2.3 U	2.4 U	2.1 U	2.3 U	2.2 U	2.7 U	2.3 U	2.2 U	2.5 U	2.3 U
Dieldrin	**5**	**200**	2.3 U	2.4 U	2.1 U	2.3 U	2.2 U	2.7 U	2.3 U	2.2 U	2.5 U	2.3 U
Endosulfan I	**2,400**	**24,000**	7.7 U	8.1 U	7.2 U	7.7 U	7.5 U	9 U	7.8 U	7.4 U	8.2 U	7.7 U
Endosulfan II	**2,400**	**24,000**	7.7 U	8.1 U	7.2 U	7.7 U	7.5 U	9 U	7.8 U	7.4 U	8.2 U	7.7 U
Endosulfan sulfate	**2,400**	**24,000**	7.7 U	8.1 U	7.2 U	7.7 U	7.5 U	9 U	7.8 U	7.4 U	8.2 U	7.7 U
Endrin	**14**	**11,000**	7.7 U	8.1 U	7.2 U	7.7 U	7.5 U	9 U	7.8 U	7.4 U	8.2 U	7.7 U
Endrin aldehyde	**NS**	**NS**	7.7 U	8.1 U	7.2 U	7.7 U	7.5 U	9 U	7.8 U	7.4 U	8.2 U	7.7 U
Endrin ketone	**NS**	**NS**	7.7 U	8.1 U	7.2 U	7.7 U	7.5 U	9 U	7.8 U	7.4 U	8.2 U	7.7 U
gamma-BHC (Lindane)	**100**	**1,300**	2.3 U	2.4 U	2.1 U	2.3 U	2.2 U	2.7 U	2.3 U	2.2 U	2.5 U	2.3 U
Heptachlor	**42**	**2,100**	7.7 U	8.1 U	7.2 U	7.7 U	7.5 U	9 U	7.8 U	7.4 U	8.2 U	7.7 U
Heptachlor epoxide	**NS**	**NS**	7.7 U	8.1 U	7.2 U	7.7 U	7.5 U	9 U	7.8 U	7.4 U	8.2 U	7.7 U
Methoxychlor	**NS**	**NS**	7.7 U	8.1 U	7.2 U	7.7 U	7.5 U	9 U	7.8 U	7.4 U	8.2 U	7.7 U
Toxaphene	**NS**	**NS**	77 U	81 U	72 U	77 U	75 U	90 U	78 U	74 U	82 U	77 U

Table 7
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Remedial Investigation Soil Analytical Results
Polychlorinated Biphenyls & Pesticides

Client ID Lab Sample ID Date Sampled Polychlorinated Biphenyls - µg/Kg	NYSDEC Part 375 Unrestricted SCO µg/Kg	NYSDEC Part 375 Restricted Residential SCO µg/Kg	SB-16(1-2') 460-85120-3 10/24/2014	SB-16(7-8') 460-85120-4 10/24/2014	SB-17 (1-2') 460-84965-1 10/22/2014	SB-17 (11-12') 460-84965-2 10/22/2014	SB-18 (1-2') 460-84965-3 10/22/2014	SB-18 (12-13') 460-84965-4 10/22/2014	SB-19 (1-2') 460-85054-5 10/23/2014	SB-19 (7-8') 460-85054-6 10/23/2014
Aroclor 1016	**NS**	**NS**	71 U	77 U	76 U	81 U	76 U	92 U	71 U	77 U
Aroclor 1221	**NS**	**NS**	71 U	77 U	76 U	81 U	76 U	92 U	71 U	77 U
Aroclor 1232	**NS**	**NS**	71 U	77 U	76 U	81 U	76 U	92 U	71 U	77 U
Aroclor 1242	**NS**	**NS**	71 U	77 U	76 U	81 U	76 U	92 U	71 U	77 U
Aroclor 1248	**NS**	**NS**	71 U	77 U	76 U	81 U	76 U	92 U	71 U	77 U
Aroclor 1254	**NS**	**NS**	71 U	77 U	76 U	81 U	76 U	92 U	71 U	77 U
Aroclor 1260	**NS**	**NS**	71 U	77 U	76 U	81 U	76 U	92 U	71 U	77 U
Aroclor 1262	**NS**	**NS**	71 U	77 U	76 U	81 U	76 U	92 U	71 U	77 U
Aroclor 1268	**NS**	**NS**	71 U	77 U	76 U	81 U	76 U	92 U	71 U	77 U
Total PCBs	**100**	**1,000**	ND	ND	ND	ND	ND	ND	ND	ND

Pesticides - µg/Kg

4,4'-DDD	**3.3**	**13,000**	7.1 U *	7.7 U *	7.6 U	8.1 U	7.6 U	9.2 U	7.1 U	7.7 U
4,4'-DDE	**3.3**	**8,900**	7.1 U	7.7 U	7.6 U	8.1 U	7.6 U	9.2 U	7.1 U	7.7 U
4,4'-DDT	**3.3**	**7,900**	7.1 U	7.7 U	7.6 U	8.1 U	7.6 U	9.2 U	7.1 U	7.7 U
Aldrin	**5**	**97**	7.1 U	7.7 U	7.6 U	8.1 U	7.6 U	9.2 U	7.1 U	7.7 U
alpha-BHC	**20**	**480**	2.1 U	2.3 U	2.3 U	2.4 U	2.3 U	2.8 U	2.1 U	2.3 U
beta-BHC	**36**	**360**	2.1 U	2.3 U	2.3 U	2.4 U	2.3 U	2.8 U	2.1 U	2.3 U
Chlordane (technical)	**94**	**4,200**	71 U	77 U	76 U	81 U	76 U	92 U	71 U	77 U
delta-BHC	**40**	**100,000**	2.1 U	2.3 U	2.3 U	2.4 U	2.3 U	2.8 U	2.1 U	2.3 U
Dieldrin	**5**	**200**	2.1 U	2.3 U	2.3 U	2.4 U	2.3 U	2.8 U	2.1 U	2.3 U
Endosulfan I	**2,400**	**24,000**	7.1 U	7.7 U	7.6 U	8.1 U	7.6 U	9.2 U	7.1 U	7.7 U
Endosulfan II	**2,400**	**24,000**	7.1 U	7.7 U	7.6 U	8.1 U	7.6 U	9.2 U	7.1 U	7.7 U
Endosulfan sulfate	**2,400**	**24,000**	7.1 U	7.7 U	7.6 U	8.1 U	7.6 U	9.2 U	7.1 U	7.7 U
Endrin	**14**	**11,000**	7.1 U	7.7 U	7.6 U	8.1 U	7.6 U	9.2 U	7.1 U	7.7 U
Endrin aldehyde	**NS**	**NS**	7.1 U	7.7 U	7.6 U	8.1 U	7.6 U	9.2 U	7.1 U	7.7 U
Endrin ketone	**NS**	**NS**	7.1 U	7.7 U	7.6 U	8.1 U	7.6 U	9.2 U	7.1 U	7.7 U
gamma-BHC (Lindane)	**100**	**1,300**	2.1 U	2.3 U	2.3 U	2.4 U	2.3 U	2.8 U	2.1 U	2.3 U
Heptachlor	**42**	**2,100**	7.1 U	7.7 U	7.6 U	8.1 U	7.6 U	9.2 U	7.1 U	7.7 U
Heptachlor epoxide	**NS**	**NS**	7.1 U	7.7 U	7.6 U	8.1 U	7.6 U	9.2 U	7.1 U	7.7 U
Methoxychlor	**NS**	**NS**	7.1 U	7.7 U	7.6 U	8.1 U	7.6 U	9.2 U	7.1 U	7.7 U
Toxaphene	**NS**	**NS**	71 U	77 U	76 U	81 U	76 U	92 U	71 U	77 U

Table 8
77 Commercial Street
Brooklyn, NY
Remedial Investigation Groundwater Analytical Results
Volatile Organic Compounds

Client ID Lab Sample ID Date Sampled µg/L	NYSDEC Class GA Ambient Standard µg/L	TW-1 460-85134-3 10/24/2014	TW-2 460-85134-2 10/24/2014	TW-3 460-85074-2 10/23/2014	TW-4 460-85134-1 10/24/2014	TW-5 460-85134-4 10/24/2014
1,1,1-Trichloroethane	5	1 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	5	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloro-1,2,2-trifluoroethane	5	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	1	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	5	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	5	1 U	1 U	1 U	1 U	1 U
1,2,3-Trichlorobenzene	5	1 U	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	5	1 U	1 U	1 U	1 U	1 U
1,2-Dibromo-3-Chloropropane	0.04	1 U	1 U	1 U	1 U	1 U
1,2-Dichlorobenzene	3	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	0.6	1 U	1 U	1 U	1 U	1 U
1,2-Dichloropropane	1	1 U	1 U	1 U	1 U	1 U
1,3-Dichlorobenzene	3	1 U	1 U	1 U	1 U	1 U
1,4-Dichlorobenzene	3	1 U	1 U	1 U	1 U	1 U
1,4-Dioxane	NS	50 U	2,200	50 U	50 U	50 U
2-Butanone (MEK)	50	5 U	5 U	5 U	5 U	5 U
2-Hexanone	50	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone (MIBK)	NS	2 J	5 U	5 U	5 U	5 U
Acetone	50	5 U	5 U	5 U	5 U	5 U
Benzene	1	1 U	1 U	1 U	1 U	1 U
Bromoform	50	1 U	1 U	1 U	1 U	1 U
Bromomethane	5	1 U *	1 U	1 U	1 U	1 U
Carbon disulfide	60	1 U	1 U	1 U	1 U	1 U
Carbon tetrachloride	5	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	5	1 U	1 U	1 U	1 U	1 U
Chlorobromomethane	NS	1 U	1 U	1 U	1 U	1 U
Chlorodibromomethane	50	1 U	1 U	1 U	1 U	1 U
Chloroethane	5	1 U	1 U	1 U	1 U	1 U
Chloroform	7	1 U	1 U	1 U	1 U	1 U
Chloromethane	5	1 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	5	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	0.4	1 U	1 U	1 U	1 U	1 U
Cyclohexane	NS	1 U	1 U	1 U	1 U	1 U
Dichlorobromomethane	50	1 U	1 U	1 U	1 U	1 U
Dichlorodifluoromethane	5	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	5	1 U	1 U	1 U	1 U	1 U
Ethylene Dibromide	0.0006	1 U	1 U	1 U	1 U	1 U
Isopropylbenzene	5	1 U	1 U	1 U	1 U	1 U
Methyl acetate	NS	5 U	5 U	5 U	5 U	5 U
Methyl tert-butyl ether	10	1 U	1 U	1 U	1 U	1 U
Methylcyclohexane	NS	1 U	1 U	1 U	1 U	1 U
Methylene Chloride	5	1 U	1 U	1 U	1 U	1 U
m-Xylene & p-Xylene	NS	1 U	1 U	1 U	1 U	1 U
o-Xylene	NS	0.22 J	1 U	1 U	1 U	1 U
Styrene	5	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	5	1 U	1 U	1 U	1 U	1 U
Toluene	5	1 U	1 U	1 U	1 U	1 U
trans-1,2-Dichloroethene	5	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	0.4	1 U	1 U	1 U	1 U	1 U
Trichloroethene	5	1 U	1 U	1 U	1 U	1 U
Trichlorofluoromethane	5	1 U	1 U	1 U	1 U	1 U
Vinyl chloride	2	1 U	1 U	1 U	1 U	1 U
Total VOCs	NS	2.22	2,200	ND	ND	ND

Table 8
77 Commercial Street
Brooklyn, NY
Remedial Investigation Groundwater Analytical Results
Volatile Organic Compounds

Client ID Lab Sample ID Date Sampled µg/L	NYSDEC Class GA Ambient Standard µg/L	TW-6 460-85074-1 10/23/2014	TB 460-84965-9 10/22/2014	TB2 460-85120-15 10/24/2014	TB3 460-85134-5 10/24/2014	FB 460-85120-16 10/24/2014
1,1,1-Trichloroethane	5	1 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	5	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloro-1,2,2-trifluoroethane	5	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	1	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	5	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	5	1 U	1 U	1 U	1 U	1 U
1,2,3-Trichlorobenzene	5	1 U	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	5	1 U	1 U	1 U	1 U	1 U
1,2-Dibromo-3-Chloropropane	0.04	1 U	1 U	1 U	1 U	1 U
1,2-Dichlorobenzene	3	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	0.6	1 U	1 U	1 U	1 U	1 U
1,2-Dichloropropane	1	1 U	1 U	1 U	1 U	1 U
1,3-Dichlorobenzene	3	1 U	1 U	1 U	1 U	1 U
1,4-Dichlorobenzene	3	1 U	1 U	1 U	1 U	1 U
1,4-Dioxane	NS	50 U	50 U	50 U	50 U	50 U
2-Butanone (MEK)	50	5 U	5 U	5 U	5 U	5 U
2-Hexanone	50	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone (MIBK)	NS	5 U	5 U	5 U	5 U	5 U
Acetone	50	5 U	5 U	5 U	5 U	5 U
Benzene	1	1 U	1 U	1 U	1 U	1 U
Bromoform	50	1 U	1 U	1 U	1 U	1 U
Bromomethane	5	1 U	1 U	1 U	1 U	1 U
Carbon disulfide	60	1 U	1 U	1 U	1 U	1 U
Carbon tetrachloride	5	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	5	1 U	1 U	1 U	1 U	1 U
Chlorobromomethane	NS	1 U	1 U	1 U	1 U	1 U
Chlorodibromomethane	50	1 U	1 U	1 U	1 U	1 U
Chloroethane	5	1 U	1 U	1 U	1 U	1 U
Chloroform	7	1 U	1 U	1 U	1 U	0.69 J
Chloromethane	5	1 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	5	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	0.4	1 U	1 U	1 U	1 U	1 U
Cyclohexane	NS	1 U	1 U	1 U	1 U	1 U
Dichlorobromomethane	50	1 U	1 U	1 U	1 U	1 U
Dichlorodifluoromethane	5	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	5	1 U	1 U	1 U	1 U	1 U
Ethylene Dibromide	0.0006	1 U	1 U	1 U	1 U	1 U
Isopropylbenzene	5	1 U	1 U	1 U	1 U	1 U
Methyl acetate	NS	5 U	5 U	5 U	5 U	5 U
Methyl tert-butyl ether	10	1 U	1 U	1 U	1 U	1 U
Methylcyclohexane	NS	1 U	1 U	1 U	1 U	1 U
Methylene Chloride	5	1 U	1 U	1 U	1 U	1 U
m-Xylene & p-Xylene	NS	1 U	1 U	1 U	1 U	1 U
o-Xylene	NS	1 U	1 U	1 U	1 U	1 U
Styrene	5	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	5	1 U	1 U	1 U	1 U	1 U
Toluene	5	1 U	1 U	1 U	1 U	1 U
trans-1,2-Dichloroethene	5	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	0.4	1 U	1 U	1 U	1 U	1 U
Trichloroethene	5	1 U	1 U	1 U	1 U	1 U
Trichlorofluoromethane	5	1 U	1 U	1 U	1 U	1 U
Vinyl chloride	2	1 U	1 U	1 U	1 U	1 U
Total VOCs	NS	ND	ND	ND	ND	0.69

Table 9
77 Commercial Street
Brooklyn, NY
Remedial Investigation Groundwater Analytical Results
Semivolatile Organic Compounds

Client ID Lab Sample ID Date Sampled µg/L	NYSDEC Class GA Ambient Standard µg/L	TW-1 460-85239-1 10/28/2014	TW-2 460-85134-2 10/24/2014	TW-3 460-85074-2 10/23/2014	TW-4 460-85134-1 10/24/2014	TW-5 460-85171-1 10/24/2014	TW-6 460-85074-1 10/23/2014	FB 460-85120-16 10/24/2014
1,1'-Biphenyl	5	12 U	11 U	12 U	11 U	12 U	12 U	10 U
1,2,4,5-Tetrachlorobenzene	5	12 U	11 U	12 U	11 U	12 U	12 U	10 U
2,2'-oxybis[1-chloropropane]	5	12 U *	11 U *	12 U	11 U *	12 U *	12 U	10 U
2,3,4,6-Tetrachlorophenol	NS	12 U	11 U	12 U	11 U	12 U	12 U	10 U
2,4,5-Trichlorophenol	NS	12 U	11 U	12 U	11 U	12 U	12 U	10 U
2,4,6-Trichlorophenol	NS	12 U	11 U	12 U	11 U	12 U	12 U	10 U
2,4-Dichlorophenol	5	12 U	11 U	12 U	11 U	12 U	12 U	10 U
2,4-Dimethylphenol	50	12 U	11 U	12 U	11 U	12 U	12 U	10 U
2,4-Dinitrophenol	10	36 U	34 U	36 U	34 U	36 U	36 U	30 U
2,4-Dinitrotoluene	5	2.4 U	2.3 U	2.4 U	2.3 U	2.4 U	2.4 U	2 U
2,6-Dinitrotoluene	5	2.4 U	2.3 U	2.4 U	2.3 U	2.4 U	2.4 U	2 U
2-Chloronaphthalene	10	12 U	11 U	12 U	11 U	12 U	12 U	10 U
2-Chlorophenol	NS	12 U	11 U	12 U	11 U	12 U	12 U	10 U
2-Methylnaphthalene	NS	12 U	11 U	12 U	11 U	12 U	12 U	10 U
2-Methylphenol	NS	12 U	11 U	12 U	11 U	12 U	12 U	10 U
2-Nitroaniline	5	24 U	23 U	24 U	23 U	24 U	24 U	20 U
2-Nitrophenol	NS	12 U	11 U	12 U	11 U	12 U	12 U	10 U
3,3'-Dichlorobenzidine	5	24 U	23 U	24 U	23 U	24 U	24 U	20 U
3-Nitroaniline	5	24 U	23 U	24 U	23 U	24 U	24 U	20 U
4,6-Dinitro-2-methylphenol	NS	36 U	34 U	36 U	34 U	36 U	36 U	30 U
4-Bromophenyl phenyl ether	NS	12 U	11 U	12 U	11 U	12 U	12 U	10 U
4-Chloro-3-methylphenol	NS	12 U	11 U	12 U	11 U	12 U	12 U	10 U
4-Chloroaniline	5	1.2 U	1.1 U	1.2 U	1.1 U	1.2 U	1.2 U	1 U
4-Chlorophenyl phenyl ether	NS	12 U	11 U	12 U	11 U	12 U	12 U	10 U
4-Methylphenol	NS	12 U	11 U	12 U	11 U	12 U	12 U	10 U
4-Nitroaniline	5	24 U	23 U	24 U	23 U	24 U	24 U	20 U
4-Nitrophenol	NS	36 U	34 U	36 U	34 U	36 U	36 U	30 U
Acenaphthene	20	12 U	11 U	12 U	11 U	12 U	12 U	10 U
Acenaphthylene	NS	12 U	11 U	12 U	11 U	12 U	12 U	10 U
Acetophenone	NS	12 U	11 U	12 U	11 U	12 U	12 U	10 U
Anthracene	50	12 U	11 U	12 U	11 U	12 U	12 U	10 U
Atrazine	7.5	12 U	11 U	12 U	11 U	12 U	12 U	10 U
Benzaldehyde	NS	12 U	11 U	12 U	11 U	12 U	12 U	10 U
Benzo[a]anthracene	0.002	1.2 U	1.1 U	1.2 U	1.1 U	1.2 U	1.2 U	1 U
Benzo[a]pyrene	ND	1.2 U *	1.1 U	1.2 U	1.1 U	0.52 J	1.2 U	1 U
Benzo[b]fluoranthene	0.002	1.2 U	1.1 U	1.2 U	1.1 U	**0.55** J	1.2 U	1 U
Benzo[g,h,i]perylene	NS	12 U	11 U	12 U	11 U	12 U	12 U	10 U
Benzo[k]fluoranthene	0.002	1.2 U	1.1 U	1.2 U	1.1 U	**0.24** J	1.2 U	1 U
Bis(2-chloroethoxy)methane	5	12 U	11 U	12 U	11 U	12 U	12 U	10 U
Bis(2-chloroethyl)ether	1	1.2 U	1.1 U	1.2 U	1.1 U	1.2 U	1.2 U	1 U
Bis(2-ethylhexyl) phthalate	5	4.1 J	3.5 J	12 U	3.5 J	4.1 J	12 U	10 U
Butyl benzyl phthalate	50	12 U	11 U	12 U	11 U	12 U	12 U	10 U
Caprolactam	NS	12 U	11 U	12 U	11 U	12 U	12 U	10 U
Carbazole	NS	12 U	11 U	12 U	11 U	12 U	12 U	10 U
Chrysene	0.002	12 U	11 U	12 U	11 U	12 U	12 U	10 U
Dibenz(a,h)anthracene	NS	1.2 U	1.1 U	1.2 U	1.1 U	1.2 U	1.2 U	1 U
Dibenzofuran	NS	12 U	11 U	12 U	11 U	12 U	12 U	10 U
Diethyl phthalate	50	12 U	11 U	12 U	11 U	12 U	12 U	10 U
Dimethyl phthalate	50	12 U	11 U	12 U	11 U	12 U	12 U	10 U
Di-n-butyl phthalate	50	1.2 J	11 U	12 U	11 U	12 U	12 U	10 U
Di-n-octyl phthalate	50	12 U	11 U	12 U *	11 U	12 U	12 U *	10 U
Fluoranthene	50	12 U	11 U	12 U	11 U	1.3 J	12 U	10 U
Fluorene	50	12 U	11 U	12 U	11 U	12 U	12 U	10 U
Hexachlorobenzene	0.04	1.2 U	1.1 U	1.2 U	1.1 U	1.2 U	1.2 U	1 U
Hexachlorobutadiene	0.5	2.4 U	2.3 U	2.4 U *	2.3 U	2.4 U	2.4 U *	2 U
Hexachlorocyclopentadiene	5	12 U	11 U	12 U	11 U	12 U	12 U	10 U
Hexachloroethane	5	1.2 U	1.1 U	1.2 U	1.1 U	1.2 U	1.2 U	1 U
Indeno[1,2,3-cd]pyrene	0.002	1.2 U	1.1 U	1.2 U	1.1 U	1.2 U	1.2 U	1 U
Isophorone	50	12 U	11 U	12 U	11 U	12 U	12 U	10 U
Naphthalene	10	12 U	11 U	12 U	11 U	12 U	12 U	10 U
Nitrobenzene	0.4	1.2 U	1.1 U	1.2 U	1.1 U	1.2 U	1.2 U	1 U
N-Nitrosodi-n-propylamine	NS	1.2 U	1.1 U	1.2 U	1.1 U	1.2 U	1.2 U	1 U
N-Nitrosodiphenylamine	50	12 U	11 U	12 U	11 U	12 U	12 U	10 U
Pentachlorophenol	NS	36 U	34 U	36 U	34 U	36 U	36 U	30 U
Phenanthrene	50	12 U	11 U	12 U	11 U	1.5 J	12 U	10 U
Phenol	NS	12 U	11 U	12 U	11 U	12 U	12 U	10 U
Pyrene	50	12 U	11 U	12 U	11 U	12 U	12 U	10 U
Total SVOCs	NS	5.3	3.5	ND	3.5	8.21	ND	ND

Table 10
77 Commercial Street
Brooklyn, NY
Remedial Investigation Groundwater Analytical Results
Metals - Total & Dissolved

Client ID Lab Sample ID Date Sampled Dilution Total Metals - µg/L	NYSDEC Class GA Ambient Standard µg/L	TW-1 460-85239-1 10/28/2014 1/2 ‡	TW-2 460-85134-2 10/24/2014 1	TW-3 460-85074-2 10/23/2014 1/10/5 ‡	TW-4 460-85134-1 10/24/2014 1/10/2 ‡	TW-5 460-85171-1 10/24/2014 1/20 ‡	TW-6 460-85074-1 10/23/2014 1/10/5 ‡	FB 460-85120-16 10/24/2014 1
Aluminum	**NS**	10,200	3,560	1,960	17,900	1,240,000	952	200 U
Antimony	**3**	20 U	20 U	20 U	20 U	400 U	20 U	20 U
Arsenic	**25**	15 U	15 U	15 U	7.6 J	**1,440**	15 U	15 U
Barium	**1,000**	96.7 J	76.5 J	210	332	**11,500**	108 J	200 U
Beryllium	**3**	2 U	2 U	2 U	2 U	**76.3**	2 U	2 U
Cadmium	**5**	4 U	4 U	4 U	4 U	80 U	4 U	4 U
Calcium	**NS**	426,000	138,000	364,000	122,000	867,000	194,000	5,000 U
Chromium	**50**	28.7	8.5 J	10 U	34.5	**2,940**	10 U	10 U
Cobalt	**NS**	13.3 J	9.2 J	4.1 J	14.3 J	1,500	50 U	50 U
Copper	**200**	40.7	14.2 J	25 U	66.6	**8,260**	25 U	25 U
Iron	**300**	**25,300**	**9,190**	**27,800**	**35,900**	**3,050,000**	**15,700**	150 U
Lead	**25**	**36**	6.6 J	10 U	**813**	**44,600**	100 U	10 U
Magnesium	**35,000**	**77,000**	**48,000**	22,200	**78,300**	**388,000**	**126,000**	5,000 U
Manganese	**300**	**2,580**	**2,920**	**1,130**	**1,030**	**47,300**	**2,670**	15 U
Mercury	**0.7**	0.58	0.2 U	0.2 U	0.2	**7.3**	0.2 U	0.2 U
Nickel	**100**	23.3 J	23.3 J	40 U	31.6 J	**3,460**	40 U	40 U
Potassium	**NS**	31,700	6,560	57,100	40,700	113,000	56,600	5,000 U
Selenium	**10**	20 U	20 U	20 U	20 U	400 U	20 U	20 U
Silver	**50**	10 U	10 U	10 U	10 U	38.7 J	10 U	10 U
Sodium	**20,000**	**96,100**	**204,000**	**490,000**	**325,000**	**232,000**	**595,000**	5,000 U
Thallium	**0.5**	20 U	20 U	20 U	20 U	400 U	20 U	20 U
Vanadium	**NS**	35.3 J	13.7 J	5.3 J	53.3	3,190	50 U	50 U
Zinc	**2,000**	224	17.9 J	44.9	162	**21,700**	30 U	30 U

Dissolved Metals - µg/L

Aluminum	**NS**	200 U	106 J	208	118 J	87.4 J	145 J	200 U
Antimony	**3**	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Arsenic	**25**	15 U	15 U	15 U	15 U	7 J	15 U	15 U
Barium	**1,000**	26.5 J	34.9 J	130 J	200	102 J	79.3 J	200 U
Beryllium	**3**	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Cadmium	**5**	4 U	4 U	4 U	4 U	4 U	4 U	4 U
Calcium	**NS**	454,000	142,000	280,000	128,000	78,200	188,000	5,000 U
Chromium	**50**	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Cobalt	**NS**	4.2 J	5.7 J	50 U	50 U	50 U	50 U	50 U
Copper	**200**	25 U	25 U	25 U	25 U	25 U	25 U	25 U
Iron	**300**	**974**	150 U	294	150 U	150 U	150 U	150 U
Lead	**25**	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Magnesium	**35,000**	**78,500**	**47,400**	21,900	**85,100**	27,000	**125,000**	5,000 U
Manganese	**300**	**2,280**	**2,650**	**698**	**769**	**376**	**2,660**	15 U
Mercury	**0.7**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel	**100**	40 U	16.3 J	40 U	40 U	40 U	40 U	40 U
Potassium	**NS**	30,900	5,670	55,600	43,100	23,700	56,400	5,000 U
Selenium	**10**	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Silver	**50**	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Sodium	**20,000**	**101,000**	**221,000**	**484,000**	**359,000**	**196,000**	**597,000**	723 J
Thallium	**0.5**	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Vanadium	**NS**	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Zinc	**2,000**	8.9 J	30 U	30 U	30 U	30 U	30 U	30 U

Note: ‡ = The dilution factor varies.

Table 11
77 Commercial Street
Brooklyn, NY
Remedial Investigation Groundwater Analytical Results
Polychlorinated Biphenyls & Pesticides

Client ID Lab Sample ID Date Sampled Polychlorinated Biphenyls - µg/L	NYSDEC Class GA Ambient Standard µg/L	TW-1 460-85239-1 10/28/2014	TW-2 460-85134-2 10/24/2014	TW-3 460-85074-2-RA 10/23/2014	TW-4 460-85134-1 10/24/2014	TW-5 460-85171-1 10/24/2014	TW-6 460-85074-1 10/23/2014
Aroclor 1016	**NS**	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Aroclor 1221	**NS**	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Aroclor 1232	**NS**	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Aroclor 1242	**NS**	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Aroclor 1248	**NS**	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Aroclor 1254	**NS**	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Aroclor 1260	**NS**	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Aroclor-1262	**NS**	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Aroclor 1268	**NS**	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Total PCBs	**0.09**	ND	ND	ND	ND	ND	ND

Pesticides - µg/L

4,4'-DDD	**0.3**	0.02 U *	0.02 U	0.02 U	0.02 U	0.02 U *	0.02 U
4,4'-DDE	**0.2**	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
4,4'-DDT	**0.2**	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aldrin	**ND**	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
alpha-BHC	**0.01**	0.02 U *	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
beta-BHC	**0.04**	0.02 U *	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Chlordane (technical)	**0.05**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
delta-BHC	**0.04**	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Dieldrin	**0.004**	0.02 U *	0.02 U *	0.02 U *	0.02 U *	0.02 U	0.02 U *
Endosulfan I	**NS**	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Endosulfan II	**NS**	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Endosulfan sulfate	**NS**	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Endrin	**ND**	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Endrin aldehyde	**5**	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Endrin ketone	**5**	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
gamma-BHC (Lindane)	**0.05**	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Heptachlor	**0.04**	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Heptachlor epoxide	**0.03**	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Methoxychlor	**35**	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Toxaphene	**0.06**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Table 12
77 Commercial Street
Brooklyn, NY
Remedial Investigation Soil Vapor Analytical Results
Volatile Organic Compounds

Client ID Lab Sample ID Date Sampled µg/m³	NYSDOH 2003 Soil Vapor Intrusion Air Guideline Value µg/m³	SV-1 140-2220-1 10/24/2014	SV-2 140-2220-2 10/24/2014	SV-3 140-2214-1 10/23/2014	SV-4 140-2214-3 10/23/2014	SV-5 140-2234-1 10/28/2014	SV-6 140-2214-2 10/23/2014	SV-7 140-2220-3 10/24/2014
1,1,1-Trichloroethane	NS	1.5 J	0.87 J	0.65 U	0.65 U	3.8 J	0.65 U	1.2 J
1,1,2,2-Tetrachloroethane	NS	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
1,1,2-Trichloroethane	NS	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
1,1-Dichloroethane	NS	0.39 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1-Dichloroethene	NS	0.53 U	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U
1,2,4-Trichlorobenzene	NS	2.8 U	2.9 U	2.9 U	2.9 U	2.9 U	2.9 U	2.9 U
1,2,4-Trimethylbenzene	NS	87	8.2	11	30	12	13	23
1,2-Dibromoethane (EDB)	NS	1.3 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
1,2-Dichlorobenzene	NS	1.6 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U
1,2-Dichloroethane	NS	0.74 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U
1,2-Dichloroethene, Total	NS	0.76 U	0.79 U	0.79 U	0.79 U	0.79 U	0.79 U	0.79 U
1,2-Dichloropropane	NS	0.93 U	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U
1,2-Dichlorotetrafluoroethane	NS	0.87 U	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U
1,3,5-Trimethylbenzene	NS	46	2.4 J	2.5 J	7.7	2.8 J	3.3 J	6.5
1,3-Butadiene	NS	0.75 J	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U	0.68 J
1,3-Dichlorobenzene	NS	1.5 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
1,4-Dichlorobenzene	NS	1.5 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
1,4-Dioxane	NS	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
2,2,4-Trimethylpentane	NS	0.95 J	0.8 J	1.5 J	0.75 U	2.2 J	1.8 J	2.4 J
2-Chlorotoluene	NS	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
3-Chloropropene	NS	0.57 U	0.59 U	0.59 U	0.59 U	0.59 U	0.59 U	0.59 U
4-Ethyltoluene	NS	15	2.7 J	3.3 J	12	3.1 J	4.1 J	5.7 J
4-Isopropyltoluene	NS	1.2 U	1.3 U	1.3 U	4 J	1.3 U	4.8	1.3 U
Acetone	NS	95	20 J	54	13 U	490	39 J	49
Benzene	NS	7.2	1.7 J	5.4	12	4.3	24	4.4
Benzyl chloride	NS	1.5 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Bromodichloromethane	NS	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
Bromoethene(Vinyl Bromide)	NS	0.59 U	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U
Bromoform	NS	1.9 U	2 U	2 U	2 U	2 U	2 U	2 U
Bromomethane	NS	0.49 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon disulfide	NS	6.1 B	3.2 J B	33 B	24 B	6.3 B	22 B	20 B
Carbon tetrachloride	NS	0.91 U	0.94 U	0.94 U	0.94 U	0.94 U	0.94 U	0.94 U
Chlorobenzene	NS	0.89 U	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U
Chloroethane	NS	0.36 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
Chloroform	NS	0.88 J	0.73 U	0.73 U	5.7	0.8 J	1.4 J	0.8 J
Chloromethane	NS	1.7 J B	2 J B	2.5 J B	2.5 J B	2.1 J B	1.8 J B	1.3 U
cis-1,2-Dichloroethene	NS	0.91 U	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U
cis-1,3-Dichloropropene	NS	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Cumene	NS	33	1.2 U	1.2 U	2.1 J	1.2 U	1.2 U	1.6 J
Cyclohexane	NS	2.1 J	5.8 J	35	62	9	22	3 J
Dibromochloromethane	NS	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
Dichlorodifluoromethane	NS	3 J	3.2 J	3 J	3.7 J	2.7 J	3.1 J	3.3 J
Ethylbenzene	NS	110	5.6	11	17	7.1	10	14
Freon 22	NS	2.2 J	2.2 J	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U
Freon TF	NS	0.88 U	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U
Hexachlorobutadiene	NS	5 U	5.2 U	5.2 U	5.2 U	5.2 U	5.2 U	5.2 U
Isopropyl alcohol	NS	9.9 J	2.3 U	2.3 U	2.3 U	11 J	2.3 U	2.3 U
Methyl Butyl Ketone (2-Hexanone)	NS	8.3	0.94 U	0.94 U	2.4 J	1.8 J	0.94 U	1.3 J
Methyl Ethyl Ketone	NS	18	2.4 U	2.4 U	2.4 U	18	5.8 J	9.8 J
methyl isobutyl ketone	NS	640	97	2.7 J	14	2 J	3.4 J	38
Methyl methacrylate	NS	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Methyl tert-butyl ether	NS	2.4 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Methylene Chloride	60	4.4 J B	6.6 J B	4.5 U	4.6 J B	4.5 U	4.5 U	4.5 U
m-Xylene & p-Xylene	NS	500	25	45	78	32	49	69
Naphthalene	NS	2 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U
n-Butane	NS	8.4	79	72	1,300	21	80	13
n-Butylbenzene	NS	1.7 J	0.99 U	0.99 U	3.3 J	1 J	1 J	1.8 J
n-Heptane	NS	9.9	8.3	12	81	14	11	7 J
n-Hexane	NS	5.5 J B	12 B	97 B	230 B	13 B	13 B	8.1 B
n-Propylbenzene	NS	19	1.3 J	1.8 J	6 J	1.8 J	2.7 J	3.4 J
o-Xylene	NS	350	9.8	15	35	12	16	26
sec-Butylbenzene	NS	2.1 J	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
Styrene	NS	0.94 U	0.98 U	0.98 U	3.2 J	0.98 U	0.98 U	0.98 U
tert-Butyl alcohol	NS	14 J	2.8 J	2.6 J	7.1 J	720	3.3 J	4.4 J
tert-Butylbenzene	NS	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
Tetrachloroethene	30	35	16	30	25	32	40	39
Tetrahydrofuran	NS	2.2 J	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U	2 J
Toluene	NS	45	18	63	42	20	42	31
trans-1,2-Dichloroethene	NS	0.76 U	0.79 U	0.79 U	0.79 U	0.79 U	0.79 U	0.79 U
trans-1,3-Dichloropropene	NS	0.83 U	0.86 U	0.86 U	0.86 U	0.86 U	0.86 U	0.86 U
Trichloroethene	5	0.72 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	94
Trichlorofluoromethane	NS	1.7 J	8.9	1 J	2.7 J	4 J	2 J	1.8 J
Vinyl chloride	NS	0.71 U	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U
Xylenes, Total	NS	830	35	59	110	45	64	95

Tables 1-12
77 Commercial Street
Brooklyn, NY
Remedial Investigation Analytical Results
Notes

GENERAL

NS : No cleanup objective listed.

ND : No Detect

U : The analyte was not detected at the indicated concentration.

*** :** Laboratory Control Standard or Laboratory Control Standard Duplicate exceeds the control limits.

J : The concentration given is an estimated value.

B : Compound was found in the blank and sample.

^ : Instrument related QC exceeds the control limits.

SOIL

Exceedences of Part 375 Unrestricted Soil Cleanup Objectives are highlighted in bold font.

Exceedences of Part 375 Restricted Residential Soil Cleanup Objectives are highlighted in gray.

Part 375 Soil Cleanup Objectives : Soil Clean-up Objectives listed in NYSDEC (New York State Department of Environmental Conservation) "Part 375" Regulations (6 NYCRR Part 375).

µg/kg : micrograms per kilogram = parts per billion (ppb)

mg/kg : milligrams per kilogram = parts per million (ppm)

*** :** For VOCs, SVOCs, and Metals, sample SB-X (7-8') is a blind duplicate of SB-4 (7-8').

GROUNDWATER

Exceedences of NYSDEC Class GA Ambient Standards are highlighted in bold font.

NYSDEC Class GA Ambient Standard : New York State Department of Environmental Conservation Technical and Operational Guidance Series (1.1.1): Class GA Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.

µg/L : micrograms per Liter = parts per billion (ppb)

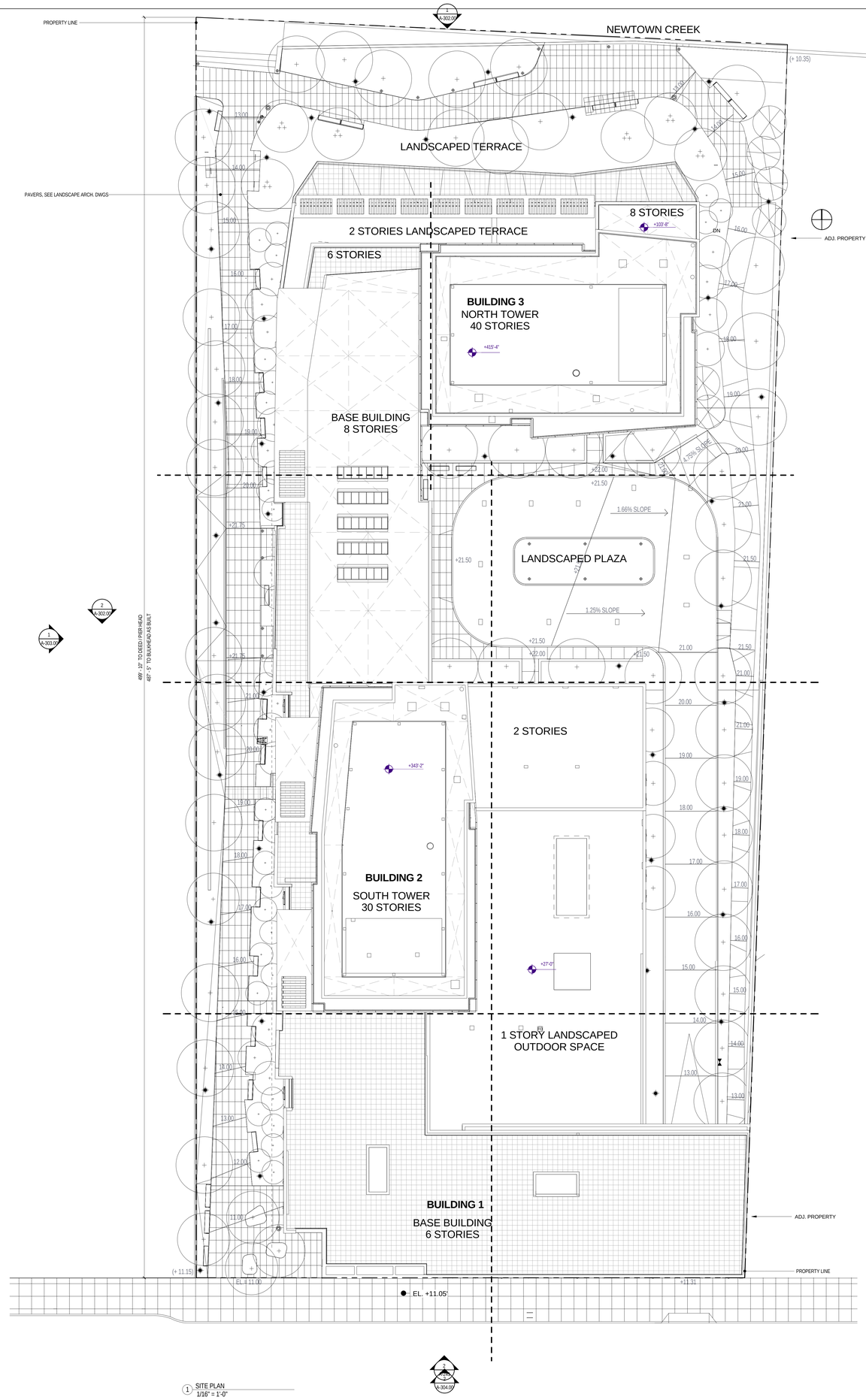
SOIL VAPOR

Exceedences of NYSDOH Soil Vapor Intrusion Air Guandance Values are highlighted in gray.

NYSDOH Soil Vapor Intrusion Air Guidance Value : NYSDOH Air Guideline Values (AGVs) presented in the Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York, dated October 2006 (“NYSDOH Vapor Intrusion Guidance Document”).

$\mu g/m^3$: micrograms per cubic meter of air

APPENDIX A
PROPOSED DEVELOPMENT PLANS



1 SITE PLAN
1/16" = 1'-0"

77-87 Commercial Street

BROOKLYN, NY 11222

ARCHITECT	John A. Cetra State of New York Registered Architect No. 018861 CetraRuddy Architecture DPC 584 Broadway Suite 401 New York, NY 10012	OWNER	Waterview at Greenpoint LLC 4611 12th Avenue Brooklyn, NY 11219
STRUCTURAL ENGINEER	WSP 228 East 45th Street, 3rd Fl New York, NY 10001 (212) 687-9888	MEP ENGINEER	Cosentini A Tetra Tech Company 2 Pennsylvania Plaza, 3rd Fl New York, NY 10121 (212) 615-3726
GEOTECHNICAL ENGINEER	McLaren Engineering Group 100 Snake Hill Road West Nyack, NY 10994 (845) 353-6400 (845) 353-6509	LANDSCAPE ARCHITECT	MPFP LLC / M. Paul Friedberg & Partners 41 East 11th Street, 3rd Fl New York, NY 10003 (212) 477-6366 (212) 477-6548
LIGHTING DESIGNER	Cosentini A Tetra Tech Company 2 Pennsylvania Plaza, 3rd Fl New York, NY 10121 (212) 615-3726	LISTED BY BALL CODE	Simpson Gumpertz & Heger 550 Seventh Avenue, 10th Fl New York, NY 10018 (212) 271-7000 (212) 271-0111

DOB NOTE:

NOT IN APPLICATION

REGISTERED ARCHITECT JOHN A. CETRA No. 018861 STATE OF NEW YORK

2014.09.10 DOB SUBMISSION

CETRARUDDY

SITE PLAN

DRAWING NO. **A-100.00**

SCALE 1/16" = 1'-0"

DOB PAGE NO. 34 OF 114

PROJECT 1410.00

DOB DRAWING

CETRARUDDY ARCHITECTURE DPC
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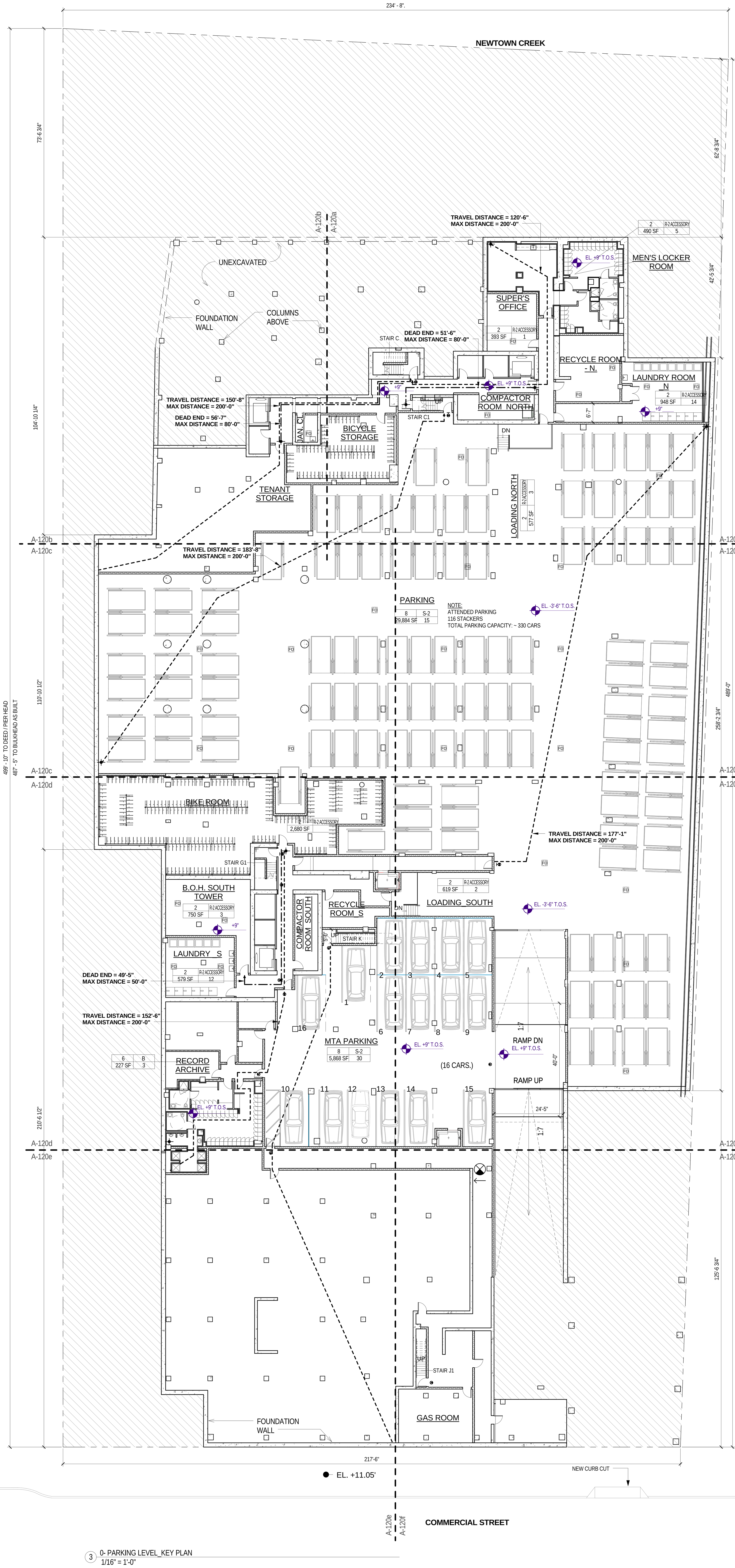


3 0- PARKING LEVEL_KEY PLAN
1/16" = 1'-0"

		FIRE RATING	STAIR / DOOR CAPACITY (PER TABLE 1005.1)	REQUIRED WIDTH (PER. SEC. 1009.1)	PROVIDED WIDTH
STAIR C1	STAIR	2 HR	0.3" PER OCCUPANT = 0.3" X 38 = 11.5"	44"	44"
	DOOR	1.5 HR	0.2" PER OCCUPANT = 0.2" X 38 = 7.6"	36"	36"

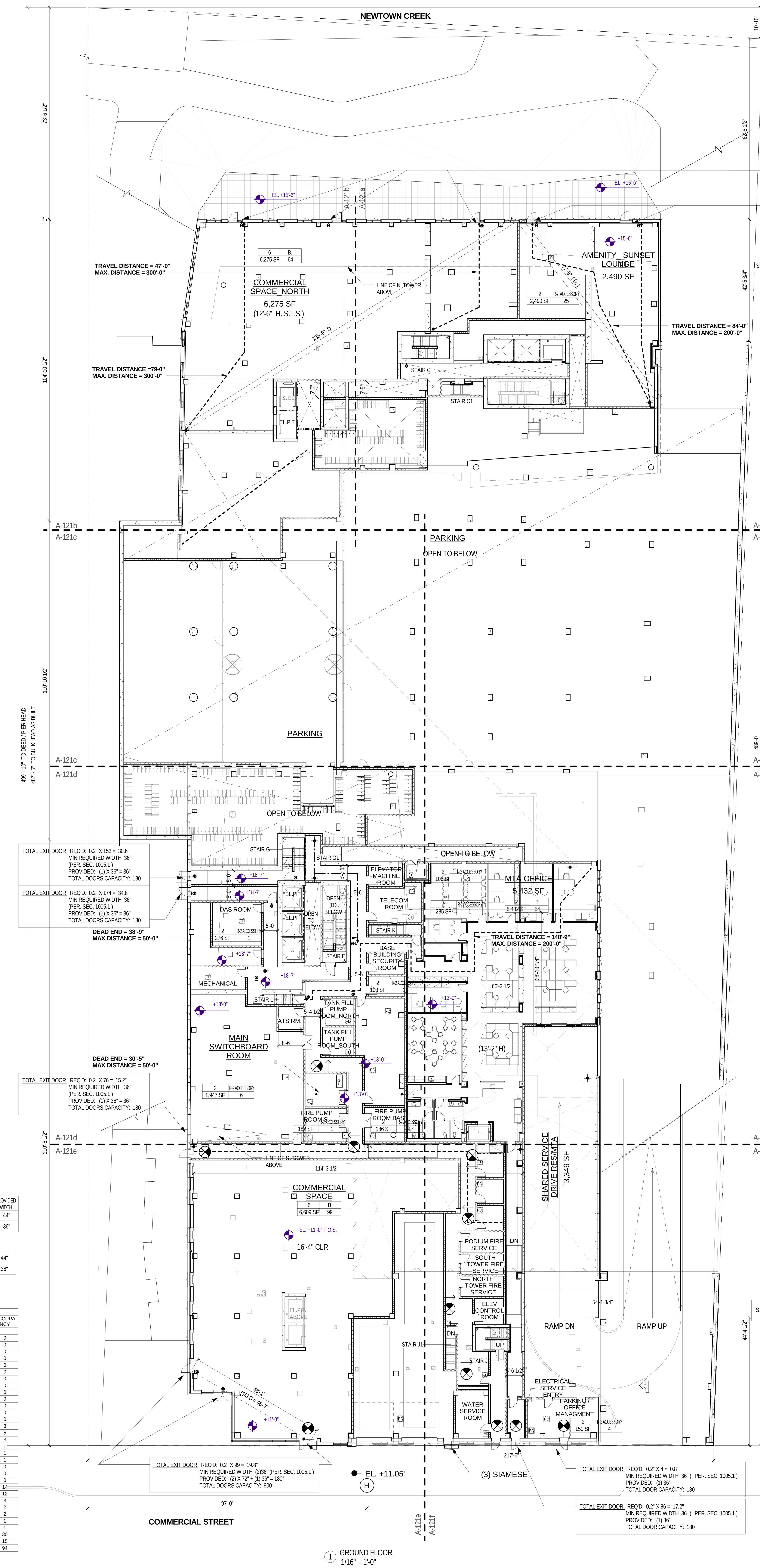
0.2" PER OCCUPANT = 0.2" X 38 = 7.6"

STAIR K	STAIR	2 HR	0.3" PER OCCUPANT = 0.3" X 38 = 11.5"	44"	44"
	DOOR	1.5 HR	0.2" PER OCCUPANT = 0.2" X 38 = 7.6"	36"	36"

TOTAL STAIR REQ'D: 0.3" X 115 = 34.5" PROVIDED: 132"
TOTAL DOOR REQ'D: 0.2" X 115 = 23.0" PROVIDED: 108"

OCCUPANCY LOAD -0 -PARKING LEVEL

SPACE	OCCUPANCY GROUP	AREA	AREA PER OCCUPANT	OCCUPANCY
LAUNDRY RM_FFF		93 SF		0
LAUNDRY RM_MMM		1,450 SF		0
LAUNDRY RM_NN		843 SF		0
LAUNDRY RM_NNN		289 SF		0
LAUNDRY RM_OO		2,350 SF		0
LAUNDRY RM_OOO		9,515 SF		0
LAUNDRY RM_RR		546 SF		0
LAUNDRY RM_GGG	B	142 SF		0
LAUNDRY RM_HHH	B	109 SF		0
LAUNDRY RM_III	B	94 SF		0
LAUNDRY RM_KKK	B	745 SF		0
LAUNDRY RM_RRR	B	512 SF		0
LAUNDRY RM_SSS	B	248 SF		0
MTA OFFICE_LOW LEVEL	B	227 SF	100	3
B.O.H. NORTH TOWER	R-2 ACCESSORY	490 SF	300	5
B.O.H. SOUTH TOWER	R-2 ACCESSORY	750 SF	300	3
COMPACTOR ROOM N.	R-2 ACCESSORY	284 SF	300	1
COMPACTOR ROOM S.	R-2 ACCESSORY	262 SF	300	1
JANITOR CLOSET	R-2 ACCESSORY	93 SF	300	1
LAUNDRY RM_DD	R-2 ACCESSORY	2,680 SF		0
LAUNDRY RM_PPP	R-2 ACCESSORY	309 SF		0
LAUNDRY RM_QQQ	R-2 ACCESSORY	610 SF		0
LAUNDRY ROOM _N	R-2 ACCESSORY	948 SF	50	14
LAUNDRY ROOM _S	R-2 ACCESSORY	579 SF	50	12
LOADING_NORTH	R-2 ACCESSORY	577 SF	300	3
LOADING_SOUTH	R-2 ACCESSORY	619 SF	300	2
RECYCLE ROOM_N	R-2 ACCESSORY	571 SF	300	2
RECYCLE ROOM_S	R-2 ACCESSORY	248 SF	300	1
SUPER'S OFFICE	R-2 ACCESSORY	393 SF	300	1
MTA PARKING	S-2	5,868 SF	200	30
PARKING	S-2	29,884 SF	200	15
Grand total				94



1 GROUND FLOOR
1/16" = 1'-0"

TOTAL EXIT DOOR REQ'D: 0.2" X 64 = 12.8"
MIN REQUIRED WIDTH 36" (PER. SEC. 1005.1)
PROVIDED: (3) X 36" = 108"
TOTAL DOORS CAPACITY: 540

TOTAL EXIT DOOR REQ'D: 0.2" X 25 = 5.0"
MIN REQUIRED WIDTH 36" (PER. SEC. 1005.1)
PROVIDED: (2) X 36" = 72"
TOTAL DOORS CAPACITY: 360

0.2" PER OCCUPANT = 0.2" X 97 = 19.4"

OCCUPANCY LOAD -1 COMMERCIAL ENTRY LEVEL_NORTH

SPACE	OCCUPANCY GROUP	AREA	AREA PER OCCUPANT	OCCUPANCY
COMMERCIAL SPACE_NORTH	B.	6,275 SF	100	64
AMENITY_SUNSET LOUNGE	R-2. ACCESSORY	2,490 SF	100	25
Grand total				89

0.2" PER OCCUPANT = 0.2" X 76 = 15.2"

0.2" PER OCCUPANT = 0.2" X 38 = 7.6"

STAIR L	STAIR	2 HR	0.3" PER OCCUPANT = 0.2" X 98 = 29.4"	44"	44"
	DOOR	1.5 HR	0.2" PER OCCUPANT = 0.2" X 98 = 19.6"	36"	36"

OCCUPANCY LOAD -1 -COMMERCIAL ENTRY LEVEL

SPACE	OCCUPANCY GROUP	AREA	AREA PER OCCUPANT	OCCUPANCY
LAUNDRY RM_AAA		104 SF		0
LAUNDRY RM_BBB		68 SF		0
LAUNDRY RM_CCC		178 SF		0
LAUNDRY RM_EEE		185 SF		0
LAUNDRY RM_TTT		303 SF		0
COMMERCIAL SPACE_S	B	6,609 SF	100	99
MTA OFFICE	B	5,432 SF	100	54
ATS RM.	R-2 ACCESSORY	79 SF	300	1
ELECTRICAL SERVICE ENTRY	R-2 ACCESSORY	233 SF	300	1
FIRE PUMP ROOM BASE	R-2 ACCESSORY	186 SF	300	1
FIRE PUMP ROOM S.	R-2 ACCESSORY	182 SF	300	1
GARAGE FAN ROOM EXHAUST	R-2 ACCESSORY	106 SF	300	1
GAS BOOSTER RM BASE	R-2 ACCESSORY	618 SF	300	2
GAS ROOM	R-2 ACCESSORY	232 SF	300	1
LAUNDRY RM_DDD	R-2 ACCESSORY	103 SF		1
LAUNDRY RM_SS	R-2 ACCESSORY	122 SF		1
LAUNDRY RM_UU	R-2 ACCESSORY	91 SF		1
LAUNDRY RM_UUU	R-2 ACCESSORY	182 SF		1
LAUNDRY RM_VV	R-2 ACCESSORY	91 SF		1
LAUNDRY RM_WW	R-2 ACCESSORY	119 SF		1
LAUNDRY RM_XX	R-2 ACCESSORY	119 SF		1
LAUNDRY RM_YY	R-2 ACCESSORY	122 SF		1
LAUNDRY RM_ZZ	R-2 ACCESSORY	107 SF		1
MAIN SWITCHBOARD ROOM	R-2 ACCESSORY	1,947 SF	300	6
PARKING / OFFICE MANAGMENT	R-2 ACCESSORY	150 SF	100	4
PE.6 PE.7 ELEVATOR CONTROL ROOM	R-2 ACCESSORY	2,207 SF	300	1
SECURITY EQUIPMENT ROOM	R-2 ACCESSORY	285 SF	300	1
STORAGE / MECH.	R-2 ACCESSORY	276 SF	300	1
TANK FILL PUMP ROOM_NORTH	R-2 ACCESSORY	116 SF	300	1
TANK FILL PUMP ROOM_SOUTH	R-2 ACCESSORY	122 SF	300	1
TELECOM / SER	R-2 ACCESSORY	103 SF	300	1
Grand total		20,776 SF		186

77-87 Commercial Street

BROOKLYN, NY 11222

ARCHITECT: John A. Cetra, State of New York Registered Architect No. 018861, CetraRuddy Architecture DPC, 584 Broadway Suite 401, New York, NY 10012

CLIENT: Waterview at Greenpoint LLC, 4611 12th Avenue, Brooklyn, NY 11219

STRUCTURAL ENGINEER: WSP, 228 East 45th Street, 3rd Fl, New York, NY 10001, (212) 687-9888

MEP ENGINEER: Cosentini, A Tetra Tech Company, 2 Pennsylvania Plaza, 3rd Fl, New York, NY 10121, (212) 615-3726

GEOTECHNICAL ENGINEER: McLaren Engineering Group, 100 Snake Hill Road, West Nyack, NY 10994, (845) 353-6400, (845) 353-6509

LANDSCAPE ARCHITECT: MPFP LLC / M. Paul Friedberg & Partners, 41 East 11th Street, 3rd Fl, New York, NY 10003, (212) 477-6366, (212) 477-6548

LIGHTING DESIGNER: Cosentini, A Tetra Tech Company, 2 Pennsylvania Plaza, 3rd Fl, New York, NY 10121, (212) 615-3726

EXTERIOR WALL CONSULTANT: Simpson Gumpertz & Heger, 550 Seventh Avenue, 10th Fl, New York, NY 10018, (212) 271-7000, (212) 271-0111

NOTES

1. ALL APARTMENTS ARE PROVIDED WITH SMOKE / CARBON MONOXIDE DETECTORS, COMPLYING WITH N.Y.C. B.C. 908.7. SEE REFLECTED CEILING PLANS A-200 SERIES DWGS, FOR LOCATIONS.
2. ALL KITCHEN AND BATHROOMS TO COMPLY WITH ACCESSIBILITY REQUIREMENTS OF ICC 1003-TYPE A, FHA SPECIFICATION B, AND UFAS. SEE A-600 SERIES DRAWINGS.
3. ALL LOT-LINE WALLS SHALL BE 2-HR FIRE RATED
4. ALL LOT-LINE WINDOWS SHALL BE SPRINKLERED
5. ALL COMMON CORRIDOR WALLS SHALL BE 2-HR FIRE RATED; SEE PARTITION SCHEDULE G-004.
6. ALL COMMON CORRIDOR DOORS SHALL BE 1 1/2 HR FIRE RATED; SEE DOOR SCHEDULE G-006.
7. PROJECT DATUM 0'-0" = NAVD 1.095
8. REFER TO FINISH BOOK (APPENDIX A), SCHEDULES, AND SPECIFICATIONS FOR ALL PUBLIC SPACE FINISHES AND FURNISHINGS.
9. ALL DUCT SLAB OPENINGS ARE 2" LARGER THAN DUCT SIZE ON ALL FOUR SIDES
10. ALL UFAS COMPLIANT UNITS SHALL BE EQUIPPED WITH COMBINATION FIRE ALARM SPEAKER/STROBE

LEGEND

HPD TAG
HPD AREA = **1000 SF**

APARTMENT UNIT TAG
UNIT NAME — 37 1BR 1000 SF — UNIT TYPE, UNIT AREA

OCCUPANCY LOAD CALCULATION FOR RESIDENTIAL USE AS PER TABLE 1004.1.2 IS 200 SF FLOOR AREA PER OCCUPANT.

UNIT OCCUPANCY TAG
ZONING USE GROUP — 2 / R-2 — OCCUPANCY GROUP
GROSS AREA (OF UNIT LEVEL) — 150 SF / 1 — NUMBER OF ALLOWED OCCUPANTS

- 2-HR FIRE RATED PARTITION OR WALL
- 1-HR FIRE RATED PARTITION OR WALL
- EGRESS TRAVEL PATH
- MAX DEAD END
- EXIT SIGN
- NON FREEZE WALL HYDRANT
- OD OVERFLOW DRAIN
- RD ROOF DRAIN
- FD FLOOR DRAIN
- F COMBINATION FIRE ALARM SPEAKER/STROBE
- TE TOILET EXHAUST
- SD C SMOKE DETECTOR/ CARBON MONOXIDE DETECTOR

DOB NOTE:
NOT IN APPLICATION

REGISTERED ARCHITECT JOHN CETRA No. 018861 STATE OF NEW YORK

2014.09.10 DOB SUBMISSION

CETRARUDDY

PARKING AND GROUND FLOOR LEVELS - KEY PLANS

DRAWING NO. **A-101.00**

SCALE: As indicated
DOB PAGE NO.: 35 OF 114
PROJECT: 1410.00
DOB FILE NO.:

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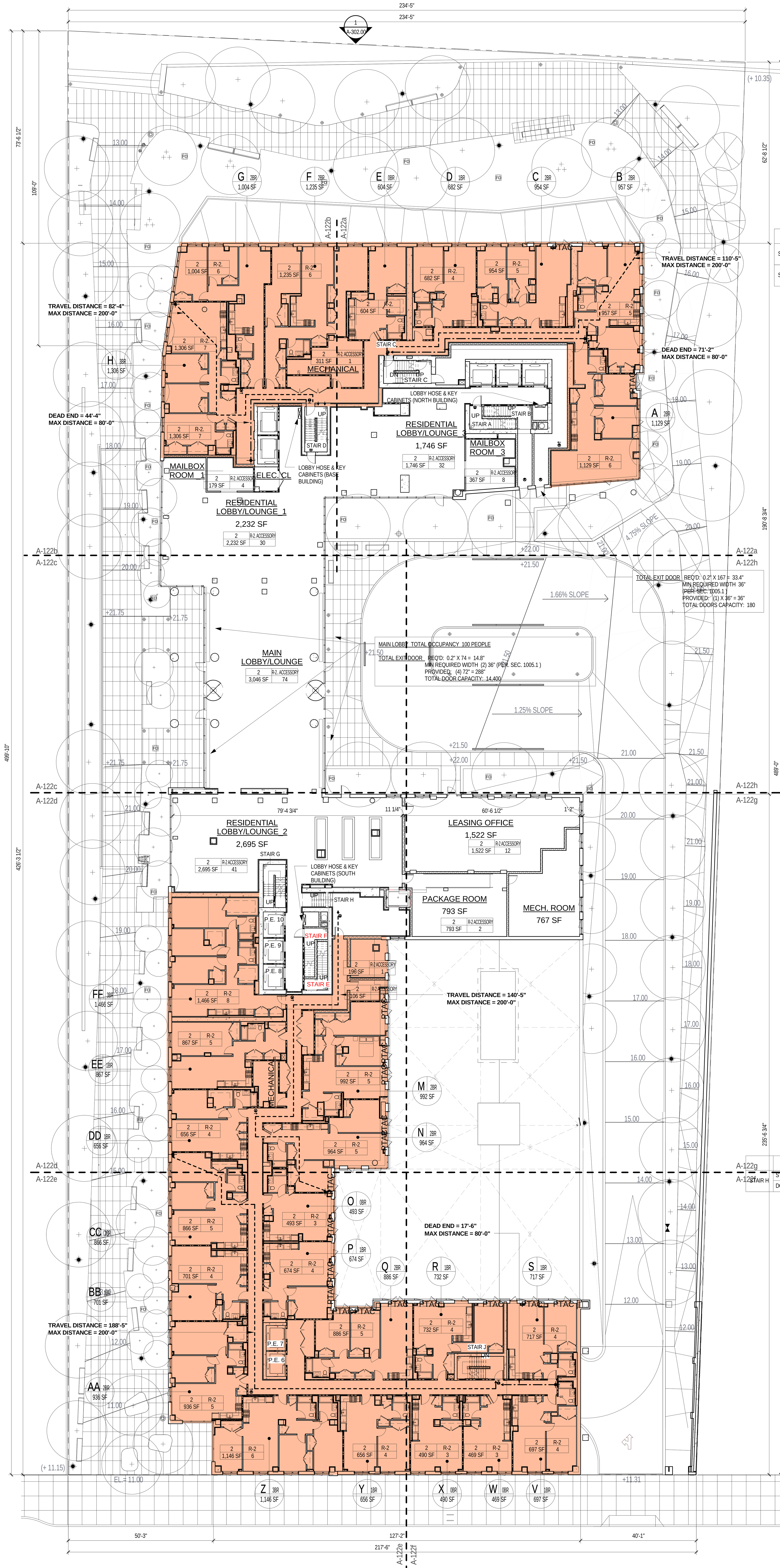


1 IH 2ND FLOOR
1/16" = 1'-0"

		FIRE RATING	STAIR / DOOR CAPACITY (PER TABLE 1005.1)	REQUIRED WIDTH (PER. SEC. 1009.1)	PROVIDED WIDTH
STAIR C	STAIR	2 HR	0.3" PER OCCUPANT = 0.3" X 67 = 20.1"	44"	44"
	DOOR	1.5 HR	0.2" PER OCCUPANT = 0.2" X 67 = 13.4"	36"	36"
STAIR D	STAIR	2 HR	0.3" PER OCCUPANT = 0.3" X 67 = 20.1"	44"	44"
	DOOR	1.5 HR	0.2" PER OCCUPANT = 0.2" X 67 = 13.4"	36"	36"

TOTAL STAIRS C & D REQ'D: 0.3" X 119 = 35.7" PROVIDED: 88"
TOTAL DOORS C & D REQ'D: 0.2" X 119 = 23.8" PROVIDED: 72"

TOTAL STAIR A & B REQ'D: 0.3" X 57 = 17.1" PROVIDED: 88"
TOTAL DOOR A & B REQ'D: 0.2" X 57 = 11.4" PROVIDED: 72"

OCCUPANCY LOAD -2nd LEVEL_N

SPACE	OCCUPANCY GROUP	AREA	AREA PER OCCUPANT	OCCUPANCY
APT. A	R-2.	1,129 SF	200	6
APT. B	R-2.	957 SF	200	5
APT. C	R-2.	954 SF	200	5
APT. D	R-2.	682 SF	200	4
APT. E	R-2.	604 SF	200	4
APT. F	R-2.	1,235 SF	200	6
APT. G	R-2.	1,004 SF	200	6
APT. H	R-2.	1,306 SF	200	7
ELECTRICAL CL	R-2. ACCESSORY	77 SF	300	1
MAILBOX ROOM _1	R-2. ACCESSORY	179 SF	50	4
MAILBOX ROOM _3	R-2. ACCESSORY	367 SF	50	8
MECHANICAL	R-2. ACCESSORY	311 SF	300	1
RESIDENTIAL LOBBY_1	R-2. ACCESSORY	2,232 SF	ACTUAL	30
RESIDENTIAL LOBBY_3	R-2. ACCESSORY	1,746 SF	ACTUAL	32
Grand total: 14				119

		FIRE RATING	STAIR / DOOR CAPACITY (PER TABLE 1005.1)	REQUIRED WIDTH (PER. SEC. 1009.1)	PROVIDED WIDTH
STAIR H	STAIR	2 HR	0.3" PER OCCUPANT = 0.3" X 75 = 22.5	44"	44"
	DOOR	1.5 HR		36"	36"

0.2" PER OCCUPANT = 0.2" X 75 = 15.0"

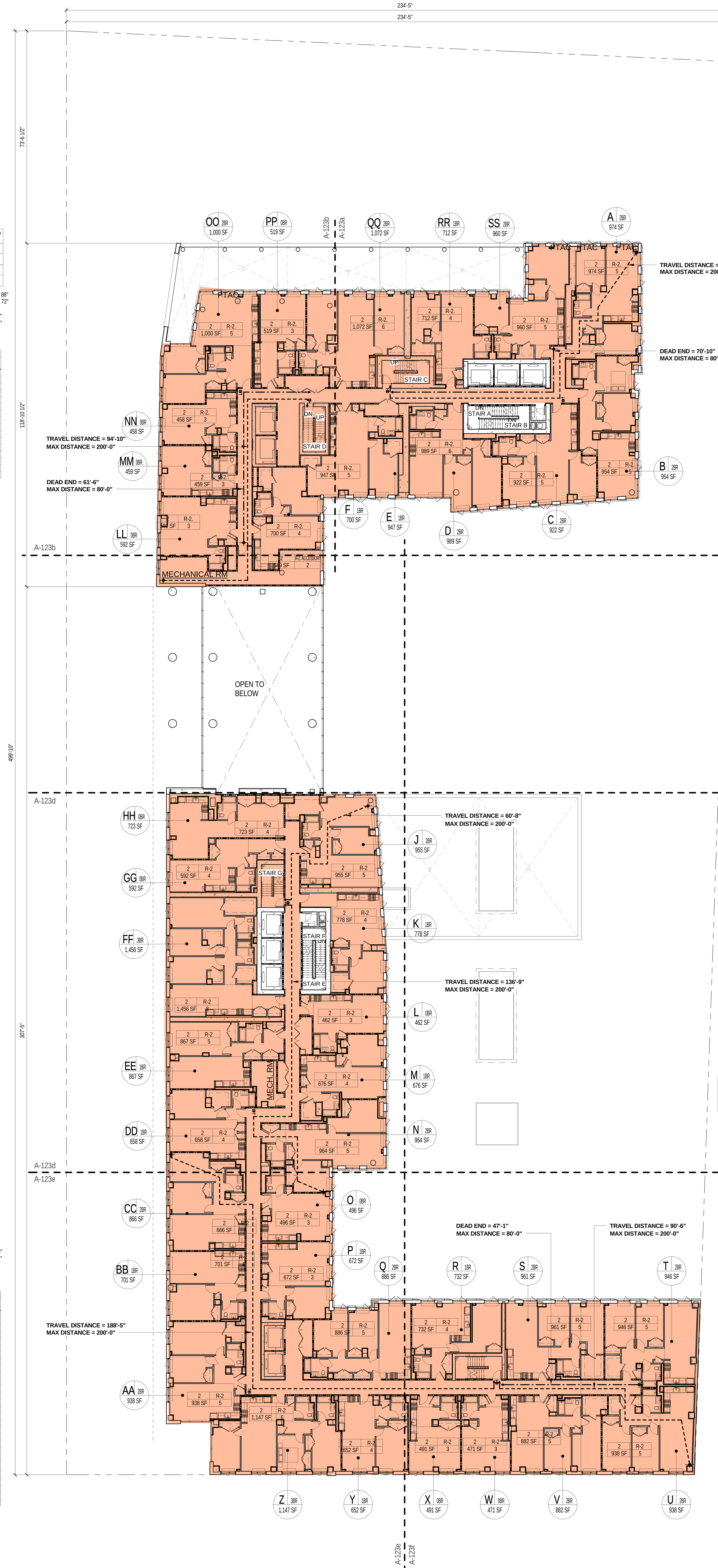
0.2" PER OCCUPANT = 0.2" X 75 = 15.0"

TOTAL STAIR H & J REQ'D: 0.3" X 150 = 45.0" PROVIDED: 88"
TOTAL DOOR @ H & J REQ'D: 0.2" X 150 = 30.0" PROVIDED: 72"

TOTAL STAIR F REQ'D: 0.3" X 46 =13.8" PROVIDED: 44"
TOTAL DOOR @ F REQ'D: 0.2" X 46 = 9.2" PROVIDED: 36"

OCCUPANCY LOAD -2nd LEVEL_S

SPACE	OCCUPANCY GROUP	AREA	AREA PER OCCUPANT	OCCUPANCY
		767 SF		0
APT. AA	R-2	936 SF	200	5
APT. BB	R-2	701 SF	200	4
APT. CC	R-2	866 SF	200	5
APT. DD	R-2	656 SF	200	4
APT. EE	R-2	867 SF	200	5
APT. FF	R-2	1,466 SF	200	8
APT. M	R-2	992 SF	200	5
APT. N	R-2	964 SF	200	5
APT. O	R-2	493 SF	200	3
APT. P	R-2	674 SF	200	4
APT. Q	R-2	886 SF	200	5
APT. R	R-2	732 SF	200	4
APT. S	R-2	717 SF	200	4
APT. V	R-2	697 SF	200	4
APT. W	R-2	469 SF	200	3
APT. X	R-2	490 SF	200	3
APT. Y	R-2	656 SF	200	4
APT. Z	R-2	1,146 SF	200	6
BIKE ROOM/ STROLLERS	R-2 ACCESSORY	1,522 SF	300	12
LEASING OFFICE / MANAGEMENT	R-2 ACCESSORY	793 SF	100	2
MECHANICAL	R-2 ACCESSORY	152 SF	300	1
RESIDENTIAL LOBBY_2	R-2 ACCESSORY	2,695 SF	ACTUAL	41
ROOF VESTIBULE	R-2 ACCESSORY	196 SF	200	1
STORAGE	R-2 ACCESSORY	106 SF	300	1
Grand total: 25				139



2 3RD FLOOR - KEY PLAN
1/16" = 1'-0"

		FIRE RATING	STAIR / DOOR CAPACITY (PER TABLE 1005.1)	REQUIRED WIDTH (PER. SEC. 1009.1)	PROVIDED WIDTH
STAIR C	STAIR	2 HR	0.3" PER OCCUPANT = 0.2" X 32 = 9.6"	44"	44"
	DOOR	1.5 HR	0.2" PER OCCUPANT = 0.2" X 32 = 6.4"	36"	36"
STAIR D	STAIR	2 HR	0.3" PER OCCUPANT = 0.3" X 32 = 9.6"	44"	44"
	DOOR	1.5 HR	0.2" PER OCCUPANT = 0.2" X 32 = 6.4"	36"	36"

TOTAL STAIR REQ'D: 0.3" X 64 = 19.2" PROVIDED: 88"
TOTAL DOOR REQ'D: 0.2" X 64 = 12.8" PROVIDED: 72"

OCCUPANCY LOAD -3rd LEVEL_NORTH

SPACE	OCCUPANCY GROUP	AREA	AREA PER OCCUPANT	OCCUPANCY
APT. A	R-2.	974 SF	200	5
APT. B	R-2.	954 SF	200	5
APT. C	R-2.	922 SF	200	5
APT. D	R-2.	989 SF	200	6
APT. E	R-2.	947 SF	200	5
APT. F	R-2.	700 SF	200	4
APT. LL	R-2.	592 SF	200	3
APT. MM	R-2.	459 SF	200	3
APT. NN	R-2.	458 SF	200	3
APT. OO	R-2.	1,000 SF	200	5
APT. PP	R-2.	519 SF	200	3
APT. QQ	R-2.	1,072 SF	200	6
APT. RR	R-2.	712 SF	200	4
APT. SS	R-2.	960 SF	200	5
MECHANICAL RM	R-2. ACCESSORY	549 SF	300	2
Grand total: 15				64

		FIRE RATING	STAIR / DOOR CAPACITY (PER TABLE 1005.1)	REQUIRED WIDTH (PER. SEC. 1009.1)	PROVIDED WIDTH
STAIR G	STAIR	2 HR	0.3" PER OCCUPANT = 0.3" X 56 = 16.8"	44"	44"
	DOOR	1.5 HR	0.2" PER OCCUPANT = 0.2" X 56 = 11.2"	36"	36"

0.3" PER OCCUPANT = 0.3" X 55 = 16.5"

0.2" PER OCCUPANT = 0.2" X 55 = 11.0"

TOTAL STAIR REQ'D: 0.3" X 111 = 33.3" PROVIDED: 88"
TOTAL DOOR REQ'D: 0.2" X 111 = 22.2" PROVIDED: 72"

OCCUPANCY LOAD -3rd LEVEL_SOUTH.

SPACE	OCCUPANCY GROUP	AREA	AREA PER OCCUPANT	OCCUPANCY
APT. AA	R-2	938 SF	200	5
APT. BB	R-2	701 SF	200	4
APT. CC	R-2	866 SF	200	4
APT. DD	R-2	658 SF	200	4
APT. EE	R-2	867 SF	200	5
APT. FF	R-2	1,456 SF	200	8
APT. GG	R-2	592 SF	200	4
APT. HH	R-2	723 SF	200	4
APT. J	R-2	955 SF	200	5
APT. K	R-2	778 SF	200	4
APT. L	R-2	462 SF	200	3
APT. M	R-2	676 SF	200	4
APT. N	R-2	964 SF	200	5
APT. O	R-2	496 SF	200	3
APT. P	R-2	672 SF	200	3
APT. Q	R-2	886 SF	200	5
APT. R	R-2	732 SF	200	4
APT. S	R-2	961 SF	200	5
APT. T	R-2	946 SF	200	5
APT. U	R-2	938 SF	200	5
APT. V	R-2	882 SF	200	5
APT. W	R-2	471 SF	200	3
APT. X	R-2	491 SF	200	3
APT. Y	R-2	652 SF	200	4
APT. Z	R-2	1,147 SF	200	6
MECHANICAL	R-2 ACCESSORY	150 SF	300	1
Grand total: 26				111

77-87 Commercial Street

BROOKLYN, NY 11222

ARCHITECT: John A. Cetra, State of New York Registered Architect No. 018861, CetraRuddy Architecture DPC, 584 Broadway Suite 401, New York, NY 10012

CLIENT: Waterview at Greenpoint LLC, 4611 12th Avenue, Brooklyn, NY 11219

STRUCTURAL ENGINEER: WSP, 228 East 45th Street, 3rd Fl, New York, NY 10001, (212) 687-9888

MEP ENGINEER: Cosentini, A Tetra Tech Company, 2 Pennsylvania Plaza, 3rd Fl, New York, NY 10121, (212) 615-3726

GEOTECHNICAL ENGINEER: McLaren Engineering Group, 100 Snake Hill Road, West Nyack, NY 10994, (845) 353-6400, (845) 353-6509

LANDSCAPE ARCHITECT: MPFP LLC / M. Paul Friedberg & Partners, 41 East 11th Street, 3rd Fl, New York, NY 10003, (212) 477-6366, (212) 477-6548

LIGHTING DESIGNER: Cosentini, A Tetra Tech Company, 2 Pennsylvania Plaza, 3rd Fl, New York, NY 10121, (212) 615-3726

EXTERIOR WALL CONSULTANT: Simpson Gumpertz & Heger, 550 Seventh Avenue, 10th Fl, New York, NY 10018, (212) 271-7000, (212) 271-0111

NOTES

1. ALL APARTMENTS ARE PROVIDED WITH SMOKE / CARBON MONOXIDE DETECTORS, COMPLYING WITH N.Y.C. B.C. 908.7. SEE REFLECTED CEILING PLANS A-200 SERIES DWGS, FOR LOCATIONS.
2. ALL KITCHEN AND BATHROOMS TO COMPLY WITH ACCESSIBILITY REQUIREMENTS OF ICC 1003-TYPE A, FHA SPECIFICATION B, AND UFAS. SEE A-600 SERIES DRAWINGS.
3. ALL LOT-LINE WALLS SHALL BE 2-HR FIRE RATED
4. ALL LOT-LINE WINDOWS SHALL BE SPRINKLERED
5. ALL COMMON CORRIDOR WALLS SHALL BE 2-HR FIRE RATED; SEE PARTITION SCHEDULE G-004.
6. ALL COMMON CORRIDOR DOORS SHALL BE 1 1/2 HR FIRE RATED; SEE DOOR SCHEDULE G-006.
7. PROJECT DATUM 0'-0" = NAVD 1.095
8. REFER TO FINISH BOOK (APPENDIX A), SCHEDULES, AND SPECIFICATIONS FOR ALL PUBLIC SPACE FINISHES AND FURNISHINGS.
9. ALL DUCT SLAB OPENINGS ARE 2" LARGER THAN DUCT SIZE ON ALL FOUR SIDES
10. ALL UFAS COMPLIANT UNITS SHALL BE EQUIPPED WITH COMBINATION FIRE ALARM SPEAKER/STROBE

LEGEND

HPD TAG

HPD AREA = **1000 SF**

APARTMENT UNIT TAG

UNIT NAME — 37 1BR 1000 SF — UNIT TYPE — UNIT AREA

OCCUPANCY LOAD CALCULATION FOR RESIDENTIAL USE AS PER TABLE 1004.1.2 IS 200 SF FLOOR AREA PER OCCUPANT.

UNIT OCCUPANCY TAG

ZONING USE GROUP — 2 R-2 150 SF 1 — OCCUPANCY GROUP
GROSS AREA (OF UNIT LEVEL) — NUMBER OF ALLOWED OCCUPANTS

- 2-HR FIRE RATED PARTITION OR WALL
- 1-HR FIRE RATED PARTITION OR WALL
- EGRESS TRAVEL PATH
- MAX DEAD END
- EXIT SIGN
- NON FREEZE WALL HYDRANT
- OD OVERFLOW DRAIN
- RD ROOF DRAIN
- FD FLOOR DRAIN
- F COMBINATION FIRE ALARM SPEAKER/STROBE
- TE TOILET EXHAUST
- SD C SMOKE DETECTOR/ CARBON MONOXIDE DETECTOR

DOB NOTE:

NOT IN APPLICATION

REGISTERED ARCHITECT JOHN CETRA No. 018861 STATE OF NEW YORK

2014.09.10 DOB SUBMISSION

CETRARUDDY

2ND AND 3RD FLOOR - KEY PLANS

DRAWING NO. **A-102.00**

SCALE: As indicated | DOB PAGE NO.: 36 OF 114

PROJECT: 1410.00 | DOB FILE NO.:

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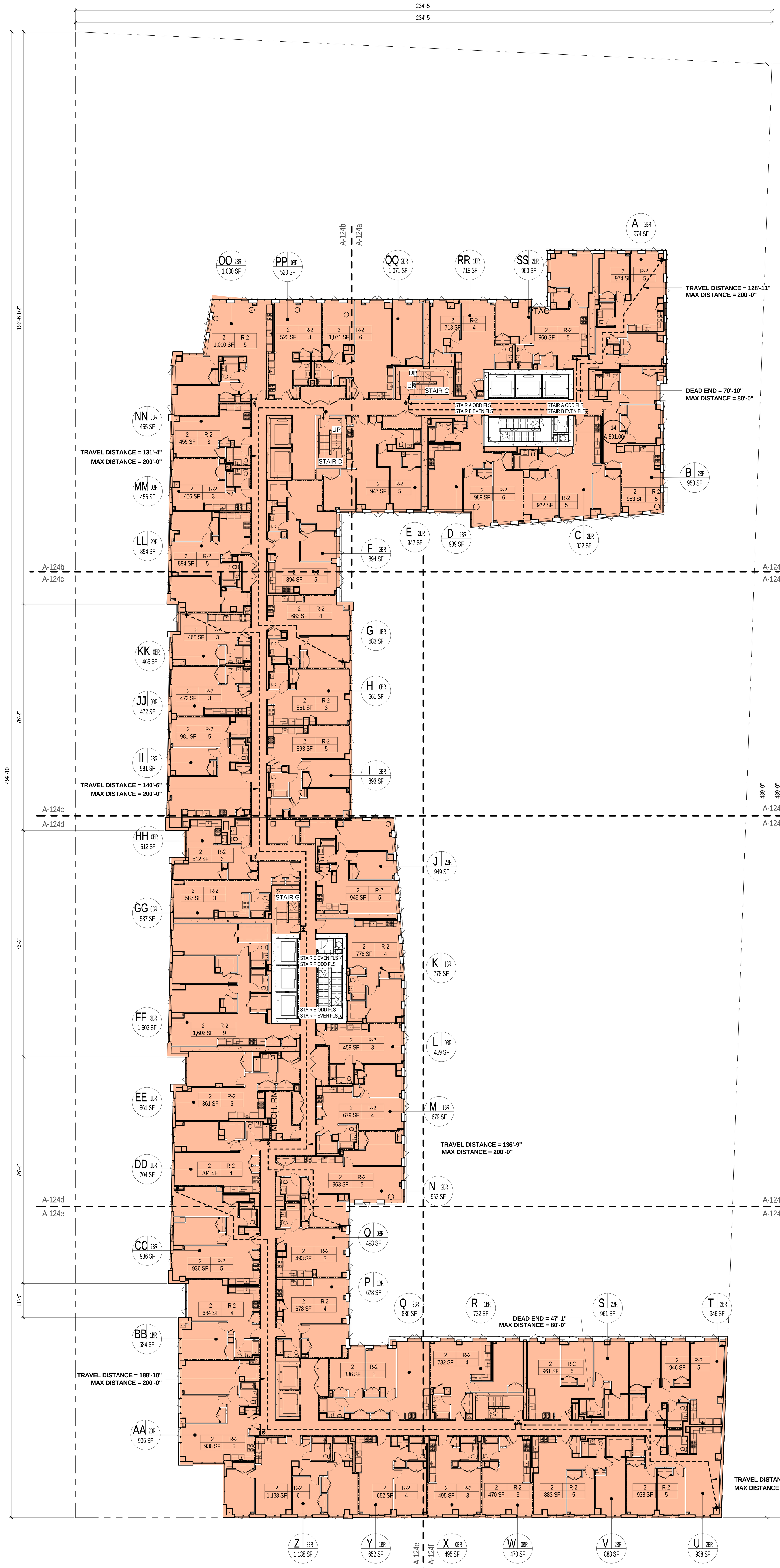


1 4TH - 6TH TYPICAL BASE FLOOR
1/16" = 1'-0"

		FIRE RATING	STAIR / DOOR CAPACITY (PER TABLE 1005.1)	REQUIRED WIDTH (PER. SEC. 1009.1)	PROVIDED WIDTH
STAIR C	STAIR	2 HR	0.3" PER OCCUPANT = 0.3" X 50 = 15.0"	44"	44"
	DOOR	1.5 HR	0.2" PER OCCUPANT = 0.2" X 50 = 10.0"	36"	36"
STAIR D	STAIR	2 HR	0.3" PER OCCUPANT = 0.3" X 50 = 15.0"	44"	44"
	DOOR	1.5 HR	0.2" PER OCCUPANT = 0.2" X 50 = 10.0"	36"	36"
STAIR G	STAIR	2 HR	0.3" PER OCCUPANT = 0.3" X 50 = 15.0"	44"	44"
	DOOR	1.5 HR	0.2" PER OCCUPANT = 0.2" X 50 = 10.0"	36"	36"

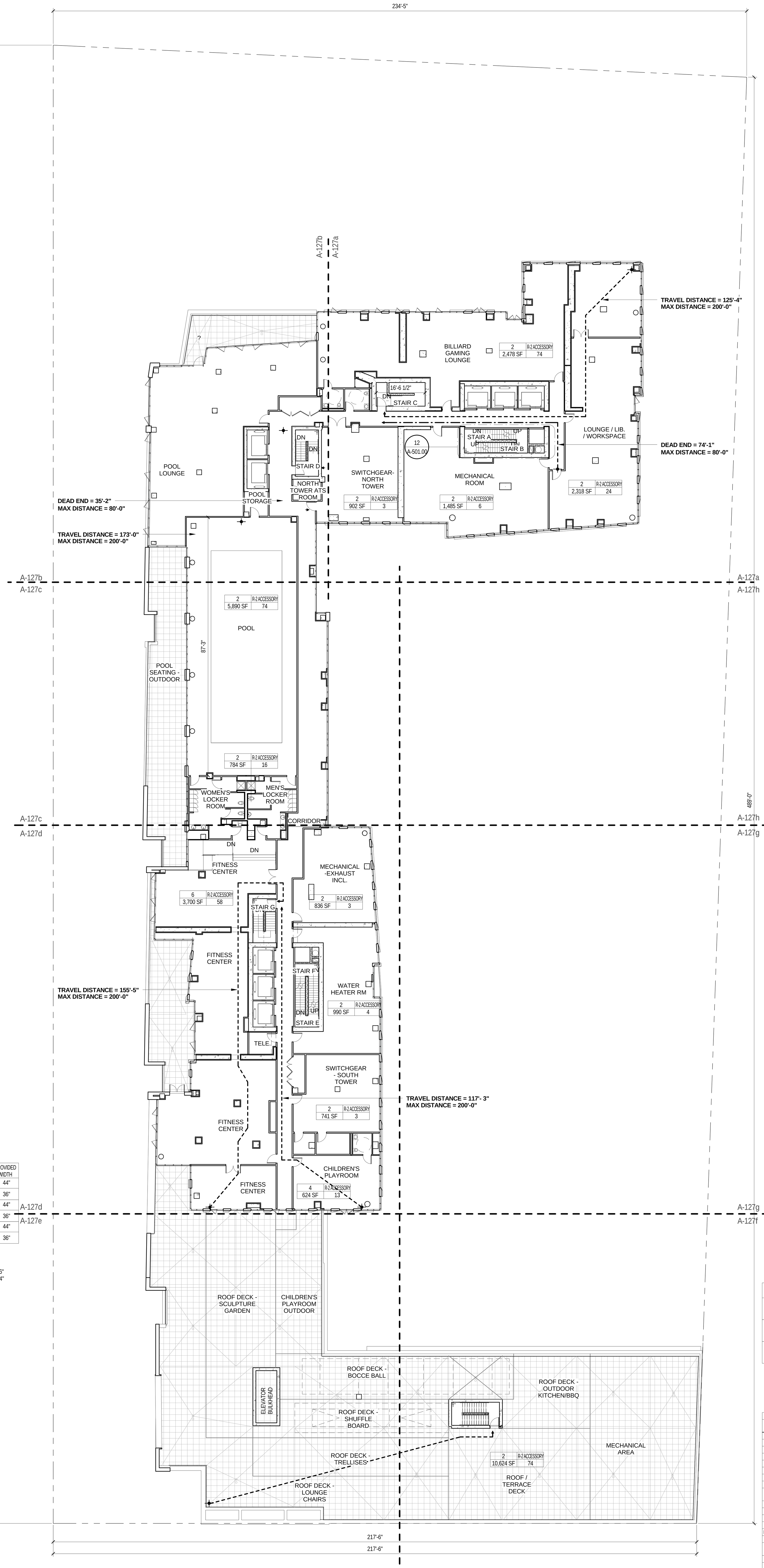
0.3" PER OCCUPANT = 0.3" X 50 = 15.0"

0.2" PER OCCUPANT = 0.2" X 50 = 10.0"

TOTAL STAIR REQ'D: 0.3" X 200 = 60.0" PROVIDED: 176"
TOTAL DOOR REQ'D: 0.2" X 200 = 40.0" PROVIDED: 144"

OCCUPANCY LOAD -4TH- 6TH LEVEL

SPACE	OCCUPANCY GROUP	AREA	AREA PER OCCUPANT	OCCUPANCY
APT. A	R-2	974 SF	200	5
APT. AA	R-2	936 SF	200	5
APT. B	R-2	953 SF	200	5
APT. BB	R-2	684 SF	200	4
APT. C	R-2	922 SF	200	5
APT. CC	R-2	936 SF	200	5
APT. D	R-2	989 SF	200	6
APT. DD	R-2	704 SF	200	4
APT. E	R-2	947 SF	200	5
APT. EE	R-2	861 SF	200	5
APT. F	R-2	894 SF	200	5
APT. FF	R-2	1,602 SF	200	9
APT. G	R-2	683 SF	200	4
APT. GG	R-2	587 SF	200	3
APT. H	R-2	561 SF	200	3
APT. HH	R-2	512 SF	200	3
APT. I	R-2	893 SF	200	5
APT. II	R-2	981 SF	200	5
APT. J	R-2	949 SF	200	5
APT. JJ	R-2	472 SF	200	3
APT. K	R-2	778 SF	200	4
APT. KK	R-2	465 SF	200	3
APT. L	R-2	459 SF	200	3
APT. LL	R-2	894 SF	200	5
APT. M	R-2	679 SF	200	4
APT. MM	R-2	456 SF	200	3
APT. N	R-2	963 SF	200	5
APT. NN	R-2	455 SF	200	3
APT. O	R-2	493 SF	200	3
APT. OO	R-2	1,000 SF	200	5
APT. P	R-2	678 SF	200	4
APT. PP	R-2	520 SF	200	3
APT. Q	R-2	886 SF	200	5
APT. QQ	R-2	1,071 SF	200	6
APT. R	R-2	732 SF	200	4
APT. RR	R-2	718 SF	200	4
APT. S	R-2	961 SF	200	5
APT. SS	R-2	960 SF	200	5
APT. T	R-2	946 SF	200	5
APT. U	R-2	938 SF	200	5
APT. V	R-2	883 SF	200	5
APT. W	R-2	470 SF	200	3
APT. X	R-2	495 SF	200	3
APT. Y	R-2	652 SF	200	4
APT. Z	R-2	1,138 SF	200	6
MECHANICAL RM	R-2 ACCESSORY	152 SF	300	1
Grand total: 46				200



2 7TH FLOOR - KEY PLAN
1/16" = 1'-0"

		FIRE RATING	STAIR / DOOR CAPACITY (PER TABLE 1005.1)	REQUIRED WIDTH (PER. SEC. 1009.1)	PROVIDED WIDTH
STAIR C	STAIR	2 HR	0.3" PER OCCUPANT = 0.3" X 90 = 27.0"	44"	44"
	DOOR	1.5 HR	0.2" PER OCCUPANT = 0.2" X 90 = 18.0"	36"	36"
STAIR D	STAIR	2 HR	0.3" PER OCCUPANT = 0.3" X 89 = 26.7"	44"	44"
	DOOR	1.5 HR	0.2" PER OCCUPANT = 0.2" X 89 = 17.8"	36"	36"
STAIR G	STAIR	2 HR	0.3" PER OCCUPANT = 0.3" X 89 = 26.7"	44"	44"
	DOOR	1.5 HR	0.2" PER OCCUPANT = 0.2" X 89 = 17.8"	36"	36"

0.2" PER OCCUPANT = 0.2" X 89 = 17.8"

TOTAL STAIR REQ'D: 0.3" X 357 =107.1" PROVIDED: 176"
TOTAL DOOR REQ'D: 0.2" X 357 = 71.4" PROVIDED: 144"

OCCUPANCY LOAD -7 TH FLOOR

SPACE	OCCUPANCY GROUP	AREA	AREA PER OCCUPANT	OCCUPANCY
		77 SF		
AMENITY - POOL / LOUNGE	R-2 ACCESSORY	5,890 SF	ACTUAL	74
BILLIARD GAMING LOUNGE	R-2 ACCESSORY	2,478 SF	ACTUAL	74
CHILDREN'S PLAYROOM	R-2 ACCESSORY	624 SF	50	13
ELECTRICAL ROOM_S	R-2 ACCESSORY	58 SF	300	1
FITNESS AREA	R-2 ACCESSORY	3,700 SF	ACTUAL	58
LOCKER ROOMS	R-2 ACCESSORY	784 SF	50	16
LOUNGE / LIB. / WORKSPACE	R-2 ACCESSORY	2,318 SF	100	24
MECHANICAL BOILER RM.	R-2 ACCESSORY	741 SF	300	3
MECHANICAL ROOM	R-2 ACCESSORY	1,485 SF	300	6
MECHANICAL. EXH FAN RM.	R-2 ACCESSORY	836 SF	300	3
NORTH TOWER ATS ROOM	R-2 ACCESSORY	78 SF	300	1
ROOF TERRACE @7 FLOOR	R-2 ACCESSORY	10,624 SF	ACTUAL	74
SOUTH TOWER ATS ROOM	R-2 ACCESSORY	90 SF	300	1
SWITCHGEAR- NORTH TOWER	R-2 ACCESSORY	902 SF	300	3
TELECOM	R-2 ACCESSORY	99 SF	300	1
WATER SERVICE ROOM	R-2 ACCESSORY	990 SF	300	4
Grand total: 17				356

77-87 Commercial Street

BROOKLYN, NY 11222

ARCHITECT: John A. Cetra, State of New York, Registered Architect, No. 018861, CetraRuddy Architecture DPC, 584 Broadway Suite 401, New York, NY 10012

CLIENT: Waterview at Greenpoint LLC, 4611 12th Avenue, Brooklyn, NY 11219

STRUCTURAL ENGINEER: WSP, 228 East 45th Street, 3rd Fl, New York, NY 10001, (212) 687-9888

MEP ENGINEER: Cosentini, A Tetra Tech Company, 2 Pennsylvania Plaza, 3rd Fl, New York, NY 10121, (212) 615-3726

GEOTECHNICAL ENGINEER: McLaren Engineering Group, 100 Snake Hill Road, West Nyack, NY 10994, (845) 353-6400, (845) 353-6509

LANDSCAPE ARCHITECT: MPFP LLC / M. Paul Friedberg & Partners, 41 East 11th Street, 3rd Fl, New York, NY 10003, (212) 477-6366, (212) 477-6548

LIGHTING DESIGNER: Cosentini, A Tetra Tech Company, 2 Pennsylvania Plaza, 3rd Fl, New York, NY 10121, (212) 615-3726

EXTERIOR WALL CONSULTANT: Simpson Gumpertz & Heger, 550 Seventh Avenue, 10th Fl, New York, NY 10018, (212) 271-7000, (212) 271-0111

NOTES

1. ALL APARTMENTS ARE PROVIDED WITH SMOKE / CARBON MONOXIDE DETECTORS, COMPLYING WITH N.Y.C. B.C. 908.7. SEE REFLECTED CEILING PLANS A-200 SERIES DWGS, FOR LOCATIONS.
2. ALL KITCHEN AND BATHROOMS TO COMPLY WITH ACCESSIBILITY REQUIREMENTS OF ICC 1003-TYPE A, FHA SPECIFICATION B, AND UFAS. SEE A-600 SERIES DRAWINGS.
3. ALL LOT-LINE WALLS SHALL BE 2-HR FIRE RATED
4. ALL LOT-LINE WINDOWS SHALL BE SPRINKLERED
5. ALL COMMON CORRIDOR WALLS SHALL BE 2-HR FIRE RATED; SEE PARTITION SCHEDULE G-004.
6. ALL COMMON CORRIDOR DOORS SHALL BE 1 1/2 HR FIRE RATED; SEE DOOR SCHEDULE G-006.
7. PROJECT DATUM 0'-0" = NAVD 1.095
8. REFER TO FINISH BOOK (APPENDIX A), SCHEDULES, AND SPECIFICATIONS FOR ALL PUBLIC SPACE FINISHES AND FURNISHINGS.
9. ALL DUCT SLAB OPENINGS ARE 2" LARGER THAN DUCT SIZE ON ALL FOUR SIDES
10. ALL UFAS COMPLIANT UNITS SHALL BE EQUIPPED WITH COMBINATION FIRE ALARM SPEAKER/STROBE

LEGEND

HPD TAG

HPD AREA = **1000 SF**

APARTMENT UNIT TAG

UNIT NAME — 37 — UNIT TYPE 1BR — UNIT AREA 1000 SF

OCCUPANCY LOAD CALCULATION FOR RESIDENTIAL USE AS PER TABLE 1004.1.2 IS 200 SF FLOOR AREA PER OCCUPANT.

UNIT OCCUPANCY TAG

ZONING USE GROUP (2) — OCCUPANCY GROUP (R-2) — GROSS AREA (OF UNIT LEVEL) (150 SF) — NUMBER OF ALLOWED OCCUPANTS (1)

- 2-HR FIRE RATED PARTITION OR WALL
- 1-HR FIRE RATED PARTITION OR WALL
- EGRESS TRAVEL PATH
- MAX DEAD END
- EXIT SIGN
- NON FREEZE WALL HYDRANT
- OD OVERFLOW DRAIN
- RD ROOF DRAIN
- FD FLOOR DRAIN
- F COMBINATION FIRE ALARM SPEAKER/STROBE
- TE TOILET EXHAUST
- SD C SMOKE DETECTOR/ CARBON MONOXIDE DETECTOR

DOB NOTE:

NOT IN APPLICATION

REGISTERED ARCHITECT JOHN CETRA No. 018861 STATE OF NEW YORK

2014.09.10 DOB SUBMISSION

CETRARUDDY

4TH - 6TH TYPICAL BASE & 7TH FLOOR - KEY PLANS

DRAWING NO. A-103.00

SCALE: As indicated

DOB PAGE NO. 37 OF 114

PROJECT: 1410.00

DOB FILE NO.

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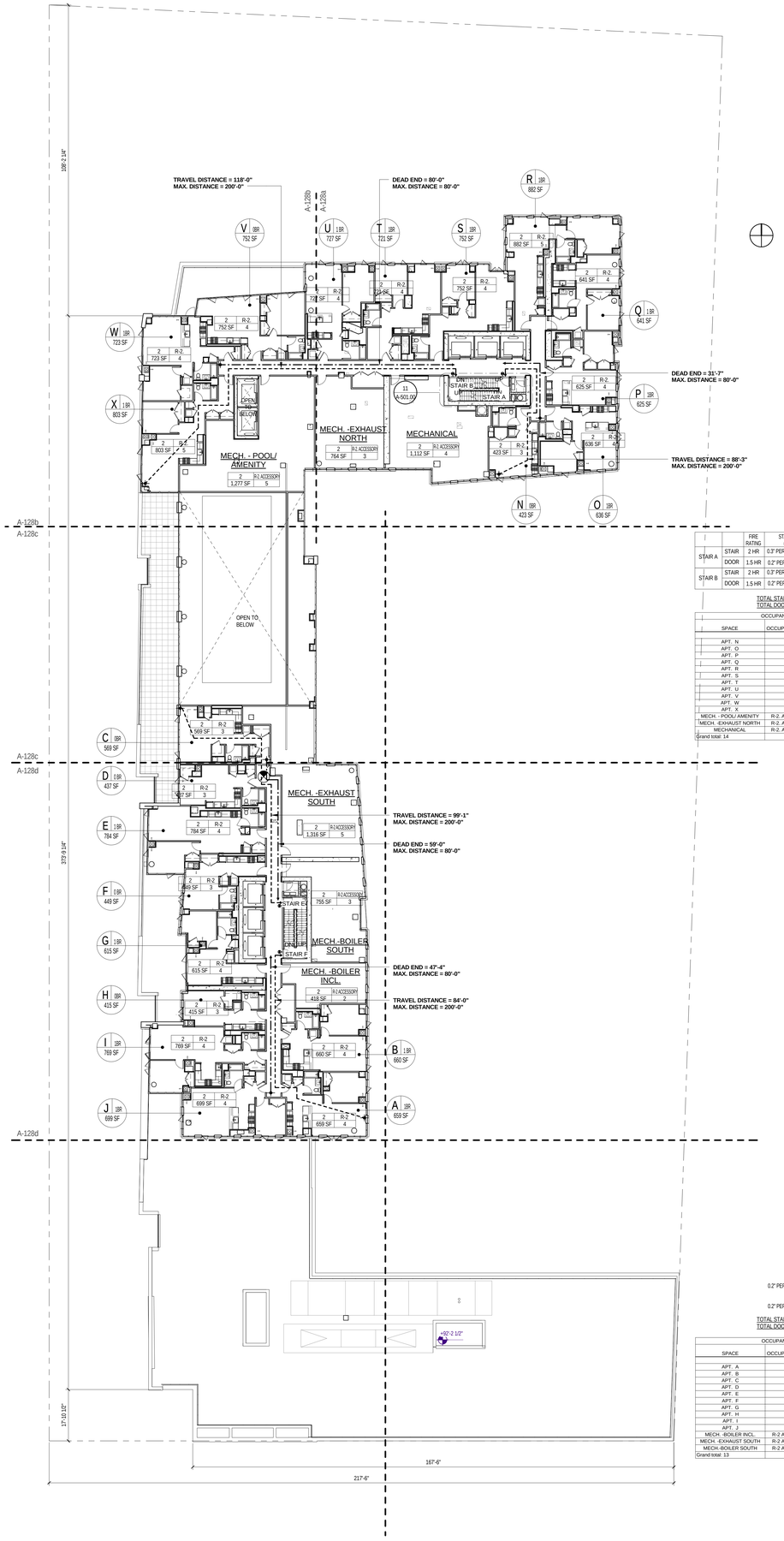


		FIRE RATING	STAIR / DOOR CAPACITY (PER TABLE 1005.1)	REQUIRED WIDTH (PER SEC. 1009.1)	PROVIDED WIDTH
STAIR A	STAIR	2 HR	0.3" PER OCCUPANT = 0.3" X 28 = 8.4"	44"	44"
	DOOR	1.5 HR	0.2" PER OCCUPANT = 0.2" X 28 = 5.6"	36"	36"
STAIR B	STAIR	2 HR	0.3" PER OCCUPANT = 0.3" X 29 = 8.7"	44"	44"
	DOOR	1.5 HR	0.2" PER OCCUPANT = 0.2" X 29 = 5.8"	36"	36"

TOTAL STAIR REQ'D: 0.3" X 57 = 17.1" PROVIDED: 88"
TOTAL DOOR REQ'D: 0.2" X 57 = 11.4" PROVIDED: 72"

OCCUPANCY LOAD -8 TH FLOOR_N				
SPACE	OCCUPANCY GROUP	AREA	AREA PER OCCUPANT	OCCUPANCY
APT. N	R-2.	423 SF	200	3
APT. O	R-2.	636 SF	200	4
APT. P	R-2.	625 SF	200	4
APT. Q	R-2.	641 SF	200	4
APT. R	R-2.	882 SF	200	5
APT. S	R-2.	752 SF	200	4
APT. T	R-2.	721 SF	200	4
APT. U	R-2.	727 SF	200	4
APT. V	R-2.	752 SF	200	4
APT. W	R-2.	723 SF	200	4
APT. X	R-2.	803 SF	200	5
MECH. - POOL/ AMENITY	R-2. ACCESSORY	1,277 SF	300	5
MECH. -EXHAUST NORTH	R-2. ACCESSORY	764 SF	300	3
MECHANICAL	R-2. ACCESSORY	1,112 SF	300	4
Grand total: 14				57

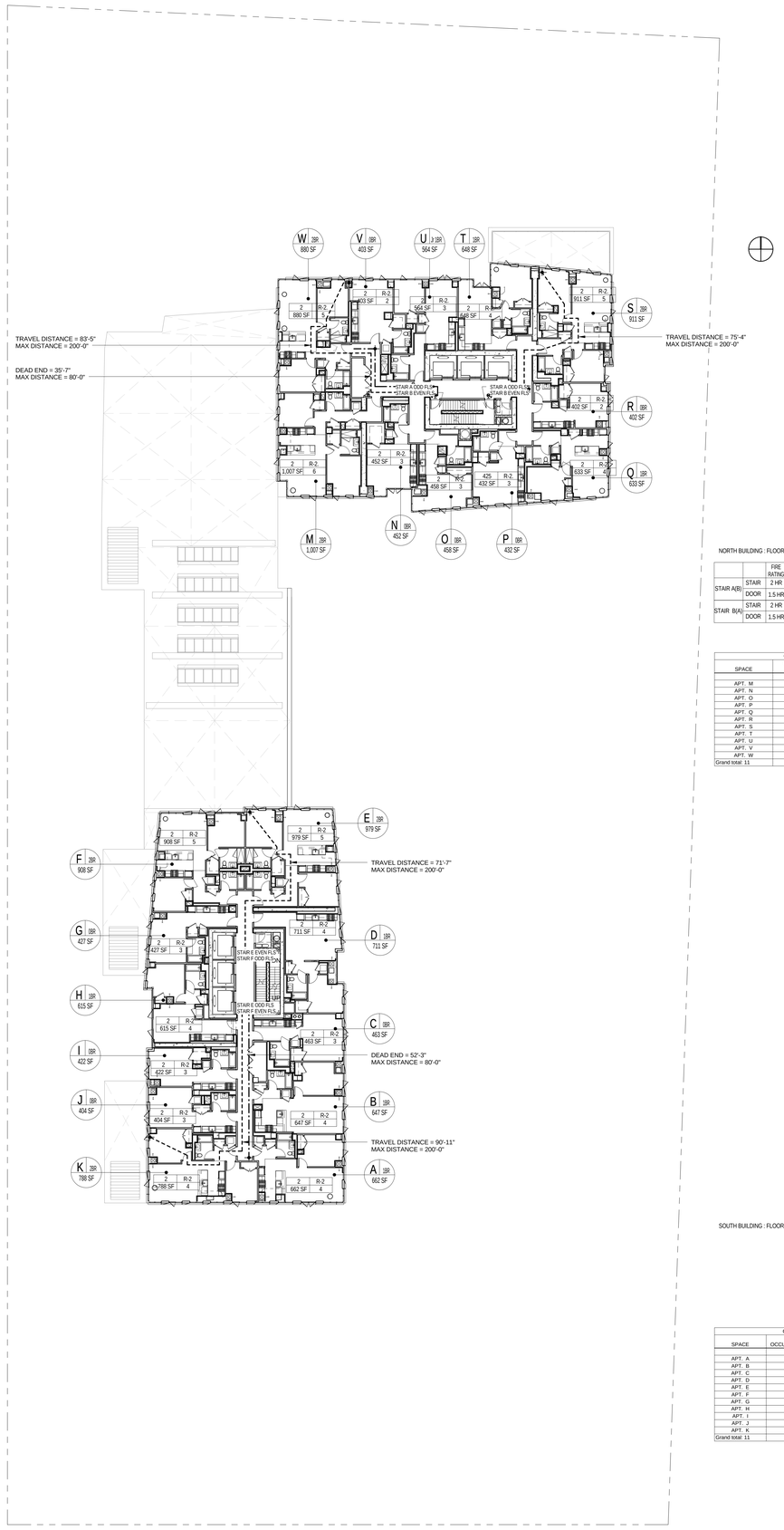
0.2" PER OCCUPANT = 0.2" X 23 = 4.6"

0.2" PER OCCUPANT = 0.2" X 23 = 4.6"

TOTAL STAIR REQ'D: 0.3" X 46 =13.8" PROVIDED: 88"
TOTAL DOOR REQ'D: 0.2" X 46 = 9.2" PROVIDED: 72"

OCCUPANCY LOAD -8 TH FLOOR_S				
SPACE	OCCUPANCY GROUP	AREA	AREA PER OCCUPANT	OCCUPANCY
APT. A	R-2	659 SF	200	4
APT. B	R-2	660 SF	200	4
APT. C	R-2	569 SF	200	3
APT. D	R-2	437 SF	200	3
APT. E	R-2	784 SF	200	4
APT. F	R-2	449 SF	200	3
APT. G	R-2	615 SF	200	4
APT. H	R-2	415 SF	200	3
APT. I	R-2	769 SF	200	4
APT. J	R-2	699 SF	200	4
MECH. -BOILER INCL.	R-2 ACCESSORY	418 SF	300	2
MECH. -EXHAUST SOUTH	R-2 ACCESSORY	1,316 SF	300	5
MECH.-BOILER SOUTH	R-2 ACCESSORY	755 SF	300	3
Grand total: 13				46

1 8TH FLOOR - KEY PLAN
1/16" = 1'-0"



NORTH BUILDING : FLOORS 9-23

		FIRE RATING	STAIR / DOOR CAPACITY (PER TABLE 1005.1)	REQUIRED WIDTH (PER SEC. 1009.1)	PROVIDED WIDTH
STAIR A(B)	STAIR	2 HR	0.3" PER OCCUPANT = 0.3" X 20 = 6.0"	44"	44"
	DOOR	1.5 HR	0.2" PER OCCUPANT = 0.2" X 20 = 4.0"	36"	36"
STAIR B(A)	STAIR	2 HR	0.3" PER OCCUPANT = 0.3" X 20 =6.0"	44"	44"
	DOOR	1.5 HR	0.2" PER OCCUPANT = 0.2" X 20 = 4.0"	36"	36"

TOTAL STAIR REQ'D: 0.3" X 40 = 12.0" PROVIDED: 88"
TOTAL DOOR REQ'D: 0.2" X 40 = 8.0" PROVIDED: 72"

OCCUPANCY LOAD -9-23RD_NORTH				
SPACE	OCCUPANCY GROUP	AREA	AREA PER OCCUPANT	OCCUPANCY
APT. M	R-2	1,007 SF	200	6
APT. N	R-2	452 SF	200	3
APT. O	R-2	458 SF	200	3
APT. P	R-2	432 SF	200	3
APT. Q	R-2	633 SF	200	4
APT. R	R-2	402 SF	200	2
APT. S	R-2	911 SF	200	5
APT. T	R-2	648 SF	200	4
APT. U	R-2	564 SF	200	3
APT. V	R-2	403 SF	200	2
APT. W	R-2	880 SF	200	5
Grand total: 11				40

SOUTH BUILDING : FLOORS 9-18

0.2" PER OCCUPANT = 0.2" X 21 = 4.2"

0.2" PER OCCUPANT = 0.2" X 21 = 4.2"

TOTAL STAIR REQ'D: 0.3" X 42 = 12.6" PROVIDED: 88"
TOTAL DOOR REQ'D: 0.2" X 42 = 8.4" PROVIDED: 72"

OCCUPANCY LOAD -9-18 TH_SOUTH				
SPACE	OCCUPANCY GROUP	AREA	AREA PER OCCUPANT	OCCUPANCY
APT. A	R-2	662 SF	200	4
APT. B	R-2	647 SF	200	4
APT. C	R-2	463 SF	200	3
APT. D	R-2	711 SF	200	4
APT. E	R-2	979 SF	200	5
APT. F	R-2	908 SF	200	5
APT. G	R-2	427 SF	200	3
APT. H	R-2	615 SF	200	4
APT. I	R-2	422 SF	200	3
APT. J	R-2	404 SF	200	3
APT. K	R-2	788 SF	200	4
Grand total: 11				42

2 TYPICAL LOWER LEVEL TOWER _KEY PLAN
1/16" = 1'-0"

77-87 Commercial Street

BROOKLYN, NY 11222

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Registered Architect
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LEED/SUSTAINABILITY CONSULT
Simpson Gumpertz & Heger
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New York, NY 10018

(212) 271-7000
(212) 271-0111

NOTES

1. ALL APARTMENTS ARE PROVIDED WITH SMOKE / CARBON MONOXIDE DETECTORS, COMPLYING WITH N.Y.C. B.C. 908.7. SEE REFLECTED CEILING PLANS/A-200 SERIES DWGS. FOR LOCATIONS.
2. ALL KITCHEN AND BATHROOMS TO COMPLY WITH ACCESSIBILITY REQUIREMENTS OF ICC 1003-TYPE A, FHA SPECIFICATION B, AND UFAS. SEE A-600 SERIES DRAWINGS.
3. ALL LOT-LINE WALLS SHALL BE 2-HR FIRE RATED
4. ALL LOT-LINE WINDOWS SHALL BE SPRINKLERED
5. ALL COMMON CORRIDOR WALLS SHALL BE 2-HR FIRE RATED; SEE PARTITION SCHEDULE G-004.
6. ALL COMMON CORRIDOR DOORS SHALL BE 1 1/2 HR FIRE RATED; SEE DOOR SCHEDULE G-006.
7. PROJECT DATUM 0'-0" = NAVD 1.095
8. REFER TO FINISH BOOK (APPENDIX A), SCHEDULES, AND SPECIFICATIONS FOR ALL PUBLIC SPACE FINISHES AND FURNISHINGS.
9. ALL DUCT SLAB OPENINGS ARE 2" LARGER THAN DUCT SIZE ON ALL FOUR SIDES
10. ALL UFAS COMPLIANT UNITS SHALL BE EQUIPPED WITH COMBINATION FIRE ALARM SPEAKER/STROBE

LEGEND

HPD TAG

HPD AREA = **1000 SF**

APARTMENT UNIT TAG

UNIT NAME — 37 1BR 1000 SF — UNIT TYPE — UNIT AREA

OCCUPANCY LOAD CALCULATION FOR RESIDENTIAL USE AS PER TABLE 1004.1.2 IS 200 SF FLOOR AREA PER OCCUPANT.

UNIT OCCUPANCY TAG

ZONING USE GROUP — 2 R-2 150 SF 1 — OCCUPANCY GROUP
GROSS AREA (OF UNIT LEVEL) — NUMBER OF ALLOWED OCCUPANTS

- 2-HR FIRE RATED PARTITION OR WALL
- 1-HR FIRE RATED PARTITION OR WALL
- EGRESS TRAVEL PATH
- MAX DEAD END
- EXIT SIGN
- NON FREEZE WALL HYDRANT
- OVERFLOW DRAIN
- ROOF DRAIN
- FLOOR DRAIN
- COMBINATION FIRE ALARM SPEAKER/STROBE
- TOILET EXHAUST
- SMOKE DETECTOR/ CARBON MONOXIDE DETECTOR

DOB NOTE:

NOT IN APPLICATION

REGISTERED ARCHITECT JOHN A. CETRA No. 018861 STATE OF NEW YORK

2014.09.10	DOB SUBMISSION

CETRARUDDY

8TH AND TYPICAL LOWER TOWER FLOOR - KEY PLANS

DRAWING NO. **A-104.00**

SCALE	As indicated	DOB PAGE NO.	38 OF 114
PROJECT NO.	1410.00	DOB JOB NO.	

CETRARUDDY ARCHITECTURE DPC
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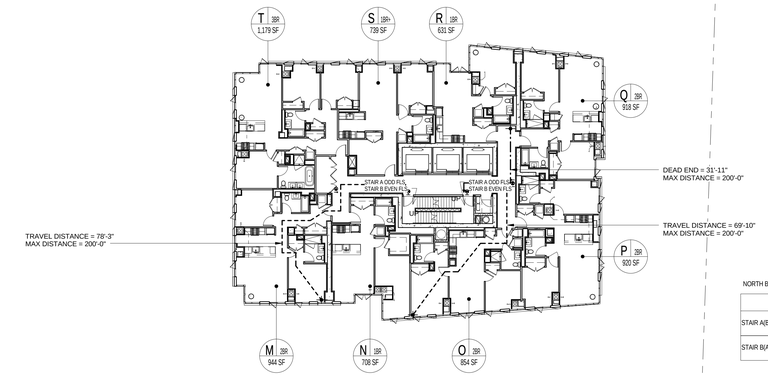
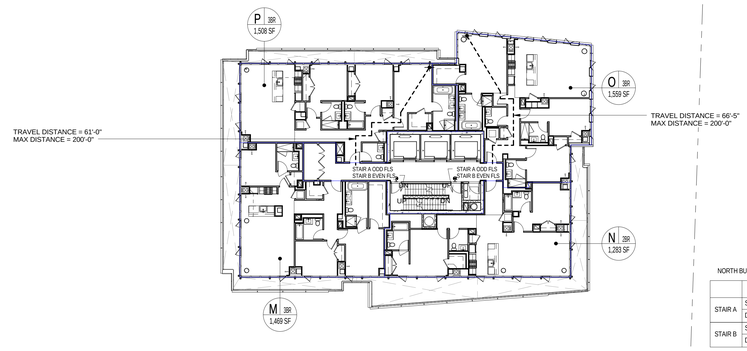


NORTH BUILDING : FLOORS 24-36

		FIRE RATING	STAIR / DOOR CAPACITY (PER TABLE 1005.1)	REQUIRED WIDTH (PER. SEC. 1009.1)	PROVIDED WIDTH
STAIR A(B)	STAIR	2 HR	0.3" PER OCCUPANT = 0.3" X 19 = 5.7"	44"	44"
	DOOR	1.5 HR	0.2" PER OCCUPANT = 0.2" X 19 = 3.8"	36"	36"
STAIR B(A)	STAIR	2 HR	0.3" PER OCCUPANT = 0.3" X 19 = 5.7"	44"	44"
	DOOR	1.5 HR	0.2" PER OCCUPANT = 0.2" X 19 = 3.8"	36"	36"

TOTAL STAIR REQ'D: 0.3" X 38 = 11.4" PROVIDED: 88"
TOTAL DOOR REQ'D: 0.2" X 38 = 7.6" PROVIDED: 72"

OCCUPANCY LOAD -24-36TH_NORTH				
SPACE	OCCUPANCY GROUP	AREA	AREA PER OCCUPANT	OCCUPANCY
APT. M	R-2	944 SF	200	5
APT. N	R-2	708 SF	200	4
APT. O	R-2	854 SF	200	5
APT. P	R-2	920 SF	200	5
APT. Q	R-2	918 SF	200	5
APT. R	R-2	631 SF	200	4
APT. S	R-2	739 SF	200	4
APT. T	R-2	1,179 SF	200	6
Grand total: 8				38

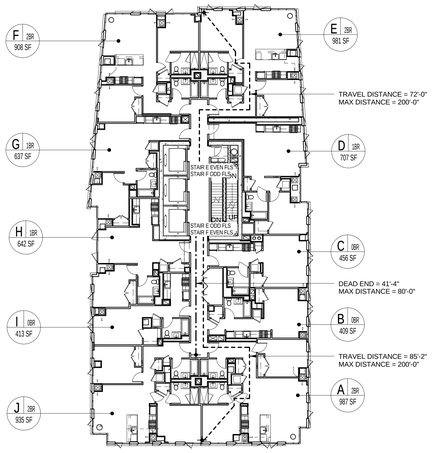


NORTH BUILDING : FLOORS 37-40

		FIRE RATING	STAIR / DOOR CAPACITY (PER TABLE 1005.1)	REQUIRED WIDTH (PER. SEC. 1009.1)	PROVIDED WIDTH
STAIR A	STAIR	2 HR	0.3" PER OCCUPANT = 0.3" X 15 = 4.5"	44"	44"
	DOOR	1.5 HR	0.2" PER OCCUPANT = 0.2" X 15 = 3.0"	36"	36"
STAIR B	STAIR	2 HR	0.3" PER OCCUPANT = 0.3" X 16 = 4.8"	44"	44"
	DOOR	1.5 HR	0.2" PER OCCUPANT = 0.2" X 16 = 3.2"	36"	36"

TOTAL STAIR REQ'D: 0.3" X 31 = 9.3" PROVIDED: 88"
TOTAL DOOR REQ'D: 0.2" X 31 = 6.2" PROVIDED: 72"

OCCUPANCY LOAD - 37-40 TH_PH_NORTH				
SPACE	OCCUPANCY GROUP	AREA	AREA PER OCCUPANT	OCCUPANCY
APT. M	R-2	1,469 SF	200	8
APT. N	R-2	1,283 SF	200	7
APT. O	R-2	1,559 SF	200	8
APT. P	R-2	1,508 SF	200	8
Grand total: 4				31



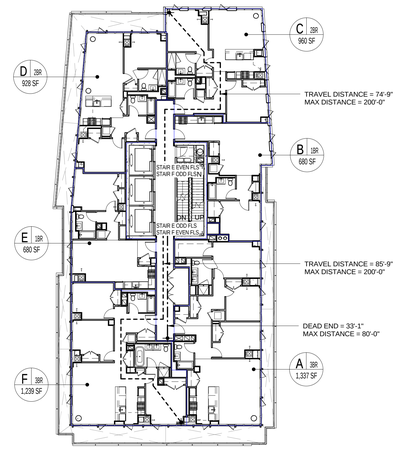
SOUTH BUILDING : FLOORS 19-26

0.2" PER OCCUPANT = 0.2" X 20 = 4.0"

0.2" PER OCCUPANT = 0.2" X 20 = 4.0"

TOTAL STAIR REQ'D: 0.3" X 40 = 12" PROVIDED: 88"
TOTAL DOOR REQ'D: 0.2" X 40 = 8" PROVIDED: 72"

OCCUPANCY LOAD - 19-26 TH_ SOUTH				
SPACE	OCCUPANCY GROUP	AREA	AREA PER OCCUPANT	OCCUPANCY
APT. A	R-2	987 SF	200	5
APT. B	R-2	409 SF	200	3
APT. C	R-2	456 SF	200	3
APT. D	R-2	707 SF	200	4
APT. E	R-2	981 SF	200	5
APT. F	R-2	908 SF	200	4
APT. G	R-2	637 SF	200	4
APT. H	R-2	642 SF	200	4
APT. I	R-2	413 SF	200	3
APT. J	R-2	935 SF	200	5
Grand total: 10				40



SOUTH BUILDING : FLOORS 27-30

0.2" PER OCCUPANT = 0.2" X 16 = 3.2"

0.2" PER OCCUPANT = 0.2" X 16 = 3.2"

TOTAL STAIR REQ'D: 0.3" X 32 = 9.6" PROVIDED: 88"
TOTAL DOOR REQ'D: 0.2" X 32 = 6.4" PROVIDED: 72"

OCCUPANCY LOAD - 27-30 TH_PH_SOUTH				
SPACE	OCCUPANCY GROUP	AREA	AREA PER OCCUPANT	OCCUPANCY
APT. A	R-2	1,337 SF	200	7
APT. B	R-2	680 SF	200	4
APT. C	R-2	960 SF	200	5
APT. D	R-2	928 SF	200	5
APT. E	R-2	680 SF	200	4
APT. F	R-2	1,239 SF	200	7
Grand total: 6				32

1 TYPICAL UPPER LEVEL TOWER _KEY PLAN
1/16" = 1'-0"

2 TYPICAL PENTHOUSE LEVEL _KEY PLAN
1/16" = 1'-0"

77-87 Commercial Street

BROOKLYN, NY 11222

ARCHITECT	John A. Cetra State of New York Registered Architect No. 018861 CetraRuddy Architecture DPC 584 Broadway Suite 401 New York, NY 10012	SURVEY	Waterview at Greenpoint LLC 4611 12th Avenue Brooklyn, NY 11219
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GEOTECHNICAL ENGINEER	McLaren Engineering Group 100 Snake Hill Road West Nyack, NY 10994 (845) 353-6400 (845) 353-6509	LANDSCAPE ARCHITECT	MPFP LLC / M. Paul Friedberg & Partners 41 East 11th Street, 3rd Fl New York, NY 10003 (212) 477-6366 (212) 477-6548
LIGHTING DESIGNER	Cosentini A Tetra Tech Company 2 Pennsylvania Plaza, 3rd Fl New York, NY 10121 (212) 615-3726	LEED/GREEN CONSULTANT	Simpson Gumpertz & Heger 500 Seventh Avenue, 10th Fl New York, NY 10018 (212) 271-7000 (212) 271-0111

NOTES

1. ALL APARTMENTS ARE PROVIDED WITH SMOKE / CARBON MONOXIDE DETECTORS, COMPLYING WITH N.Y.C. B.C. 908.7. SEE REFLECTED CEILING PLANS/A-200 SERIES DWGS. FOR LOCATIONS.
2. ALL KITCHEN AND BATHROOMS TO COMPLY WITH ACCESSIBILITY REQUIREMENTS OF ICC 1003-TYPE A, FHA SPECIFICATION B, AND UFAS. SEE A-600 SERIES DRAWINGS.
3. ALL LOT-LINE WALLS SHALL BE 2-HR FIRE RATED
4. ALL LOT-LINE WINDOWS SHALL BE SPRINKLERED
5. ALL COMMON CORRIDOR WALLS SHALL BE 2-HR FIRE RATED; SEE PARTITION SCHEDULE G-004.
6. ALL COMMON CORRIDOR DOORS SHALL BE 1 1/2 HR FIRE RATED; SEE DOOR SCHEDULE G-006.
7. PROJECT DATUM 0'-0" = NAVD 1.095
8. REFER TO FINISH BOOK (APPENDIX A), SCHEDULES, AND SPECIFICATIONS FOR ALL PUBLIC SPACE FINISHES AND FURNISHINGS.
9. ALL DUCT SLAB OPENINGS ARE 2" LARGER THAN DUCT SIZE ON ALL FOUR SIDES
10. ALL UFAS COMPLIANT UNITS SHALL BE EQUIPPED WITH COMBINATION FIRE ALARM SPEAKER/STROBE

LEGEND

HPD TAG

HPD AREA = **1000 SF**

APARTMENT UNIT TAG

UNIT NAME — 37 | 1BR | 1000 SF — UNIT TYPE — UNIT AREA

OCCUPANCY LOAD CALCULATION FOR RESIDENTIAL USE AS PER TABLE 1004.1.2 IS 200 SF FLOOR AREA PER OCCUPANT.

UNIT OCCUPANCY TAG

ZONING USE GROUP — OCCUPANCY GROUP — 2 | R-2
GROSS AREA (OF UNIT LEVEL) — 150 SF | 1 — NUMBER OF ALLOWED OCCUPANTS

- 2-HR FIRE RATED PARTITION OR WALL
- 1-HR FIRE RATED PARTITION OR WALL
- EGRESS TRAVEL PATH
- MAX DEAD END
- EXIT SIGN
- NON FREEZE WALL HYDRANT
- OD OVERFLOW DRAIN
- RD ROOF DRAIN
- FD FLOOR DRAIN
- F COMBINATION FIRE ALARM SPEAKER/STROBE
- TE TOILET EXHAUST
- SD C SMOKE DETECTOR/ CARBON MONOXIDE DETECTOR

DOB NOTE:

NOT IN APPLICATION

REGISTERED ARCHITECT JOHN A. CETRA No. 018861 STATE OF NEW YORK

2014.09.10	DOB SUBMISSION

CETRARUDDY

TYPICAL UPPER TOWER AND PENTHOUSE FLOOR - KEY PLANS

DRAWING NO. **A-105.00**

SCALE: As indicated

PROJECT: 1410.00

DOB PLAN NO.

CETRARUDDY **ARCHITECTURE DPC**
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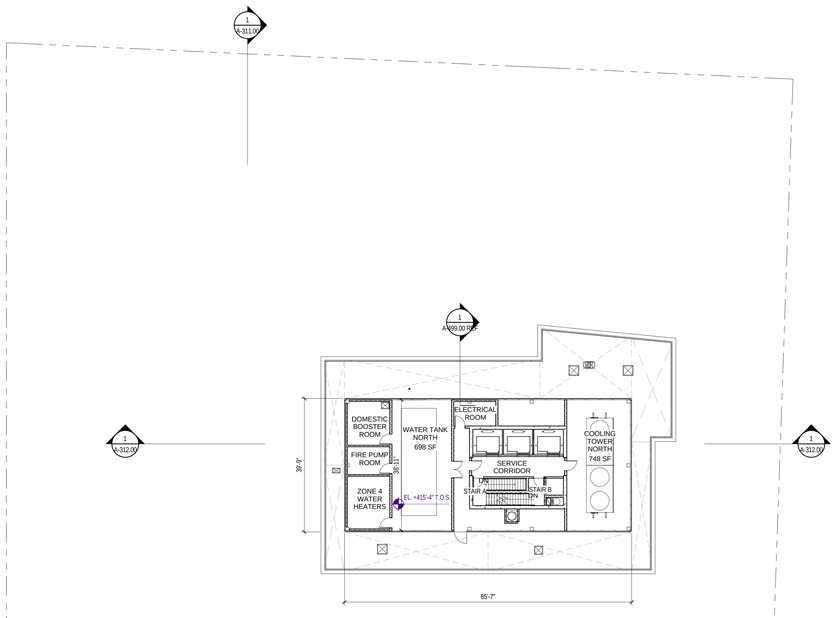


0.3" PER OCCUPANT = 0.3" X 5 = 1.5"

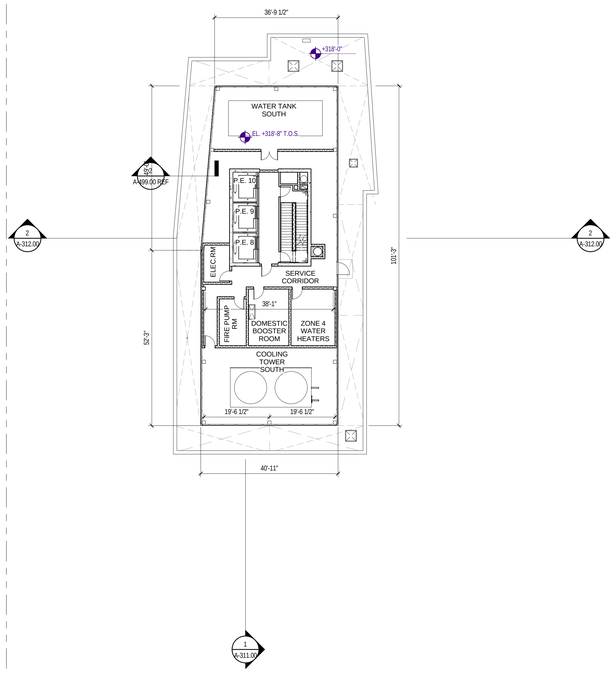
0.2" PER OCCUPANT = 0.2" X 5 = 1.0"

STAIR B	STAIR	2 HR	0.2" PER OCCUPANT = 0.2" X 5 = 1.0"	44"	44"
	DOOR	1.5 HR	0.2" PER OCCUPANT = 0.2" X 5 = 1.0"	36"	36"

TOTAL STAIR REQ'D: 0.3" X 10 = 3.0" PROVIDED: 88"
TOTAL DOOR REQ'D: 0.2" X 10 = 2.0" PROVIDED: 72"

OCCUPANCY LOAD -MECH. LEVEL 1_NORTH

SPACE	OCCUPANCY GROUP	AREA	AREA PER OCCUPANT	OCCUPANCY
WATER TANK NORTH	R-2 ACCESSORY	698 SF	300	3
COOLING TOWER NORTH	R-2 ACCESSORY	748 SF	300	3
ZONE 4 WATER HEATERS	R-2 ACCESSORY	198 SF	300	1
FIRE PUMP ROOM	R-2 ACCESSORY	104 SF	300	1
DOMESTIC BOOSTER ROOM	R-2 ACCESSORY	164 SF	300	1
ELECTRICAL ROOM	R-2 ACCESSORY	91 SF	300	1
Grand total				10



0.3" PER OCCUPANT = 0.3" X 6 = 1.8"

0.2" PER OCCUPANT = 0.2" X 6 = 1.2"

0.3" PER OCCUPANT = 0.3" X 5 = 1.5"

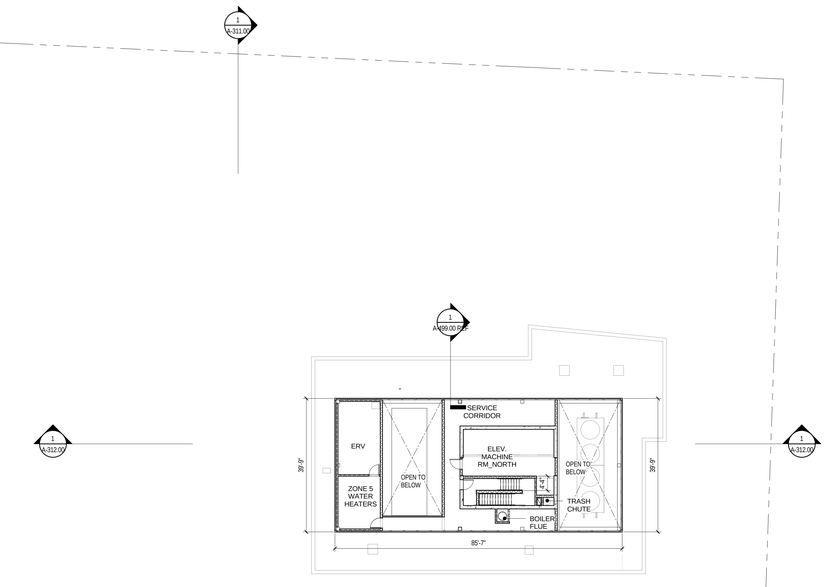
0.2" PER OCCUPANT = 0.2" X 5 = 1.0"

TOTAL STAIR REQ'D: 0.3" X 11 = 3.3" PROVIDED: 88"
TOTAL DOOR REQ'D: 0.2" X 11 = 2.2" PROVIDED: 72"

OCCUPANCY LOAD -MECH. LEVEL 1_SOUTH

SPACE	OCCUPANCY GROUP	AREA	AREA PER OCCUPANT	OCCUPANCY
DOMESTIC BOOSTER ROOM	R-2 ACCESSORY	203 SF	300	1
ZONE 4 WATER HEATERS	R-2 ACCESSORY	221 SF	300	1
FIRE PUMP RM	R-2 ACCESSORY	111 SF	300	1
ELEC RM	R-2 ACCESSORY	85 SF	300	1
WATER TANK SOUTH	R-2 ACCESSORY	689 SF	300	3
COOLING TOWER SOUTH	R-2 ACCESSORY	923 SF	300	4
Grand total				11

1 ROOF / MECHANICAL LEVEL 1 _ KEY PLAN
1/16" = 1'-0"

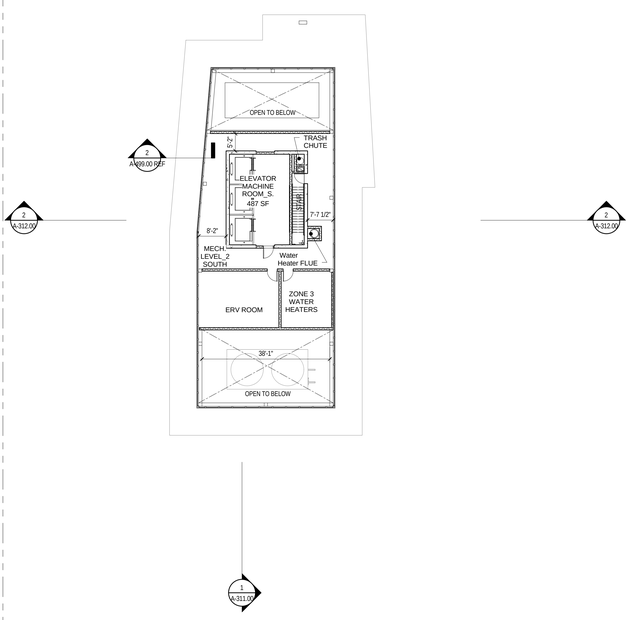


0.32" PER OCCUPANT = 0.3" X 4 = 1.2"

0.2" PER OCCUPANT = 0.2" X 4 = 0.8"

OCCUPANCY LOAD -MECH. LEVEL 2_NORTH

SPACE	OCCUPANCY GROUP	AREA	AREA PER OCCUPANT	OCCUPANCY
ELEV. MACHINE RM_NORTH	R-2 ACCESSORY	409 SF	300	2
ZONE 5 WATER HEATERS	R-2 ACCESSORY	198 SF	300	1
ERV	R-2 ACCESSORY	274 SF	300	1
Grand total				4



0.2" PER OCCUPANT = 0.2" X 8 = 2.4"

0.2" PER OCCUPANT = 0.2" X 8 = 1.6"

OCCUPANCY LOAD -MECH. LEVEL 2_SOUTH

SPACE	OCCUPANCY GROUP	AREA	AREA PER OCCUPANT	OCCUPANCY
ELEVATOR MACHINE ROOM_S.	R-2 ACCESSORY	487 SF	300	2
ERV ROOM	R-2 ACCESSORY	406 SF	300	1
ZONE 3 WATER HEATERS	R-2 ACCESSORY	253 SF	300	2
MECH. LEVEL_2 SOUTH	R-2 ACCESSORY	874 SF	300	3
Grand total				8

2 MECHANICAL LEVEL 2 _ KEY PLAN
1/16" = 1'-0"

77-87 Commercial Street

BROOKLYN, NY 11222

ARCHITECT	John A. Cetra State of New York Registered Architect No. 018861 CetraRuddy Architecture DPC 584 Broadway Suite 401 New York, NY 10012	OWNER	Waterview at Greenpoint LLC 4611 12th Avenue Brooklyn, NY 11219
STRUCTURAL ENGINEER	WSP 228 East 45th Street, 3rd Fl New York, NY 10001 (212) 687-9888	MEP ENGINEER	Cosentini A Tetra Tech Company 2 Pennsylvania Plaza, 3rd Fl New York, NY 10121 (212) 615-3726
GEOTECHNICAL ENGINEER	McLaren Engineering Group 100 Snake Hill Road West Nyack, NY 10994 (845) 353-6400 (845) 353-6509	LANDSCAPE ARCHITECT	MPFP LLC / M. Paul Friedberg & Partners 41 East 11th Street, 3rd Fl New York, NY 10003 (212) 477-6366 (212) 477-6548
LIGHTING DESIGNER	Cosentini A Tetra Tech Company 2 Pennsylvania Plaza, 3rd Fl New York, NY 10121 (212) 615-3726	LISTED FIRM (CIVIL ENG)	Simpson Gumpertz & Heger 500 Seventh Avenue, 10th Fl New York, NY 10018 (212) 271-7000 (212) 271-0111

NOTES

1. ALL APARTMENTS ARE PROVIDED WITH SMOKE / CARBON MONOXIDE DETECTORS, COMPLYING WITH N.Y.C. B.C. 908.7. SEE REFLECTED CEILING PLANS A-200 SERIES DWGS, FOR LOCATIONS.
2. ALL KITCHEN AND BATHROOMS TO COMPLY WITH ACCESSIBILITY REQUIREMENTS OF ICC 1003-TYPE A, FHA SPECIFICATION B, AND UFAS. SEE A-600 SERIES DRAWINGS.
3. ALL LOT-LINE WALLS SHALL BE 2-HR FIRE RATED
4. ALL LOT-LINE WINDOWS SHALL BE SPRINKLERED
5. ALL COMMON CORRIDOR WALLS SHALL BE 2-HR FIRE RATED; SEE PARTITION SCHEDULE G-004.
6. ALL COMMON CORRIDOR DOORS SHALL BE 1 1/2 HR FIRE RATED; SEE DOOR SCHEDULE G-006.
7. PROJECT DATUM 0'-0" = NAVD 1.095
8. REFER TO FINISH BOOK (APPENDIX A), SCHEDULES, AND SPECIFICATIONS FOR ALL PUBLIC SPACE FINISHES AND FURNISHINGS.
9. ALL DUCT SLAB OPENINGS ARE 2" LARGER THAN DUCT SIZE ON ALL FOUR SIDES.
10. ALL UFAS COMPLIANT UNITS SHALL BE EQUIPPED WITH COMBINATION FIRE ALARM SPEAKER/STROBE

LEGEND

HPD TAG

HPD AREA = **1000 SF**

APARTMENT UNIT TAG

UNIT NAME — 37 — 198 — 1000 SF — UNIT TYPE — UNIT AREA

OCCUPANCY LOAD CALCULATION FOR RESIDENTIAL USE AS PER TABLE 1004.1.2 IS 200 SF FLOOR AREA PER OCCUPANT.

UNIT OCCUPANCY TAG

ZONING USE GROUP — 2 — R-2 — 150 SF — 1 — OCCUPANCY GROUP — GROSS AREA (OF UNIT LEVEL) — NUMBER OF ALLOWED OCCUPANTS

2-HR FIRE RATED PARTITION OR WALL

1-HR FIRE RATED PARTITION OR WALL

EGRESS TRAVEL PATH

MAX DEAD END

EXIT SIGN

NON FREEZE WALL HYDRANT

OD OVERFLOW DRAIN

RD ROOF DRAIN

FD FLOOR DRAIN

F COMBINATION FIRE ALARM SPEAKER/STROBE

TE TOILET EXHAUST

SD/C SMOKE DETECTOR/ CARBON MONOXIDE DETECTOR

DOB NOTE:

NOT IN APPLICATION

REGISTERED ARCHITECT JOHN A. CETRA No. 018861 STATE OF NEW YORK

2014.09.10 DOB SUBMISSION

CETRARUDDY

ROOF AND MECHANICAL LEVELS - KEY PLANS

DRAWING NO. **A-106.00**

SCALE: As indicated

DOB PAGE NO.: 40 OF 114

PROJECT NO.: 1410.00

DOB FILE NO.:

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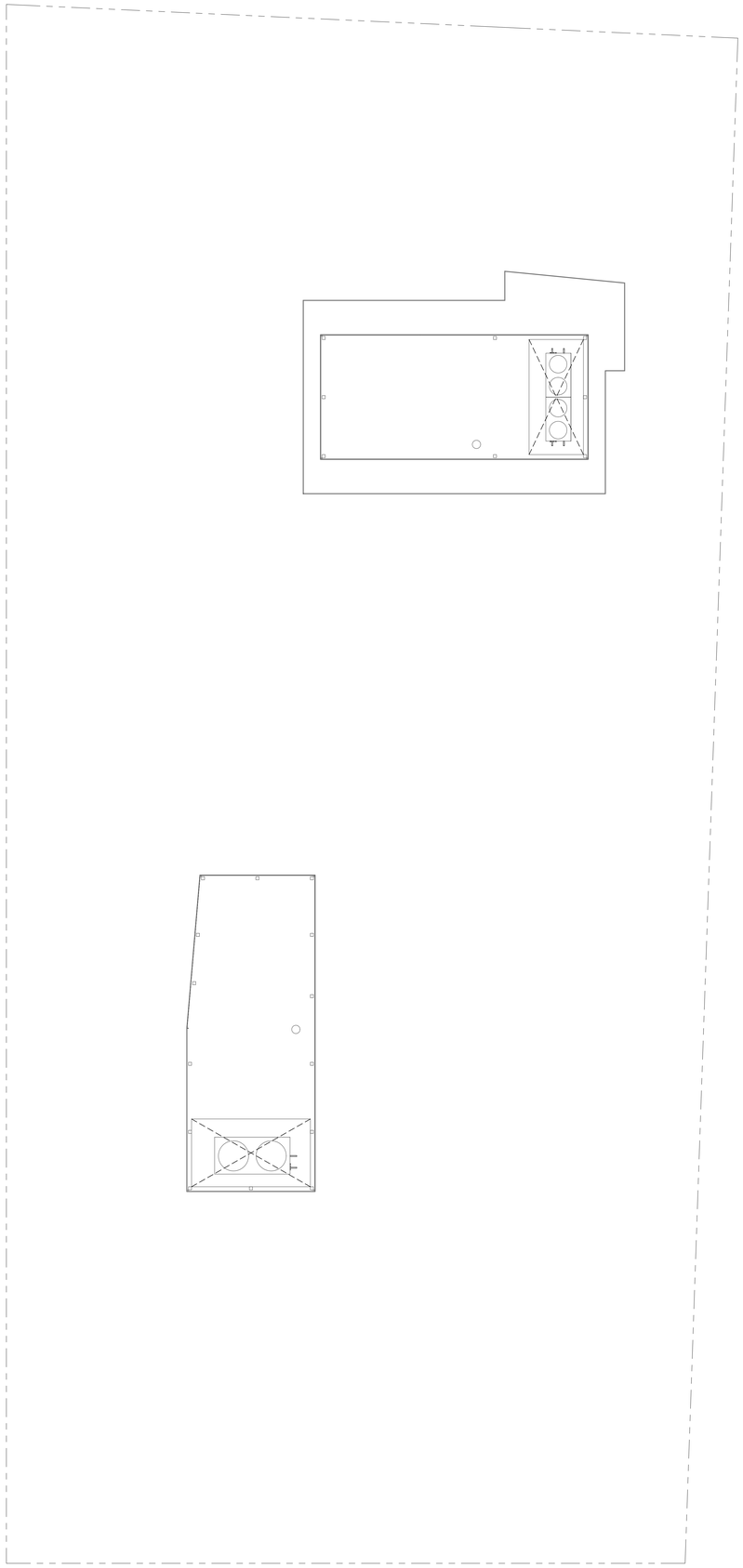

1 BULKHEAD ROOFS
1/16" = 1'-0"

NOT FOR CONSTRUCTION

77-87 Commercial Street

BROOKLYN, NY 11222

ARCHITECT	John A. Cetra State of New York Registered Architect No. 018861 CetraRuddy Architecture DPC 584 Broadway Suite 401 New York, NY 10012	CLIENT	Waterview at Greenpoint LLC 4611 12th Avenue Brooklyn, NY 11219
STRUCTURAL ENGINEER	WSP 228 East 45th Street, 3rd Fl New York, NY 10001 (212) 687-9888	MEP ENGINEER	Cosentini A Tetra Tech Company 2 Pennsylvania Plaza, 3rd Fl New York, NY 10121 (212) 615-3726
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LIGHTING DESIGNER	Cosentini A Tetra Tech Company 2 Pennsylvania Plaza, 3rd Fl New York, NY 10121 (212) 615-3726	LISTED FIRM ELEV. CONSULT.	Simpson Gumpertz & Heger 550 Seventh Avenue, 10th Fl New York, NY 10018 (212) 271-7000 (212) 271-0111

PRELIMINARY - NOT FOR CONSTRUCTION

CETRARUDDY

BULKHEAD - KEY PLANS

DRAWING NO. **A-107.00**

SCALE 1/16" = 1'-0"

PROJECT 1410.00

DATE 06/28/21

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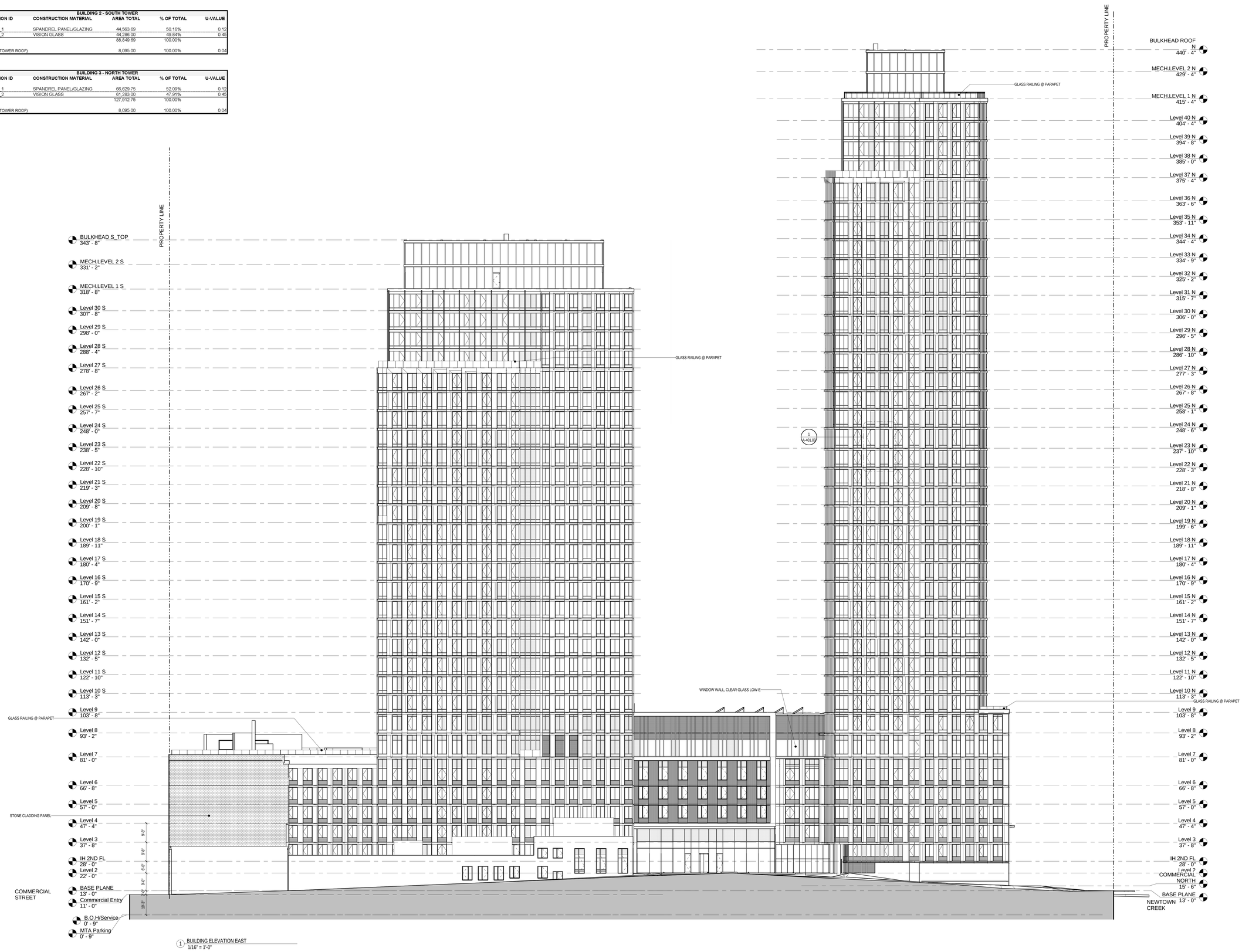
BUILDING ENVELOPE SUMMARY CHART

BUILDING 1 - BASE BUILDING PODIUM				
SECTION ID	CONSTRUCTION MATERIAL	AREA TOTAL	% OF TOTAL	U-VALUE
WT-B_1	SPANDREL PANEL/GLAZING	57,106.71	56.77%	0.075
WT-B_2	VISION GLASS	41,803.00	41.55%	0.45
WT-C_3	STOREFRONT	1,692.00	1.68%	0.45
		100,601.71	100.00%	
ST-A (SKYLIGHTS)	FIXED VISION LITES	510.01	100.00%	0.67
RT-C (BASE ROOF)		65,951.44	100.00%	0.04
BGWT-A (BELOW GRADE WALLS)		17,408.00	100.00%	0.063
BGST-A (BELOW GRADE SLABS)		46,289.63	100.00%	0.3

BUILDING 2 - SOUTH TOWER				
SECTION ID	CONSTRUCTION MATERIAL	AREA TOTAL	% OF TOTAL	U-VALUE
WT-A_1	SPANDREL PANEL/GLAZING	44,563.69	50.16%	0.12
WT-A_2	VISION GLASS	44,286.00	49.84%	0.45
		88,849.69	100.00%	
RT-A (TOWER ROOF)		8,095.00	100.00%	0.04

BUILDING 3 - NORTH TOWER				
SECTION ID	CONSTRUCTION MATERIAL	AREA TOTAL	% OF TOTAL	U-VALUE
WT-A_1	SPANDREL PANEL/GLAZING	66,629.75	52.09%	0.12
WT-A_2	VISION GLASS	61,283.00	47.91%	0.45
		127,912.75	100.00%	
RT-A (TOWER ROOF)		8,095.00	100.00%	0.04



1 BUILDING ELEVATION EAST
1/16" = 1'-0"

77-87 Commercial Street

BROOKLYN, NY 11222

ARCHITECT	John A. Cetra State of New York Registered Architect No. 018861 CetraRuddy Architecture DPC 584 Broadway Suite 401 New York, NY 10012	OWNER	Waterview at Greenpoint LLC 4611 12th Avenue Brooklyn, NY 11219
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DOB NOTE:

NOT IN APPLICATION

REGISTERED ARCHITECT JOHN CETRA No. 018861 STATE OF NEW YORK

2014.09.10 DOB SUBMISSION

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BUILDING ELEVATION EAST

DRAWING NO. **A-301.00**

SCALE: As indicated

DOB PAGE NO.: 93 OF 114

PROJECT: 1410.00

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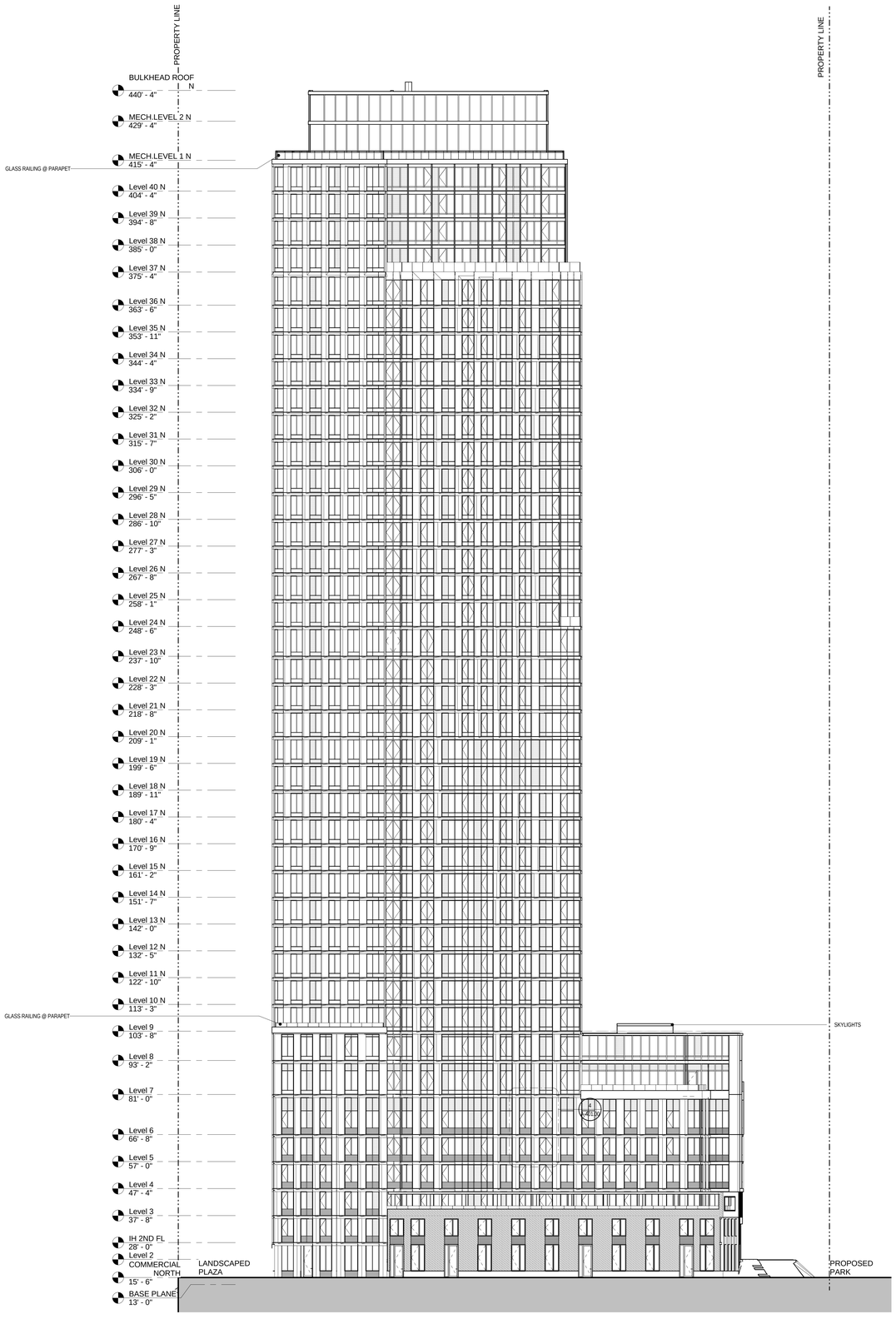
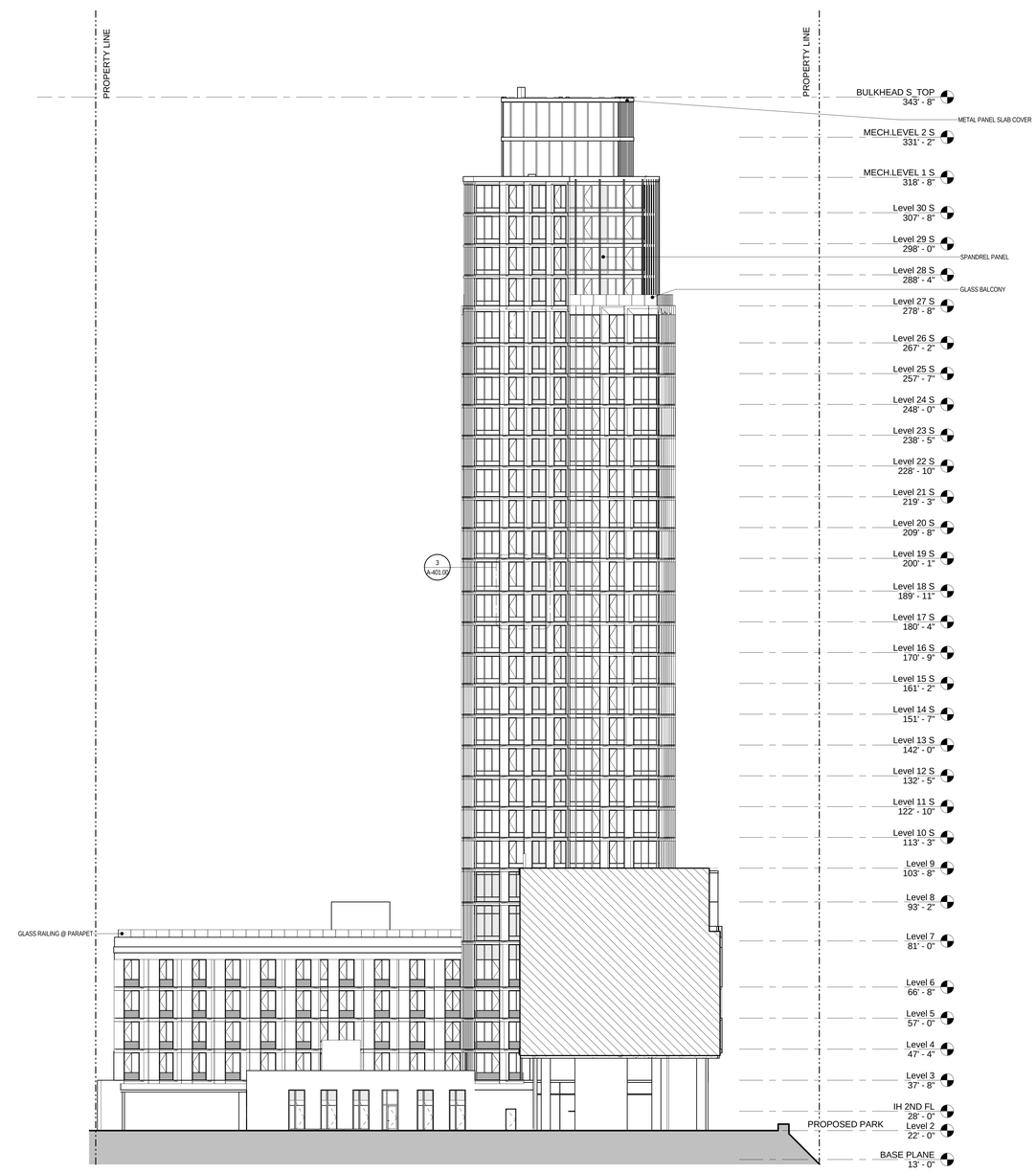


1 NEWTOWN CREEK ELEVATION NORTH
1/16" = 1'-0"



2 COURYARD ELEVATION NORTH
1/16" = 1'-0"

77-87 Commercial Street

BROOKLYN, NY 11222

ARCHITECT	John A. Cetra State of New York Registered Architect No. 018861 CetraRuddy Architecture DPC 584 Broadway Suite 401 New York, NY 10012	OWNER	Waterview at Greenpoint LLC 4611 12th Avenue Brooklyn, NY 11219
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LIGHTING DESIGNER	Cosentini A Tetra Tech Company 2 Pennsylvania Plaza, 3rd Fl New York, NY 10121 (212) 615-3726	LISTED FIRM / CONTRACT	Simpson Gumpertz & Heger 550 Seventh Avenue, 10th Fl New York, NY 10018 (212) 271-7000 (212) 271-0111

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REGISTERED ARCHITECT JOHN CETRA No. 018861 STATE OF NEW YORK

2014.09.10	DOB SUBMISSION

CETRARUDDY

BUILDING ELEVATION NORTH

DRAWING NO. **A-302.00**

SCALE 1/16" = 1'-0"

PROJECT 1410.00

DOB / LBL NO.

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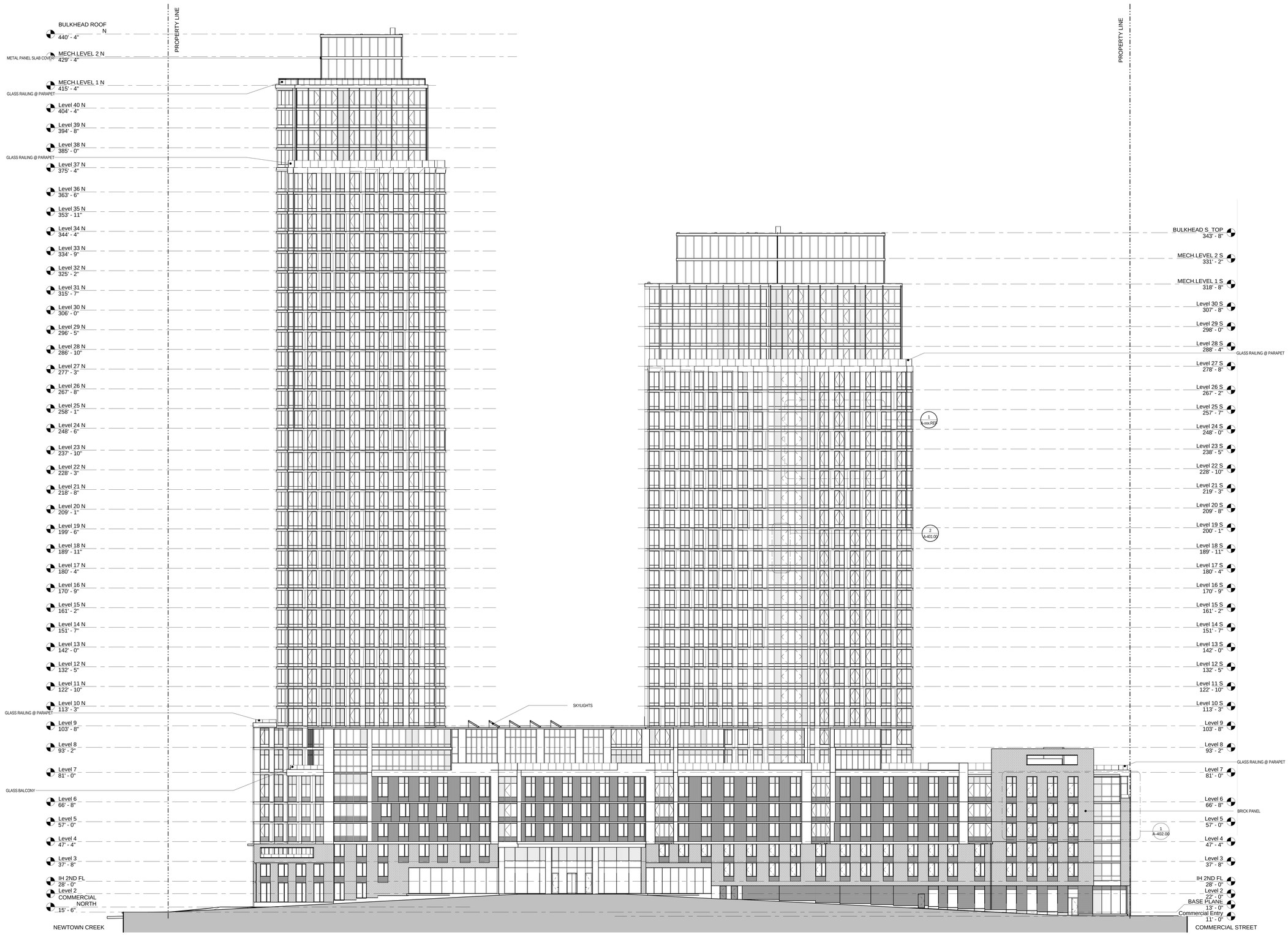
LAYOUT: 77-87 COMMERCIAL STREET.DWG



1 BUILDING ELEVATION WEST
1/16" = 1'-0"

77-87 Commercial Street

BROOKLYN, NY 11222

ARCHITECT	John A. Cetra State of New York Registered Architect No. 018861 CetraRuddy Architecture DPC 584 Broadway Suite 401 New York, NY 10012	OWNER	Waterview at Greenpoint LLC 4611 12th Avenue Brooklyn, NY 11219
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REGISTERED ARCHITECT JOHN A. CETRA No. 018861 STATE OF NEW YORK

2014.09.10 DOB SUBMISSION

CETRARUDDY

BUILDING ELEVATION WEST

DRAWING NO. **A-303.00**

SCALE 1/16" = 1'-0"

DOB PAGE NO. 95 OF 114

PROJECT 1410.00

DOB DRAWING

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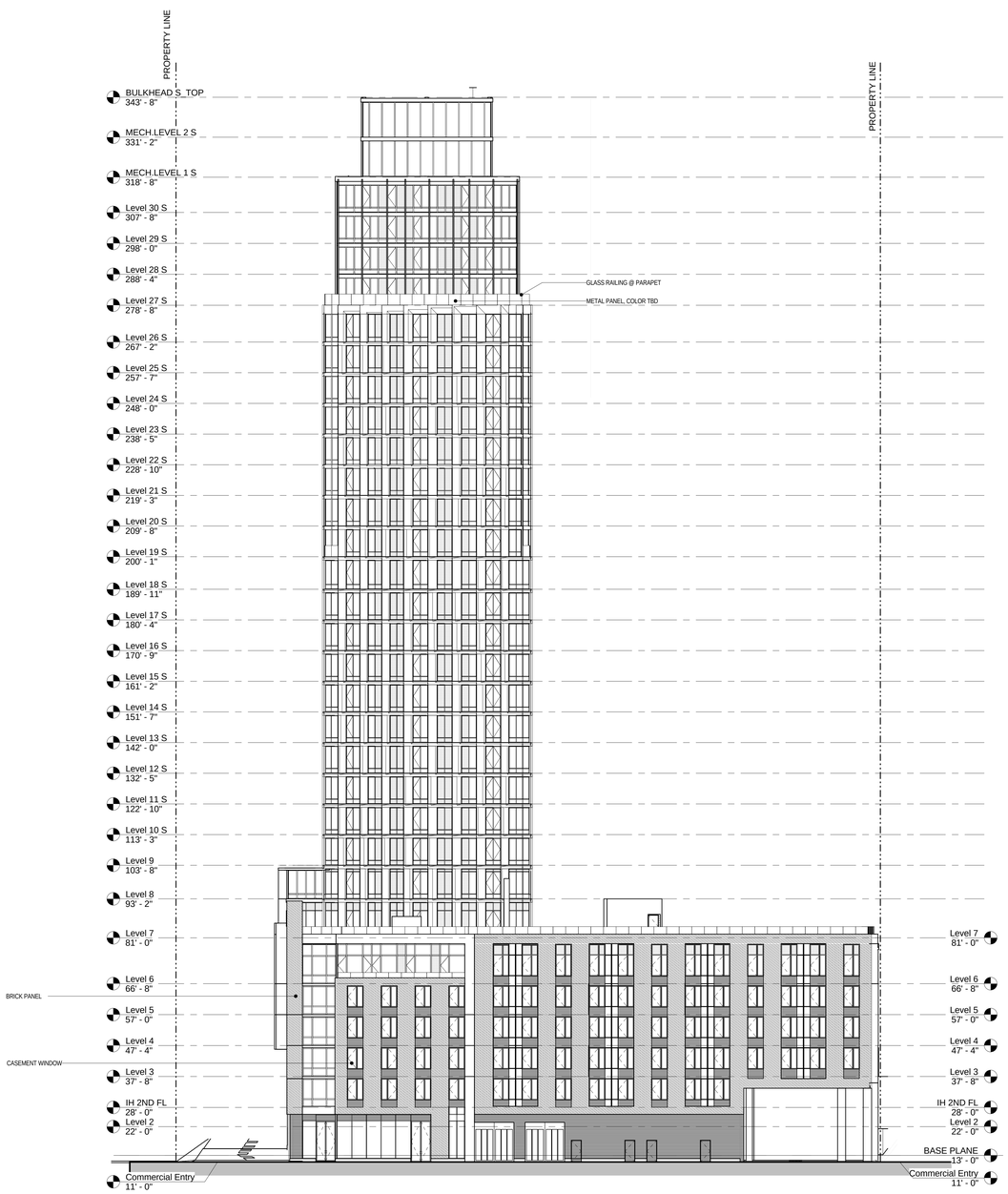
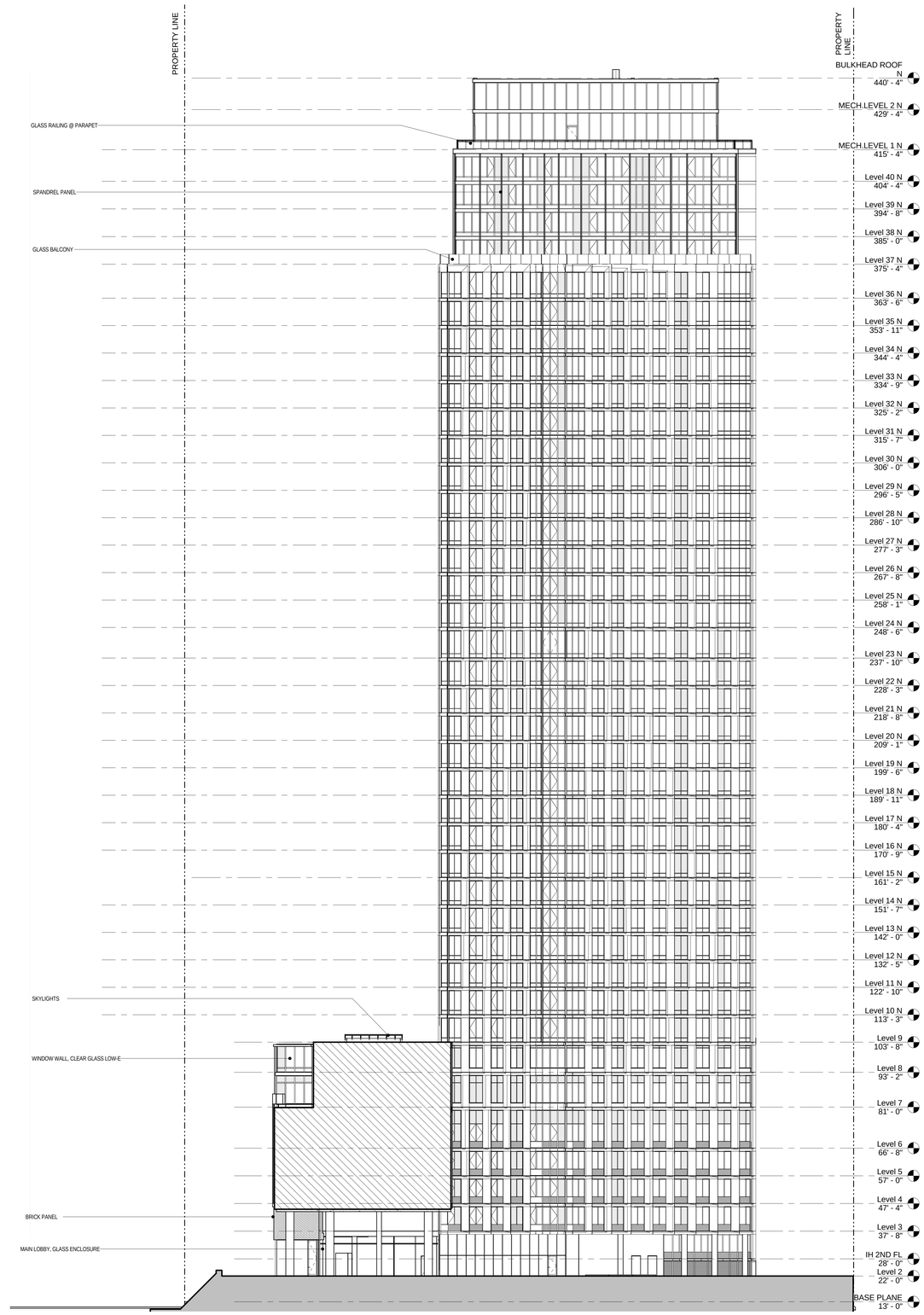


2 COMMERCIAL STREET ELEVATION SOUTH
1/16" = 1'-0"



1 COURTYARD ELEVATION SOUTH
1/16" = 1'-0"

77-87 Commercial Street

BROOKLYN, NY 11222

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DOB NOTE:

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REGISTERED ARCHITECT JOHN CETRA No. 018861 STATE OF NEW YORK

2014.09.10	DOB SUBMISSION

CETRARUDDY

BUILDING ELEVATION SOUTH

DRAWING NO. **A-304.00**

PROJECT	SCALE	1/16" = 1'-0"	96 OF 114
1410.00	DOB FILE NO.		

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APPENDIX B
PHASE I ENVIRONMENTAL SITE ASSESSMENT

PHASE I ENVIRONMENTAL SITE ASSESSMENT (ESA)

77 COMMERCIAL STREET
BROOKLYN, NEW YORK 11222

PREPARED FOR

NEW YORK COMMUNITY BANK

PROJECT NO. M5374

MERRITT
Environmental
Consulting Corp.

77 Arkay Drive, Suite D, Hauppauge, NY 11788
(631) 617-6200, Fax. 631-617-6201

ALL APPROPRIATE INQUIRY (AAI)
PHASE I ENVIRONMENTAL SITE ASSESSMENT (ESA)

ASTM E1527-05

Site Address	77 Commercial Street Brooklyn, New York 11222
Prepared for	New York Community Bank 1 Jericho Plaza, Wing B, 2nd Floor Jericho, New York 11753 Attn: Mr. Douglas Orth
Prepared By	Merritt Environmental Consulting Corp. 77 Arkay Drive, Suite D Hauppauge, New York 11788 (631) 617-6200 www.merrittec.com
MECC Project No	Project M5374
Inspection Date	May 3, 2011
Summary Date	May 13, 2011
Final Report Date	May 25, 2011

4.1 EXECUTIVE SUMMARY

Merritt Environmental Consulting Corp. (MECC) was retained by New York Community Bank to conduct a Phase I Environmental Site Assessment (ESA) at 77 Commercial Street, Brooklyn, New York 11222.

The on site investigation was conducted on May 3, 2011.

Based on our site reconnaissance, database review and historical investigation, no Recognized Environmental Conditions (RECs), were noted.

A Recognized Environmental Condition means the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substance or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The term includes hazardous substances or petroleum products even under compliance with laws.

Our database review indicated that the subject property is an "E" designated site.

Lot 410, Tax Block 2472
77 Commercial Street
E-No. E-138
Effective Date: 05/11/05
Satisfaction date: Not Reported
Description: Underground Storage Tanks* Testing Protocol, Window Wall Attenuation & Alternate Ventilation

The "E" designations would require that the fee owner of the site conduct a testing and sampling protocol and remediation where appropriate, to the satisfaction of the NYCDEP before the issuance of a building permit by the Department of Buildings. Once approval is granted by the NYCDEP, the work can be performed in accordance to required regulations in order to receive a notice of satisfaction.
Research of the NYC Building Department indicated the following:

The subject property is documented as an "E" designated lot at the NYC Department of Buildings. According to a NYCDOB memorandum (12/23/03), "E" designated lots are amendments to the New York City Zoning Maps that may include environmental designations of certain tax lots that have physical or historical evidence of uses related to hazardous materials. Zoning Resolution 11-15 provides that the Department of Buildings may not issue a building permit for work on a tax lot labeled "E", until the Department of Buildings is provided with a report from the Department of Environmental Protection stating that the environmental requirements for the lot have been met.

The process to remove an "E" designation and receive a notice of satisfaction includes the following:

- **Submitting a work plan to the New York City Department of Environmental Protection**
- **Conducting a sub-surface investigation**
- **Submit results to the New York City Department of Environmental Protection**

The process can take several months and cost over $20,000-$25,000 to satisfy the requirement for removing an "E" designation. However, the "E" designation is only addressed during the redevelopment of a site.

In addition, the subject site is listed as having an "E" designation for noise/air. The process for receiving a notice of satisfaction from the NYCDEP may include the following:

- **Submitting a work plan to the New York City Department of Environmental Protection to monitor levels of noise within the building and provide results to the NYCDEP**
- **Upgrade windows to provide more sound absorption**
- **Retrofit A/C with noise reduction sleeves**

MECC has not been informed of the future usage of the site. Therefore, we cannot comment on the time frame in which the "E" designation would need to be addressed.

As previously outlined, an "E" designation only needs to be complied with during the redevelopment of a site. Part of the "E" designation submittal includes architectural drawings on the proposed development.

The following de minimis conditions were noted but are not considered Recognized Environmental Conditions (RECs).

A de minimis condition is one that generally does not present a material risk of harm to public health or the environment and that generally would not be subject of an enforcement action if brought to the attention of appropriate governmental agencies (excluding local asbestos & lead situations).

	ITEM
1	There is a vaulted 3,000-gallon aboveground storage tank (AST) located on the ground floor. The vault is equipped with weep holes to allow passage of oil should a leak occur. The tank is currently registered with New York State Department of Environmental Conservation (NYSDEC), (permit #2-601397), which expired on 11/04/08.
2	Based on the age of the building, lead based paint is assumed to be present. Peeling and flaking of the paint was noted in the 2nd floor stairwells.
3	Visible signs of mold were present on the 2nd floor walls and ceilings.

The following Historical Recognized Environmental Conditions (HRECs) were reported:

- There is 15,000-gallon underground storage tank (UST) and a 550-gallon Underground Storage Tank (UST) registered to the site with closed in place status.

  As part of a prior Phase I ESA prepared by Merritt Engineering Consultants (MEC) in 2004, documentation indicating proper abandonment of the tank was provided. No further evaluation is recommended regarding these tanks (See Prior Reports in Appendix A).

- The following NSYDEC Spill events occurred on site:

1)	Bulova Corporation 77 Commercial Street Spill # 0211097 Spill date: 02/05/03 Close date: 04/09/03 Remarks: Tank Test Failure	2)	77 Commercial Street Spill # 9811015 Spill date: 12/02/98 Close date: 07/02/98 Remarks: Tanks to be removed as well as soil contamination

The spills have been closed by the New York State Department of Environmental Conservation (NYSDEC). MECC has been provided with a No Further Action (NFA) for Spill No. 9811015 (See Appendix A).

During a visual inspection conducted on May 3, 2011, monitoring wells were observed on site adjacent to the abandoned oil tank and loading dock area. Testing of the wells was conducted by Hydro Tech Environmental, Corp. in February of 2004, which indicated slightly elevated levels of contamination present in only one (1) of the wells tested. No further investigation was recommended at the time and the NYSDEC issued a letter of No Further Action (NFA) to the site (Spill No. 9811015). However, it was observed that the wells have not been sealed as recommended by HTE in 2004 (The cost to abandon the wells properly is approximately $1,500).

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4.15) Qualification(s) of Environmental Professional(s)

Appendices

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- Site Vicinity Map
- Regulatory Records Documentation
- Historical Research Documentation
- Interview Documentation
- Qualifications
- Special Contractual Conditions between User & Environmental Professional (If Applicable)
- Historical Recognized Environmental Conditions (HREC) documentation provided (If Applicable)
- Additional Information obtained

4.2) INTRODUCTION

4.2.1 PURPOSE

The report was prepared by Merritt Environmental Consulting Corp., whose purpose is to provide comprehensive Phase I Environmental Site Assessments (ESA) in accordance with American Society of Testing Materials (ASTM E 1527-05) standards for a Phase I Environmental Site Assessment. The survey personnel are trained in the field of Environmental Site inspections as Certified Environmental Specialist (CES) by the Environmental Assessment Association as well as asbestos investigators by the Federal Environmental Protection Agency and NY State.

4.2.2 DETAILED SCOPE OF SERVICES

For the Phase I Environmental Site Assessment (ESA), Merritt Environmental Consulting Corp. performed the following primary tasks:

1. *Physical site inspection by* Merritt Environmental Consulting Corp. *Certified Environmental Specialists (CES) who traversed the interior and exterior areas of the site by foot, in addition to conducting a review of adjacent areas and their exteriors.*
2. *Investigations of historical usage of site based upon:*
   a. *Interview of persons knowledgeable about the sites current and past usage.*
   b. *Review of Sanborn Fire Insurance Maps and/or a review of Local Building Department records and/or Aerial Photographs.*
3. *Review of USGS geologic and 7.5 Minute Topographical Maps.*
4. *Review of the federal and state environmental databases as per ASTM E1527-05 guidelines, as well as a review of pertinent information provided by local government records.*
5. *Limited survey of site for the presence of electrical transformers that may contain Poly-chlorinated biphenyl (PCBs).*
6. *Limited survey for the presence of friable asbestos containing material (ACM).*
7. *Limited survey of site for the presence of lead based paint surfaces within common areas.*
8. *Inspection of water supply, gas supply, garbage disposal practices, groundwater flow, storm and sanitary discharge methods.*
9. *Review of Radon averages.*
10. *Inspection for petroleum storage tanks, above and below grade, stored on site.*
11. *Review of report by a senior certified environmental specialist (CES).*
12. *Unless provided with Bank Scope of Work (SOW) prior to inspection, no other items have been included.*

The following services are not included as part of this Phase I Assessment:

- Lead Based Paint Testing
- Soil Borings
- Testing of Water Main
- Wetlands Evaluation
- ACP-5 Asbestos Report
- High Voltage Power Lines
- Indoor Air Quality
- Radon Testing
- Non-friable Asbestos Testing
- Evaluation of Fluorescent light fixtures that may contain PCBs
- Endangered Species
- Ecological Resources
- Health & Safety
- Industrial Hygiene
- Cultural & Historical Risk
- Regulatory Compliance
- Testing for Mold Spores

4.2.3 SIGNIFICANT ASSUMPTIONS

Information and records provided by the client and outside vendors retained by Merritt Environmental Consulting Corp. are assumed to be correct and complete.

4.2.4 LIMITATIONS AND EXCEPTIONS

The contents of this report are correct to our knowledge and belief. This report and conclusions stated herein are, however, limited to actual knowledge based upon a visual inspection of the Property, the examination of readily available public records concerning the current and prior use of the Property, and interviews with individuals knowledgeable about present and past property uses.

Merritt Environmental Consulting Corp. has performed this Phase I Environmental Site Assessment (ESA) of the Property in accordance with the detailed scope of work in section 4.2.2.

Merritt Environmental Consulting Corp. cannot guarantee that the Property is completely free of hazardous substances or other materials or conditions that could subject the Client to potential liability. The presence or absence of any such condition can only be confirmed through the collection and analysis of soil and groundwater samples, as well as through testing building materials that may contain asbestos or lead paint. This is beyond the scope of the investigation.

Merritt Environmental Consulting Corp. has no interest other than professional in this Assessment and neither its performance, nor compensation for same, is contingent upon the findings and recommendations that are represented herein.

4.2.5 SPECIAL TERMS AND CONDITIONS

There are no special terms or conditions to the content of the report that are in addition to the scope outlined in Section 4.2.2.

4.2.6 RELIANCE

This Phase I Assessment was performed at the client's request utilizing methods and procedures that are consistent with acceptable professional standards ASTM-E1527-05.

The report has been prepared for the sole use of MECC's client. No other party may use the report without the written authority of MECC.

4.3) SITE DESCRIPTION

4.3.1 LOCATION AND LEGAL DESCRIPTION

The property address is 77 Commercial Street. The legal site address is Block 2472, Lot 410. The site is located in the Greenpoint section of Brooklyn, New York.

3.2 SITE AND VICINITY GENERAL CHARACTERISTICS

The current site is situated on a plot size 106,575 square feet.

The current structure was built in 1960.

The weather conditions during our on site inspection consisted of sunny skies. The temperature was approximately 66°.

3.3 CURRENT USE OF THE PROPERTIES

The current use of the site consists of one (1) commercial warehouse space.

4.3.4 DESCRIPTIONS OF STRUCTURES, ROADS AND OTHER IMPROVEMENTS

A. The current site consists of a 1 & 2-story commercial building. The site is located on a plot size approximately 106,575 square feet. There are no basements or subbasements at the subject site. All utilities as well as the boiler room are located on the ground floor.

B. The site is located on the west side of Commercial Street between the corners of Box Street and Manhattan Avenue.

C. The heating system for this site is located on the ground floor and is supplied by a gas & oil fired hot water heating system.

D. ***STORM AND SANITARY DISCHARGE***

There are no on-site sanitary services such as cesspools or septic tanks located on the property. The sanitary discharge for this building empties into the New York City sewer system located under Commercial Street.

E. *WATER SUPPLY*

The U.S. Environmental Protection Agency estimates that drinking water can comprise 20% or more of a person's total exposure to lead. Although lead in drinking water is rarely the single cause of lead poisoning, it can significantly increase a person's total lead exposure. Infants who are fed baby formula or drinks mixed with hot water from the tap are the most vulnerable to lead in drinking water. Lead solder can leach into the water supply. Standing water in the piping system can aid in the leaching process.

The EPA action level for lead in drinking water is 15 parts per billion, (PPB).

A sample with lead levels that equal or exceed 15 PPB is considered to have elevated levels of lead, and it is recommended that response action be taken. This response action may include additional testing, replacement of plumbing components, or an operations and maintenance program.

FINDINGS

The water main enters the property from Commercial Street. The main is connected to a water meter located in a basement area of the ground floor. The domestic water is supplied by New York City through aqua-ducts from upstate reservoirs.

There are no private ground water wells servicing this property.

No testing of the water was conducted under this scope.

F. *GARBAGE DISPOSAL*

There are currently no active incinerators located on the property. The garbage to be disposed of is placed at the rear of the building in portable cans with covers. These containers are picked up several times per week by private sanitation.

4.3.5 CURRENT USES OF THE ADJOINING PROPERTIES

North	4-story commercial building
South	MTA Department of Subways
East	Commercial Street /4-story residential & commercial building
West	Newtown Creek

4.4) USER PROVIDED INFORMATION

4.4.1 TITLE RECORDS

No title records were provided.

4.4.2 ENVIRONMENTAL LIENS

Merritt Environmental Consulting Corp. (MECC) has retained Environmental Data Resources (EDR) to conduct an Environmental Lien Search on the site. No environmental liens were indicated (See Appendix A).

4.4.3 SPECIALIZED KNOWLEDGE

No information regarding specialized knowledge was provided.

4.4.4 COMMONLY KNOWN OR REASONABLY ASCERTAINABLE INFORMATION

Merritt Environmental Consulting Corp. (MECC) has used the following New York State websites to research information on the subject property:

- NYC Housing and Preservation
- NYC Department of Finance
- NYC Department of Buildings
- PropertyShark.com

4.4.5 VALUATION REDUCTION FOR ENVIRONMENTAL ISSUES

No information regarding the valuation reduction for environmental issues was provided by the owner.

4.4.6 OWNER, PROPERTY MANAGER AND OCCUPANT INFORMATION

The current owner of the site is 77 Commercial Holdings, LLC.

The current property manager is Mr. Fred Sui.

The current occupant is commercial.

4.4.7 REASON FOR PERFORMING PHASE I

Merritt Environmental Consulting Corp. (MECC) was retained to perform a Phase I Environmental Site Assessment (ESA) as an agent for the lending institution (New York Community Bank).

4.4.8 OTHER/ADDITIONAL INFORMATION PROVIDED

The following additional information was provided:

- Groundwater sampling results conducted by Hydro Tech Environmental, Corp. in February of 2004 and May of 2004.
- Phase I Environmental Site Assessment (ESA) issued by Middleton, Kontokosta Associates, LTD in September of 1998.
- Phase II Environmental Site Assessment (ESA) conducted by Fluor Daniel GTI in November of 1998.
- New York State Department of Environmental Conservation (NYSDEC) spill report closure letter.
- Soil Mechanics report addressed to New York State Department of Environmental Conservation (NYSDEC) on June 21, 1999.
- Prior Phase I conducted by Merritt Engineering Consultants (MEC) on August 10, 2004

Several other reports were referenced in the above reports. We have not received any additional documentation.

4.5) RECORDS REVIEW

4.5.1 STANDARD ENVIRONMENTAL RECORD SOURCES

The federal government and New York State have compiled database lists of contaminated, potentially hazardous and regulated sites that may impact the subject property. Environmental Data Resources (EDR) has provided this information to Merritt Environmental Consulting Corp. (MECC).

4.5.2 DATABASE SEARCHES

The following Federal and State databases were reviewed by Merritt Environmental Consulting Corp. (MECC) on May 13, 2011, with the corresponding distance.

FINDINGS

The closest 10 sites have been included in Appendix A.

Due to the density of the area, several of the site printouts have been omitted from the report.

FEDERAL

Database	Radius Searched
1. Federal National Priority List	1 Mile
2. Federal CERCLIS list	½ Mile
3. Federal RCRA TSD facilities list	½ Mile
4. Federal RCRA generators list	Site & Adjacent Properties
5. Federal ERNS list	Site

National Priorities List (NPL) - list compiled by EPA pursuant to CERCLA 42 USC 9605(a)(8)(B) of properties with the highest priority for cleanup pursuant to EPA's Hazard Ranking System.

Findings: No sites located within a 1-mile radius.

Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) - the list of sites compiled by EPA that EPA has investigated or is currently investigating for potential hazardous substance contamination for possible inclusion on the National Priorities List.

Findings: No sites located within a ½-mile radius.

Resource Conservation Recovery Act (RCRA) Treatment Storage Disposal (TSD) facilities - those facilities on which treatment, storage, and/or disposal of hazardous wastes takes place, as defined and regulated by RCRA. Inclusion on the RCRA TSD list does not imply contamination has occurred at the site.

Findings: No sites located within a ½-mile radius.

Resource Conservation Recovery Act (RCRA) generators list - list kept by EPA of those persons or entities that generate hazardous wastes as defined and regulated by RCRA. Inclusion on the RCRA list does not imply contamination has occurred at the site.

Findings: **1 generator listed at property.**

Harte & Co. Inc.
77 Commercial Street
Brooklyn, New York 11222

RCRA Non Generator, EPA ID: NYD095759981
Description: Non-Generators do not presently generate hazardous waste

- **Facility is listed in EPA's index system-Facility Index System (FINDS)**
- **Facility is listed in FTTS-FIFRA /TSCA Tracking System /FIFRA (Federal insecticide, Fungicide, & Rodenticide Act) /TSCA (Toxic Substances Control Act)**

United Feather & Down
77 Commercial Street
Brooklyn, New York 11222

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act).

3 generators listed within a ¼-mile radius.

Emergency Response Notification System (ERNS) list - list of reported CERCLA hazardous substance releases or spills in quantities greater than the reportable quantity, as maintained at the National Response Center. Notification requirements for such releases or spills are codified in 40 CFR Parts 302 & 355.

Findings: Site not listed.

STATE AND LOCAL RECORDS

Database	**Radius Searched**
1. State lists of Haz. Waste Sites	1 Mile
2. State landfill/solid waste site lists	½ Mile
3. State leaking tank lists (LTANKS)	½ Mile
4. State registered tanks	Site & Adjacent Properties

Department of Environmental Conservation (DEC) lists the contaminated sites throughout the State and classifies the degree of contamination. Number 1 being highly contaminated; number 5 being the least hazardous to the public.

code:

1. Causing or presenting an imminent danger of causing irreversible or irreparable damage to the public health or environment - immediate action required;

2. Significant threat to the public health or environment - action required;

2a. Temporary classification assigned to sites that have inadequate and/or insufficient data for inclusion in any of the other classifications;

3. Does not present a significant threat to the public health or the environment - action may be deferred;

4. Site is properly closed - requires continued management;

5. Site is properly closed, no evidence of present or potential adverse impact - no further action is required.

Findings: 3 sites located within a 1-mile radius.

Solid Waste Disposal Site - any place, location, tract of land, area, or premises used for the disposal of solid wastes as defined by state solid waste regulations. The term is synonymous with the term landfill and is also known as a garbage dump, trash dump or by similar terms.

Findings: 8 sites located within a ½-mile radius.

Spill Logs/LTANKS list – New York State Department of Environmental Conservation (NYSDEC) has a computerized list of spills that have occurred as of 1986, including the present status of the sites. In addition, the leaking tank (LTANKS) database was also reviewed for reported incidents in the area.

Findings: 29 LTANKS located within a ½-mile radius.

28 NY Spills located within a 1/8-mile radius.

- **The following NSYDEC Spill events occurred on site:**

Bulova Corporation

1) 77 Commercial Street
Spill # 0211097
Spill date: 02/05/03
Close date: 04/09/03
Remarks: Tank Test Failure

2) 77 Commercial Street
Spill # 9811015
Spill date: 12/02/98
Close date: 07/02/98
Remarks: Tanks to be removed as well as soil contamination

The spills have been closed by the New York State Department of Environmental Conservation (NYSDEC). MECC has been provided with a No Further Action (NFA) for Spill No. 9811015 (See Appendix A).

State registered tanks - state lists of storage tanks required to be registered under Subtitle I. Section 9002 of RCRA.

Findings: **3 tanks registered to the site.**

Bulova Clock Division
77 Commercial Street
Brooklyn, New York 11222

15,000-gallon Underground Storage Tank (UST)
Permit No. 2-601397, Tank No. 001-A
Tank Status: Closed-In Place (2003)

550-gallon Underground Storage Tank (UST)
Permit No. 2-601397, Tank No. 1
Tank Status: Closed-In Place (1980)

3,000-gallon Aboveground Storage Tank (AST)
Permit No. 2-601397, Tank No. 001
Tank Status: In Service
Expiration date: 11/04/08

18 registered tank sites located within a 1/8-mile radius.

- **Our database review indicated that the subject property is an "E" designated site.**

Lot 410, Tax Block 2472
77 Commercial Street
E-No. E-138
Effective Date: 05/11/05
Satisfaction date: Not Reported
Description: Underground Storage Tanks* Testing Protocol, Window Wall Attenuation & Alternate Ventilation

The "E" designations would require that the fee owner of the site conduct a testing and sampling protocol and remediation where appropriate, to the satisfaction of the NYCDEP before the issuance of a building permit by the Department of Buildings. Once approval is granted by the NYCDEP, the work can be performed in accordance to required regulations in order to receive a notice of satisfaction.

4.5.2 ADDITIONAL RECORDS SEARCHED

Database	Radius Searched
1. Indian Reservation	1 Mile
2. Indian LUST	½ Mile
3. Indian UST	¼ Mile

The subject site is not listed in any of the additional database searches provided by Environmental Data Resources (EDR). No other environmental records were researched.

4.5.2A ORPHAN SITES

Our database review indicated several sites that cannot be positively plotted (orphan sites). A total of 20 sites were classified as orphans.

The subject site does not appear on the orphan list.

4.5.3 PHYSICAL SETTING SOURCES

A. BODIES OF WATER

The nearest body of water to the subject site is the East River, which is located at the west end of the site of the site.

B. GROUND WATER FLOW

Through information provided by EDR, hydrological data involving ground water flow has been obtained. Based on our findings, the hydrological groundwater flows in a westerly direction eventually emptying into the East River.

Groundwater in this area is at a depth of approximately 12 feet.

Drinking water for the five boroughs has been supplied by the New York reservoir system for many years (See Map in Appendix A). Groundwater is not a primary source of drinking water for Brooklyn.

C. ECOLOGICAL SENSITIVE AREA

Based on information provided by Environmental Data Resources (EDR), no designated wetlands are located in the immediate vicinity of the property.

SITE GEOLOGY AND TOPOGRAPHY

Information pertaining to the hydrogeologic setting in the vicinity of the subject property was obtained from a review of selected published documents and maps. United States Geological Survey (USGS) 7.5-minute Topographic Maps were used to characterize surface topography, water table elevation and drainage. Subsurface characteristics were obtained from USGS Surficial and Bedrock Geology Maps from the lower Hudson Sheet.

4.5.4 HISTORICAL USE INFORMATION ON THE PROPERTY

A. Sanborn Fire Insurance maps of the site and immediate area were available for the years 1887, 1905, 1916, 1922, 1928, 1942, 1951, 1965, 1978, 1979, 1980, 1981, 1982 1983, 1986 1987, 1988, 1989, 1991, 1992, 1993, 1995, 1996, 2001, 2002, 2003, 2004, 2005, 2006 and 2007. The maps indicate the following information:

1905 Greenpoint Sugar Refinery
1916 Commercial Buildings
1922 French Government Storage Warehouse
1928 Vacant lot
1942 Carter Coal & Dock Corp.
1951 Metropolitan Sand & Gravel Corp.
1965-2007 Similar to current conditions

B. Aerial Photographs of the site and immediate area were available for the years 1954, 1966, 1975, 1984, 1994 and 2006. The photos indicate the following information:

This section of Brooklyn has been developed with residential and commercial buildings from 1954 through the latest aerial photo available (2006).

C. City Directories

City Directories were ordered for the site (See Appendix A). The search indicated the following:

1985-1992 United Feather & Down, Inc. /Knickerbocker United Feather Corp.
1997 United Feather & Down, Inc.
2005 77 Commercial Holdings /United Feather & Down, Inc.

D. Topographic Maps

A topographic map (topo) is a color coded line-and-symbol representation of natural and selected artificial features plotted to a scale. Topos show the shape, elevation, and development of the terrain in precise detail by using contour lines and color coded symbols. The colors of the lines usually indicate similar classes of information. For example, topographic contours (brown); lakes, streams, irrigation ditches, etc. (blue); land grids and important roads (red); secondary roads and trails, railroads, boundaries, etc. (black).

Historical topographic maps are a valuable historical resource for documenting the prior use of a property and its surrounding area.

Topographic Maps of the site and immediate area were available for the years 1900, 1947, 1956, 1967, 1979 and 1995.

4.5.4A DATA GAPS

No significant data gaps were noted within the historical research conducted by Merritt Environmental Consulting Corp (MECC).

4.5.5 HISTORICAL USE INFORMATION ON ADJOINING PROPERTIES

The above historical sources were reviewed by Merritt Environmental Consulting Corp. (MECC) for the adjoining properties on the north, south, east & west.

4.6) SITE RECONNAISSANCE

4.6.1 METHODOLOGY AND LIMITING CONDITIONS

At the time of our inspection, the following areas were accessed by Mr. John Perotti, of our staff: ground floor, boiler room, utilities areas, vacant 2nd floor area, warehouse areas, parking lots and all accessible exterior areas of the site.

4.6.2 GENERAL SITE SETTING

West side of Commercial Street
Topography is hilly

4.6.3 EXTERIOR OBSERVATIONS

No potential environmental conditions such as, dead vegetation, gas/chemical spills or storage drums were observed throughout the exterior areas at the time of our inspection.

During a visual inspection conducted on May 3, 2011, monitoring wells were observed on site adjacent to the abandoned oil tank and loading dock area.

Testing of the wells was conducted by Hydro Tech Environmental, Corp. in February of 2004, which indicated slightly elevated levels of contamination present in only one (1) of the wells tested. No further investigation was recommended at the time and the NYSDEC issued a letter of No Further Action (NFA) to the site (Spill No. 9811015). However, it was observed that the wells have not been sealed as recommended by HTE in 2004 (The cost to abandon the wells properly is approximately $1,500).

4.6.4 INTERIOR OBSERVATIONS

The interior inspection revealed no evidence of any on-site staining of petroleum products, chemicals, or other hazardous materials.

4.6.5 UNDERGROUND STORAGE TANKS (UST) AND DRUMS

Each year, thousands of petroleum leaks and spills are reported to the Department of Environmental Conservation (DEC) / Department of Environmental Protection (DEP). Thousands of others may go unreported mainly because they have not yet been discovered. These leaks can enter the ground, seep into an aquifer and contaminate a water supply. In some places, water wells have been closed down and people have had to vacate their homes. Even small amounts of petroleum in soil or groundwater can be tasted or smelled and can subsequently affect health.

Leaking petroleum storage tanks are a major source of groundwater contamination. The DEC/DEP estimates that there may be as many as 185,000 tanks storing petroleum, which are subject to state regulations. Many of these tanks are bare steel and were installed underground in the 1950's and 1960's. These tanks have weakened by rust and have a fifty percent chance of developing leaks.

FINDINGS

There is 15,000-gallon underground storage tank (UST) and a 550-gallon Underground Storage Tank (UST) registered to the site with closed in place status.

As part of a prior Phase I ESA prepared by Merritt Engineering Consultants (MEC) in 2004, documentation indicating proper abandonment of the tank was provided. No further evaluation is recommended regarding these tanks (See Prior Reports in Appendix A).

4.6.6 ABOVEGROUND STORAGE TANKS (AST)

There is a 3,000-gallon aboveground storage tank (AST) holding #2 oil located on the ground floor. The tank is encased in a concrete block vault. The vault is equipped with weep holes to allow passage of oil should a leak occur.

TANK REGISTRATION:

The tank is currently registered with New York State Department of Environmental Conservation (NYSDEC), (permit #2-601397), which expired on 11/04/08.

4.6.7 ELECTRICAL TRANSFORMERS (PCBs)

Transformers often contain Poly-chlorinated biphenyl (PCB) Askarel coolant liquid and are generally used in hazardous locations where flammability is of concern. PCB transformers are no longer produced because of EPA's ban on the manufacture of new equipment containing PCB's. However, older equipment does remain in certain areas and may contain PCB's.

FINDINGS

There is one vaulted underground electrical transformer located on the exterior of the building along the front sidewalk. At the time of our inspection, the transformer did not demonstrate signs of leaking. No staining or dead vegetation was observed adjacent to the transformer.

Per to toxic substance contract act (TSCA) the transformer owner, i.e. Utility Company, is responsible for all transformers maintenance and all spills of PCB's from their transformers.

Fluorescent light fixtures were not inspected for PCB content under the scope of this assessment.

4.6.8 NATURAL GAS

There is one underground gas main entering the building from Commercial Street. The main is connected to a meter located on the ground floor. The gas is then distributed throughout the building by branch lines of black iron pipe.

Gas service is provided by National Grid.

4.6.9 RADON

Radon first gained national attention in early 1984, when extremely high levels of indoor radon were found in areas of Connecticut, Pennsylvania, New Jersey, and New York. Radon is a colorless, odorless radioactive gas. Nearly one out of every 15 homes in the U.S. is estimated to have elevated annual average levels of indoor radon. EPA established a Radon Program in 1985 to assist States and homeowners in reducing their risk of lung cancer from indoor radon.

FINDINGS

The New York State Department of Health indicates the average radon level for this area of Brooklyn to be 1.4 pico curies per liter (pCi/L), which is below the EPA action level of 4 pCi/L.

A radon canister was not initiated at the time of our inspection since this is beyond the scope of this assessment.

4.6.10 NON-SCOPE ASTM CONSIDERATIONS

A. ASBESTOS

The EPA has identified over 3,000 products used in buildings containing asbestos fibers. Our inspection of the premises is to determine the presence of **friable asbestos**, as defined by the Federal Environmental Protection Agency as any material, which may be pulverized with hand pressure. This material has the potential to release asbestos fibers into the atmosphere and in turn may be hazardous to the building occupants' health.

We have not inspected for or included in our report any building materials, which may contain non-friable asbestos such as vinyl asbestos floor tiles, exterior asbestos shingles, asbestos roofing felts, etc. Many of these materials are still manufactured today and not considered hazardous unless the material is cut, sawed, or grounded in a manner that might release asbestos fibers into the atmosphere.

We have used the 4-category system as defined by Asbestos Hazardous Emergency Response Act (AHERA) to designate the different conditions of asbestos noted throughout the areas of the site. This report is not designed to meet the AHERA protocols.

1. *Good Condition*
   Material with no visible damage or deterioration to very limited damage or deterioration.

2. *Fair Condition*
   Material with one or more of the following characteristics:
   - *A few water stains or less than one tenth of insulation with missing jackets.*
   - *Crushed insulation or water stains, gouges, puncture or mars on up to one tenth of the insulation if the damage is evenly distributed (or up to one quarter if the damage is localized).*

3. *Poor Condition*
   Material with one or more of the following characteristics:
   - *Missing jackets on at least one tenth of the piping equipment.*
   - *Crushed or heavily gouged or punctured insulation on at least one tenth of pipe runs/risers, boiler, tank duct, etc., if the damage is evenly distributed (one quarter if the damage is localized).*

4. *Significantly Damaged*
   Thermal systems insulation on pipes, boilers, tanks, ducts, and other thermal system insulation equipment which the insulation has lost its structural integrity, or its covering, in whole or in part, is crushed, water-stained, gouged, punctured, missing, or not intact such that is not able to contain fibers. Damage may be further illustrated by occasional puncture, gouges, or other signs of physical injury to ACM; occasional water damage on the protective coverings/jackets; or exposed ACM ends or joints. Asbestos debris, originating from the ACM in question may also indicate damage.

ASBESTOS FINDINGS

No friable asbestos containing material was observed in any of the accessible areas of the building.

Many buildings' fireproofing is concealed in a plenum above the ceiling. These areas were not accessible and, therefore, we are unable to determine the type of fireproofing for those areas above the first floor.

B. LEAD BASED PAINT

Lead-based paint (LBP) was used extensively in buildings and structures that were constructed prior to 1978 and can be hazardous when damaged (i.e., chipped, broken, crumbling, pulverized); lead is toxic to humans particularly to children, if ingested, inhaled, or otherwise absorbed. Exposure to lead can cause health problems in children ranging from damage to the brain and nervous system, behavioral and learning problems (such as hyperactivity), slowed growth, hearing problems and headaches. In adults the health problems can range from difficulties during pregnancy, other reproductive problems, high blood pressure, digestive problems, nerve disorders, memory and concentration problems and muscle and joint pain.

Our research indicates the building was constructed **prior to 1978**, and lead based paint is assumed to be present throughout the building.

FINDINGS

Peeling and flaking of the paint was noted in the 2nd floor stairwells (See Photo section).

Research of the Housing Preservation and Development (HPD) Department records did not reveal any lead based paint violations against the subject site (See Appendix A).

A lead based paint survey in accordance with The Housing & Urban Development (HUD) guidelines was not conducted under the scope of this assessment.

C. MOLD

Visible signs of mold were present on the 2nd floor walls and ceilings (See Photo Section).

D. VAPOR ENCROACHMENT

Vapor Encroachment (VE) is defined as the potential for the presence or likely presence of any chemical of concern in the indoor air environment of existing or planned structures on the subject property or within close proximity to the subject property, at a concentration that presents or may present an unacceptable health risk to occupants.

Based on a review of the EDR Report, the subject property is not identified in the State Records Search or in the Federal Records Search. In addition, according to a review of subject property historical use information that is reasonably ascertainable, there are no known or suspect potentially contaminated sources having chemicals of concern (petroleum hydrocarbons or non-petroleum hydrocarbons) associated with the subject property. Therefore the subject property is not a source of a potential Vapor Encroachment Condition.

4.7) INTERVIEWS

4.7.1 INTERVIEW WITH OWNER

The owner was not present during our inspection.

4.7.2 INTERVIEW WITH SITE REPRESENTATIVE

During our on-site visit, we interviewed Mr. Fred Sui, who is the manager and associated with the site for 2 ½ years.

Copies of the above records of communications are included in Appendices, Section 10.6.

4.7.3 INTERVIEWS WITH OCCUPANTS (TENANTS)

No other individuals were interviewed regarding the facility.

4.7.4 INTERVIEWS WITH LOCAL GOVERNMENT OFFICIALS

We are researching the New York City Health & Fire Department records for any information of hazardous operations including, past spills, leaks or violations. The information has not yet been provided. We will forward any information that appears to impact the scope of this assessment.

Research of the NYC Building Department indicated the following:

The subject property is documented as an "E" designated lot at the NYC Department of Buildings. According to a NYCDOB memorandum (12/23/03), "E" designated lots are amendments to the New York City Zoning Maps that may include environmental designations of certain tax lots that have physical or historical evidence of uses related to hazardous materials. Zoning Resolution 11-15 provides that the Department of Buildings may not issue a building permit for work on a tax lot labeled "E", until the Department of Buildings is provided with a report from the Department of Environmental Protection stating that the environmental requirements for the lot have been met.

The process to remove an "E" designation and receive a notice of satisfaction includes the following:

- **Submitting a work plan to the New York City Department of Environmental Protection**
- **Conducting a sub-surface investigation**
- **Submit results to the New York City Department of Environmental Protection**

The process can take several months and cost over $20,000-$25,000 to satisfy the requirement for removing an "E" designation. However, the "E" designation is only addressed during the redevelopment of a site.

In addition, the subject site is listed as having an "E" designation for noise/air. The process for receiving a notice of satisfaction from the NYCDEP may include the following:

- **Submitting a work plan to the New York City Department of Environmental Protection to monitor levels of noise within the building and provide results to the NYCDEP**
- **Upgrade windows to provide more sound absorption**
- **Retrofit A/C with noise reduction sleeves**

MECC has not been informed of the future usage of the site. Therefore, we cannot comment on the time frame in which the "E" designation would need to be addressed.

As previously outlined, an "E" designation only needs to be complied with during the redevelopment of a site. Part of the "E" designation submittal includes architectural drawings on the proposed development.

4.7.5 INTERVIEWS WITH OTHERS

No additional interviews were conducted as part of this assessment.

A questionnaire was forwarded to Mr. Jacob Eisenstein on May 1, 2011. We have not yet received a completed questionnaire (See Appendix A).

4.8) REPORT FINDINGS

Based on our site reconnaissance, database review and historical investigation, no Recognized Environmental Conditions (RECs), were noted.

A Recognized Environmental Condition means the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substance or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The term includes hazardous substances or petroleum products even under compliance with laws.

Our database review indicated that the subject property is an "E" designated site.

Lot 410, Tax Block 2472
77 Commercial Street
E-No. E-138
Effective Date: 05/11/05
Satisfaction date: Not Reported
Description: Underground Storage Tanks* Testing Protocol, Window Wall Attenuation & Alternate Ventilation

The "E" designations would require that the fee owner of the site conduct a testing and sampling protocol and remediation where appropriate, to the satisfaction of the NYCDEP before the issuance of a building permit by the Department of Buildings. Once approval is granted by the NYCDEP, the work can be performed in accordance to required regulations in order to receive a notice of satisfaction.
Research of the NYC Building Department indicated the following:

The subject property is documented as an "E" designated lot at the NYC Department of Buildings. According to a NYCDOB memorandum (12/23/03), "E" designated lots are amendments to the New York City Zoning Maps that may include environmental designations of certain tax lots that have physical or historical evidence of uses related to hazardous materials. Zoning Resolution 11-15 provides that the Department of Buildings may not issue a building permit for work on a tax lot labeled "E", until the Department of Buildings is provided with a report from the Department of Environmental Protection stating that the environmental requirements for the lot have been met.

The process to remove an "E" designation and receive a notice of satisfaction includes the following:

- **Submitting a work plan to the New York City Department of Environmental Protection**
- **Conducting a sub-surface investigation**
- **Submit results to the New York City Department of Environmental Protection**

The process can take several months and cost over $20,000-$25,000 to satisfy the requirement for removing an "E" designation. However, the "E" designation is only addressed during the redevelopment of a site.

In addition, the subject site is listed as having an "E" designation for noise/air. The process for receiving a notice of satisfaction from the NYCDEP may include the following:

- **Submitting a work plan to the New York City Department of Environmental Protection to monitor levels of noise within the building and provide results to the NYCDEP**
- **Upgrade windows to provide more sound absorption**
- **Retrofit A/C with noise reduction sleeves**

MECC has not been informed of the future usage of the site. Therefore, we cannot comment on the time frame in which the "E" designation would need to be addressed.

As previously outlined, an "E" designation only needs to be complied with during the redevelopment of a site. Part of the "E" designation submittal includes architectural drawings on the proposed development.

The following de minimis conditions were noted but are not considered Recognized Environmental Conditions (RECs).

A de minimis condition is one that generally does not present a material risk of harm to public health or the environment and that generally would not be subject of an enforcement action if brought to the attention of appropriate governmental agencies (excluding local asbestos & lead situations).

	ITEM
1	There is a vaulted 3,000-gallon aboveground storage tank (AST) located on the ground floor. The vault is equipped with weep holes to allow passage of oil should a leak occur. The tank is currently registered with New York State Department of Environmental Conservation (NYSDEC), (permit #2-601397), which expired on 11/04/08.
2	Based on the age of the building, lead based paint is assumed to be present. Peeling and flaking of the paint was noted in the 2nd floor stairwells.
3	Visible signs of mold were present on the 2nd floor walls and ceilings.

The following Historical Recognized Environmental Conditions (HRECs) were reported:

- **There is 15,000-gallon underground storage tank (UST) and a 550-gallon Underground Storage Tank (UST) registered to the site with closed in place status.**

  As part of a prior Phase I ESA prepared by Merritt Engineering Consultants (MEC) in 2004, documentation indicating proper abandonment of the tank was provided. No further evaluation is recommended regarding these tanks (See Prior Reports in Appendix A).

- **The following NSYDEC Spill events occurred on site:**

	Bulova Corporation		
1)	**77 Commercial Street**	**2)**	**77 Commercial Street**
	Spill # 0211097		**Spill # 9811015**
	Spill date: 02/05/03		**Spill date: 12/02/98**
	Close date: 04/09/03		**Close date: 07/02/98**
	Remarks: Tank Test Failure		**Remarks: Tanks to be removed as well as soil contamination**

The spills have been closed by the New York State Department of Environmental Conservation (NYSDEC). MECC has been provided with a No Further Action (NFA) for Spill No. 9811015 (See Appendix A).

During a visual inspection conducted on May 3, 2011, monitoring wells were observed on site adjacent to the abandoned oil tank and loading dock area. Testing of the wells was conducted by Hydro Tech Environmental, Corp. in February of 2004, which indicated slightly elevated levels of contamination present in only one (1) of the wells tested. No further investigation was recommended at the time and the NYSDEC issued a letter of No Further Action (NFA) to the site (Spill No. 9811015). However, it was observed that the wells have not been sealed as recommended by HTE in 2004 (The cost to abandon the wells properly is approximately $1,500).

4.9 OPINIONS

Based on our site reconnaissance, database review, historical review and interviews with persons familiar with the subject site and adjacent properties, no Recognized Environmental Conditions (RECs) were identified under the scope of services outlined in Section 4.2.2.

Based on our site reconnaissance, database review, historical review and interviews with persons familiar with the subject site and adjacent properties, the above de minimis conditions were identified under the scope of services outlined in Section 4.2.2.

The following Historical Recognized Environmental Conditions (HRECs) were reported:

- **There is 15,000-gallon underground storage tank (UST) and a 550-gallon Underground Storage Tank (UST) registered to the site with closed in place status.**

  As part of a prior Phase I ESA prepared by Merritt Engineering Consultants (MEC) in 2004, documentation indicating proper abandonment of the tank was provided. No further evaluation is recommended regarding these tanks (See Prior Reports in Appendix A).

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4.10 CONCLUSION

Merritt Environmental Consulting Corp has performed a Phase I Environmental Site Assessment (ESA) in conformance with the scope and limitations of ASTM Practice E1527 of 77 Commercial Street, Brooklyn, New York 11222, the property. Any exceptions to, or deletions from, this practice are described in Section [4.2.2] of this report.

4.11 DEVIATIONS

The assessment was performed in accordance with the ASTM 1527-05 Standards as well as the detailed scope of services outlined in section 4.2.2 of this report.

4.12 ADDITIONAL SERVICES

No additional services were performed beyond the detailed scope of services in section 4.2.2.

4.13 REFERENCES

All references relied upon are located in Appendix A.

4.14 SIGNATURE OF ENVIRONMENTAL PROFESSIONAL

We thank you for allowing Merritt Environmental Consulting Corp., to serve as your Environmental Consultant for this project. We declare that, to the best our professional knowledge and belief, we meet the definition of Environmental Professional as defined in §312.10 of 40 CFR 312, and

We have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. We have developed and performed the "All Appropriate Inquiries" in conformance with the standards and practices set forth in 40 CFR Part 312.

Should you have any questions regarding the contents of this report, please feel free to contact us to discuss the report in further detail.

Site Inspector:

John Perotti
Certified Environmental Specialist

Reviewed by:

Charles G. Merritt
Certified Environmental Specialist /LEED AP

4.15 QUALIFICATIONS

See Appendix A

Charles G Merritt
Environmental Assessment
#10770
Certified Environmental Specialist

APPENDICES

- Site Photography
- Site Vicinity Map
- Regulatory Records Documentation
- Historical Research Documentation
- Interview Documentation
- Qualifications
- Special Contractual Conditions between User & Environmental Professional (If Applicable)
- Historical Recognized Environmental Conditions (HREC) documentation provided (If Applicable)
- Additional Information obtained

S:\Environmental\ASTM 2005Report/M5374/mw

SITE PHOTOGRAPHY

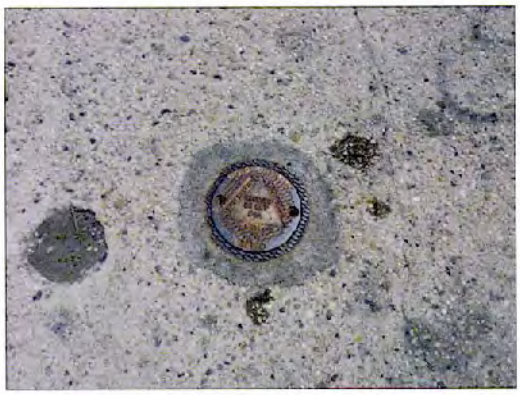
MERRITT ENVIRONMENTAL CONSULTING CORP.

77 Arkay Drive, Suite D, Hauppauge, NY 11788 (631) 617-6200, Fax. 631-617-6201
WWW.MERRITTEC.COM

SITE ADDRESS: 77 COMMERCIAL STREET

PROJECT M5374

VIEW OF SITE



TYPICAL VIEW OF MONITORING WELL NOTED ON SITE

VIEW OF AREA OF ABANDONED UNDERGROUND OIL TANK AND MONITORING WELLS NOTED ON SITE

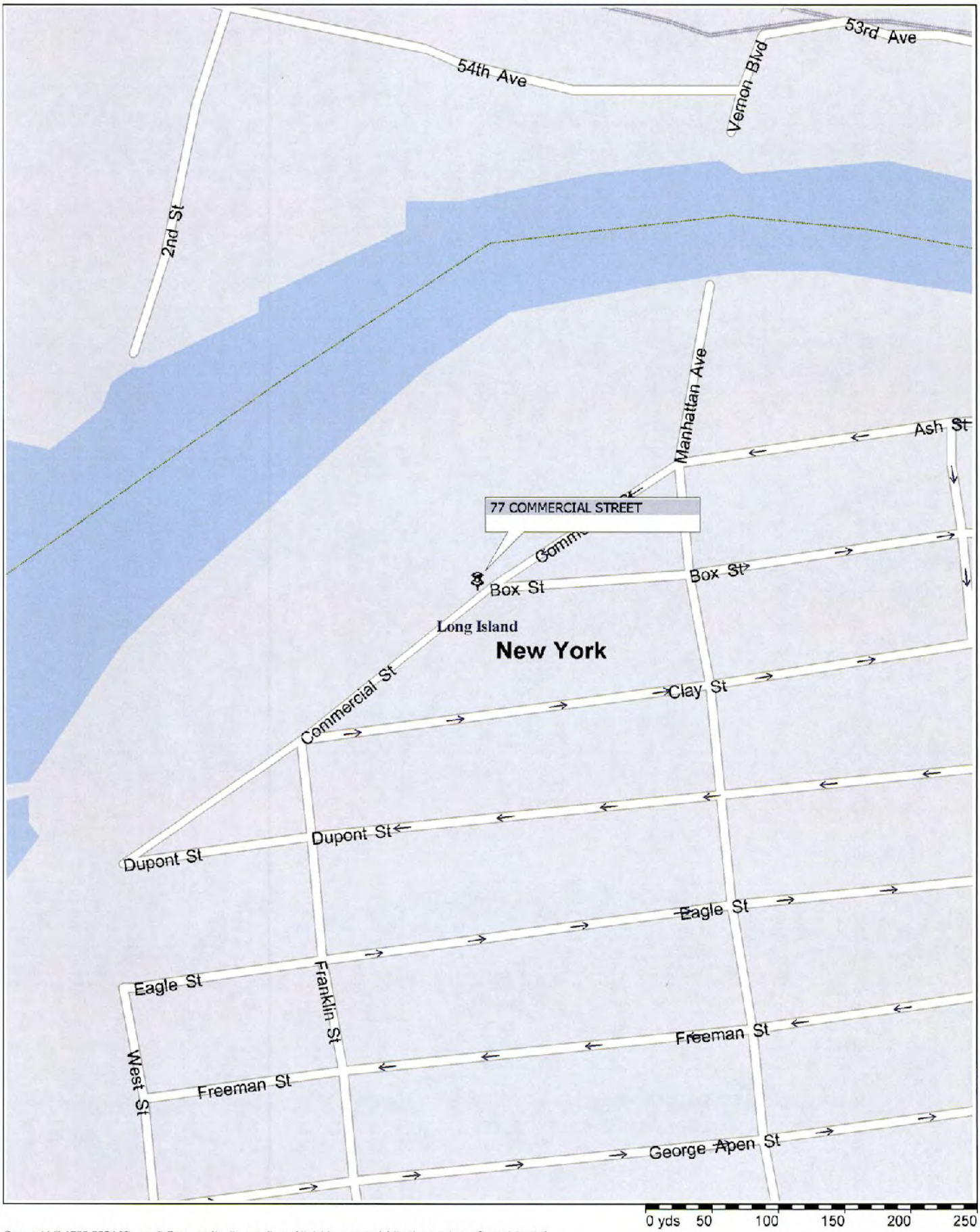
VIEW OF LOADING DOCK AND MONITORING WELL

VIEW OF CEMENT BLOCK VAULTED HEATING OIL TANK

VIEW OF OIL FIRED STEAM BOILER

SITE VICINITY MAP

New York, New York, United States



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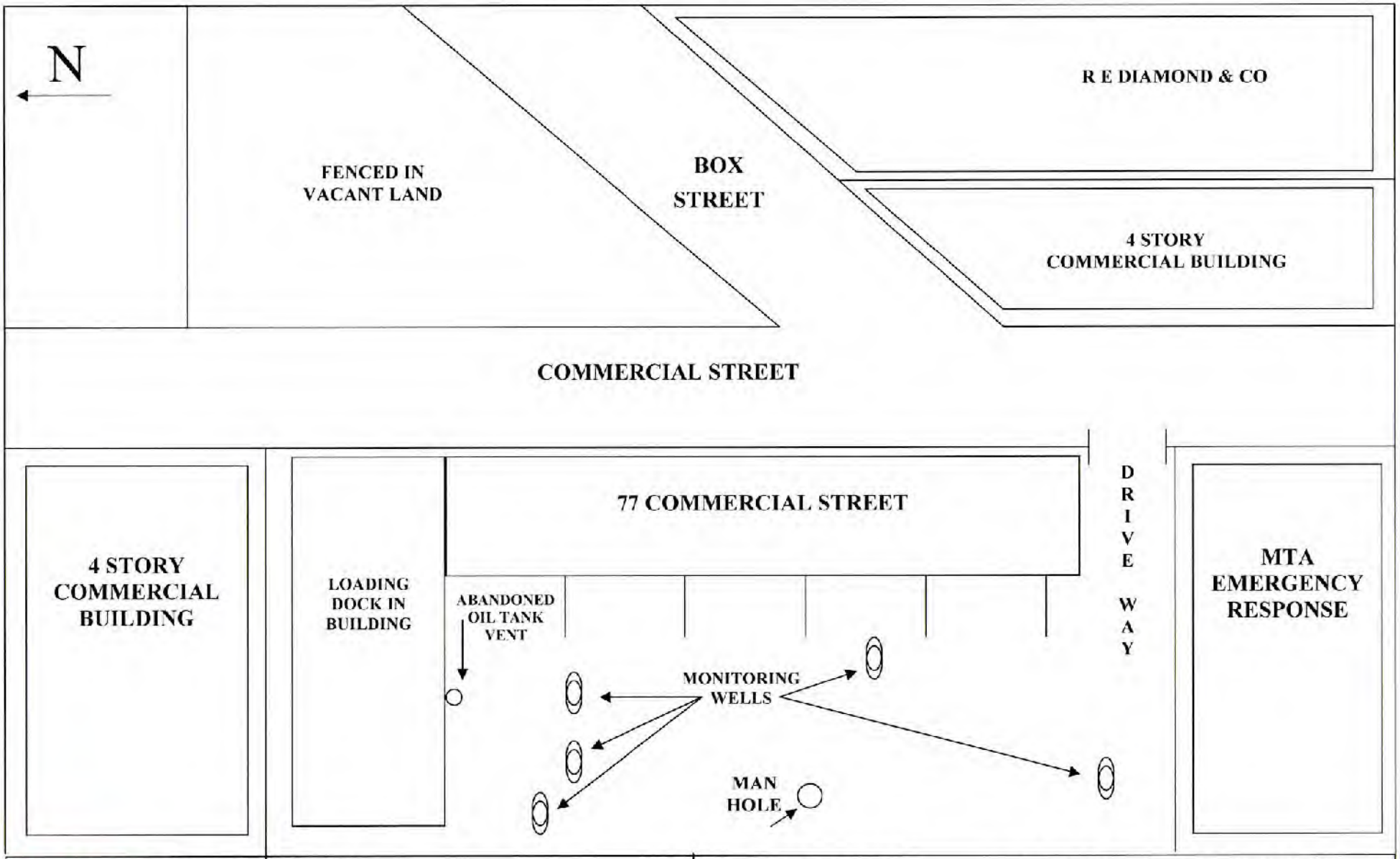
© Copyright 2003 by Geographic Data Technology, Inc. All rights reserved. © 2004 NAVTEQ. All rights reserved. This data includes information taken with permission from Canadian authorities © Her Majesty the Queen in Right of Canada.

REGULATORY RECORDS DOCUMENTATION



MERRITT ENVIRONMENTAL
CONSULTING CORP
77 ARKAY DRIVE, SUITE D
HAUPPAUGE, NY 11788 (631) 617-6200

SITE ADDRESS: 77 COMMERCIAL STREET
PROJECT NO : M5374
DRAWING DATE: MAY 13, 2011

FINAL ASSESSMENT ROLL 2010-2011 | City of New York

Taxable Status Date: January 5, 2010

EXPLANATION OF ASSESSMENT ROLL

View January 15, 2011 - Market Value History
View 2011 TENTATIVE ASSESSMENT ROLL
View May 25, 2010 - Market Value History
View 2010 TENTATIVE ASSESSMENT ROLL
View 2009 FINAL ASSESSMENT ROLL
View 2008 FINAL ASSESSMENT ROLL
View 2007 FINAL ASSESSMENT ROLL
View 2006 FINAL ASSESSMENT ROLL

Parcel Information

◀◀ Previous BBL Next BBL ▶▶

Owner Name:
77 COMMERICAL HOLDIN

Property Address and Zip Code:
77 COMMERCIAL STREET 11222

Real Estate Billing Name and Address:
77 COMMERCIAL HOLDING LLC
7212 FORT HAMILTON P
BROOKLYN NY 11228

Borough: BROOKLYN
Block: 2472
Lot: 410

Tax Class: 4
Building Class: F1 Codes

Land Information

Lot Size	Irregular	Corner
217.50FT X 490.00FT	IRREG	

Building Information

Number of Buildings	Building Size	Extension	Stories
1	200.00FT X 190.00FT		2

Assessment Information

Description	Land	Total
ESTIMATED MARKET VALUE		3,750,000
ACTUAL AV	949,500	1,687,500
ACTUAL EX AV	0	0
TRANS AV	678,600	1,543,500
TRANS EX AV	0	0

Taxable/Billable Assessed Value

NYC Buildings

NYC .gov always open

CLICK HERE TO SIGN UP FOR BUILDINGS NEWS

NYC Department of Buildings

Property Profile Overview

77 COMMERCIAL STREET
COMMERCIAL STREET 77 - 77

BROOKLYN 11222

Health Area	: 100
Census Tract	: 577
Community Board	: 301
Buildings on Lot	: 1

BIN# 3063675

Tax Block	: 2472
Tax Lot	: 410
Condo	: NO
Vacant	: NO

View DCP Addresses... Browse Block

View Zoning Documents View Challenge Results View Certificates of Occupancy

Cross Street(s):	BOX STREET, ASH STREET		
DOB Special Place Name:			
DOB Building Remarks:			
Landmark Status:		**Special Status:**	N/A
Local Law:	NO	**Loft Law:**	NO
SRO Restricted:	NO	**TA Restricted:**	NO
UB Restricted:	NO		
Little 'E' Restricted:	HAZMAT/NOISE	**Grandfathered Sign:**	NO
Legal Adult Use:	NO	**City Owned:**	NO
Additional BINs for Building:	NONE		
Additional Designation(s):	IBZ - INDUSTRIAL BUSINESS ZONE		

Special District: NONE

This property is located in an area that may be affected by the following:

Tidal Wetlands Map Check:	Yes	
Freshwater Wetlands Map Check:	No	Click here for more information
Coastal Erosion Hazard Area Map Check:	No	

Department of Finance Building Classification: F1-FACTORY/INDSTRIAL

Please Note: The Department of Finance's building classification information shows a building's tax status, which may not be the same as the legal use of the structure. To determine the legal use of a structure, research the records of the Department of Buildings.

	Total	Open
Complaints	1	0
Violations-DOB	10	4
Violations-ECB (DOB)	0	0
Jobs/Filings	7	
ARA / LAA Jobs	1	
Total Jobs	8	
Actions	19	

OR Enter Action Type:
OR Select from List:
Select...
AND Show Actions

Elevator Records
Electrical Applications
Permits In-Process / Issued
Illuminated Signs Annual Permits
Plumbing Inspections
Open Plumbing Jobs / Work Types
Facades
Marquee Annual Permits
Boiler Records
DEP Boiler Information
After Hours Variance Permits

If you have any questions please review these Frequently Asked Questions, the Glossary, or call the 311 Citizen Service Center by dialing 311 or (212) NEW YORK outside of New York City.

4/28/2011
082310

HPD Building, Registration & Violation Services — Select — Home

The selected address: 77 COMMERCIAL STREET, Brooklyn 11222

HPD#	Range	Block	Lot	CD	CensusTract	Stories	A Units	B Units	Ownership	MDR#	Class
224368 Active	77-77	02472	0410	1	57700	2	0	0	PVT	0	N/A

Other Units

Registration

Charges

Map

Complaint Status

Complaint History

Carbon Monoxide Certificate

Litigation/Case Status

All Open Violations

prior year Open Viol.'s

Ecertification

I-Card Images

Property Registration Assistance

There is no registration information for this building.

No violations were retrieved.

NYC.gov

Services News & Features City Life City Agencies Office of the Mayor Contact Us Search

NYC.gov - NEW YORK CITY'S OFFICIAL WEB SITE

FIRE DEPARTMENT – CITY OF NEW YORK

Public Records Unit / Fire Records Section

9 MetroTech Center
Brooklyn, New York 11201-3857
(718) 999-2681 or 2682

Violation Special Report Request Form

SECTION A **CUSTOMER INFORMATION**

Please print the required information below.

OFFICE USE ONLY

Cashier / Search No.

PRU Staff
Accepted By/Initials:

Searched By:

Total Amount:

4/28
Date

Maryann Wegn
Name

77 Arkay Drive, Suite D
Address

Hauppauge, NY 11788
Borough, State Zip Code

631-617-6200
Telephone Number

Note: Please make sure you complete this form and attach all required documents. Enclose a check or money order made payable to the **NYC Fire Department and a stamped self-addressed envelope (with postage).** Mail checks or money orders directly to the address and unit listed above. DO NOT MAIL CASH.

SECTION B **REQUEST VIOLATION REPORT** **FEE $10.00 / PER REPORT**

Please print the required information below.

77 Commercial St Brooklyn
House No Street Name Borough

☑ **EXISTING- ALL NOTICES OF VIOLATION AND VIOLATION ORDERS ISSUED BY THE FIRE PREVENTION**

☐ **EXISTING- ALL SUMMONSES**

Note: This search is limited to outstanding Summonses, Notices of Violation and Violation Orders (VOs) that are reported to be related to a specific address. With respect to VOs this search is limited to VOs issued on January 1, 2008 or thereafter. This search does not contain information on VOs issued by fire companies, unless they were forwarded to the Bureau of Fire Prevention. A requested report will only list the violation numbers. After you have received the Report, you can obtain a copy of any record available for an additional fee of $0.25 (cents) / per page by filling out the copy of violation request form.

Note: Requests will be responded to within 10 business days.

PR4 (April-09)

FIRE DEPARTMENT – CITY OF NEW YORK

Public Records Unit / Tanks Section

9 MetroTech Center
Brooklyn, New York 11201-3857
(718) 999-2441 or 2442

Fuel Tank Special Report Request Form

SECTION A **CUSTOMER INFORMATION**

Please print the required information below.

Maryann Wegh
Name

77 Arkay Drive, Suite D
Address

Hauppauge, NY 11788
State Zip Code

631-617-6200
Telephone Number

OFFICE USE ONLY

Cashier / Search No.

PRU Staff
Accepted By/Initials:

Searched By:

Total Amount:

Note: Please make sure you complete this form and attach all required documents. Enclose a check or money order made payable to the NYC Fire Department and a stamped self-addressed envelope (with postage). Mail checks or money orders directly to the address and unit listed above. DO NOT MAIL CASH.

SECTION B **FUEL TANK REPORT - FEE $10.00 / PER REPORT**

77 Commercial Street
House Number Street Name

Brooklyn
Borough

- [x] THE TOTAL AMOUNT AND SIZE OF EXISTING FUEL OIL / HEATING TANKS
- [ ] THE TOTAL AMOUNT AND SIZE OF REMOVED OR SEALED FUEL OIL / HEATING TANKS
- [ ] THE TOTAL AMOUNT AND SIZE OF EXISTING BURIED MOTOR VEHICLE TANKS
- [ ] THE TOTAL AMOUNT AND SIZE OF REMOVED OR SEALED BURIED MOTOR VEHICLE TANKS
- [ ] MOST RECENT TANK / PIPING TEST RESULTS
- [ ] HISTORY OF BURIED TANKS LEAKS

Note: Requests will be responded to within 10 business days.

PR3 (July-08)

MERRITT
Environmental
Consulting Corp.

77 Arkay Drive, Suite D, Hauppauge, NY 11788
(631) 617-6200, Fax. 631-617-6201

April 28, 2011
Project No. M5374

Robert LoCicero
Records Access Office
New York State Department of Health
Corning Tower Room 2364
Albany, New York 12237-0044

Re: Freedom of Information Request

Dear Mr. LoCicero:

Merritt Environmental Consulting Corp. (MECC) would like to review any files retained by the NYS Department of Health concerning the following property:

- **77 Commercial Street, Brooklyn, New York 10021**
- **Block: 2472, Lot: 410**

The information we are interested in is underground storage tanks, site contamination, or violations that have been issued to the site. If you have any questions, please feel free to contact me.

Very truly yours,

Charles G. Merritt
Certified Environmental Specialist /LEED, AP

NEW YORK
state department of
HEALTH

Nirav R. Shah, M.D., M.P.H.
Commissioner

Sue Kelly
Executive Deputy Commissioner

May 2, 2011

Charles G. Merritt
Merritt Environmental Consulting Corp.
77 Arkay Drive, Suite D
Hauppauge, NY 11788

Re: 11-05-015
Your project no.: M5374
77 Commercial Street

Dear Mr. Merritt:

This will acknowledge receipt of your 4/28/2011 request for records under the Freedom of Information Law (FOIL).

Your request has been forwarded to the appropriate Department program area(s) to identify documents that are responsive to your request and which may be made available pursuant to all applicable provisions of FOIL.

It is estimated that within 20 business days we will complete your request or we will notify you in writing if the responsible program area(s) should require additional time to locate, assemble and review responsive documents.

Please note that, pursuant to Article 6 of the Public Officers Law, a charge *may* be applied to your request, including the actual cost of the medium used to respond to your FOIL request and/or other related costs. When responsive records have been identified, you will be informed of any cost and how payment should be made.

Sincerely,

Valerie L. Giordano

Valerie L. Giordano
Records Access Office

M5374
77 COMMERCIAL STREET
BROOKLYN, NY 11222

Inquiry Number: 3055497.8
April 29, 2011

The EDR Property Tax Map Report

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

EDR Property Tax Map Report

Environmental Data Resources, Inc.'s EDR Property Tax Map Report is designed to assist environmental professionals in evaluating potential environmental conditions on a target property by understanding property boundaries and other characteristics. The report includes a search of available property tax maps, which include information on boundaries for the target property and neighboring properties, addresses, parcel identification numbers, as well as other data typically used in property location and identification.

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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NYC Finance

NYC Digital Tax Map

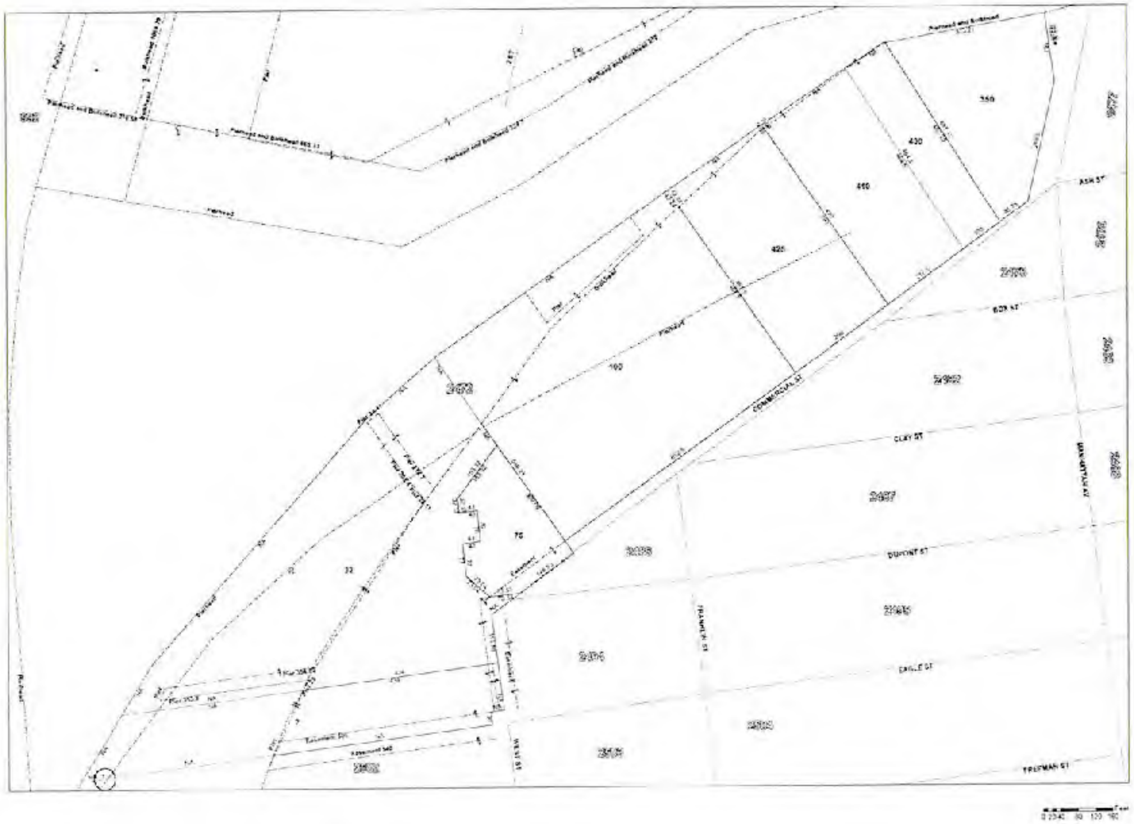
Effective Date 10-29-2008 10:32:16

End Date Current

Brooklyn Block: 2472

Legend

- Streets
- Miscellaneous Text
- Possession Hooks
- Boundary Lines
- Lot Face Possession Hooks
- Regular
- Underwater
- Tax Lot Polygon
- Condo Number
- Tax Block Polygon



Finance

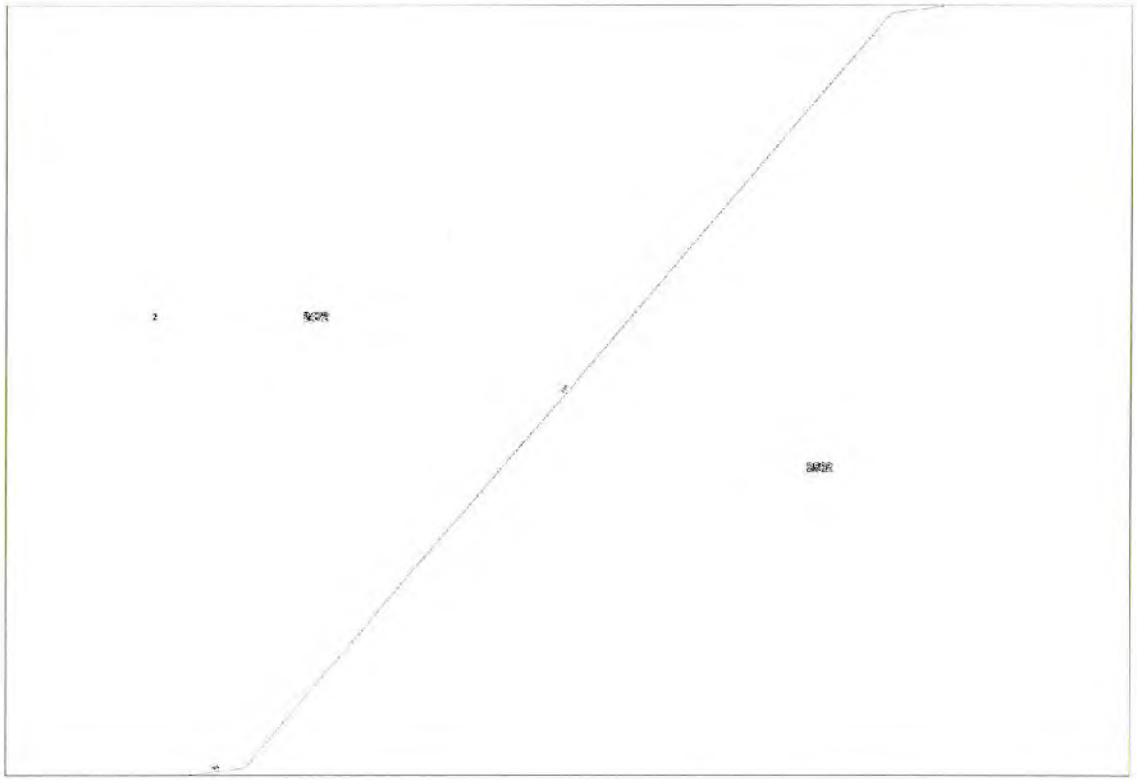
NYC Digital Tax Map

Effective Date 10-29-2009 09:07:16
End Date Current

Brooklyn Block 2472 Inset: 1

Legend

- Streets
- Miscellaneous Text
- Possession Hooks
- Boundary Lines
- Lot Face Possession Hooks
- Regular
- Underwater
- Tax Lot Polygon
- Condo Number
- Tax Block Polygon



M5374
77 COMMERCIAL STREET
BROOKLYN, NY 11222

Inquiry Number: 3055497.7
May 02, 2011

The EDR Environmental LienSearch™ Report

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

The EDR Environmental LienSearch™ Report

The EDR Environmental LienSearch Report provides results from a search of available current land title records for environmental cleanup liens and other activity and use limitations, such as engineering controls and institutional controls.

A network of professional, trained researchers, following established procedures, uses client supplied address information to:

- search for parcel information and/or legal description;
- search for ownership information;
- research official land title documents recorded at jurisdictional agencies such as recorders' offices, registries of deeds, county clerks' offices, etc.;
- access a copy of the deed;
- search for environmental encumbering instrument(s) associated with the deed;
- provide a copy of any environmental encumbrance(s) based upon a review of key words in the instrument(s) (title, parties involved, and description); and
- provide a copy of the deed or cite documents reviewed.

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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The EDR Environmental LienSearch™ Report

TARGET PROPERTY INFORMATION

ADDRESS

77 COMMERCIAL STREET
M5374
BROOKLYN, NY 11222

RESEARCH SOURCE

Source 1:

Kings County Register of Deeds
Kings, NY

PROPERTY INFORMATION

Deed 1:

Type of Deed:	Deed
Title is vested in:	77 COMMERICAL HOLDING LLC
Title received from:	BULOVA CORPORATION
Deed Dated	10/27/2004
Deed Recorded:	12/21/2004
Book:	NA
Page:	NA
Volume:	NA
Instrument:	2004112900465001
Docket:	NA
Land Record Comments:	NA
Miscellaneous Comments:	NA
Legal Description:	See Exhibit
Legal Current Owner:	77 COMMERICAL HOLDING LLC
Property Identifiers:	BLOCK 2472 LOT 410
Comments:	See Exhibit

ENVIRONMENTAL LIEN

Environmental Lien: Found ☐ Not Found ☒

OTHER ACTIVITY AND USE LIMITATIONS (AULs)

AULs: Found ☐ Not Found ☒

Deed Exhibit 1

NYC DEPARTMENT OF FINANCE
OFFICE OF THE CITY REGISTER

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2004112900465001002EC3B0

RECORDING AND ENDORSEMENT COVER PAGE

Document ID: 2004112900465001 Document Date: 10-27-2004 Preparation Date: 12-01-2004
Document Type: DEED
Document Page Count: 3

PRESENTER:
RELIABLE ABSTRACT CO. LLC.
4203 13TH AVENUE 2ND FLOOR
BROOKLYN, NY 11219
718-438-0786
JACOB@RELIABLEABSTRACT.NET

RETURN TO:
77 COMMERCIAL HOLDINGS LLC
1734 60TH STREET
BROOKLYN, NY 11204

PROPERTY DATA

Borough	Block	Lot	Unit	Address
BROOKLYN	2472	410	Entire Lot	77 COMMERCIAL STREET

Property Type: INDUSTRIAL BUILDING

CROSS REFERENCE DATA

CRFN _____ *or* Document ID _____ *or* _____ Year _____ Reel _____ Page _____ *or* File Number _____

PARTIES

GRANTOR/SELLER:
BULOVA CORPORATION
ONE BULOVA AVENUE
WOODSIDE, NY 11377

GRANTEE/BUYER:
77 COMMERICAL HOLDING LLC
C/O N.C. CALLER, P.C., 1481 42ND STREET
BROOKLYN, NY 11219

FEES AND TAXES

Mortgage

Mortgage Amount:	$	0.00
Taxable Mortgage Amount:	$	0.00
Exemption:		
TAXES: County (Basic):	$	0.00
City (Additional):	$	0.00
Spec (Additional):	$	0.00
TASF:	$	0.00
MTA:	$	0.00
NYCTA:	$	0.00
Additional MRT:	$	0.00
TOTAL:	$	0.00

NYC HPD Affidavit in Lieu of Registration Staten

Recording Fee: $ 52.00
Affidavit Fee: $ 0.00
NYC Real Property Transfer Tax Filing Fee: $ 165.00
NYS Real Estate Transfer Tax: $ 51,000.00

RECORDED OR FILED IN THE OFFICE OF THE CITY REGISTER OF THE CITY OF NEW YORK

Recorded/Filed 12-21-2004 12:05
City Register File No.(CRFN): **2004000781698**

City Register Official Signature

RK 43217

CONSULT YOUR LAWYER BEFORE SIGNING THIS INSTRUMENT—THIS INSTRUMENT SHOULD BE USED BY LAWYERS ONLY.

THIS INDENTURE, made the 27th day of October, in the year two thousand and four

BETWEEN BULOVA CORPORATION, with an address at One Bulova Avenue, Woodside, New York 11377

party of the first part, and 77 COMMERCIAL HOLDING LLC, with an address at c/o N.C. Caller, P.C., 1481 42nd Street, Brooklyn, New York 11219

party of the second part,

WITNESSETH, that the party of the first part, in consideration of Ten Dollars and other valuable consideration paid by the party of the second part, does hereby grant and release unto the party of the second part, the heirs or successors and assigns of the party of the second part forever,

ALL that certain plot, piece or parcel of land, with the buildings and improvements thereon erected, situate, lying and being in the County of Kings, City and State of New York as described on Schedule A annexed hereto and made a part hereof

This conveyance is made with the Unanimous Consent of the Board of Directors of Bulova Corporation.

TOGETHER with all right, title and interest, if any, of the party of the first part of, in and to any streets and roads abutting the above-described premises to the center lines thereof; TOGETHER with the appurtenances and all the estate and rights of the party of the first part in and to said premises; TO HAVE AND TO HOLD the premises herein granted unto the party of the second part, the heirs or successors and assigns of the party of the second part forever.

AND the party of the first part, in compliance with Section 13 of the Lien Law, covenants that the party of the first part will receive the consideration for this conveyance and will hold the right to receive such consideration as a trust fund to be applied first for the purpose of paying the cost of the improvement and will apply the same first to the payment of the cost of the improvement before using any part of the total of the same for any other purpose.

The word "party" shall be construed as if it read "parties" whenever the sense of this indenture so requires.

IN WITNESS WHEREOF, the party of the first part has duly executed this deed the day and year first above written.

IN PRESENCE OF:

BULOVA CORPORATION

By: _____

Warren J. Neitzel
General Counsel and Corporate Secretary

STATE OF NEW YORK, COUNTY OF

On the 27th day of October in the year 2004, before me, the undersigned, personally appeared

Warren J. Neitzel

, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(s) is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person on behalf of which the individual(s) acted, executed the instrument.

CHAIM S. HENDLOWITZ
NOTARY PUBLIC, State of New York
No. 01HE6006583
Qualified in Kings County
Commission Expires 5/4/2006

Notary Public

STATE OF , COUNTY OF

On the day of in the year , before me, the undersigned, a Notary Public in and for said State, personally appeared

, the

subscribing witness to the foregoing instrument, with whom I am personally acquainted, who, being by me duly sworn, did depose and say that he/she/they reside(s) in

(if the place of residence is in a city, include the street and street number if any, thereof);

that he/she/they know(s)

to be the individual described in and who executed the foregoing instrument; that said subscribing witness was present and saw said

execute the same; and that said witness at the same time subscribed his/her/their name(s) as a witness thereto

[add the following if the acknowledgment is taken outside NY State]
and that said subscribing witness made such appearance before the undersigned in the (insert the city or other political subdivision and the State or country or other place the proof was taken).

STATE OF

On the day of in the year before me, the undersigned, personally appeared

, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(s) is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person on behalf of which the individual(s) acted, executed the instrument

[add the following if the acknowledgment is taken outside NY State]
and that said individual made such appearance before the undersigned in the (insert the city or other political subdivision and the State or country or other place the acknowledgment was taken).

STATE OF , COUNTY OF

On the day of in the year before me personally came

to me known, who, being by me duly sworn, did depose and say that he resides at

that he is the

of

the corporation described in and which executed the foregoing instrument; that he knows the seal of said corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the board of directors of said corporation, and that he signed h name thereto by like order.

Bargain and Sale Deed

WITHOUT COVENANT AGAINST GRANTOR'S ACTS

TITLE NO.

SECTION	
BLOCK	2472
LOT	410
COUNTY OR TOWN	Kings

TO

Recorded at Request of STEWART TITLE®

RETURN BY MAIL TO:

Carl Caller, Esq.
N.C. Caller, P.C.
1481 42nd Street
Brooklyn, New York 11219

Sanctity of Contract®

Distributed by
STEWART TITLE®
INSURANCE COMPANY
300 EAST 42nd STREET, 4th FLOOR
NEW YORK, NEW YORK 10017
(212) 922-0509 Fax (212) 922-1593

Schedule A Description

Title Number **RK-043217** Policy Number: **5312-1190468** Page 1

ALL that certain plot, piece or parcel of land situate lying and being in the Borough of Brooklyn, County of Kings, City and State of New York, bounded and described as follows:

BEGINNING at a point on the northwesterly side of Commercial Street, distant 185 feet 9 inches southwesterly from the corner formed by the intersection of the northwesterly side of Commercial Street with the westerly side of Manhattan Avenue;

RUNNING THENCE southwesterly along the northwesterly side of Commercial Street, 217 feet 6 inches;

THENCE northwesterly along a line drawn at right angles to Commercial Street, 499 feet 10 inches to the pierhead line approved by the Secretary of War in July, 1916;

THENCE easterly along said pierhead line, 234 feet 8 inches;

THENCE southerly in a straight line, 489 feet to the northwesterly side of Commercial Street to the point or place of BEGINNING.

NYC DEPARTMENT OF FINANCE
OFFICE OF THE CITY REGISTER

2004112900465001002S0D31

SUPPORTING DOCUMENT COVER PAGE

Document ID: 2004112900465001 Document Date: 10-27-2004 Preparation Date: 12-01-2004
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ASSOCIATED TAX FORM ID: 2004082401013

SUPPORTING DOCUMENTS SUBMITTED:

	Page Count
RP - 5217 REAL PROPERTY TRANSFER REPORT	1

FOR CITY USE ONLY

C1. County Code ____ C2. Date Deed Recorded ___ / ___ / ___ (Month Day Year)

C3. Book ____ C4. Page ____

OR

C5. CRFN ____

REAL PROPERTY TRANSFER REPORT

STATE OF NEW YORK
STATE BOARD OF REAL PROPERTY SERVICES

RP - 5217NYC

(Rev 11/2002)

PROPERTY INFORMATION

1. Property Location: 77 (STREET NUMBER) COMMERCIAL STREET (STREET NAME) BROOKLYN (BOROUGH) 11222 (ZIP CODE)

2. Buyer Name: 77 COMMERICAL HOLDING LLC (LAST NAME / COMPANY) (FIRST NAME)

(LAST NAME / COMPANY) (FIRST NAME)

3. Tax Billing Address: Indicate where future Tax Bills are to be sent if other than buyer address (at bottom of form) (LAST NAME / COMPANY) (FIRST NAME)

(STREET NUMBER AND STREET NAME) (CITY OR TOWN) (STATE) (ZIP CODE)

4. Indicate the number of Assessment Roll parcels transferred on the deed: 1 # of Parcels OR ☐ Part of a Parcel

4A. Planning Board Approval - N/A for NYC

4B. Agricultural District Notice - N/A for NYC

5. Deed Property Size: 217.5 (FRONT FEET) X 490 (DEPTH) OR ____ (ACRES)

Check the boxes below as they apply:

6. Ownership Type is Condominium ☐

7. New Construction on Vacant Land ☐

8. Seller Name: BULOVA CORPORATION (LAST NAME / COMPANY) (FIRST NAME)

(LAST NAME / COMPANY) (FIRST NAME)

9. Check the box below which most accurately describes the use of the property at the time of sale:

- A ☐ One Family Residential
- B ☐ 2 or 3 Family Residential
- C ☐ Residential Vacant Land
- D ☐ Non-Residential Vacant Land
- E ☐ Commercial
- F ☐ Apartment
- G ☐ Entertainment / Amusement
- H ☐ Community Service
- I ☑ Industrial
- J ☐ Public Service

SALE INFORMATION

10. Sale Contract Date: 2 / 12 / 2004 (Month Day Year)

11. Date of Sale / Transfer: 10 / 27 / 2004 (Month Day Year)

12. Full Sale Price: 1,275,000.0

(Full Sale Price is the total amount paid for the property including personal property. This payment may be in the form of cash, other property or goods, or the assumption of mortgages or other obligations.) *Please round to the nearest whole dollar amount.*

13. Indicate the value of personal property included in the sale: ____

14. Check one or more of these conditions as applicable to transfer:

- A ☐ Sale Between Relatives or Former Relatives
- B ☐ Sale Between Related Companies or Partners in Business
- C ☐ One of the Buyers is also a Seller
- D ☐ Buyer or Seller is Government Agency or Lending Institution
- E ☐ Deed Type not Warranty or Bargain and Sale (Specify Below)
- F ☐ Sale of Fractional or Less than Fee Interest (Specify Below)
- G ☐ Significant Change in Property Between Taxable Status and Sale Dates
- H ☐ Sale of Business is Included in Sale Price
- I ☐ Other Unusual Factors Affecting Sale Price (Specify Below)
- J ☑ None

ASSESSMENT INFORMATION - Data should reflect the latest Final Assessment Roll and Tax Bill

15. Building Class: F 1

16. Total Assessed Value (of all parcels in transfer): 837,000

17. Borough, Block and Lot / Roll Identifier(s) (If more than three, attach sheet with additional identifier(s))

BROOKLYN 2472 410

CERTIFICATION

I certify that all of the items of information entered on this form are true and correct (to the best of my knowledge and belief) and I understand that the making of any willful false statement of material fact herein will subject me to the provisions of the penal law relative to the making and filing of false instruments.

BUYER

BUYER SIGNATURE ____ DATE ____

1481 (STREET NUMBER) 42nd Street (STREET NAME (AFTER SALE))

Brooklyn (CITY OR TOWN) N.Y. (STATE) 11219 (ZIP CODE)

BUYER'S ATTORNEY

LAST NAME ____ FIRST NAME ____

718 (AREA CODE) 438-2525 (TELEPHONE NUMBER)

SELLER

Bulova Corporation

By: [signature]

SELLER SIGNATURE ____ DATE ____

Warren Vetzel
General Counsel
& Corporate Secretary

2004082401013201

M5374
77 COMMERCIAL STREET
BROOKLYN, NY 11222

Inquiry Number: 3055497.2s
April 29, 2011

The EDR Radius Map™ Report with GeoCheck®

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
Toll Free: 800.352.0050
www.edrnet.com

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GEOCHECK ADDENDUM

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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

77 COMMERCIAL STREET
BROOKLYN, NY 11222

COORDINATES

Latitude (North):	40.737300 - 40' 44' 14.3"
Longitude (West):	73.956700 - 73' 57' 24.1"
Universal Tranverse Mercator:	Zone 18
UTM X (Meters):	588093.7
UTM Y (Meters):	4509907.5
Elevation:	12 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	40073-F8 BROOKLYN, NY
Most Recent Revision:	1995
North Map:	40073-G8 CENTRAL PARK, NY
Most Recent Revision:	1995

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	2006, 2008
Source:	USDA

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 7 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
BULOVA CLOCK DIVISION 77 COMMERCIAL STREET BROOKLYN, NY 11222	UST	N/A
BULOVA CORPORATION 77 COMMERCIAL STREET BROOKLYN, NY	LTANKS Date Closed: 4/9/2003	N/A
LOT 410,TAXBLOCK 2472 77 COMMERCIAL STREET BROOKLYN, NY 11222	E DESIGNATION	N/A

EXECUTIVE SUMMARY

HARTE & CO INC 77 COMMERCIAL ST BROOKLYN, NY 11222	RCRA-NonGen FINDS	NYD095759981
UNITED FEATHER & DOWN 77 COMMERCIAL ST BROOKLYN, NY 11222	FTTS HIST FTTS FINDS	N/A
77 COMMERCIAL STREET 77 COMMERCIAL STREET BROOKLYN, NY	NY Spills Date Closed: 7/2/1999 NY Hist Spills	N/A
BULOVA CLOCK DIVISION 77 COMMERCIAL STREET BROOKLYN, NY 11222	AST	N/A
FORMER UNITED FEATHER & DOWN INC. 77 COMMERCIAL STREET BROOKLYN, NY 11222	HIST UST	N/A

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL..... National Priority List
Proposed NPL..... Proposed National Priority List Sites
NPL LIENS..... Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL..... National Priority List Deletions

Federal CERCLIS list

CERCLIS..... Comprehensive Environmental Response, Compensation, and Liability Information System
FEDERAL FACILITY..... Federal Facility Site Information listing

Federal CERCLIS NFRAP site List

CERC-NFRAP..... CERCLIS No Further Remedial Action Planned

EXECUTIVE SUMMARY

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF..... RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-SQG..... RCRA - Small Quantity Generators

Federal institutional controls / engineering controls registries

US ENG CONTROLS..... Engineering Controls Sites List
US INST CONTROL..... Sites with Institutional Controls

Federal ERNS list

ERNS..... Emergency Response Notification System

State- and tribal - equivalent CERCLIS

VAPOR REOPENED..... Vapor Intrusion Legacy Site List

State and tribal leaking storage tank lists

INDIAN LUST..... Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

CBS UST..... Chemical Bulk Storage Database
CBS AST..... Chemical Bulk Storage Database
INDIAN UST..... Underground Storage Tanks on Indian Land
FEMA UST..... Underground Storage Tank Listing

State and tribal institutional control / engineering control registries

ENG CONTROLS..... Registry of Engineering Controls
INST CONTROL..... Registry of Institutional Controls
RES DECL..... Restrictive Declarations Listing

State and tribal voluntary cleanup sites

INDIAN VCP..... Voluntary Cleanup Priority Listing
VCP..... Voluntary Cleanup Agreements

State and tribal Brownfields sites

ERP..... Environmental Restoration Program Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS..... A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

DEBRIS REGION 9..... Torres Martinez Reservation Illegal Dump Site Locations

EXECUTIVE SUMMARY

ODI..... Open Dump Inventory
SWTIRE..... Registered Waste Tire Storage & Facility List
INDIAN ODI..... Report on the Status of Open Dumps on Indian Lands

Local Lists of Hazardous waste / Contaminated Sites

US CDL..... Clandestine Drug Labs
US HIST CDL..... National Clandestine Laboratory Register

Local Lists of Registered Storage Tanks

HIST AST..... Historical Petroleum Bulk Storage Database

Local Land Records

LIENS 2..... CERCLA Lien Information
LUCIS..... Land Use Control Information System

Records of Emergency Release Reports

HMIRS..... Hazardous Materials Information Reporting System

Other Ascertainable Records

DOT OPS..... Incident and Accident Data
DOD..... Department of Defense Sites
FUDS..... Formerly Used Defense Sites
CONSENT..... Superfund (CERCLA) Consent Decrees
ROD..... Records Of Decision
UMTRA..... Uranium Mill Tailings Sites
MINES..... Mines Master Index File
TRIS..... Toxic Chemical Release Inventory System
TSCA..... Toxic Substances Control Act
SSTS..... Section 7 Tracking Systems
ICIS..... Integrated Compliance Information System
PADS..... PCB Activity Database System
MLTS..... Material Licensing Tracking System
RADINFO..... Radiation Information Database
RAATS..... RCRA Administrative Action Tracking System
HSWDS..... Hazardous Substance Waste Disposal Site Inventory
UIC..... Underground Injection Control Wells
DRYCLEANERS..... Registered Drycleaners
NPDES..... State Pollutant Discharge Elimination System
AIRS..... Air Emissions Data
INDIAN RESERV..... Indian Reservations
SCRD DRYCLEANERS..... State Coalition for Remediation of Drycleaners Listing
COAL ASH EPA..... Coal Combustion Residues Surface Impoundments List
FINANCIAL ASSURANCE.... Financial Assurance Information Listing
COAL ASH..... Coal Ash Disposal Site Listing
PCB TRANSFORMER..... PCB Transformer Registration Database
COAL ASH DOE..... Sleam-Electric Plan Operation Data

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

EXECUTIVE SUMMARY

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Federal RCRA CORRACTS facilities list

CORRACTS: CORRACTS is a list of handlers with RCRA Corrective Action Activity. This report shows which nationally-defined corrective action core events have occurred for every handler that has had corrective action activity.

A review of the CORRACTS list, as provided by EDR, and dated 05/25/2010 has revealed that there are 2 CORRACTS sites within approximately 1 mile of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
ACCURATE ASSOCIATES	***5-36 46TH RD***	***N 1/2 - 1 (0.647 mi.)***	***160***	***546***
KOSAN INDUSTRIAL CORP	***5-49 49TH AVE***	***NNE 1/2 - 1 (0.705 mi.)***	***161***	***561***

Federal RCRA generators list

RCRA-LQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

A review of the RCRA-LQG list, as provided by EDR, and dated 02/17/2010 has revealed that there is 1 RCRA-LQG site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
NYCT-CROSSTOWN ANNEX	***65 COMMERCIAL STREET***	***SW 0 - 1/8 (0.034 mi.)***	***B16***	***50***

RCRA-CESQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

A review of the RCRA-CESQG list, as provided by EDR, and dated 02/17/2010 has revealed that there are

EXECUTIVE SUMMARY

2 RCRA-CESQG sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
S & G WOODWORKING INC	***1155 MANHATTAN AVE - MA***	***NE 0 - 1/8 (0.084 mi.)***	***F49***	***163***
SHELTER ELECTRIC MAINTENANCE C	***53-01 VERNON BLVD***	***NNE 1/8 - 1/4 (0.238 mi.)***	***P122***	***354***

State- and tribal - equivalent CERCLIS

SHWS: The State Hazardous Waste Sites records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. The data come from the Department of Environmental Conservation's Inactive Hazardous waste Disposal Sites in New York State.

A review of the SHWS list, as provided by EDR, and dated 03/31/2011 has revealed that there are 3 SHWS sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
FORMER NUHART PLASTIC MANUFACT	280 FRANKLIN STREET	SW 1/8 - 1/4 (0.149 mi.)	104	304
Class Code: Significant threat to the public health or environment - action required.				
21-03 44TH AVENUE	21-03 44TH AVENUE	NNE 1/2 - 1 (0.994 mi.)	166	573
Class Code: Significant threat to the public health or environment - action required.				

Lower Elevation	Address	Direction / Distance	Map ID	Page
K - WILLIAMSBURG WORKS	KENT AVE & 12TH STREET	S 1/2 - 1 (0.986 mi.)	165	571

State and tribal landfill and/or solid waste disposal site lists

SWF/LF: The Solid Waste Facilities/Landfill Sites records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. The data come from the list.

A review of the SWF/LF list, as provided by EDR, and dated 01/12/2011 has revealed that there are 8 SWF/LF sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MICHAEL FERONE (BRICK) CO.	247 GREENE ST	SE 1/4 - 1/2 (0.342 mi.)	S134	434
BERLIN WRECKING LTD.	10-23 JACKSON AVENUE	NNE 1/4 - 1/2 (0.369 mi.)	146	511

Lower Elevation	Address	Direction / Distance	Map ID	Page
NEW YORK RECYCLERS; INC.(MANHA	1166-68 MANHATTAN AVENU	NE 0 - 1/8 (0.086 mi.)	F51	167
MANHATTAN AVE. RECYCLING CORP.	1166 MANHATTAN AVE.	NE 0 - 1/8 (0.086 mi.)	F52	168
ECONOMY CONTAINER SERVICE	23 ASH ST	ENE 1/8 - 1/4 (0.125 mi.)	M92	260
CONCRETE RECYCLING (NEWSPOINT)	55-02 2ND STREET	NW 1/8 - 1/4 (0.239 mi.)	Q124	358
PEREZ INTERBORO ASPHALT C	99 PAIDGE AVENUE	E 1/4 - 1/2 (0.384 mi.)	148	513
PRONTO DEMOLITION CORP.	73 PROVOST ST	SE 1/4 - 1/2 (0.451 mi.)	156	534

EXECUTIVE SUMMARY

State and tribal leaking storage tank lists

LTANKS: Leaking Storage Tank Incident Reports. These records contain an inventory of reported leaking storage tank incidents reported from 4/1/86 through the most recent update. They can be either leaking underground storage tanks or leaking aboveground storage tanks. The causes of the incidents are tank test failures, tank failures or tank overfills

A review of the LTANKS list, as provided by EDR, and dated 03/31/2011 has revealed that there are 29 LTANKS sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
65 COMMERCIAL ST/BKLYN Date Closed: 1/30/2004	***65 COMMERCIAL STREET***	***SW 0 - 1/8 (0.034 mi.)***	***B18***	***82***
132-140 GREEN STREET Date Closed: 4/11/2003	***132-140 GREEN STREET***	***S 1/4 - 1/2 (0.257 mi.)***	***125***	***358***
FORMER WASTE TRANSFER STATION Date Closed: 1/27/2005	247-251 GREEN ST	SE 1/4 - 1/2 (0.342 mi.)	S133	433
203 JAVA ST. Date Closed: 6/10/1993	***203 JAVA ST***	***SSE 1/4 - 1/2 (0.438 mi.)***	***152***	***524***
PARKING GARAGE Date Closed: 3/31/2003	***11-15 50TH AVE***	***NE 1/4 - 1/2 (0.446 mi.)***	***154***	***529***
ST. MARY'S ROMAN CATHOLIC Date Closed: 3/3/2003	***10-08 49TH AVENUE***	***NNE 1/4 - 1/2 (0.448 mi.)***	***155***	***532***

Lower Elevation	Address	Direction / Distance	Map ID	Page
Not reported Date Closed: 6/13/2003	***64 BOX ST***	***E 0 - 1/8 (0.122 mi.)***	***H90***	***256***
29 ASH ST Date Closed: 7/18/2003 Date Closed: 4/3/2003	***29 ASH ST***	***ENE 1/8 - 1/4 (0.136 mi.)***	***M98***	***274***
5-35 54TH STREET Date Closed: 4/22/1994	***5-35 54TH STREET***	***N 1/8 - 1/4 (0.205 mi.)***	***110***	***327***
ANOROC REALTY, LLC Date Closed: 8/27/1997	***5-35 54TH AVENUE***	***NNW 1/4 - 1/2 (0.275 mi.)***	***126***	***361***
MOTIVA Date Closed: 7/30/1987	***25 PAIDGE AVENUE***	***E 1/4 - 1/2 (0.276 mi.)***	***R127***	***384***
MOTIVA Date Closed: 10/28/2003	***25 PAIDGE AVENUE***	***E 1/4 - 1/2 (0.276 mi.)***	***R128***	***415***
52-00 2ND ST/QU'NS/NORVAL Date Closed: 12/29/2005	***52000 2ND ST***	***NNW 1/4 - 1/2 (0.310 mi.)***	***131***	***426***
NYC NEWTON CREEK WPCP Date Closed: 7/31/1997	***320 FREEMAN ST***	***ESE 1/4 - 1/2 (0.345 mi.)***	***T136***	***466***
EXXON TERMINAL Date Closed: 10/16/1997	***320 FREEMAN STREET***	***ESE 1/4 - 1/2 (0.345 mi.)***	***T137***	***468***
EXXON TERMINAL Date Closed: 3/30/1995 Date Closed: 12/27/2002 **Additional key fields are available in the Map Findings section*	***320 FREEMAN STREET***	***ESE 1/4 - 1/2 (0.345 mi.)***	***T138***	***470***
QUEENS MIDTOWN FACILITY Date Closed: 6/24/2004	***BORDEN AVENUE***	***NNW 1/4 - 1/2 (0.355 mi.)***	***U139***	***487***

EXECUTIVE SUMMARY

Lower Elevation	Address	Direction / Distance	Map ID	Page
LONG ISLAND CITY YARD Date Closed: 7/8/2003	***BORDEN AV / 2ND ST***	***NNW 1/4 - 1/2 (0.355 mi.)***	***U140***	***492***
5-50 51ST AVENUE Date Closed: 12/21/1995	***5-50 51ST AVENUE***	***N 1/4 - 1/2 (0.356 mi.)***	***141***	***495***
BUSINESS Date Closed: 7/24/2008	11-40 BORDEN AVE	NE 1/4 - 1/2 (0.361 mi.)	142	500
50-3519 2ND ST Date Closed: 11/4/1995	***50-3519 2ND ST.***	***NNW 1/4 - 1/2 (0.363 mi.)***	***U143***	***501***
10-55 51ST AVE/QUNS/TBTA Date Closed: 10/21/2003	***10-55 51ST AVENUE***	***NNE 1/4 - 1/2 (0.366 mi.)***	***V144***	***503***
1055 51 AVENUE Date Closed: 12/31/2002 Date Closed: 10/21/2003	***1055 51 AVENUE***	***NNE 1/4 - 1/2 (0.366 mi.)***	***V145***	***506***
02-24 51ST AVE/ Date Closed: 10/2/1992	***02-24 51ST AVE***	***NNW 1/4 - 1/2 (0.389 mi.)***	***149***	***514***
145 WEST STREET Date Closed: 12/2/1994 Date Closed: 12/2/1994	***145 WEST STREET***	***SSW 1/4 - 1/2 (0.399 mi.)***	***150***	***516***
21-07 BORDEN AVE Date Closed: 2/25/2003	***21-07 BORDEN AVE***	***ENE 1/4 - 1/2 (0.419 mi.)***	***151***	***521***
51-02 21 ST Date Closed: 7/19/2004	***51-02 21 ST***	***NE 1/4 - 1/2 (0.441 mi.)***	***153***	***526***
HOLDING CO Date Closed: 4/8/2005	5-15 49TH AVE	N 1/4 - 1/2 (0.453 mi.)	W157	535
HOBART INDUST BLDG Date Closed: 4/24/1989	***48-48 5 ST***	***N 1/4 - 1/2 (0.473 mi.)***	***W158***	***536***

HIST LTANKS: A listing of leaking underground and aboveground storage tanks. The causes of the incidents are tank test failures, tank failures or tank overfills. In 2002, the Department of Environmental Conservation stopped providing updates to its original Spills Information Database. This database includes fields that are no longer available from the NYDEC as of January 1, 2002. Current information may be found in the NY LTANKS database.

A review of the HIST LTANKS list, as provided by EDR, and dated 01/01/2002 has revealed that there are 23 HIST LTANKS sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
65 COMMERCIAL ST/BKLYN Date Closed: / /	***65 COMMERCIAL STREET***	***SW 0 - 1/8 (0.034 mi.)***	***B18***	***82***
132-140 GREEN STREET Date Closed: / /	***132-140 GREEN STREET***	***S 1/4 - 1/2 (0.257 mi.)***	***125***	***358***
203 JAVA ST. Date Closed: 06/10/93	***203 JAVA ST***	***SSE 1/4 - 1/2 (0.438 mi.)***	***152***	***524***
PARKING GARAGE Date Closed: / /	***11-15 50TH AVE***	***NE 1/4 - 1/2 (0.446 mi.)***	***154***	***529***
ST. MARY'S ROMAN CATHOLIC Date Closed: / /	***10-08 49TH AVENUE***	***NNE 1/4 - 1/2 (0.448 mi.)***	***155***	***532***

EXECUTIVE SUMMARY

Lower Elevation	Address	Direction / Distance	Map ID	Page
Not reported Date Closed: / /	*64 BOX ST*	*E 0 - 1/8 (0.122 mi.)*	*H90*	*256*
29 ASH ST Date Closed: / / Date Closed: / /	*29 ASH ST*	*ENE 1/8 - 1/4 (0.136 mi.)*	*M98*	*274*
5-35 54TH STREET Date Closed: 04/22/94	*5-35 54TH STREET*	*N 1/8 - 1/4 (0.205 mi.)*	*110*	*327*
ANOROC REALTY, LLC Date Closed: 08/27/97	*5-35 54TH AVENUE*	*NNW 1/4 - 1/2 (0.275 mi.)*	*126*	*361*
MOTIVA Date Closed: 07/30/87 Date Closed: / /	*25 PAIDGE AVENUE*	*E 1/4 - 1/2 (0.276 mi.)*	*R127*	*384*
52-00 2ND ST/QU'NS/NORVAL Date Closed: / /	*52000 2ND ST*	*NNW 1/4 - 1/2 (0.310 mi.)*	*131*	*426*
EXXON TERMINAL Date Closed: / / Date Closed: / /	*320 FREEMAN STREET*	*ESE 1/4 - 1/2 (0.345 mi.)*	*T138*	*470*
QUEENS MIDTOWN FACILITY Date Closed: / /	*BORDEN AVENUE*	*NNW 1/4 - 1/2 (0.355 mi.)*	*U139*	*487*
LONG ISLAND CITY YARD Date Closed: / /	*BORDEN AV / 2ND ST*	*NNW 1/4 - 1/2 (0.355 mi.)*	*U140*	*492*
5-50 51ST AVENUE Date Closed: 12/21/95	*5-50 51ST AVENUE*	*N 1/4 - 1/2 (0.356 mi.)*	*141*	*495*
50-3519 2ND ST Date Closed: 11/04/95	*50-3519 2ND ST.*	*NNW 1/4 - 1/2 (0.363 mi.)*	*U143*	*501*
10-55 51ST AVE/QUNS/TBTA Date Closed: / /	*10-55 51ST AVENUE*	*NNE 1/4 - 1/2 (0.366 mi.)*	*V144*	*503*
1055 51 AVENUE Date Closed: / / Date Closed: / /	*1055 51 AVENUE*	*NNE 1/4 - 1/2 (0.366 mi.)*	*V145*	*506*
02-24 51ST AVE/ Date Closed: 10/02/92	*02-24 51ST AVE*	*NNW 1/4 - 1/2 (0.389 mi.)*	*149*	*514*
145 WEST STREET Date Closed: 12/02/94 Date Closed: 12/02/94	*145 WEST STREET*	*SSW 1/4 - 1/2 (0.399 mi.)*	*150*	*516*
21-07 BORDEN AVE Date Closed: / /	*21-07 BORDEN AVE*	*ENE 1/4 - 1/2 (0.419 mi.)*	*151*	*521*
51-02 21 ST Date Closed: 11/04/93	*51-02 21 ST*	*NE 1/4 - 1/2 (0.441 mi.)*	*153*	*526*
HOBART INDUST BLDG Date Closed: 04/24/89	*48-48 5 ST*	*N 1/4 - 1/2 (0.473 mi.)*	*W158*	*536*

EXECUTIVE SUMMARY

State and tribal registered storage tank lists

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Environmental Conservation's Petroleum Bulk Storage (PBS) Database

A review of the UST list, as provided by EDR, and dated 04/05/2011 has revealed that there are 10 UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CROSSTOWN BUS DEPOT	***65 COMMERCIAL STREET***	***SW 0 - 1/8 (0.034 mi.)***	***B12***	***30***
M. HILLER & SON INC.	1133 MANHATTAN AVENUE	ESE 0 - 1/8 (0.070 mi.)	D27	101
GREENPOINT HOTEL	***1109 MANHATTAN AVENUE***	***SE 0 - 1/8 (0.095 mi.)***	***G59***	***183***
STS CYRIL & METHODIOS RC SCH	96 DUPONT ST	SSE 0 - 1/8 (0.110 mi.)	L82	241
NUHART & CO., INC.	49-55 DUPONT STREET	SW 1/8 - 1/4 (0.143 mi.)	N100	280
EAGLE STREEET ASSOC.	***48 EAGLE STREET***	***SSW 1/8 - 1/4 (0.208 mi.)***	***112***	***331***

Lower Elevation	Address	Direction / Distance	Map ID	Page
1160 MANHATTAN AVE	1160 MANHATTAN AVENUE	ENE 0 - 1/8 (0.082 mi.)	F35	125
GREENPOINT MANUFACTURING & DES	1155-1205 MANHATTAN AVE	NE 0 - 1/8 (0.084 mi.)	F46	151
STAR CANDLE COMPANY	***29 ASH ST***	***ENE 1/8 - 1/4 (0.136 mi.)***	***M97***	***271***
ALETA INDUSTRIES INC	***40 ASH STREET***	***ENE 1/8 - 1/4 (0.166 mi.)***	***105***	***307***

MOSF UST: Major Oil Storage Facilities Database. Facilities are licensed pursuant to Article 12 of the Navigation Law, 6 NYCRR Part 610 and 17 NYCRR Part 30. These facilities may be onshore facilities or vessels, with petroleum storage capacities of 400,000 gallons or greater. Includes MOSF's licensed or closed since April 1, 1986, (responsibility was transferred from DOT on October 13, 1985) plus available data obtained from DOT facilities licensed since Article 12 became law on April 1, 1978.

A review of the MOSF UST list, as provided by EDR, and dated 01/01/2002 has revealed that there are 3 MOSF UST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
NORTH FIRST STREET FUEL OIL TE	***214 KENT AVENUE***	***SSE 1/4 - 1/2 (0.495 mi.)***	***159***	***539***

Lower Elevation	Address	Direction / Distance	Map ID	Page
MOTIVA ENTERPRISES, LLC	***25 PAIDGE AVENUE***	***E 1/4 - 1/2 (0.276 mi.)***	***R129***	***417***
EXXON COMPANY USA	***320 FREEMAN STREET***	***ESE 1/4 - 1/2 (0.345 mi.)***	***T135***	***435***

AST: The Aboveground Storage Tank database contains registered ASTs. The data come from the Department of Environmental Conservation's Petroleum Bulk Storage (PBS) Database.

A review of the AST list, as provided by EDR, and dated 04/05/2011 has revealed that there are 8 AST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CROSSTOWN BUS DEPOT	***65 COMMERCIAL STREET***	***SW 0 - 1/8 (0.034 mi.)***	***B12***	***30***
M & W INC.	81 CLAY ST	ESE 0 - 1/8 (0.116 mi.)	K86	249
DUPONT ASSOC	***127 DUPONT ST***	***SE 1/8 - 1/4 (0.136 mi.)***	***96***	***268***
223 FRANKLIN ST	***223 FRANKLIN ST***	***SSW 1/8 - 1/4 (0.198 mi.)***	***108***	***317***

Lower Elevation	Address	Direction / Distance	Map ID	Page
GREENPOINT MANUFACTURING & DES	***1155-1205 MANHATTAN AVE***	***NE 0 - 1/8 (0.084 mi.)***	***F48***	***159***

EXECUTIVE SUMMARY

Lower Elevation	Address	Direction / Distance	Map ID	Page
J & N ASSOC	*159 DUPONT ST*	*ESE 1/8 - 1/4 (0.190 mi.)*	*O106*	*310*
J & N ASSOC	*158 DUPONT ST (AKA 158A*	*ESE 1/8 - 1/4 (0.192 mi.)*	*O107*	*314*
146 CLAY LLC	400 MC GUINNESS BLVD	E 1/8 - 1/4 (0.219 mi.)	113	337

MOSF AST: Major Oil Storage Facilities Database. Facilities are licensed pursuant to Article 12 of the Navigation Law, 6 NYCRR Part 610 and 17 NYCRR Part 30. These facilities may be onshore facilities or vessels, with petroleum storage capacities of 400,000 gallons or greater. Includes MOSF's licensed or closed since April 1, 1986, (responsibility was transferred from DOT on October 13, 1985) plus available data obtained from DOT facilities licensed since Article 12 became law on April 1, 1978.

A review of the MOSF AST list, as provided by EDR, and dated 01/01/2002 has revealed that there are 4 MOSF AST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
NORTH FIRST STREET FUEL OIL TE	*214 KENT AVENUE*	*SSE 1/4 - 1/2 (0.495 mi.)*	*159*	*539*

Lower Elevation	Address	Direction / Distance	Map ID	Page
MOTIVA ENTERPRISES, LLC	*25 PAIDGE AVENUE*	*E 1/4 - 1/2 (0.276 mi.)*	*R129*	*417*
DITMAS OIL-LONG ISLAND CITY	53-02 11TH ST.	NE 1/4 - 1/2 (0.319 mi.)	132	429
EXXON COMPANY USA	*320 FREEMAN STREET*	*ESE 1/4 - 1/2 (0.345 mi.)*	*T135*	*435*

CBS: These facilities store regulated hazardous substances in aboveground tanks with capacities of 185 gallons or greater, and/or in underground tanks of any size

A review of the CBS list, as provided by EDR, and dated 04/05/2011 has revealed that there is 1 CBS site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
NUHART & COMPANY	49-55 DUPONT ST.	SW 1/8 - 1/4 (0.143 mi.)	N102	303

MOSF: These facilities may be onshore facilities or vessels, with petroleum storage capacities of 400,000 gallons or greater.

A review of the MOSF list, as provided by EDR, and dated 04/05/2011 has revealed that there are 2 MOSF sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
NORTH FIRST STREET FUEL OIL TE	*214 KENT AVENUE*	*SSE 1/4 - 1/2 (0.495 mi.)*	*159*	*539*

Lower Elevation	Address	Direction / Distance	Map ID	Page
MOTIVA ENTERPRISES, LLC	*25 PAIDGE AVENUE*	*E 1/4 - 1/2 (0.276 mi.)*	*R129*	*417*

EXECUTIVE SUMMARY

State and tribal Brownfields sites

BROWNFIELDS: Brownfields Site List

A review of the BROWNFIELDS list, as provided by EDR, and dated 03/31/2011 has revealed that there is 1 BROWNFIELDS site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
HUXLEY ENVELOPE INDUSTRIAL SIT	155 WEST STREET	SSW 1/4 - 1/2 (0.375 mi.)	147	512

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Landfill / Solid Waste Disposal Sites

Registered Recycling Facility List from the Department of Environmental Conservation.

A review of the SWRCY list, as provided by EDR, and dated 01/12/2011 has revealed that there is 1 SWRCY site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
POLYSTYRENE RECYCLING; INC.	220 DUPONT STREET	ESE 1/4 - 1/2 (0.279 mi.)	130	426

Local Lists of Hazardous waste / Contaminated Sites

DEL SHWS: A database listing of sites delisted from the Registry of Inactive Hazardous Waste Disposal Sites.

A review of the DEL SHWS list, as provided by EDR, and dated 03/31/2011 has revealed that there are 2 DEL SHWS sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MOBIL OIL BROOKLYN TERMINAL	300 NORTH HENRY STREET	SE 1/2 - 1 (0.844 mi.)	163	569

Lower Elevation	Address	Direction / Distance	Map ID	Page
FORMER MANHATTAN ADHESIVES PLA	425-459 GREENPOINT AVEN	ESE 1/2 - 1 (0.809 mi.)	162	567

Local Lists of Registered Storage Tanks

HIST UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Environmental Conservation's Petroleum Bulk Storage (PBS) Database

A review of the HIST UST list, as provided by EDR, and dated 01/01/2002 has revealed that there are 7 HIST UST sites within approximately 0.25 miles of the target property.

EXECUTIVE SUMMARY

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CROSSTOWN BUS DEPOT	*65 COMMERCIAL STREET*	*SW 0 - 1/8 (0.034 mi.)*	*B12*	*30*
GREENPOINT HOTEL	*1109 MANHATTAN AVENUE*	*SE 0 - 1/8 (0.095 mi.)*	*G59*	*183*
STS CYRIL & METHODIOS RC SCH	96 DUPONT ST	SSE 0 - 1/8 (0.110 mi.)	L81	239
EAGLE STREEET ASSOC.	*48 EAGLE STREET*	*SSW 1/8 - 1/4 (0.208 mi.)*	*112*	*331*

Lower Elevation	Address	Direction / Distance	Map ID	Page
GREENPOINT MANUFACTURING & DES	*1155-1205 MANHATTAN AVE*	*NE 0 - 1/8 (0.084 mi.)*	*F48*	*159*
STAR CANDLE COMPANY	*29 ASH ST*	*ENE 1/8 - 1/4 (0.136 mi.)*	*M97*	*271*
ALETA INDUSTRIES INC	*40 ASH STREET*	*ENE 1/8 - 1/4 (0.166 mi.)*	*105*	*307*

Records of Emergency Release Reports

NY Spills: Data collected on spills reported to NYSDEC. is required by one or more of the following: Article 12 of the Navigation Law, 6 NYCRR Section 613.8 (from PBS regs), or 6 NYCRR Section 595.2 (from CBS regs). It includes spills active as of April 1, 1986, as well as spills occurring since this date.

A review of the NY Spills list, as provided by EDR, and dated 03/31/2011 has revealed that there are 28 NY Spills sites within approximately 0.125 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MANHOLE 4284 Date Closed: 5/11/1999	*COMMERCIAL ST AND BOX S*	*SSW 0 - 1/8 (0.004 mi.)*	*A9*	*24*
COMMERCIAL ST/BOX&CLAY ST Date Closed: 11/6/2001	*COMMERCIAL ST / BOX ST*	*SW 0 - 1/8 (0.012 mi.)*	*A11*	*28*
MANHOLE 4285 Date Closed: 5/11/1999	*MANHATTEN AV & COMERCIÆ*	*NE 0 - 1/8 (0.048 mi.)*	*19*	*85*
MANHOLE 4284 Date Closed: 6/13/2002	*COMMERCIAL ST AND BOX S*	*SW 0 - 1/8 (0.053 mi.)*	*B20*	*88*
MANHOLE #4294 Date Closed: 12/14/2001	*MANHATEEN AV & BOX ST*	*E 0 - 1/8 (0.067 mi.)*	*D23*	*94*
V# 1109 & V# 852 Date Closed: 12/21/2001	*20 CLAY ST*	*SW 0 - 1/8 (0.081 mi.)*	*E34*	*123*
15 CLAY ST Date Closed: 2/15/1996	*15 CLAY ST*	*SW 0 - 1/8 (0.083 mi.)*	*E43*	*143*
STEVEN SUPPLY CO Date Closed: 4/29/1996	*15 CLAY ST*	*SW 0 - 1/8 (0.083 mi.)*	*E44*	*145*
BOX PACE REALTY Date Closed: 5/5/2008	41 BOX ST.	E 0 - 1/8 (0.092 mi.)	D57	179
1109 MANHATTAN AVE Date Closed: 11/22/1996	*1109 MANHATTAN AVE*	*SE 0 - 1/8 (0.095 mi.)*	*G58*	*181*
VAULT 852 Date Closed: 10/17/2001	*10-20 CLAY ST*	*SW 0 - 1/8 (0.097 mi.)*	*E63*	*193*
VAULT #VS2364,1109,852 Date Closed: 11/7/2002	10 CLAY ST	SW 0 - 1/8 (0.097 mi.)	E64	196
VACTOR TRUCK #60722 Date Closed: 6/17/2008	10 CLAY STREET	SW 0 - 1/8 (0.097 mi.)	E65	198
VS 1106 Date Closed: 10/23/2001	*2-20 CLAY ST*	*SW 0 - 1/8 (0.108 mi.)*	*78*	*231*

EXECUTIVE SUMMARY

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
APARTMENT BUILDING Date Closed: 7/14/2009	88 CLAY ST	ESE 0 - 1/8 (0.110 mi.)	K80	237

Lower Elevation	Address	Direction / Distance	Map ID	Page
OLD GAS STATION Date Closed: 9/24/2003	1160 MANHATTAN AVE	ENE 0 - 1/8 (0.080 mi.)	F33	121
MH 4285 Date Closed: 6/13/2002	***MANHATTAN AVE/COMMERCIA***	***NE 0 - 1/8 (0.082 mi.)***	***F36***	***128***
TRANSFORMER MANHOLE Date Closed: 5/18/2000	***MANHATTAN AVE &COMMERCI***	***NE 0 - 1/8 (0.082 mi.)***	***F37***	***131***
MANHATTAN AVE & ASH ST Date Closed: 8/23/1995	***MANHATTAN AVE & ASH ST***	***NE 0 - 1/8 (0.082 mi.)***	***F38***	***133***
MANHATTAN AVE & ASH ST Date Closed: 2/13/2006	MANHATTAN AVE & ASH ST	NE 0 - 1/8 (0.082 mi.)	F39	136
MANHOLE Date Closed: 5/26/2010	COMMERCIAL ST/MANHATTAN	NE 0 - 1/8 (0.082 mi.)	F41	140
DESIGN CENTER/GREENPOINT MANUF Date Closed: 7/30/2010	1155-1205 MANHATTAN AVE	NE 0 - 1/8 (0.084 mi.)	F45	148
1155-1205 MANHATTAN AVE Date Closed: 5/29/1993 Date Closed: 11/19/1998	***1155-1205 MANHATTAN AVE***	***NE 0 - 1/8 (0.084 mi.)***	***F47***	***154***
1166 MANHATTAN AVE Date Closed: 8/14/1986	***1166 MANHATTAN AVE***	***NE 0 - 1/8 (0.086 mi.)***	***F53***	***168***
1205 MANHATTAN AVE Date Closed: 11/30/2001 Date Closed: 12/9/1993	***1205 MANHATTAN AVENUE***	***NE 0 - 1/8 (0.102 mi.)***	***I70***	***208***
NEW TOWN CREEK Date Closed: 4/17/2003	***1205 MANHATTAN AVE***	***NE 0 - 1/8 (0.102 mi.)***	***I72***	***215***
NEWTOWN CREEK Date Closed: 10/17/1992 Date Closed: 8/25/1996	***1205 MANHATTAN AVE***	***NE 0 - 1/8 (0.102 mi.)***	***I73***	***217***
1205 MANHATTAN AVE/BKLYN Date Closed: 1/16/1990	***1205 MANHATTAN AVENUE***	***NE 0 - 1/8 (0.103 mi.)***	***I74***	***222***

NY Hist Spills: This database contains records of chemical and petroleum spill incidents. Under State law, petroleum and hazardous chemical spills that can impact the waters of the state must be reported by the spiller (and, in some cases, by anyone who has knowledge of the spills). In 2002, the Department of Environmental Conservation stopped providing updates to its original Spills Information Database. This database includes fields that are no longer available from the NYDEC as of January 1, 2002. Current information may be found in the NY SPILLS database.

A review of the NY Hist Spills list, as provided by EDR, and dated 01/01/2002 has revealed that there are 20 NY Hist Spills sites within approximately 0.125 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MANHOLE 4284	***COMMERCIAL ST AND BOX S***	***SSW 0 - 1/8 (0.004 mi.)***	***A9***	***24***
COMMERCIAL ST/BOX&CLAY ST	***COMMERCIAL ST / BOX ST***	***SW 0 - 1/8 (0.012 mi.)***	***A11***	***28***

EXECUTIVE SUMMARY

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MANHOLE 4285	*MANHATTEN AV & COMERCIA*	*ENE 0 - 1/8 (0.048 mi.)*	*19*	*85*
MANHOLE 4284	*COMMERCIAL ST AND BOX S*	*SW 0 - 1/8 (0.053 mi.)*	*B20*	*88*
MANHOLE #4294	*MANHATEEN AV & BOX ST*	*E 0 - 1/8 (0.067 mi.)*	*D23*	*94*
V# 1109 & V# 852	*20 CLAY ST*	*SW 0 - 1/8 (0.081 mi.)*	*E34*	*123*
15 CLAY ST	*15 CLAY ST*	*SW 0 - 1/8 (0.083 mi.)*	*E43*	*143*
STEVEN SUPPLY CO	*15 CLAY ST*	*SW 0 - 1/8 (0.083 mi.)*	*E44*	*145*
1109 MANHATTAN AVE	*1109 MANHATTAN AVE*	*SE 0 - 1/8 (0.095 mi.)*	*G58*	*181*
VAULT 852	*10-20 CLAY ST*	*SW 0 - 1/8 (0.097 mi.)*	*E63*	*193*
VS 1106	*2-20 CLAY ST*	*SW 0 - 1/8 (0.108 mi.)*	*78*	*231*

Lower Elevation	Address	Direction / Distance	Map ID	Page
MH 4285	*MANHATTAN AVE/COMMERCI*	*NE 0 - 1/8 (0.082 mi.)*	*F36*	*128*
TRANSFORMER MANHOLE	*MANHATTAN AVE &COMMERC*	*NE 0 - 1/8 (0.082 mi.)*	*F37*	*131*
MANHATTAN AVE & ASH ST	*MANHATTAN AVE & ASH ST*	*NE 0 - 1/8 (0.082 mi.)*	*F38*	*133*
1155-1205 MANHATTAN AVE	*1155-1205 MANHATTAN AVE*	*NE 0 - 1/8 (0.084 mi.)*	*F47*	*154*
1166 MANHATTAN AVE	*1166 MANHATTAN AVE*	*NE 0 - 1/8 (0.086 mi.)*	*F53*	*168*
1205 MANHATTAN AVE	*1205 MANHATTAN AVENUE*	*NE 0 - 1/8 (0.102 mi.)*	*I70*	*208*
NEW TOWN CREEK	*1205 MANHATTAN AVE*	*NE 0 - 1/8 (0.102 mi.)*	*I72*	*215*
NEWTOWN CREEK	*1205 MANHATTAN AVE*	*NE 0 - 1/8 (0.102 mi.)*	*I73*	*217*
1205 MANHATTAN AVE/BKLYN	*1205 MANHATTAN AVENUE*	*NE 0 - 1/8 (0.103 mi.)*	*I74*	*222*

Other Ascertainable Records

RCRA-NonGen: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA-NonGen list, as provided by EDR, and dated 02/17/2010 has revealed that there are 15 RCRA-NonGen sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CON EDISON	*MANHATTAN AVE & BOX ST*	*E 0 - 1/8 (0.067 mi.)*	*D24*	*96*
INTERFLO TECHNOLOGIES	*19 CLAY STREET*	*SSW 0 - 1/8 (0.076 mi.)*	*C30*	*107*
CON ED - V 3283	*55 DUPONT ST*	*SSW 1/8 - 1/4 (0.135 mi.)*	*N95*	*265*
DYNAMIT NOBEL-HARTE, INC	*49 DUPONT STREET*	*SW 1/8 - 1/4 (0.143 mi.)*	*N101*	*289*
PAT & DOMS BODY & FENDER REPAI	*246 FRANKLIN ST*	*SSW 1/8 - 1/4 (0.220 mi.)*	*114*	*339*
KELLY CLEANERS	*1036 MANHATTAN AVE*	*SSE 1/8 - 1/4 (0.231 mi.)*	*118*	*345*

Lower Elevation	Address	Direction / Distance	Map ID	Page
MINERALS & METALS - M & R CORP	*1205 MANHATTAN AVE*	*NE 0 - 1/8 (0.102 mi.)*	*I71*	*213*
NYCHA - TECHNICAL SERVICES	*23 ASH ST - REMEDIATION*	*ENE 1/8 - 1/4 (0.125 mi.)*	*M91*	*259*
NYC HOUSING AUTH - CENTRAL SHO	*23 ASH ST*	*ENE 1/8 - 1/4 (0.125 mi.)*	*M93*	*261*
GREEN ROUND EPS OF NY CORP	*65 BOX ST*	*E 1/8 - 1/4 (0.129 mi.)*	*94*	*263*
ANHEUSER BUSCH DISTRIBUTORS OF	*55-01 2ND ST*	*NW 1/8 - 1/4 (0.200 mi.)*	*109*	*320*
INTERFLO TECHNOLOGIES	*393 MCGUINNESS BLVD*	*ESE 1/8 - 1/4 (0.205 mi.)*	*111*	*329*
MTA NYCT 54TH AVE FAN PLANT &	*54TH AVE & VERNON BLVD*	*NNE 1/8 - 1/4 (0.226 mi.)*	*P117*	*343*
HUNTERS POINT WATERFRONT SITE	*5500 2ND ST*	*NW 1/8 - 1/4 (0.237 mi.)*	*Q119*	*347*
SHELTER ELECTRIC MAINTENANCE C	*53-01 VERNON BLVD*	*NNE 1/8 - 1/4 (0.238 mi.)*	*P121*	*352*

EXECUTIVE SUMMARY

MANIFEST: Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

A review of the MANIFEST list, as provided by EDR, and dated 12/31/2010 has revealed that there are 19 MANIFEST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
NYCT-CROSSTOWN ANNEX	***65 COMMERCIAL STREET***	***SW 0 - 1/8 (0.034 mi.)***	***B16***	***50***
CON EDISON	***MANHATTAN AVE & BOX ST***	***E 0 - 1/8 (0.067 mi.)***	***D24***	***96***
INTERFLO TECHNOLOGIES	***19 CLAY STREET***	***SSW 0 - 1/8 (0.076 mi.)***	***C30***	***107***
CON ED - V 3283	***55 DUPONT ST***	***SSW 1/8 - 1/4 (0.135 mi.)***	***N95***	***265***
DYNAMIT NOBEL-HARTE, INC	***49 DUPONT STREET***	***SW 1/8 - 1/4 (0.143 mi.)***	***N101***	***289***
NUHART CO	49 DUPONT ST	SW 1/8 - 1/4 (0.143 mi.)	N103	303
PAT & DOMS BODY & FENDER REPAI	***246 FRANKLIN ST***	***SSW 1/8 - 1/4 (0.220 mi.)***	***114***	***339***
KELLY CLEANERS	***1036 MANHATTAN AVE***	***SSE 1/8 - 1/4 (0.231 mi.)***	***118***	***345***

Lower Elevation	Address	Direction / Distance	Map ID	Page
CONSOLIDATED EDISON	MANHATTAN AVE & ASH ST	NE 0 - 1/8 (0.082 mi.)	F40	138
S & G WOODWORKING INC	***1155 MANHATTAN AVE - MA***	***NE 0 - 1/8 (0.084 mi.)***	***F49***	***163***
NYC HOUSING AUTH - CENTRAL SHO	***23 ASH ST***	***ENE 1/8 - 1/4 (0.125 mi.)***	***M93***	***261***
ANHEUSER BUSCH DISTRIBUTORS OF	***55-01 2ND ST***	***NW 1/8 - 1/4 (0.200 mi.)***	***109***	***320***
CONSOLIDATED EDISON	VERNON BLVD & 54 AVE MH	NNE 1/8 - 1/4 (0.226 mi.)	P115	341
CONSOLIDATED EDISON	54TH AVE & VERNON BLVD	NNE 1/8 - 1/4 (0.226 mi.)	P116	342
MTA NYCT 54TH AVE FAN PLANT &	***54TH AVE & VERNON BLVD***	***NNE 1/8 - 1/4 (0.226 mi.)***	***P117***	***343***
HUNTERS POINT WATERFRONT SITE	***5500 2ND ST***	***NW 1/8 - 1/4 (0.237 mi.)***	***Q119***	***347***
SHELTER ELECTRIC MAINTENANCE C	***53-01 VERNON BLVD***	***NNE 1/8 - 1/4 (0.238 mi.)***	***P121***	***352***
SHELTER ELECTRIC MAINTENANCE C	***53-01 VERNON BLVD***	***NNE 1/8 - 1/4 (0.238 mi.)***	***P122***	***354***
CONSOLIDATED EDISON	55TH AVE & 2ND ST	NW 1/8 - 1/4 (0.238 mi.)	Q123	357

E DESIGNATION: Lots designation with an ?E? on the Zoning Maps of the City of New York for potential hazardous material contamination, air and/or noise quality impacts.

A review of the E DESIGNATION list, as provided by EDR, and dated 10/13/2010 has revealed that there are 32 E DESIGNATION sites within approximately 0.125 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
LOT 21,TAXBLOCK 2482	6 BOX STREET	SE 0 - 1/8 (0.012 mi.)	A10	26
LOT 425,TAXBLOCK 2472	65 REAR COMMERCIAL STRE	SW 0 - 1/8 (0.034 mi.)	B17	79
LOT 8,TAXBLOCK 2482	56 COMMERCIAL STREET	SW 0 - 1/8 (0.056 mi.)	B21	90
LOT 53,TAXBLOCK 2482	29 CLAY STREET	SSW 0 - 1/8 (0.063 mi.)	C22	92
LOT 21,TAXBLOCK 2487	32 CLAY STREET	SSW 0 - 1/8 (0.067 mi.)	C25	98
LOT 20,TAXBLOCK 2487	30 CLAY STREET	SSW 0 - 1/8 (0.069 mi.)	C26	100
LOT 26,TAXBLOCK 2482	1133 MANHATTAN AVENUE	ESE 0 - 1/8 (0.070 mi.)	D28	103
LOT 18,TAXBLOCK 2487	26 CLAY STREET	SSW 0 - 1/8 (0.074 mi.)	C29	105
LOT 4,TAXBLOCK 2482	48 COMMERCIAL STREET	SW 0 - 1/8 (0.076 mi.)	E31	118
LOT 17,TAXBLOCK 2487	22 CLAY STREET	SSW 0 - 1/8 (0.079 mi.)	32	120
LOT 7,TAXBLOCK 2482	15 CLAY STREET	SW 0 - 1/8 (0.083 mi.)	E42	141
LOT 39,TAXBLOCK 2482	1117 MANHATTAN AVENUE	ESE 0 - 1/8 (0.084 mi.)	G50	165
LOT 11,TAXBLOCK 2483	44 BOX STREET	E 0 - 1/8 (0.088 mi.)	D54	171
LOT 12,TAXBLOCK 2487	14 CLAY STREET	SW 0 - 1/8 (0.090 mi.)	E55	174
LOT 12,TAXBLOCK 2483	46 BOX STREET	E 0 - 1/8 (0.091 mi.)	D56	176
LOT 7,TAXBLOCK 2488	1110 MANHATTAN AVENUE	SE 0 - 1/8 (0.096 mi.)	G60	187
LOT 1,TAXBLOCK 2482	40 COMMERCIAL STREET	SW 0 - 1/8 (0.096 mi.)	E61	190
LOT 10,TAXBLOCK 2487	10 CLAY STREET	SW 0 - 1/8 (0.097 mi.)	E62	191
LOT 42,TAXBLOCK 2487	1107 MANHATTAN AVENUE	SE 0 - 1/8 (0.098 mi.)	G66	199

EXECUTIVE SUMMARY

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
LOT 14,TAXBLOCK 2483	50 BOX STREET	E 0 - 1/8 (0.098 mi.)	H67	202
LOT 6,TAXBLOCK 2488	1108 MANHATTAN AVENUE	SE 0 - 1/8 (0.099 mi.)	G68	204
LOT 15,TAXBLOCK 2483	52 BOX STREET	E 0 - 1/8 (0.101 mi.)	H69	207
LOT 43,TAXBLOCK 2487	1103 MANHATTAN AVENUE	SE 0 - 1/8 (0.104 mi.)	J75	225
LOT 17,TAXBLOCK 2483	56 BOX STREET	E 0 - 1/8 (0.108 mi.)	H76	228
LOT 62,TAXBLOCK 2483	77 CLAY STREET	ESE 0 - 1/8 (0.109 mi.)	K77	229
LOT 4,TAXBLOCK 2488	1102 MANHATTAN AVENUE	SE 0 - 1/8 (0.109 mi.)	J79	234
LOT 61,TAXBLOCK 2483	79 CLAY STREET	ESE 0 - 1/8 (0.112 mi.)	K83	243
LOT 19,TAXBLOCK 2483	60 BOX STREET	E 0 - 1/8 (0.115 mi.)	H84	245
LOT 3,TAXBLOCK 2488	1098 MANHATTAN AVENUE	SE 0 - 1/8 (0.116 mi.)	J85	246
LOT 60,TAXBLOCK 2483	81 CLAY STREET	ESE 0 - 1/8 (0.116 mi.)	K87	251
LOT 59,TAXBLOCK 2483	83 CLAY STREET	ESE 0 - 1/8 (0.120 mi.)	K89	254

Lower Elevation	Address	Direction / Distance	Map ID	Page
LOT 20,TAXBLOCK 2483	62 BOX STREET	E 0 - 1/8 (0.119 mi.)	H88	253

EDR PROPRIETARY RECORDS

EDR Proprietary Records

Manufactured Gas Plants: The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

A review of the Manufactured Gas Plants list, as provided by EDR, has revealed that there is 1 Manufactured Gas Plants site within approximately 1 mile of the target property.

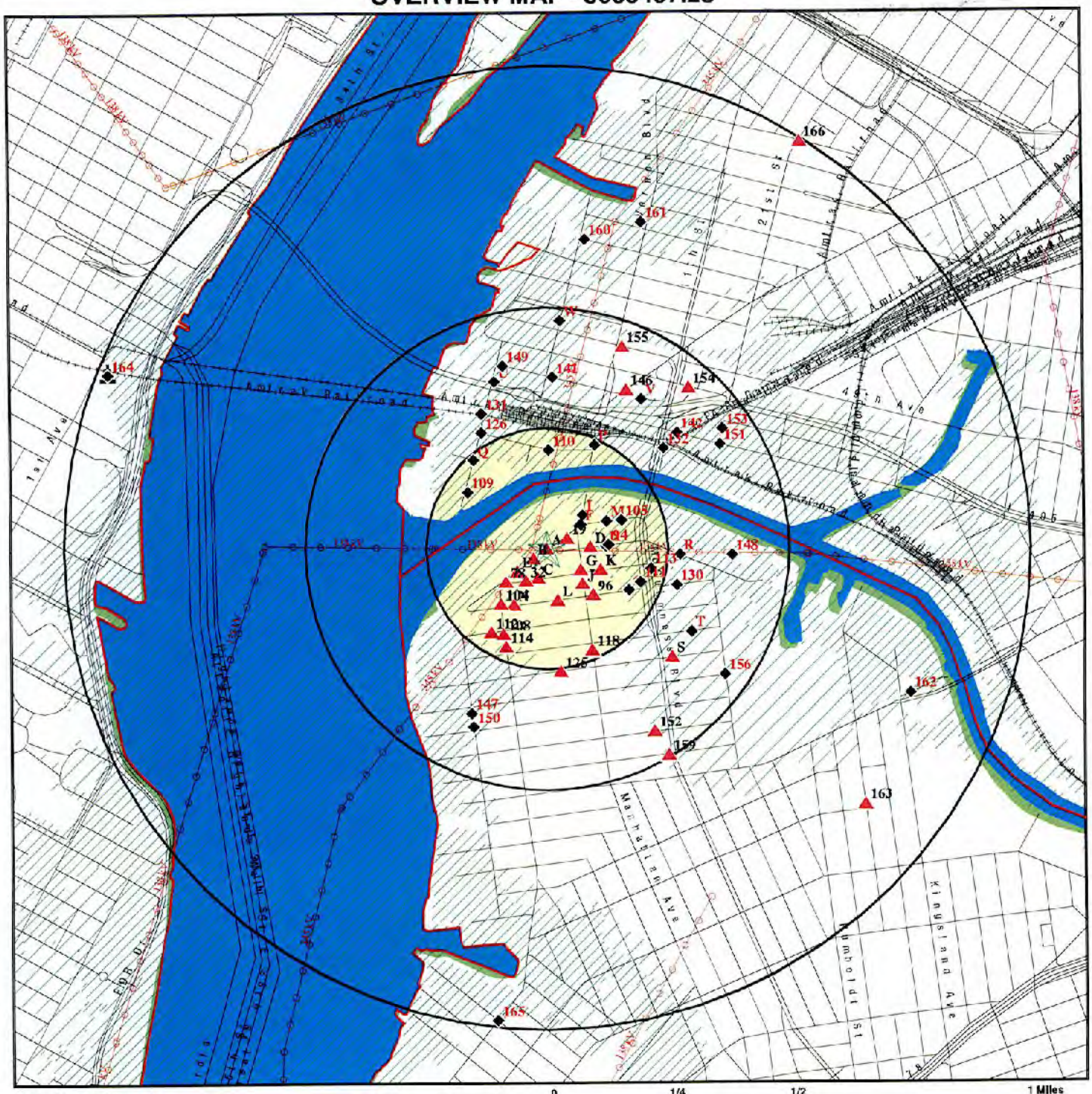
Lower Elevation	Address	Direction / Distance	Map ID	Page
CON EDISON - EAST 32ND ST. STA	EAST 32ND - EAST 33RD S	WNW 1/2 - 1 (0.977 mi.)	164	571

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 20 records.

Site Name	Database(s)
NYSDOT BIN 1066220	FINDS,MANIFEST
BELL ATLANTIC-NY	MANIFEST
BELL ATLANTIC-NY	RCRA-NLR,MANIFEST
CONSOLIDATED EDISON	RCRA-NLR,MANIFEST
NYCDOT C/O KOCH-SKANSKA	RCRA-CESQG,MANIFEST
VERIZON NEW YORK INC	FINDS,MANIFEST
VERIZON NEW YORK INC. MANHOLE	MANIFEST
NYSDOT BIN 1077069	RCRA-LQG
ALPHA COATINGS CO	FINDS,RCRA-NLR
VERIZON NEW YORK INC	RCRA-NLR
BELL ATLANTIC-NY	RCRA-NLR
VERIZON NEW YORK INC	RCRA-NLR
BELL ATLANTIC-NY	RCRA-NLR
E 29TH ST & KINGS HWY	SPILLS,HIST SPILLS
BETW/AVE X &	SPILLS
BOX 38486	SPILLS,HIST SPILLS
KINGS HIGHWAY MOBIL	SPILLS
205842; KINGS HWY	SPILLS
ROUTE 9A - MANHATTAN	HSWDS
IDEAL DRY CLEANERS (FORMER)/THE SH	VCP

OVERVIEW MAP - 3055497.2s



- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- County Boundary
- Power transmission lines
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- State Wetlands

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: M5374 ADDRESS: 77 COMMERCIAL STREET BROOKLYN NY 11222 LAT/LONG: 40.7373 / 73.9567	CLIENT: Merritt Environmental Consulting Corp. CONTACT: MARYANN WEGH INQUIRY #: 3055497.2s DATE: April 29, 2011 9:14 am

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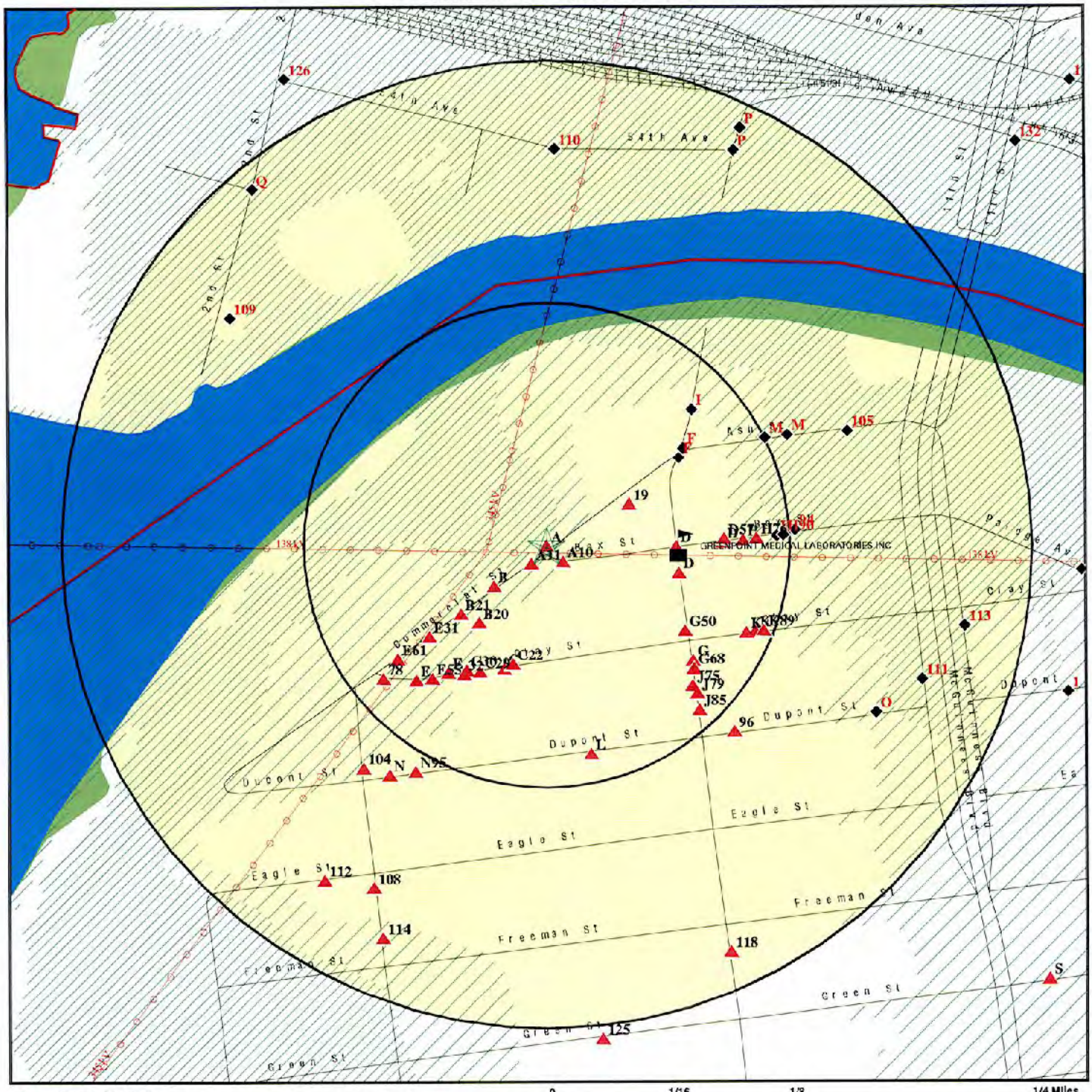
DETAIL MAP - 3055497.2s



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites

0 1/16 1/8 1/4 Miles

- Indian Reservations BIA
- County Boundary
- Power transmission lines
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- State Wetlands

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: M5374 ADDRESS: 77 COMMERCIAL STREET BROOKLYN NY 11222 LAT/LONG: 40.7373 / 73.9567	CLIENT: Merritt Environmental Consulting Corp. CONTACT: MARYANN WEGH INQUIRY #: 3055497.2s DATE: April 29, 2011 9:15 am

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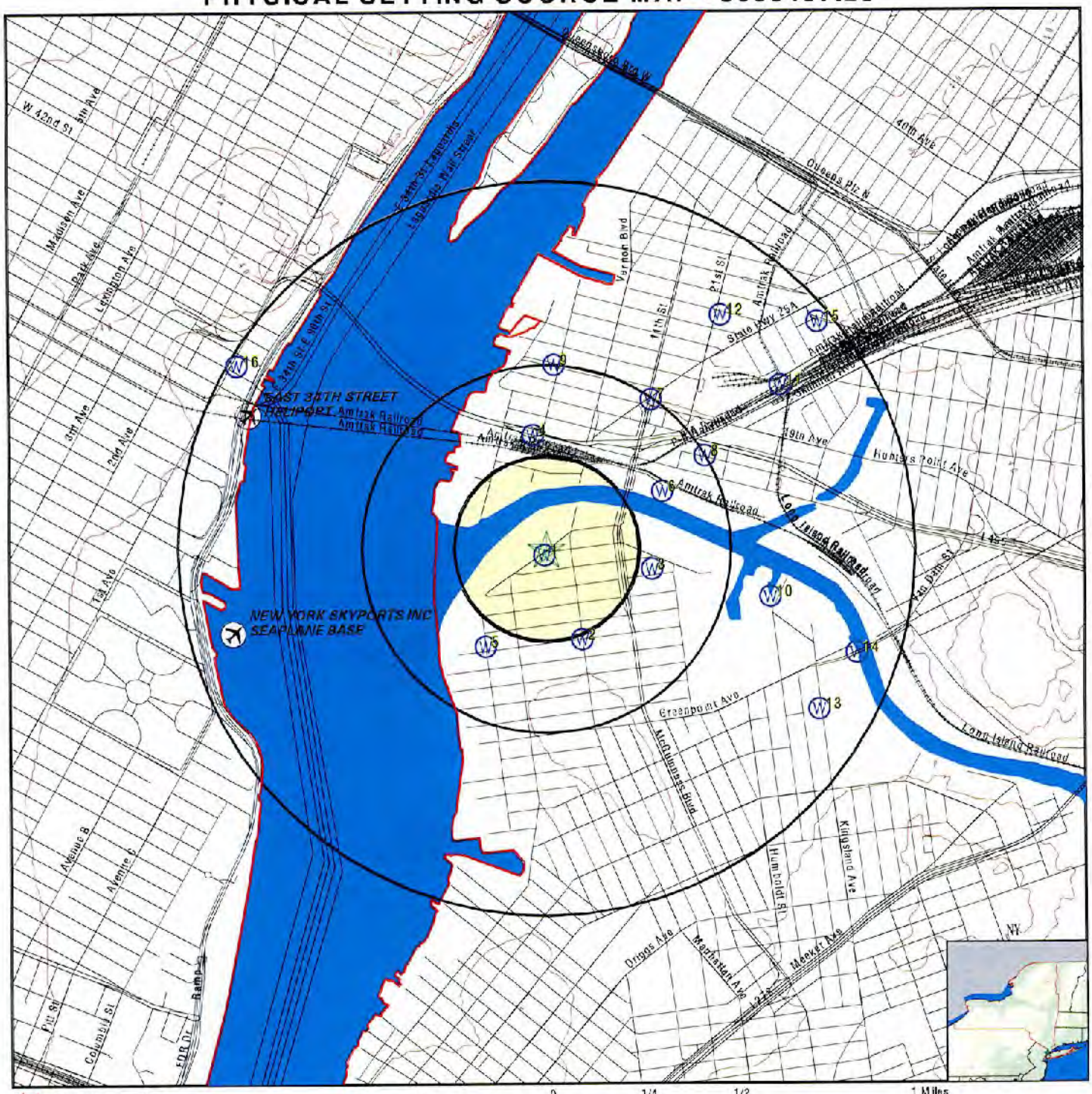
PHYSICAL SETTING SOURCE MAP - 3055497.2s



- County Boundary
- Major Roads
- Contour Lines
- Airports
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- Indeterminate Groundwater Flow at Location
- Groundwater Flow Varies at Location
- Closest Hydrogeological Data
- Oil, gas or related wells

SITE NAME: M5374 ADDRESS: 77 COMMERCIAL STREET BROOKLYN NY 11222 LAT/LONG: 40.7373 / 73.9567	CLIENT: Merritt Environmental Consulting Corp. CONTACT: MARYANN WEGH INQUIRY #: 3055497.2s DATE: April 29, 2011 9:15 am

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MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL		1.000	0	0	0	0	NR	0
Proposed NPL		1.000	0	0	0	0	NR	0
NPL LIENS		TP	NR	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL		1.000	0	0	0	0	NR	0
Federal CERCLIS list								
CERCLIS		0.500	0	0	0	NR	NR	0
FEDERAL FACILITY		1.000	0	0	0	0	NR	0
Federal CERCLIS NFRAP site List								
CERC-NFRAP		0.500	0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS		1.000	0	0	0	2	NR	2
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF		0.500	0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG		0.250	1	0	NR	NR	NR	1
RCRA-SQG		0.250	0	0	NR	NR	NR	0
RCRA-CESQG		0.250	1	1	NR	NR	NR	2
Federal institutional controls / engineering controls registries								
US ENG CONTROLS		0.500	0	0	0	NR	NR	0
US INST CONTROL		0.500	0	0	0	NR	NR	0
Federal ERNS list								
ERNS		TP	NR	NR	NR	NR	NR	0
State- and tribal - equivalent CERCLIS								
SHWS		1.000	0	1	0	2	NR	3
VAPOR REOPENED		1.000	0	0	0	0	NR	0
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF		0.500	2	2	4	NR	NR	8
State and tribal leaking storage tank lists								
LTANKS	X	0.500	2	2	25	NR	NR	29
HIST LTANKS		0.500	2	2	19	NR	NR	23
INDIAN LUST		0.500	0	0	0	NR	NR	0
State and tribal registered storage tank lists								
UST	X	0.250	6	4	NR	NR	NR	10

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
CBS UST		0.250	0	0	NR	NR	NR	0
MOSF UST		0.500	0	0	3	NR	NR	3
AST	X	0.250	3	5	NR	NR	NR	8
CBS AST		0.250	0	0	NR	NR	NR	0
MOSF AST		0.500	0	0	4	NR	NR	4
CBS		0.250	0	1	NR	NR	NR	1
MOSF		0.500	0	0	2	NR	NR	2
INDIAN UST		0.250	0	0	NR	NR	NR	0
FEMA UST		0.250	0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
ENG CONTROLS		0.500	0	0	0	NR	NR	0
INST CONTROL		0.500	0	0	0	NR	NR	0
RES DECL		0.125	0	NR	NR	NR	NR	0
State and tribal voluntary cleanup sites								
INDIAN VCP		0.500	0	0	0	NR	NR	0
VCP		0.500	0	0	0	NR	NR	0
State and tribal Brownfields sites								
ERP		0.500	0	0	0	NR	NR	0
BROWNFIELDS		0.500	0	0	1	NR	NR	1
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS		0.500	0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
DEBRIS REGION 9		0.500	0	0	0	NR	NR	0
ODI		0.500	0	0	0	NR	NR	0
SWRCY		0.500	0	0	1	NR	NR	1
SWTIRE		0.500	0	0	0	NR	NR	0
INDIAN ODI		0.500	0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US CDL		TP	NR	NR	NR	NR	NR	0
DEL SHWS		1.000	0	0	0	2	NR	2
US HIST CDL		TP	NR	NR	NR	NR	NR	0
Local Lists of Registered Storage Tanks								
HIST UST	X	0.250	4	3	NR	NR	NR	7
HIST AST		TP	NR	NR	NR	NR	NR	0
Local Land Records								
LIENS 2		TP	NR	NR	NR	NR	NR	0
LUCIS		0.500	0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
Records of Emergency Release Reports								
HMIRS		TP	NR	NR	NR	NR	NR	0
NY Spills	X	0.125	28	NR	NR	NR	NR	28
NY Hist Spills	X	0.125	20	NR	NR	NR	NR	20
Other Ascertainable Records								
RCRA-NonGen	X	0.250	3	12	NR	NR	NR	15
DOT OPS		TP	NR	NR	NR	NR	NR	0
DOD		1.000	0	0	0	0	NR	0
FUDS		1.000	0	0	0	0	NR	0
CONSENT		1.000	0	0	0	0	NR	0
ROD		1.000	0	0	0	0	NR	0
UMTRA		0.500	0	0	0	NR	NR	0
MINES		0.250	0	0	NR	NR	NR	0
TRIS		TP	NR	NR	NR	NR	NR	0
TSCA		TP	NR	NR	NR	NR	NR	0
FTTS	X	TP	NR	NR	NR	NR	NR	0
HIST FTTS	X	TP	NR	NR	NR	NR	NR	0
SSTS		TP	NR	NR	NR	NR	NR	0
ICIS		TP	NR	NR	NR	NR	NR	0
PADS		TP	NR	NR	NR	NR	NR	0
MLTS		TP	NR	NR	NR	NR	NR	0
RADINFO		TP	NR	NR	NR	NR	NR	0
FINDS	X	TP	NR	NR	NR	NR	NR	0
RAATS		TP	NR	NR	NR	NR	NR	0
HSWDS		0.500	0	0	0	NR	NR	0
UIC		TP	NR	NR	NR	NR	NR	0
MANIFEST		0.250	8	16	NR	NR	NR	24
DRYCLEANERS		0.250	0	0	NR	NR	NR	0
NPDES		TP	NR	NR	NR	NR	NR	0
AIRS		TP	NR	NR	NR	NR	NR	0
E DESIGNATION	X	0.125	32	NR	NR	NR	NR	32
INDIAN RESERV		1.000	0	0	0	0	NR	0
SCRD DRYCLEANERS		0.500	0	0	0	NR	NR	0
COAL ASH EPA		0.500	0	0	0	NR	NR	0
FINANCIAL ASSURANCE		TP	NR	NR	NR	NR	NR	0
COAL ASH		0.500	0	0	0	NR	NR	0
PCB TRANSFORMER		TP	NR	NR	NR	NR	NR	0
COAL ASH DOE		TP	NR	NR	NR	NR	NR	0
EDR PROPRIETARY RECORDS								
EDR Proprietary Records								
Manufactured Gas Plants		1.000	0	0	0	1	NR	1

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A1 Target Property | **BULOVA CLOCK DIVISION**
77 COMMERCIAL STREET
BROOKLYN, NY 11222 | **UST** | **U004081907**
N/A

Site 1 of 11 in cluster A

Actual: 12 ft.

UST:

Facility Id:	2-601397
Region:	STATE
DEC Region:	2
Site Status:	Active
Program Type:	PBS
Expiration Date:	2008/11/04
UTM X:	588107.09955000004
UTM Y:	4510067.5543900002

Affiliation Records:

Site Id:	23363
Affiliation Type:	Emergency Contact
Company Name:	NEW YORK CITY INDUSTRIAL DEVELOPMENT AGENCY
Contact Type:	Not reported
Contact Name:	R.A. WEBER
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(718) 204-3300
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	3/4/2004

Site Id:	23363
Affiliation Type:	On-Site Operator
Company Name:	BULOVA CLOCK DIVISION
Contact Type:	Not reported
Contact Name:	BULOVA CORPORATION
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(718) 204-3300
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	3/4/2004

Site Id:	23363
Affiliation Type:	Owner
Company Name:	NEW YORK CITY INDUSTRIAL DEVELOPMENT AGENCY
Contact Type:	Not reported
Contact Name:	Not reported
Address1:	110 WILLIAM STREET
Address2:	Not reported

BULOVA CLOCK DIVISION (Continued) **U004081907**

City:	NEW YORK
State:	NY
Zip Code:	10038
Country Code:	001
Phone:	(212) 341-5900
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	3/4/2004

Site Id:	23363
Affiliation Type:	Mail Contact
Company Name:	BULOVA CORPORATION
Contact Type:	VICE PRESIDENT - OPERATIONS
Contact Name:	ROBERT A. WEBER
Address1:	ONE BULOVA AVENUE
Address2:	Not reported
City:	WOODSIDE
State:	NY
Zip Code:	11377
Country Code:	001
Phone:	(718) 204-3300
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	kxtang
Date Last Modified:	3/25/2004

Equipment Records:

A00 - Tank Internal Protection - None
I05 - Overfill - Vent Whistle
C02 - Pipe Location - Underground/On-ground
G00 - Tank Secondary Containment - None
D01 - Pipe Type - Steel/Carbon Steel/Iron
I04 - Overfill - Product Level Gauge (A/G)
B01 - Tank External Protection - Painted/Asphalt Coating
J02 - Dispenser - Suction
F00 - Pipe External Protection - None
B00 - Tank External Protection - None
D00 - Pipe Type - No Piping
A00 - Tank Internal Protection - None
G00 - Tank Secondary Containment - None
J03 - Dispenser - Gravity
I00 - Overfill - None
C02 - Pipe Location - Underground/On-ground
C01 - Pipe Location - Aboveground
F01 - Pipe External Protection - Painted/Asphalt Coating
L09 - Piping Leak Detection - Exempt Suction Piping
H00 - Tank Leak Detection - None
D01 - Pipe Type - Steel/Carbon Steel/Iron
F01 - Pipe External Protection - Painted/Asphalt Coating
G01 - Tank Secondary Containment - Diking (Aboveground)
J02 - Dispenser - Suction
B01 - Tank External Protection - Painted/Asphalt Coating
H06 - Tank Leak Detection - Impervious Barrier/Concrete Pad (A/G)
A01 - Tank Internal Protection - Epoxy Liner

BULOVA CLOCK DIVISION (Continued) **U004081907**

I05 - Overfill - Vent Whistle
H00 - Tank Leak Detection - None

Tank Info:

Site ID:	23363
Tank Number:	001-A
Tank ID:	167284
Tank Status:	Closed - In Place
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	Not reported
Capacity Gallons:	15000
Tightness Test Method:	03
Next Test Date:	Not reported
Date Tank Closed:	4/15/2003
Tank Location:	5
Tank Type:	Steel/carbon steel
Date Test:	2/1/1998
Register:	True
Modified By:	TRANSLAT
Last Modified:	3/4/2004
Site ID:	23363
Tank Number:	1
Tank ID:	56068
Tank Status:	Closed - In Place
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	12/1/1980
Capacity Gallons:	550
Tightness Test Method:	NN
Next Test Date:	Not reported
Date Tank Closed:	12/1/1980
Tank Location:	5
Tank Type:	Steel/carbon steel
Date Test:	Not reported
Register:	True
Modified By:	TRANSLAT
Last Modified:	3/4/2004

A2 Target Property **BULOVA CORPORATION**
77 COMMERCIAL STREET
BROOKLYN, NY

LTANKS **S105998104**
N/A

Site 2 of 11 in cluster A

Actual: 12 ft.

LTANKS:

Site ID:	137163
Spill No:	0211097
Spill Date:	2/5/2003
Spill Cause:	Tank Test Failure
Spill Source:	Commercial/Industrial
Spill Class:	Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	4/9/2003
Facility Addr2:	Not reported

BULOVA CORPORATION (Continued) **S105998104**

Cleanup Ceased:	Not reported
Cleanup Meets Standard:	False
SWIS:	2401
Investigator:	JBVOUGHT
Referred To:	Not reported
Reported to Dept:	2/5/2003
CID:	204
Water Affected:	Not reported
Spill Notifier:	Tank Tester
Last Inspection:	Not reported
Recommended Penalty:	Penalty Not Recommended
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	2/5/2003
Spill Record Last Update:	1/7/2004
Spiller Name:	BOB WEBER
Spiller Company:	BULOVA CORPORATION
Spiller Address:	77 COMMERCIAL STREET
Spiller City,St,Zip:	BROOKLYN, NY 11222-
Spiller County:	001
Spiller Contact:	PHIL FAZIN
Spiller Phone:	(516) 375-5890
Spiller Extention:	Not reported
DEC Region:	2
DER Facility ID:	117348
Remarks:	TANK TEST FAILURE

Material:

Site ID:	137163
Operable Unit ID:	862135
Operable Unit:	01
Material ID:	514458
Material Code:	0001
Material Name:	#2 Fuel Oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	0
Units:	Gallons
Recovered:	No
Resource Affected:	Not reported
Oxygenate:	False

Tank Test:

Site ID:	137163
Spill Tank Test:	1528007
Tank Number:	1
Tank Size:	15000
Test Method:	03
Leak Rate:	0
Gross Fail:	Not reported
Modified By:	Spills
Last Modified:	10/1/2004
Test Method:	Horner EZ Check I or II

A3 Target Property | **LOT 410,TAXBLOCK 2472**
77 COMMERCIAL STREET
BROOKLYN, NY 11222 | **E DESIGNATION** | **S108076607**
N/A

Site 3 of 11 in cluster A

Actual: 12 ft.

E DESIGNATION:

Tax Lot(s):	410
E-No:	E-138
Effective Date:	5/11/2005
Satisfaction Date:	Not reported
Ceqr Number:	04DCP003K
Ulurp Number:	050110 ZRK, 050111 ZMK, 050415 MMK, 040416 MMK, 040417 MMK, 040418 MMK, 050110 (A) ZRK, 050111 (A) ZMK
Zoning Map No:	12c, 12d, 13a, 13b
Description:	Underground Gasoline Storage Tanks* Testing Protocol.
Borough Code:	BK
Community District:	301
Census Tract:	577
Census Block:	1000
School District:	14
City Council District:	33
Fire Company:	L106
Health Area:	30
Police Precinct:	094
Zone District 1:	R6
Zone District 2:	Not reported
Commercial Overlay1:	C2-4
Commercial Overlay2:	Not reported
Special Purpose District1:	Not reported
Special Purpose District2:	Not reported
All Components1:	C2-4/R6
All Components2:	Not reported
Split Boundary Indicator:	N
Building Class:	F1
Land Use Category:	06
Number of Easements:	0
Owner, Type of Code:	P
Owner Name:	77 COMMERICAL HOLDIN
Lot Area:	000112000
Total Building Floor Area:	00000084200
Commercial Floor Area:	00000084200
Office Floor Area:	00000000000
Retail Floor Area:	00000000000
Garage Floor Area:	00000000000
Storage Floor Area:	00000000000
Factory Floor Area:	00000084200
Other Floor Area:	00000000000
Floor Area,Total Bld Source Code:	7
Number of Buildings:	00001
Number of Floors:	002.00
Residential Units:	00000
Non and Residential Units:	00001
Lot Frontage:	0217.50
Lot Depth:	0490.00
Building Frontage:	0200.00
Building Depth:	0190.00
Proximity Code:	0
Irregular Lot Code:	Y

LOT 410,TAXBLOCK 2472 (Continued) **S108076607**

Lot Type:	5
Basement Type Grade:	5
Land Assessed Value:	00000553500
Total Assessed Value:	00000976500
Land Exempt Value:	00000000000
Total Exempt Value:	00000000000
Year Built:	1960
Year Built Code:	Not reported
Year Altered1:	0000
Year Altered2:	0000
Historic District Name:	Not reported
Landmark Name:	Not reported
Built Floor Area Ratio-Far:	0000.75
Maximum Allowable Far:	02.43
Borough Code:	3
Borough Tax Block And Lot:	3024720410
Condominium Number:	00000
Census Tract 2:	0577
X Coordinate:	0996151
Y Coordinate:	0208164
Zoning Map:	12C
Sanborn Map:	304 009
Tax Map:	30901
E Designation No:	E-138
Date of RPAD Data:	11/2005
Date of DCAS Data:	01/2006
Date of Zoning Data:	11/2005
Date of Major Property Data:	11/2005
Date of Landmark Data:	12/2005
Date of Base Map Data:	01/2006
Date of Mass Appraisal Data:	11/2005
Date of Political and Adm Data:	08/2005
Pluto-Base Map Indicator:	1

Tax Lot(s):	410
E-No:	E-138
Effective Date:	5/11/2005
Satisfaction Date:	Not reported
Ceqr Number:	04DCP003K
Ulurp Number:	050110 ZRK, 050111 ZMK, 050415 MMK, 040416 MMK, 040417 MMK, 040418 MMK, 050110 (A) ZRK, 050111 (A) ZMK
Zoning Map No:	12c, 12d, 13a, 13b
Description:	Window Wall Attenuation & Alternate Ventilation
Borough Code:	BK
Community District:	301
Census Tract:	577
Census Block:	1000
School District:	14
City Council District:	33
Fire Company:	L106
Health Area:	30
Police Precinct:	094
Zone District 1:	R6
Zone District 2:	Not reported
Commercial Overlay1:	C2-4
Commercial Overlay2:	Not reported
Special Purpose District1:	Not reported

LOT 410,TAXBLOCK 2472 (Continued) **S108076607**

Special Purpose District2:	Not reported
All Components1:	C2-4/R6
All Components2:	Not reported
Split Boundary Indicator:	N
Building Class:	F1
Land Use Category:	06
Number of Easements:	0
Owner, Type of Code:	P
Owner Name:	77 COMMERICAL HOLDIN
Lot Area:	000112000
Total Building Floor Area:	00000084200
Commercial Floor Area:	00000084200
Office Floor Area:	00000000000
Retail Floor Area:	00000000000
Garage Floor Area:	00000000000
Storage Floor Area:	00000000000
Factory Floor Area:	00000084200
Other Floor Area:	00000000000
Floor Area,Total Bld Source Code:	7
Number of Buildings:	00001
Number of Floors:	002.00
Residential Units:	00000
Non and Residential Units:	00001
Lot Frontage:	0217.50
Lot Depth:	0490.00
Building Frontage:	0200.00
Building Depth:	0190.00
Proximity Code:	0
Irregular Lot Code:	Y
Lot Type:	5
Basement Type Grade:	5
Land Assessed Value:	00000553500
Total Assessed Value:	00000976500
Land Exempt Value:	00000000000
Total Exempt Value:	00000000000
Year Built:	1960
Year Built Code:	Not reported
Year Altered1:	0000
Year Altered2:	0000
Historic District Name:	Not reported
Landmark Name:	Not reported
Built Floor Area Ratio-Far:	0000.75
Maximum Allowable Far:	02.43
Borough Code:	3
Borough Tax Block And Lot:	3024720410
Condominium Number:	00000
Census Tract 2:	0577
X Coordinate:	0996151
Y Coordinate:	0208164
Zoning Map:	12C
Sanborn Map:	304 009
Tax Map:	30901
E Designation No:	E-138
Date of RPAD Data:	11/2005
Date of DCAS Data:	01/2006
Date of Zoning Data:	11/2005
Date of Major Property Data:	11/2005

LOT 410,TAXBLOCK 2472 (Continued) **S108076607**

Date of Landmark Data: 12/2005
Date of Base Map Data: 01/2006
Date of Mass Appraisal Data: 11/2005
Date of Political and Adm Data: 08/2005
Pluto-Base Map Indicator: 1

A4 Target Property **HARTE & CO INC**
77 COMMERCIAL ST
BROOKLYN, NY 11222

RCRA-NonGen FINDS **1000396818 NYD095759981**

Site 4 of 11 in cluster A

Actual: 12 ft.

RCRA-NonGen:

Date form received by agency:	01/01/2007
Facility name:	HARTE & CO INC
Facility address:	77 COMMERCIAL ST BROOKLYN, NY 112221005
EPA ID:	NYD095759981
Mailing address:	COMMERCIAL ST BROOKLYN, NY 11222
Contact:	Not reported
Contact address:	COMMERCIAL ST BROOKLYN, NY 11222
Contact country:	US
Contact telephone:	Not reported
Contact email:	Not reported
EPA Region:	02
Land type:	Facility is not located on Indian land. Additional information is not known.
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	DYNAMIT NOBEL OF AMERICA INC
Owner/operator address:	NOT REQUIRED NOT REQUIRED, WY 99999
Owner/operator country:	US
Owner/operator telephone:	(212) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	DYNAMIT NOBEL OF AMERICA INC
Owner/operator address:	NOT REQUIRED NOT REQUIRED, WY 99999
Owner/operator country:	US
Owner/operator telephone:	(212) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler accessibilty indicator: Transferred to the program or state equivalent.

Handler Activities Summary:

U.S. importer of hazardous waste:	Unknown
Mixed waste (haz. and radioactive):	Unknown
Recycler of hazardous waste:	No

HARTE & CO INC (Continued) **1000396818**

Transporter of hazardous waste:	Unknown
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	Unknown
Furnace exemption:	Unknown
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No
Off-site waste receiver:	Commercial status unknown

Historical Generators:

Date form received by agency:	01/01/2006
Facility name:	HARTE & CO INC
Classification:	Not a generator, verified
Date form received by agency:	07/08/1999
Facility name:	HARTE & CO INC
Classification:	Not a generator, verified
Date form received by agency:	10/09/1980
Facility name:	HARTE & CO INC
Classification:	Large Quantity Generator
Violation Status:	No violations found

Evaluation Action Summary:

Evaluation date:	12/27/1989
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation:	Not reported
Date achieved compliance:	Not reported
Evaluation lead agency:	State
Evaluation date:	07/10/1986
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation:	Not reported
Date achieved compliance:	Not reported
Evaluation lead agency:	State

FINDS:

Registry ID: 110004375809

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

A5 Target Property — **UNITED FEATHER & DOWN**, **77 COMMERCIAL ST**, **BROOKLYN, NY 11222** — **FTTS** **1005625407**, **HIST FTTS** **N/A**, **FINDS**

Site 5 of 11 in cluster A

Actual: 12 ft.

FTTS INSP:

Inspection Number:	1998020514107 1
Region:	02
Inspection Date:	02/05/98
Inspector:	D. SALKIE
Violation occurred:	No
Investigation Type:	Specific Product Review
Investigation Reason:	For Cause, Government
Legislation Code:	FIFRA
Facility Function:	Other Parties

HIST FTTS INSP:

Inspection Number:	1998020514107 1
Region:	02
Inspection Date:	Not reported
Inspector:	D. SALKIE
Violation occurred:	No
Investigation Type:	Specific Product Review
Investigation Reason:	For Cause, Government
Legislation Code:	FIFRA
Facility Function:	Other Parties

FINDS:

Registry ID: 110011937459

Environmental Interest/Information System

NCDB (National Compliance Data Base) supports implementation of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and the Toxic Substances Control Act (TSCA). The system tracks inspections in regions and states with cooperative agreements, enforcement actions, and settlements.

A6 Target Property — **77 COMMERCIAL STREET**, **77 COMMERCIAL STREET**, **BROOKLYN, NY** — **NY Spills** **S103574974**, **NY Hist Spills** **N/A**

Site 6 of 11 in cluster A

Actual: 12 ft.

NY Spills:

Site ID:	164785
Facility Addr2:	Not reported
Facility ID:	9811015
Spill Number:	9811015
Facility Type:	ER
SWIS:	2401
Investigator:	SIGONA
Referred To:	Not reported
Spill Date:	12/2/1998
Reported to Dept:	12/2/1998

77 COMMERCIAL STREET (Continued) **S103574974**

CID:	252
Spill Cause:	Housekeeping
Water Affected:	Not reported
Spill Source:	Non Major Facility > 1,100 gal
Spill Notifier:	Other
Cleanup Ceased:	Not reported
Cleanup Meets Std:	False
Last Inspection:	Not reported
Recommended Penalty:	Penalty Not Recommended
UST Trust:	False
Spill Class:	Known release that creates potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	7/2/1999
Remediation Phase:	0
Date Entered In Computer:	12/2/1998
Spill Record Last Update:	7/2/1999
Spiller Name:	ANDREW BELFER
Spiller Company:	77 COMMERCIAL STREET
Spiller Address:	77 COMMERCIAL ST
Spiller City,St,Zip:	BROOKLYN, NY
Spiller Company:	001
Contact Name:	ANDREW BELFER
Contact Phone:	(516) 482-1970
DEC Region:	2
DER Facility ID:	117348
DEC Memo:	Not reported
Remarks:	TANKS TO BE REMOVED AS WELL AS SOIL CONTAMINATION-WILL NOTIFY DEC PRIOR TO DOING SAME.

Material:

Site ID:	164785
Operable Unit ID:	1068400
Operable Unit:	01
Material ID:	557994
Material Code:	0009
Material Name:	Gasoline
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	0
Units:	Gallons
Recovered:	No
Resource Affected:	Not reported
Oxygenate:	False
Site ID:	164785
Operable Unit ID:	1068400
Operable Unit:	01
Material ID:	557993
Material Code:	0002
Material Name:	#4 Fuel Oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	0
Units:	Gallons
Recovered:	No
Resource Affected:	Not reported
Oxygenate:	False

77 COMMERCIAL STREET (Continued) **S103574974**

Tank Test:

Site ID:	Not reported
Spill Tank Test:	Not reported
Tank Number:	Not reported
Tank Size:	Not reported
Test Method:	Not reported
Leak Rate:	Not reported
Gross Fail:	Not reported
Modified By:	Not reported
Last Modified:	Not reported
Test Method:	Not reported

NY Hist Spills:

Region of Spill:	2
Spill Number:	9811015
Investigator:	SIGONA
Caller Name:	Not reported
Caller Agency:	Not reported
Caller Phone:	Not reported
Notifier Name:	Not reported
Notifier Agency:	Not reported
Notifier Phone:	Not reported
Spill Date/Time:	12/02/1998 12:00
Reported to Dept Date/Time:	12/02/98 14:23
SWIS:	61
Spiller Name:	77 COMMERCIAL STREET
Spiller Contact:	ANDREW BELFER
Spiller Phone:	(516) 482-1970
Spiller Contact:	ANDREW BELFER
Spiller Phone:	(516) 482-1970
Spiller Address:	77 COMMERCIAL ST
Spiller City,St,Zip:	BROOKLYN, NY
Spill Cause:	Housekeeping
Reported to Dept:	Groundwater
Water Affected:	Not reported
Spill Source:	04
Spill Notifier:	Other
PBS Number:	2-601297
Cleanup Ceased:	/ /
Cleanup Meets Std:	False
Last Inspection:	/ /
Recommended Penalty:	Penalty Not Recommended
Spiller Cleanup Dt:	/ /
Enforcement Date:	/ /
Invstgn Complete:	/ /
UST Involvement:	False
Spill Class:	Known release that creates potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	07/02/99
Corrective Action Plan Submitted:	/ /
Date Region Sent Summary to Central Office:	/ /
Date Spill Entered In Computer Data File:	12/02/98
Date Spill Entered In Computer Data File:	Not reported
Update Date:	07/02/99
Is Updated:	False

77 COMMERCIAL STREET (Continued) **S103574974**

Tank:

PBS Number:	Not reported
Tank Number:	Not reported
Tank Size:	Not reported
Test Method:	Not reported
Leak Rate Failed Tank:	Not reported
Gross Leak Rate:	Not reported

Material:

Material Class Type:	Petroleum
Quantity Spilled:	0
Unkonwn Quantity Spilled:	True
Units:	Gallons
Quantity Recovered:	0
Unkonwn Quantity Recovered:	True
Material:	#4 FUEL OIL
Class Type:	#4 FUEL OIL
Times Material Entry In File:	1751
CAS Number:	Not reported
Last Date:	19941205
Material Class Type:	Petroleum
Quantity Spilled:	0
Unkonwn Quantity Spilled:	True
Units:	Gallons
Quantity Recovered:	0
Unkonwn Quantity Recovered:	True
Material:	GASOLINE
Class Type:	GASOLINE
Times Material Entry In File:	21329
CAS Number:	Not reported
Last Date:	19940929

DEC Remarks: DEC Sigona) met on-site with property owner. Also, received a copy of site assessment by Flour Daniel GTI, who assessed the site for potential buyer Bulova Corporation). Soil Mechanics supervised cleaning of oil-water separator which contained free product. Also, a gasoline 550 gallon UST was found to be improperly closed. Tank being removed on 12/28/98. Soil mechanics sent proposal to install five monitoring wells. DEC Sigona) sent letter approving the site investigation plan.DEC sigona) reviewed a series of investigatory and remedial reports prepared for the DEC by Soil Mechanics Enviommental Services from December 1998 to June 1999. The site has been cleanup to a level slightly above groundwater standards. But because of the industrial setting in Greenpoint, the cleanup is acceptable. see reports) A letter was sent to Belfer Realty Development, dated July 2, 1999.

Remark: TANKS TO BE REMOVED AS WELL AS SOIL CONTAMINATION-WILL NOTIFY DEC PRIOR TO DOING SAME.

A7 Target Property **BULOVA CLOCK DIVISION**
77 COMMERCIAL STREET
BROOKLYN, NY 11222

AST A100293411
N/A

Site 7 of 11 in cluster A

Actual: 12 ft.

AST:

Region:	STATE
DEC Region:	2
Site Status:	Active
Facility Id:	2-601397
Program Type:	PBS

BULOVA CLOCK DIVISION (Continued) **A100293411**

UTM X:	588107.09955000004
UTM Y:	4510067.5543900002
Expiration Date:	2008/11/04

Affiliation Records:

Site Id:	23363
Affiliation Type:	Emergency Contact
Company Name:	NEW YORK CITY INDUSTRIAL DEVELOPMENT AGENCY
Contact Type:	Not reported
Contact Name:	R.A. WEBER
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(718) 204-3300
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	3/4/2004

Site Id:	23363
Affiliation Type:	On-Site Operator
Company Name:	BULOVA CLOCK DIVISION
Contact Type:	Not reported
Contact Name:	BULOVA CORPORATION
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(718) 204-3300
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	3/4/2004

Site Id:	23363
Affiliation Type:	Owner
Company Name:	NEW YORK CITY INDUSTRIAL DEVELOPMENT AGENCY
Contact Type:	Not reported
Contact Name:	Not reported
Address1:	110 WILLIAM STREET
Address2:	Not reported
City:	NEW YORK
State:	NY
Zip Code:	10038
Country Code:	001
Phone:	(212) 341-5900
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	3/4/2004

BULOVA CLOCK DIVISION (Continued) **A100293411**

Site Id:	23363
Affiliation Type:	Mail Contact
Company Name:	BULOVA CORPORATION
Contact Type:	VICE PRESIDENT - OPERATIONS
Contact Name:	ROBERT A. WEBER
Address1:	ONE BULOVA AVENUE
Address2:	Not reported
City:	WOODSIDE
State:	NY
Zip Code:	11377
Country Code:	001
Phone:	(718) 204-3300
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	kxtang
Date Last Modified:	3/25/2004

Equipment Records:

A00 - Tank Internal Protection - None
I05 - Overfill - Vent Whistle
C02 - Pipe Location - Underground/On-ground
G00 - Tank Secondary Containment - None
D01 - Pipe Type - Steel/Carbon Steel/Iron
I04 - Overfill - Product Level Gauge (A/G)
B01 - Tank External Protection - Painted/Asphalt Coating
J02 - Dispenser - Suction
F00 - Pipe External Protection - None
B00 - Tank External Protection - None
D00 - Pipe Type - No Piping
A00 - Tank Internal Protection - None
G00 - Tank Secondary Containment - None
J03 - Dispenser - Gravity
I00 - Overfill - None
C02 - Pipe Location - Underground/On-ground
C01 - Pipe Location - Aboveground
F01 - Pipe External Protection - Painted/Asphalt Coating
L09 - Piping Leak Detection - Exempt Suction Piping
H00 - Tank Leak Detection - None
D01 - Pipe Type - Steel/Carbon Steel/Iron
F01 - Pipe External Protection - Painted/Asphalt Coating
G01 - Tank Secondary Containment - Diking (Aboveground)
J02 - Dispenser - Suction
B01 - Tank External Protection - Painted/Asphalt Coating
H06 - Tank Leak Detection - Impervious Barrier/Concrete Pad (A/G)
A01 - Tank Internal Protection - Epoxy Liner
I05 - Overfill - Vent Whistle
H00 - Tank Leak Detection - None

Tank Info:

Tank Number:	001
Tank Id:	10248
Tank Location:	1
Tank Type:	Steel/Carbon Steel/Iron
Tank Status:	In Service
Tank Model:	Not reported

BULOVA CLOCK DIVISION (Continued) **A100293411**

Pipe Model:	Not reported
Install Date:	10/30/2003
Capacity Gallons:	3000
Tightness Test Method:	NN
Date Test:	Not reported
Next Test Date:	Not reported
Date Tank Closed:	Not reported
Register:	True
Modified By:	TRANSLAT
Last Modified:	3/4/2004

A8 Target Property **FORMER UNITED FEATHER & DOWN INC.** **HIST UST** **U001841906**
77 COMMERCIAL STREET **N/A**
BROOKLYN, NY 11222

Site 8 of 11 in cluster A

Actual: 12 ft.

HIST UST:

PBS Number:	2-601397
SPDES Number:	Not reported
Emergency Contact:	ANDREW BELFER
Emergency Telephone:	(516) 482-1970
Operator:	ANDREW BELFER
Operator Telephone:	(516) 482-1970
Owner Name:	77 COMMERCIAL, LLC
Owner Address:	C/O BELFER REALTY & DEVELOPMENT CO.
Owner City,St,Zip:	GREAT NECK, NY 11021
Owner Telephone:	(516) 482-1970
Owner Type:	Corporate/Commercial
Owner Subtype:	Not reported
Mailing Name:	77 COMMERCIAL, LLC
Mailing Address:	C/O BELFER REALTY & DEVELOPMENT CO.
Mailing Address 2:	80 CUTTER MILL ROAD
Mailing City,St,Zip:	GREAT NECK, NY 11021
Mailing Contact:	ANDREW BELFER
Mailing Telephone:	(516) 482-1970
Owner Mark:	Second Owner
Facility Status:	1 - Active PBS facility, i.e. total capacity of the PBS tanks is greater than 1,100 gallons, regardless if Subpart 360-14 tanks exist or not at the facility.
Facility Addr2:	77 COMMERCIAL STREET
SWIS ID:	6101
Old PBS Number:	Not reported
Facility Type:	MANUFACTURING
Inspected Date:	Not reported
Inspector:	Not reported
Inspection Result:	Not reported
Federal ID:	Not reported
Certification Flag:	False
Certification Date:	03/01/1999
Expiration Date:	02/11/2004
Renew Flag:	False
Renewal Date:	Not reported
Total Capacity:	15000
FAMT:	True
Facility Screen:	No Missing Data
Owner Screen:	No Missing Data
Tank Screen:	No Missing Data

FORMER UNITED FEATHER & DOWN INC. (Continued) **U001841906**

Dead Letter:	False
CBS Number:	Not reported
Town or City:	NEW YORK CITY
County Code:	61
Town or City:	01
Region:	2

Tank Id:	001
Tank Location:	UNDERGROUND
Tank Status:	In Service
Install Date:	Not reported
Capacity (gals):	15000
Product Stored:	NOS 1,2, OR 4 FUEL OIL
Tank Type:	Steel/carbon steel
Tank Internal:	None
Tank External:	Painted/Asphalt Coating
Pipe Location:	Underground
Pipe Type:	STEEL/IRON
Pipe Internal:	None
Pipe External:	Painted/Asphalt Coating
Second Containment:	None
Leak Detection:	None
Overfill Prot:	Product Level Gauge, Vent Whistle
Dispenser:	Suction
Date Tested:	02/01/1998
Next Test Date:	02/01/2003
Missing Data for Tank:	No Missing Data
Date Closed:	Not reported
Test Method:	Horner EZ Check
Deleted:	False
Updated:	True
Lat/long:	Not reported

Tank Id:	1
Tank Location:	UNDERGROUND
Tank Status:	Closed-In Place
Install Date:	19801201
Capacity (gals):	550
Product Stored:	LEADED GASOLINE
Tank Type:	Steel/carbon steel
Tank Internal:	None
Tank External:	None
Pipe Location:	Underground
Pipe Type:	NONE
Pipe Internal:	None
Pipe External:	None
Second Containment:	None
Leak Detection:	None
Overfill Prot:	None
Dispenser:	Gravity
Date Tested:	Not reported
Next Test Date:	Not reported
Missing Data for Tank:	No Missing Data
Date Closed:	12/01/1980
Test Method:	Not reported
Deleted:	False

FORMER UNITED FEATHER & DOWN INC. (Continued) **U001841906**

Updated: True
Lat/long: Not reported

A9
SSW
< 1/8
0.004 mi.
19 ft.

MANHOLE 4284
COMMERCIAL ST AND BOX ST
BROOKLYN, NY

NY Spills **S103936626**
NY Hist Spills **N/A**

Site 9 of 11 in cluster A

Relative:
Equal

Actual:
12 ft.

NY Spills:

Site ID:	70871
Facility Addr2:	Not reported
Facility ID:	9900977
Spill Number:	9900977
Facility Type:	ER
SWIS:	2401
Investigator:	JHOCONNE
Referred To:	Not reported
Spill Date:	4/26/1999
Reported to Dept:	4/26/1999
CID:	371
Spill Cause:	Unknown
Water Affected:	Not reported
Spill Source:	Unknown
Spill Notifier:	Affected Persons
Cleanup Ceased:	Not reported
Cleanup Meets Std:	False
Last Inspection:	Not reported
Recommended Penalty:	Penalty Not Recommended
UST Trust:	False
Spill Class:	Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	5/11/1999
Remediation Phase:	0
Date Entered In Computer:	4/26/1999
Spill Record Last Update:	6/14/2000
Spiller Name:	Not reported
Spiller Company:	UNKNOWN
Spiller Address:	Not reported
Spiller City,St,Zip:	NY
Spiller Company:	999
Contact Name:	Not reported
Contact Phone:	Not reported
DEC Region:	2
DER Facility ID:	67173
DEC Memo:	Prior to Sept, 2004 data translation this spill Lead_DEC Field was "O'CONNELL" Con ed e2mis notes: Found 2 qts of unknown oil on 100 gal of water in mh. NO other oil filled equipment in hole. Lab Seq #99-04239 <1.00ppm S.Pace 49874. Env. Ops. reports <1.0ppm cleanup complete and tag removed.
Remarks:	2 qts unknown petro on 100 gals water ---sample taken - clean up pending results -- con ed 124435.

Material:

Site ID:	70871
Operable Unit ID:	1075746
Operable Unit:	01
Material ID:	304518

MANHOLE 4284 (Continued) **S103936626**

Material Code:	0066A
Material Name:	UNKNOWN PETROLEUM
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	1
Units:	Gallons
Recovered:	No
Resource Affected:	Not reported
Oxygenate:	False

Tank Test:

Site ID:	Not reported
Spill Tank Test:	Not reported
Tank Number:	Not reported
Tank Size:	Not reported
Test Method:	Not reported
Leak Rate:	Not reported
Gross Fail:	Not reported
Modified By:	Not reported
Last Modified:	Not reported
Test Method:	Not reported

NY Hist Spills:

Region of Spill:	2
Spill Number:	9900977
Investigator:	O'CONNELL
Caller Name:	Not reported
Caller Agency:	Not reported
Caller Phone:	Not reported
Notifier Name:	Not reported
Notifier Agency:	Not reported
Notifier Phone:	Not reported
Spill Date/Time:	04/26/1999 10:10
Reported to Dept Date/Time:	04/26/99 11:09
SWIS:	61
Spiller Name:	UNKNOWN
Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Address:	Not reported
Spiller City,St,Zip:	Not reported
Spill Cause:	Unknown
Reported to Dept:	On Land
Water Affected:	Not reported
Spill Source:	12
Spill Notifier:	Affected Persons
PBS Number:	Not reported
Cleanup Ceased:	/ /
Cleanup Meets Std:	False
Last Inspection:	/ /
Recommended Penalty:	Penalty Not Recommended
Spiller Cleanup Dt:	/ /
Enforcement Date:	/ /
Invstgn Complete:	/ /
UST Involvement:	False
Spill Class:	Known release with minimal potential for fire or hazard. DEC Response.

MANHOLE 4284 (Continued) **S103936626**

Willing Responsible Party. Corrective action taken.
Spill Closed Dt: 05/11/99
Corrective Action Plan Submitted: / /
Date Region Sent Summary to Central Office: / /
Date Spill Entered In Computer Data File: 04/26/99
Date Spill Entered In Computer Data File: Not reported
Update Date: 06/14/00
Is Updated: False

Tank:
PBS Number: Not reported
Tank Number: Not reported
Tank Size: Not reported
Test Method: Not reported
Leak Rate Failed Tank: Not reported
Gross Leak Rate: Not reported

Material:
Material Class Type: Petroleum
Quantity Spilled: 1
Unkonwn Quantity Spilled: False
Units: Gallons
Quantity Recovered: 0
Unkonwn Quantity Recovered: False
Material: UNKNOWN PETROLEUM
Class Type: UNKNOWN PETROLEUM
Times Material Entry In File: 16414
CAS Number: Not reported
Last Date: 19940929
DEC Remarks: Con ed e2mis notes: Found 2 qts of unknown oil on 100 gal of water in mh. NO other oil filled equipment in hole. Lab Seq 99-04239 <1.00ppm S.Pace 49874. Env. Ops. reports <1.0ppm cleanup complete and tag removed.
Remark: 2 qts unknown petro on 100 gals water ---sample taken - clean up pending results -- con ed 124435.

A10 **LOT 21,TAXBLOCK 2482** **E DESIGNATION** **S108076390**
SE **6 BOX STREET** **N/A**
< 1/8 **BROOKLYN, NY 11222**
0.012 mi.
64 ft. **Site 10 of 11 in cluster A**

Relative:
Higher

Actual:
13 ft.

E DESIGNATION:
Tax Lot(s): 21
E-No: E-138
Effective Date: 5/11/2005
Satisfaction Date: Not reported
Ceqr Number: 04DCP003K
Ulurp Number: 050110 ZRK, 050111 ZMK, 050415 MMK, 040416 MMK, 040417 MMK, 040418 MMK, 050110 (A) ZRK, 050111 (A) ZMK
Zoning Map No: 12c, 12d, 13a, 13b
Description: Underground Gasoline Storage Tanks* Testing Protocol.
Borough Code: BK
Community District: 301
Census Tract: 563
Census Block: 1001
School District: 14
City Council District: 33
Fire Company: L106
Health Area: 30

Count: 20 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
BROOKLYN	1000994370	ALPHA COATINGS CO	PO BOX 110236	11211	FINDS,RCRA-NLR
BROOKLYN	1007204911	NYCDOT C/O KOCH-SKANSKA	MANHATTAN BR		RCRA-CESQG,MANIFEST
BROOKLYN	1007205499	BELL ATLANTIC-NY	FRANKLIN/ST MARKS AVES		RCRA-NLR,MANIFEST
NEW YORK	1007205804	BELL ATLANTIC-NY	KINGS HWY E 12	10016	RCRA-NLR
NEW YORK	1007205815	BELL ATLANTIC-NY	RT 107 & NEVADA ST	10016	RCRA-NLR
NEW YORK	1007205912	VERIZON NEW YORK INC	RT 119 & TARRYTOWN RD	10016	RCRA-NLR
FREEPORT	1007205959	VERIZON NEW YORK INC	37 GUY LOMBARDO & SUNRISE HWY	10016	RCRA-NLR
BROOKLYN	1007208397	CONSOLIDATED EDISON	MH38210-KINGS HWY & W 7TH ST		RCRA-NLR,MANIFEST
FREEPORT	1007252448	VERIZON NEW YORK INC	37 GUY LOMBARDO & SUNRISE HWY	10016	FINDS,MANIFEST
BRONX	1010488291	NYSDOT BIN 1066220	GRANT HIGHWAY OVER CROSS BRONX	11101	FINDS,MANIFEST
NEW YORK	1012187134	NYSDOT BIN 1077069	RTE 907L OVER 34TH ST	10010	RCRA-LQG
BROOKLYN	S102142527	E 29TH ST & KINGS HWY	E 29TH ST & KINGS HWY		SPILLS,HIST SPILLS
BROOKLYN	S103938400	BOX 38486	KINGS HIGHWAY/ROCKAWAY PK		SPILLS,HIST SPILLS
NORTH BRUNSWICK	S106589105	IDEAL DRY CLEANERS (FORMER)/THE SH	2219 RTE 1 S	10017	VCP
BROOKLYN	S106737045	BETW/AVE X &	KINGS HIGHWAY AVE U		SPILLS
BROOKLYN	S107407580	KINGS HIGHWAY MOBIL	KINGS HIGHWAY		SPILLS
NEW YORK CITY	S108146270	ROUTE 9A - MANHATTAN	WEST SIDE HIGHWAY	10002	HSWDS
BROOKLYN	S109064521	BELL ATLANTIC-NY	E 94 ST/BET CLARKSON AVE KINGS		MANIFEST
	S109207895	205842; KINGS HWY	KINGS HWY		SPILLS
NEW YORK	S109564950	VERIZON NEW YORK INC. MANHOLE	ROUTE 110 E/S	10016	MANIFEST

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 12/31/2010
Date Data Arrived at EDR: 01/13/2011
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 15

Source: EPA
Telephone: N/A
Last EDR Contact: 04/13/2011
Next Scheduled EDR Contact: 07/25/2011
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 3
Telephone 215-814-5418

EPA Region 4
Telephone 404-562-8033

EPA Region 5
Telephone 312-886-6686

EPA Region 10
Telephone 206-553-8665

EPA Region 6
Telephone: 214-655-6659

EPA Region 7
Telephone: 913-551-7247

EPA Region 8
Telephone: 303-312-6774

EPA Region 9
Telephone: 415-947-4246

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 12/31/2010
Date Data Arrived at EDR: 01/13/2011
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 15

Source: EPA
Telephone: N/A
Last EDR Contact: 04/13/2011
Next Scheduled EDR Contact: 07/25/2011
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 02/14/2011
Next Scheduled EDR Contact: 05/30/2011
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal Delisted NPL site list

DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 12/31/2010
Date Data Arrived at EDR: 01/13/2011
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 15

Source: EPA
Telephone: N/A
Last EDR Contact: 04/13/2011
Next Scheduled EDR Contact: 07/25/2011
Data Release Frequency: Quarterly

Federal CERCLIS list

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 11/30/2010
Date Data Arrived at EDR: 12/30/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 57

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 03/01/2011
Next Scheduled EDR Contact: 06/13/2011
Data Release Frequency: Quarterly

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPAa??s Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 12/10/2010
Date Data Arrived at EDR: 01/11/2011
Date Made Active in Reports: 02/16/2011
Number of Days to Update: 36

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 04/15/2011
Next Scheduled EDR Contact: 07/25/2011
Data Release Frequency: Varies

Federal CERCLIS NFRAP site List

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 10/28/2010
Date Data Arrived at EDR: 12/01/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 86

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 03/01/2011
Next Scheduled EDR Contact: 06/13/2011
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 05/25/2010
Date Data Arrived at EDR: 06/02/2010
Date Made Active in Reports: 10/04/2010
Number of Days to Update: 124

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 02/14/2011
Next Scheduled EDR Contact: 05/30/2011
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 02/17/2010
Date Data Arrived at EDR: 02/19/2010
Date Made Active in Reports: 05/17/2010
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: (212) 637-3660
Last EDR Contact: 04/05/2011
Next Scheduled EDR Contact: 07/18/2011
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 02/17/2010
Date Data Arrived at EDR: 02/19/2010
Date Made Active in Reports: 05/17/2010
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: (212) 637-3660
Last EDR Contact: 04/05/2011
Next Scheduled EDR Contact: 07/18/2011
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 02/17/2010
Date Data Arrived at EDR: 02/19/2010
Date Made Active in Reports: 05/17/2010
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: (212) 637-3660
Last EDR Contact: 04/05/2011
Next Scheduled EDR Contact: 07/18/2011
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 02/17/2010
Date Data Arrived at EDR: 02/19/2010
Date Made Active in Reports: 05/17/2010
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: (212) 637-3660
Last EDR Contact: 04/05/2011
Next Scheduled EDR Contact: 07/18/2011
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal institutional controls / engineering controls registries

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 01/05/2011
Date Data Arrived at EDR: 01/14/2011
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 14

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 03/14/2011
Next Scheduled EDR Contact: 06/27/2011
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 01/05/2011
Date Data Arrived at EDR: 01/14/2011
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 14

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 03/14/2011
Next Scheduled EDR Contact: 06/27/2011
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/2010
Date Data Arrived at EDR: 01/07/2011
Date Made Active in Reports: 03/21/2011
Number of Days to Update: 73

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 04/05/2011
Next Scheduled EDR Contact: 07/18/2011
Data Release Frequency: Annually

State- and tribal - equivalent CERCLIS

SHWS: Inactive Hazardous Waste Disposal Sites in New York State

Referred to as the State Superfund Program, the Inactive Hazardous Waste Disposal Site Remedial Program is the cleanup program for inactive hazardous waste sites and now includes hazardous substance sites

Date of Government Version: 03/31/2011
Date Data Arrived at EDR: 04/01/2011
Date Made Active in Reports: 04/20/2011
Number of Days to Update: 19

Source: Department of Environmental Conservation
Telephone: 518-402-9622
Last EDR Contact: 04/01/2011
Next Scheduled EDR Contact: 06/06/2011
Data Release Frequency: Annually

VAPOR REOPENED: Vapor Intrustion Legacy Site List

New York is currently re-evaluating previous assumptions and decisions regarding the potential for soil vapor intrusion exposures at sites. As a result, all past, current, and future contaminated sites will be evaluated to determine whether these sites have the potential for exposures related to soil vapor intrusion.

Date of Government Version: 09/14/2010
Date Data Arrived at EDR: 11/24/2010
Date Made Active in Reports: 12/17/2010
Number of Days to Update: 23

Source: Department of Environmenal Conservation
Telephone: 518-402-9814
Last EDR Contact: 02/25/2011
Next Scheduled EDR Contact: 06/06/2011
Data Release Frequency: Varies

State and tribal landfill and/or solid waste disposal site lists

SWF/LF: Facility Register

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 01/12/2011
Date Data Arrived at EDR: 01/14/2011
Date Made Active in Reports: 02/04/2011
Number of Days to Update: 21

Source: Department of Environmental Conservation
Telephone: 518-457-2051
Last EDR Contact: 04/11/2011
Next Scheduled EDR Contact: 07/25/2011
Data Release Frequency: Semi-Annually

State and tribal leaking storage tank lists

LTANKS: Spills Information Database

Leaking Storage Tank Incident Reports. These records contain an inventory of reported leaking storage tank incidents reported from 4/1/86 through the most recent update. They can be either leaking underground storage tanks or leaking aboveground storage tanks. The causes of the incidents are tank test failures, tank failures or tank overfills.

Date of Government Version: 03/31/2011
Date Data Arrived at EDR: 04/01/2011
Date Made Active in Reports: 04/20/2011
Number of Days to Update: 19

Source: Department of Environmental Conservation
Telephone: 518-402-9549
Last EDR Contact: 04/01/2011
Next Scheduled EDR Contact: 06/06/2011
Data Release Frequency: Varies

HIST LTANKS: Listing of Leaking Storage Tanks

A listing of leaking underground and aboveground storage tanks. The causes of the incidents are tank test failures, tank failures or tank overfills. In 2002, the Department of Environmental Conservation stopped providing updates to its original Spills Information Database. This database includes fields that are no longer available from the NYDEC as of January 1, 2002. Current information may be found in the NY LTANKS database. Department of Environmental Conservation.

Date of Government Version: 01/01/2002
Date Data Arrived at EDR: 07/08/2005
Date Made Active in Reports: 07/14/2005
Number of Days to Update: 6

Source: Department of Environmental Conservation
Telephone: 518-402-9549
Last EDR Contact: 07/07/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 08/27/2010
Date Data Arrived at EDR: 08/30/2010
Date Made Active in Reports: 10/04/2010
Number of Days to Update: 35

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 02/16/2011
Next Scheduled EDR Contact: 05/16/2011
Data Release Frequency: Semi-Annually

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 01/31/2011
Date Data Arrived at EDR: 02/01/2011
Date Made Active in Reports: 03/21/2011
Number of Days to Update: 48

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 01/31/2011
Next Scheduled EDR Contact: 05/16/2011
Data Release Frequency: Quarterly

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 02/03/2011
Date Data Arrived at EDR: 02/04/2011
Date Made Active in Reports: 03/21/2011
Number of Days to Update: 45

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 01/31/2011
Next Scheduled EDR Contact: 05/16/2011
Data Release Frequency: Quarterly

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 09/01/2010
Date Data Arrived at EDR: 11/05/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 84

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 02/03/2011
Next Scheduled EDR Contact: 05/16/2011
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 02/03/2011
Date Data Arrived at EDR: 02/04/2011
Date Made Active in Reports: 03/21/2011
Number of Days to Update: 45

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 01/31/2011
Next Scheduled EDR Contact: 05/16/2011
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 11/04/2009
Date Data Arrived at EDR: 05/04/2010
Date Made Active in Reports: 07/07/2010
Number of Days to Update: 64

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 05/04/2010
Next Scheduled EDR Contact: 05/16/2011
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 02/04/2011
Date Data Arrived at EDR: 02/04/2011
Date Made Active in Reports: 03/21/2011
Number of Days to Update: 45

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 01/31/2011
Next Scheduled EDR Contact: 05/16/2011
Data Release Frequency: Quarterly

State and tribal registered storage tank lists

UST: Petroleum Bulk Storage (PBS) Database
Facilities that have petroleum storage capacities in excess of 1,100 gallons and less than 400,000 gallons.

Date of Government Version: 04/05/2011
Date Data Arrived at EDR: 04/05/2011
Date Made Active in Reports: 04/25/2011
Number of Days to Update: 20

Source: Department of Environmental Conservation
Telephone: 518-402-9549
Last EDR Contact: 04/05/2011
Next Scheduled EDR Contact: 07/18/2011
Data Release Frequency: No Update Planned

CBS UST: Chemical Bulk Storage Database
Facilities that store regulated hazardous substances in underground tanks of any size

Date of Government Version: 01/01/2002
Date Data Arrived at EDR: 02/20/2002
Date Made Active in Reports: 03/22/2002
Number of Days to Update: 30

Source: NYSDEC
Telephone: 518-402-9549
Last EDR Contact: 10/24/2005
Next Scheduled EDR Contact: 01/23/2006
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

MOSF UST: Major Oil Storage Facilities Database
Facilities that may be onshore facilities or vessels, with petroleum storage capacities of 400,000 gallons or greater.

Date of Government Version: 01/01/2002
Date Data Arrived at EDR: 02/20/2002
Date Made Active in Reports: 03/22/2002
Number of Days to Update: 30

Source: NYSDEC
Telephone: 518-402-9549
Last EDR Contact: 07/25/2005
Next Scheduled EDR Contact: 10/24/2005
Data Release Frequency: Varies

AST: Petroleum Bulk Storage
Registered Aboveground Storage Tanks.

Date of Government Version: 04/05/2011
Date Data Arrived at EDR: 04/05/2011
Date Made Active in Reports: 04/25/2011
Number of Days to Update: 20

Source: Department of Environmental Conservation
Telephone: 518-402-9549
Last EDR Contact: 04/05/2011
Next Scheduled EDR Contact: 07/18/2011
Data Release Frequency: No Update Planned

CBS AST: Chemical Bulk Storage Database
Facilities that store regulated hazardous substances in aboveground tanks with capacities of 185 gallons or greater, and/or in underground tanks of any size.

Date of Government Version: 01/01/2002
Date Data Arrived at EDR: 02/20/2002
Date Made Active in Reports: 03/22/2002
Number of Days to Update: 30

Source: NYSDEC
Telephone: 518-402-9549
Last EDR Contact: 07/25/2005
Next Scheduled EDR Contact: 10/24/2005
Data Release Frequency: No Update Planned

MOSF AST: Major Oil Storage Facilities Database
Facilities that may be onshore facilities or vessels, with petroleum storage capacities of 400,000 gallons or greater.

Date of Government Version: 01/01/2002
Date Data Arrived at EDR: 02/20/2002
Date Made Active in Reports: 03/22/2002
Number of Days to Update: 30

Source: NYSDEC
Telephone: 518-402-9549
Last EDR Contact: 07/25/2005
Next Scheduled EDR Contact: 10/24/2005
Data Release Frequency: No Update Planned

CBS: Chemical Bulk Storage Site Listing
These facilities store regulated hazardous substances in aboveground tanks with capacities of 185 gallons or greater, and/or in underground tanks of any size

Date of Government Version: 04/05/2011
Date Data Arrived at EDR: 04/05/2011
Date Made Active in Reports: 04/20/2011
Number of Days to Update: 15

Source: Department of Environmental Conservation
Telephone: 518-402-9549
Last EDR Contact: 04/05/2011
Next Scheduled EDR Contact: 07/18/2011
Data Release Frequency: Quarterly

MOSF: Major Oil Storage Facility Site Listing
These facilities may be onshore facilities or vessels, with petroleum storage capacities of 400,000 gallons or greater.

Date of Government Version: 04/05/2011
Date Data Arrived at EDR: 04/05/2011
Date Made Active in Reports: 04/20/2011
Number of Days to Update: 15

Source: Department of Environmental Conservation
Telephone: 518-402-9549
Last EDR Contact: 04/05/2011
Next Scheduled EDR Contact: 07/18/2011
Data Release Frequency: Quarterly

INDIAN UST R6: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 02/03/2011
Date Data Arrived at EDR: 02/04/2011
Date Made Active in Reports: 03/21/2011
Number of Days to Update: 45

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 01/31/2011
Next Scheduled EDR Contact: 05/16/2011
Data Release Frequency: Semi-Annually

INDIAN UST R5: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 02/11/2010
Date Data Arrived at EDR: 02/11/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 60

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 01/31/2011
Next Scheduled EDR Contact: 05/16/2011
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 08/27/2010
Date Data Arrived at EDR: 08/30/2010
Date Made Active in Reports: 10/04/2010
Number of Days to Update: 35

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 02/16/2011
Next Scheduled EDR Contact: 05/16/2011
Data Release Frequency: Semi-Annually

INDIAN UST R9: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 01/31/2011
Date Data Arrived at EDR: 02/01/2011
Date Made Active in Reports: 03/21/2011
Number of Days to Update: 48

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 01/31/2011
Next Scheduled EDR Contact: 05/16/2011
Data Release Frequency: Quarterly

INDIAN UST R8: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 02/04/2011
Date Data Arrived at EDR: 02/04/2011
Date Made Active in Reports: 03/21/2011
Number of Days to Update: 45

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 01/31/2011
Next Scheduled EDR Contact: 05/16/2011
Data Release Frequency: Quarterly

INDIAN UST R7: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 11/01/2010
Date Data Arrived at EDR: 12/02/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 57

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 02/03/2011
Next Scheduled EDR Contact: 05/16/2011
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

INDIAN UST R10: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 02/03/2011
Date Data Arrived at EDR: 02/04/2011
Date Made Active in Reports: 03/21/2011
Number of Days to Update: 45

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 01/31/2011
Next Scheduled EDR Contact: 05/16/2011
Data Release Frequency: Quarterly

INDIAN UST R1: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 09/01/2010
Date Data Arrived at EDR: 11/05/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 84

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 02/03/2011
Next Scheduled EDR Contact: 05/16/2011
Data Release Frequency: Varies

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/01/2010
Date Data Arrived at EDR: 02/16/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 55

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 04/18/2011
Next Scheduled EDR Contact: 08/01/2011
Data Release Frequency: Varies

State and tribal institutional control / engineering control registries

ENG CONTROLS: Registry of Engineering Controls
Environmental Remediation sites that have engineering controls in place.

Date of Government Version: 03/31/2011
Date Data Arrived at EDR: 04/01/2011
Date Made Active in Reports: 04/20/2011
Number of Days to Update: 19

Source: Department of Environmental Conservation
Telephone: 518-402-9553
Last EDR Contact: 04/01/2011
Next Scheduled EDR Contact: 06/06/2011
Data Release Frequency: Quarterly

INST CONTROL: Registry of Institutional Controls
Environmental Remediation sites that have institutional controls in place.

Date of Government Version: 03/31/2011
Date Data Arrived at EDR: 04/01/2011
Date Made Active in Reports: 04/20/2011
Number of Days to Update: 19

Source: Department of Environmental Conservation
Telephone: 518-402-9553
Last EDR Contact: 04/01/2011
Next Scheduled EDR Contact: 06/06/2011
Data Release Frequency: Quarterly

RES DECL: Restrictive Declarations Listing
A restrictive declaration is a covenant running with the land which binds the present and future owners of the property. As a condition of certain special permits, the City Planning Commission may require an applicant to sign and record a restrictive declaration that places specified conditions on the future use and development of the property. Certain restrictive declarations are indicated by a D on zoning maps.

Date of Government Version: 11/18/2010
Date Data Arrived at EDR: 12/23/2010
Date Made Active in Reports: 02/11/2011
Number of Days to Update: 50

Source: NYC Department of City Planning
Telephone: 212-720-3401
Last EDR Contact: 03/30/2011
Next Scheduled EDR Contact: 07/11/2011
Data Release Frequency: No Update Planned

State and tribal voluntary cleanup sites

VCP: Voluntary Cleanup Agreements

New York established its Voluntary Cleanup Program (VCP) to address the environmental, legal and financial barriers that often hinder the redevelopment and reuse of contaminated properties. The Voluntary Cleanup Program was developed to enhance private sector cleanup of brownfields by enabling parties to remediate sites using private rather than public funds and to reduce the development pressures on "greenfield" sites.

Date of Government Version: 03/31/2011
Date Data Arrived at EDR: 04/01/2011
Date Made Active in Reports: 04/20/2011
Number of Days to Update: 19

Source: Department of Environmental Conservation
Telephone: 518-402-9711
Last EDR Contact: 04/01/2011
Next Scheduled EDR Contact: 06/06/2011
Data Release Frequency: Semi-Annually

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 09/01/2010
Date Data Arrived at EDR: 01/05/2011
Date Made Active in Reports: 03/21/2011
Number of Days to Update: 75

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 04/05/2011
Next Scheduled EDR Contact: 07/18/2011
Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

State and tribal Brownfields sites

ERP: Environmental Restoration Program Listing

In an effort to spur the cleanup and redevelopment of brownfields, New Yorkers approved a $200 million Environmental Restoration or Brownfields Fund as part of the $1.75 billion Clean Water/Clean Air Bond Act of 1996 (1996 Bond Act). Enhancements to the program were enacted on October 7, 2003. Under the Environmental Restoration Program, the State provides grants to municipalities to reimburse up to 90 percent of on-site eligible costs and 100% of off-site eligible costs for site investigation and remediation activities. Once remediated, the property may then be reused for commercial, industrial, residential or public use.

Date of Government Version: 03/31/2011
Date Data Arrived at EDR: 04/01/2011
Date Made Active in Reports: 04/20/2011
Number of Days to Update: 19

Source: Department of Environmental Conservation
Telephone: 518-402-9622
Last EDR Contact: 04/01/2011
Next Scheduled EDR Contact: 06/06/2011
Data Release Frequency: Quarterly

BROWNFIELDS: Brownfields Site List

A Brownfield is any real property where redevelopment or re-use may be complicated by the presence or potential presence of a hazardous waste, petroleum, pollutant, or contaminant.

Date of Government Version: 03/31/2011
Date Data Arrived at EDR: 04/01/2011
Date Made Active in Reports: 04/20/2011
Number of Days to Update: 19

Source: Department of Environmental Conservation
Telephone: 518-402-9764
Last EDR Contact: 04/01/2011
Next Scheduled EDR Contact: 06/06/2011
Data Release Frequency: Semi-Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities--especially those without EPA Brownfields Assessment Demonstration Pilots--minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields. Cooperative Agreement Recipients-States, political subdivisions, territories, and Indian tribes become Brownfields Cleanup Revolving Loan Fund (BCRLF) cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U.S. EPA. EPA selects BCRLF cooperative agreement recipients based on a proposal and application process. BCRLF cooperative agreement recipients must use EPA funds provided through BCRLF cooperative agreement for specified brownfields-related cleanup activities.

Date of Government Version: 12/29/2010
Date Data Arrived at EDR: 12/30/2010
Date Made Active in Reports: 03/21/2011
Number of Days to Update: 81

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 03/29/2011
Next Scheduled EDR Contact: 07/11/2011
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 03/28/2011
Next Scheduled EDR Contact: 07/11/2011
Data Release Frequency: No Update Planned

SWRCY: Registered Recycling Facility List

A listing of recycling facilities.

Date of Government Version: 01/12/2011
Date Data Arrived at EDR: 01/14/2011
Date Made Active in Reports: 02/04/2011
Number of Days to Update: 21

Source: Department of Environmental Conservation
Telephone: 518-402-8705
Last EDR Contact: 04/11/2011
Next Scheduled EDR Contact: 07/25/2011
Data Release Frequency: Semi-Annually

SWTIRE: Registered Waste Tire Storage & Facility List

A listing of facilities registered to accept waste tires.

Date of Government Version: 08/01/2006
Date Data Arrived at EDR: 11/15/2006
Date Made Active in Reports: 11/30/2006
Number of Days to Update: 15

Source: Department of Environmental Conservation
Telephone: 518-402-8694
Last EDR Contact: 01/28/2011
Next Scheduled EDR Contact: 05/09/2011
Data Release Frequency: Annually

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 02/08/2011
Next Scheduled EDR Contact: 05/23/2011
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US CDL: Clandestine Drug Labs
A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 12/03/2010
Date Data Arrived at EDR: 12/30/2010
Date Made Active in Reports: 02/16/2011
Number of Days to Update: 48

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 03/08/2011
Next Scheduled EDR Contact: 06/20/2011
Data Release Frequency: Quarterly

DEL SHWS: Delisted Registry Sites
A database listing of sites delisted from the Registry of Inactive Hazardous Waste Disposal Sites.

Date of Government Version: 03/31/2011
Date Data Arrived at EDR: 04/01/2011
Date Made Active in Reports: 04/20/2011
Number of Days to Update: 19

Source: Department of Environmental Conservation
Telephone: 518-402-9622
Last EDR Contact: 04/01/2011
Next Scheduled EDR Contact: 06/06/2011
Data Release Frequency: Annually

US HIST CDL: National Clandestine Laboratory Register
A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 09/01/2007
Date Data Arrived at EDR: 11/19/2008
Date Made Active in Reports: 03/30/2009
Number of Days to Update: 131

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

Local Lists of Registered Storage Tanks

HIST UST: Historical Petroleum Bulk Storage Database
These facilities have petroleum storage capacities in excess of 1,100 gallons and less than 400,000 gallons. This database contains detailed information per site. It is no longer updated due to the sensitive nature of the information involved. See UST for more current data.

Date of Government Version: 01/01/2002
Date Data Arrived at EDR: 06/02/2006
Date Made Active in Reports: 07/20/2006
Number of Days to Update: 48

Source: Department of Environmental Conservation
Telephone: 518-402-9549
Last EDR Contact: 10/23/2006
Next Scheduled EDR Contact: 01/22/2007
Data Release Frequency: Varies

HIST AST: Historical Petroleum Bulk Storage Database
These facilities have petroleum storage capabilities in excess of 1,100 gallons and less than 400,000 gallons. This database contains detailed information per site. No longer updated due to the sensitive nature of the information involved. See AST for more current data.

Date of Government Version: 01/01/2002
Date Data Arrived at EDR: 06/02/2006
Date Made Active in Reports: 07/20/2006
Number of Days to Update: 48

Source: Department of Environmental Conservation
Telephone: 518-402-9549
Last EDR Contact: 10/23/2006
Next Scheduled EDR Contact: 01/22/2007
Data Release Frequency: No Update Planned

Local Land Records

LIENS 2: CERCLA Lien Information
A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 11/09/2010
Date Data Arrived at EDR: 11/16/2010
Date Made Active in Reports: 02/16/2011
Number of Days to Update: 92

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 01/31/2011
Next Scheduled EDR Contact: 05/16/2011
Data Release Frequency: Varies

LUCIS: Land Use Control Information System
LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 12/09/2005
Date Data Arrived at EDR: 12/11/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 31

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 02/22/2011
Next Scheduled EDR Contact: 06/06/2011
Data Release Frequency: Varies

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System
Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/31/2010
Date Data Arrived at EDR: 01/05/2011
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 51

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 04/05/2011
Next Scheduled EDR Contact: 07/18/2011
Data Release Frequency: Annually

SPILLS: Spills Information Database
Data collected on spills reported to NYSDEC as required by one or more of the following: Article 12 of the Navigation Law, 6 NYCRR Section 613.8 (from PBS regs), or 6 NYCRR Section 595.2 (from CBS regs). It includes spills active as of April 1, 1986, as well as spills occurring since this date.

Date of Government Version: 03/31/2011
Date Data Arrived at EDR: 04/01/2011
Date Made Active in Reports: 04/20/2011
Number of Days to Update: 19

Source: Department of Environmental Conservation
Telephone: 518-402-9549
Last EDR Contact: 04/01/2011
Next Scheduled EDR Contact: 06/06/2011
Data Release Frequency: Varies

HIST SPILLS: SPILLS Database
This database contains records of chemical and petroleum spill incidents. Under State law, petroleum and hazardous chemical spills that can impact the waters of the state must be reported by the spiller (and, in some cases, by anyone who has knowledge of the spills). In 2002, the Department of Environmental Conservation stopped providing updates to its original Spills Information Database. This database includes fields that are no longer available from the NYDEC as of January 1, 2002. Current information may be found in the NY SPILLS database. Department of Environmental Conservation.

Date of Government Version: 01/01/2002
Date Data Arrived at EDR: 07/08/2005
Date Made Active in Reports: 07/14/2005
Number of Days to Update: 6

Source: Department of Environmental Conservation
Telephone: 518-402-9549
Last EDR Contact: 07/07/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA-NonGen: RCRA - Non Generators
RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 02/17/2010
Date Data Arrived at EDR: 02/19/2010
Date Made Active in Reports: 05/17/2010
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: (212) 637-3660
Last EDR Contact: 04/05/2011
Next Scheduled EDR Contact: 07/18/2011
Data Release Frequency: Varies

DOT OPS: Incident and Accident Data
Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 10/13/2010
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 02/11/2011
Next Scheduled EDR Contact: 05/23/2011
Data Release Frequency: Varies

DOD: Department of Defense Sites
This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 703-692-8801
Last EDR Contact: 04/21/2011
Next Scheduled EDR Contact: 08/01/2011
Data Release Frequency: Semi-Annually

FUDS: Formerly Used Defense Sites
The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 08/12/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 112

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 03/15/2011
Next Scheduled EDR Contact: 06/27/2011
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees
Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 10/01/2010
Date Data Arrived at EDR: 10/29/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 91

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 04/04/2011
Next Scheduled EDR Contact: 07/18/2011
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ROD: Records Of Decision
Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 02/25/2011
Date Data Arrived at EDR: 03/16/2011
Date Made Active in Reports: 03/21/2011
Number of Days to Update: 5

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 03/16/2011
Next Scheduled EDR Contact: 06/27/2011
Data Release Frequency: Annually

UMTRA: Uranium Mill Tailings Sites
Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 09/14/2010
Date Data Arrived at EDR: 10/21/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 99

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 03/04/2011
Next Scheduled EDR Contact: 06/13/2011
Data Release Frequency: Varies

MINES: Mines Master Index File
Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 08/04/2010
Date Data Arrived at EDR: 09/09/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 84

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 03/09/2011
Next Scheduled EDR Contact: 06/20/2011
Data Release Frequency: Semi-Annually

TRIS: Toxic Chemical Release Inventory System
Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/17/2010
Date Made Active in Reports: 03/21/2011
Number of Days to Update: 94

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 03/01/2011
Next Scheduled EDR Contact: 06/13/2011
Data Release Frequency: Annually

TSCA: Toxic Substances Control Act
Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2006
Date Data Arrived at EDR: 09/29/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 64

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 03/29/2011
Next Scheduled EDR Contact: 07/11/2011
Data Release Frequency: Every 4 Years

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 02/28/2011
Next Scheduled EDR Contact: 06/13/2011
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 02/28/2011
Next Scheduled EDR Contact: 06/13/2011
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

SSTS: Section 7 Tracking Systems
Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 01/31/2011
Next Scheduled EDR Contact: 05/16/2011
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System
The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 01/07/2011
Date Data Arrived at EDR: 01/21/2011
Date Made Active in Reports: 03/21/2011
Number of Days to Update: 59

Source: Environmental Protection Agency
Telephone: 202-564-5088
Last EDR Contact: 03/28/2011
Next Scheduled EDR Contact: 07/11/2011
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 11/01/2010
Date Data Arrived at EDR: 11/10/2010
Date Made Active in Reports: 02/16/2011
Number of Days to Update: 98

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 04/22/2011
Next Scheduled EDR Contact: 08/01/2011
Data Release Frequency: Annually

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 03/18/2010
Date Data Arrived at EDR: 04/06/2010
Date Made Active in Reports: 05/27/2010
Number of Days to Update: 51

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 03/14/2011
Next Scheduled EDR Contact: 06/27/2011
Data Release Frequency: Quarterly

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 01/11/2011
Date Data Arrived at EDR: 01/13/2011
Date Made Active in Reports: 02/16/2011
Number of Days to Update: 34

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 04/13/2011
Next Scheduled EDR Contact: 07/25/2011
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 04/14/2010
Date Data Arrived at EDR: 04/16/2010
Date Made Active in Reports: 05/27/2010
Number of Days to Update: 41

Source: EPA
Telephone: (212) 637-3000
Last EDR Contact: 03/14/2011
Next Scheduled EDR Contact: 06/27/2011
Data Release Frequency: Quarterly

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 02/25/2010
Date Made Active in Reports: 05/12/2010
Number of Days to Update: 76

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 03/01/2011
Next Scheduled EDR Contact: 06/13/2011
Data Release Frequency: Biennially

HSWDS: Hazardous Substance Waste Disposal Site Inventory

The list includes any known or suspected hazardous substance waste disposal sites. Also included are sites delisted from the Registry of Inactive Hazardous Waste Disposal Sites and non-Registry sites that U.S. EPA Preliminary Assessment (PA) reports or Site Investigation (SI) reports were prepared. Hazardous Substance Waste Disposal Sites are eligible to be Superfund sites now that the New York State Superfund has been refinanced and changed. This means that the study inventory has served its purpose and will no longer be maintained as a separate entity. The last version of the study inventory is frozen in time. The sites on the study will not automatically be made Superfund sites, rather each site will be further evaluated for listing on the Registry. So overtime they will be added to the registry or not.

Date of Government Version: 01/01/2003
Date Data Arrived at EDR: 10/20/2006
Date Made Active in Reports: 11/30/2006
Number of Days to Update: 41

Source: Department of Environmental Conservation
Telephone: 518-402-9564
Last EDR Contact: 05/26/2009
Next Scheduled EDR Contact: 08/24/2009
Data Release Frequency: No Update Planned

UIC: Underground Injection Control Wells

A listing of enhanced oil recovery underground injection wells.

Date of Government Version: 03/14/2011
Date Data Arrived at EDR: 03/15/2011
Date Made Active in Reports: 04/06/2011
Number of Days to Update: 22

Source: Department of Environmental Conservation
Telephone: 518-402-8056
Last EDR Contact: 03/15/2011
Next Scheduled EDR Contact: 06/27/2011
Data Release Frequency: Quarterly

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 12/31/2010
Date Data Arrived at EDR: 02/09/2011
Date Made Active in Reports: 03/04/2011
Number of Days to Update: 23

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 02/09/2011
Next Scheduled EDR Contact: 05/23/2011
Data Release Frequency: Annually

DRYCLEANERS: Registered Drycleaners

A listing of all registered drycleaning facilities.

Date of Government Version: 12/31/2010
Date Data Arrived at EDR: 03/30/2011
Date Made Active in Reports: 04/20/2011
Number of Days to Update: 21

Source: Department of Environmental Conservation
Telephone: 518-402-8403
Last EDR Contact: 03/21/2011
Next Scheduled EDR Contact: 07/04/2011
Data Release Frequency: Varies

SPDES: State Pollutant Discharge Elimination System

New York State has a state program which has been approved by the United States Environmental Protection Agency for the control of wastewater and stormwater discharges in accordance with the Clean Water Act. Under New York State law the program is known as the State Pollutant Discharge Elimination System (SPDES) and is broader in scope than that required by the Clean Water Act in that it controls point source discharges to groundwaters as well as surface waters.

Date of Government Version: 01/19/2011
Date Data Arrived at EDR: 01/20/2011
Date Made Active in Reports: 03/02/2011
Number of Days to Update: 41

Source: Department of Environmental Conservation
Telephone: 518-402-8233
Last EDR Contact: 04/18/2011
Next Scheduled EDR Contact: 08/01/2011
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

AIRS: Air Emissions Data
Point source emissions inventory data.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 11/02/2010
Date Made Active in Reports: 12/17/2010
Number of Days to Update: 45

Source: Department of Environmental Conservation
Telephone: 518-402-8452
Last EDR Contact: 01/31/2011
Next Scheduled EDR Contact: 05/16/2011
Data Release Frequency: Annually

E DESIGNATION: E DESIGNATION SITE LISTING
The (E (Environmental)) designation would ensure that sampling and remediation take place on the subject properties, and would avoid any significant impacts related to hazardous materials at these locations. The (E) designations would require that the fee owner of the sites conduct a testing and sampling protocol, and remediation where appropriate, to the satisfaction of the NYCDEP before the issuance of a building permit by the Department of Buildings pursuant to the provisions of Section 11-15 of the Zoning Resolution (Environmental Requirements). The (E) designations also include a mandatory construction-related health and safety plan which must be approved by NYCDEP.

Date of Government Version: 10/13/2010
Date Data Arrived at EDR: 12/30/2010
Date Made Active in Reports: 02/04/2011
Number of Days to Update: 36

Source: New York City Department of City Planning
Telephone: 718-595-6658
Last EDR Contact: 03/30/2011
Next Scheduled EDR Contact: 07/11/2011
Data Release Frequency: Varies

INDIAN RESERV: Indian Reservations
This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 12/08/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 34

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 04/21/2011
Next Scheduled EDR Contact: 08/01/2011
Data Release Frequency: Semi-Annually

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing
The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 08/31/2010
Date Data Arrived at EDR: 09/01/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 92

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 04/25/2011
Next Scheduled EDR Contact: 08/08/2011
Data Release Frequency: Varies

FINANCIAL ASSURANCE 2: Financial Assurance Information Listing
A listing of financial assurance information for hazardous waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 10/31/2008
Date Data Arrived at EDR: 11/25/2008
Date Made Active in Reports: 12/11/2008
Number of Days to Update: 16

Source: Department of Environmental Conservation
Telephone: 518-402-8712
Last EDR Contact: 04/11/2011
Next Scheduled EDR Contact: 07/25/2011
Data Release Frequency: Varies

COAL ASH DOE: Sleam-Electric Plan Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 04/19/2011
Next Scheduled EDR Contact: 08/01/2011
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 08/17/2010
Date Data Arrived at EDR: 01/03/2011
Date Made Active in Reports: 03/21/2011
Number of Days to Update: 77

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 03/18/2011
Next Scheduled EDR Contact: 06/27/2011
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 01/01/2008
Date Data Arrived at EDR: 02/18/2009
Date Made Active in Reports: 05/29/2009
Number of Days to Update: 100

Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 02/04/2011
Next Scheduled EDR Contact: 05/16/2011
Data Release Frequency: Varies

FINANCIAL ASSURANCE 1: Financial Assurance Information Listing
Financial assurance information.

Date of Government Version: 01/12/2011
Date Data Arrived at EDR: 01/14/2011
Date Made Active in Reports: 02/04/2011
Number of Days to Update: 21

Source: Department of Environmental Conservation
Telephone: 518-402-8660
Last EDR Contact: 04/11/2011
Next Scheduled EDR Contact: 07/25/2011
Data Release Frequency: Quarterly

COAL ASH: Coal Ash Disposal Site Listing
A listing of coal ash disposal site locations.

Date of Government Version: 01/12/2011
Date Data Arrived at EDR: 01/26/2011
Date Made Active in Reports: 03/07/2011
Number of Days to Update: 40

Source: Department of Environmental Conservation
Telephone: 518-402-8660
Last EDR Contact: 04/11/2011
Next Scheduled EDR Contact: 07/25/2011
Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands
Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 04/21/2011
Next Scheduled EDR Contact: 08/01/2011
Data Release Frequency: N/A

EDR PROPRIETARY RECORDS

EDR Proprietary Records

Manufactured Gas Plants: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

COUNTY RECORDS

CORTLAND COUNTY:

Cortland County Storage Tank Listing
A listing of aboveground storage tank sites located in Cortland County.

Date of Government Version: 03/18/2011
Date Data Arrived at EDR: 03/18/2011
Date Made Active in Reports: 04/21/2011
Number of Days to Update: 34

Source: Cortland County Health Department
Telephone: 607-753-5035
Last EDR Contact: 02/07/2011
Next Scheduled EDR Contact: 05/23/2011
Data Release Frequency: Quarterly

Cortland County Storage Tank Listing
A listing of underground storage tank sites located in Cortland County.

Date of Government Version: 03/18/2011
Date Data Arrived at EDR: 03/18/2011
Date Made Active in Reports: 04/21/2011
Number of Days to Update: 34

Source: Cortland County Health Department
Telephone: 607-753-5035
Last EDR Contact: 02/07/2011
Next Scheduled EDR Contact: 05/23/2011
Data Release Frequency: Quarterly

NASSAU COUNTY:

Registered Tank Database
A listing of aboveground storage tank sites located in Nassau County.

Date of Government Version: 05/21/2003
Date Data Arrived at EDR: 05/27/2003
Date Made Active in Reports: 06/09/2003
Number of Days to Update: 13

Source: Nassau County Health Department
Telephone: 516-571-3314
Last EDR Contact: 04/11/2011
Next Scheduled EDR Contact: 07/25/2011
Data Release Frequency: No Update Planned

Storage Tank Database
A listing of aboveground storage tank sites located in Nassau County.

Date of Government Version: 02/15/2011
Date Data Arrived at EDR: 02/23/2011
Date Made Active in Reports: 03/29/2011
Number of Days to Update: 34

Source: Nassau County Office of the Fire Marshal
Telephone: 516-572-1000
Last EDR Contact: 02/07/2011
Next Scheduled EDR Contact: 05/23/2011
Data Release Frequency: Varies

Registered Tank Database
A listing of underground storage tank sites located in Nassau County.

Date of Government Version: 05/21/2003
Date Data Arrived at EDR: 05/27/2003
Date Made Active in Reports: 06/09/2003
Number of Days to Update: 13

Source: Nassau County Health Department
Telephone: 516-571-3314
Last EDR Contact: 04/11/2011
Next Scheduled EDR Contact: 07/25/2011
Data Release Frequency: No Update Planned

Storage Tank Database
A listing of underground storage tank sites located in Nassau County.

Date of Government Version: 02/15/2011
Date Data Arrived at EDR: 02/23/2011
Date Made Active in Reports: 03/29/2011
Number of Days to Update: 34

Source: Nassau County Office of the Fire Marshal
Telephone: 516-572-1000
Last EDR Contact: 02/07/2011
Next Scheduled EDR Contact: 05/23/2011
Data Release Frequency: Varies

ROCKLAND COUNTY:

Petroleum Bulk Storage Database
A listing of aboveground storage tank sites located in Rockland County.

Date of Government Version: 03/17/2011
Date Data Arrived at EDR: 03/18/2011
Date Made Active in Reports: 04/21/2011
Number of Days to Update: 34

Source: Rockland County Health Department
Telephone: 914-364-2605
Last EDR Contact: 03/14/2011
Next Scheduled EDR Contact: 06/27/2011
Data Release Frequency: Quarterly

Petroleum Bulk Storage Database
A listing of underground storage tank sites located in Rockland County.

Date of Government Version: 03/17/2011
Date Data Arrived at EDR: 03/18/2011
Date Made Active in Reports: 04/21/2011
Number of Days to Update: 34

Source: Rockland County Health Department
Telephone: 914-364-2605
Last EDR Contact: 03/14/2011
Next Scheduled EDR Contact: 06/27/2011
Data Release Frequency: Quarterly

SUFFOLK COUNTY:

Storage Tank Database
A listing of aboveground storage tank sites located in Suffolk County.

Date of Government Version: 09/13/2006
Date Data Arrived at EDR: 01/11/2007
Date Made Active in Reports: 02/07/2007
Number of Days to Update: 27

Source: Suffolk County Department of Health Services
Telephone: 631-854-2521
Last EDR Contact: 02/07/2011
Next Scheduled EDR Contact: 05/23/2011
Data Release Frequency: Annually

Storage Tank Database
A listing of underground storage tank sites located in Suffolk County.

Date of Government Version: 09/13/2006
Date Data Arrived at EDR: 01/11/2007
Date Made Active in Reports: 02/07/2007
Number of Days to Update: 27

Source: Suffolk County Department of Health Services
Telephone: 631-854-2521
Last EDR Contact: 02/07/2011
Next Scheduled EDR Contact: 05/23/2011
Data Release Frequency: Annually

WESTCHESTER COUNTY:

Listing of Storage Tanks
A listing of aboveground storage tank sites located in Westchester County.

Date of Government Version: 03/22/2011
Date Data Arrived at EDR: 03/24/2011
Date Made Active in Reports: 04/21/2011
Number of Days to Update: 28

Source: Westchester County Department of Health
Telephone: 914-813-5161
Last EDR Contact: 02/11/2011
Next Scheduled EDR Contact: 05/23/2011
Data Release Frequency: Varies

Listing of Storage Tanks
A listing of underground storage tank sites located in Westchester County.

Date of Government Version: 03/22/2011
Date Data Arrived at EDR: 03/24/2011
Date Made Active in Reports: 04/21/2011
Number of Days to Update: 28

Source: Westchester County Department of Health
Telephone: 914-813-5161
Last EDR Contact: 02/11/2011
Next Scheduled EDR Contact: 05/23/2011
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 08/26/2009
Date Made Active in Reports: 09/11/2009
Number of Days to Update: 16

Source: Department of Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 02/25/2011
Next Scheduled EDR Contact: 06/06/2011
Data Release Frequency: Annually

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 07/22/2010
Date Made Active in Reports: 08/26/2010
Number of Days to Update: 35

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 04/19/2011
Next Scheduled EDR Contact: 08/01/2011
Data Release Frequency: Annually

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2008
Date Data Arrived at EDR: 12/01/2009
Date Made Active in Reports: 12/14/2009
Number of Days to Update: 13

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 04/04/2011
Next Scheduled EDR Contact: 07/06/2011
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 07/19/2010
Date Made Active in Reports: 08/26/2010
Number of Days to Update: 38

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 02/28/2011
Next Scheduled EDR Contact: 06/13/2011
Data Release Frequency: Annually

VT MANIFEST: Hazardous Waste Manifest Data
Hazardous waste manifest information.

Date of Government Version: 03/29/2010
Date Data Arrived at EDR: 05/14/2010
Date Made Active in Reports: 06/22/2010
Number of Days to Update: 39

Source: Department of Environmental Conservation
Telephone: 802-241-3443
Last EDR Contact: 04/25/2011
Next Scheduled EDR Contact: 08/08/2011
Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 07/06/2010
Date Made Active in Reports: 07/26/2010
Number of Days to Update: 20

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 03/21/2011
Next Scheduled EDR Contact: 07/04/2011
Data Release Frequency: Annually

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Electric Power Transmission Line Data
Source: Rextag Strategies Corp.
Telephone: (281) 769-2247
U.S. Electric Transmission and Power Plants Systems Digital GIS Data

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Day Care Providers
Source: Department of Health
Telephone: 212-676-2444

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2009 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Freshwater Wetlands
Source: Department of Environmental Conservation
Telephone: 518-402-8961

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

STREET AND ADDRESS INFORMATION

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GEOCHECK®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

M5374
77 COMMERCIAL STREET
BROOKLYN, NY 11222

TARGET PROPERTY COORDINATES

Latitude (North):	40.73730 - 40' 44' 14.3"
Longitude (West):	73.9567 - 73' 57' 24.1"
Universal Tranverse Mercator:	Zone 18
UTM X (Meters):	588093.7
UTM Y (Meters):	4509907.5
Elevation:	12 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	40073-F8 BROOKLYN, NY
Most Recent Revision:	1995
North Map:	40073-G8 CENTRAL PARK, NY
Most Recent Revision:	1995

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

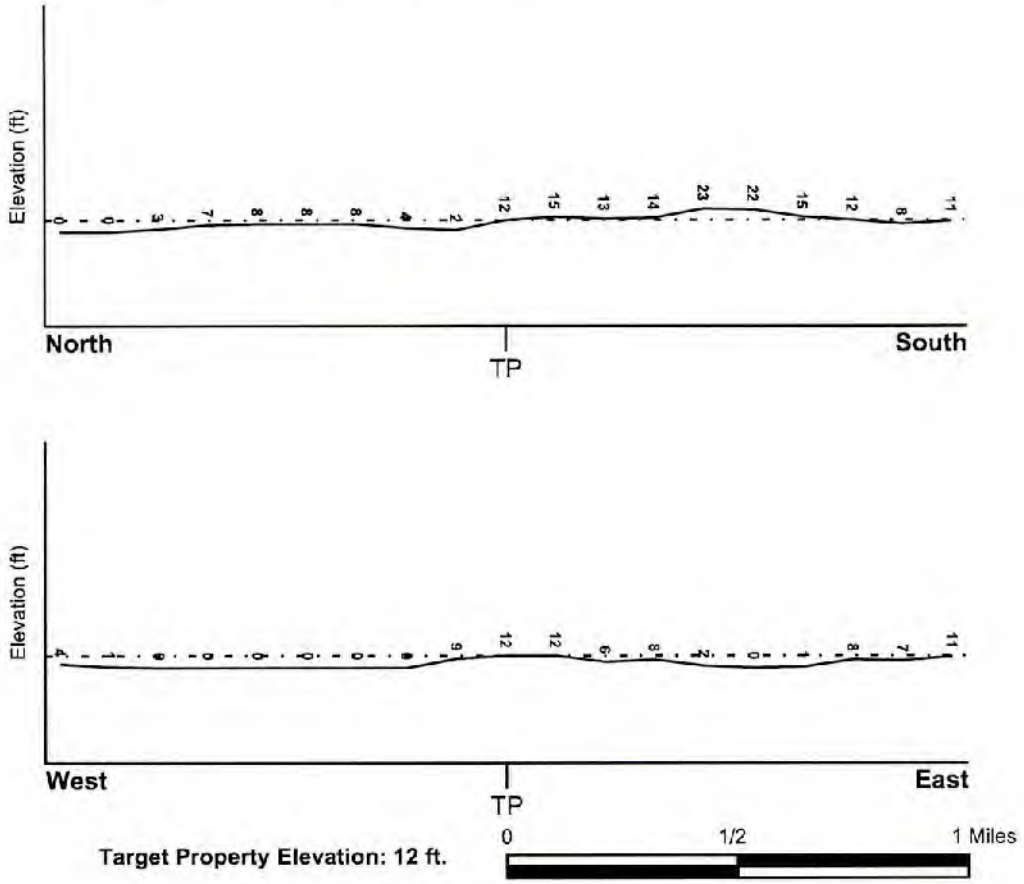
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General NW

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Target Property Elevation: 12 ft.

Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Target Property County	FEMA Flood Electronic Data
KINGS, NY	YES - refer to the Overview Map and Detail Map

Flood Plain Panel at Target Property: 360497 - FEMA DFIRM Flood data

Additional Panels in search area: Not Reported

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
BROOKLYN	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius: 1.25 miles
Status: Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

* ©1996 Site-specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

Era:	Paleozoic
System:	Ordovician
Series:	Ordovician
Code:	Oe *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Eugeosynclinal Deposits

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name:	URBAN LAND
Soil Surface Texture:	variable
Hydrologic Group:	Not reported
Soil Drainage Class:	Not reported

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel:	Not Reported
Depth to Bedrock Min:	> 10 inches
Depth to Bedrock Max:	> 10 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
1	0 inches	6 inches	variable	Not reported	Not reported	Max: 0.00 Min: 0.00	Max: 0.00 Min: 0.00

OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures: silt loam
loamy sand
sandy loam
fine sandy loam

Surficial Soil Types: silt loam
loamy sand
sandy loam
fine sandy loam

Shallow Soil Types: sandy loam

Deeper Soil Types: unweathered bedrock
very gravelly - loamy sand
stratified
sandy loam

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	USGS2116938	0 - 1/8 Mile SSW
2	USGS2117172	1/4 - 1/2 Mile SSE
3	USGS2116900	1/4 - 1/2 Mile East
4	USGS2116725	1/4 - 1/2 Mile North
5	USGS2117133	1/4 - 1/2 Mile SSW
6	USGS2116841	1/4 - 1/2 Mile ENE
7	USGS2116571	1/4 - 1/2 Mile NE
8	USGS2116688	1/4 - 1/2 Mile ENE
9	USGS2116629	1/2 - 1 Mile North
10	USGS2117046	1/2 - 1 Mile ESE
11	USGS2116593	1/2 - 1 Mile NE
12	USGS2116506	1/2 - 1 Mile NE
13	USGS2117352	1/2 - 1 Mile ESE
14	USGS2117116	1/2 - 1 Mile ESE
15	USGS2116497	1/2 - 1 Mile NE
16	USGS2116630	1/2 - 1 Mile WNW

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation	Database	EDR ID Number
1 **SSW** **0 - 1/8 Mile** **Higher**	**FED USGS**	**USGS2116938**

Agency cd:	USGS	Site no:	404413073572601
Site name:	K 2227. 1		
Latitude:	404413	EDR Site id:	USGS2116938
Longitude:	0735726	Dec lat:	40.73704647
Dec lon:	-73.95680486	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	36
State:	36	County:	047
Country:	US	Land net:	Not Reported
Location map:	KE1008	Map scale:	Not Reported
Altitude:	10.0		
Altitude method:	Level or other surveying method		
Altitude accuracy:	0.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Northern Long Island. New York. Area = 915 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	EST
Local standard time flag:	N		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	50.
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

2 **SSE** **1/4 - 1/2 Mile** **Higher**	**FED USGS**	**USGS2117172**

Agency cd:	USGS	Site no:	404401073571901
Site name:	K 710. 1		
Latitude:	404401	EDR Site id:	USGS2117172
Longitude:	0735719	Dec lat:	40.73371321
Dec lon:	-73.95486036	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	36
State:	36	County:	047
Country:	US	Land net:	Not Reported
Location map:	KE1019	Map scale:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

Federal EPA Radon Zone for KINGS County: 3

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for KINGS COUNTY, NY

Number of sites tested: 51

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area	0.750 pCi/L	100%	0%	0%
Basement	1.370 pCi/L	88%	10%	2%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2009 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Freshwater Wetlands
Source: Department of Environmental Conservation
Telephone: 518-402-8961

HYDROGEOLOGIC INFORMATION

AQUIFLOW[R] Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec. Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

New York Public Water Wells
Source: New York Department of Health
Telephone: 518-458-6731

OTHER STATE DATABASE INFORMATION

Oil and Gas Well Database
Department of Environmental Conservation
Telephone: 518-402-8072
These files contain records, in the database, of wells that have been drilled.

RADON

State Database: NY Radon
Source: Department of Health
Telephone: 518-402-7556
Radon Test Results

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

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HISTORICAL RESEARCH DOCUMENTATION

M5374

77 COMMERCIAL STREET

BROOKLYN, NY 11222

Inquiry Number: 3055497.3

April 29, 2011

Certified Sanborn® Map Report

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

4/29/11

Site Name:
M5374
77 COMMERCIAL STREET
BROOKLYN, NY 11222

Client Name:
Merritt Environmental
77 Arkay Drive
Hauppauge, NY 11788

EDR Inquiry # 3055497.3

Contact: MARYANN WEGH

The complete Sanborn Library collection has been searched by EDR, and fire insurance maps covering the target property location provided by Merritt Environmental Consulting Corp. were identified for the years listed below. The certified Sanborn Library search results in this report can be authenticated by visiting www.edrnet.com/sanborn and entering the certification number. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by Sanborn Library LLC, the copyright holder for the collection.

Certified Sanborn Results:

Site Name: M5374
Address: 77 COMMERCIAL STREET
City, State, Zip: BROOKLYN, NY 11222
Cross Street:
P.O. # NA
Project: NA
Certification # 3A75-4041-9547

Sanborn® Library search results
Certification # 3A75-4041-9547

Maps Provided:

2007	2001	1989	1981	1942
2006	1996	1988	1980	1928
2005	1995	1987	1979	1922
2004	1993	1986	1978	1916
2003	1992	1983	1965	1905
2002	1991	1982	1951	1887

The Sanborn Library includes more than 1.2 million Sanborn fire insurance maps, which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

✓ Library of Congress
✓ University Publications of America
✓ EDR Private Collection

The Sanborn Library LLC Since 1866™

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Sanborn Sheet Thumbnails

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

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Volume 4, Sheet 10

Volume 4, Sheet 38

2006 Source Sheets

Volume 4, Sheet 9

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2005 Source Sheets

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2004 Source Sheets

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1905 Source Sheets

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1887 Source Sheets

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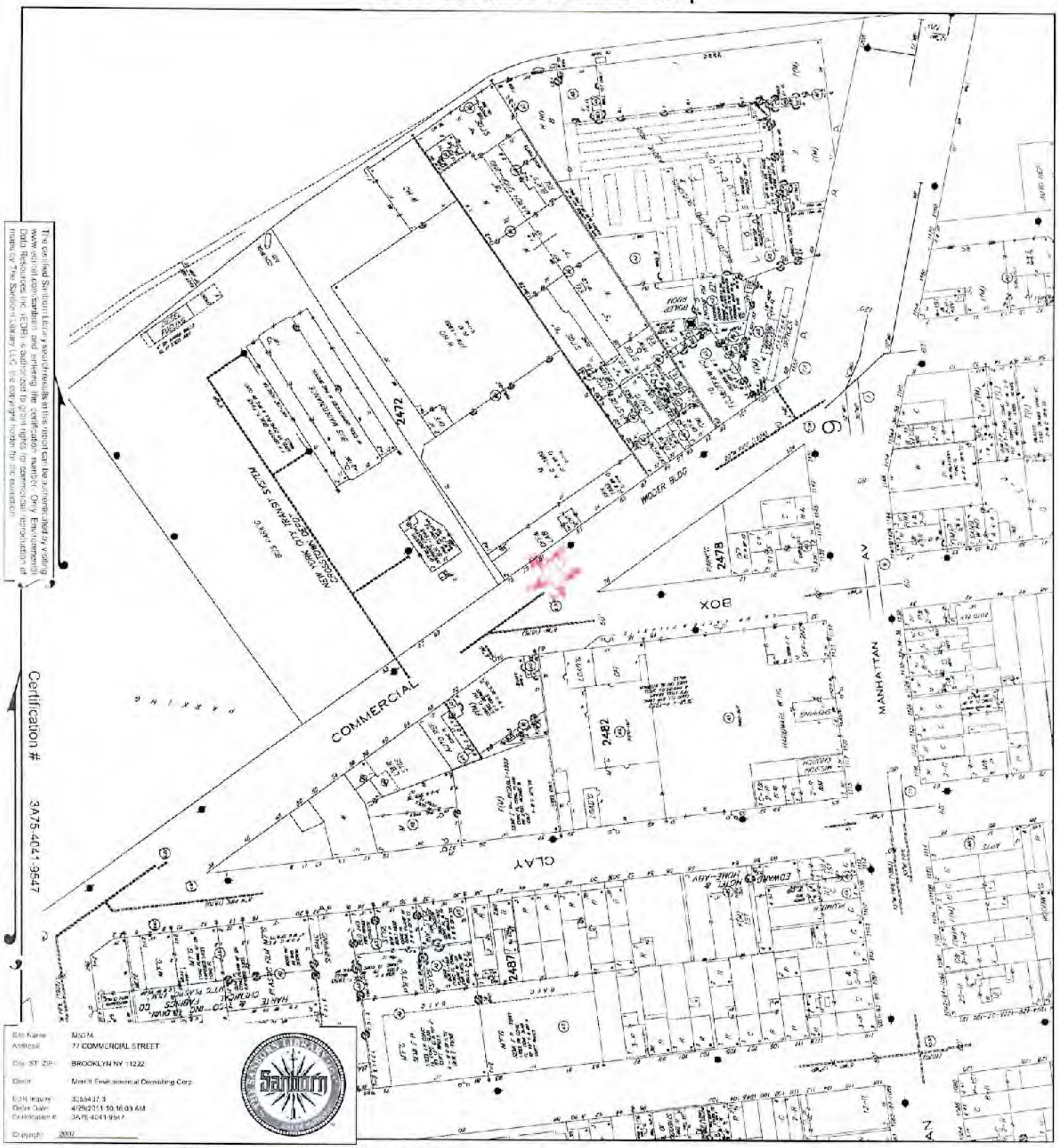

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Outlined areas indicate map sheets within the collection.

Volume 4, Sheet 9
Volume 4, Sheet 10
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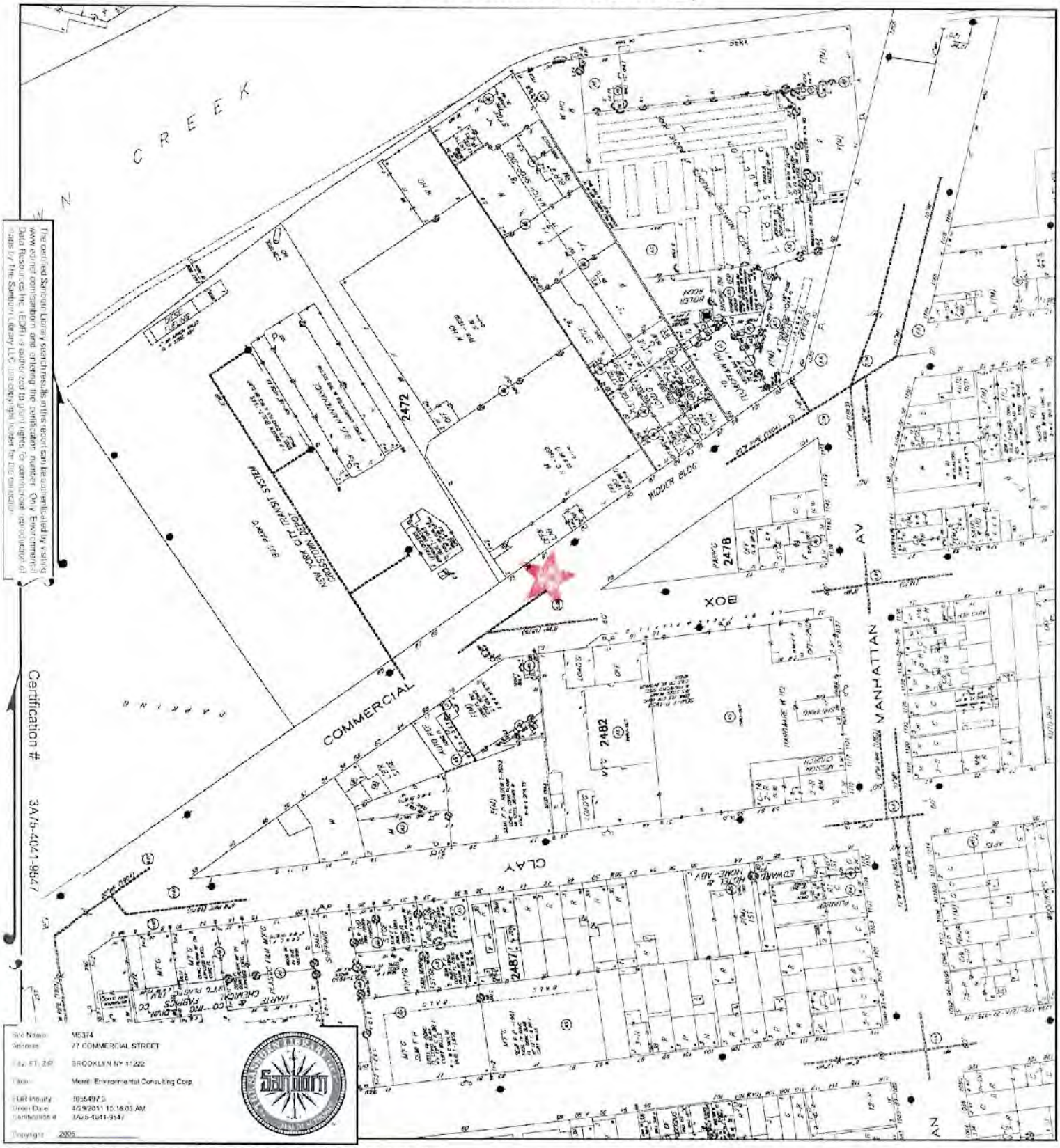

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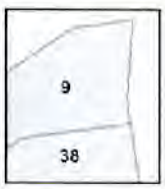

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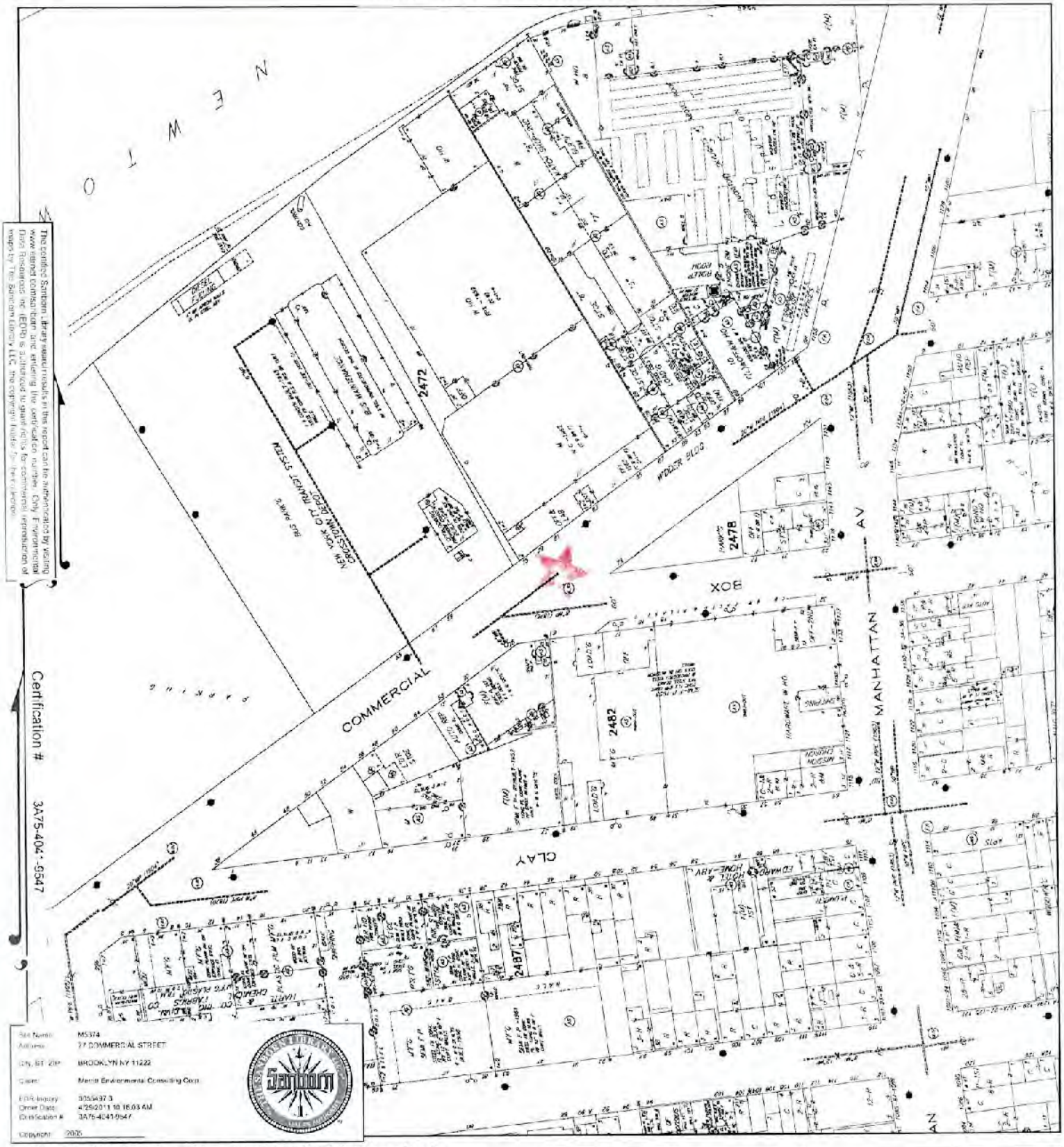

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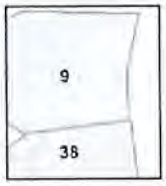

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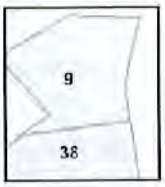

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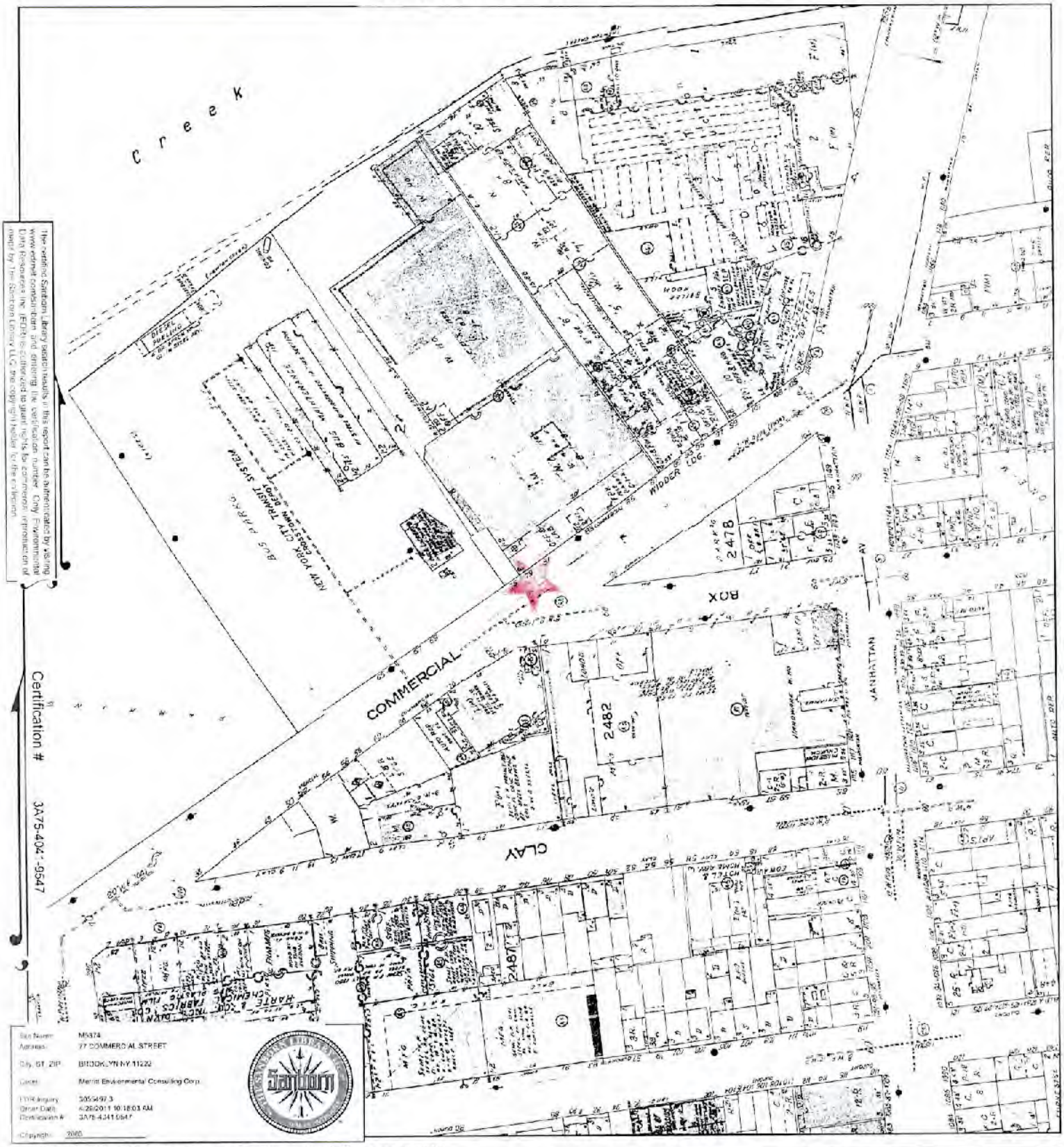

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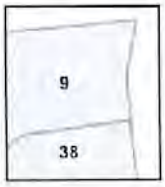

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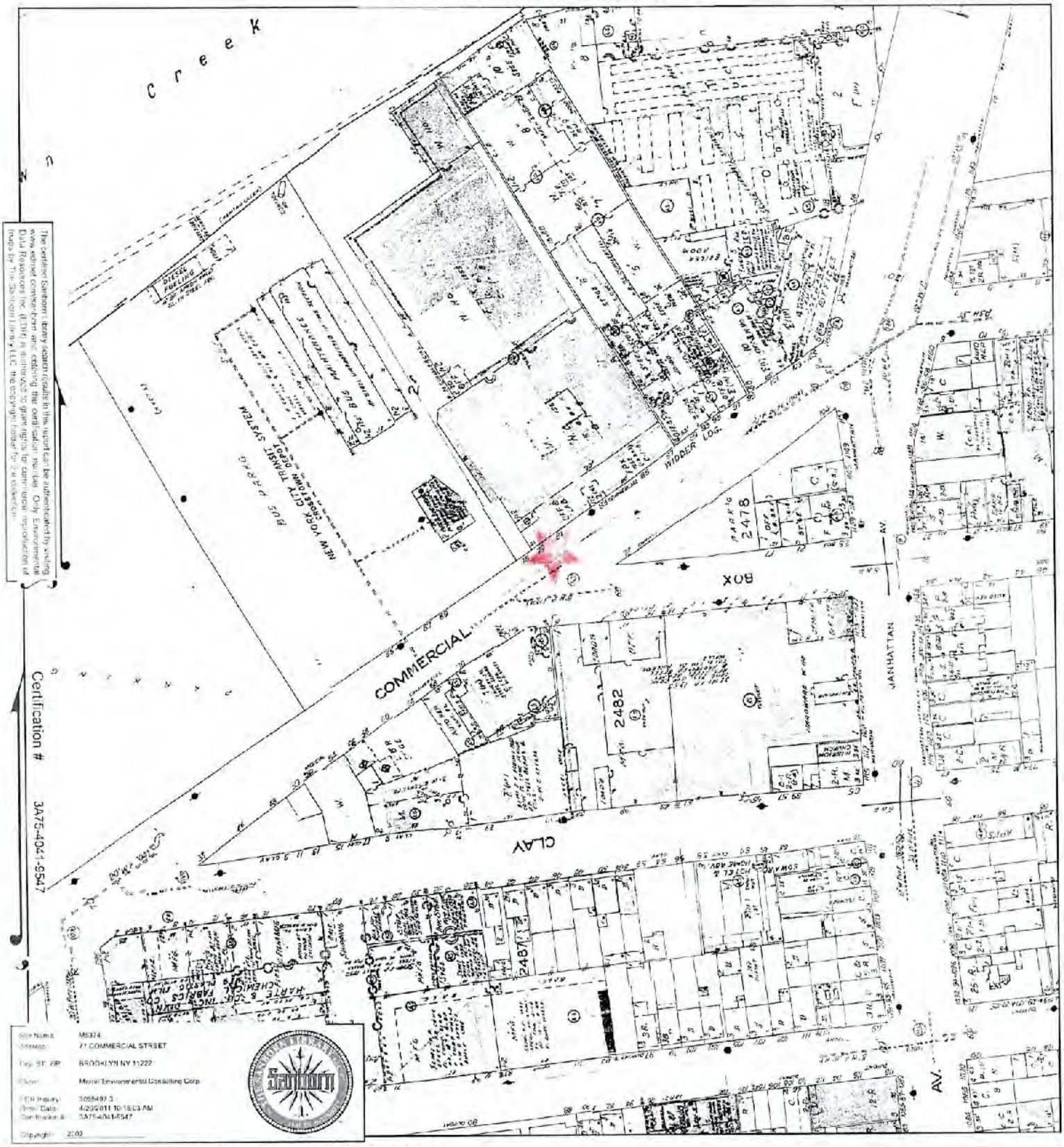

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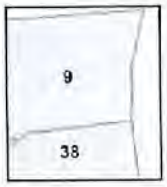

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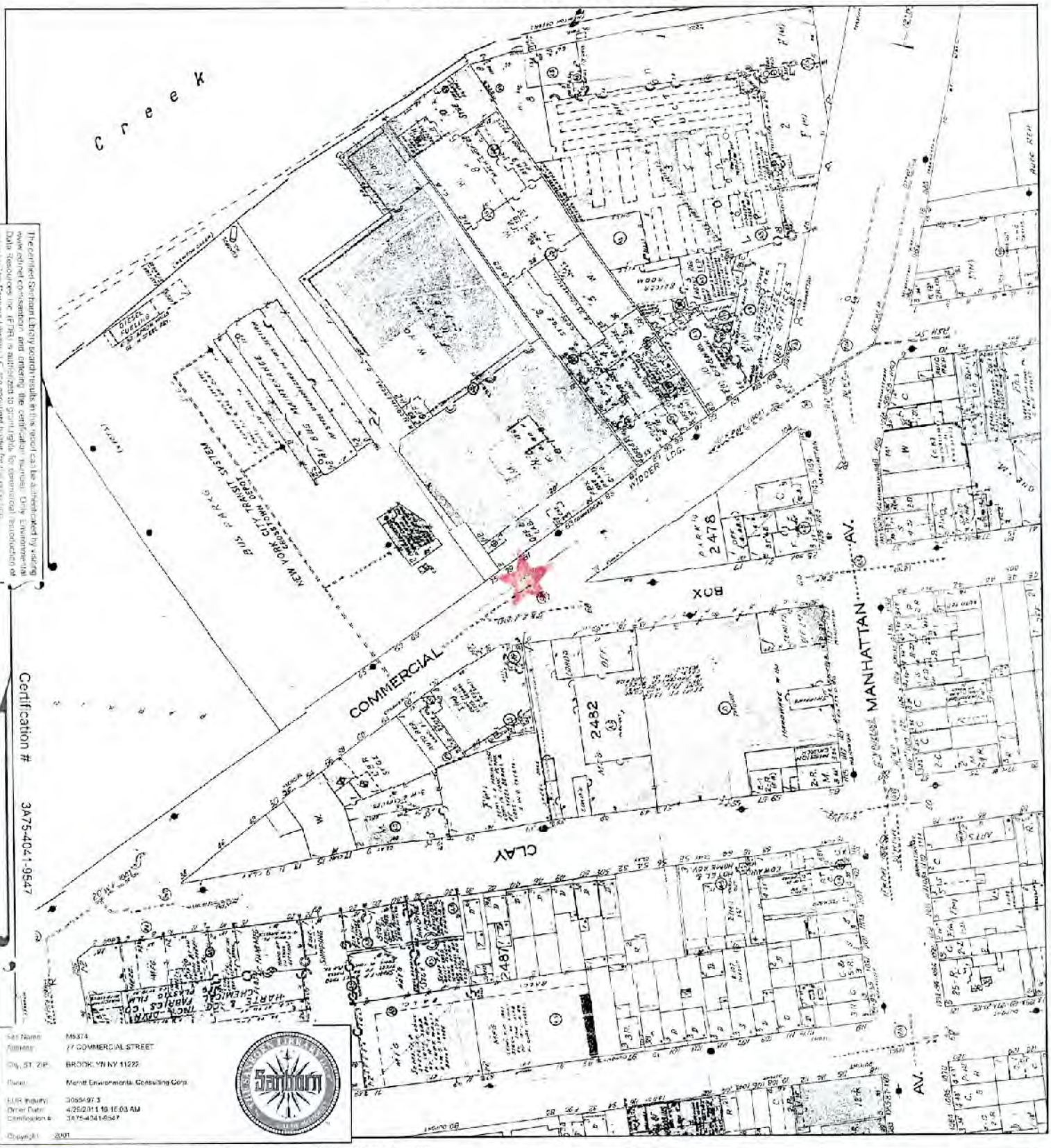

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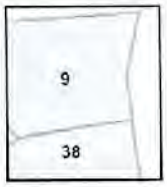

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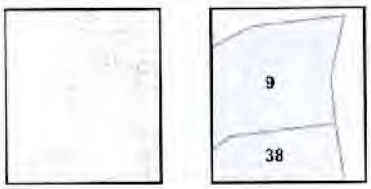

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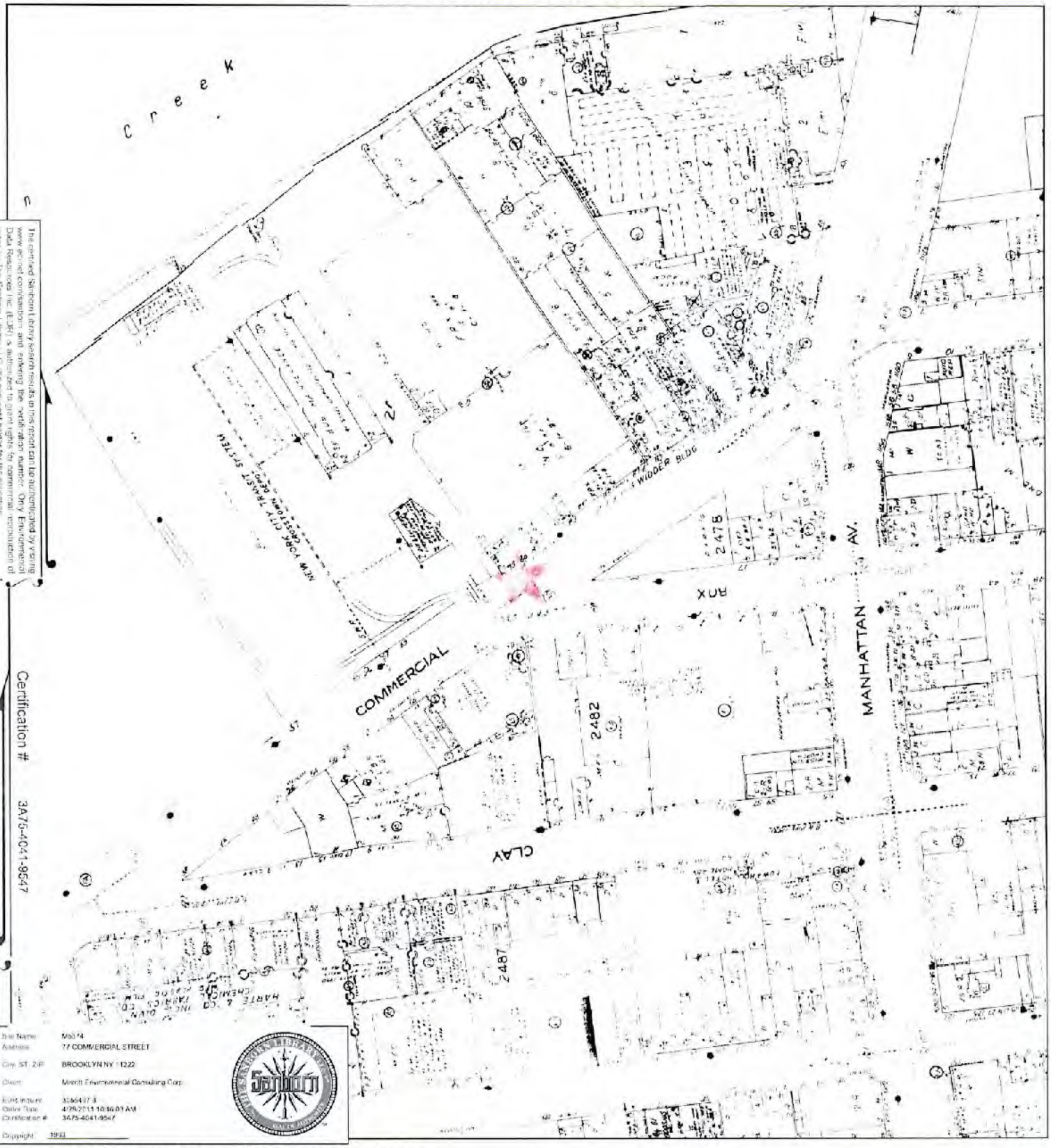

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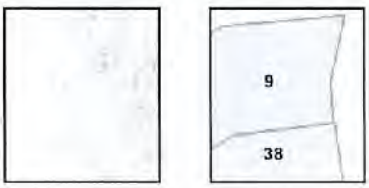

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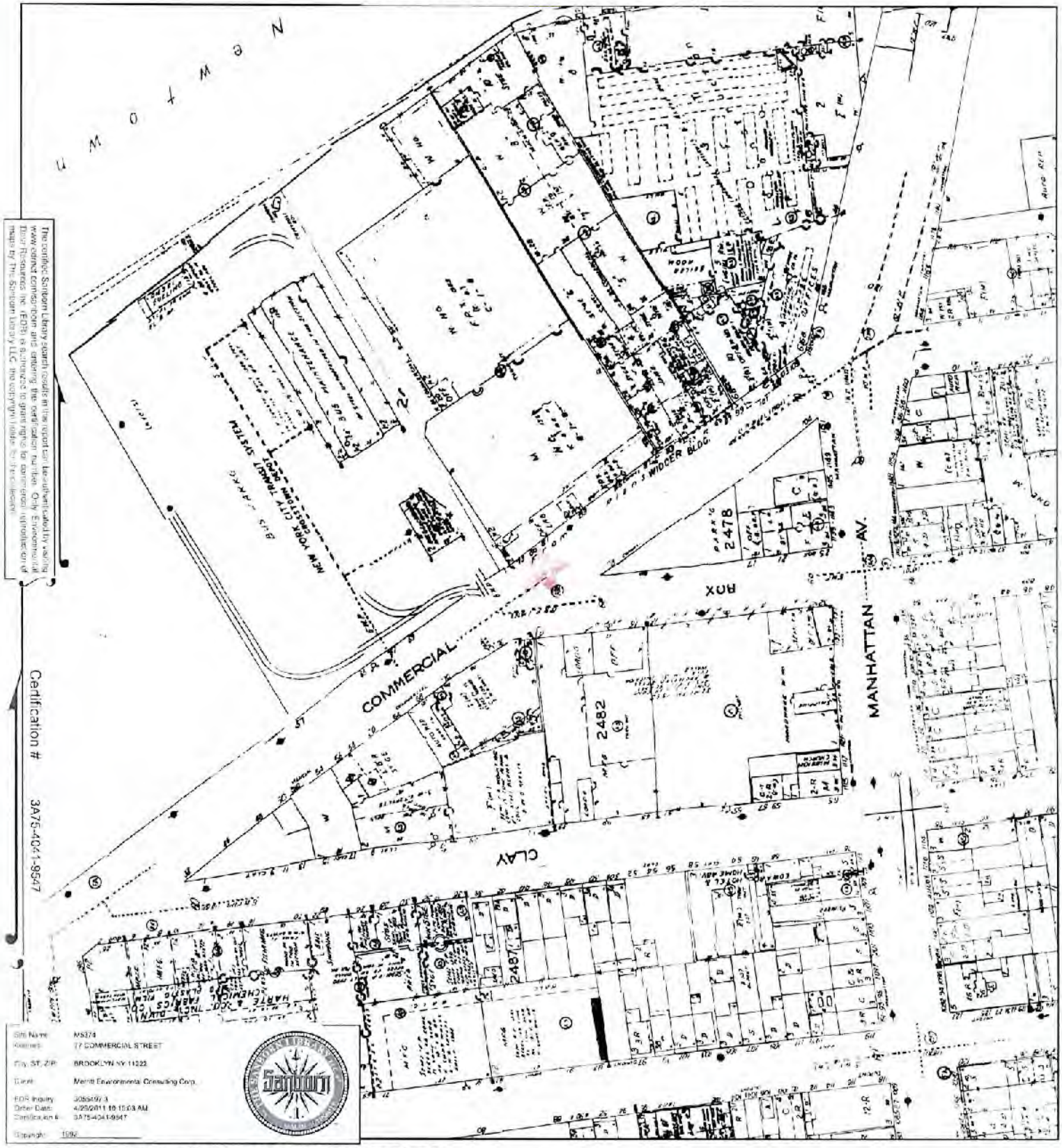

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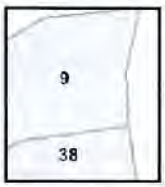

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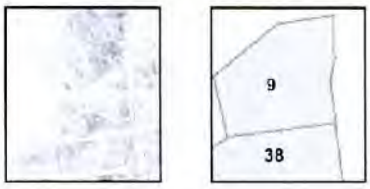

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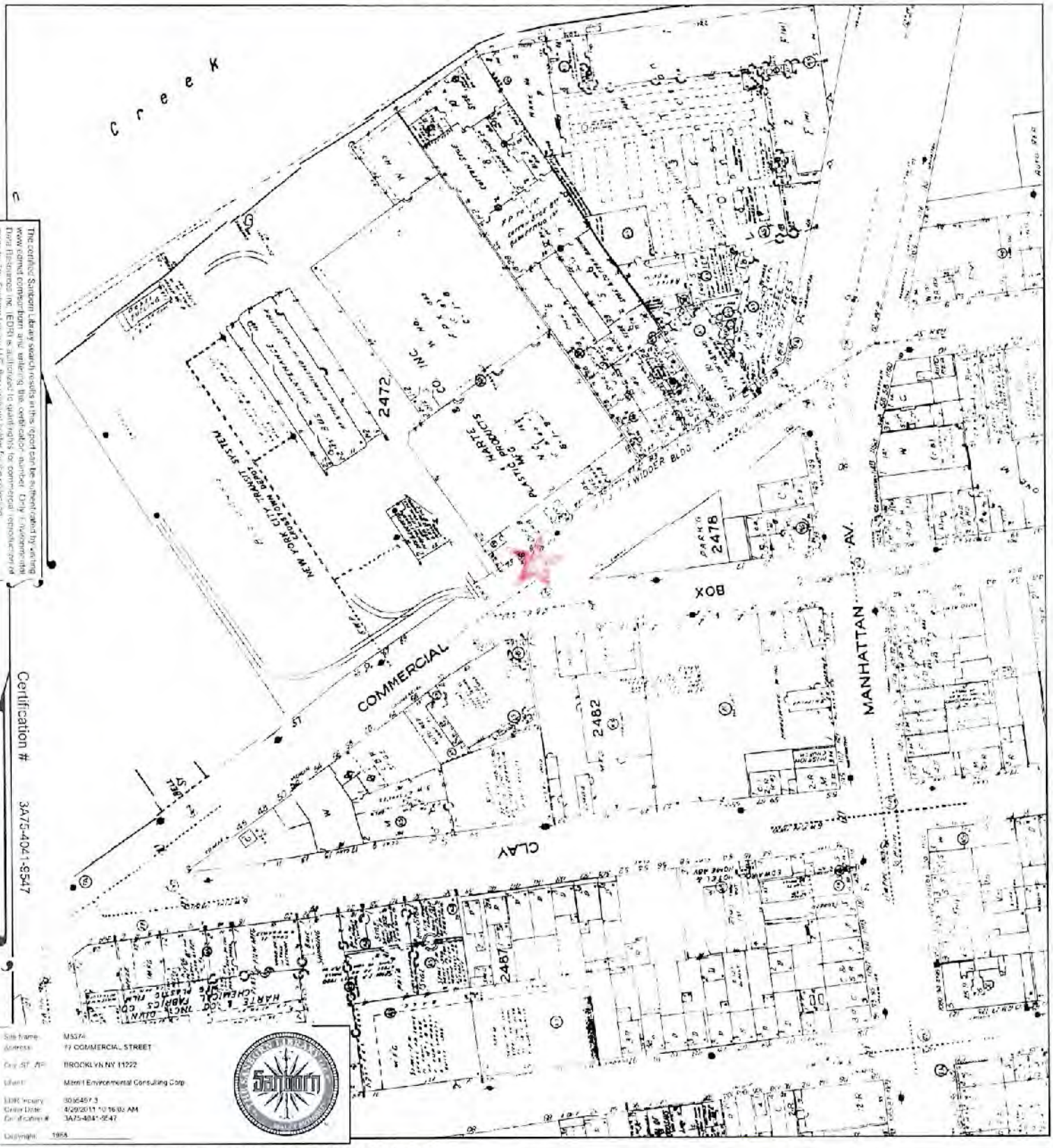

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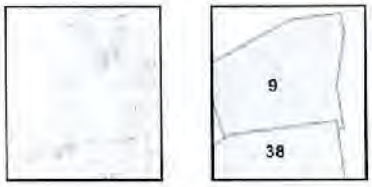

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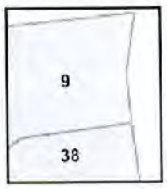

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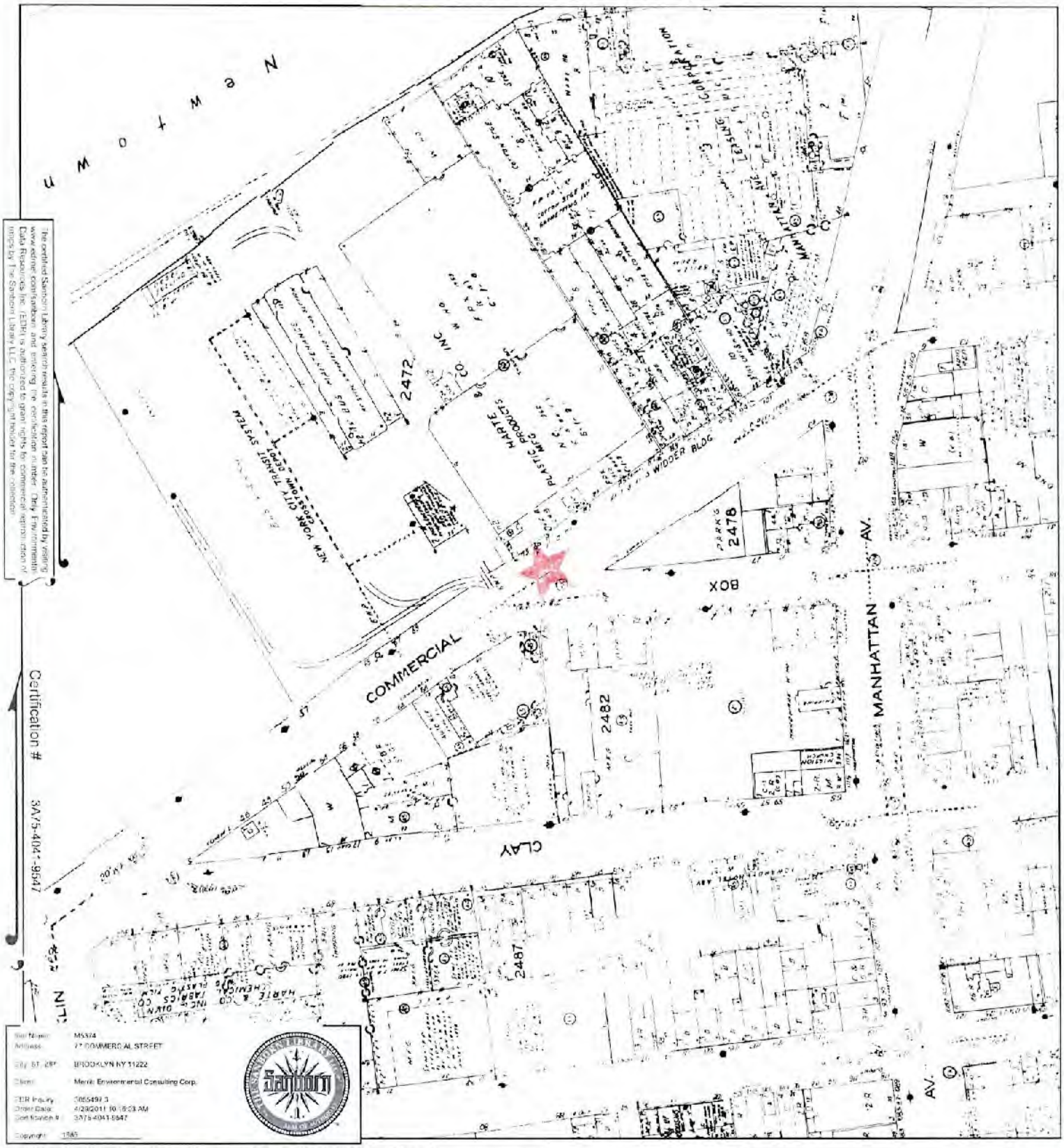

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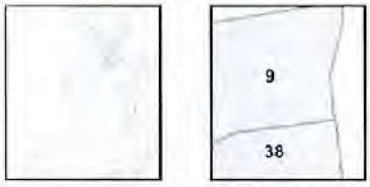

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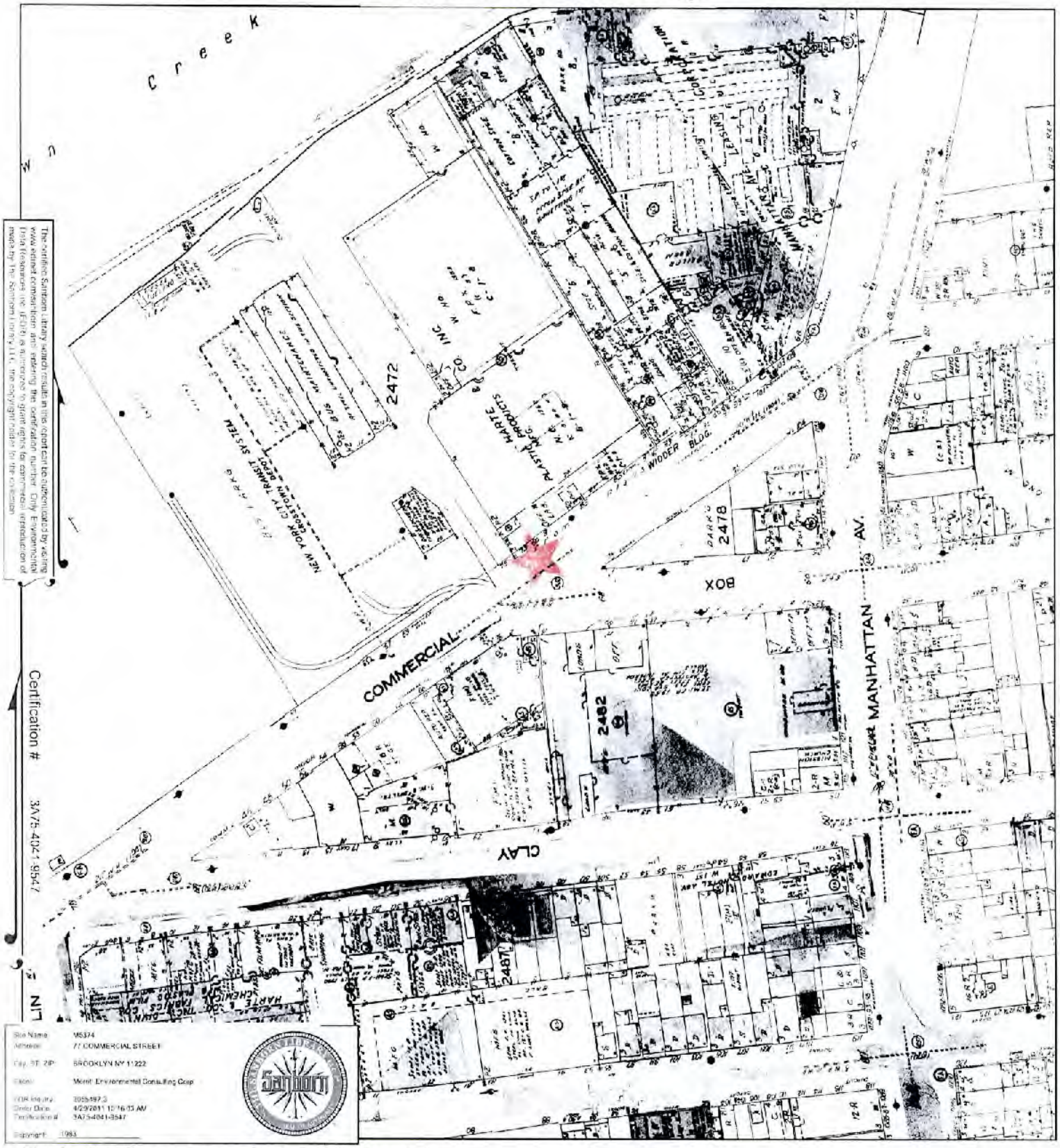

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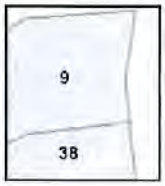

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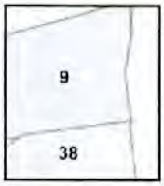

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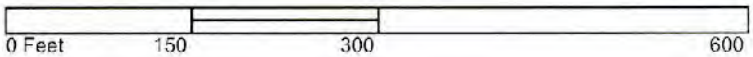

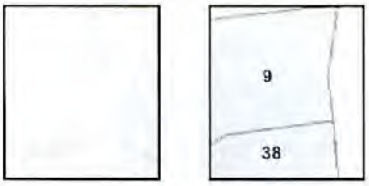

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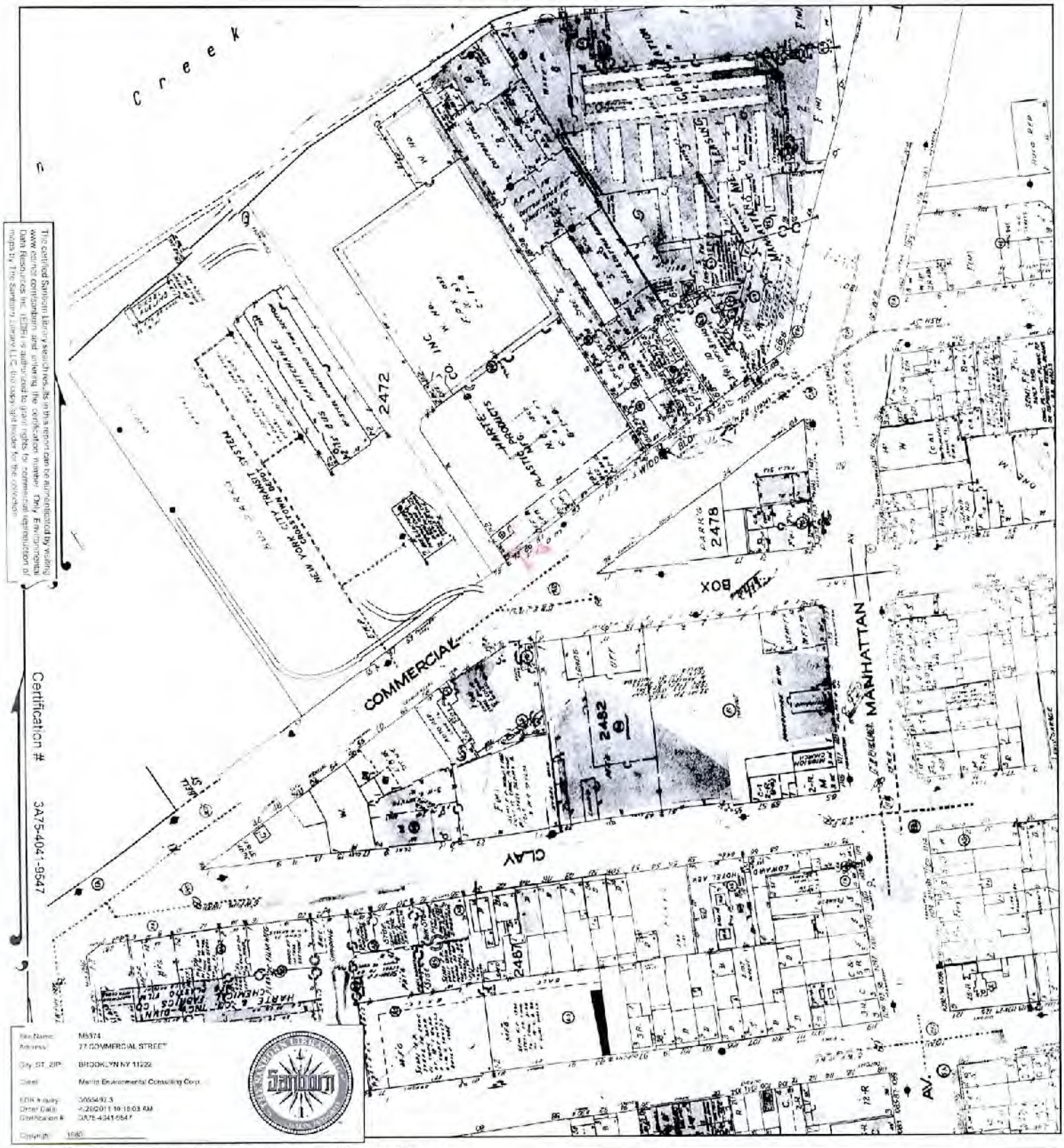

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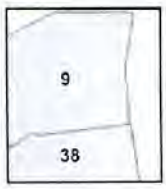

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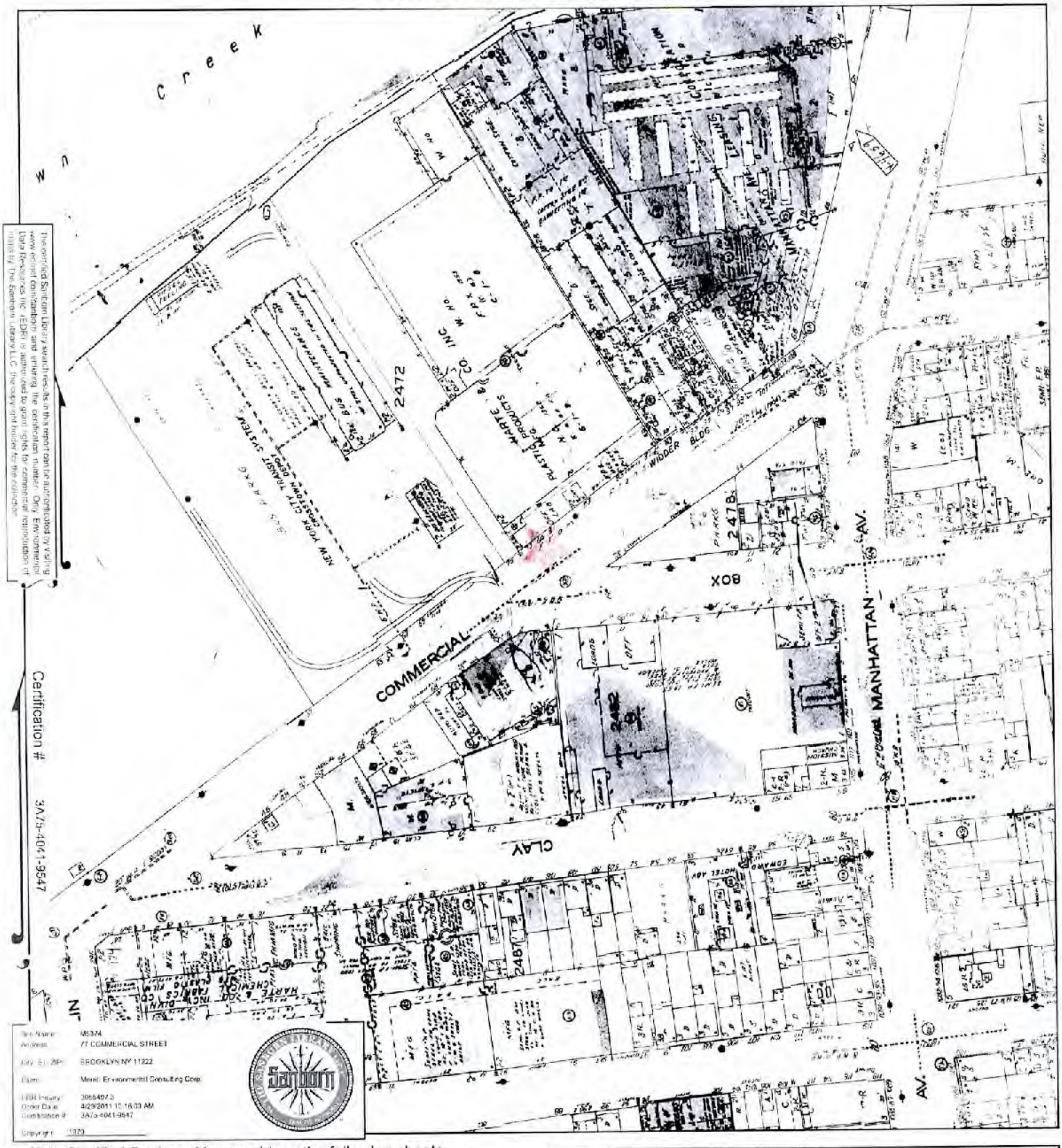

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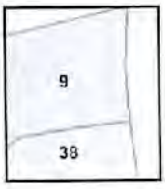

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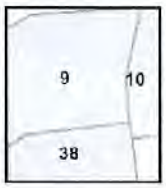

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Volume 4, Sheet 10
Volume 4, Sheet 38

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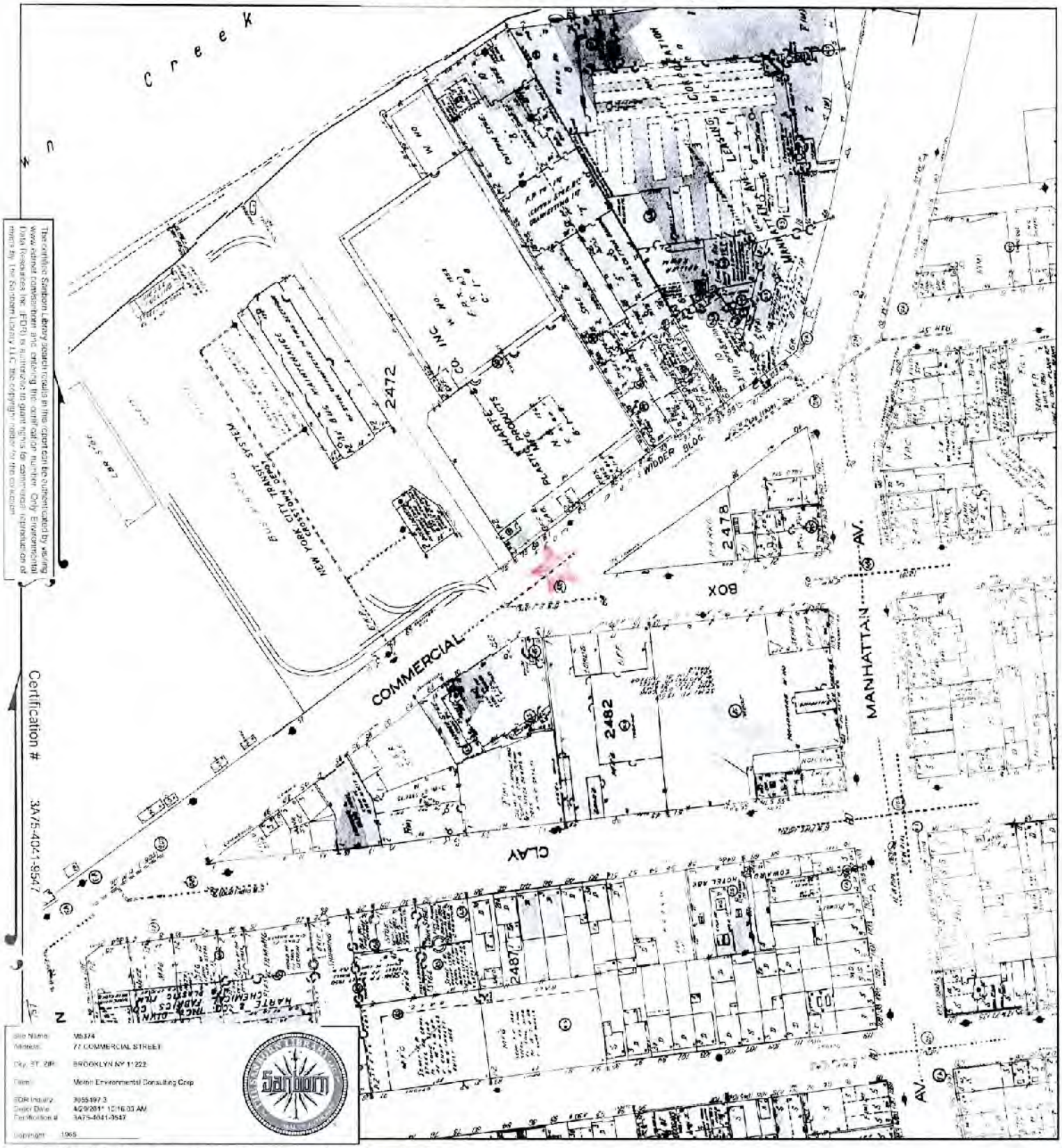
N

1965 Certified Sanborn Map



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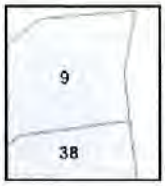
Certification # 3A75-4041-9547

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.

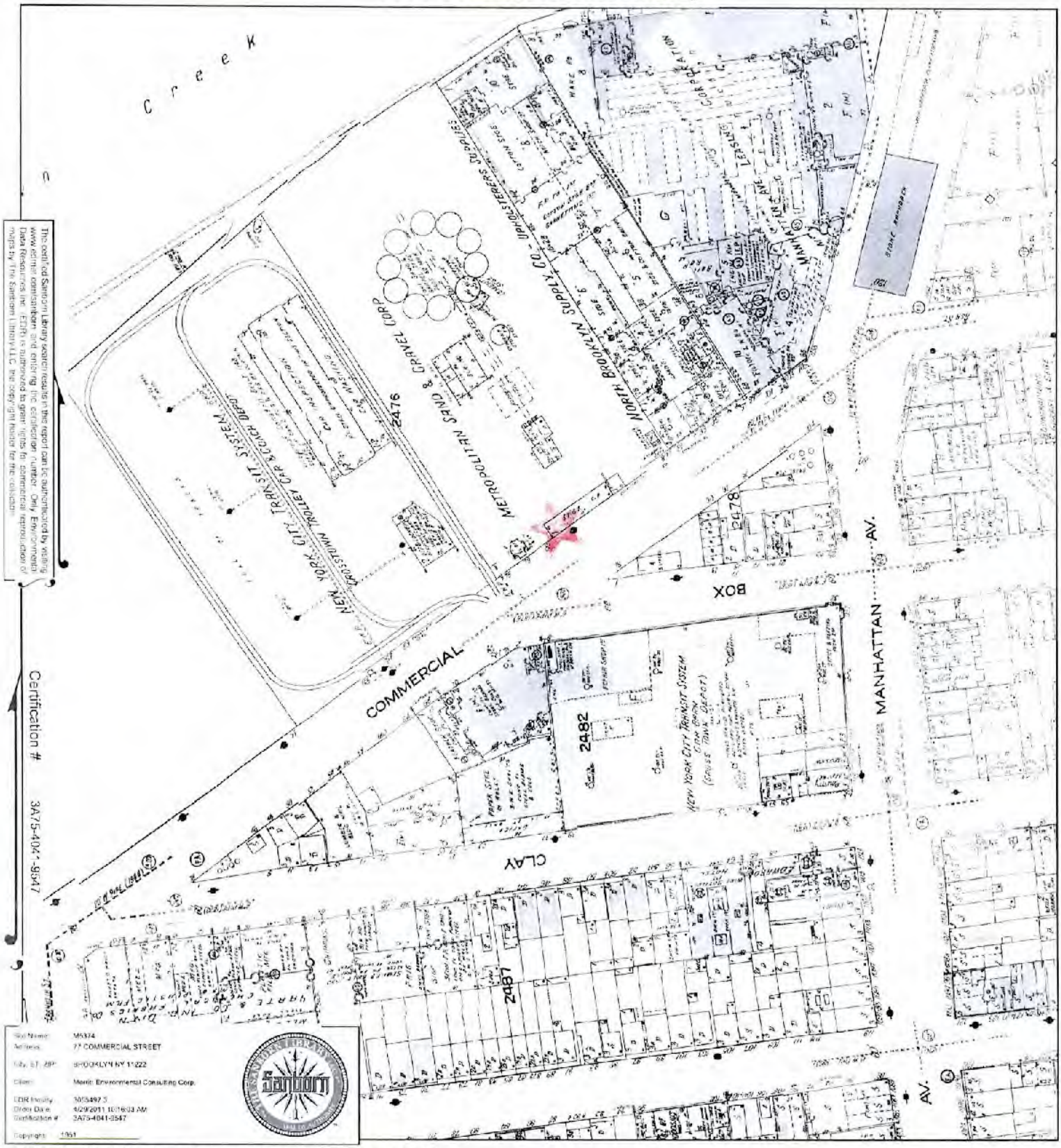
0 Feet 150 300 600



Volume 4, Sheet 9
Volume 4, Sheet 38

N

1951 Certified Sanborn Map



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Certification # 3A75-4041-9347

Site Name: M5374
Address: 77 COMMERCIAL STREET
City, ST, ZIP: BROOKLYN NY 11222
Client: Merritt Environmental Consulting Corp.
EDR Inquiry: 3055497.3
Order Date: 4/29/2011 10:16:03 AM
Certification #: 3A75-4041-9347
Copyright: 1951

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.

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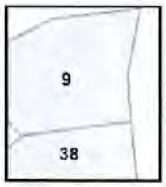
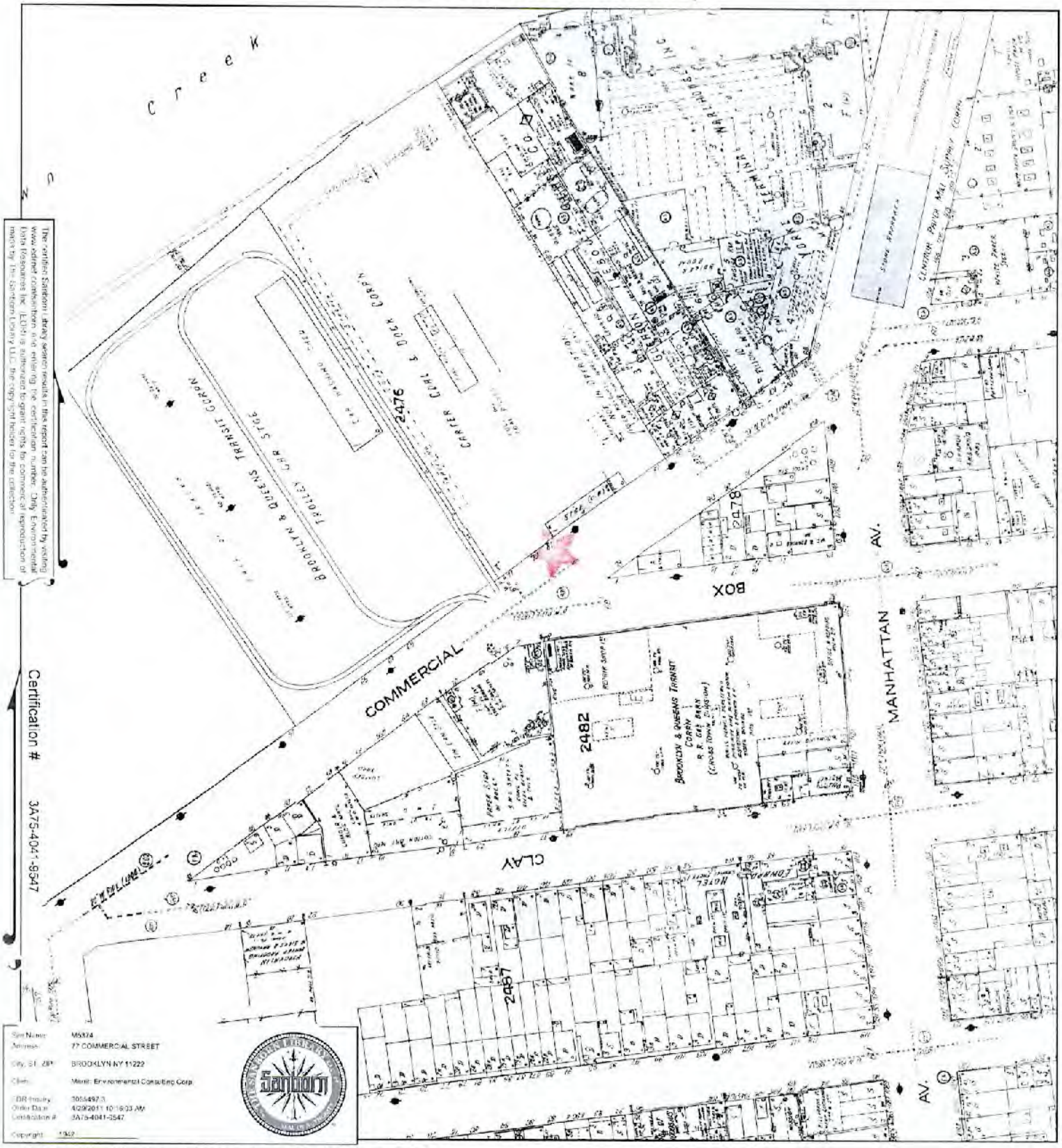


Volume 4, Sheet 9
Volume 4, Sheet 38

N

1942 Certified Sanborn Map



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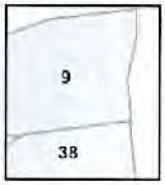
Certification # 3A75-4041-9547

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.

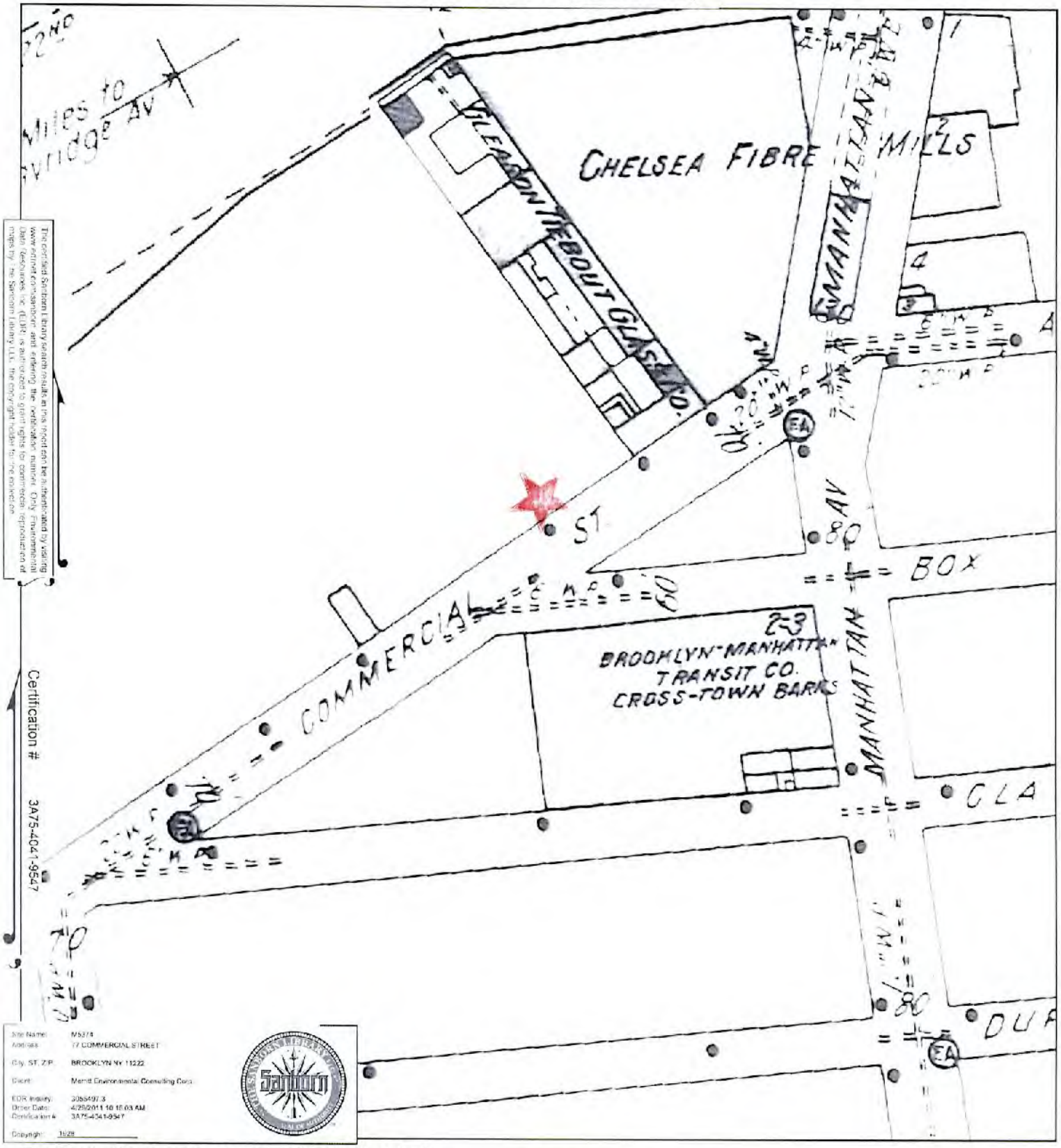
0 Feet 150 300 600



Volume 4, Sheet 9
Volume 4, Sheet 38

N

1928 Certified Sanborn Map



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Certification # 3A75-4041-9547

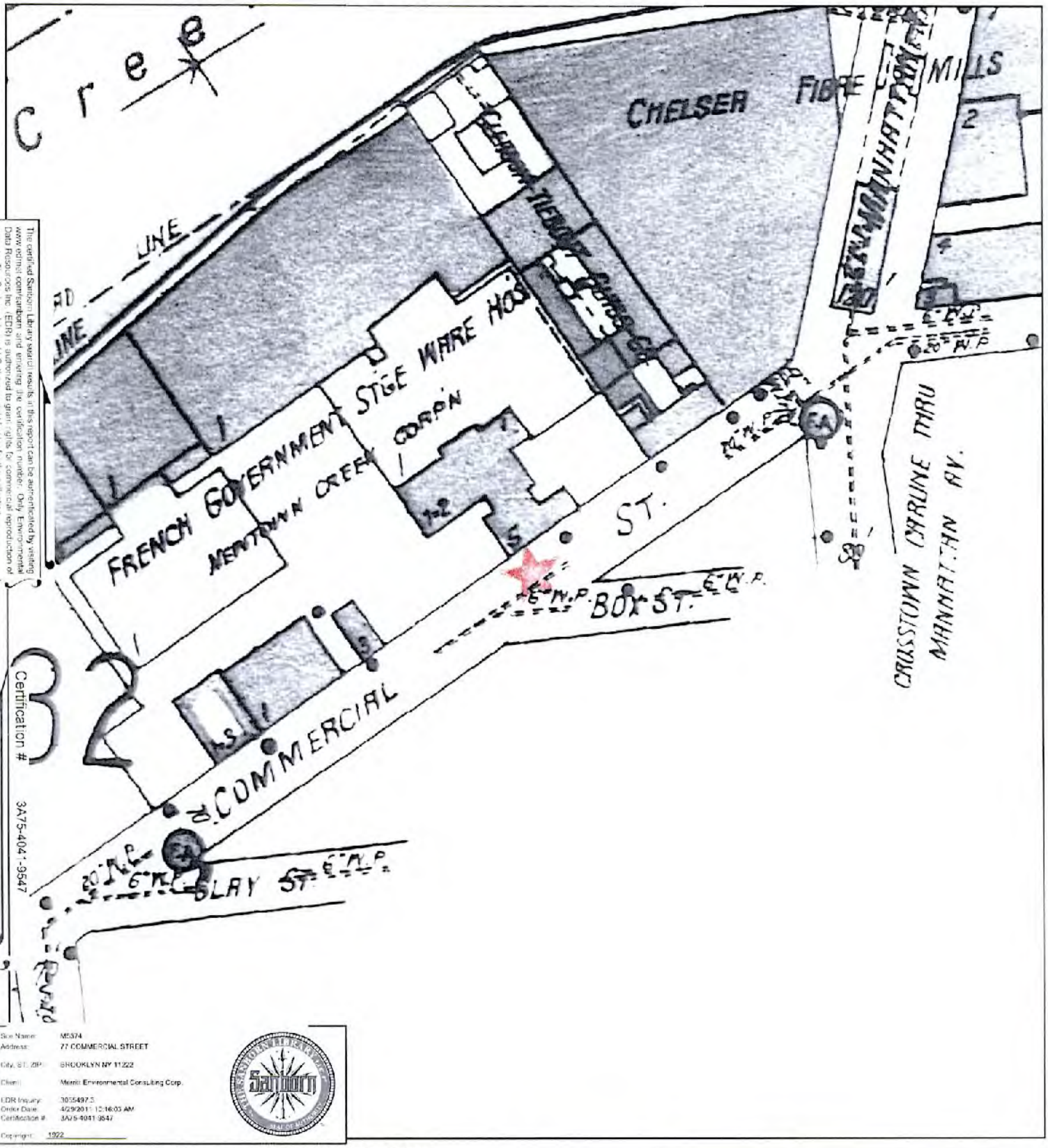
This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.

Volume Pier Maps, Sheet 38
Volume Pier Maps, Sheet 39

0 Feet 150 300 600

N

1922 Certified Sanborn Map



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Site Name:	M5374
Address:	77 COMMERCIAL STREET
City, ST, ZIP:	BROOKLYN NY 11222
Client:	Merritt Environmental Consulting Corp.
EDR Inquiry:	3055497.5
Order Date:	4/29/2011 12:16:03 AM
Certification #:	3A75-4041-9547
Copyright:	1922

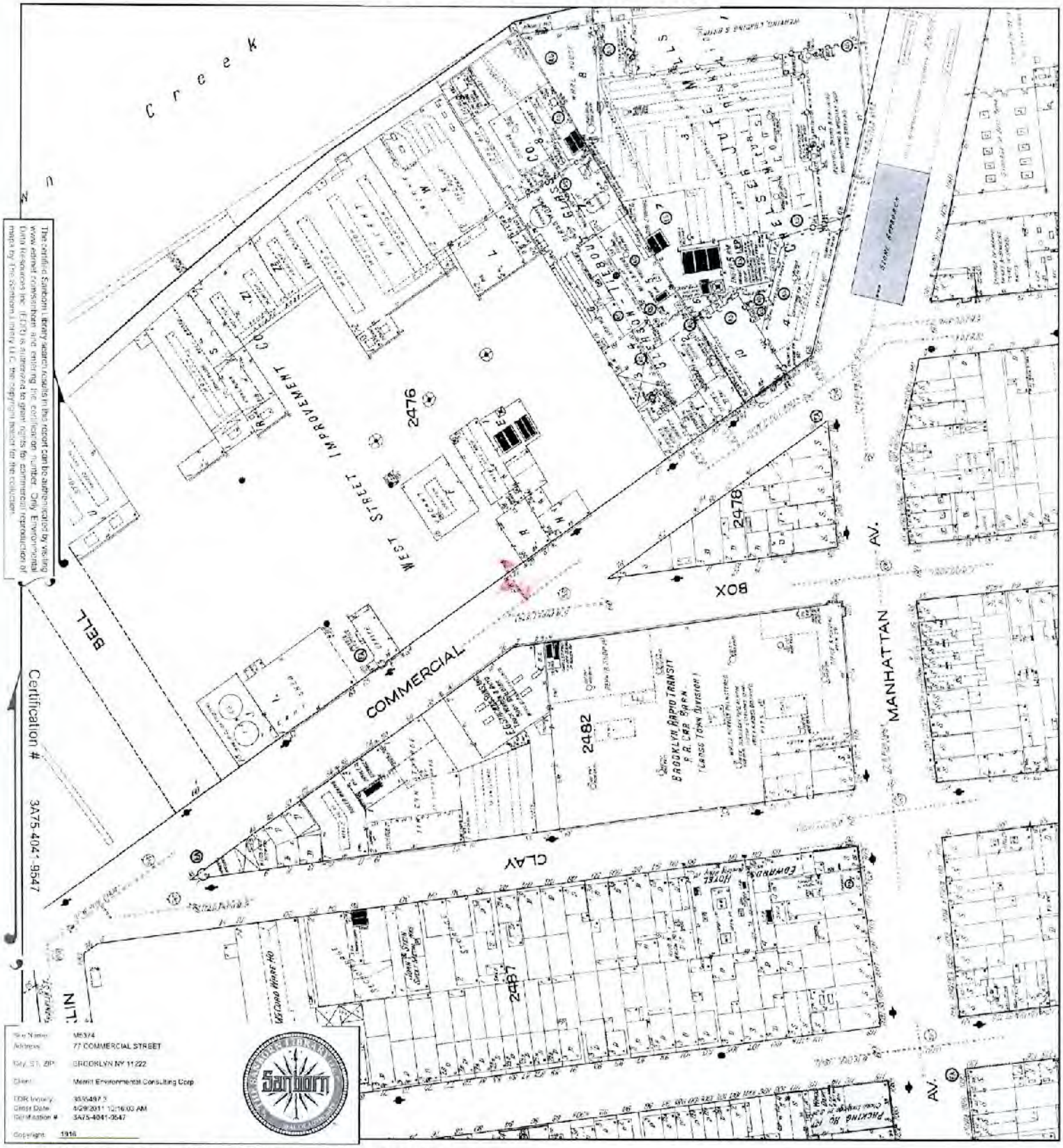
This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.

Volume Pier Maps, Sheet 30
Volume Pier Maps, Sheet 31
Volume Pier Maps, Sheet 32

0 Feet 150 300 600

N

1916 Certified Sanborn Map



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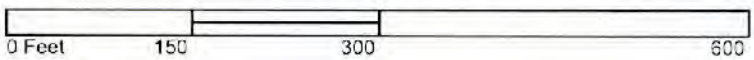
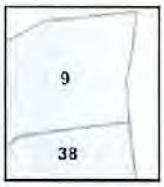
Certification # 3A75-4041-9547

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.





Volume 4, Sheet 9
Volume 4, Sheet 38

N

1905 Certified Sanborn Map

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Certification # 3A75-4041-9547

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.

Volume 4, Sheet 38
Volume 4, Sheet 9

0 Feet 150 300 600

N

1887 Certified Sanborn Map

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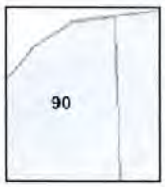
Certification # 3A75-4041-9547

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.



Volume 4, Sheet 90
Volume 4, Sheet 90

0 Feet 150 300 600

N

M5374
77 COMMERCIAL STREET
BROOKLYN, NY 11222

Inquiry Number: 3055497.5
April 29, 2011

The EDR Aerial Photo Decade Package

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

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Date EDR Searched Historical Sources:
Aerial Photography April 29, 2011

Target Property:
77 COMMERCIAL STREET
BROOKLYN, NY 11222

Year	*Scale*	*Details*	*Source*
1954	Aerial Photograph. Scale: 1"=500'	Panel #: 40073-F8, Brooklyn, NY;/Flight Date: February 23, 1954	EDR
1966	Aerial Photograph. Scale: 1"=500'	Panel #: 40073-F8, Brooklyn, NY;/Flight Date: February 23, 1966	EDR
1975	Aerial Photograph. Scale: 1"=750'	Panel #: 40073-F8, Brooklyn, NY;/Flight Date: April 01, 1975	EDR
1984	Aerial Photograph. Scale: 1"=750'	Panel #: 40073-F8, Brooklyn, NY;/Flight Date: April 27, 1984	EDR
1994	Aerial Photograph. Scale: 1"=750'	Panel #: 40073-F8, Brooklyn, NY;/Flight Date: April 04, 1994	EDR
2006	Aerial Photograph. Scale: 1"=604'	Panel #: 40073-F8, Brooklyn, NY;/Flight Date: January 01, 2006	EDR

INQUIRY #: 3055497.5
YEAR: 1954
= 500'
N

INQUIRY #: 3055497.5
YEAR: 1966
= 500'
N

INQUIRY #: 3055497.5

YEAR: 1975

= 750'

N

INQUIRY #: 3055497.5

YEAR: 1984

= 750'

N

INQUIRY #: 3055497.5
YEAR: 1994
= 750'
N

INQUIRY #: 3055497.5
YEAR: 2006
= 604'
N

M5374
77 COMMERCIAL STREET
BROOKLYN, NY 11222

Inquiry Number: 3055497.6
April 29, 2011

The EDR-City Directory Abstract

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

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Executive Summary

Findings

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EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Abstract is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Abstract includes a search and abstract of available city directory data. For each address, the directory lists the name of the corresponding occupant at five year intervals.

Business directories including city, cross reference and telephone directories were reviewed, if available, at approximately five year intervals for the years spanning 1928 through 2005. This report compiles information gathered in this review by geocoding the latitude and longitude of properties identified and gathering information about properties within 100 feet of the target property.

A summary of the information obtained is provided in the text of this report.

RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. An "X" indicates where information was identified in the source and provided in this report.

Year	Source	TP	Adjoining	Text Abstract	Source Image
2005	Hill-Donnelly Corporation	X	X	X	-
2000	Cole Information Services	-	-	-	-
1997	NYNEX	X	-	X	-
1992	NYNEX Informantion Resource Co.	X	X	X	-
1985	NYNEX Information Resources Company	X	X	X	-
1980	New York Telephone	-	-	-	-
1976	New York Telephone	-	X	X	-
1973	New York Telephone	-	X	X	-
1970	New York Telephone	-	X	X	-
1965	New York Telephone	-	X	X	-
1960	New York Telephone	-	X	X	-
	New York Telephone Company	-	X	X	-
1949	New York Telephone	-	-	-	-
1945	New York Telephone	-	-	-	-
1940	New York Telephone	-	-	-	-
1934	R. L. Polk & Co.	-	X	X	-
1928	New York Telephone	-	X	X	-

FINDINGS

TARGET PROPERTY INFORMATION

ADDRESS

77 COMMERCIAL STREET
BROOKLYN, NY 11222

FINDINGS DETAIL

Target Property research detail.

Year	*Uses*	*Source*
2005	77 Commercial Holdings	Hill-Donnelly Corporation
	United Feather & Down Inc	Hill-Donnelly Corporation
1997	United Feather & Down Inc	NYNEX
1992	KNICKERBOCKER FEATHER CORP	NYNEX Informantion Resource Co.
	UNITED FEATHER & DOWN INC	NYNEX Informantion Resource Co.
1985	KNICKERBOCKER FEATHER CORP	NYNEX Information Resources Company
	KNICKERBOCKER UNITED FEATHER CORP	NYNEX Information Resources Company
	UNITED FEATHER & DOWN INC	NYNEX Information Resources Company

FINDINGS

ADJOINING PROPERTY DETAIL

The following Adjoining Property addresses were researched for this report. Detailed findings are provided for each address.

BOX

10 BOX

Year	Uses	Source
1985	CORONATION YARN CO	NYNEX Information Resources Company
	BELL YARN CO	NYNEX Information Resources Company
1976	BELL YARN CO	New York Telephone
	CORONATION YARN CO	New York Telephone
1960	CARYL RICHARDS INE	New York Telephone
	RICHARDS CARYL INC	New York Telephone

12 BOX

Year	Uses	Source
1934	BIHARAY ANNA R	R. L. Polk & Co.
	BIHARAY CHAS LAB R	R. L. Polk & Co.

2 BOX

Year	Uses	Source
1992	L D F INDUSTRIES	NYNEX Informantion Resource Co.
1976	BEST FACTORS CORP	New York Telephone
1960	BEST FACTORS CORP	New York Telephone

BOX ST

1 BOX ST

Year	Uses	Source
2005	3 4 NCL	Hill-Donnelly Corporation

10 BOX ST

Year	Uses	Source
2005	RE Diamond & Co	Hill-Donnelly Corporation
	10 Box Street Partners Inc	Hill-Donnelly Corporation

FINDINGS

BOX st

10 BOX st

Year	Uses	Source
1973	Bell Yarn Co	New York Telephone
1970	Acme Mailina Co	New York Telephone
	Bell Yarn Co	New York Telephone
	Acme Finishg Co	New York Telephone

BOX ST

10 BOX ST

Year	Uses	Source
1965	Acme Finishg Co	New York Telephone
	Acme Malling Co	New York Telephone
1960	Caryl Richards Inc	New York Telephone Company
	Richards Caryl Inc	New York Telephone Company

BOX st

2 BOX st

Year	Uses	Source
1973	Best Factors Corp	New York Telephone
1970	Best Factors Corp	New York Telephone

BOX ST

2 BOX ST

Year	Uses	Source
1965	Best Factors Corp	New York Telephone
1960	Best Factors Corp	New York Telephone Company

3 BOX ST

Year	Uses	Source
2005	Palin Corp	Hill-Donnelly Corporation

COMMERCIAL

84 COMMERCIAL

Year	Uses	Source
1928	HOGAN EDW MRS R	New York Telephone

FINDINGS

COMMERCIAL AVE

75 COMMERCIAL AVE

Year	*Uses*	*Source*
1992	ALSIDE SUPPLY COMPANY L I DIVISION OF ALSIDE INC	NYNEX Informantion Resource Co.
1985	ALSIDE SUPPLY COMPANY LI DIVISION OF ALSIDE INC	NYNEX Information Resources Company

FINDINGS

TARGET PROPERTY: ADDRESS NOT IDENTIFIED IN RESEARCH SOURCE

The following Target Property addresses were researched for this report, and the addresses were not identified in the research source.

Address Researched	Address Not Identified in Research Source
77 COMMERCIAL STREET	2000, 1980, 1976, 1973, 1970, 1965, 1960, 1949, 1945, 1940, 1934, 1928

ADJOINING PROPERTY: ADDRESSES NOT IDENTIFIED IN RESEARCH SOURCE

The following Adjoining Property addresses were researched for this report, and the addresses were not identified in research source.

Address Researched	Address Not Identified in Research Source
1 BOX ST	2000, 1997, 1992, 1985, 1980, 1976, 1973, 1970, 1965, 1960, 1949, 1945, 1940, 1934, 1928
10 BOX	2005, 2000, 1997, 1992, 1980, 1973, 1970, 1965, 1949, 1945, 1940, 1934, 1928
10 BOX ST	2000, 1997, 1992, 1985, 1980, 1976, 1973, 1970, 1949, 1945, 1940, 1934, 1928
10 BOX st	2005, 2000, 1997, 1992, 1985, 1980, 1976, 1965, 1960, 1949, 1945, 1940, 1934, 1928
12 BOX	2005, 2000, 1997, 1992, 1985, 1980, 1976, 1973, 1970, 1965, 1960, 1949, 1945, 1940, 1928
2 BOX	2005, 2000, 1997, 1985, 1980, 1973, 1970, 1965, 1949, 1945, 1940, 1934, 1928
2 BOX ST	2005, 2000, 1997, 1992, 1985, 1980, 1976, 1973, 1970, 1949, 1945, 1940, 1934, 1928
2 BOX st	2005, 2000, 1997, 1992, 1985, 1980, 1976, 1965, 1960, 1949, 1945, 1940, 1934, 1928
3 BOX ST	2000, 1997, 1992, 1985, 1980, 1976, 1973, 1970, 1965, 1960, 1949, 1945, 1940, 1934, 1928
75 COMMERCIAL AVE	2005, 2000, 1997, 1980, 1976, 1973, 1970, 1965, 1960, 1949, 1945, 1940, 1934, 1928
84 COMMERCIAL	2005, 2000, 1997, 1992, 1985, 1980, 1976, 1973, 1970, 1965, 1960, 1949, 1945, 1940, 1934

M5374
77 COMMERCIAL STREET
BROOKLYN, NY 11222

Inquiry Number: 3055497.4
April 29, 2011

EDR Historical Topographic Map Report

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

EDR Historical Topographic Map Report

Environmental Data Resources, Inc.s (EDR) Historical Topographic Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topographic Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the early 1900s.

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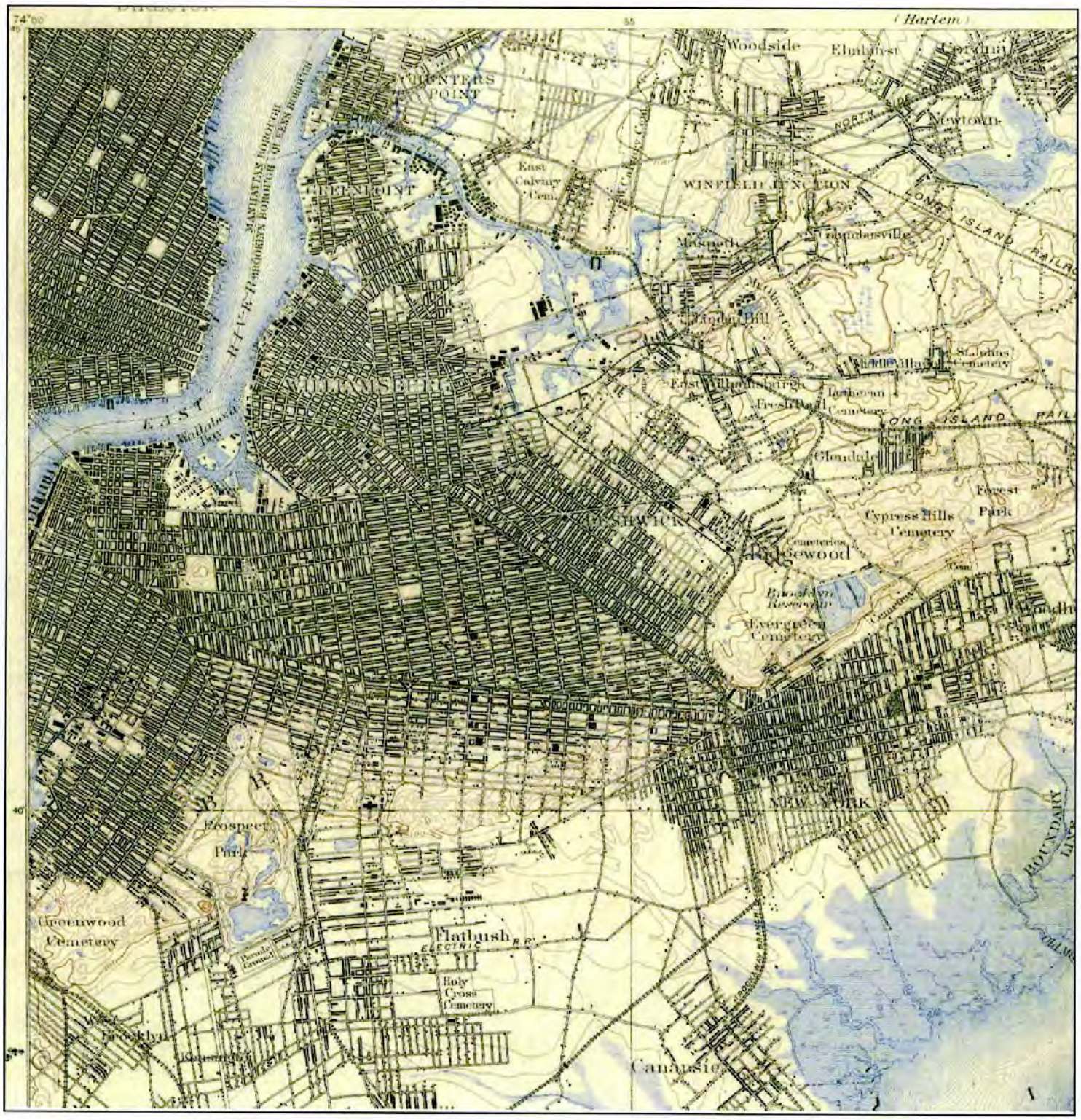
Historical Topographic Map

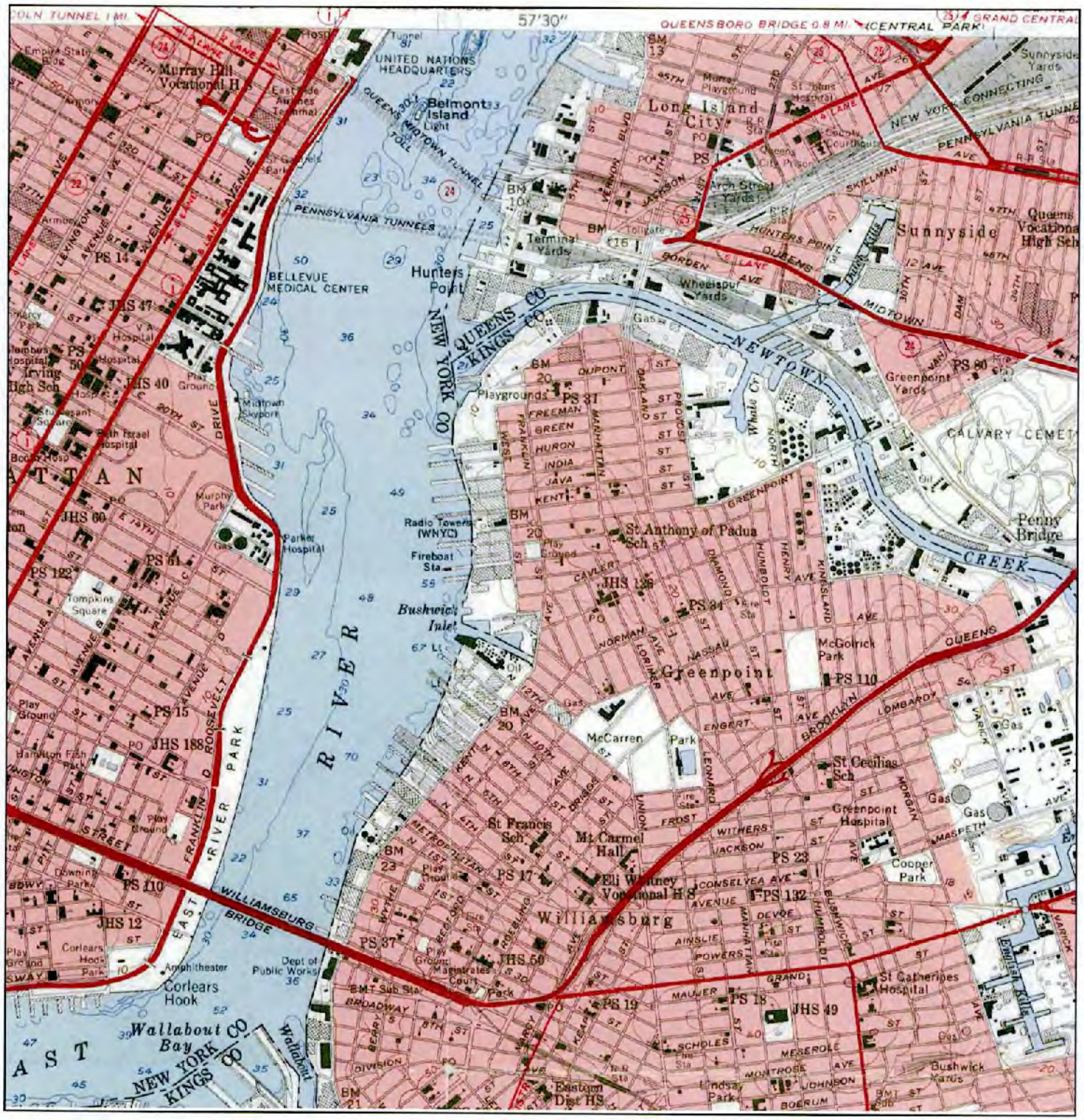


N	TARGET QUAD NAME: BROOKLYN MAP YEAR: 1900 SERIES: 15 SCALE: 1:62500	SITE NAME: M5374 ADDRESS: 77 COMMERCIAL STREET BROOKLYN, NY 11222 LAT/LONG: 40.7373 / -73.9567	CLIENT: Merritt Environmental Consulting Corp. CONTACT: MARYANN WEGH INQUIRY#: 3055497.4 RESEARCH DATE: 04/29/2011

Historical Topographic Map

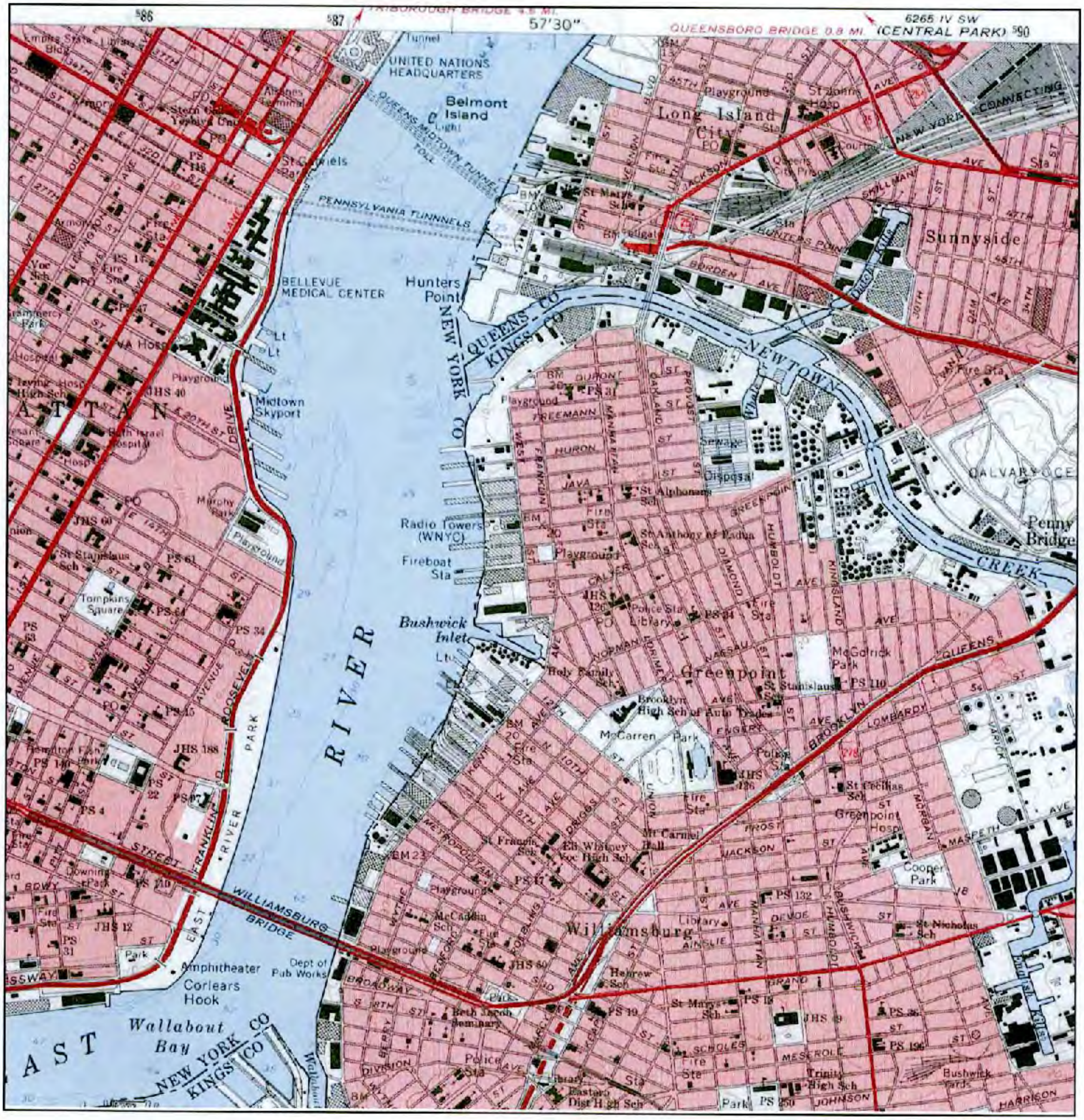
N	TARGET QUAD NAME: BROOKLYN MAP YEAR: 1947 SERIES: 7.5 SCALE: 1:25000	SITE NAME: M5374 ADDRESS: 77 COMMERCIAL STREET BROOKLYN, NY 11222 LAT/LONG: 40.7373 / -73.9567	CLIENT: Merritt Environmental Consulting Corp. CONTACT: MARYANN WEGH INQUIRY#: 3055497.4 RESEARCH DATE: 04/29/2011

Historical Topographic Map



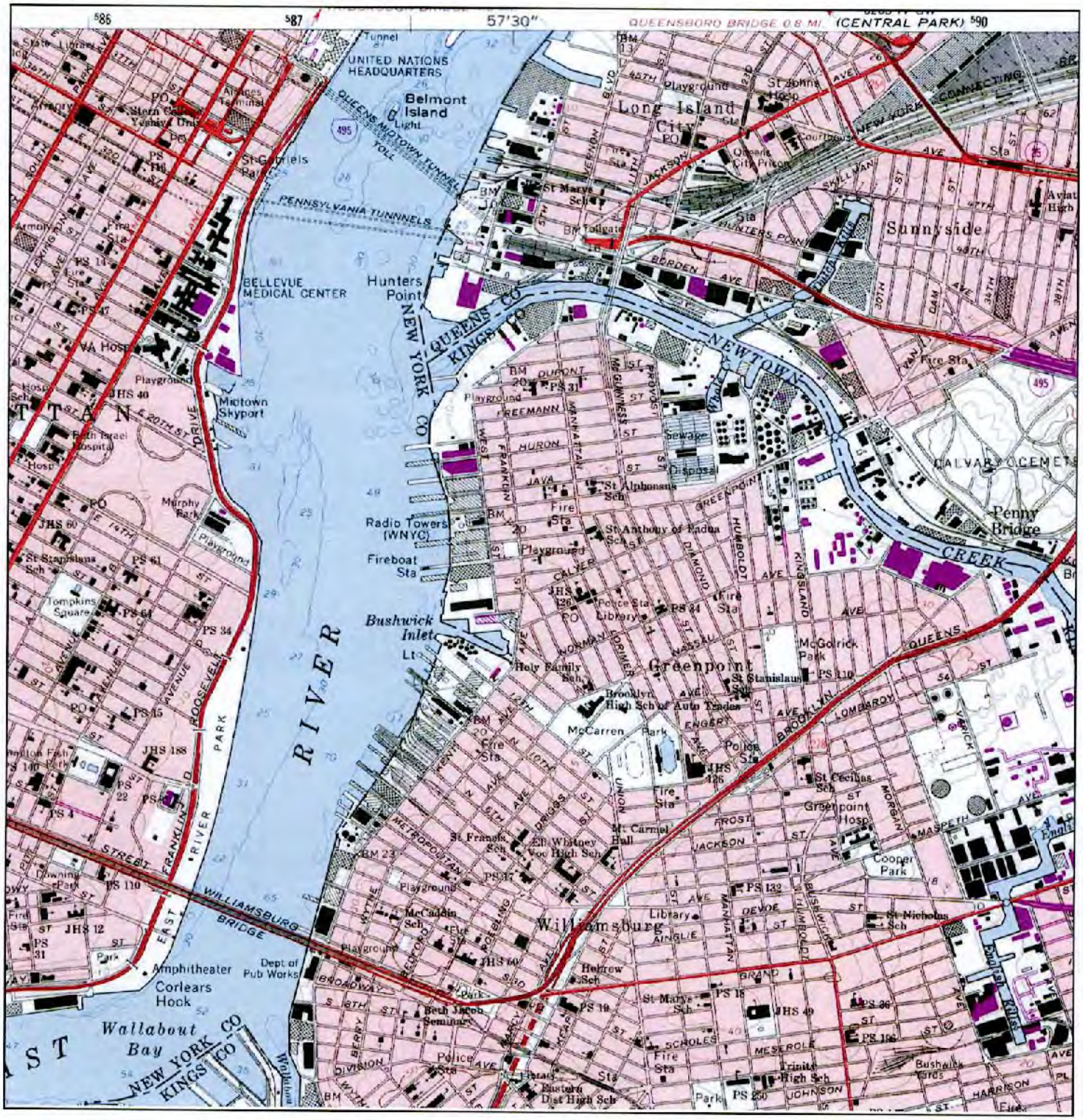
N	TARGET QUAD NAME: BROOKLYN MAP YEAR: 1956 SERIES: 7.5 SCALE: 1:24000	SITE NAME: M5374 ADDRESS: 77 COMMERCIAL STREET BROOKLYN, NY 11222 LAT/LONG: 40.7373 / -73.9567	CLIENT: Merritt Environmental Consulting Corp. CONTACT: MARYANN WEGH INQUIRY#: 3055497.4 RESEARCH DATE: 04/29/2011

Historical Topographic Map



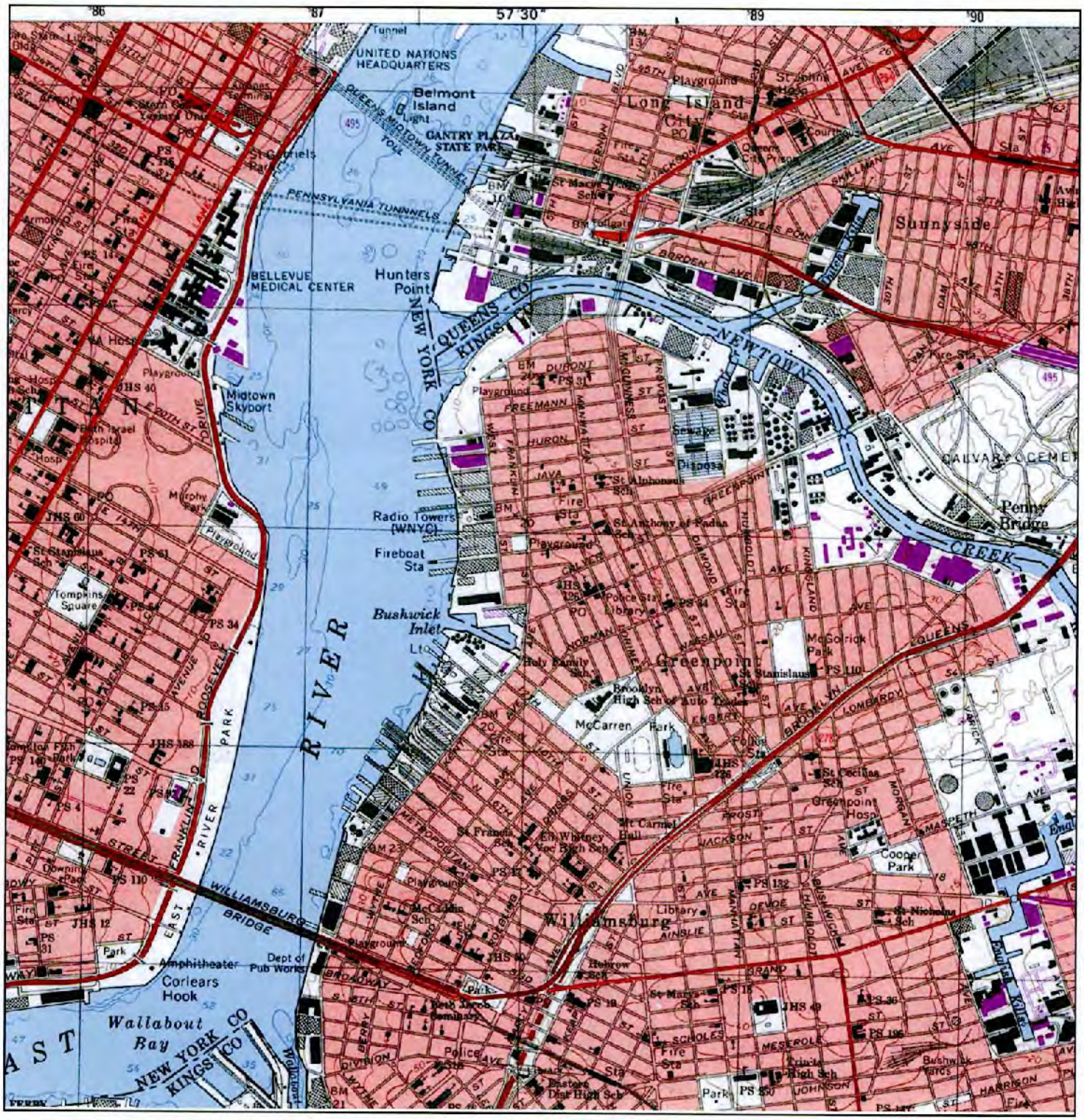
N ↑	TARGET QUAD	SITE NAME: M5374	CLIENT: Merritt Environmental Consulting Corp.
	NAME: BROOKLYN	ADDRESS: 77 COMMERCIAL STREET, BROOKLYN, NY 11222	CONTACT: MARYANN WEGH
	MAP YEAR: 1967	LAT/LONG: 40.7373 / -73.9567	INQUIRY#: 3055497.4
	SERIES: 7.5		RESEARCH DATE: 04/29/2011
	SCALE: 1:24000		

Historical Topographic Map



N	TARGET QUAD NAME: BROOKLYN MAP YEAR: 1979 PHOTOREVISED:1967 SERIES: 7.5 SCALE: 1:24000	SITE NAME: M5374 ADDRESS: 77 COMMERCIAL STREET BROOKLYN, NY 11222 LAT/LONG: 40.7373 / -73.9567	CLIENT: Merritt Environmental Consulting Corp. CONTACT: MARYANN WEGH INQUIRY#: 3055497.4 RESEARCH DATE: 04/29/2011

Historical Topographic Map



N	TARGET QUAD NAME: BROOKLYN MAP YEAR: 1995 SERIES: 7.5 SCALE: 1:24000	SITE NAME: M5374 ADDRESS: 77 COMMERCIAL STREET BROOKLYN, NY 11222 LAT/LONG: 40.7373 / -73.9567	CLIENT: Merritt Environmental Consulting Corp. CONTACT: MARYANN WEGH INQUIRY#: 3055497.4 RESEARCH DATE: 04/29/2011

INTERVIEW DOCUMENTATION

QUESTION	OWNER \ OWNER'S REPRESENTATIVE			OCCUPANT \ MANAGER \ OTHER			OBSERVED DURING SITE VISIT		
	YES	NO	UNK	YES	NO	UNK	YES	NO	UNK
3b. Is any adjoining property used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility (if applicable, identify which)?					/			/	
4a. Did you observed evidence or do you have any prior knowledge that the property has been used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility (if applicable, identify which)?					/			/	
4b. Did you observe evidence or do you have any prior knowledge that an adjoining property has been used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility (if applicable, identify which)?					/			/	
5a. Are there currently any damaged or discarded automotive or industrial batteries, pesticides, paints, or other chemicals in individual containers of >5 gal (19 L) in volume or 50 gal (190 L) in the aggregate, stored on or used at the property or at the facility?					/			/	

QUESTION	OWNER \ OWNER'S REPRESENTATIVE			OCCUPANT \ MANAGER \ OTHER			OBSERVED DURING SITE VISIT		
	YES	NO	UNK	YES	NO	UNK	YES	NO	UNK
5b. Did you observe evidence or do you have any prior knowledge there have been previously any damaged or discarded automotive or industrial batteries, pesticides, paints, or other chemicals in individual containers of >5 gal (19 L) in volume or 50 gal (190 L) in the aggregate, stored on or used at the property or at the facility?					✓			✓	
6a. Are there currently any industrial drums (typically 55 gal (208 L) or sacks of chemicals located on the property or at the facility?					✓			✓	
6b. Did you observe evidence or do you have any prior knowledge that there have been previously any industrial drums (typically 55 gal (208 L) or sacks of chemicals located on the property or at the facility?					✓			✓	
7a. Did you observe evidence or do you have any prior knowledge that fill dirt has been brought onto the property that originated from a contaminated site?					✓			✓	
7b. Did you observe evidence or do you have any prior knowledge that fill dirt has been brought onto the property that is of an unknown origin?					✓			✓	

QUESTION	OWNER \ OWNER'S REPRESENTATIVE			OCCUPANT \ MANAGER \ OTHER			OBSERVED DURING SITE VISIT		
	YES	NO	UNK	YES	NO	UNK	YES	NO	UNK
8a. Are there currently any pits, ponds, or lagoons located on the property in connection with waste treatment or waste disposal?					/			/	
8b. Did you observe evidence or do you have any prior knowledge that there have been previously any pits, ponds, or lagoons located on the property in connection with waste treatment or waste disposal?					/			/	
9a. Is there currently any stained soil on the property?					/			/	
9b. Did you observe evidence or do you have any prior knowledge that there has been previously, any stained soil on the property?					/			/	
10a. Are there currently any registered or unregistered storage tanks (above or underground) located on the property?				/			/		
10b. Did you observe evidence or do you have any prior knowledge that there have been previously, any registered or unregistered storage tanks (above or underground) located on the property?				/			/		

QUESTION	OWNER \ OWNER'S REPRESENTATIVE			OCCUPANT \ MANAGER \ OTHER			OBSERVED DURING SITE VISIT		
	YES	NO	UNK	YES	NO	UNK	YES	NO	UNK
11a. Are there currently any vent pipes, fill pipes, or access ways indicating a fill pipe protruding from the ground on the property or adjacent to any structure located on the property?					✓		✓		
11b. Did you observe evidence or do you have any prior knowledge that there have been previously any vent pipes, fill pipes, or access ways indicating a fill pipe protruding from the ground on the property or adjacent to any structure located on the property?				✓			✓		
12a. Are there currently any flooring, drains, or walls located within the facility that are stained by substances other than water or are emitting foul odors?					✓			✓	
12b. Did you observe evidence or do you have any prior knowledge that there have been previously any flooring, drains, or walls within the facility that were stained by substances other than water or were emitting foul odors?					✓			✓	
13a. If the property is served by a private well or non-public water system, is there evidence or do you have prior knowledge that contaminants have been identified in the well system that exceed guidelines applicable to the water system?					✓			✓	

QUESTION	OWNER \ OWNER'S REPRESENTATIVE			OCCUPANT \ MANAGER \ OTHER			OBSERVED DURING SITE VISIT		
	YES	NO	UNK	YES	NO	UNK	YES	NO	UNK
13b. If the property is served by a private well or non-public water system, is there evidence or do you have prior knowledge that the well has been designated as contaminated by any government environmental / health agency?					/			/	
14. Does the owner or occupant of the property have any knowledge or environmental liens or governmental notifications relating to past or recurrent violations or environmental laws as respect to the property or any facility located on the property?					/			/	
15a. Has the owner or occupant of the property been informed of the past existence of hazardous substances or petroleum products with respect to the property or any facility located on the property?					/			/	
15b. Has the owner or occupant of the property been informed of the current existence of hazardous substances or petroleum products with respect to the property or any facility located on the property?					/			/	
15c. Has the owner or occupant of the property been informed of the past existence of environmental violations with respect to the property or any facility located on the property?					/			/	

QUESTION	OWNER \ OWNER'S REPRESENTATIVE			OCCUPANT \ MANAGER \ OTHER			OBSERVED DURING SITE VISIT		
	YES	NO	UNK	YES	NO	UNK	YES	NO	UNK
15d. Has the owner or occupant of the property been informed of the current existence of environmental violations with respect to the property or any facility located on the property?					✓			✓	
16. Does the owner or occupant of the property have any knowledge of any environmental site assessment of the property or facility that indicated the presence of hazardous substances or petroleum products on, or contamination of, the property or recommended further assessment of the property?					✓			✓	
17. Does the owner or occupant of the property know of any past, threatened, or pending lawsuits or administrative proceedings concerning a release or threatened release of any hazardous substance or petroleum product involving the property by any owner or occupant of the property?					✓			✓	
18a. Does the property discharge waste water on or adjacent to the property, other than storm water, into a storm water sewer system?					✓			✓	
18b. Does the property discharge waste water on or adjacent to the property other than storm water into a sanitary sewer system?					✓			✓	

QUESTION	OWNER \ OWNER'S REPRESENTATIVE			OCCUPANT \ MANAGER \ OTHER			OBSERVED DURING SITE VISIT		
	YES	NO	UNK	YES	NO	UNK	YES	NO	UNK
19. Did you observe evidence or do you have any prior knowledge that any hazardous substances or petroleum products, unidentified waste materials, tires, automotive or industrial batteries, or any other waste materials have been dumped above grade, buried and/or burned on the property?					/			/	
20. Is there a transformer, capacitor, or any hydraulic equipment for which there are any records indicating the presence of PCBs?					/			/	
NON-SCOPE ITEMS									
1. Did you observe any suspect asbestos containing material? If yes, see report								/	
2. Did you observe evidence of peeling or cracking paint? If yes, see report								/	
3. Did you observe evidence of a lead water main? If yes, see report								/	

QUALIFICATIONS

Resume

Mr. Charles G. Merritt
President

As Merritt Environmental Consulting Corp.'s Principal and Senior Certified Environmental Specialist (CES), Mr. Merritt supervises all aspects of environmental assessments (Phase I & Transaction Screen) reports. These assessments include on site property evaluations, site interviews, reviews of regulatory data, and public records to identify environmental concerns. Mr. Merritt has received extensive training, professional certifications, and over 19 years of industry experience; providing a range of diversified environmental services for a wide variety of clients.

Areas of Expertise:

- Phase I Environmental Site Assessments (ESA) E1527-00 & E1527-05 (All Appropriate Inquiry "AAI" standards)
- Provide peer review of environmental reports for lending institutions
- Supervise Site Remediations
- Review of all Environmental Reports prepared
- Client Liaison

Professional Experience:

- Conduct Environmental Site Assessments (ESA's) for lending institutions, property owners, insurance companies and private investors conducting due diligence investigations
- Perform asbestos, lead-based paint, mold and radon surveys

Education/Certificates/Membership

- Adelphi University
  Bachelor of Business Administration **May 1988**

Certifications and Affiliation:

- LEED AP
- ASTM Technical & Professional Training
- Certified Environmental Specialist (CES) EAA #10770

Staff Resume

Mr. John Perotti
Project Manager

As an experienced Certified Environmental Specialist (CES), Mr. Perotti performs Phase I Environmental Site Assessments (ESA) and Transaction Screens for the Tri-State region. The environmental assessments include on site property inspections, reviews of regulatory data, and historical data to identify environmental concerns.

Areas of Expertise:

- Phase I Environmental Site Assessments (ESA) E1527-05
- Environmental Transaction Screens
- Asbestos and Lead Investigation

Professional Experience:

- Conduct environmental site assessments for 20 years for lending institutions, property owners and other private clients conducting due diligence.

Education/Certificates/Membership

- Certified Environmental Specialist (EAA) #73426
- New York State Asbestos Inspector
- New York State Asbestos Project Manager
- New York State Asbestos Air Monitor
- New York State Asbestos Supervisor
- EPA Certification for Lead Based Paint Supervisor
- ASTM 1527-05 "All Appropriate Inquiry" qualified environmental professional

SPECIAL CONTRACTUAL CONDITIONS BETWEEN USERS & ENVIRONMENTAL PROFESSIONAL (If Applicable)

HISTORICAL RECOGNIZED ENVIRONMENTAL CONDITION (HREC) DOCUMENTATION PROVIDED (If Applicable)

MERRITT
Environmental
Consulting Corp.

77 Arkay Drive, Suite D, Hauppauge, NY 11788
(631) 617-6200/Tel (631) 617-6201/Fax

E-MAILED
5/2/2011

May 1, 2011
Project: M5374

Jacob Eisenstein
Jacob@EisensteinRealty.com

Re: Phase I ASTM - Document & Information Inquiry Sheet
77 Commercial Street, Brooklyn, NY

Dear Mr. Eisenstein:

On behalf of New York Community Bank, Merritt Environmental Consulting Corp. has been retained to conduct a Phase I Site Assessment of the above referenced property in accordance with the ASTM standards.

These standards emphasize more responsibility on the user as well as the consultant. These standards must be adhered to in order to qualify for innocent land owner defense under CERCLA. We kindly request that someone knowledgeable with the property provide the information requested below to our office.

- **Current owning entity name**
- **Year purchased**
- **Year of construction**
- **AKA addresses**
- **Cross Street**
- **Block and Lot**
- **Plot size**
- **Sq. footage of building**
- **Building manager / Super's name**
- **Title Records**
- **Tenant list (commercial/retail only)**
- **Site Survey**

Specialized Knowledge of site:

- **Environmental Liens**
- **Valuation reduction for Environmental issues**
- **Prior Environmental Reports**

Your quick response to provide this information will facilitate the commencement of our report. Furthermore, the information provided will appear as exhibits in our report. Should you have any questions or if I can be of any further assistance, please feel free to contact me.

Regards,

Charles G. Merritt

Phase I Environmental Site Assessment

User Provided Information Questionnaire

The ASTM standard for Phase I ESAs requires that the user (usually the client) be responsible for certain information that is included in the Phase I report. The following questions are being provided to you as the "user". You may or may not know specifics about what is being asked.

Name:

Organization:

Subject Site:

Signed: _____

Date: _____

1. Title Records: Do you currently have any title records for the Site?

   (If "yes", please mail, fax, or e-mail a copy to MEC)

2. Are you aware of any environmental cleanup liens against the property that are filed or recorded under federal, tribal, state or local law?

3. Are you aware of any activity or land use limitations, such as engineering controls, land use restrictions or institutional controls that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state or local law?

4. Do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?

5. Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example, as user,

   a) Do you know the past uses of the property? If so, what are they?

   b) Do you know of specific chemicals that are present or once were present at the property?

   c) Do you know of spills or other chemical releases that have taken place at the property?

   d) Do you know of any environmental cleanups that have taken place at the property?

6. Do you know of any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the property?

7. Do you know of any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on or from the property?

8. Do you know of any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products?

9. Based on your knowledge and experience related to the property are there any obvious indicators that point to the presence or likely presence of contamination at the property?

10. Do you believe that the value of the Site that was or is being paid for this property reasonably reflects the fair market value of the property? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the property?

Hydro Tech Environmental, Corp.

Main Office:
2171 Jericho Turnpike, Suite 240
Commack, New York 11725

NYC Office:
15 Ocean Avenue, Second Floor
Brooklyn, New York 11225

Phone (631) 462-5866 • Fax (631) 462-5877
www.hydrotechenvironmental.com
Toll Free: (866) HYDRO-TK

May 10, 2004

Mr. Mordechai Milworn
International Design Realty, Inc.
394 Marcy Avenue
Brooklyn, New York 11206

Re: 77 Commercial Street, Brooklyn, NY
HTE Job #040022

Dear Mr. Milworn:

Hydro Tech recently completed a groundwater sampling exercise for five (5) monitoring wells at the above property. The results of the exercise identified four (4) monitoring wells found to be free of any contamination and only one well slightly exceeded regulatory standards. Hydro Tech also reviewed the file for the site regarding the existing monitoring wells and our review indicated that No Further Action letter by the New York State Department of Environmental Conservation (NYSDEC) was issued and the remediation was completed. As such, the levels that was found in One well appear to be insignificant and should biodegrade to acceptable levels over time. At this time, it is recommended that all of the monitoring wells be permanently abandoned in accordance with NYSDEC regulations.

I hope that this information has proven valuable to this phase of your project. Should you have any questions or comments, please feel free to contact me at your convenience.

Very Truly Yours,
Hydro Tech Environmental, Corp.

Mostafa El Sehamy, P.G., C.G.W.P.
Operations Director

MER/ra

cc: HTE Job #040022

C:\Documents and Settings\Mostafa El Sehamy\Desktop\IDR letter 5-10-04.doc

MERRITT ENGINEERING CONSULTANTS, P.C.
Environmental Engineering – Asbestos – Lead

28-08 Bayside Lane, Bayside, NY 11358
(718) 767-7997 Fax (718) 767-7796

ASTM E1527-00

PHASE I ENVIRONMENTAL SITE ASSESSMENT (ESA)

Site Address	77 Commercial Street Brooklyn, New York 11222
Prepared for	New York Community Bank 1 Jericho Plaza Jericho, New York 11753 Attn: Ms. Rabeya Khandaker Application #15-041297-7
Prepared By	Merritt Engineering Consultants, P.C. 28-08 Bayside Lane Bayside, New York 11358 (718) 767-7997 (718) 767-7796 Fax
MEC Project No	Project E17195
Report Date	August 31, 2004
Inspection Date	August 10, 2004

EXECUTIVE SUMMARY

Merritt Engineering Consultants, P.C., was retained by New York Community Bank to conduct a Phase I Environmental Site Assessment (ESA) at 77 Commercial Street, Brooklyn, New York 11222.

The on site investigation was conducted on August 10, 2004.

Based on our site reconnaissance, database review and historical investigation, no Recognized Environmental Conditions (RECs), were noted.

A Recognized Environmental Condition means the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substance or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The term includes hazardous substances or petroleum products even under compliance with laws.

The following de minimis condition was noted but is not considered a Recognized Environmental Condition (REC).

	ITEM	APPROXIMATE COST	PAGE
1	Remove unmarked storage drum noted at the rear perimeter of the site and properly dispose of its contents	Cost not determined	15
2A	Register 3,000-gallon above ground storage tank (AST) with the New York State Department of Environmental Conservation (NYSDEC)	$250-$350	16
2B	Register 15,000-gallon underground storage tank (UST) as "closed in place" with the New York State Department of Environmental Conservation (NYSDEC)	$250-$350	16

The following Historical Recognized Environmental Conditions (HRECs) were identified in our database search:

(1) LUST designation located at Target Property:

Bulova Corporation
77 Commercial Street
Spill #0211097
Spill date: 02/05/03
Region Close date: 04/09/03

(1) NY Spill located at Target Property:

77 Commercial Street
NY Spill #9811015
Spill date: 12/02/98
Close date: 07/02/99

Since the spills have been closed by the New York State Department of Environmental Conservation (NYSDEC), they do not appear to adversely affect the subject site.

In addition, the borrower has provided documentation indicating no contamination present around a 15,000-gallon underground storage tank (UST).

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2) INTRODUCTION

2.1 PURPOSE

The report was prepared by Merritt Engineering Consultants, P.C., whose purpose is to provide comprehensive Phase I Environmental Site Assessments (ESA) in accordance with American Society of Testing Materials (ASTM E 1527-00) standards for a Phase I Environmental Site Assessment. The survey personnel are trained in the field of Environmental Site inspections as Certified Environmental Specialist (CES) by the Environmental Assessment Association as well as asbestos investigators by the Federal Environmental Protection Agency and NY State.

2.2 DETAILED SCOPE OF SERVICES

For the Phase I Environmental Site Assessment (ESA), Merritt Engineering Consultants (MEC) performed the following primary tasks:

1. *Physical site inspection by Merritt Engineering Consultants Certified Environmental Specialists (CES) who traversed the interior and exterior areas of the site by foot, in addition to conducting a review of adjacent areas and their exteriors.*
2. *Investigations of historical usage of site based upon:*
   a. *Interview of persons knowledgeable about the sites current and past usage.*
   b. *Review of Sanborn Fire Insurance Maps and/or a review of Local Building Department records and/or Aerial Photographs.*
3. *Review of USGS geologic and 7.5 Minute Topographical Maps.*
4. *Review of the federal and state environmental databases as per ASTM E1527-00 guidelines, as well as a review of pertinent information provided by local government records.*
5. *Limited survey of site for the presence of electrical transformers that may contain Poly-chlorinated biphenyl (PCBs).*
6. *Limited survey for the presence of friable asbestos containing material (ACM).*
7. *Limited survey of site for the presence of lead based paint surfaces within common areas.*
8. *Inspection of water supply, gas supply, garbage disposal practices, groundwater flow, storm and sanitary discharge methods.*
9. *Review of Radon averages.*
10. *Inspection for petroleum storage tanks, above and below grade, stored on site.*
11. *Review of report by a senior certified environmental specialist (CES).*

The following services are not included as part of this Phase I Assessment:

- Lead Based Paint Testing
- Soil Borings
- Testing of Water Main
- Wetlands Evaluation
- ACP-5 Asbestos Report
- High Voltage Power Lines
- Indoor Air Quality
- Radon Testing
- Non-friable Asbestos Testing
- Evaluation of Fluorescent light fixtures that may contain PCBs
- Endangered Species
- Ecological Resources
- Health & Safety
- Industrial Hygiene
- Cultural & Historical Risk
- Regulatory Compliance
- Testing for Mold Spores

2.3 SIGNIFICANT ASSUMPTIONS

Information and records provided by the client and outside vendors retained by Merritt Engineering Consultants are assumed to be correct and complete.

2.4 LIMITATIONS AND EXCEPTIONS

The contents of this report are correct to our knowledge and belief. This report and conclusions stated herein are, however, limited to actual knowledge based upon a visual inspection of the Property, the examination of readily available public records concerning the current and prior use of the Property, and interviews with individuals knowledgeable about present and past property uses.

Merritt Engineering Consultants, P.C., has performed this Phase I Environmental Site Assessment (ESA) of the Property in accordance with the detailed scope of work in section 2.2.

Merritt Engineering Consultants, P.C., cannot guarantee that the Property is completely free of hazardous substances or other materials or conditions that could subject the Client to potential liability. The presence or absence of any such condition can only be confirmed through the collection and analysis of soil and groundwater samples, as well as through testing building materials that may contain asbestos or lead paint. This is beyond the scope of the investigation.

Merritt Engineering Consultants, P.C., has no interest other than professional in this Assessment and neither its performance, nor compensation for same, is contingent upon the findings and recommendations that are represented herein.

2.5 SPECIAL TERMS AND CONDITIONS

There are no special terms or conditions to the content of the report that are in addition to the scope outlined in Section 2.2.

2.6 RELIANCE

This Phase I Assessment was performed at the client's request utilizing methods and procedures that are consistent with acceptable professional standards ASTM-E1527-00.

The report has been prepared for the sole use of MEC's client. No other party may use the report without the written authority of MEC.

3) SITE DESCRIPTION

3.1 LOCATION AND LEGAL DESCRIPTION

The property address is 77 Commercial Street. The legal site address is Block 2472, Lot 410. The site is located in the Greenpoint section of Brooklyn.

3.2 SITE AND VICINITY GENERAL CHARACTERISTICS

The current site is situated on a plot size 106,820 square feet.

The current structure was built in 1959.

The weather conditions during our on site inspection consisted of sunny skies. The temperature was approximately 80°.

3.3 CURRENT USE OF THE PROPERTY

The current use of the site consists of one (1) commercial unit.

The site usage appears to remain similar, since the building's construction (commercial/manufacturing/warehouse/industrial).

None of the current tenants or their on site operations appear to pose an adverse environmental impact to the property or neighboring sites.

3.4 DESCRIPTIONS OF STRUCTURES, ROADS AND OTHER IMPROVEMENTS

The current site consists of a 1.5-story commercial/manufacturing/warehouse building with a rear and side parking lot holding 30 cars and trucks. The site is located on a plot size approximately 106,820 square feet (building size is approximately 38,000 square feet). There is a front basement which houses the utilities. There are no basements or subbasements located in the rear sections of the building. The boiler room is located on the ground floor. The heating system for this site is located on the ground floor and is supplied by a gas and oil fired steam boiler as well as gas fired HVAC units located on the roof for the 2nd floor office spaces.

3.5 CURRENT USES OF THE ADJOINING PROPERTIES

North	commercial
South	New York City Transit Bus Yard
East	commercial
West	Newtown Creek

4) USER PROVIDED INFORMATION

4.1 TITLE RECORDS

No title records were provided.

4.2 ENVIRONMENTAL LIENS

No environmental liens were indicated.

4.3 SPECIALIZED KNOWLEDGE

No information regarding specialized knowledge was provided.

4.4 VALUATION REDUCTION FOR ENVIRONMENTAL ISSUES

No information regarding the valuation reduction for environmental issues was provided by the owner.

4.5 OWNER, PROPERTY MANAGER AND OCCUPANT INFORMATION

The current owner of the site is NYC Industrial Development.

The current occupants are commercial.

4.6 REASON FOR PERFORMING PHASE I

Merritt Engineering was retained to perform a Phase I Environmental Site Assessment (ESA) as an agent for the lending institution (New York Community Bank).

4.7 OTHER/ADDITIONAL INFORMATION PROVIDED

- Groundwater sampling results conducted by Hydro Tech Environmental, Corp. in February of 2004 and May of 2004.
- Phase I Environmental Site Assessment (ESA) issued by Middleton, Kontokosta Associates, LTD in September of 1998.
- Phase II Environmental Site Assessment (ESA) conducted by Fluor Daniel GTI in November of 1998.
- New York State Department of Environmental Conservation (NYSDEC) spill report closure letter.
- Soil Mechanics report addressed to New York State Department of Environmental Conservation (NYSDEC) on June 21, 1999.

Several other reports were referenced in the above reports. We have not received any additional documentation.

5) RECORDS REVIEW

5.1 STANDARD ENVIRONMENTAL RECORD SOURCES

The federal government and New York State have compiled database lists of contaminated, potentially hazardous and regulated sites that may impact the subject property. Environmental Data Resources (EDR) has provided this information to Merritt Engineering Consultants.

5.2 DATABASE SEARCHES

The following Federal and State databases were reviewed by Merritt Engineering Consultants on August 23, 2004, with the corresponding distance.

Database	Radius Searched
FEDERAL	
1. Federal National Priority List	1 Mile
2. Federal CERCLIS list	½ Mile
3. Federal RCRA TSD facilities list	½ Mile
4. Federal RCRA generators list	Site & Adjacent Properties
5. Federal ERNS list	Site
STATE	
1. State lists of Haz. Waste Sites	1 Mile
2. State landfill/solid waste site lists	½ Mile
3. State leaking UST lists (LUSTs)	½ Mile
4. State registered tanks	Site & Adjacent Properties

FINDINGS

The closest 84 sites have been included in Appendix A.

National Priorities List (NPL) - list compiled by EPA pursuant to CERCLA 42 USC 9605(a)(8)(B) of properties with the highest priority for cleanup pursuant to EPA's Hazard Ranking System.

Findings: No sites located within a 1-mile radius. **(See State Hazardous Waste Sites Maps)**

Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) - the list of sites compiled by EPA that EPA has investigated or is currently investigating for potential hazardous substance contamination for possible inclusion on the National Priorities List.

Findings: No sites located within a ½-mile radius.

Resource Conservation Recovery Act (RCRA) Treatment Storage Disposal (TSD) facilities - those facilities on which treatment, storage, and/or disposal of hazardous wastes takes place, as defined and regulated by RCRA. Inclusion on the RCRA TSD list does not imply contamination has occurred at the site.

Findings: No sites located within a ½-mile radius.

Resource Conservation Recovery Act (RCRA) generators list - list kept by EPA of those persons or entities that generate hazardous wastes as defined and regulated by RCRA. Inclusion on the RCRA list does not imply contamination has occurred at the site.

Findings: **1 generator listed at property.**
(1) small quantity generator, EPA ID #NYD095759981
no violations found

The Target Property is listed in EPA's index system: Facility Index System (FINDS):

United Feather & Down (former tenant)
77 Commercial St.
Brooklyn, NY 11222

16 generators listed within a ¼-mile radius.

The Target Property has inspections under FIFRA/TSCA Tracking System (FTTS) - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act):

United Feather & Down (former tenant)
77 Commercial St.
Brooklyn, NY 11222

Emergency Response Notification System (ERNS) list - list of reported CERCLA hazardous substance releases or spills in quantities greater than the reportable quantity, as maintained at the National Response Center. Notification requirements for such releases or spills are codified in 40 CFR Parts 302 & 355.

Findings: Site not listed.

Department of Environmental Conservation (DEC) lists the contaminated sites throughout the State and classifies the degree of contamination. Number 1 being highly contaminated; number 5 being the least hazardous to the public.

code:

1. Causing or presenting an imminent danger of causing irreversible or irreparable damage to the public health or environment - immediate action required;

2. Significant threat to the public health or environment - action required;

2a. Temporary classification assigned to sites that have inadequate and/or insufficient data for inclusion in any of the other classifications;

3. Does not present a significant threat to the public health or the environment - action may be deferred;

4. Site is properly closed - requires continued management;

5. Site is properly closed, no evidence of present or potential adverse impact - no further action is required.

Findings: No sites located within a 1-mile radius. **(See State Hazardous Waste Maps)**

Solid Waste Disposal Site - any place, location, tract of land, area, or premises used for the disposal of solid wastes as defined by state solid waste regulations. The term is synonymous with the term landfill and is also known as a garbage dump, trash dump or by similar terms.

Findings: 8 sites located within a ½-mile radius.

Spill Logs/LUST list – New York Department of Environmental Conservation (NYDEC) has a computerized list of spills that have occurred as of 1986, including the present status of the sites. In addition, the leaking underground storage tank (LUST) database was also reviewed for reported incidents in the area.

Findings: 23 LUSTs located within a ½-mile radius.

22 NY Spills located within a 1/8-mile radius.

(1) LUST designation located at Target Property:

Bulova Corporation
77 Commercial Street
Spill #0211097
Spill date: 02/05/03
Region Close date: 04/09/03

(1) NY Spill located at Target Property:

77 Commercial Street
NY Spill #9811015
Spill date: 12/02/98
Close date: 07/02/99

Since the spills have been closed by the New York State Department of Environmental Conservation (NYSDEC), they do not appear to adversely affect the subject site.

The closest adjacent sites with spill designations are:

1) Commercial St/Box St
NY Spill #9900977
Spill date: 04/26/99
Close date: 05/11/99

2) Commercial St/Box St
NY Spill #8905639
Spill date: 09/01/89
Close date: 11/06/01

Since the spills have been closed by the New York State Department of Environmental Conservation (NYSDEC), they do not appear to adversely affect the subject site.

State registered tanks - state lists of storage tanks required to be registered under Subtitle I. Section 9002 of RCRA.

Findings: **One (1) registered tank located on Target Property:**

One (1) 15,000-gallon underground storage tank (UST)
permit # 2-601397, expired 02/11/04
tank status: in service

The borrower has provided documentation indicating no contamination around the 15,000-gallon underground storage tank (UST) (see Appendix A).

It is recommended that the status of the tank be amended to reflect "closed in place" with the New York State Department of Environmental Conservation (NYSDEC).

6 registered tank sites located within a 1/8-mile radius.

ECOLOGICAL SENSITIVE AREA

Based on information provided by Environmental Data Resources (EDR), no designated wetlands or flood plains are located in the immediate vicinity of the property.

5.3 DATABASE SITE MAPS

A map provided by Merritt Engineering Consultants indicating the property and surrounding 1-mile radius has been included in Appendix A. The map denotes any National Priority Listed Sites (NPL) and State Hazardous Waste Sites (SHWS) sites within the ASTM radius of 1 mile.

5.4 ORPHAN SITES

Our database review indicated several sites that cannot be positively plotted (orphan sites). A total of 38 sites were classified as orphans.

The subject site does not appear on the orphan list.

5.5 LOCAL AGENCY REVIEW

We have researched the New York City Health & Fire Department records for any information of hazardous operations including, past spills, leaks or violations. The information we received from the Fire Department indicated one (1) violation, which does not appear to impact the scope of this Assessment (see Appendix A).

5.6 ADDITIONAL ENVIRONMENTAL RECORD SOURCES

No additional environmental records were researched.

5.7 PHYSICAL SETTING SOURCES

5.8 BODIES OF WATER

The nearest body of water to the subject site is the Newtown Creek, which is at the rear of the site.

5.9 GROUND WATER FLOW

Through information provided by EDR, hydrological data involving ground water flow has been obtained. Based on our findings, the hydrological groundwater flows in a westerly direction eventually emptying into the Newtown Creek.

Groundwater in this area is at a depth of approximately 25-50 feet.

Drinking water for the five boroughs has been supplied by the New York reservoir system for many years (see map in Appendix A). Groundwater is not a primary source of drinking water for Brooklyn. The property is not within a public potable well field protection area and is, therefore, not subject to land use restrictions for such areas.

5.10 SITE GEOLOGY AND TOPOGRAPHY

Information pertaining to the hydrogeologic setting in the vicinity of the subject property was obtained from a review of selected published documents and maps. United States Geological Survey (USGS) 7.5-minute Topographic Maps were used to characterize surface topography, water table elevation and drainage. Subsurface characteristics were obtained from USGS Surficial and Bedrock Geology Maps from the lower Hudson Sheet.

5.11 HISTORICAL USE INFORMATION ON THE PROPERTIES

Sanborn Fire Insurance maps of the site and immediate area were available for the years 1905, 1916, 1951, 1965, 1979, 1983, 1986, 1987, 1988, 1991 and 1995. The maps indicate the following information:

1905 – Greenpoint Sugar Refinery
1916 – mostly vacant land with scattered structures
1951 – Metropolitan Sand and Gravel Corp.
1965-1991 – Harte & Co., Inc. Plastic Products Mfg.
1995 – similar to current conditions

5.12 HISTORICAL USE INFORMATION ON ADJOINING PROPERTIES

The Sanborn Fire Insurance maps reviewed by Merritt Engineering Consultants cover the adjoining properties on the north, south, east & west. No recognized environmental conditions were noted (gas tanks, filling station etc.).

6) SITE RECONNAISSANCE

6.1 METHODOLOGY AND LIMITING CONDITIONS

At the time of our inspection, the following areas were accessed by Mr. John Perotti, of our staff: basement areas, boiler room, ground floor, 2nd floor office areas, public hallways, utilities areas, manufacturer warehouse areas, side and rear parking lot and all accessible exterior areas of the site.

6.2 GENERAL SITE SETTING

Northwest side of Commercial Street
Topography is hilly

6.3 EXTERIOR OBSERVATIONS

An unmarked storage drum was observed at the rear perimeter of the site. The content of the drum is unknown. It is recommended that the drum be sampled and then disposed of properly.

Monitoring wells were observed in the side driveway and parking lot. Testing of the wells was conducted by Hydro Tech Environmental, Corp. in February of 2004, which indicated slightly elevated levels of contamination present. No further investigation was recommended (see Appendix A).

6.4 INTERIOR OBSERVATIONS

The interior inspection revealed no evidence of any on-site spillage or disposal of chemicals or other hazardous materials.

During our inspection no access was possible to the basement area, which houses the water main. The water is municipally supplied by New York City.

6.5 UNDERGROUND STORAGE TANKS (UST) AND DRUMS

Each year, thousands of petroleum leaks and spills are reported to the Department of Environmental Conservation (DEC) / Department of Environmental Protection (DEP). Thousands of others may go unreported mainly because they have not yet been discovered. These leaks can enter the ground, seep into an aquifer and contaminate a water supply. In some places, water wells have been closed down and people have had to vacate their homes. Even small amounts of petroleum in soil or groundwater can be tasted or smelled and can subsequently affect health.

Leaking petroleum storage tanks are a major source of groundwater contamination. The DEC/DEP estimates that there may be as many as 185,000 tanks storing petroleum, which are subject to state regulations. Many of these tanks are bare steel and were installed underground in the 1950's and 1960's. These tanks have weakened by rust and have a fifty percent chance of developing leaks.

FINDINGS

There appears to be an abandoned 15,000-gallon underground storage tank (UST) and a 2nd oil tank, located at the northwest front end of the building. The borrower has provided documentation by Soil Mechanics indicating no further evaluation of the 15,000-gallon underground storage tank (UST) is required (see Appendix A).

In addition, the owner has supplied documentation showing proper abandonment/removal of two (2) gasoline tanks (see appendix A). No further evaluation is recommended regarding these tanks.

It is recommended the tank registration be amended with the New York State Department of Environmental Conservation (NYSDEC) to reflect 15,000-gallon underground storage tank (UST) as "closed in place" status.

6.6 ABOVEGROUND STORAGE TANKS (AST)

There is a 3,000-gallon above ground fuel storage tank (AST) holding # 2 oil located on the ground floor in the boiler room. The tank is encased in a concrete block vault. The vault is equipped with weep holes to allow passage of oil should a leak occur.

At the time of our inspection, no staining of the foundation adjacent to the weep holes were observed.

TANK REGISTRATION:

No New York State registration certificates were noted at the subject site and our database review also indicated no New York State registered tanks on site. Since the tank is above 1,100 gallons, it is recommended it be registered with New York State Department of Environmental Conservation (NYSDEC).

6.7 ASBESTOS

The EPA has identified over 3,000 products used in buildings containing asbestos fibers. Our inspection of the premises is to determine the presence of **friable asbestos**, as defined by the Federal Environmental Protection Agency as any material, which may be pulverized with hand pressure. This material has the potential to release asbestos fibers into the atmosphere and in turn may be hazardous to the building occupants' health.

We have not inspected for or included in our report any building materials, which may contain non-friable asbestos such as vinyl asbestos floor tiles, exterior asbestos shingles, asbestos roofing felts, etc. Many of these materials are still manufactured today and not considered hazardous unless the material is cut, sawed, or grounded in a manner that might release asbestos fibers into the atmosphere.

We have used the 4-category system as defined by Asbestos Hazardous Emergency Response Act (AHERA) to designate the different conditions of asbestos noted throughout the areas of the site.

1. *Good Condition*
   Material with no visible damage or deterioration to very limited damage or deterioration.

2. *Fair Condition*
   Material with one or more of the following characteristics:
   - *A few water stains or less than one tenth of insulation with missing jackets.*
     - *Crushed insulation or water stains, gouges, puncture or mars on up to one tenth of the insulation if the damage is evenly distributed (or up to one quarter if the damage is localized).*

3. *Poor Condition*
   Material with one or more of the following characteristics:
   - *Missing jackets on at least one tenth of the piping equipment.*
   - *Crushed or heavily gouged or punctured insulation on at least one tenth of pipe runs/risers, boiler, tank duct, etc., if the damage is evenly distributed (one quarter if the damage is localized).*

4. *Significantly Damaged*
   Thermal systems insulation on pipes, boilers, tanks, ducts, and other thermal system insulation equipment which the insulation has lost its structural integrity, or its covering, in whole or in part, is crushed, water-stained, gouged, punctured, missing, or not intact such that is not able to contain fibers. Damage may be further illustrated by occasional puncture, gouges, or other signs of physical injury to ACM; occasional water damage on the protective coverings/jackets; or exposed ACM ends or joints. Asbestos debris, originating from the ACM in question may also indicate damage.

ASBESTOS FINDINGS

No friable asbestos containing material was observed in any of the accessible areas of the building.

Many buildings' fireproofing is concealed in a plenum above the ceiling. These areas were not accessible and, therefore, we are unable to determine the type of fireproofing for those areas above the first floor.

6.8 ELECTRICAL TRANSFORMERS (PCBs)

Transformers often contain Poly-chlorinated biphenyl (PCB) Askarel coolant liquid and are generally used in hazardous locations where flammability is of concern. PCB transformers are no longer produced because of EPA's ban on the manufacture of new equipment containing PCB's.

FINDINGS

There is one (1) underground electrical transformer located in the front sidewalk. At the time of our inspection, the transformer did not demonstrate signs of leaking. No staining or dead vegetation was observed adjacent to the transformer.

Per to toxic substance contract act (TSCA) the transformer owner, i.e. Utility Company, is responsible for all transformers maintenance and all spills of PCB's from their transformers.

Fluorescent light fixtures were not inspected for PCB content under the scope of this assessment.

6.9 GARBAGE DISPOSAL

There are no active incinerators located on the property. The garbage to be disposed of is placed in the rear of the building in portable cans with covers. These containers are picked up several times per week by private sanitation.

6.10 LEAD BASED PAINT

Lead-based paint (LBP) was used extensively in buildings and structures that were constructed prior to 1978 and can be hazardous when damaged (i.e., chipped, broken, crumbling, pulverized); lead is toxic to humans particularly to children, if ingested, inhaled, or otherwise absorbed. Exposure to lead can cause health problems in children ranging from damage to the brain and nervous system, behavioral and learning problems (such as hyperactivity), slowed growth, hearing problems and headaches. In adults the health problems can range from difficulties during pregnancy, other reproductive problems, high blood pressure, digestive problems, nerve disorders, memory and concentration problems and muscle and joint pain.

Our research indicates the building was constructed prior to 1978, and lead based paint is assumed to be present throughout the building.

FINDINGS

The painted surface in the common areas inspected by Merritt Engineering Consultant's staff did not demonstrate signs of peeling or cracking. No samples of the paint were analyzed since this is beyond the scope of a Phase I Environmental Assessment.

In addition, the site is not used for residential purposes.

A lead based paint survey in accordance with The Housing & Urban Development (HUD) guidelines was not conducted under the scope of this assessment.

6.11 NATURAL GAS

There is one (1) underground gas main entering the building from Commercial Street. The main is connected to two (2) meters located on the ground floor. The gas is then distributed the heating system only by branch lines of black iron pipe.

Gas service is provided by Key Span.

6.12 RADON

Radon first gained national attention in early 1984, when extremely high levels of indoor radon were found in areas of Connecticut, Pennsylvania, New Jersey, and New York. Radon is a colorless, odorless radioactive gas. Nearly one out of every 15 homes in the U.S. is estimated to have elevated annual average levels of indoor radon. EPA established a Radon Program in 1985 to assist States and homeowners in reducing their risk of lung cancer from indoor radon.

FINDINGS

The New York State Department of Health indicates the average radon level for this area of Brooklyn to be 1.4 pico curies per liter (pCi/L), which is below the EPA action level of 4 pCi/L.

A radon canister was not initiated at the time of our inspection since this is beyond the scope of this assessment.

6.13 STORM AND SANITARY DISCHARGE

There are no cesspools or septic tanks located on the property. The drainage system for this building consists of a combination storm and sanitary drainage system, which empties by gravity into the New York City sewer system located under Commercial Street.

6.14 WATER SUPPLY

The U.S. Environmental Protection Agency estimates that drinking water can comprise 20% or more of a person's total exposure to lead. Although lead in drinking water is rarely the single cause of lead poisoning, it can significantly increase a person's total lead exposure. Infants who are fed baby formula or drinks mixed with hot water from the tap are the most vulnerable to lead in drinking water. Lead solder can leach into the water supply. Standing water in the piping system can aid in the leaching process.

The EPA action level for lead in drinking water is 15 parts per billion, (PPB).

A sample with lead levels that equal or exceed 15 PPB is considered to have elevated levels of lead, and it is recommended that response action be taken. This response action may include additional testing, replacement of plumbing components, or an operations and maintenance program.

FINDINGS

The water main enters the property from Commercial Street. The main is connected to a water meter located in a small basement. The domestic water is supplied by New York City through aqua-ducts from upstate reservoirs.

During our inspection no access was possible to the basement area, which houses the water main. The water is municipally supplied by New York City.

There are no private ground water wells servicing this property.

No testing of the water was conducted under this scope.

7) INTERVIEWS

7.1 INTERVIEW WITH OWNER

The owner was not present during our inspection.

7.2 INTERVIEW WITH SITE REPRESENTATIVE

During our on-site visit, we interviewed Mr. Milworn, who is one of the buyers and associated with the site for 6 months. In addition, we interviewed Mr. Dimeo, who is the facility's manager for the Bulova Corp. and has been associated with the site for 5 years.

Copies of the above records of communications are included in Appendices, Section 10.6.

7.3 INTERVIEWS WITH OCCUPANTS (TENANTS)

No other individuals were interviewed regarding the facility.

7.4 INTERVIEWS WITH LOCAL GOVERNMENT OFFICIALS

MEC has retained Barretta Research to provide local government agency information, which includes the following:

New York City Health Department
New York City Fire Department

Copies of the above records of communications are included in Appendices, Section 10.4.

7.5 INTERVIEWS WITH OTHERS

No additional interviews were conducted as part of this assessment.

8) REPORT SUMMARY

Based on our site reconnaissance, database review and historical investigation, no Recognized Environmental Conditions (RECs), were noted.

A Recognized Environmental Condition means the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substance or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The term includes hazardous substances or petroleum products even under compliance with laws.

The following de minimis condition was noted but is not considered a Recognized Environmental Condition (REC).

	ITEM	APPROXIMATE COST	PAGE
1	Remove unmarked storage drum noted at the rear perimeter of the site and properly dispose of its contents	Cost not determined	15
2A	Register 3,000-gallon above ground storage tank (AST) with the New York State Department of Environmental Conservation (NYSDEC)	$250-$350	16
2B	Register 15,000-gallon underground storage tank (UST) as "closed in place" with the New York State Department of Environmental Conservation (NYSDEC)	$250-$350	16

The following Historical Recognized Environmental Conditions (HRECs) were identified in our database search:

(1) LUST designation located at Target Property:

Bulova Corporation
77 Commercial Street
Spill #0211097
Spill date: 02/05/03
Region Close date: 04/09/03

(1) NY Spill located at Target Property:

77 Commercial Street
NY Spill #9811015
Spill date: 12/02/98
Close date: 07/02/99

Since the spills have been closed by the New York State Department of Environmental Conservation (NYSDEC), they do not appear to adversely affect the subject site.

In addition, the borrower has provided documentation indicating no contamination present around a 15,000-gallon underground storage tank (UST).

8.2 CONCLUSION

Merritt Engineering Consultants has performed a Phase I Environmental Site Assessment (ESA) in conformance with the scope and limitations of ASTM Practice E1527 of (77 Commercial Street, Brooklyn), the property. Any exceptions to, or deletions from, this practice are described in Section [2.2] of this report.

8.3 OPINIONS

Based on our site reconnaissance, database review, historical review and interviews with persons familiar with the subject site and adjacent properties, no Recognized Environmental Conditions (RECs) were identified under the scope of services outlined in Section 2.2.

Based on our site reconnaissance, database review, historical review and interviews with persons familiar with the subject site and adjacent properties, the above de minimis conditions were identified under the scope of services outlined in Section 2.2.

Since the Historical Recognized Environmental Condition (HREC) has been addressed (1 LUST designation and 1 Spill closed by the (NYSDEC)), it does not appear to impact the site.

In addition, several tanks have been removed/abandoned. Documentation has been provided addressing the 15,000-gallon underground storage tank (UST).

8.4 DEVIATIONS

The assessment was performed in accordance with the Phase I (ESA) detailed scope of services in section 2.2, and the requirements of the detailed scope of work were met.

8.5 ADDITIONAL SERVICES

No additional services were performed beyond the detailed scope of services in section 2.2.

8.6 REFERENCES

All references relied upon are located in Appendix A.

9) CONSULTANT INFORMATION

9.1 QUALIFICATIONS AND SIGNATURE OF ENVIRONMENTAL PROFESSIONAL

See Appendix A

We thank you for allowing Merritt Engineering Consultants, P.C., to serve as your Environmental Consultant for this project.

Should you have any questions regarding the contents of this report, please feel free to contact us to discuss the report in further detail.

Site Inspector:	Reviewed by:
John Perotti Certified Environmental Specialist	Charles G. Merritt Certified Environmental Specialist

10) APPENDICES

10.1 Site Photographs
10.2 Site (Vicinity) Map
10.3 Hazardous Waste Site Map
10.4 Regulatory Records Documentation
10.5 Historical Research Documentation
10.6 Interview Documentation
10.7 Qualifications
10.8 Special Contractual Conditions between User and Environmental Professional (If Applicable)
10.9 Historical Recognized Environmental Condition (HREC) documentation provided (if Applicable)
10.10 Additional information obtained

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FLUOR DANIEL GTI

November 30, 1998

Mr. Robert Weber
Bulova Corporation
One Bulova Avenue
Woodside, New York 11377-7874

Re: Additional Phase II Site Assessment Report
77 Commercial Street
Brooklyn, NY

Dear Bob:

Fluor Daniel GTI was retained by the Bulova Corporation to conduct an additional Phase II site assessment of the property located at 77 Commercial Street, Brooklyn, New York. See the attached site location map, Figure 1, and the site plan, Figure 2. The initial phase II site assessment occurred on November 5 and 6, 1998. As stated in the November 13, 1998 report, there were elevated concentrations of volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs) and metals in soil and groundwater above New York State Department of Environmental Conservation (NYSDEC) guidelines and standards. The purpose of this investigation was to further delineate the extent of VOC and SVOC soil and groundwater contamination present at the site, as well as to confirm the presence of elevated metal concentrations in groundwater.

Scope of Work

The scope of work included the following:

- Installation of eight (8) soil boring/temporary well points and two (2) temporary well points. The locations were selected based upon the results from the initial Phase II site assessment. Soil and groundwater borings were installed adjacent to the 15,000 gallon fuel oil underground storage tank and the former 550 gallon gasoline underground storage tank. One soil sample and one groundwater sample were collected from each boring for laboratory analysis. The two temporary wells points were located in front of both loading dock areas. One groundwater sample was collected from each temporary well point location to confirm the presence of dissolved metals in groundwater.

- The soil and groundwater samples collected from the soil borings/temporary well points were analyzed for VOCs and NYSDEC STARS Memo #1, Table #2 VOCs and SVOCs (poly aromatic hydrocarbons (PAHs)), according to EPA Methods 8260 and 8270. The two loading bay area temporary well points were analyzed for dissolved RCRA metals only. Additionally, during the initial phase II site assessment, groundwater samples were collected from GP-4 and GP-5, but were never analyzed for dissolved RCRA metals. Based upon the other initial groundwater metal analytical results, it was decided to also analyze GP-4 and GP-5 for dissolved RCRA metals. The samples were analyzed with a 48 hour turn-around-time.

101-1 Colin Drive / Holbrook, NY 11741 USA (516) 472-4000 FAX (516) 472-4077

- Preparation of this summary report.

Field Work

On November 19 and 20, 1998 Fluor Daniel GTI supervised the installation of eight (8) soil borings/temporary well points (B-4 - B-9, B-10 and B-12) and two (2) temporary well points (B-1 and B-2). See the attached site plan, Figure 2. These borings were completed utilizing an air rotary drill rig.

On November 19, 1998, Fenley and Nicol Environmental, Inc. mobilized to the site with an air rotary drill rig. The first temporary well point, B-1, was to be installed adjacent to the northern loading dock in the vicinity of GP-1. The boring was drilled down to 15 feet below grade (b.g.) and a water sample collected. The air rotary rig was then moved to B-2, which is located at the southern loading dock at the location of GP-6, and a water sample was collected at 15' b.g. At each location, a new two-inch diameter well screen was temporarily inserted into the borehole and the groundwater purged with a disposable bailer. Following purging, groundwater samples were collected with a disposable bailer for laboratory analysis of dissolved RCRA metals. The samples were then field filtered and tested for turbidity prior to adding to preservatives. The turbidity readings for B-1 and B-2 were 2 and 5 NTUs; respectively.

The air rotary rig was moved to B-4, southwest of the abandoned 550 gallon UST. Please note that B-3 was not completed due to the presence of an overhang from the building, which prevented access for the air rotary rig. Soil samples were collected at 3-5 feet b.g. No other soil samples were collected due to the presence of a brick foundation from 5-13 feet b.g. The sample was screened with a photo-ionization detector and selected for laboratory analysis of VOCs and NYSDEC STARS Memo #1 Table #2 for VOCs and SVOCs according to EPA Methods 8260 and 8270. A summary table of geologic descriptions and PID readings is attached as Table 1. The air rig then drilled down to 17 feet b.g. to collect a water sample. A new two-inch diameter well screen was temporarily inserted into the borehole and the groundwater purged with a disposable bailer. Following purging, groundwater samples were collected with a disposable bailer for laboratory analysis of VOCs and SVOCs (PAHs) according to EPA Methods 8250 and 8270.

The air rotary rig was moved to B-5, west of the abandoned 550 gallon UST. A soil sample was collected from 3-5 feet bg. No other samples were collected due to the presence of a brick and concrete foundation. The soil sample was screened with a PID and selected for laboratory analysis. The sample was analyzed for VOCs and NYSDEC STARS Memo #1 Table #2 VOCs and SVOCs according to EPA Methods 8260 and 8270. The drill rig then drilled down to 15 feet bg to collect a groundwater sample. A new two-inch diameter well screen was temporarily inserted into the borehole and the groundwater purged with a disposable bailer. Following purging, groundwater samples were collected with a disposable bailer for laboratory analysis of VOCs and SVOCs (PAHs) according to EPA Methods 8260 and 8270.

The air rotary rig was moved to B-6, northwest of the abandoned 550 gallon UST. Soil samples were collected from 3-5 and 9-9 ½ feet b.g. and screened with a PID. The 3-5 feet interval was selected for laboratory analysis of VOCs and NYSDEC STARS Memo #1 Table #2 VOCs and SVOCs according to EPA Methods 8260 and 8270. The rig then drilled to 9 ½ feet b.g. to collect the water sample. A new two-inch diameter well screen was temporarily inserted into the borehole and the groundwater purged with a disposable bailer. Following purging, groundwater samples were collected with a disposable bailer for laboratory analysis of VOCs and SVOCs (PAHs) according to EPA Methods 8260 and 8270.

The air rotary rig was moved to B-7, located at the northwest corner of the 15,000 gallon UST. Soil samples were collected at 3-5 and 7-9 feet below grade. The samples were then screened with a PID. The 3-5 foot interval was selected for laboratory analysis of VOCs and NYSDEC STARS Memo #1 Table #2 VOCs and SVOCs according to EPA Methods 8260 and 8270. The drill rig then drilled down to 15 feet b.g. to collect a water sample. A new two-inch diameter well screen was temporarily inserted into the borehole and the groundwater purged with a disposable bailer. Following purging, groundwater samples were collected with a disposable bailer for laboratory analysis of VOCs and SVOCs (PAHs) according to EPA Methods 8260 and 8270.

On November 20, 1998, Fenley and Nicol Environmental, Inc. again mobilized to the site with an air rotary drill rig. The rig was set up at B-8, located at the west side of the 15,000 gallon UST. Soil samples were collected from 3-5 and 7-9 feet below grade. The samples were then screened with a PID. The 7-9 foot interval was selected for laboratory analysis of VOCs and NYSDEC STARS Memo #1 Table #2 VOCs and SVOCs according to EPA Methods 8260 and 8270. The rig then drilled down to 15 feet b.g. to collect a water sample. A new two-inch diameter well screen was temporarily inserted into the borehole and the groundwater purged with a disposable bailer. Following purging, groundwater samples were collected with a disposable bailer for laboratory analysis of VOCs and SVOCs (PAHs) according to EPA Methods 8260 and 8270.

The rig was moved to B-9, located on the south side of the 15,000 gallon UST. Soil samples were collected at 3-5 and 5-7 feet b.g. and screened with a PID. The 5-7 foot interval was selected for laboratory analysis of VOCs and NYSDEC STARS Memo #1 Table #2 VOCs and SVOCs according to EPA Methods 8260 and 8270. The rig then drilled down to 15', but cave-in restricted the final depth to 11 feet below grade. A new two-inch diameter well screen was temporarily inserted into the borehole and the groundwater purged with a disposable bailer. Following purging, groundwater samples were collected with a disposable bailer for laboratory analysis of VOCs and SVOCs (PAHs) according to EPA Methods 8260 and 8270.

The drill rig was then set up at B-11, located at the southeast corner of the 15,000 gallon UST. Please note that B-10 was inaccessible due to the presence of piping from the oil-water separator. Soil samples were collected from 2-4 and 5-7 feet below grade. The samples were then screened with a PID. The 2-4 foot interval was then selected for laboratory analysis of VOCs and NYSDEC STARS Memo #1 Table #2

VOCs and SVOCs according to EPA Method 8260 and 8270.. The rig then drilled down to 17 feet to collect a groundwater sample. A new two-inch diameter well screen was temporarily inserted into the borehole and the groundwater purged with a disposable bailer. Following purging, groundwater samples were collected with a disposable bailer for laboratory analysis of VOCs and SVOCs (PAHs) according to EPA Methods 8260 and 8270.

The drill rig was then moved to B-12, located at the northeast side of the 15,000 gallon UST. Soil samples were collected from 2-4 and 5-7 feet below grade. The samples were then screened with a PID. The 2-4 foot interval was selected for laboratory analysis of VOCs and NYSDEC STARS Memo #1 Table #2 VOCs and SVOCs according to EPA Methods 8260 and 8270. The rig then drilled down to 16 feet below grade to collect a groundwater sample. A new two-inch diameter well screen was temporarily inserted into the borehole and the groundwater purged with a disposable bailer. Following purging, groundwater samples were collected with a disposable bailer for laboratory analysis of VOCs and SVOCs (PAHs) according to EPA Methods 8260 and 8270.

All samples were collected in laboratory supplied containers and packed on ice in coolers after collection and were shipped via a courier service to Veritech Laboratories, Fairfield, New Jersey utilizing chain-of-custody procedures.

Results

The soil deposits of the site consists of silt and fill deposits consisting of sand, cobbles, pebbles, concrete, brick, wood, ambers and glass. Table 1 contains a summary of the soil boring descriptions along with PID readings. Groundwater is encountered at approximately 6 ½ - 8 feet below grade. Due to proximity to Newtown Creek, the water table is likely influenced by tidal fluctuations. The local groundwater flow is assumed to be towards Newtown Creek.

The soil analytical results were compared to the NYSDEC TAGM #4046, dated June 1995, recommended soil cleanup objectives (RSCO) and also compared to the NYSDEC STARS Memo #1, Table 2 TCLP alternative guidance values. Tables 2A, 2B and 2C summarize the soil analytical results and compare the results to the NYSDEC standards and guidance values. A summary of soil analytical results is presented as Figure 3.

Groundwater analytical results were compared to the NYSDEC TOGS 1.1.1 Ambient Water Quality Standards and Guidance Values as class GA (potable water supply). Although the site and vicinity is supplied with water from reservoirs located in upstate New York and there are no public water supply wells located in Brooklyn, New York; the NYSDEC classifies the groundwater as GA (potable water supply). Tables 3A, 3B and 3C summarize the groundwater analytical and compare them to the standards. A summary of groundwater analytical results is presented as Figure 4.

Total VOC concentrations in soil ranged from below the detection limits in B-5 (3'-5'), B-6 (3'-5'), B-7 (3'-

5'), B-9 (5'-7'), B-11 (2'-4') and B-12 (2'-4') to 310.5 ppb in B-4 (3'-5'). Please note that methylene chloride was not incorporated into this figure because of its presence in the method blanks. Methylene Chloride was detected in all of the samples except for B-5. There were no VOCs above the RSCO. However, benzene concentrations in B-4 (54 ppb) were above the NYSDEC STARS guidance value of 14 ppb. Total SVOC analytical results ranged from 672 ppb in B-5 (3'-5') to 30,920 ppb in B-8 (7'-9'). The SVOC analytical results indicated only one compound in B-5 (3'-5'), five compounds in B-11 (2'-4'), and six compounds in B-5 (3'-5'), B-6 (3'-5'), B-7 (3'-5'), B-8 (7'-9'), B-9 (5'-7') and B-12 (2'-4') above the RSCO. All of the borings contained from five to 13 SVOCs above the NYSDEC STARS guidance values.

Borings B-4, B-5 and B-11 contained VOC concentrations in groundwater above class GA standards. B-4 contained 4.5 ppb of benzene (class GA standard of 0.7 ppb) and 5.1 ppb of m&p xylenes (class GA standard of 5.0 ppb). B-5 contained 2.5 ppb of benzene and 43 ppb of naphthalene (class GA standard of 10 ppb). B-11 contained 62 ppb of naphthalene. Acetone was detected in B-5 (37 ppb), B-7 (46 ppb) and B-12 (37 ppb), which is below the class GA standard of 50 ppb. Acetone is a common laboratory contaminant, although it was not detected in the method blank. Total SVOCs in groundwater ranged from below the detection limit in B-6 to 96.3 ppb in B-9. B-5 (23 ppb) and B-11(23 ppb) detected naphthalene above the class GA standards. Please note that naphthalene is analyzed by both EPA method 8260 and 8270. B-9 contained seven SVOCs and B-12 contained six SVOCs above class GA standards. Please note that the highest concentration was 7.6 ppb of chrysene, which has a class GA standard of only 0.002 ppb. The metal analysis indicated B-1, B-2 and GP-4 were below class GA standards for all eight metals. GP-5 contained 26 ppb of arsenic, which is just above class GA standard of 25 ppb. All other metals in GP-5 were below class GA standards.

Conclusions and Recommendations

Based on the results obtained during this additional Phase II Assessment, Fluor Daniel GTI concludes the following:

- Total VOC concentrations in soil ranged from below the detection limits in B-5 (3'-5'), B-6 (3'-5'), B-7 (3'-5'), B-9 (5'-7'), B-11 (2'-4') and B-12 (2'-4') to 310.5 ppb in B-4 (3'-5'). There were no VOCs above the RSCO. 2-Butanone, which was detected in GP-3 during the initial investigation, was not detected in any of the samples, indicating it is limited in extent. However, benzene concentrations in B-4 (54 ppb) were above the NYSDEC STARS guidance value of 14 ppb.

- Total SVOC analytical results ranged from 672 ppb in B-5 (3'-5') to 30,920 ppb in B-8 (7'-9'). The SVOC analytical results indicated only one compound in B-5 (3'-5'), five compounds in B-11 (2'-4'), and six compounds in B-5 (3'-5'), B-6 (3'-5'), B-7 (3'-5'), B-8 (7'-9'), B-9 (5'-7') and B-12 (2'-4') above the RSCO. All of the borings contained from five to 13 SVOCs above the NYSDEC STARS guidance values.

- Borings B-4, B-5 and B-11 contained VOC concentrations in groundwater above class GA standards. B-4 contained 4.5 ppb of benzene (class GA standard of 0.7 ppb) and 5.1

ppb of m&p xylenes (class GA standard of 5.0 ppb). B-5 contained 2.5 ppb of benzene and 43 ppb of naphthalene (class GA standard of 10 ppb). B-11 contained 62 ppb of naphthalene.

- Total SVOCs in groundwater ranged from below the detection limit in B-6 to 96.3 ppb in B-9. B-5 (23 ppb) and B-11 (23 ppb) detected naphthalene above the class GA standards. B-9 contained seven SVOCs and B-12 contained six SVOCs above class GA standards. Please note that the highest concentration was 7.6 ppb of chrysene, which has a class GA standard of only 0.002 ppb.

- The metal analysis indicated B-1, B-2 and GP-4 were below class GA standards for all eight metals. GP-5 contained 26 ppb of arsenic, which is just above class GA standard of 25 ppb. All other metals in GP-5 were below class GA standards. These results indicate that there is limited extent of chromium in the groundwater by the northern loading dock. Please note that the original analytical result for GP-1 was 600 ppb of chromium in groundwater and not 6,000 ppb as originally reported. The decimal point was missing from the fax transmission and the error was noted upon receipt of the final laboratory report. This value is still above the class GA standard. The resample of GP-5 (B-2 from this investigation) indicates metal concentrations within class GA standards and therefore, there must have been laboratory error in the filtering process. Overall, there are minor metal concentrations above class GA standards, but they are not widespread.

Based upon the results obtained, Fluor Daniel GTI recommends the following:

cost?

- If not already done, the current property owner should report a spill for this site based upon the elevated VOCs and SVOCs above NYSDEC STARS guidance values. This is a requirement of the New York State Navigation Law.

- Remove the 550 gallon UST along with the majority of the contaminated soil, to the extent possible.

- Although the 15,000 gallon UST was tested recently and passed, it may be prudent to remove the UST and the majority of the contaminated soil adjacent to the UST, to the extent possible. It should then be replaced with an above ground storage tank.

- Conduct an additional subsurface investigation to complete the delineation of VOC and SVOC contamination in the vicinity of the 15,000 gallon UST and the abandoned 550 gallon UST and to confirm if the soil excavation has remediated the site sufficiently to obtain closure from the NYSDEC. Permanent monitoring wells may be necessary in order to document natural attenuation of VOCs and SVOCs in groundwater.

Disclaimer

Fluor Daniel GTI reviewed information concerning potential presence of contamination on the subject property, and prepared a report in a professional manner using that degree of skill and care exercised for similar conditions by reputable and competent environmental consultants. The information contained in the report including its conclusions, was based on the information which was made available to Fluor Daniel GTI during the investigation and upon the services described, which were performed within the time and budgetary requirements of the customer. Because this report was based on available

information, some its conclusions could be different if the information upon which it is based is determined to be false, inaccurate, misleading or contradicted by additional information.

Fluor Daniel GTI makes no representation concerning the legal significance of its findings or of the value of the property investigated. No third party is entitled to rely upon any information or opinions contained in this report. The report is not intended to satisfy the requirements of the National Contingency Plan.

If you have any questions regarding this report, please contact me at (516) 472-4000.

Sincerely,
Fluor Daniel GTI, Inc.

Albert M. Tonn
Project Manager

enc.

C: Mitch Bernstein (van Ness, Feldman)
Nicholas Hastings (Fluor Daniel GTI)

report2.wpd

TABLE 1
SOIL BORING SUMMARY
BULOVA CORPORATION
77 COMMERCIAL STREET
BROOKLYN, NY

SOIL BORING	DEPTH (ft b.g.)	PID RESULT (PPM)	SOIL LITHOLOGY
B-4	1-3	NA	3" Concrete, Fill.
	3-5	58.3	Coarse Black dry GRAVEL, some brick, little glass.
	5-9	NA	Red Bricks.
	9-10	NA	Concrete.
	10-13	NA	Wood.
B-5	1-3	NA	
	3-5	53.4	Dark Brown to Black dry coarse SAND and GRAVEL. Some cobbles.
	5-9	NA	Red Bricks.
	9-10	NA	Concrete.
B-6	1-3	NA	5" Concrete.
	3-5	23.8	Dark Brown coarse SAND, some gravel, trace silt.
	7-8 1/2	NA	Void, standing water present.
	9-9 1/2	12.8	Black coarse GRAVEL, red bricks at 9 1/2 feet below grade.
B-7	1-3	NA	
	3-5	35.1	Red dry Medium to Fine SAND, trace gravel, trace silt, trace coarse sand.
	7-9	NA	Red Brick at 7' (poor recovery-5%). Brown gravel and cobbles.
B-8	1-3	NA	4" Concrete, Fill.
	3-5	92.8	Dark Brown to Black Dry Coarse SAND. Little cobble, Little med. to fine san
	7-9	140.0	Saturated Brown Coarse to Medium SAND. little silt, little cobble.
B-9	1-2	NA	4" Concrete, 6" Red Brick, Fill.
	3-5	132.0	Brown to Black Coarse SAND, Little cobble, Little medium sand.
	5-7	139.0	Wet Dark Brown Fine SAND, some silt, little cobble.
B-11	1-2	NA	5" Concrete, Fill.
	2-4	128.0	Light Brown Medium to Fine SAND, some black staining. Little sand, trace silt.
	5-7	80.5	Brown to Black Wet to Saturated Fine SAND, little silt, Black staining at 7'.
B-12	1-2	NA	6" Concrete, Black Fill.
	2-4	90.2	Black ASH and Coarse GRAVEL, little silt, trace cinders, Red Brick at 4'
	5-7	59.9	Red Brick (poor recovery - 15%). Some black ash and gravel.

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TABLE 2B
BULOVA CORPORATION
77 COMMERCIAL STREET
BROOKLYN, NEW YORK
SUMMARY OF UST SOIL ANALYTICAL RESULTS
VOLATILE AND SEMI-VOLATILE ORGANIC COMPOUNDS COMPARED TO NYSDEC STARS MEMO #1

COMPOUND	GUIDANCE VALUE	B-4 [illegible] 11/17/98	B-5 [illegible] 11/18/98	B-6 [illegible] 11/18/98	B-7 [illegible] 11/19/98	B-8 [illegible] 11/20/98	B-9 [illegible] 11/20/98	B-11 [illegible] 11/20/98	B-12 [illegible] 11/20/98
Benzene	14	54	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	100	16	ND	ND	ND	ND	ND	ND	ND
Toluene	100	35	ND	ND	ND	ND	ND	ND	ND
O-Xylene	100	15	ND	ND	ND	ND	ND	ND	ND
M+P Xylene	100	40	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	100	13	ND	ND	ND	ND	ND	ND	ND
n-propylbenzene	100	28.8	ND	ND	ND	ND	ND	ND	ND
p-Isopropyltoluene	100	NA	NA	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	100	43	ND	ND	ND	ND	ND	ND	ND
1,3,5-trimethylbenzene	100	32	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	100	ND	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	100	14	ND	ND	ND	ND	ND	ND	ND
t-Butylbenzene	100	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	200	320	ND	130J	63J	280	740	290	580J
Acenaphthylene	–	47J	ND	200	98J	270	170J	110J	1700
Anthracene	1,000	120J	ND	1240	240	1380	1200	570	650J
Fluorene	1,000	46J	ND	880	100J	870	810	380	640J
Phenanthrene	1,000	418	38J	4000	910	4400	4300	2810	2300
Pyrene	1,000	1100	190J	3400	1300	5300	5500	2600	2300
Acenaphthene	400	ND	ND	720	86J	550	820	430	ND
Benzo(a)anthracene	0.04	540	65J	2500	650	2500	2300	1250	1400
Fluoranthene	1,000	710	98J	4700	1400	5700	4500	2700	1700
Benzo(b)fluoranthene	1,000	1000	100J	2800	510	2810	2700	1200	1500
Benzo(k)fluoranthene	0.04	460	54J	1000	320	960	1200	500	950J
Chrysene	0.04	570	71J	2300	600	2400	2200	1200	1710
Benzo(a)pyrene	0.04	610	82J	2200	500	2300	2300	1600	1500
Benzo(g,h,i)perylene	0.04	290	47J	800	324	700	700	360	470J
Indeno(1,2,3-cd)pyrene	0.04	280	ND	570	270	710	700	340	430J
Dibenz(a,h)anthracene	1,000	110J	ND	66J	67J	70J	160J	ND	230J

Guidance Values based upon NYSDEC STARS Memo #1 dated August 1992.

Samples analyzed by EPA Methods 8260/8270. Note: Naphthalene reported from EPA 8270 analysis.

Results reported in ug/kg (ppb).

NA- Not Analyzed

J = Estimated value when a compound is detected at less than the specified detection limit.

[illegible]

TABLE 2A
BULOVA CORPORATION
[illegible] COMMERCIAL STREET
BROOKLYN, NEW YORK
SUMMARY OF SOIL SAMPLING RESULTS
VOLATILE ORGANIC COMPOUNDS

COMPOUND	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
ACETONE	200	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
BROMOMETHANE	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	200	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROETHANE	1,900	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROFLUOROMETHANE	-	ND	ND	8.1JB	2.3JB	4.4JB	3.5JB	3.7JB	5.2JB	
METHYLENE CHLORIDE	100	43B	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHENE	400	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	200	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-BUTANONE	500	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	300	ND	ND	ND	ND	ND	ND	ND	ND	ND
CIS-1,2-DICHLOROETHENE	250	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROFORM	300	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROETHANE	100	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-CHLOROETHYL VINYL ETHER	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-HEXANONE	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-METHYL-2-PENTANONE	1	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-TRICHLOROETHANE	800	8.5J	ND	ND	ND	ND	ND	ND	ND	ND
CARBON TETRACHLORIDE	600	ND	ND	ND	ND	ND	ND	ND	ND	ND
ACROLEIN	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
BROMODICHLOROMETHANE	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-DICHLOROPROPANE	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE	700	ND	ND	ND	ND	ND	ND	ND	ND	ND
DIBROMOCHLOROMETHANE	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLOROETHANE	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
BENZENE	60	8.6	ND	ND	ND	ND	ND	ND	ND	ND
BROMOFORM	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
TETRACHLOROETHENE	1,400	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-TETRACHLOROETHANE	600	ND	ND	ND	ND	ND	ND	ND	ND	ND
ACRYLONITRILE	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOLUENE	1,500	33	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROBENZENE	1,700	ND	ND	ND	ND	ND	ND	ND	ND	ND
ETHYL BENZENE	5,500	56	ND	ND	ND	ND	ND	ND	ND	ND
STYRENE	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
META + PARA-XYLENES	1,200	49	ND	ND	ND	ND	ND	ND	ND	ND
ORTHO-XYLENE	1,200	18	ND	ND	ND	ND	ND	ND	ND	ND
CARBON DISULFIDE	2,700	ND	ND	ND	ND	ND	ND	ND	ND	ND
CIS-1,3 DICHLOROPROPENE	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
DI-ISOPROPYL ETHER	400	ND	ND	ND	ND	ND	ND	ND	ND	ND
T-BUTYL ALCOHOL	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
T-1,3 DICHLOROPROPENE	300	ND	ND	ND	ND	ND	ND	ND	ND	ND
VINYL ACETATE	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	1,600	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	8,500	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	7,900	ND	ND	ND	ND	ND	2.7	ND	ND	ND
NAPHTHALENE	13,000	13	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4 TRIMETHYLBENZENE	-	43	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5 TRIMETHYLBENZENE	-	32	ND	ND	ND	ND	ND	ND	ND	ND
1,2 DIBROMOETHANE	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-ISOPROPYLTOLUENE	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
ISOPROPYLBENZENE	-	13	ND	ND	ND	ND	ND	ND	ND	ND
METHYL-TERT-BUTYL-ETHER	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-BUTYLBENZENE	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-PROPYLBENZENE	-	28	ND	ND	ND	ND	ND	ND	ND	ND
SEC-BUTYLBENZENE	-	14	ND	ND	ND	ND	ND	ND	ND	ND
T-BUTYLBENZENE	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOTAL VOCs		[illegible]	ND	ND	ND	ND	[illegible]	ND	ND	ND

* AS PER TAGM 4046 DATED JUNE 1992, TOTAL VOCs <10,000 PPB

RESULTS RECORDED IN UG/KG (PPB)

J - ESTIMATED VALUE, BELOW METHOD QUANTITATION LIMIT, ABOVE INSTRUMENT DETECTION LIMIT

R-RESULTS UNUSABLE DUE TO LOW RESPONSE ON LABORATORY INTERNAL STANDARDS

E- EXCEEDS CALIBRATION RANGE

NA- NOT ANALYZED

B- FOUND IN METHOD BLANK, NOT INCLUDED IN TOTAL VOCs

SAMPLES ANALYZED BY EPA METHOD 8260

NOTE: B-1, B-2, B-3 AND B-10 WERE NOT SAMPLED

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TABLE 2C
BULOVA CORPORATION
77 COMMERCIAL STREET
BROOKLYN, NEW YORK
SUMMARY OF SOIL SAMPLING RESULTS
SEMI-VOLATILE ORGANIC COMPOUNDS COMPARED TO NYSDEC TAGM RSCO

COMPOUND	RECOMMENDED SOIL CLEANUP OBJECTIVE*	B-1 [illegible] 11/19/96	B-6 [illegible] 11/19/96	B-4 [illegible] 11/19/96	B-7 [illegible] 11/19/96	B-4 [illegible] 10/22/96	B-2 [illegible] 11/20/96	B-1 [illegible] 11/20/96	B-12 [illegible] 11/20/96
Naphthalene	13,000	320	ND	130J	53J	290	740	290	580J
Acenaphthylene	41,000	47J	ND	200	86J	270	170J	110J	1700
Acenaphthene	50,000	ND	ND	720	85J	550	920	430	ND
Fluorene	50,000	46J	ND	660	100J	670	810	380	640J
Phenanthrene	50,000	410	58J	4000	910	4400	4300	2800	2300
Anthracene	50,000	120J	ND	1200	240	1300	1200	670	650J
Fluoranthene	50,000	710	95J	4700	1400	5700	4500	2700	1700
Pyrene	50,000	1100	100J	5400	1300	5300	5500	2500	3300
Benzo (a) anthracene	224	540	65J	2500	650	2500	2300	1200	1400
Chrysene	400	670	71J	2300	600	2400	2200	1200	1700
Benzo (b) fluoranthene	224	1000	100J	2900	510	2800	2700	1200	1600
Benzo (k) fluoranthene	224	460	54J	1000	320	960	1200	500	990J
Benzo (a) pyrene	61 or MDL	810	82J	2200	500	2300	2300	1000	1500
Indeno (1,2,3-cd) pyrene	3,200	280	ND	570	270	710	700	340	430J
Dibenzo (a,h) anthracene	14 or MDL	110J	ND	66J	97J	70J	160J	ND	230J
Benzo (ghi) perylene	50,000	290	47J	600	320	700	760	360	470J
Total SVOCs	500,000	6913	672	29146	7461	30920	30380	15580	19080

SAMPLES ANALYZED BY EPA METHOD 8270

*AS PER TAGM #4046 DATED June 1995, TOTAL sVOCs <500,000 PPB

RESULTS RECORDED IN UG/KG (PPB)

J - ESTIMATED VALUE, BELOW METHOD QUANTITATION LIMIT, ABOVE INSTRUMENT DETECTION LIMIT

R-RESULTS UNUSABLE DUE TO LOW RESPONSE ON LABORATORY INTERNAL STANDARDS.

E- EXCEEDS CALIBRATION RANGE

NA- NOT ANALYZED

MDL - METHOD DETECTION LIMIT

Bulova Brooklyn/SVOCSOIL.wk4

TABLE 3B
BULOVA CORPORATION
77 COMMERCIAL STREET
BROOKLYN, NEW YORK
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
SEMI-VOLATILE ORGANIC COMPOUNDS

COMPOUND	CLASS GA STANDARDS	B-4 11/19/96	B-5 11/19/96	B-6 11/19/96	B-7 11/19/96	B-8 11/20/96	B-9 11/20/96	B-10 11/20/96	B-12 11/20/96
Naphthalene	10	6.7	23	ND	ND	ND	2.9J	23	ND
Flourene	50	2.6J	17	ND	ND	ND	2.8J	4.9J	ND
Phenanthrene	50	2.3J	14	ND	1.2J	1.1J	14	5.1	5.5J
Pyrene	50	ND	1.2J	ND	1.4J	1.3J	11	1.9J	5.6J
Fluoranthene	50	ND	2.5J	ND	2.0J	1.4J	17	2.5J	9.5J
Chrysene	0.002	ND	ND	ND	ND	ND	7.6	ND	4.2J
Benzo(a)pyrene	ND	ND	ND	ND	ND	ND	7.4	ND	3.9J
Indeno(1,2,3-cd)pyrene	0.002	ND	ND	ND	ND	ND	4.7J	ND	2.6J
Diben(a,h)anthracene	50	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	50	ND	ND	ND	ND	ND	3.1J	ND	ND
Acenaphthene	50	5.1	24	ND	2.2J	ND	ND	11	2.4J
Anthracene	50	ND	1.5J	ND	ND	ND	3.9J	ND	2.0J
Benzo (a) anthracene	0.002	ND	ND	ND	ND	ND	6.2	ND	2.7J
Benzo (b) fluoranthene	0.002	ND	ND	ND	ND	ND	6.0	ND	3.5J
Benzo (k) fluoranthene	0.002	ND	ND	ND	ND	ND	6.2	ND	3.1J
Benzo (ghi) perylene	50	ND	ND	ND	ND	ND	4.5J	ND	3.1J
Total SVOCs	–	16.7	67.2	ND	6.8	3.8	96.3	48.6	49.4

* BASED UPON NYSDEC TOGS SERIES #1.1.1 DATED OCTOBER 22, 1993.
RESULTS REPORTED IN UG/L (PPB).
ND: NOT DETECTED
J: ESTIMATED VALUE

Bulova Brooklyn/xls/Table4/svoc water

12

FLUOR DANIEL GTI

TABLE 3A

BULOVA CORPORATION
77 COMMERCIAL STREET
BROOKLYN, NEW YORK
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
VOLATILE ORGANIC COMPOUNDS

COMPOUND	CLASS GA STANDARDS (PPB)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
CHLOROMETHANE	50	ND	1.4	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	2	ND	ND	ND	ND	ND	ND	ND	ND
BROMOMETHANE	5	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROETHANE	5	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROFLUOROMETHANE	5	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHENE	5	ND	ND	ND	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	5	ND	ND	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	5	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	5	ND	ND	ND	ND	ND	ND	ND	ND
CIS-1,2-DICHLOROETHENE	5	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROFORM	7	ND	ND	ND	ND	ND	ND	ND	ND
BROMOCHLOROMETHANE	5	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-TRICHLOROETHANE	5	ND	ND	ND	ND	ND	ND	ND	ND
CARBON TETRACHLORIDE	5	ND	ND	ND	ND	ND	ND	ND	ND
BENZENE	0.7	4.5	2.5	ND	ND	ND	ND	ND	ND
1,2-DICHLOROETHANE	5	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE	5	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROPROPANE	5	ND	ND	ND	ND	ND	ND	ND	ND
BROMODICHLOROMETHANE	50	ND	ND	ND	ND	ND	ND	ND	ND
DIBROMOMETHANE	5	ND	ND	ND	ND	ND	ND	ND	ND
CIS-1,3-DICHLOROPROPENE	5	ND	ND	ND	ND	ND	ND	ND	ND
TOLUENE	5	3.4	1.7	ND	ND	ND	ND	ND	ND
TRANS-1,3-DICHLOROPROPENE	5	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLOROETHANE	5	ND	ND	ND	ND	ND	ND	ND	ND
TETRACHLOROETHENE	5	ND	ND	ND	ND	ND	ND	ND	ND
DIBROMOCHLOROMETHANE	50	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROBENZENE	5	ND	ND	ND	ND	ND	ND	ND	ND
ETHYLBENZENE	5	1.1	1.0	ND	ND	ND	ND	ND	ND
META + PARA-XYLENES	5	8.1	3.7	ND	ND	ND	ND	ND	ND
ORTHO-XYLENE	5	3.1	1.6	ND	ND	ND	ND	ND	ND
STYRENE	5	ND	ND	ND	ND	ND	ND	ND	ND
BROMOFORM	50	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-TETRACHLOROETHANE	5	ND	ND	ND	ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	5	ND	ND	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	4.7	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	4.7	ND	ND	ND	ND	ND	ND	ND	ND
ACETONE	50	ND	37	ND	48	ND	ND	ND	ND
2-BUTANONE	50	ND	ND	ND	ND	ND	ND	ND	37
4-METHYL-2-PENTANONE	50	ND	ND	ND	ND	ND	ND	ND	ND
2-CHLOROETHYLVINYLETHER	50	ND	ND	ND	ND	ND	ND	ND	ND
2-HEXANONE	50	ND	ND	ND	ND	ND	ND	ND	ND
ACROLEIN	50	ND	ND	ND	ND	ND	ND	ND	ND
ACRYLONITRILE	5	ND	ND	ND	ND	ND	ND	ND	ND
VINYL ACETATE	50	ND	ND	ND	ND	ND	ND	ND	ND
T-BUTYL ALCOHOL	50	16	18	ND	ND	ND	ND	ND	ND
DIISOPROPYL ETHER	50	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-TRIMETHYLBENZENE	5	3.1	3.4	ND	ND	ND	ND	ND	ND
1,3,5-TRIMETHYLBENZENE	5	ND	ND	ND	ND	ND	ND	ND	ND
4-ISOPROPYL TOLUENE	5	2.2	1.2	ND	ND	ND	ND	ND	ND
ISOPROPYLBENZENE	5	1.2	1.7	ND	ND	ND	ND	ND	ND
MTBE	50	ND	ND	ND	ND	ND	ND	ND	ND
N-BUTYLBENZENE	5	ND	ND	ND	ND	ND	ND	ND	ND
N-PROPYLBENZENE	5	4.0	1.8	ND	ND	ND	ND	ND	ND
NAPHTALENE	10	3.4	4.3	ND	ND	ND	1.7	4.3	3.2
SEC-BUTYLBENZENE	5	ND	ND	ND	ND	ND	ND	ND	ND
T-BUTYLBENZENE	5	ND	ND	ND	ND	ND	ND	ND	ND
TOTAL VOCS		[illegible]	[illegible]	ND	ND	ND	[illegible]	[illegible]	[illegible]

* BASED UPON NYSDEC TOGS SERIES #1.1.1 DATED OCTOBER 22, 1993

RESULTS RECORDED IN UG/L (PPB)

NA: NOT ANALYZED

ND: NOT DETECTED

SAMPLES ANALYZED BY EPA METHOD 8260

Bulova Brooklyn/GWRESULTS.wk4/VOCs

FLUOR DANIEL GTI

TABLE 3C
BULOVA CORPORATION
77 COMMERCIAL STREET
BROOKLYN, NEW YORK
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
DISSOLVED METALS

COMPOUND	CLASS GA STANDARDS*	GP-1 17/05/96	GP-5 17/06/96	B-7 [illegible]	B-12 [illegible]
ARSENIC	25	12	26	13	ND
MERCURY	2	ND	ND	ND	ND
BARIUM	1000	93	100	280	140
CADMIUM	10	ND	ND	ND	ND
CHROMIUM	50	ND	ND	ND	ND
LEAD	25	6.6	ND	ND	ND
SILVER	50	ND	ND	ND	ND
SELENIUM	10	ND	ND	ND	ND

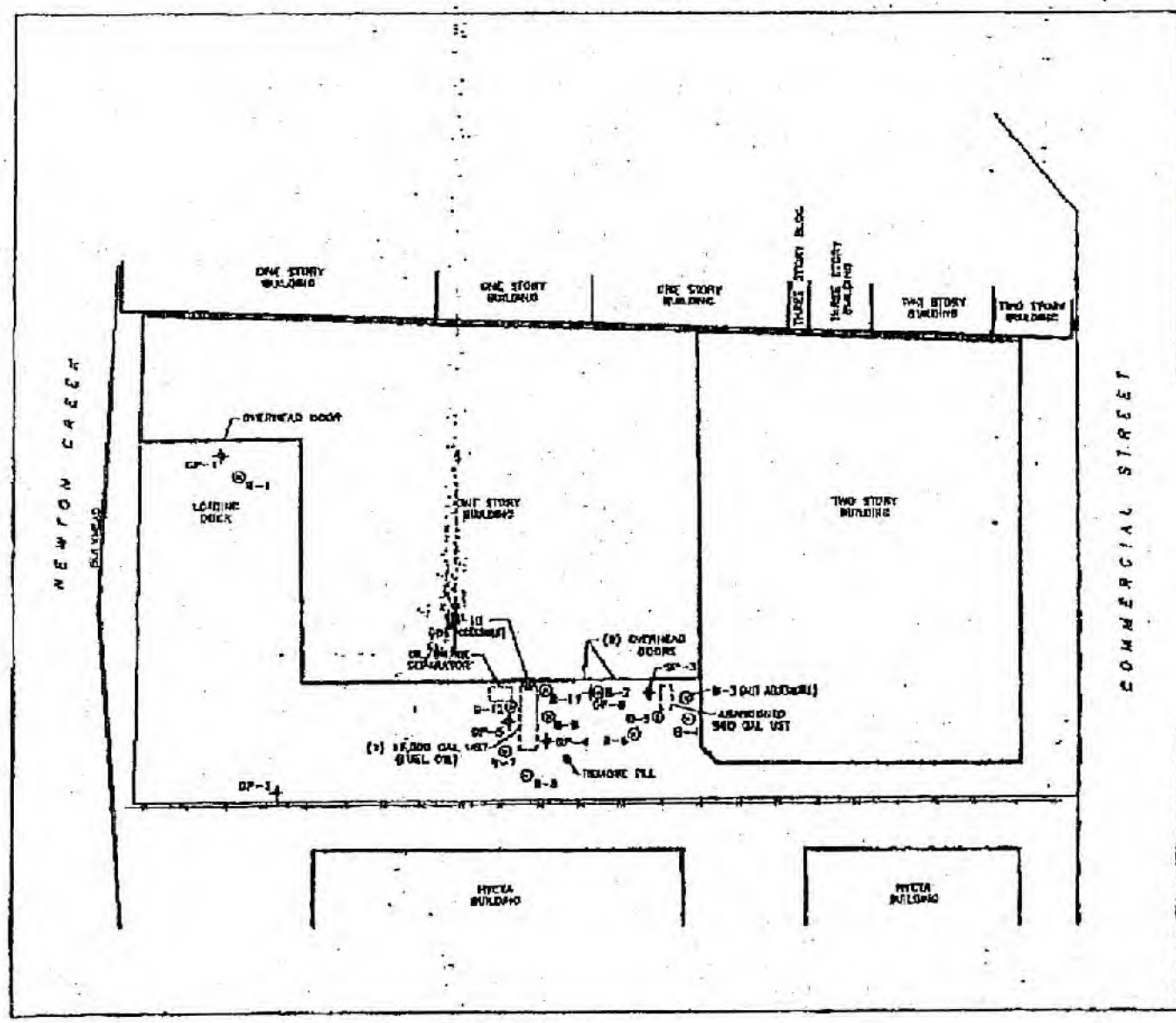
* BASED UPON NYSDEC TOGS SERIES #1.1.1 DATED OCTOBER 22, 1993

RESULTS RECORDED IN UG/L (PPB)

ND: NOT DETECTED

Bulova Brooklyn\GWRESULTS.xls\Um-kpk

FLUOR DANIEL GTI



LEGEND

- ⊙ SOIL BORING/ TEMPORARY MONITORING WELL
- + GEOPROBE POINT
- UST UNDERGROUND STORAGE TANK
- —×— FENCE

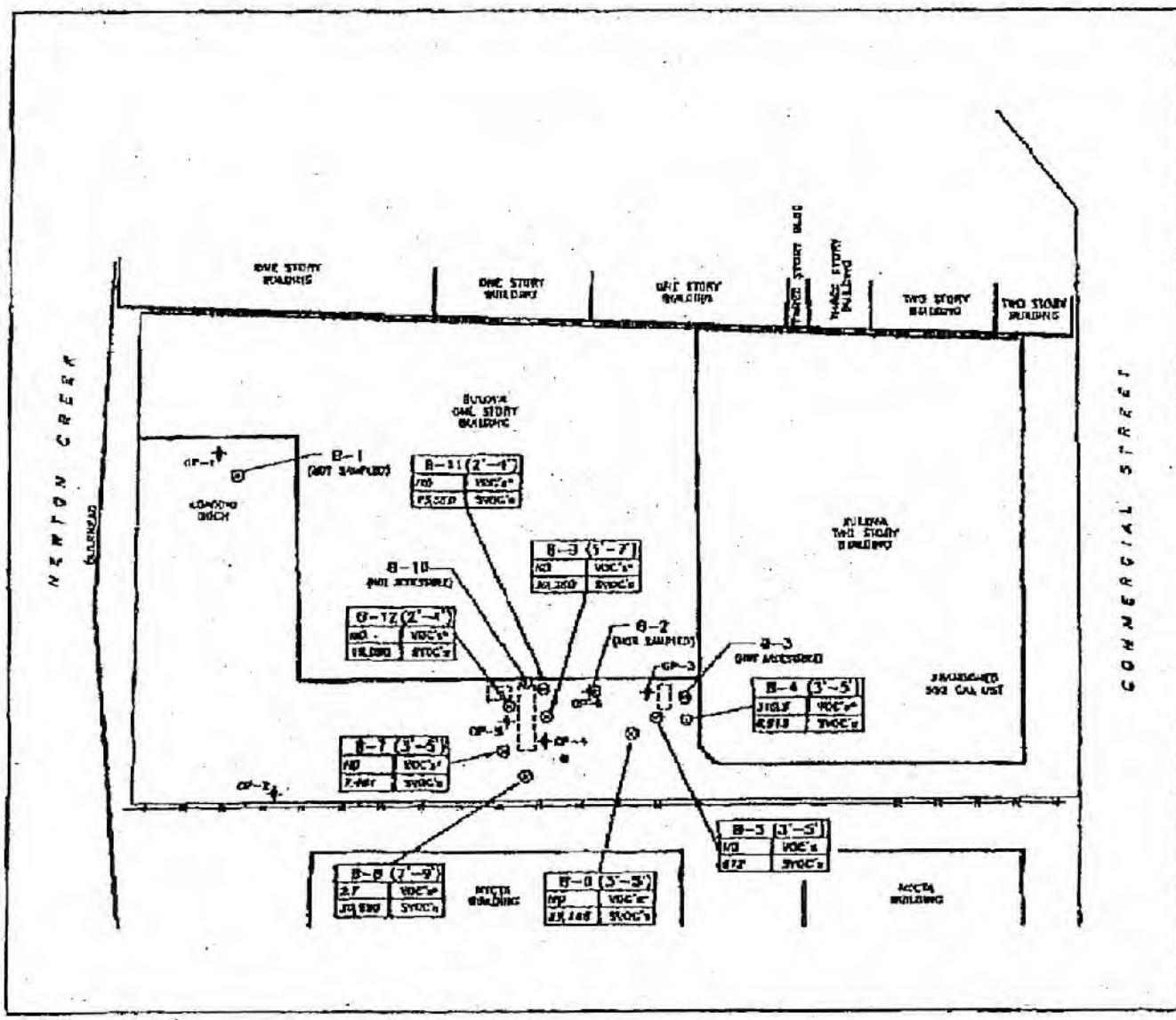
0 50 100
SCALE FEET

SUNOCO GAS & OIL

REV. NO.:	DRAWING DATE: 11/30/98	CAD FILE: 77G25T08

SITE PLAN

CLIENT: BULOVA CORPORATION	FILE:
LOCATION: 77 COMMERCIAL STREET GREENPOINT, BROOKLYN N.Y.	FIG/PG:
DRAWN BY: SUE SOURGE / DESIGNED: TRS / PROJECT NO.: 197742	FIGURE: 2



LEGEND

- ⊙ SOIL BORING/ TEMPORARY MONITORING WELL
- + GEOPROBE POINT
- UST UNDERGROUND STORAGE TANK
- —x—x— FENCE
- ● REMOTE FILL

DATA BOX LEGEND

GP-3	
ND 3.87	Total Volatile Organic Compounds (ppb)
ND,750	Total Semi-Volatile Organic Compounds (ppb)

ND – NOT DETECTED ABOVE THE METHOD DETECTION LIMIT

NA – NOT ANALYZED

ppb – PARTS PER BILLION

* – DOES NOT INCLUDE METHYLENE CHLORIDE BECAUSE OF ITS PRESENCE IN THE METHOD BLANK.

0 50 100
SCALE FEET

FLUOR DANIEL GTI

101-4 CROSS DRIVE
MILLBROOK, NY. 10941
(914) 471-4100

REV. NO.:	REPORTED DATE: 11/30/98	DRAW FILE: 77425N10

SUMMARY OF SOIL ANALYTICAL RESULTS NOVEMBER 19-20, 1998

CLIENT: BULOVA CORPORATION

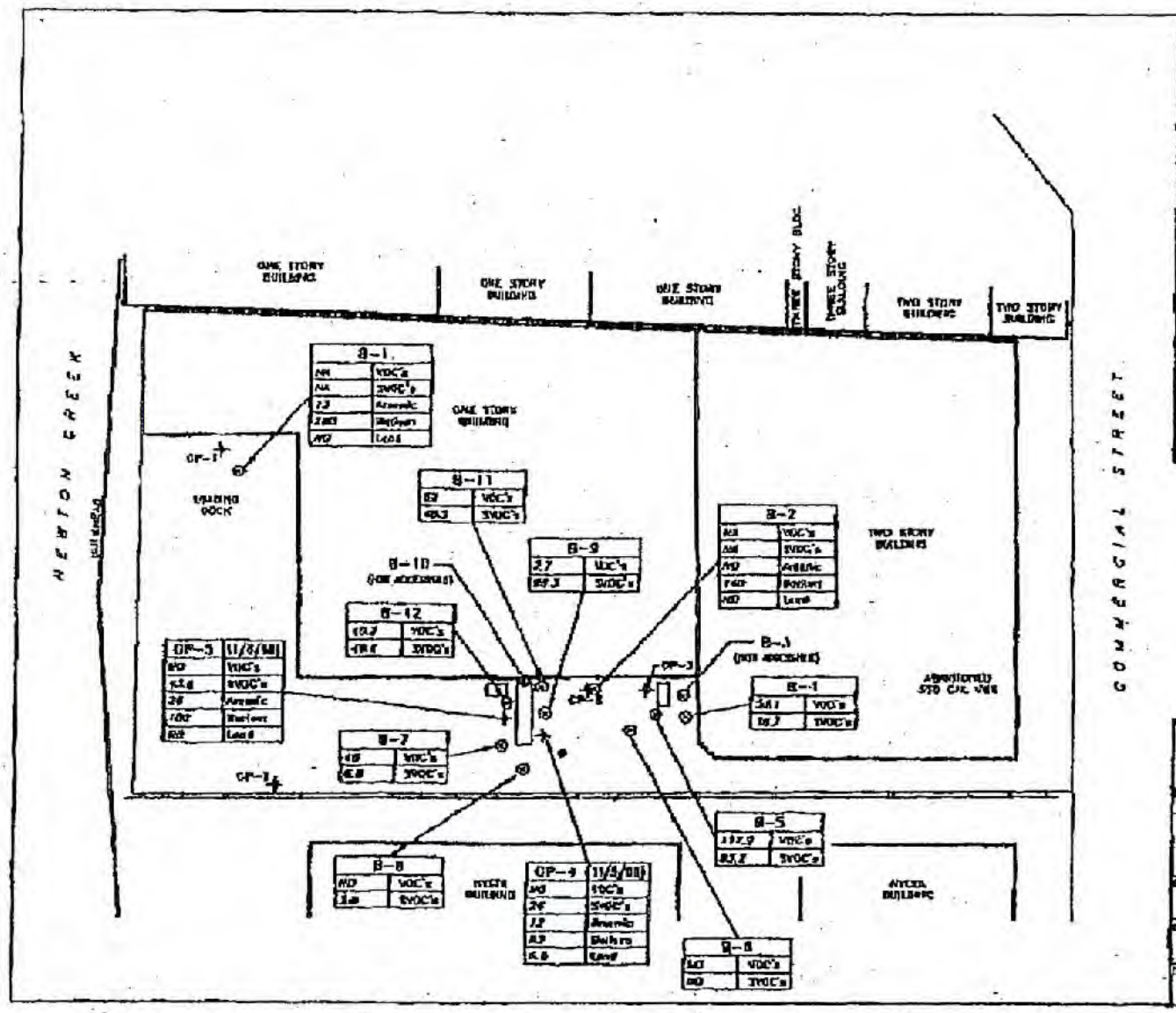
FIG. NO.

LOCATION: 77 COMMERCIAL STREET GREENPOINT, BROOKLYN N.Y.

PROJ. NO.

REVISION: SEE SOURCE	DRAWN: TRS	PROJECT NO.: 107742	FIGURE 3

16



LEGEND

- SOIL BORING/ TEMPORARY MONITORING WELL
- CENTROID POINT
- UST UNDERGROUND STORAGE TANK
- FENCE
- REMOTE FILL

DATA BOX LEGEND

CP-3	
[illegible]	Total Volatile Organic Compounds (ppb)
[illegible]	Total Semi-Volatile Organic Compounds (ppb)
[illegible]	Arsenic (ppm)
[illegible]	Mercury (ppb)
[illegible]	Lead (ppb)

ND – NOT DETECTED ABOVE THE METHOD DETECTION LIMIT

NA – NOT ANALYZED

ppb – PARTS PER BILLION

ppm – PARTS PER MILLION

0 50 100
SCALE FEET

FLINT DANIEL ETI

HI-1 TOWN DRIVE
HOLBROOK, NY, 11741
(516) 472-[illegible]

REV. NO.	DRAWING DATE: 11/30/98	DWG FILE: 774[illegible]TTD

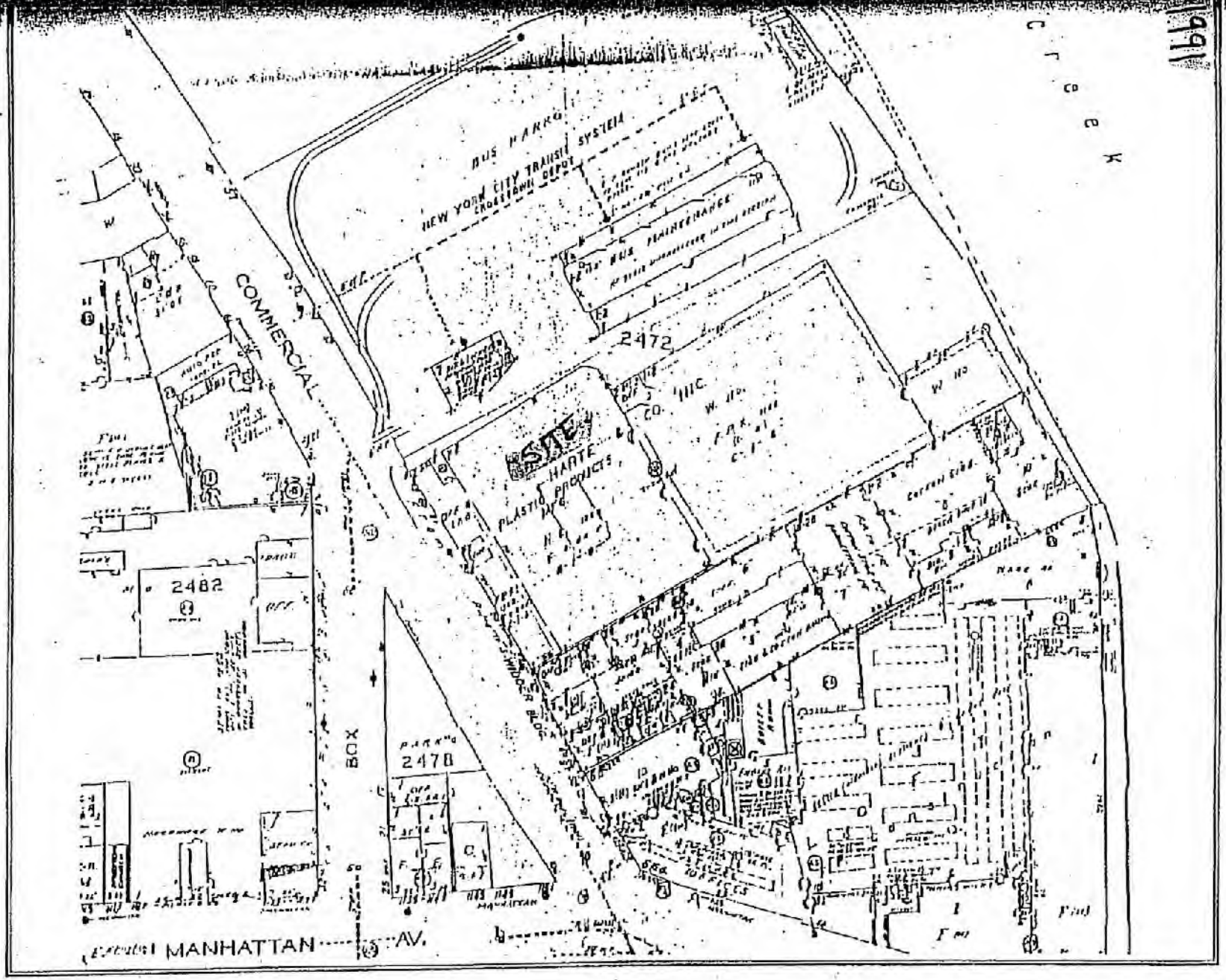
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS NOVEMBER 18-20, 1998

CLIENT: BULOVA CORPORATION

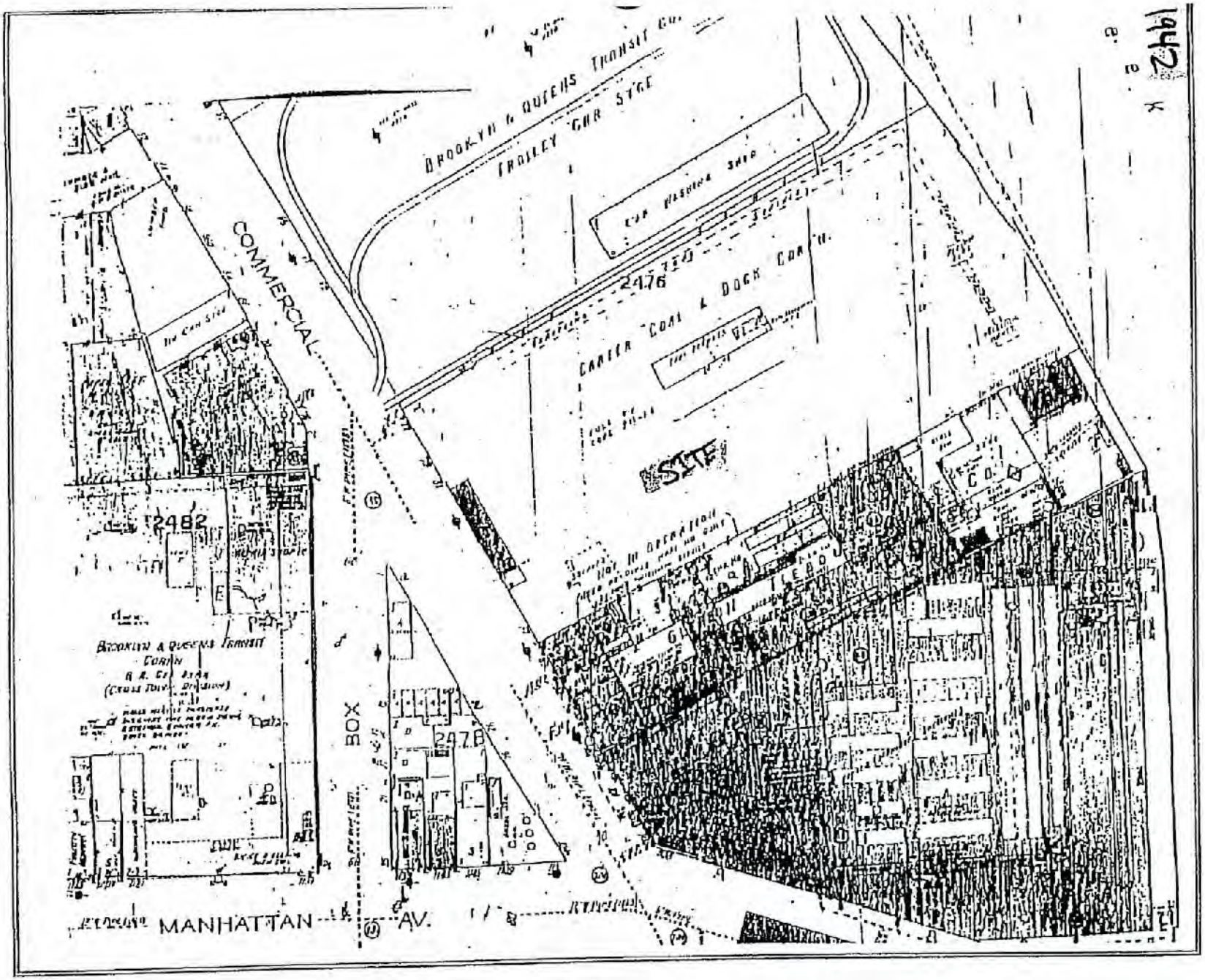
LOCATION: 77 COMMERCIAL STREET GREENPOINT, BROOKLYN N.Y.

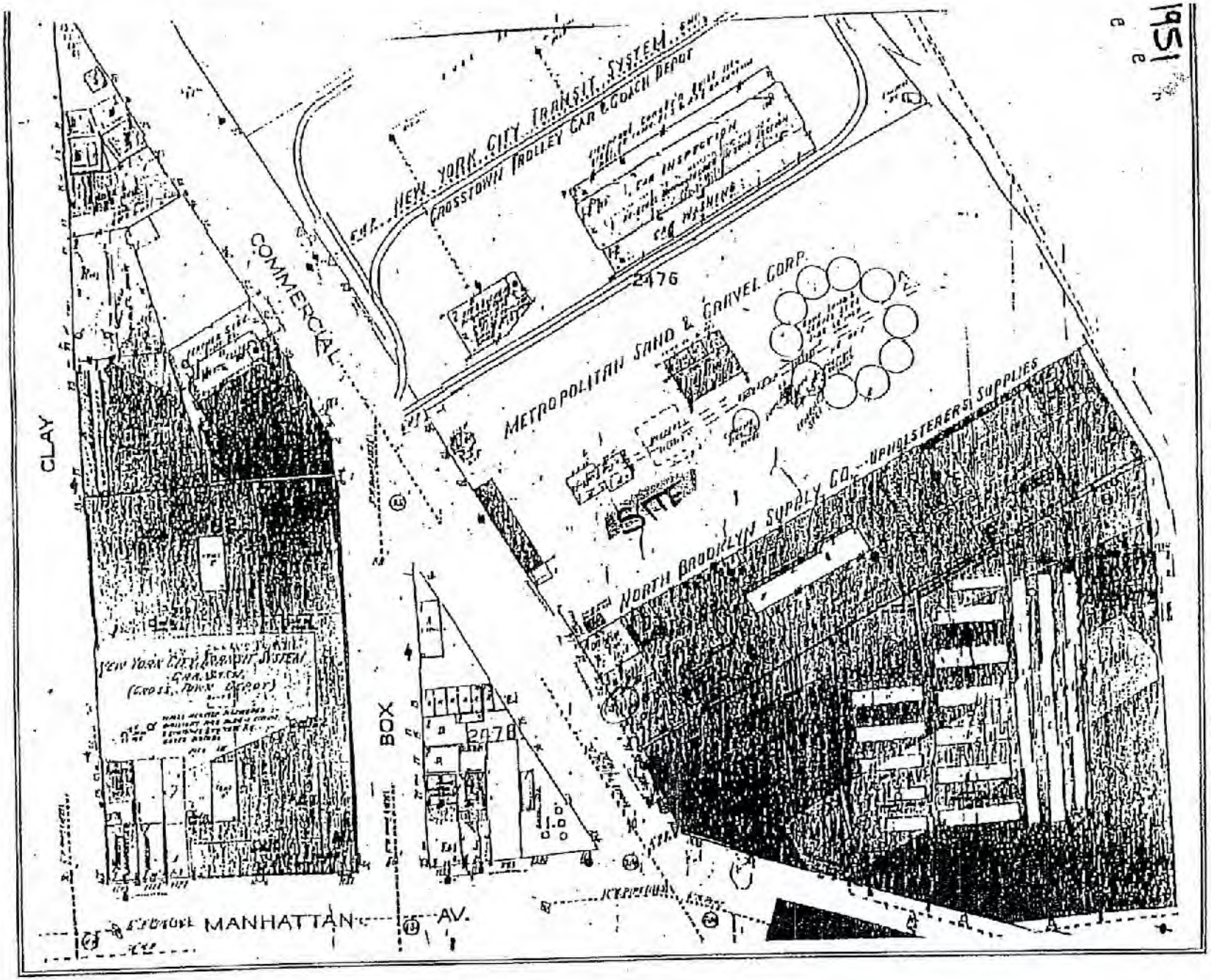
DESIGN: SEE SOURCE	DRAWN: TMS	PROJECT NO.: 107742	FIGURE: 4

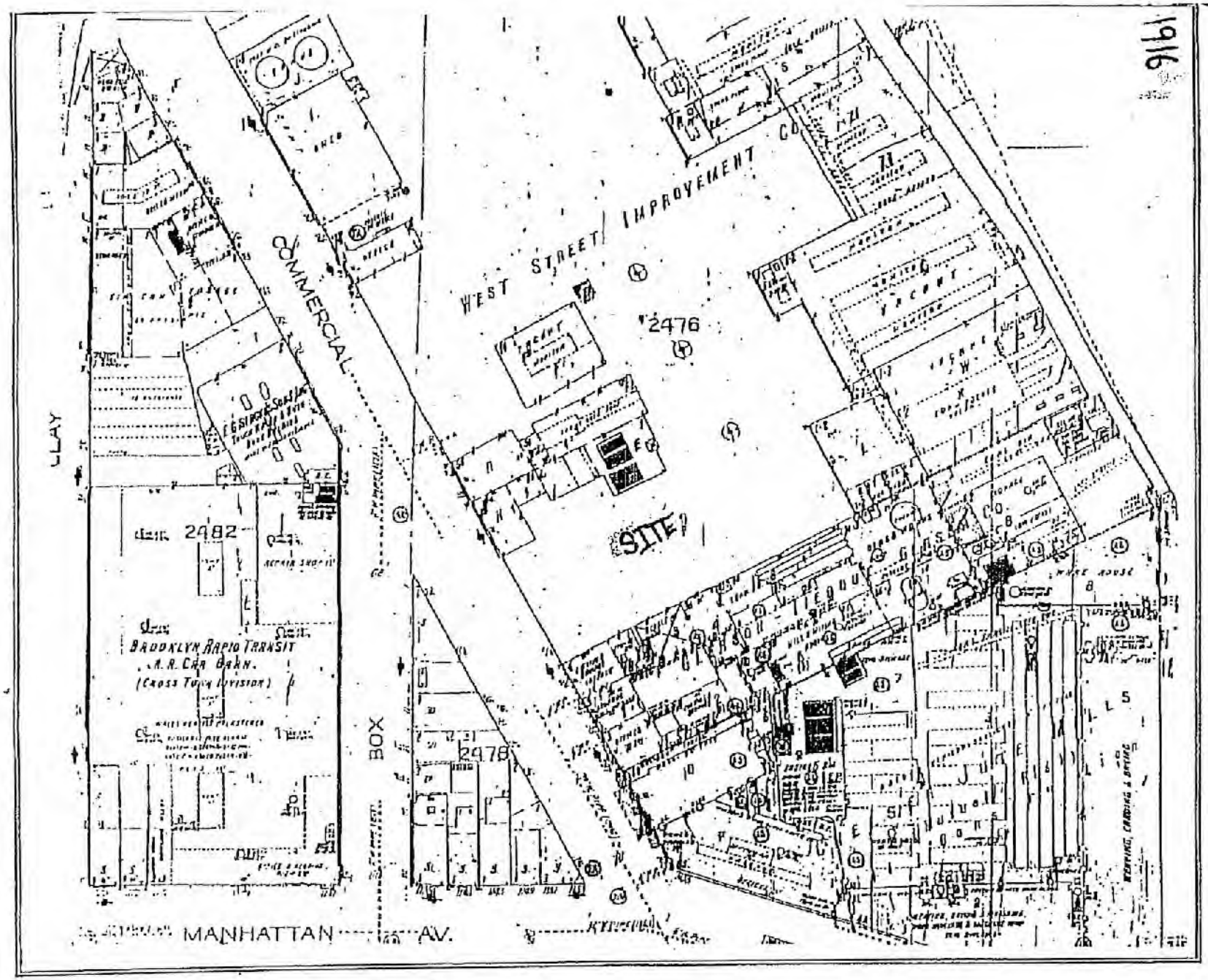
SANBORN FIRE INSURANCE MAPS


BUS PARKING
NEW YORK CITY TRANSIT SYSTEM
CROSSTOWN DEPOT
BUS MAINTENANCE
2472
SITE
HARTE PRODUCTS
PLASTIC MFG.
COMMERCIAL
2482
2478
BOX
MANHATTAN AV.

1991


BROOKLYN & QUEENS TRANSIT CO.
TROLLEY CAR STGE
COMMERCIAL
2476
CARTER COAL & DOCK CO.
SITE
2482
BROOKLYN & QUEENS TRANSIT CORP.
BOX
2478
MANHATTAN AV.


NEW YORK CITY TRANSIT SYSTEM
CROSSTOWN TROLLEY CAR & COACH DEPOT
CAR INSPECTION
CAR WASHING
2476
METROPOLITAN SAND & GRAVEL CORP.
NORTH BROOKLYN SUPPLY CO.
UPHOLSTERERS' SUPPLIES
SITE
COMMERCIAL
CLAY
BOX
2070
MANHATTAN
AV.


1916
WEST STREET IMPROVEMENT CO
COMMERCIAL
BOX
CLAY
2476
SITE
2482
BROOKLYN RAPID TRANSIT
R.R. CAR BARN.
(CROSS TOWN DIVISION)
2478
MANHATTAN AV.

NEW YORK CITY DEPARTMENT OF ASSESSMENT INFORMATION

County. 3
Block.. 2472
Lot.... 410 Easement: Secvol 901
Addr... 77 /87 COMMERCIAL STREET
Owner.. 77 COMMERCIAL LLC C/O
Tax Cl. 4

Attorney Group 115
Exemptions....

Reuc

[Building Information]

Building Class	F1 Gar	Year Built	1960	Coop Apts	
Stories.....	2.00	Buildings	1	Total Units	1
Lot Frontage	217.50	Lot Depth	0490	Apt Number	
Bld. Frontage	200.00	Bldg. Depth	190.00	Condo Number	
Corner Status		Irregular	I		

[Transitional Values]

Assessed...Land	630,000
Assessed..Total	900,800
Exempt.....Land	
Exempt....Total	

[Actual Values]

Assessed....Land	630,000
Assessed...Total	918,000
Exempt.....Land	
Exempt.....Total	

BUILDING CONSTRUCTED IN 1959-1960.

MIDDLETON, KONTOKOSTA ASSOCIATES, LT
Environmental Planners, Engineers and Architects

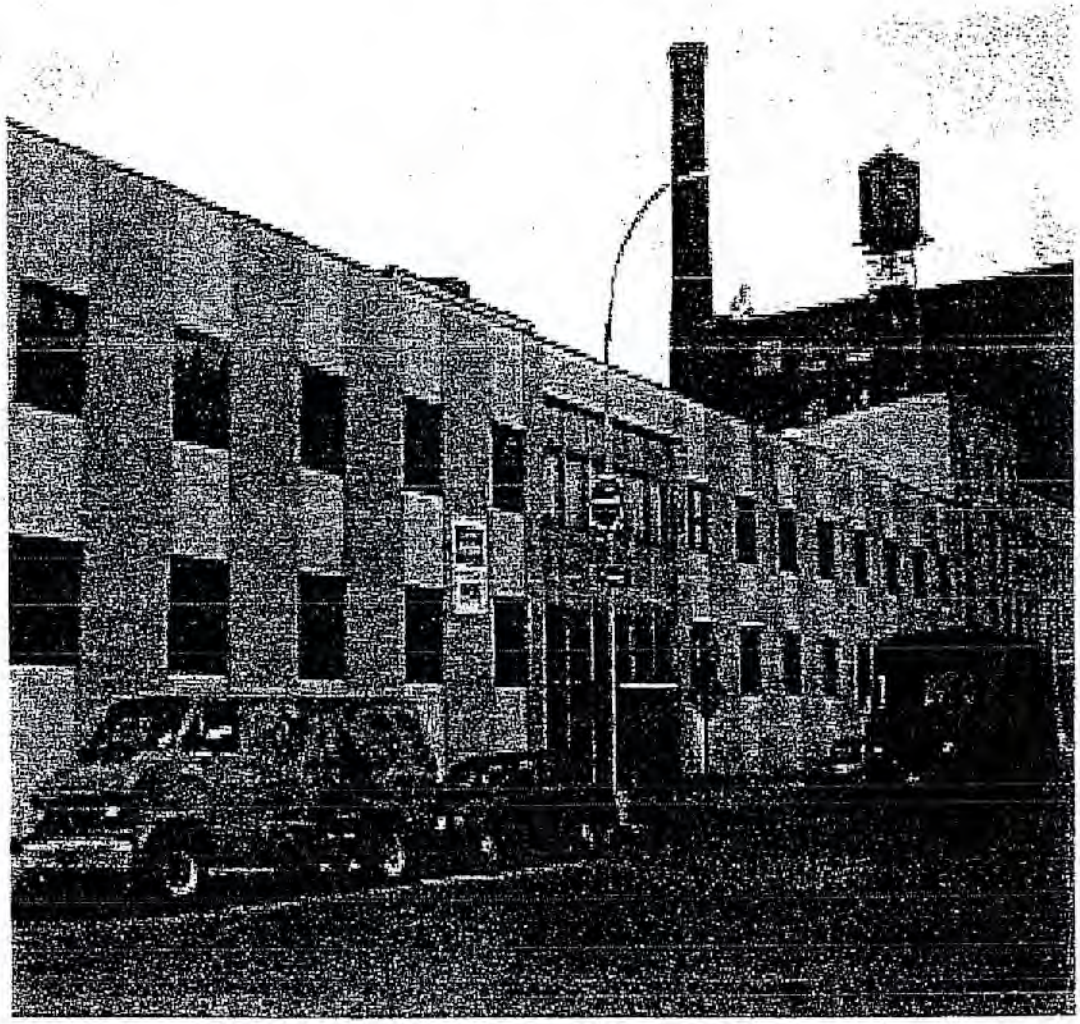
A JOINT VENTURE KONTOKOSTA ASSOCIATES

DONALD J. MIDDLET
E.M. KONTOKOSTA
GARY S. ROGERS, P

UPDATE TO PHASE I ENVIRONMENTAL SITE ASSESSMENT REPOI

Property located at 77 Commercial Street

In Brooklyn, New York



Prepared for the Bulova Watch Company

September 18, 1998

754 DEER PARK AVE., NORTH BABYLON, NY 11703 • 516 321-4300 • FAX: 516 321-4349
43 WEST 54th STREET, NEW YORK CITY, NEW YORK 10019 • 212 582-6100

MIDDLETON, KONTOKOSTA ASSOCIATES, LTD.
Environmental Planners, Engineers and Architects

A JOINT VENTURE KONTOKOSTA ASSOCIATES

DONALD J. MIDDLETON
E.M. KONTOKOSTA, P.E.
GARY S. ROGERS, R.A.

September 18, 1998

Mr. Robert A. Weber
Vice President of Operations
Bulova Watch Company
1 Bulova Avenue
Woodside, NY 11377-7874

RE: Property located at 77 Commercial Street in Brooklyn, New York.

Dear Mr. Weber,

Pursuant to our recent telephone conversation regarding the above referenced property, it was determined that an update to the Phase I Environmental Site Assessment report prepared by Middleton, Kontokosta Associates was required. The original report is an "ASTM" Type report and the report documents the areas that are required under ASTM 1527-94. The above referenced property was reinspected on September 15, 1998.

The subject site is approximately 105,900 square feet in size and there is one (1) 88,000 square foot building on the subject site. The building has a main floor manufacturing area (82,000 square feet), and a second floor mezzanine office area (6,000 square feet). The building has no basement. The building is presently utilized by the United Feather Company for importing and processing feathers (for pillows, comforters, ect..).

The building was constructed in 1959 and was originally utilized by Harte Plastics Company until 1980 for fabrication of plastic products until 1980. The building was transferred and has been utilized by the United Feather Company since 1980. A review of Sanborn Fire Insurance Maps prior to 1959 indicated that the property was utilized by the American Sugar Refining Company as a sugar refinery and as a storage yard for construction material and sand/gravel.

754 DEER PARK AVE., NORTH BABYLON, NY 11703 • 516 321-4300 • FAX: 516 321-4349
43 WEST 54th STREET, NEW YORK CITY, NEW YORK 10019 • 212 582-6100

The reinspection of the site indicated that the manufacturing area had a concrete floor, concrete walls and a corrugated steel ceiling. The second floor office had carpeted floors, sheetrock and wood panel walls and 2 by 2 foot cellulose ceiling tiles. There were three (3) drainage troughs noticed in the manufacturing area and one floor drain noticed in the boiler room. These drains were not dye tested but it is believed that these drains lead to the municipal sewer system and do not drain into an on-site cesspool or drywell (no cesspools observed on the subject site). There were no signs of friable PACM noticed on the corrugated steel ceiling in the manufacturing areas or on the concrete ceiling atop the ceiling tiles in the office areas. There were three (3) 55 gallon drums of detergent noticed in the manufacturing area (for process washing the feathers). None of these drums showed any signs of staining or leakage.

A review of the New York State Department of Environmental Conservation's (NYSDEC), Petroleum Bulk Storage Tank Database indicated that there was a 15,000 gallon underground heating oil storage tank on the subject site. During the previous Phase I Environmental Site Assessment, the building manager reported that this tank was stored in an underground vault (although no drawings were available to verify this statement). The underground tank is properly registered with the New York City Fire Department and the NYSDEC. According to the NYSDEC, the tank was pressure tested in February of 1998 and passed the pressure test (see appendix for tank test letter). The Phase I Environmental Site Assessment that was prepared by EEA indicated that there was a 550 gallon underground gasoline storage tank on the subject site that was abandoned in 1980 by Tanks A Lot (prior to United Feather taking ownership of the property). No documentation regarding this abandonment was available for review during the reinspection of the site.

A review of all Federal, State and local environmental agency records was conducted in order to determine if there were any hazardous waste sites, landfills, spill incidents or cases of improper chemical disposal on the site or any of the surrounding sites which may have an adverse impact on the subject site. The search indicated that there were no USEPA National Priority List (Federal Superfund), or any USEPA CERCLIS sites within a half mile radius of the site. The former owner and occupant of the subject site was identified as a RCRA Hazardous Waste Generator (Harte & Company). It should be noted that there were no USEPA violations noticed for this facility.

A review of the New York State Department of Environmental Conservation's (NYSDEC) Publication "Inactive Hazardous Waste Sites in New York - Volume 1" did not indicate the presence of any Inactive Hazardous Waste Disposal Sites within a mile radius of the subject site. There were twenty one (21) NYSDEC Leaking Underground Storage Tank (LUST), sites within a half mile radius of the subject site. The nearest site is located on the property directly to the west of the subject site (65 Commercial Street). This is an open spill incident that is under investigation by the NYSDEC and it could not be determined if this LUST site would have an apparent adverse impact on the subject site (vertical and horizontal extant of contamination at this site could not be determined). However, it should be noted that this LUST site was not due to a contamination concern from the subject site and the remediation of this spill is the responsibility of the 65 Commercial Street property owner and not the owner of the subject site. None of the other LUST sites would have an apparent adverse impact on the subject site based upon the direction of groundwater flow and distance to the subject site. A review of the New York City Fire Department's Storage Tank files indicated that the 15,000 gallon underground heating oil storage tank is properly registered.

Please feel free to contact my office should you have any questions regarding this inspection or if you need any additional information.

Sincerely,

Donald J. Middleton Jr.

Vice President

APPENDICES

1. ENVIRONMENTAL DATA (SUPPLIED BY THE EDR CORPORATION)

2. SITE PHOTOS

3. MAP OF RADON ZONES

4. NYSDEC TANK TEST SHEET

5. NEW YORK CITY FIRE DEPARTMENT STORAGE TANK INFORMATION

6. SANBORN FIRE INSURANCE MAPS

7. NEW YORK CITY DEPARTMENT OF ASSESSMENT INFORMATION

ENVIRONMENTAL DATA (SUPPLIED BY THE EDR CORPORATION)

The EDR-Transaction Screen™ Map Report

Webber Commercial Street
77 Commercial Street
Brooklyn, NY 11222

Inquiry Number: 0293542.1r

September 16, 1998

Environmental Data Resources, Inc.
an edr company

The Source For Environmental Risk Management Data

3530 Post Road
Southport, Connecticut 06490

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com

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Map Summary - Sites with higher or the same elevation as the Target Property	4
Map Findings	5
Orphan Summary	91

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Area Radon Information	A1
Government Records Searched / Data Currency Tracking Addendum	A2

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

The EDR-Transaction Screen Map Report is a screening tool which maps sites with potential liability or existing environmental liabilities. Specified government databases are searched in accordance with ASTM Standard E 1528-96.

The ASTM E 1528-96 Transaction Screen property due diligence standard consists of four major components: a government records check, an historical inquiry, an owner/occupant questionnaire, and a site survey. This report contains the results of the government records search on the target property and surrounding area in accordance with the government records search requirements of the ASTM E 1528-96 standard.

The results of the government records search in accordance with **QUESTIONS 21 and 22** (page 12) of the standard indicated the following:

QUESTION 21
*Do any of the following **Federal** government record systems list the property or any property within the circumference of the area noted below:*

National Priorities List (NPL)	☐ on the property	☐ Within 1 Mile
CERCLIS List	☐ on the property	☐ Within 1/2 Mile
RCRA-CORRACTS Facilities	☐ on the property	☒ Within 1 Mile
RCRA-TSD Non-CORRACTS Facilities	☐ on the property	☐ Within 1/2 Mile

QUESTION 22
*Do any of the following **state** government record systems list the property or any property within the circumference of the area noted below:*

State equivalent to NPL	☐ on the property	☐ Within 1 Mile
State equivalent to CERCLIS	☐ on the property	☐ Within 1/2 Mile
Leaking Underground Storage Tank List (LUST)	☐ on the property	☒ Within 1/2 Mile
Solid Waste/Landfill Facilities (SWF/LS)	☐ on the property	☐ Within 1/2 Mile

*In accordance with Section 5.6 (page 9) of ASTM E 1528-96, if the answer is (yes) **or unknown**, then the user will have to decide what further action, if any, is appropriate. Answers should be evaluated in light of the other information obtained in the transaction screen process. If the user decides no further inquiry is warranted, the rationale must be documented. If the user decides that further inquiry is warranted, it may be necessary to contact an environmental professional.*

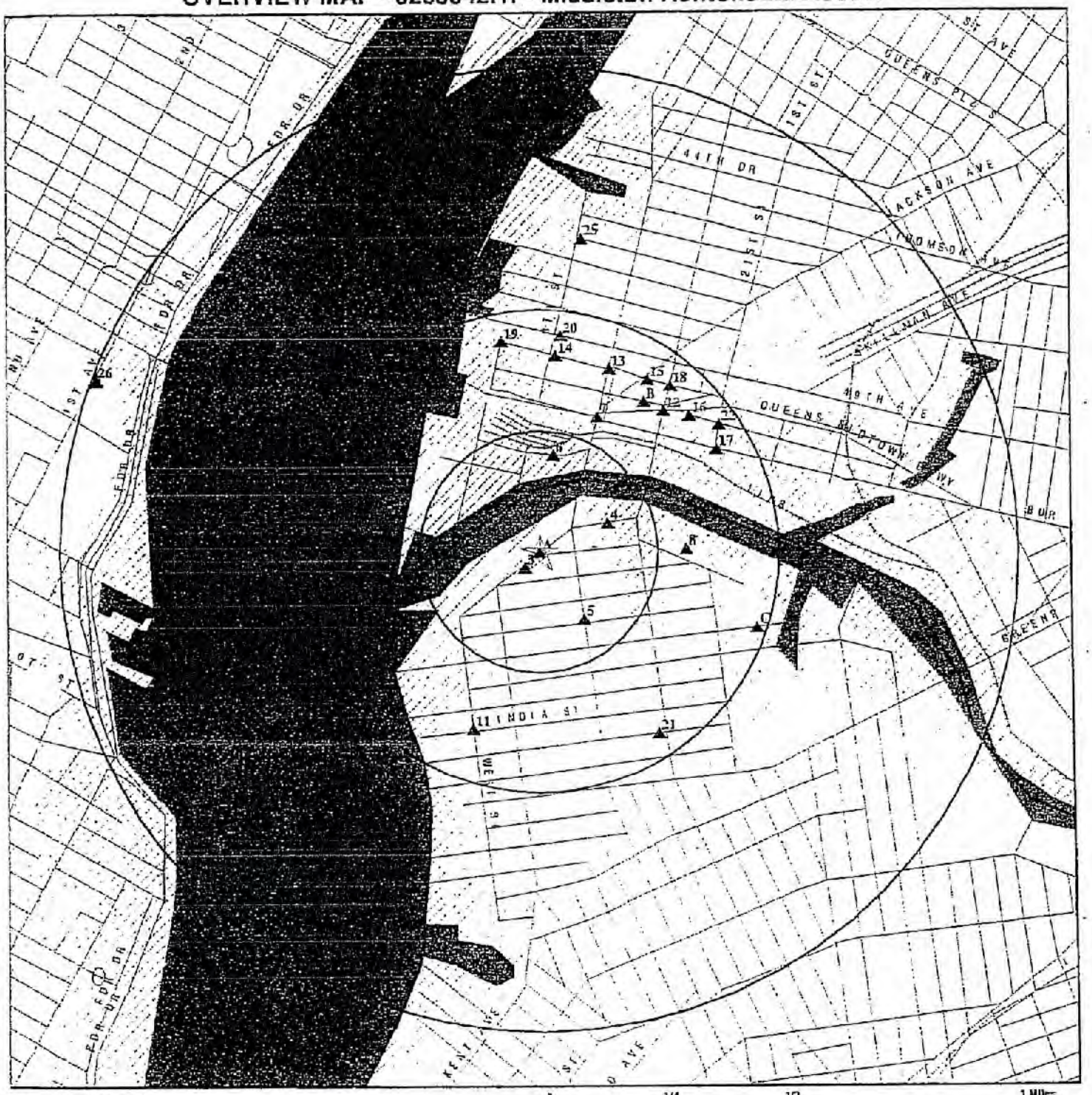
- **Additional Research - Non-ASTM Government Databases**

To provide additional information which may assist in the assessment of other components of the ASTM E 1528-96 Transaction Screen, EDR also searches government databases ***not*** included in Questions 21 and 22 of ASTM E 1528-96. For example, by searching the state underground storage tank database (UST), it may be possible to find out if there is a registered storage tank on the target property. This information may be useful in completing the owner/occupant questionnaire, particularly Question 10.

The results of the search of these additional government records indicated affirmative (yes) responses on the target property for the following government databases:

UST	☒ Yes
RCRIS Lg. Quan. Gen.	☒ Yes

OVERVIEW MAP - 0293542.1r - Middleton Kontokosta Assoc.



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Coal Gasification Sites (if requested)
- National Priority List Sites
- Landfill Sites
- Power transmission lines
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone

TARGET PROPERTY:	Webber Commercial Street	CUSTOMER:-	Middleton Kontokosta Assoc.
ADDRESS:	77 Commercial Street	CONTACT:	Don Middleton
CITY/STATE/ZIP:	Brooklyn NY 11222	INQUIRY #:	0293542.1r
LAT/LONG:	40.7369 / 73.9572	DATE:	September 16, 1998 3:51 pm

MAP FINDINGS SUMMARY SHOWING ALL SITES

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
NPL		1.000	0	0	0	0	NR	0
Delisted NPL		TP	NR	NR	NR	NR	NR	0
RCRIS-TSD		0.500	0	0	1	NR	NR	1
State Haz. Waste		1.000	0	0	0	0	NR	0
CERCLIS		0.500	0	0	0	NR	NR	0
CERC-NFRAP		TP	NR	NR	NR	NR	NR	0
CORRACTS		1.000	0	0	1	1	NR	2
State Landfill		0.500	0	0	0	NR	NR	0
LUST		0.500	1	3	17	NR	NR	21
UST	X	TP	NR	NR	NR	NR	NR	0
AST		TP	NR	NR	NR	NR	NR	0
RAATS		TP	NR	NR	NR	NR	NR	0
RCRIS Sm. Quan. Gen.		TP	NR	NR	NR	NR	NR	0
RCRIS Lg. Quan. Gen.	X	TP	NR	NR	NR	NR	NR	0
HMIRS		TP	NR	NR	NR	NR	NR	0
PADS		TP	NR	NR	NR	NR	NR	0
ERNS		TP	NR	NR	NR	NR	NR	0
FINDS	X	TP	NR	NR	NR	NR	NR	0
TRIS		TP	NR	NR	NR	NR	NR	0
NPL Liens		TP	NR	NR	NR	NR	NR	0
TSCA		TP	NR	NR	NR	NR	NR	0
MLTS		TP	NR	NR	NR	NR	NR	0
NY Spills		TP	NR	NR	NR	NR	NR	0
CBS UST		TP	NR	NR	NR	NR	NR	0
CBS AST		TP	NR	NR	NR	NR	NR	0
MOSF UST		TP	NR	NR	NR	NR	NR	0
MOSF AST		TP	NR	NR	NR	NR	NR	0
HSWDS		TP	NR	NR	NR	NR	NR	0
Coal Gas		1.000	0	0	0	1	NR	1

TP = Target Property

NR = Not Requested at this Search Distance

* Sites may be listed in more than one database

MAP FINDINGS SUMMARY SHOWING ONLY SITES HIGHER THAN OR THE SAME ELEVATION AS TP

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
NPL		1.000	0	0	0	0	NR	0
Delisted NPL		TP	NR	NR	NR	NR	NR	0
RCRIS-TSD		0.500	0	0	1	NR	NR	1
State Haz. Waste		1.000	0	0	0	0	NR	0
CERCLIS		0.500	0	0	0	NR	NR	0
CERC-NFRAP		TP	NR	NR	NR	NR	NR	0
CORRACTS		1.000	0	0	1	1	NR	2
State Landfill		0.500	0	0	0	NR	NR	0
LUST		0.500	1	3	17	NR	NR	21
UST	X	TP	NR	NR	NR	NR	NR	0
AST		TP	NR	NR	NR	NR	NR	0
RAATS		TP	NR	NR	NR	NR	NR	0
RCRIS Sm. Quan. Gen.		TP	NR	NR	NR	NR	NR	0
RCRIS Lg. Quan. Gen.	X	TP	NR	NR	NR	NR	NR	0
HMIRS		TP	NR	NR	NR	NR	NR	0
PADS		TP	NR	NR	NR	NR	NR	0
ERNS		TP	NR	NR	NR	NR	NR	0
FINDS	X	TP	NR	NR	NR	NR	NR	0
TRIS		TP	NR	NR	NR	NR	NR	0
NPL Liens		TP	NR	NR	NR	NR	NR	0
TSCA		TP	NR	NR	NR	NR	NR	0
MLTS		TP	NR	NR	NR	NR	NR	0
NY Spills		TP	NR	NR	NR	NR	NR	0
CBS UST		TP	NR	NR	NR	NR	NR	0
CBS AST		TP	NR	NR	NR	NR	NR	0
MOSF UST		TP	NR	NR	NR	NR	NR	0
MOSF AST		TP	NR	NR	NR	NR	NR	0
HSWDS		TP	NR	NR	NR	NR	NR	0
Coal Gas		1.000	0	0	0	1	NR	1

TP = Target Property

NR = Not Requested at this Search Distance

* Sites may be listed in more than one database

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
A2 Target Property	UNITED FEATHER & DOWN INC. 77 COMMERCIAL STREET BROOKLYN, NY 11222	UST	U001841906 N/A

PBS UST:

PBS Number:	2-601397	CBS Number:	Not reported
SWIS ID:	6101	Telephone:	(718) 389-6464
Operator:	OLIVER DOWNEY		
Contact:	Not reported		
Emergency Contact:	OLIVER DOWNEY, (718) 389-6464		
Facility Type:	MANUFACTURING		
Total Tanks:	1	Old PBS Num:	Not reported
Owner:	UNITED FEATHER & DOWN INC. 77 COMMERCIAL STREET BROOKLYN, NY 11222 (718) 389-6464		
Owner Type:	Corporate/Commercial	Owner Mark:	Not reported
Owner Subtype:	Not reported		
Mailing Address:	UNITED FEATHER & DOWN INC. 77 COMMERCIAL STREET NY 11222 (718) 389-6464 ATTN: OLIVER DOWNEY		
Facility Status:	Active	Total Capacity:	Not reported
Certification:	Not reported	Expiration:	Not reported
Tank Number:	001	Capacity (gals):	15000
Tank Location:	UNDERGROUND		
Tank ID:	Not reported	Install Date:	00/00
Product Stored:	NOS 1,2, OR 4 FUEL OIL	Tank Type:	Not reported
Tank Internal:	Not reported	Pipe Internal:	Not reported
Pipe Location:	Not reported	Pipe Type:	Not reported
Tank External:	Not reported		
Pipe External:	Not reported		
Second Containment:	Not reported		
Leak Detection:	Not reported		
Overfill Prot:	Not reported	Dispenser:	Not reported
Date Tested:	Not reported	Next Test Date:	03/98
Date Closed:	Not reported	Test Method:	Not reported
Region:	2		

A1 Target Property	HARTE & CO INC 77 COMMERCIAL ST BROOKLYN, NY 11222	FINDS RCRIS-LQG	1000396818 NYD095759981

RCRIS:

Owner:	DYNAMIT NOBEL OF AMERICA INC (212) 555-1212
Contact:	ARI COHEN (717) 383-4350
Record Date:	10/08/80
Classification:	Large Quantity Generator

HARTE & CO INC (Continued) 1000396818

Used Oil Recyc: No

Violation Status: No violations found

3
SW
< 1/8
Higher

65 COMMERCIAL ST/BKLYN
65 COMMERCIAL ST
BROOKLYN, NY

LUST S100146732
N/A

LUST:

Spill Number:	9011113	Region of Spill:	2
Facility Contact:	Not reported	Facility Tele:	Not reported
Investigator:	HALE	SWIS:	61
Caller Name:	RONALD TRAMPASCH	Caller Agency:	URS CONSULTANTS
Caller Phone:	(716) 883-5525	Caller Extension:	Not reported
Notifier Name:	Not reported	Notifier Agency:	Not reported
Notifier Phone:	Not reported	Notifier Extension:	Not reported
Spiller Contact:	Not reported	Spiller Phone:	(718) 739-7535
Spiller:	NYCTA		
Address	90-25 161ST STREET JAMAICA, NY		
Spill Class:	Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.		
Spill Closed Dt:	Not reported		
Spill Cause:	Tank Failure	Resource Affected:	On Land
Water Affected:	Not reported	Spill Source:	Other Non Commercial/Industrial
Spill Notifier:	Other	PBS Number:	Not reported
Spill Date:	01/18/1991 15:00	Reported to Dept:	01/18/1991 16:25
Cleanup Ceased:	Not reported		
Last Inspection:	Not reported		
Cleanup Meets Standard:	False		
Recommended Penalty:	No Penalty		
Spiller Cleanup Date:	Not reported		
Enforcement Date:	Not reported		
Investigation Complete:	Not reported		
UST Involvement:	True		
Spill Record Last Update:	10/17/1997		
Corrective Action Plan Submitted:	Not reported		
Date Spill Entered In Computer Data File:	02/01/1991		
Date Region Sent Summary to Central Office:	Not reported		
PBS Number:	Not reported	Tank Number:	Not reported
Test Method:	Not reported	Leak Rate:	Not reported
Capacity (Gal):	Not reported	Gross Leak/Fail:	Not reported
Material:	DIESEL		
Material Class:	Petroleum		
Unknwn Quantity:	False	Unk Qt Recovered:	False
Quantity Spilled:	-1	Quant Recovered:	0
Quantity Units:	Liters		
Material:	LUBE OIL		
Material Class:	Petroleum		
Unknwn Quantity:	False	Unk Qt Recovered:	False
Quantity Spilled:	0	Quant Recovered:	0
Quantity Units:	Liters		
DEC Remarks:	01/18/91: WILL PUMP OUT OIL. 11/16/94: REASSIGNED FROM SIGONA TO ZHITOMIRSKY ON 11/16/94.		

65 COMMERCIAL ST/BKLYN (Continued) S100146732

Caller Remarks: (3) 5K DIESEL TANKS IN (1) UNDERGROUND CONCRETE VAULT, 25 INCHES OF WATER & OIL DISCOVERED (2 INCHES OF OIL ON WATER),2ND VAULT CONTAINED LUBE OIL,1120 GAL TANK,(2) 550 GAL WASTE OIL,SAME CONDITION.

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4 ENE 1/8-1/4 Higher — **29 ASH ST**, **29 ASH ST**, **BROOKLYN, NY** — LUST — S102959956, N/A

LUST:

Spill Number:	9709313	Region of Spill:	2
Facility Contact:	MARGARET TAVARES	Facility Tele:	(212) 363-3775
Investigator:	TIBBE	SWIS:	61
Caller Name:	MARGARET TAVARES	Caller Agency:	ESPL ENVIRONMENTAL
Caller Phone:	(212) 363-3775	Caller Extension:	Not reported
Notifier Name:	MARGARET TAVARES	Notifier Agency:	ESPL ENVIRONMENTAL
Notifier Phone:	(212) 363-3775	Notifier Extension:	Not reported
Spiller Contact:	MARGARET TAVARES	Spiller Phone:	(212) 363-3775
Spiller:	Not reported		
Address	29 ASH ST BROOKLYN, NY		
Spill Class:	Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.		
Spill Closed Dt:	Not reported		
Spill Cause:	Tank Test Failure	Resource Affected:	On Land
Water Affected:	Not reported	Spill Source:	Other Commercial/Industrial
Spill Notifier:	Tank Tester	PBS Number:	Not reported
Spill Date:	11/10/1997 16:30	Reported to Dept:	11/10/1997 16:39

Cleanup Ceased: Not reported
Last Inspection: Not reported
Cleanup Meets Standard: False
Recommended Penalty: No Penalty
Spiller Cleanup Date: Not reported
Enforcement Date: Not reported
Investigation Complete: Not reported
UST Involvement: False
Spill Record Last Update: 11/12/1997
Corrective Action Plan Submitted: Not reported
Date Spill Entered In Computer Data File: 11/10/1997
Date Region Sent Summary to Central Office: Not reported

PBS Number:	Not reported	Tank Number:	1
Test Method:	HORNER	Leak Rate:	0.00
Capacity (Gal):	5000	Gross Leak/Fail:	Not reported
Material:	#2 FUEL OIL		
Material Class:	Petroleum		
Unknwn Quantity:	False	Unk Qt Recovered:	False
Quantity Spilled:	0	Quant Recovered:	0
Quantity Units:	Gallons		
DEC Remarks:	Not reported		
Caller Remarks:	Not reported		

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5 SE 1/8-1/4 Higher — **1071 MANHATTAN AVENUE**, **1071 MANHATTAN AVE**, **BROOKLYN, NY** — LUST — S102672391, N/A

LUST:

Spill Number:	9313337	Region of Spill:	2

1071 MANHATTAN AVENUE (Continued) S102672391

Facility Contact: Not reported
Facility Tele: Not reported
Investigator: CHRIS ENGLEHARD
SWIS: 61
Caller Name: ROBERT KEPICH
Caller Agency: DEP
Caller Phone: (718) 595-6777
Caller Extension: Not reported
Notifier Name: Not reported
Notifier Agency: Not reported
Notifier Phone: Not reported
Notifier Extension: Not reported
Spiller Contact: Not reported
Spiller Phone: Not reported
Spiller: CON-ED
Address Not reported
Not reported
Spill Class: Known release that creates potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt: Not reported
Spill Cause: Other
Resource Affected: On Land
Water Affected: Not reported
Spill Source: Private Dwelling
Spill Notifier: Federal Government
PBS Number: Not reported
Spill Date: 02/07/1994 12:00
Reported to Dept: 02/11/1994 12:45
Cleanup Ceased: Not reported
Last Inspection: Not reported
Cleanup Meets Standard: Not reported
Recommended Penalty: No Penalty
Spiller Cleanup Date: Not reported
Enforcement Date: Not reported
Investigation Complete: Not reported
UST Involvement: False
Spill Record Last Update: Not reported
Corrective Action Plan Submitted: Not reported
Date Spill Entered In Computer Data File: 02/14/1994
Date Region Sent Summary to Central Office: Not reported
PBS Number: Not reported
Tank Number: Not reported
Test Method: Not reported
Leak Rate: Not reported
Capacity (Gal): Not reported
Gross Leak/Fail: Not reported
Material: #6 FUEL OIL
Material Class: Petroleum
Unknwn Quantity: False
Unk Qt Recovered: False
Quantity Spilled: -1
Quant Recovered: 0
Quantity Units: Not reported
DEC Remarks: Not reported
Caller Remarks: CON-ED WORKING ON HER ST ALL WEEK OIL HAS BEEN LEAKING INTO HER BASEMENT ALL WEEK - CON-ED IS USING STEAM ON IT.

6
North
1/8-1/4
Higher

FINK BAKING CORP/STEPHAN FINK
535 54TH AVE
BROOKLYN, NY 11220

AST 1000546033
FINDS NYD001519214
LUST
UST

FINDS:
Other Pertinent Environmental Activity Identified at Site:
- Facility is monitored or permitted for air emissions under the Clean Air Act (under AFS/AIRS)

LUST:
Spill Number: 9704673
Region of Spill: 2
Facility Contact: GERMAN FUENTES
Facility Tele: (718) 392-8300 Ext. 243
Investigator: MULQUEEN
SWIS: 63
Caller Name: CHUCK PEDANO
Caller Agency: CROMPCO CORP.
Caller Phone: (610) 278-7203
Caller Extension: Not reported
Notifier Name: MIKE ZYGMUNT
Notifier Agency: FOREMAN
Notifier Phone: Not reported
Notifier Extension: Not reported
Spiller Contact: GERMAN FUENTES
Spiller Phone: (718) 392-8300 Ext. 243

FINK BAKING CORP/STEPHAN FINK (Continued) 1000546033

Spiller: FINK BAKING
Address: 5-35 54TH AVE
LONG ISLAND CITY
Spill Class: Known release that creates potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt: 08/27/1997
Spill Cause: Tank Test Failure
Resource Affected: On Land
Water Affected: Not reported
Spill Source: Other Commercial/Industrial
Spill Notifier: Tank Tester
PBS Number: Not reported
Spill Date: 07/18/1997 09:30
Reported to Dept: 07/18/1997 10:02
Cleanup Ceased: Not reported
Last Inspection: Not reported
Cleanup Meets Standard: False
Recommended Penalty: No Penalty
Spiller Cleanup Date: Not reported
Enforcement Date: Not reported
Investigation Complete: Not reported
UST Involvement: False
Spill Record Last Update: 08/27/1997
Corrective Action Plan Submitted: Not reported
Date Spill Entered In Computer Data File: 07/18/1997
Date Region Sent Summary to Central Office: Not reported
PBS Number: Not reported
Tank Number: Not reported
Test Method: USTest 2000
Leak Rate: 0.00
Capacity (Gal): 8000
Gross Leak/Fail: Not reported
Material: Not reported
Material Class: Not reported
Unknown Quantity: Not reported
Unk Qt Recovered: Not reported
Quantity Spilled: Not reported
Quant Recovered: Not reported
Quantity Units: Not reported
DEC Remarks: 8/27/97: REC'D LETTER FROM ALVIN PETROLEUM STATING 2 LINES ON TOP OF TANK DEFECTIVE. LINES NOT IN USE AND WERE REMOVED, TANK PASSED TEST FROM CROMPCO. TT SENT TO PBS.
Caller Remarks: gross failure

KOSAN INDUSTRIAL CORP (Continued) 1000150474

Used Oil Recyc: No

TSDF Activities: Not reported

Violation Status: No violations found

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21 SSE 1/4-1/2 Higher — **203 JAVA ST.**, **203 JAVA ST**, **BROOKLYN, NY** — LUST — S100560362, N/A

LUST:

Spill Number:	9303193	Region of Spill:	2
Facility Contact:	Not reported	Facility Tele:	Not reported
Investigator:	TANG.	SWIS:	61
Caller Name:	WALTER URBAN	Caller Agency:	BAERENKLAU
Caller Phone:	(718) 647-4200	Caller Extension:	Not reported
Notifier Name:	Not reported	Notifier Agency:	Not reported
Notifier Phone:	Not reported	Notifier Extension:	Not reported
Spiller Contact:	Not reported	Spiller Phone:	Not reported
Spiller:	WASHCYSHYN REC.		
Address	Not reported Not reported		
Spill Class:	Possible release with minimal potential for fire or hazard or Known release with no damage. DEC Response. Willing Responsible Party. Corrective action taken.		
Spill Closed Dt:	06/10/1993		
Spill Cause:	Tank Failure	Resource Affected:	On Land
Water Affected:	Not reported	Spill Source:	Private Dwelling
Spill Notifier:	Other	PBS Number:	Not reported
Spill Date:	06/10/1993 11:45	Reported to Dept:	06/10/1993 12:07
Cleanup Ceased:	06/10/1993		
Last Inspection:	Not reported		
Cleanup Meets Standard:	True		
Recommended Penalty:	No Penalty		
Spiller Cleanup Date:	Not reported		
Enforcement Date:	Not reported		
Investigation Complete:	Not reported		
UST Involvement:	False		
Spill Record Last Update:	07/19/1993		
Corrective Action Plan Submitted:	Not reported		
Date Spill Entered In Computer Data File:	06/11/1993		
Date Region Sent Summary to Central Office:	Not reported		
PBS Number:	Not reported	Tank Number:	Not reported
Test Method:	Not reported	Leak Rate:	Not reported
Capacity (Gal):	Not reported	Gross Leak/Fail:	Not reported
Material:	#2 FUEL OIL		
Material Class:	Petroleum		
Unknwn Quantity:	False	Unk Qt Recovered:	False
Quantity Spilled:	1	Quant Recovered:	0
Quantity Units:	Gallons		
DEC Remarks:	Not reported		
Caller Remarks:	SPILL ON DIRT FLOOR (CELLAR) - SORBENT APPLIED - TANK SIHING DIRECTLY ON DIRT.		

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
22 NE 1/4-1/2 Higher	51-02 21 ST 51-02 21 ST NYC, NY	LUST	S100167593 N/A

LUST:

Spill Number:	8806127	Region of Spill:	2
Facility Contact:	Not reported	Facility Tele:	Not reported
Investigator:	BATTISTA	SWIS:	63
Caller Name:	NAT MOSER	Caller Agency:	GND
Caller Phone:	(516) 933-1085	Caller Extension:	Not reported
Notifier Name:	Not reported	Notifier Agency:	Not reported
Notifier Phone:	Not reported	Notifier Extension:	Not reported
Spiller Contact:	Not reported	Spiller Phone:	(718) 361-1373
Spiller:	AMJ REALTY CO		
Address	SAME Not reported		
Spill Class:	Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.		
Spill Closed Dt:	11/04/1993		
Spill Cause:	Tank Test Failure	Resource Affected:	Groundwater
Water Affected:	Not reported	Spill Source:	Other Commercial/Industrial
Spill Notifier:	Tank Tester	PBS Number:	2-149780
Spill Date:	10/20/1988 10:00	Reported to Dept:	10/20/1988 10:17
Cleanup Ceased:	11/04/1993		
Last Inspection:	Not reported		
Cleanup Meets Standard:	False		
Recommended Penalty:	No Penalty		
Spiller Cleanup Date:	Not reported		
Enforcement Date:	Not reported		
Investigation Complete:	Not reported		
UST Involvement:	False		
Spill Record Last Update:	02/15/1994		
Corrective Action Plan Submitted:	Not reported		
Date Spill Entered In Computer Data File:	10/31/1988		
Date Region Sent Summary to Central Office:	Not reported		
PBS Number:	2-149780	Tank Number:	Not reported
Test Method:	Not reported	Leak Rate:	Not reported
Capacity (Gal):	Not reported	Gross Leak/Fail:	Not reported
Material:	#2 FUEL OIL		
Material Class:	Petroleum		
Unknwn Quantity:	False	Unk Qt Recovered:	False
Quantity Spilled:	-1	Quant Recovered:	0
Quantity Units:	Not reported		
DEC Remarks:	11/04/93: MID COUNTY MECH. PERMANENTLY TOOK TANK OUT OF SERVICE 12/88 AND INSTALLED A NEW TANK 6/89.		
Caller Remarks:	10K TK SYS FAILED PETRO, WOULDN'T MAINTAIN LEVEL IN STAND PIPE.		

C23 ESE 1/4-1/2 Higher	320 FREEMAN ST/BKLY/EXXON 320 FREEMAN STREET NEW YORK CITY, NY	LUST	S100146679 N/A

LUST:

Spill Number:	9101866	Region of Spill:	2
Facility Contact:	Not reported	Facility Tele:	Not reported
Investigator:	MILLER	SWIS:	61
Caller Name:	BOB FJELSTAD	Caller Agency:	EEXON
Caller Phone:	(718) 389-3368	Caller Extension:	Not reported
Notifier Name:	Not reported	Notifier Agency:	Not reported
Notifier Phone:	Not reported	Notifier Extension:	Not reported

320 FREEMAN ST/BKLY/EXXON (Continued) S100146879

Spiller Contact: Not reported
Spiller Phone: Not reported
Spiller: EXXON
Address Not reported
Not reported
Spill Class: Known release that creates potential for fire or hazard. (Highly Improbable)
Spill Closed Dt: Not reported
Spill Cause: Tank Failure
Resource Affected: Groundwater
Water Affected: Not reported
Spill Source: Major Facility 400,000 gallons
Spill Notifier: Responsible Party
PBS Number: Not reported
Spill Date: 05/16/1991 11:00
Reported to Dept: 05/16/1991 11:10
Cleanup Ceased: Not reported
Last Inspection: Not reported
Cleanup Meets Standard: Not reported
Recommended Penalty: No Penalty
Spiller Cleanup Date: Not reported
Enforcement Date: Not reported
Investigation Complete: Not reported
UST Involvement: False
Spill Record Last Update: Not reported
Corrective Action Plan Submitted: Not reported
Date Spill Entered In Computer Data File: 05/23/1991
Date Region Sent Summary to Central Office: Not reported
PBS Number: Not reported
Tank Number: Not reported
Test Method: Not reported
Leak Rate: Not reported
Capacity (Gal): Not reported
Gross Leak/Fail: Not reported
Material: #2 FUEL OIL
Material Class: Petroleum
Unknwn Quantity: False
Unk Qt Recovered: False
Quantity Spilled: -1
Quant Recovered: 0
Quantity Units: Not reported
DEC Remarks: Not reported
Caller Remarks: OIL DISCOVERED WHILE EXCAVATING UNDERGROUND TANKS, DEC TO INVESTIGATE.

Spill Number: 9012950
Region of Spill: 2
Facility Contact: Not reported
Facility Tele: Not reported
Investigator: MILLER
SWIS: 61
Caller Name: ROBERT FJELSTAD
Caller Agency: EXXON/USA
Caller Phone: (718) 389-3368
Caller Extension: Not reported
Notifier Name: Not reported
Notifier Agency: Not reported
Notifier Phone: Not reported
Notifier Extension: Not reported
Spiller Contact: Not reported
Spiller Phone: Not reported
Spiller: EXXON
Address Not reported
Not reported
Spill Class: Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt: Not reported
Spill Cause: Tank Overfill
Resource Affected: On Land
Water Affected: Not reported
Spill Source: Major Facility 400,000 gallons
Spill Notifier: Responsible Party
PBS Number: Not reported
Spill Date: 03/19/1991 15:30
Reported to Dept: 03/19/1991 15:54
Cleanup Ceased: Not reported
Last Inspection: Not reported
Cleanup Meets Standard: Not reported
Recommended Penalty: No Penalty
Spiller Cleanup Date: Not reported

320 FREEMAN ST/BKLY/EXXON (Continued) S100146879

Enforcement Date: Not reported
Investigation Complete: Not reported
UST Involvement: False
Spill Record Last Update: Not reported
Corrective Action Plan Submitted: Not reported
Date Spill Entered In Computer Data File: 04/02/1991
Date Region Sent Summary to Central Office: Not reported
PBS Number: Not reported
Test Method: Not reported
Capacity (Gal): Not reported
Material: GASOLINE
Material Class: Petroleum
Unknwn Quantity: False
Quantity Spilled: 0
Quantity Units: Gallons
Tank Number: Not reported
Leak Rate: Not reported
Gross Leak/Fail: Not reported
Unk Qt Recovered: False
Quant Recovered: 0
DEC Remarks: 03/19/91: WHOLE PLANT TO BE DEMOLISHED,WILL INSTALL OBSERVATION WELL.
Caller Remarks: ACCUMULATOR TANK SIZE 10FT DIAMETER BY 6FT LENGTH INSTALLED VERTICALLYPARTIALLY ABOVEGROUND,UPON TANK PULL,CONTAMINATED SOIL WAS DISCOVERED,WATER FROM WHALE CREEK SEEPED INTO EXCAVATION SITE.

C24
ESE
1/4-1/2
Higher

EXXON COMPANY USA
320 FREEMAN ST
BROOKLYN, NY 11222

MOSF UST S102633590
MOSF AST N/A
LUST

LUST:
Spill Number: 9601620
Facility Contact: STEVE SCHMALLER
Investigator: TANG
Caller Name: ELLEN METZGER
Caller Phone: (914) 987-1755
Notifier Name: WINNIE LANHAM
Notifier Phone: (914) 987-1755
Spiller Contact: UNKNOWN
Spiller: UNKNOWN
Address UNKNOWN
UNKNOWN
Region of Spill: 2
Facility Tele: (718) 595-4363
SWIS: 61
Caller Agency: BLASLAND BOUCK & LEE
Caller Extension: Not reported
Notifier Agency: BLASLAND BOUCK &LEE
Notifier Extension: Not reported
Spiller Phone: Not reported
Spill Class: Known release that creates potential for fire or hazard. (Highly Improbable)
Spill Closed Dt: 07/31/1997
Spill Cause: Other
Water Affected: Not reported
Spill Notifier: Other
Spill Date: 05/01/1996 15:00
Cleanup Ceased: Not reported
Last Inspection: Not reported
Cleanup Meets Standard: False
Recommended Penalty: No Penalty
Spiller Cleanup Date: Not reported
Enforcement Date: Not reported
Investigation Complete: Not reported
UST Involvement: False
Spill Record Last Update: 08/07/1997
Corrective Action Plan Submitted: Not reported
Date Spill Entered In Computer Data File: 05/01/1996
Date Region Sent Summary to Central Office: Not reported
PBS Number: Not reported
Test Method: Not reported
Capacity (Gal): Not reported
Resource Affected: On Land
Spill Source: Other Commercial/Industrial
PBS Number: Not reported
Reported to Dept: 05/01/1996 15:42
Tank Number: Not reported
Leak Rate: Not reported
Gross Leak/Fail: Not reported

EXXON COMPANY USA (Continued) S102633590

Material: WASTE OIL
Material Class: Petroleum
Unknwn Quantity: True — Unk Qt Recovered: True
Quantity Spilled: 0 — Quant Recovered: 0
Quantity Units: Gallons
DEC Remarks: AFTER CONSIDERING THE FACT THAT THE SPILL OCCURRED SO LONG AGO, AND THE REMARKS INDICATE THAT NO LONG-TERM FOLLOW-UP IS NEEDED; I DECIDED TO CLOSE THIS SPILL.
Caller Remarks: upon excavtion of soil tank was accidentally hit and pulled out of ground-soil cleaned up

MOSF UST:

Facility ID:	2-1300	Facility Status:	INACTIVE FACILITY
SWIS Code:	61	Facility Town:	NEW YORK CITY
Operator:	C.P. KRAMER	Contact Phone:	(201) 474-3505
Owner:	EXXON COMPANY, USA P.O. BOX 4415 HOUSTON, TX 77210		
Owner Tel:	(713) 656-9216	Owner Type:	UNDEFINED
Mail To:	EXXON COMPANY, USA 320 FREEMAN STREET BROOKLYN, NY 11222 ATTN: ROBERT FJELSTAD (718) 389-9025		
Legal Agent:	C.T. CORP. SYSTEM 277 PARK AVENUE NEW YORK, NY 10017		
Date Filed:	Not reported	CBS Number:	2-000218
Emerg Contact:	C.P. KRAMER, (201) 474-3505		
SPDES Num:	0-005339		
Total Tanks:	0	Total Capacity:	0
Tank Status:	0		
Status of Data:	Complete		
Avg Throughpt:	5136	License Stat:	Not reported
License Issued:	10/23/91	Expiration Date:	03/31/92
Facility Type:	Storage Terminal		
Transfer Operation:	Vessel/Barge, Pipeline		
Applic Rcvd:	02/06/92	Tank ID:	21
Tank Location:	Underground		
Install Date:	01/35	Capacity (Gal):	101598
Product:	Empty	Tank Internal:	None
Tank Type:	Steel/carbon steel		
Tank External:	None		
Pipe Location:	Aboveground	Pipe Type:	STEEL/IRON
Pipe Internal:	None	Dispenser:	Submersible
Pipe External:	None		
Second Contain:	None		
Leak Detection:	00		
Overfill Protection:	42		
Test Date:	03/90	Date Closed:	09/91
Region:	Not reported	First Name:	Not reported
Inspected Date:	Not reported	Inspector:	Not reported
Lat/Long:	40144106 / 73156152	Inspected State:	Not reported
Owner Mark:	1		
Renew Date:	10/30/91	Vessel ID:	Not reported
Facility ID:	2-1300	Facility Status:	INACTIVE FACILITY
SWIS Code:	61	Facility Town:	NEW YORK CITY

PARKING GARAGE (Continued) S102447951

LUST:

Spill Number:	9610315	Region of Spill:	2
Facility Contact:	BOB SUDYY	Facility Tele:	(718) 729-6055
Investigator:	O'DOWD	SWIS:	63
Caller Name:	BOB ARCARO	Caller Agency:	TONE TANK AND PUMP INC
Caller Phone:	(718) 331-5003	Caller Extension:	Not reported
Notifier Name:	Not reported	Notifier Agency:	Not reported
Notifier Phone:	Not reported	Notifier Extension:	Not reported
Spiller Contact:	SAME	Spiller Phone:	Not reported
Spiller:	MUTUAL PARKING		
Address	11-15 50TH AVE LONG ISLAND CITY, NY 11101		
Spill Class:	Not reported		
Spill Closed Dt:	Not reported		
Spill Cause:	Tank Test Failure	Resource Affected:	On Land
Water Affected:	Not reported	Spill Source:	Vessel
Spill Notifier:	Tank Tester	PBS Number:	2-600455
Spill Date:	11/18/1996 10:00	Reported to Dept:	11/18/1996 12:20
Cleanup Ceased:	Not reported		
Last Inspection:	Not reported		
Cleanup Meets Standard:	False		
Recommended Penalty:	No Penalty		
Spiller Cleanup Date:	Not reported		
Enforcement Date:	Not reported		
Investigation Complete:	Not reported		
UST Involvement:	True		
Spill Record Last Update:	12/03/1996		
Corrective Action Plan Submitted:	Not reported		
Date Spill Entered In Computer Data File:	11/18/1996		
Date Region Sent Summary to Central Office:	Not reported		
PBS Number:	Not reported	Tank Number:	0
Test Method:	HORNER	Leak Rate:	0.00
Capacity (Gal):	550	Gross Leak/Fail:	F
Material:	GASOLINE		
Material Class:	Petroleum		
Unknwn Quantity:	True	Unk Qt Recovered:	False
Quantity Spilled:	0	Quant Recovered:	0
Quantity Units:	Gallons		
DEC Remarks:	Not reported		
Caller Remarks:	CALLER STATES TANKS WERE TESTED TODAY AND WILL BE EXCAVATED TOMORROW NO ADDITIONAL INFORMATION AT THIS TIME.		

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19 North 1/4-1/2 Higher — 50-3519 2ND ST, 50-3519 2ND ST., FLUSHING, NY — LUST — S102233194, N/A

LUST:

Spill Number:	9409964	Region of Spill:	2
Facility Contact:	BETTY ASCH	Facility Tele:	(718) 357-7317
Investigator:	ENGELHARDT	SWIS:	63
Caller Name:	MIKE MALARKEY	Caller Agency:	PETRO OIL
Caller Phone:	(718) 545-4500	Caller Extension:	330
Notifier Name:	BETTY ASCH	Notifier Agency:	CUSTOMER
Notifier Phone:	(718) 357-7317	Notifier Extension:	Not reported
Spiller Contact:	Not reported	Spiller Phone:	Not reported

50-3519 2ND ST (Continued) S102233194

Spiller: UNKNOWN
Address: Not reported
Not reported
Spill Class: Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt: 11/04/1995
Spill Cause: Tank Failure
Resource Affected: On Land
Water Affected: Not reported
Spill Source: Unknown
Spill Notifier: Other
PBS Number: Not reported
Spill Date: 10/25/1994 17:30
Reported to Dept: 10/25/1994 19:47
Cleanup Ceased: 11/04/1995
Last Inspection: Not reported
Cleanup Meets Standard: False
Recommended Penalty: No Penalty
Spiller Cleanup Date: Not reported
Enforcement Date: Not reported
Investigation Complete: Not reported
UST Involvement: False
Spill Record Last Update: 01/05/1996
Corrective Action Plan Submitted: Not reported
Date Spill Entered In Computer Data File: 12/27/1948
Date Region Sent Summary to Central Office: Not reported
PBS Number: Not reported
Tank Number: Not reported
Test Method: Not reported
Leak Rate: Not reported
Capacity (Gal): Not reported
Gross Leak/Fail: Not reported
Material: UNKNOWN MATERIAL
Material Class: Raw Sewage
Unknwn Quantity: False
Unk Qt Recovered: False
Quantity Spilled: 1
Quant Recovered: 0
Quantity Units: Liters
DEC Remarks: Not reported
Caller Remarks: SPILL INSIDE BASEMENT. PETRO OIL ON SCENE . APPLIED TEMPORARY PATCH. GOING TO NOTIFY TANK IS TO REPLACE TANK. NONE ELSE NOTIFIED ON NO CALL BACK IS REQUESTED. TANK FOR HOME HEATING.

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20 North 1/4-1/2 Higher

KOSAN INDUSTRIAL CORP
5-49 49TH AVE
LONG ISLAND CITY, NY 11101

CORRACTS 1000150474
FINDS NYD061949228
RCRIS-LQG
RCRIS-TSD

CORRACTS Date:
Prioritization: High
Status: RCRA Facility Assessment Completed, Referred to a Non-RCRA Authority

RCRIS:
Owner: STEPHEN GALGANO
(212) 277-3333

Contact: THOMAS GILCHRIST
(718) 784-8385

Record Date: 08/18/80

Classification: Large Quantity Generator, TSDF

FINK BAKING CORP/STEPHAN FINK (Continued) 1000546033

PBS AST:

PBS Number:	2-117277	Telephone:	(718) 392-8300
Facility Status:	Active		
Owner:	FINK BAKING CORP 5-35 54TH AVE LONG ISLAND CITY, NY 11101 (718) 392-8300		
Tank ID:	014	Capacity (Gal):	20000
Tank Status:	Temporarily Out Of Service		
Tank Location:	ABOVEGROUND ON SADDLES LEGS, STILTS, RACK, OR CRADLE		
Product Stored:	DIESEL	Tank Type:	Steel/carbon steel
Install Date:	06/79	Tank Internal:	Not reported
Tank External:	Not reported		
Tank Containment:	VAULT		
Pipe Location:	Not reported	Pipe Type:	STEEL/IRON
Pipe Internal:	Not reported		
Pipe External:	Not reported		
Leak Detection:	NONE		
Overfill Prot:	Product Level Gauge	Dispenser:	Suction
Date Tested:	Not reported	Next Test Date:	N.T.R
Date Closed:	Not reported	Test Method:	Not reported
Updated:	Not reported	Deleted:	Not reported

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7 NNE 1/4-1/2 Higher — **54TH AVA & VERNON BLVD**, **54TH AVE / VERNON BLVD**, **LONG ISLAND CITY, NY** — LUST — S102662694, N/A

LUST:

Spill Number:	9609179	Region of Spill:	2
Facility Contact:	Not reported	Facility Tele:	Not reported
Investigator:	O'DOWD	SWIS:	63
Caller Name:	ANONYMOUS	Caller Agency:	Not reported
Caller Phone:	Not reported	Caller Extension:	Not reported
Notifier Name:	Not reported	Notifier Agency:	Not reported
Notifier Phone:	Not reported	Notifier Extension:	Not reported
Spiller Contact:	Not reported	Spiller Phone:	Not reported
Spiller:	UNKNOWN		
Address	Not reported Not reported		
Spill Class:	Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.		
Spill Closed Dt:	03/27/1997		
Spill Cause:	Other	Resource Affected:	On Land
Water Affected:	Not reported	Spill Source:	Tank Truck
Spill Notifier:	Affected Persons	PBS Number:	Not reported
Spill Date:	10/23/1996 08:30	Reported to Dept:	10/23/1996 08:47
Cleanup Ceased:	Not reported		
Last Inspection:	Not reported		
Cleanup Meets Standard:	False		
Recommended Penalty:	No Penalty		
Spiller Cleanup Date:	Not reported		
Enforcement Date:	Not reported		
Investigation Complete:	Not reported		
UST Involvement:	False		
Spill Record Last Update:	03/27/1997		
Corrective Action Plan Submitted:	Not reported		
Date Spill Entered In Computer Data File:	10/23/1996		

54TH AVA & VERNON BLVD (Continued) S102662694

Date Region Sent Summary to Central Office: Not reported
PBS Number: Not reported — Tank Number: Not reported
Test Method: Not reported — Leak Rate: Not reported
Capacity (Gal): Not reported — Gross Leak/Fail: Not reported
Material: UNKNOWN MATERIAL
Material Class: Raw Sewage
Unknwn Quantity: True — Unk Qt Recovered: True
Quantity Spilled: 0 — Quant Recovered: 0
Quantity Units: Gallons
DEC Remarks: 3/27/97 WENT TO SITE. COULDN'T CONFIRM REPORT. BEHIND LIRR. WORKERS DOING WORK IN STREET ON WATER LINES, STREET DUG UP.
Caller Remarks: CALLER SAYS THAT THERE IS A COMPRESSOR ON THE SIDE WALK LEAKING OIL

B East 1/4-1/2 Higher — **25 PAIDGE AVE/BKLYN/SHELL**, **25 PAIDGE AVENUE**, **NEW YORK CITY, NY** — LUST — S100146031, N/A

LUST:
Spill Number: 9002114 — Region of Spill: 2
Facility Contact: Not reported — Facility Tele: Not reported
Investigator: SIGONA — SWIS: 61
Caller Name: JACK ROGERS — Caller Agency: SHELL OIL
Caller Phone: (718) 383-4066 — Caller Extension: Not reported
Notifier Name: Not reported — Notifier Agency: Not reported
Notifier Phone: Not reported — Notifier Extension: Not reported
Spiller Contact: Not reported — Spiller Phone: Not reported
Spiller: SHELL
Address: Not reported
Not reported
Spill Class: Known release that creates a file or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt: Not reported
Spill Cause: Tank Failure — Resource Affected: Groundwater
Water Affected: Not reported — Spill Source: Major Facility 400,000 gallons
Spill Notifier: Responsible Party — PBS Number: Not reported
Spill Date: 05/23/1990 17:36 — Reported to Dept: 05/23/1990 08:50
Cleanup Ceased: Not reported
Last Inspection: Not reported
Cleanup Meets Standard: False
Recommended Penalty: No Penalty
Spiller Cleanup Date: Not reported
Enforcement Date: Not reported
Investigation Complete: Not reported
UST Involvement: True
Spill Record Last Update: 01/26/1996
Corrective Action Plan Submitted: Not reported
Date Spill Entered In Computer Data File: 05/30/1990
Date Region Sent Summary to Central Office: Not reported
PBS Number: Not reported — Tank Number: Not reported
Test Method: Not reported — Leak Rate: Not reported
Capacity (Gal): Not reported — Gross Leak/Fail: Not reported
Material: GASOLINE
Material Class: Petroleum
Unknwn Quantity: False — Unk Qt Recovered: False
Quantity Spilled: -1 — Quant Recovered: 0
Quantity Units: Liters
DEC Remarks: Not reported

25 PAIDGE AVE/BKLYN/SHELL (Continued) S100146031

Caller Remarks: SITE WELL TEST, WELL #2 .13, WELL #4 .004, WELL #9 FILM, WELL #5, WELL #17, WELL #19 .09, WELL #20 FILM.

B9 NE 1/4-1/2 Higher

10-55 51ST AVE/QUNS/TBTA LUST S100146362
10-55 51ST AVENUE N/A
NEW YORK CITY, NY

LUST:

Spill Number:	9007411	Region of Spill:	2
Facility Contact:	Not reported	Facility Tele:	Not reported
Investigator:	SIGONA	SWIS:	63
Caller Name:	SCOTT SCHUCK	Caller Agency:	FENLEY & NICOL
Caller Phone:	(516) 586-4900	Caller Extension:	Not reported
Notifier Name:	Not reported	Notifier Agency:	Not reported
Notifier Phone:	Not reported	Notifier Extension:	Not reported
Spiller Contact:	Not reported	Spiller Phone:	(212) 983-1111
Spiller:	TRIBORO BRIDGE & TUNNEL		
Address	Not reported		
	Not reported		
Spill Class:	Known release that creates potential for fire or hazard, DEC Response. Willing Responsible Party. Corrective action taken.		
Spill Closed Dt:	Not reported		
Spill Cause:	Tank Test Failure	Resource Affected:	On Land
Water Affected:	Not reported	Spill Source:	Other Non Commercial/Industrial
Spill Notifier:	Tank Tester	PBS Number:	Not reported
Spill Date:	10/05/1990 15:00	Reported to Dept:	10/05/1990 15:19
Cleanup Ceased:	Not reported		
Last Inspection:	Not reported		
Cleanup Meets Standard:	Not reported		
Recommended Penalty:	No Penalty		
Spiller Cleanup Date:	Not reported		
Enforcement Date:	Not reported		
Investigation Complete:	Not reported		
UST Involvement:	False		
Spill Record Last Update:	11/15/1994		
Corrective Action Plan Submitted:	Not reported		
Date Spill Entered In Computer Data File:	10/10/1990		
Date Region Sent Summary to Central Office:	Not reported		
PBS Number:	Not reported	Tank Number:	Not reported
Test Method:	Not reported	Leak Rate:	Not reported
Capacity (Gal):	Not reported	Gross Leak/Fail:	Not reported
Material:	#2 FUEL OIL		
Material Class:	Petroleum		
Unknwn Quantity:	False	Unk Qt Recovered:	False
Quantity Spilled:	-1	Quant Recovered:	0
Quantity Units:	Not reported		
DEC Remarks:	Not reported		
Caller Remarks:	4K TANK FAILED HORNER EZY CHECK WITH A LEAK RATE OF -.130GPH.		

B10 NE 1/4-1/2 Higher

1055 51 AVENUE LUST S100879180
1055 51 AVENUE N/A
QUEENS, NY

LUST:

Spill Number:	9312975	Region of Spill:	2
Facility Contact:	Not reported	Facility Tele:	Not reported

1055 51 AVENUE (Continued) S100879180

Investigator: MILLER
SWIS: 63
Caller Name: TOM LEDDY
Caller Agency: PRO TESE
Caller Phone: (718) 668-1363
Caller Extension: Not reported
Notifier Name: Not reported
Notifier Agency: Not reported
Notifier Phone: Not reported
Notifier Extension: Not reported
Spiller Contact: Not reported
Spiller Phone: Not reported
Spiller: Not reported
Address Not reported
Not reported
Spill Class: Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt: Not reported
Spill Cause: Tank Test Failure
Resource Affected: Groundwater
Water Affected: Not reported
Spill Source: Other Commercial/Industrial
Spill Notifier: Tank Tester
PBS Number: Not reported
Spill Date: 02/02/1994 14:20
Reported to Dept: 02/02/1994 23:56
Cleanup Ceased: Not reported
Last Inspection: Not reported
Cleanup Meets Standard: Not reported
Recommended Penalty: No Penalty
Spiller Cleanup Date: Not reported
Enforcement Date: Not reported
Investigation Complete: Not reported
UST Involvement: False
Spill Record Last Update: Not reported
Corrective Action Plan Submitted: Not reported
Date Spill Entered In Computer Data File: 02/04/1994
Date Region Sent Summary to Central Office: Not reported
PBS Number: Not reported
Tank Number: Not reported
Test Method: Not reported
Leak Rate: Not reported
Capacity (Gal): Not reported
Gross Leak/Fail: Not reported
Material: #2 FUEL OIL
Material Class: Petroleum
Unknwn Quantity: False
Unk Qt Recovered: False
Quantity Spilled: -1
Quant Recovered: 0
Quantity Units: Not reported
DEC Remarks: 10/10/95: This is additional information about material spilled from the translation of the old spill file: TTF.
Caller Remarks: NO FURTHER COMMNENTS.

Spill Number: 9313543
Region of Spill: 2
Facility Contact: Not reported
Facility Tele: Not reported
Investigator: SIGONA
SWIS: 63
Caller Name: TOM LEDDY
Caller Agency: TANK TESTING
Caller Phone: (718) 789-3770
Caller Extension: Not reported
Notifier Name: Not reported
Notifier Agency: Not reported
Notifier Phone: Not reported
Notifier Extension: Not reported
Spiller Contact: Not reported
Spiller Phone: Not reported
Spiller: TBTA - MIDTOWN TUNNEL
Address Not reported
Not reported
Spill Class: Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt: Not reported
Spill Cause: Tank Test Failure
Resource Affected: Groundwater
Water Affected: Not reported
Spill Source: Other Commercial/Industrial
Spill Notifier: Tank Tester
PBS Number: Not reported

1055 51 AVENUE (Continued) S100879180

Spill Date: 02/15/1993 13:45 Reported to Dept: 02/17/1994 20:49
Cleanup Ceased: Not reported
Last Inspection: Not reported
Cleanup Meets Standard: Not reported
Recommended Penalty: No Penalty
Spiller Cleanup Date: Not reported
Enforcement Date: Not reported
Investigation Complete: Not reported
UST Involvement: False
Spill Record Last Update: 01/06/1995
Corrective Action Plan Submitted: Not reported
Date Spill Entered In Computer Data File: 02/22/1994
Date Region Sent Summary to Central Office: Not reported
PBS Number: Not reported Tank Number: Not reported
Test Method: Not reported Leak Rate: Not reported
Capacity (Gal): Not reported Gross Leak/Fail: Not reported
Material: #2 FUEL OIL
Material Class: Petroleum
Unknwn Quantity: False Unk Qt Recovered: False
Quantity Spilled: -1 Quant Recovered: 0
Quantity Units: Not reported
DEC Remarks: 10/10/95: This is additional information about material spilled from the translation of the old spill file: TTF.
Caller Remarks: NO OTHER AGENCIES - NO CALL -

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11 SSW 1/4-1/2 Higher

145 WEST STREET
145 WEST ST
BROOKLYN, NY

LUST S101341059
N/A

LUST:
Spill Number: 9408283 Region of Spill: 2
Facility Contact: Not reported Facility Tele: Not reported
Investigator: MARTINKAT SWIS: 61
Caller Name: RICH ZEGA Caller Agency: STATE ENVIRONMENTAL
Caller Phone: (718) 265-3355 Caller Extension: Not reported
Notifier Name: Not reported Notifier Agency: Not reported
Notifier Phone: Not reported Notifier Extension: Not reported
Spiller Contact: Not reported Spiller Phone: Not reported
Spiller: UNKNOWN
Address Not reported
Not reported
Spill Class: Not reported
Spill Closed Dt: 12/02/1994
Spill Cause: Tank Test Failure Resource Affected: On Land
Water Affected: Not reported Spill Source: Other Commercial/Industrial
Spill Notifier: Tank Tester PBS Number: Not reported
Spill Date: 09/21/1994 12:00 Reported to Dept: 09/22/1994 08:16
Cleanup Ceased: 12/02/1994
Last Inspection: Not reported
Cleanup Meets Standard: True
Recommended Penalty: No Penalty
Spiller Cleanup Date: Not reported
Enforcement Date: Not reported
Investigation Complete: Not reported
UST Involvement: False
Spill Record Last Update: 12/02/1994
Corrective Action Plan Submitted: Not reported
Date Spill Entered In Computer Data File: 10/31/1994

145 WEST STREET (Continued) S101341059

Date Region Sent Summary to Central Office: Not reported

PBS Number:	Not reported	Tank Number:	Not reported
Test Method:	Not reported	Leak Rate:	Not reported
Capacity (Gal):	Not reported	Gross Leak/Fail:	Not reported
Material:	#2 FUEL OIL		
Material Class:	Petroleum		
Unknwn Quantity:	False	Unk Qt Recovered:	True
Quantity Spilled:	-1	Quant Recovered:	0
Quantity Units:	Not reported		

DEC Remarks: 12/02/94: CLOSED OUT 20K TANK, TOOK SOIL SAMPLES, BELOW STARS.
Caller Remarks: TTF- WILL RECOMMEND REPAIRS

Spill Number:	9408663	Region of Spill:	2
Facility Contact:	Not reported	Facility Tele:	Not reported
Investigator:	O'DOWD	SWIS:	61
Caller Name:	JIM GUISTINI	Caller Agency:	STATE ENVIRON. SERVICE
Caller Phone:	(718) 265-3355	Caller Extension:	Not reported
Notifier Name:	Not reported	Notifier Agency:	Not reported
Notifier Phone:	Not reported	Notifier Extension:	Not reported
Spiller Contact:	Not reported	Spiller Phone:	Not reported
Spiller:	COMMERCIAL BLDG COOP APTS		
Address	145 WEST STREET BROOKLYN, NEW YORK		
Spill Class:	Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.		
Spill Closed Dt:	12/02/1994		
Spill Cause:	Tank Test Failure	Resource Affected:	On Land
Water Affected:	Not reported	Spill Source:	Private Dwelling
Spill Notifier:	Tank Tester	PBS Number:	Not reported
Spill Date:	09/29/1994 10:30	Reported to Dept:	09/29/1994 11:53
Cleanup Ceased:	12/02/1994		
Last Inspection:	Not reported		
Cleanup Meets Standard:	True		
Recommended Penalty:	No Penalty		
Spiller Cleanup Date:	Not reported		
Enforcement Date:	Not reported		
Investigation Complete:	Not reported		
UST Involvement:	False		
Spill Record Last Update:	12/02/1994		
Corrective Action Plan Submitted:	Not reported		
Date Spill Entered In Computer Data File:	11/01/1994		

Date Region Sent Summary to Central Office: Not reported

PBS Number:	Not reported	Tank Number:	Not reported
Test Method:	Not reported	Leak Rate:	Not reported
Capacity (Gal):	Not reported	Gross Leak/Fail:	Not reported
Material:	#2 FUEL OIL		
Material Class:	Petroleum		
Unknwn Quantity:	False	Unk Qt Recovered:	True
Quantity Spilled:	-1	Quant Recovered:	0
Quantity Units:	Not reported		

DEC Remarks: 12/02/94: CLOSED OUT 20K TANK, TOOK SOIL SAMPLES BELOW STARS.
Caller Remarks: TO PUMP TANK OUT VIA NOTIFIER

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12 NE 1/4-1/2 Higher | **QUEENS MIDTOWN TUNNELL**
11TH STREET
QUEENS, NY | **LUST** | **S102141239**
NY Spills | **N/A**

QUEENS MIDTOWN TUNNELL (Continued) S102141239

LUST:

Spill Number:	9705809	Region of Spill:	2
Facility Contact:	Not reported	Facility Tele:	Not reported
Investigator:	SIGONA	SWIS:	63
Caller Name:	TIMOTHY BORMAN	Caller Agency:	ENSA
Caller Phone:	(914) 268-8265	Caller Extension:	Not reported
Notifier Name:	Not reported	Notifier Agency:	Not reported
Notifier Phone:	Not reported	Notifier Extension:	Not reported
Spiller Contact:	PAUL STEFANESCU	Spiller Phone:	(212) 360-2924
Spiller:	RANDALLS ISLAND		
Address	ROBERT MOSES BLDG BRONX, NY		
Spill Class:	Known release that creates potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.		
Spill Closed Dt:	Not reported		
Spill Cause:	Tank Test Failure	Resource Affected:	On Land
Water Affected:	Not reported	Spill Source:	Other Commercial/Industrial
Spill Notifier:	Tank Tester	PBS Number:	Not reported
Spill Date:	08/13/1997 10:45	Reported to Dept:	08/13/1997 12:11
Cleanup Ceased:	Not reported		
Last Inspection:	Not reported		
Cleanup Meets Standard:	False		
Recommended Penalty:	No Penalty		
Spiller Cleanup Date:	Not reported		
Enforcement Date:	Not reported		
Investigation Complete:	Not reported		
UST Involvement:	False		
Spill Record Last Update:	08/14/1997		
Corrective Action Plan Submitted:	Not reported		
Date Spill Entered In Computer Data File:	08/13/1997		
Date Region Sent Summary to Central Office:	Not reported		
PBS Number:	6-106380	Tank Number:	3
Test Method:	PETRO-TITE	Leak Rate:	0.00
Capacity (Gal):	4000	Gross Leak/Fail:	Not reported
Material:	#2 FUEL OIL		
Material Class:	Petroleum		
Unknwn Quantity:	True	Unk Qt Recovered:	True
Quantity Spilled:	0	Quant Recovered:	0
Quantity Units:	Gallons		
DEC Remarks:	Not reported		
Caller Remarks:	gross failure of tank		

SPILLS:

Spill Number:	9105459	Region of Spill:	2
Facility Contact:	Not reported	Facility Tele:	Not reported
Investigator:	TIBBE		
Caller Name:	PO DERLAND	Caller Agency:	USCG
Caller Phone:	(212) 668-7920	Caller Extension:	Not reported
Notifier Name:	Not reported	Notifier Agency:	Not reported
Notifier Phone:	Not reported	Notifier Extension:	Not reported
Spiller Contact:	Not reported	Spiller Phone:	Not reported
SWIS:	63		
Spiller:	Not reported		
Address	Not reported Not reported		
Spill Class:	Not reported		
Spill Closed Dt:	08/21/1991		

QUEENS MIDTOWN TUNNELL (Continued) S102141239

Spill Cause: Unknown
Water Affected: EAST RIVER
Spill Notifier: Citizen
Spill Date: 07/20/1991 12:00
Cleanup Ceased: 08/21/1991
Last Inspection: Not reported
Cleanup Meets Standard: True
Recommended Penalty: No Penalty
Spiller Cleanup Date: Not reported
Enforcement Date: Not reported
Investigation Complete: Not reported
UST Involvement: False
Spill Record Last Update: Not reported
Corrective Action Plan Submitted: Not reported
Date Spill Entered In Computer Data File: 08/29/1991
Date Region Sent Report To Central Office: Not reported
DEC Remark: / / : HANDLED BY NYCDEP.
Caller Remarks: SUBSTANCE IN WATER AT LOW TIDE

Resource Affected: Surface Water
Spill Source: Unknown
PBS Number: Not reported
Reported to Dept: 08/20/1991 16:50

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13 NNE 1/4-1/2 Higher
RANEY SUB STATION
35 VERNON BLVD
QUEENS, NY

LUST
NY Spills
S102239201
N/A

LUST:
Spill Number: 9602445
Facility Contact: MR ROACH
Investigator: ENGELHARDT
Caller Name: MR ROACH
Caller Phone: (212) 580-6764
Notifier Name: MR WICKBOLDT
Notifier Phone: Not reported
Spiller Contact: MR ROACH
Spiller: CON ED
Address 4 IRVING PLACE
Not reported
Spill Class: Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt: 09/17/1997
Spill Cause: Other
Water Affected: EAST RIVER
Spill Notifier: Responsible Party
Spill Date: 05/21/1996 11:15
Cleanup Ceased: Not reported
Last Inspection: Not reported
Cleanup Meets Standard: False
Recommended Penalty: No Penalty
Spiller Cleanup Date: Not reported
Enforcement Date: Not reported
Investigation Complete: Not reported
UST Involvement: False
Spill Record Last Update: 09/17/1997
Corrective Action Plan Submitted: Not reported
Date Spill Entered In Computer Data File: 05/21/1996
Date Region Sent Summary to Central Office: Not reported
PBS Number: Not reported
Test Method: Not reported
Capacity (Gal): Not reported
Material: TRANSFORMER OIL

Region of Spill: 2
Facility Tele: (212) 580-6764
SWIS: 63
Caller Agency: CON ED
Caller Extension: Not reported
Notifier Agency: CON ED
Notifier Extension: Not reported
Spiller Phone: (212) 580-6764

Resource Affected: Surface Water
Spill Source: Other Commercial/Industrial
PBS Number: Not reported
Reported to Dept: 05/21/1996 11:38

Tank Number: Not reported
Leak Rate: Not reported
Gross Leak/Fail: Not reported

RANEY SUB STATION (Continued) S102239201

Material Class: Petroleum
Unknwn Quantity: True
Unk Qt Recovered: False
Quantity Spilled: 0
Quant Recovered: 0
Quantity Units: Gallons
DEC Remarks: SEE SPILL #9602430
Caller Remarks: transformer fire

Spill Number: 9605409
Region of Spill: 2
Facility Contact: JOHN HAGGERTY
Facility Tele: Not reported
Investigator: O'CONNELL
SWIS: 63
Caller Name: STEVEN ROMERO
Caller Agency: CON ED
Caller Phone: (212) 580-6763
Caller Extension: Not reported
Notifier Name: JOHN HAGGERTY
Notifier Agency: CON ED
Notifier Phone: (212) 460-3849
Notifier Extension: Not reported
Spiller Contact: STEVEN ROMERO
Spiller Phone: (212) 580-6764
Spiller: CON ED
Address 4 IRVING PLACE
MANHATTAN, NY 10003
Spill Class: Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt: Not reported
Spill Cause: Other
Resource Affected: On Land
Water Affected: Not reported
Spill Source: Other Commercial/Industrial
Spill Notifier: Responsible Party
PBS Number: Not reported
Spill Date: 07/26/1996 14:30
Reported to Dept: 07/26/1996 15:54
Cleanup Ceased: Not reported
Last Inspection: Not reported
Cleanup Meets Standard: False
Recommended Penalty: No Penalty
Spiller Cleanup Date: Not reported
Enforcement Date: Not reported
Investigation Complete: Not reported
UST Involvement: False
Spill Record Last Update: 09/04/1996
Corrective Action Plan Submitted: Not reported
Date Spill Entered In Computer Data File: 07/26/1996
Date Region Sent Summary to Central Office: Not reported
PBS Number: Not reported
Tank Number: Not reported
Test Method: Not reported
Leak Rate: Not reported
Capacity (Gal): Not reported
Gross Leak/Fail: Not reported
Material: DIELECTRIC FLUID
Material Class: Petroleum
Unknwn Quantity: False
Unk Qt Recovered: True
Quantity Spilled: 300
Quant Recovered: 0
Quantity Units: Gallons
DEC Remarks: NON PCB FLUID - THE INVESTIGATION IS ONGOING - THE CHECKING HAS COMPLETED RUNWAY OF THE FEEDER. LEAKS BEEN LOCATED 43 GOLD STREET UNIT AT 17:18 - CONTRACTOR WAS CALLED IN - THE SPILL WAS IN THE FLOOR OF THE UNIT, ALSO MADE AREA & BLUE STONE - (HOTLINE 19:55) NOTHING WENT IN THE SEWER - EVERYTHING IS IN THE PURGED UNIT 20:05
Caller Remarks: thier was a descrepency in the amount of dielectric fluid that was in a tank.they cant account for 300 gallons of the fluid.people are patrolling the feeder now looking for the leak.feeder runs from rainey station to farragut sub station. LEAK HASBEEN LOCATED AT 43 GOLD STREET UNIT AT 17.18. OUTSIDE CONTRACTOR CALLED FOR CLEANUP SPILL WAS ON FLOOR OF THE UNIT, MOAT AREA AND BLUE STONE.

RANEY SUB STATION (Continued) S102239201

SPILLS:

Spill Number:	9711793	Region of Spill:	2
Facility Contact:	MIKE CESARE	Facility Tele:	(212) 580-6763
Investigator:	O'CONNELL		
Caller Name:	MIKE CESARE	Caller Agency:	CON EDISON
Caller Phone:	(212) 580-6763	Caller Extension:	Not reported
Notifier Name:	MR BYRNES	Notifier Agency:	CON ED
Notifier Phone:	(914) 966-0629	Notifier Extension:	Not reported
Spiller Contact:	CALLER	Spiller Phone:	Not reported
SWIS:	63		
Spiller:	CON EDISON		
Address	128 WEST END AV NEW YORK, NY 10023		
Spill Class:	Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.		
Spill Closed Dt:	Not reported		
Spill Cause:	Equipment Failure	Resource Affected:	On Land
Water Affected:	Not reported	Spill Source:	Other Commercial/Industrial
Spill Notifier:	Responsible Party	PBS Number:	Not reported
Spill Date:	01/21/1998 11:00	Reported to Dept:	01/21/1998 11:39
Cleanup Ceased:	Not reported		
Last Inspection:	Not reported		

Cleanup Meets Standard: False
Recommended Penalty: No Penalty
Spiller Cleanup Date: Not reported
Enforcement Date: Not reported
Investigation Complete: Not reported
UST Involvement: False
Spill Record Last Update: 02/02/1998
Corrective Action Plan Submitted: Not reported
Date Spill Entered In Computer Data File: 01/21/1998
Date Region Sent Report To Central Office: Not reported
DEC Remark: Not reported
Caller Remarks: caller states a leaking joint valve on a feeder line caused the leak.

This is the most recent NY SPILLS record for this site.
The NY SPILLS database contains 8 additional records for this site.
Please contact your EDR Account Executive for more information.

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14 North 1/4-1/2 Higher | **NYC POLICE DEPT - 108TH**
547 50TH AVE
LONG ISLAND CITY, NY | **LUST** | **S102233287**
N/A

LUST:

Spill Number:	9514946	Region of Spill:	2
Facility Contact:	MIKE ENGLISH	Facility Tele:	Not reported
Investigator:	KOLLEENY	SWIS:	63
Caller Name:	BRIAN COSTELLO	Caller Agency:	TYREE ENVIORMENTAL
Caller Phone:	(516) 249-3150	Caller Extension:	Not reported
Notifier Name:	BRIAN COSTELLO	Notifier Agency:	TYREE ENVIORMENTAL
Notifier Phone:	(516) 249-3150	Notifier Extension:	Not reported
Spiller Contact:	MIKE ENGLISH	Spiller Phone:	Not reported
Spiller:	NYC POLICE DEPT - 108TH		
Address	5-47 50TH AV LONG ISLAND CITY, NY		
Spill Class:	Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.		

NYC POLICE DEPT - 108TH (Continued) S102233287

Spill Closed Dt: Not reported
Spill Cause: Tank Failure
Water Affected: Not reported
Spill Notifier: Other
Spill Date: 02/21/1996 15:30
Cleanup Ceased: Not reported
Last Inspection: Not reported
Cleanup Meets Standard: False
Recommended Penalty: No Penalty
Spiller Cleanup Date: Not reported
Enforcement Date: Not reported
Investigation Complete: Not reported
UST Involvement: True
Spill Record Last Update: 10/14/1997
Corrective Action Plan Submitted: Not reported
Date Spill Entered In Computer Data File: 02/21/1996
Date Region Sent Summary to Central Office: Not reported

Resource Affected: On Land
Spill Source: Other Non Commercial/Industrial
PBS Number: Not reported
Reported to Dept: 02/21/1996 17:02

PBS Number: Not reported
Test Method: Not reported
Capacity (Gal): Not reported
Material: GASOLINE
Material Class: Petroleum
Unknwn Quantity: False
Quantity Spilled: 5
Quantity Units: Gallons
DEC Remarks: Not reported
Caller Remarks: removing 2 tanks (550 gal.) found about 5 gal of gas during removal . spill is stock piled at this time.

Tank Number: Not reported
Leak Rate: Not reported
Gross Leak/Fail: Not reported

Unk Qt Recovered: False
Quant Recovered: 0

---

15 NNE 1/4-1/2 Higher

QUEEN SMITH TOWN TUNNEL LUST S102659631
1050 50TH AVE N/A
LONG ISLAND CITY, NY

LUST:
Spill Number: 9706666
Facility Contact: RAYMOND LO
Investigator: SIGONA
Caller Name: RAYMOND LO
Caller Phone: (212) 468-2334
Notifier Name: PAUL STEFANESCO
Notifier Phone: (212) 360-2924
Spiller Contact: Not reported
Spiller: Not reported
Address Not reported
Not reported
Spill Class: Known release that creates potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt: Not reported
Spill Cause: Tank Test Failure
Water Affected: Not reported
Spill Notifier: Other
Spill Date: 09/03/1997 16:00
Cleanup Ceased: Not reported
Last Inspection: Not reported
Cleanup Meets Standard: False
Recommended Penalty: No Penalty
Spiller Cleanup Date: Not reported
Enforcement Date: Not reported

Region of Spill: 2
Facility Tele: (212) 468-2334
SWIS: 63
Caller Agency: TRIBOROUGH BRIDGE & TUNNE
Caller Extension: Not reported
Notifier Agency: TRIBOROUGH BRIDGE & TUNNE
Notifier Extension: Not reported
Spiller Phone: Not reported

Resource Affected: On Land
Spill Source: Other Commercial/Industrial
PBS Number: 4-54559
Reported to Dept: 09/04/1997 10:40

QUEEN SMITH TOWN TUNNEL (Continued) S102659631

Investigation Complete: Not reported
UST Involvement: False
Spill Record Last Update: 09/05/1997
Corrective Action Plan Submitted: Not reported
Date Spill Entered In Computer Data File: 09/04/1997
Date Region Sent Summary to Central Office: Not reported
PBS Number: Not reported
Test Method: PETRO-TITE
Capacity (Gal): 4000
Material: #2 FUEL OIL
Material Class: Petroleum
Unknwn Quantity: False
Quantity Spilled: 0
Quantity Units: Gallons
DEC Remarks: Not reported
Caller Remarks: CALLER STATED A TANK TEST FAILURE. FUEL HAS BEEN PUMPED OUT AND THE TANK HAS BEEN TAKEN OUT OF SERVICE. LEAK RATE - .357 GALS PER HOUR
Tank Number: 4
Leak Rate: 0.00
Gross Leak/Fail: Not reported
Unk Qt Recovered: False
Quant Recovered: 0

---

16 NE 1/4-1/2 Higher
1320 51ST STREET/BKLYN
1320 51ST STREET
NEW YORK CITY, NY
LUST S102671341 N/A

LUST:
Spill Number: 8808094
Facility Contact: Not reported
Investigator: TOMASELLO
Caller Name: RON SAESSLER
Caller Phone: (718) 476-6298
Notifier Name: Not reported
Notifier Phone: Not reported
Spiller Contact: Not reported
Spiller: ORIGINAL CONSUMERS OIL CO
Address 1267 RANDALL AVENUE
BX, NY
Spill Class: Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt: Not reported
Spill Cause: Tank Overfill
Water Affected: Not reported
Spill Notifier: Fire Department
Spill Date: 01/10/1989 15:00
Cleanup Ceased: Not reported
Last Inspection: Not reported
Cleanup Meets Standard: Not reported
Recommended Penalty: No Penalty
Spiller Cleanup Date: Not reported
Enforcement Date: Not reported
Investigation Complete: Not reported
UST Involvement: False
Spill Record Last Update: 11/20/1992
Corrective Action Plan Submitted: Not reported
Date Spill Entered In Computer Data File: 01/10/1989
Date Region Sent Summary to Central Office: Not reported
PBS Number: Not reported
Test Method: Not reported
Capacity (Gal): Not reported
Material: UNKNOWN PETROLEUM
Material Class: Petroleum
Region of Spill: 2
Facility Tele: Not reported
SWIS: 61
Caller Agency: NYC HAZ MAT
Caller Extension: Not reported
Notifier Agency: Not reported
Notifier Extension: Not reported
Spiller Phone: (212) 593-3200
Resource Affected: On Land
Spill Source: Other Commercial/Industrial
PBS Number: Not reported
Reported to Dept: 01/10/1989 15:21
Tank Number: Not reported
Leak Rate: Not reported
Gross Leak/Fail: Not reported

1320 51ST STREET/BKLYN (Continued) — **S102671341**

Unknwn Quantity: False
Quantity Spilled: -1
Quantity Units: Not reported
DEC Remarks: Not reported
Caller Remarks: Not reported
Unk Qt Recovered: False
Quant Recovered: 0

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17 ENE 1/4-1/2 Higher — **21-07 BORDEN AVE**, **21-07 BORDEN AVE**, **QUEENS, NY** — LUST — **S102662890** **N/A**

LUST:

Spill Number:	9614479	Region of Spill:	2
Facility Contact:	JOHN GOODWIN	Facility Tele:	(800) 635-3835
Investigator:	TOMASELLO	SWIS:	63
Caller Name:	JOHN GOODWIN	Caller Agency:	MYSTIC TRANSPORT
Caller Phone:	(718) 932-9075	Caller Extension:	Not reported
Notifier Name:	TOM SCHEHR	Notifier Agency:	DRIVER
Notifier Phone:	(718) 932-9075	Notifier Extension:	Not reported
Spiller Contact:	JOHN GOODWIN	Spiller Phone:	(800) 635-3835
Spiller:	MYSTIC TRANSPORT		
Address	1901 STEINWAY ST ASTORIA, NY		
Spill Class:	Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.		
Spill Closed Dt:	Not reported		
Spill Cause:	Tank Overfill	Resource Affected:	On Land
Water Affected:	Not reported	Spill Source:	Other Commercial/Industrial
Spill Notifier:	Responsible Party	PBS Number:	Not reported
Spill Date:	03/15/1997 12:15	Reported to Dept:	03/15/1997 12:30
Cleanup Ceased:	Not reported		
Last Inspection:	Not reported		
Cleanup Meets Standard:	False		
Recommended Penalty:	No Penalty		
Spiller Cleanup Date:	Not reported		
Enforcement Date:	Not reported		
Investigation Complete:	Not reported		
UST Involvement:	False		
Spill Record Last Update:	03/17/1997		
Corrective Action Plan Submitted:	Not reported		
Date Spill Entered In Computer Data File:	03/15/1997		
Date Region Sent Summary to Central Office:	Not reported		
PBS Number:	Not reported	Tank Number:	Not reported
Test Method:	Not reported	Leak Rate:	Not reported
Capacity (Gal):	Not reported	Gross Leak/Fail:	Not reported
Material:	#2 FUEL OIL		
Material Class:	Petroleum		
Unknwn Quantity:	False	Unk Qt Recovered:	False
Quantity Spilled:	10	Quant Recovered:	10
Quantity Units:	Gallons		
DEC Remarks:	Not reported		
Caller Remarks:	TANK OVERFILL BY DRIVER - MATERAL SPILLED ONTO SIDEWALK - OIL CLEANED UP BY DRIVER		

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18 NE 1/4-1/2 Higher — **PARKING GARAGE**, **1115 50TH AVE**, **LONG ISLAND CITY, NY** — LUST — **S102447951** **N/A**

EXXON COMPANY USA (Continued) S102633590

Facility Status:	INACTIVE FACILITY		
Owner:	EXXON COMPANY, USA P.O. BOX 4415 HOUSTON, TX 77210		
Owner Tel:	(713) 656-9216		
Owner Type:	Corporate/Commercial		
Tank Status:	0	Tank ID:	L12
Total Tanks:	0	Daily Throughput	5135 Gal(s)
Tank Location:	Aboveground on crib, rack or cradle		
Install Date:	Not reported	Total Capacity:	0
Tank Type:	Steel/carbon steel		
Tank External:	None		
Tank Internal:	None		
Product:	Empty	Capacity (gal):	3500
Status of Data:	Complete		
Pipe Location:	Aboveground	Pipe Type:	STEEL/IRON
Pipe Internal:	None	Dispenser:	Gravity
Pipe External:	None		
Second Contain:	None		
Leak Detection:	None		
Overfill Protection:	None		
Test Date:	Not reported	Date Closed:	08/91
Dispensing Mthd:	Gravity		
SWIS Code:	61	Facility Town:	NEW YORK CITY
Mailing Name:	EXXON COMPANY, USA 320 FREEMAN STREET BROOKLYN, NY 11222		
Mailing Contact:	ROBERT FJELSTAD		
Mailing Phone:	(718) 389-9025		
Legal Agent:	C.T. CORP. SYSTEM 277 PARK AVENUE NEW YORK, NY 10017		

Date Legal Agent Filed with Secretary of State:	Not reported
Name of Emergency Contact:	C.P. KRAMER
Emergency Contact Telephone:	(201) 474-3505
Chemical Bulk Storage Number:	2-000218
Pollution Discharge Elimination System Num:	0-005339
License Status:	License Pending
Date License Application Received:	02/06/92
Date License Issued:	10/23/91
Date License Expires or Expired:	03/31/92
Product Transfer Operation:	Vessel/Barge (Including off-shore platform) Pipeline

Region:	Not reported		
First Name:	Not reported	Operator Name:	C.P. KRAMER
Lat/Long:	40I44I06 / 73I56I52	Vessel ID:	Not reported
Inspected Date:	Not reported	Inspector:	Not reported
Inspected State:	Not reported		
Renew Date:	10/30/91		

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25 North 1/2-1 Higher

ACCURATE ASSOC
5-36 46TH RD
LONG ISLAND CITY, NY 11101

CORRACTS 1000426821
FINDS NYD001264191
RCRIS-LQG
RAATS

ACCURATE ASSOC (Continued) 1000426821

CORRACTS Data:
Prioritization: Medium
Status: RCRA Facility Assessment Completed

RCRIS Corrective Action Summary:
Effective Date: 05/24/91
Legal Authority: RCRA 7003 or equivalent

RCRIS:
Owner: ACCURATE ASSOCIATES
(718) 729-2957

Contact: MILTON BROCK
(718) 729-2957

Record Date: 07/31/91

Classification: Large Quantity Generator

Used Oil Recyc: No

Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site:
- Facility is monitored or permitted for air emissions under the Clean Air Act (under AFS/AIRS)
- Civil judicial and administrative enforcement case against facility (under DOCKET)

26
WNW
1/2-1
Higher

STANDARD GAS LIGHT CO.
556 FIRST AVE.
NEW YORK, NY 10016

Coal Gas | G000000362
N/A

COAL GAS SITE DESCRIPTION:
Site is on the eastern side of First Ave. between 33rd St. and 32nd St. Site had a Gas Holder. (E18)

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AREA RADON INFORMATION

- EPA Radon Zone for KINGS County, NY: 3

Note : Zone 1 indoor average level > 4 pCi/L
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L
: Zone 3 indoor average level < 2 pCi/L

- EPA Radon Information for KINGS County, NY

Number of sites tested: 51

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area	0.750 pCi/L	100%	0%	0%
Basement	1.370 pCi/L	88%	10%	2%

- State Radon Information for Zip Code: 11222

Number of sites tested: 2

Average (pCi/L)	Geometric Mean (pCi/L)	Geometric Std Dev.	Maximum (pCi/L)
1.0	1.0	1.2	1.2

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Elapsed ASTM days: Provides confirmation that this EDR report meets or exceeds the 90-day updating requirement of the ASTM standard.

FEDERAL ASTM RECORDS:

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System
Source: EPA/NTIS
Telephone: 703-413-0223
CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 06/15/98
Date Made Active at EDR: 07/20/98
Database Release Frequency: Quarterly
Date of Data Arrival at EDR: 07/08/98
Elapsed ASTM days: 12
Date of Last EDR Contact: 08/27/98

ERNS: Emergency Response Notification System
Source: EPA/NTIS
Telephone: 202-260-2342
Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 06/30/98
Date Made Active at EDR: 07/20/98
Database Release Frequency: Quarterly
Date of Data Arrival at EDR: 07/14/98
Elapsed ASTM days: 6
Date of Last EDR Contact: 07/10/98

NPL: National Priority List
Source: EPA
Telephone: 703-603-8852
National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC).

Date of Government Version: 03/06/98
Date Made Active at EDR: 07/08/98
Database Release Frequency: Semi-Annually
Date of Data Arrival at EDR: 06/09/98
Elapsed ASTM days: 30
Date of Last EDR Contact: 07/30/98

RCRIS: Resource Conservation and Recovery Information System
Source: EPA/NTIS
Telephone: 800-424-9346
Resource Conservation and Recovery Information System. RCRIS includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA).

Date of Government Version: 01/01/98
Date Made Active at EDR: 04/13/98
Database Release Frequency: Semi-Annually
Date of Data Arrival at EDR: 02/17/98
Elapsed ASTM days: 55
Date of Last EDR Contact: 08/14/98

CORRACTS: Corrective Action Report
Source: EPA
Telephone: 800-424-9346
CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 12/15/97
Date Made Active at EDR: 02/02/98
Database Release Frequency: Semi-Annually
Date of Data Arrival at EDR: 01/05/98
Elapsed ASTM days: 28
Date of Last EDR Contact: 08/14/98

FEDERAL NON-ASTM RECORDS:

BRS: Biennial Reporting System
Source: EPA/NTIS
Telephone: 800-424-9346
The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/95
Database Release Frequency: Biennially
Date of Last EDR Contact: 06/22/98
Date of Next Scheduled EDR Contact: 09/21/98

FINDS: Facility Index System
Source: EPA/NTIS
Telephone: 703-908-2493
Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 04/01/97
Database Release Frequency: Quarterly
Date of Last EDR Contact: 08/19/98
Date of Next Scheduled EDR Contact: 09/21/98

HMIRS: Hazardous Materials Information Reporting System
Source: U.S. Department of Transportation
Telephone: 202-366-4526
Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/31/97
Database Release Frequency: Annually
Date of Last EDR Contact: 07/22/98
Date of Next Scheduled EDR Contact: 10/26/98

MLTS: Material Licensing Tracking System
Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 01/30/98
Database Release Frequency: Quarterly
Date of Last EDR Contact: 07/13/98
Date of Next Scheduled EDR Contact: 10/12/98

NPL LIENS: Federal Superfund Liens
Source: EPA
Telephone: 205-564-4267
Federal Superfund Liens. Under the authority granted the USEPA by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner receives notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/91
Database Release Frequency: No Update Planned
Date of Last EDR Contact: 08/26/98
Date of Next Scheduled EDR Contact: 11/23/98

PADS: PCB Activity Database System
Source: EPA
Telephone: 202-260-3936
PCB Activity Database. PADS identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 09/22/97
Database Release Frequency: Semi-Annually
Date of Last EDR Contact: 08/18/98
Date of Next Scheduled EDR Contact: 11/16/98

STATE OF NEW YORK ASTM RECORDS:

LUST: Spills Information Database
Source: Department of Environmental Conservation
Telephone: 518-457-2462
Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 04/01/98
Date Made Active at EDR: 07/15/98
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 06/15/98
Elapsed ASTM days: 30
Date of Last EDR Contact: 07/27/98

SHWS: Inactive Hazardous Waste Disposal Sites in New York State
Source: Department of Environmental Conservation
Telephone: 518-457-0747
State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Date of Government Version: 04/01/97
Date Made Active at EDR: 04/13/98
Database Release Frequency: Annually

Date of Data Arrival at EDR: 03/13/98
Elapsed ASTM days: 31
Date of Last EDR Contact: 08/31/98

LF: Facility Register
Source: Department of Environmental Conservation
Telephone: 518-457-2051
Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 12/31/97
Date Made Active at EDR: 04/28/98
Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 03/26/98
Elapsed ASTM days: 33
Date of Last EDR Contact: 08/12/98

UST: Petroleum Bulk Storage (PBS) Database
Source: Department of Environmental Conservation
Telephone: 518-457-4351
Facilities that have petroleum storage capacities in excess of 1,100 gallons and less than 400,000 gallons.

Date of Government Version: 04/01/98
Date Made Active at EDR: 07/30/98
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 07/01/98
Elapsed ASTM days: 29
Date of Last EDR Contact: 07/27/98

CBS UST: Chemical Bulk Storage Database
Source: NYSDEC
Telephone: 518-457-4351
Facilities that store regulated hazardous substances in aboveground tanks with capacities of 185 gallons or greater, and/or in underground tanks of any size.

Date of Government Version: 04/01/98
Date Made Active at EDR: 07/20/98
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 06/18/98
Elapsed ASTM days: 32
Date of Last EDR Contact: 07/27/98

MOSF UST: Major Oil Storage Facilities Database
Source: NYSDEC
Telephone: 518-457-4351
Facilities that may be onshore facilities or vessels, with petroleum storage capacities of 400,000 gallons or greater.

Date of Government Version: 04/01/98
Date Made Active at EDR: 07/20/98
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 06/18/98
Elapsed ASTM days: 32
Date of Last EDR Contact: 05/27/98

STATE OF NEW YORK NON-ASTM RECORDS:

AST: Petroleum Bulk Storage (AST)
Source: Department of Environmental Conservation
Telephone: 518-457-4351
Registered Aboveground Storage Tanks.

Date of Government Version: 04/01/98
Database Release Frequency: Quarterly

Date of Last EDR Contact: 07/27/98
Date of Next Scheduled EDR Contact: 11/02/98

CBS AST: Chemical Bulk Storage Database
Source: NYSDEC
Telephone: 518-457-4351
Facilities that store regulated hazardous substances in aboveground tanks with capacities of 185 gallons or greater, and/or in underground tanks of any size.

Date of Government Version: 04/01/98
Database Release Frequency: Quarterly

Date of Last EDR Contact: 07/27/98
Date of Next Scheduled EDR Contact: 11/02/98

MOSF AST: Major Oil Storage Facilities Database
Source: NYSDEC
Telephone: 518-457-4351
Facilities that may be onshore facilities or vessels, with petroleum storage capacities of 400,000 gallons or greater.

Date of Government Version: 04/01/98
Database Release Frequency: Quarterly

Date of Last EDR Contact: 07/27/98
Date of Next Scheduled EDR Contact: 11/02/98

HSWDS: Hazardous Substance Waste Disposal Site Inventory
Source: Department of Environmental Conservation
Telephone: 518-457-0639
The list includes any known or suspected hazardous substance waste disposal sites. Also included are sites delisted from the Registry of Inactive Hazardous Waste Diposal Sites and non-registry sites which U.S. EPA Preliminary Assessment (PA) reports or Site Investigation (SI) reports were prepared.

Date of Government Version: 09/01/97
Database Release Frequency: N/A

Date of Last EDR Contact: 06/08/98
Date of Next Scheduled EDR Contact: 09/07/98

SPILLS: Spills Information Database
Source: Department of Environmental Conservation
Telephone: 518-457-2462
Data collected on spills reported to NYSDEC as required by one or more of the following: Article 12 of the Navigation Law, 6 NYCRR Section 613.8 (from PBS regs), or 6 NYCRR Section 595.2 (from CBS regs). It includes spills active as of April 1, 1986, as well as spills occurring since this date.

Date of Government Version: 04/01/98
Database Release Frequency: Quarterly

Date of Last EDR Contact: 07/27/98
Date of Next Scheduled EDR Contact: 11/02/98

NEW YORK COUNTY RECORDS

CORTLAND COUNTY:

Cortland County UST Listing (AST)
Source: Cortland County Health Department
Telephone: 607-753-5035

Date of Government Version: 03/24/98
Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/08/98
Date of Next Scheduled EDR Contact: 12/07/98

Cortland County UST Listing (UST)
Source: Cortland County Health Department
Telephone: 607-753-5035

Date of Government Version: 03/24/98
Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/08/98
Date of Next Scheduled EDR Contact: 12/07/98

NASSAU COUNTY:

Registered Tank Database
Source: Nassau County Health Department
Telephone: 516-571-3314

Date of Government Version: 04/07/98
Database Release Frequency: Quarterly

Date of Last EDR Contact: 07/06/98
Date of Next Scheduled EDR Contact: 10/05/98

Registered Tank Database
Source: Nassau County Health Department
Telephone: 516-571-3314

Date of Government Version: 04/07/98
Database Release Frequency: Quarterly

Date of Last EDR Contact: 07/06/98
Date of Next Scheduled EDR Contact: 10/05/98

ROCKLAND COUNTY:

Petroleum Bulk Storage Database (AST)
Source: Rockland County Health Department
Telephone: 914-364-2605

Date of Government Version: 04/01/98
Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/08/98
Date of Next Scheduled EDR Contact: 12/07/98

Petroleum Bulk Storage Database (UST)
Source: Rockland County Health Department
Telephone: 914-364-2605

Date of Government Version: 04/01/98
Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/08/98
Date of Next Scheduled EDR Contact: 12/07/98

SUFFOLK COUNTY:

Underground Storage Tank Database (AST)
Source: Suffolk County Department of Health Services
Telephone: 516-854-2521

Date of Government Version: 03/01/98
Database Release Frequency: Annually

Date of Last EDR Contact: 09/08/98
Date of Next Scheduled EDR Contact: 12/07/98

Underground Storage Tank Database (UST)
Source: Suffolk County Department of Health Services
Telephone: 516-854-2521

Date of Government Version: 03/01/98
Database Release Frequency: Annually

Date of Last EDR Contact: 09/08/98
Date of Next Scheduled EDR Contact: 12/07/98

Historical and Other Database(s)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

Former Manufactured Gas (Coal Gas) Sites: The existence and location of Coal Gas sites is provided exclusively to EDR by Real Property Scan, Inc. ©Copyright 1993 Real Property Scan, Inc. For a technical description of the types of hazards which may be found at such sites, contact your EDR customer service representative.

Disclaimer Provided by Real Property Scan, Inc.

The information contained in this report has predominantly been obtained from publicly available sources produced by entities other than Real Property Scan. While reasonable steps have been taken to insure the accuracy of this report, Real Property Scan does not guarantee the accuracy of this report. Any liability on the part of Real Property Scan is strictly limited to a refund of the amount paid. No claim is made for the actual existence of toxins at any site. This report does not constitute a legal opinion.

DELISTED NPL: NPL Deletions
Source: EPA
Telephone: 703-603-8769
The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 03/06/98
Date Made Active at EDR: 07/09/98
Database Release Frequency: Semi-Annually.

Date of Data Arrival at EDR: 06/09/98
Elapsed ASTM days: 30
Date of Last EDR Contact: 07/30/98

NFRAP: No Further Remedial Action Planned
Source: EPA/NTIS
Telephone: 703-413-0223
As of February 1995, CERCLIS sites designated "No Further Remedial Action Planned" (NFRAP) have been removed from CERCLIS. NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the need for the site to be placed on the NPL, or the contamination was not serious enough to require Federal Superfund action or NPL consideration. EPA has removed approximately 25,000 NFRAP sites to lift the unintended barriers to the redevelopment of these properties and has archived them as historical records so EPA does not needlessly repeat the investigations in the future. This policy change is part of the EPA's Brownfields Redevelopment Program to help cities, states, private investors and affected citizens to promote economic redevelopment of unproductive urban sites.

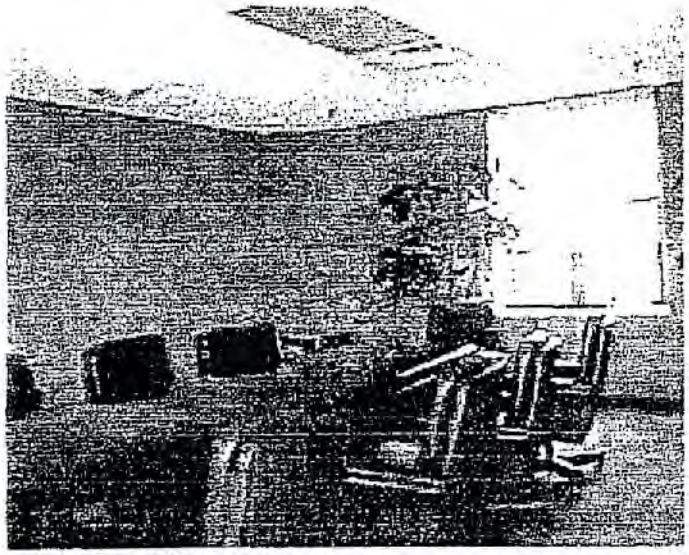
Date of Government Version: 06/15/98
Date Made Active at EDR: 07/20/98
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 07/08/98
Elapsed ASTM days: 12
Date of Last EDR Contact: 08/27/98

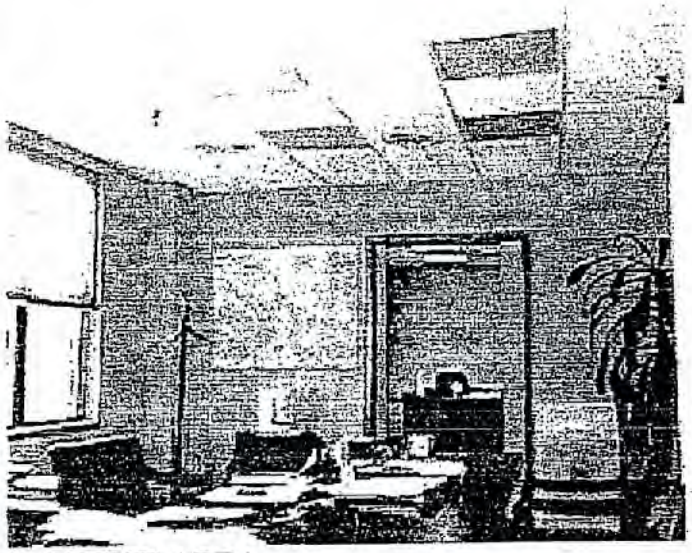
Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1996 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in March 1997 from the U.S. Fish and Wildlife Service.

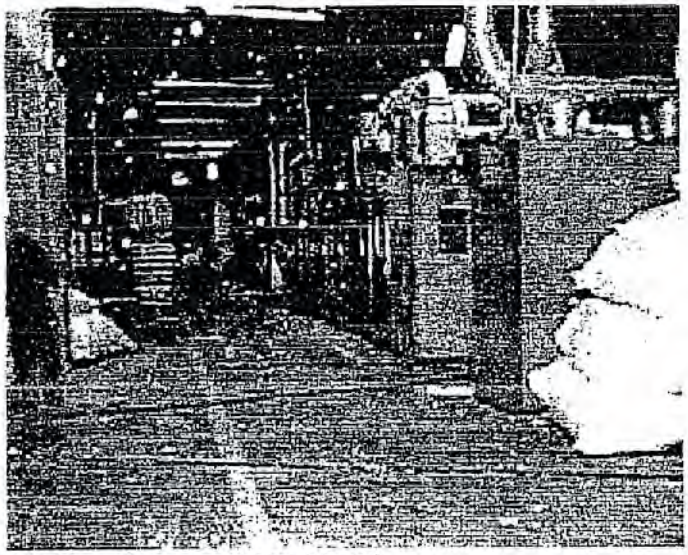
SITE PHOTOS



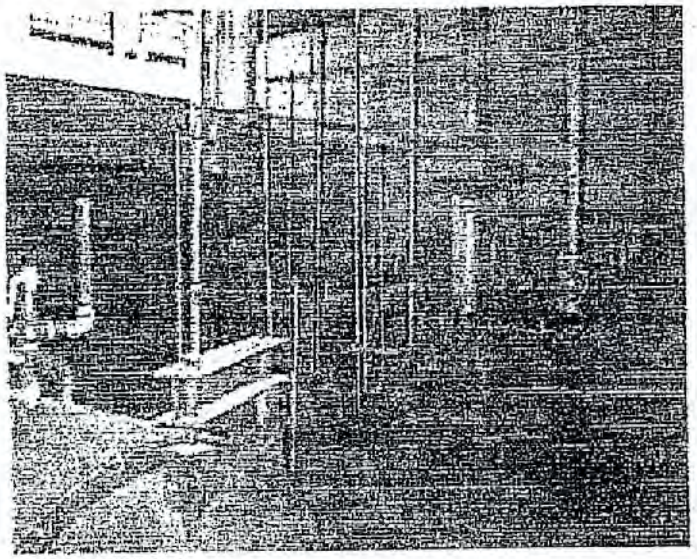
BOARD ROOM



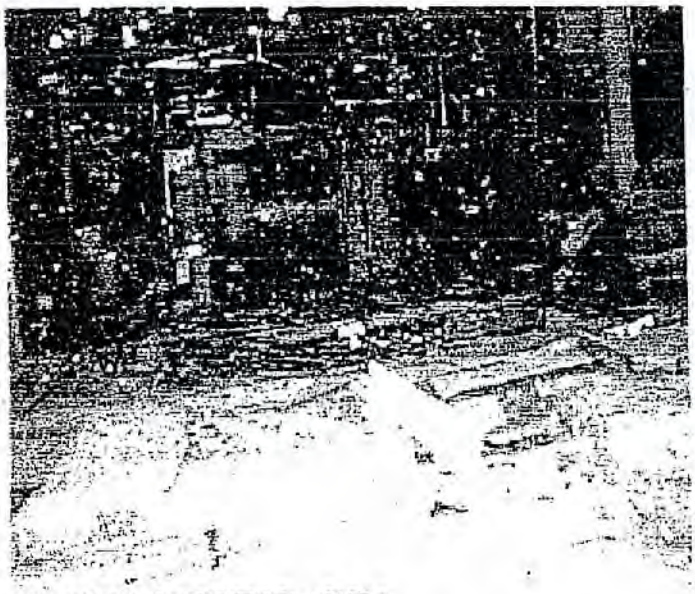
OFFICE AREA



MANUFACTURING AREA



BOILERS



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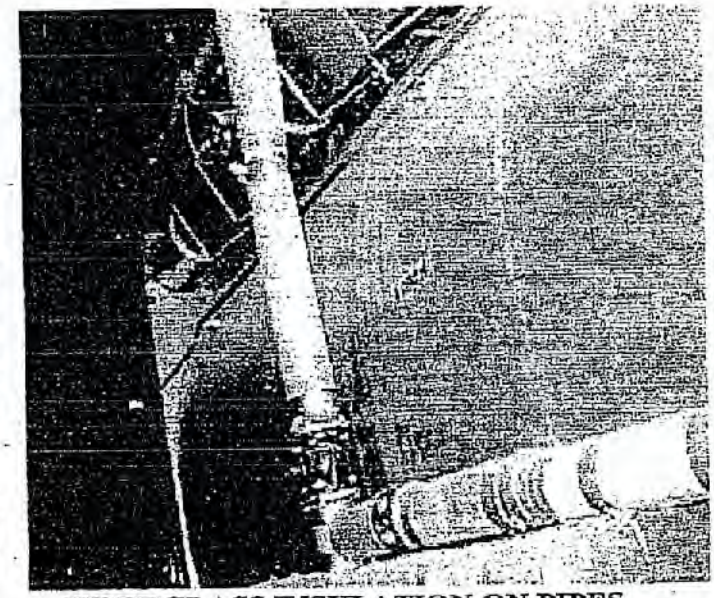
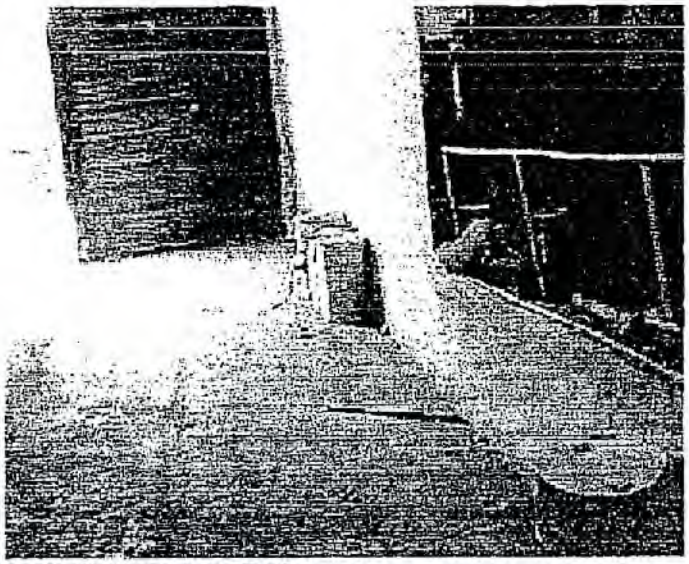


FIBERGLASS INSULATION ON PIPES



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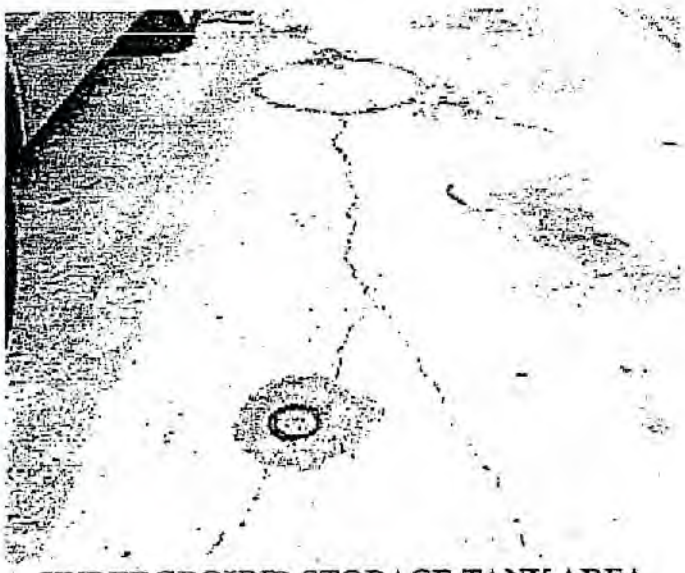
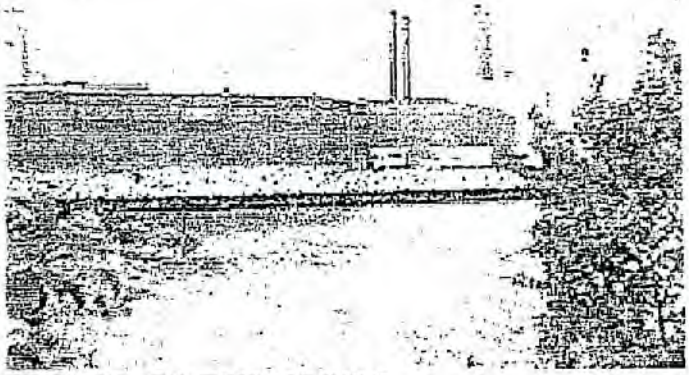
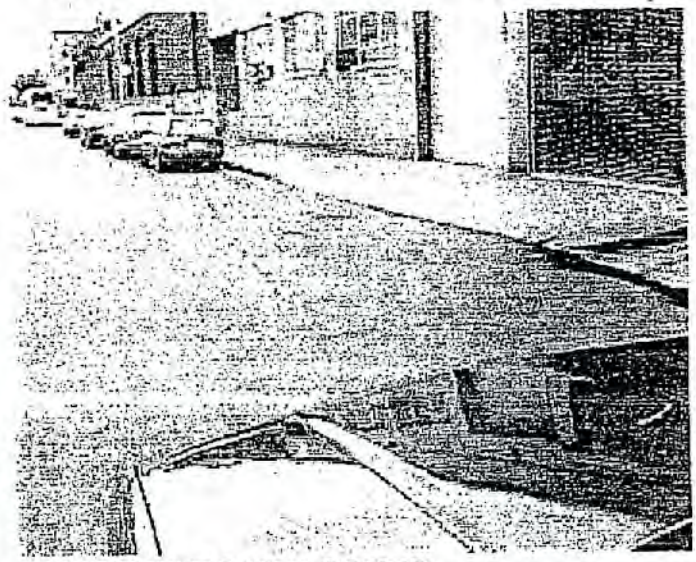


UNDERGROUND STORAGE TANK AREA



BORDER TO THE NORTH



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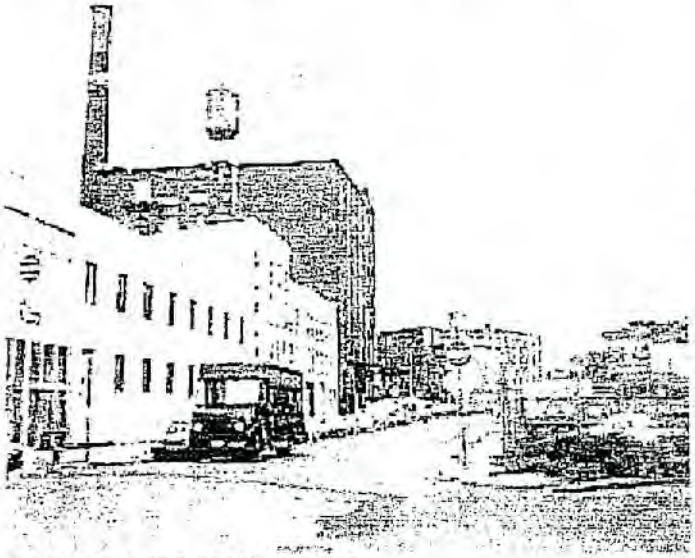
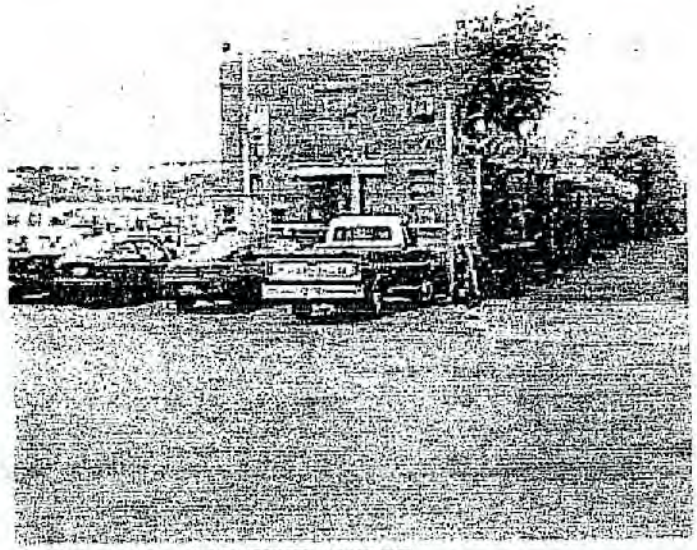


BORDER TO THE EAST



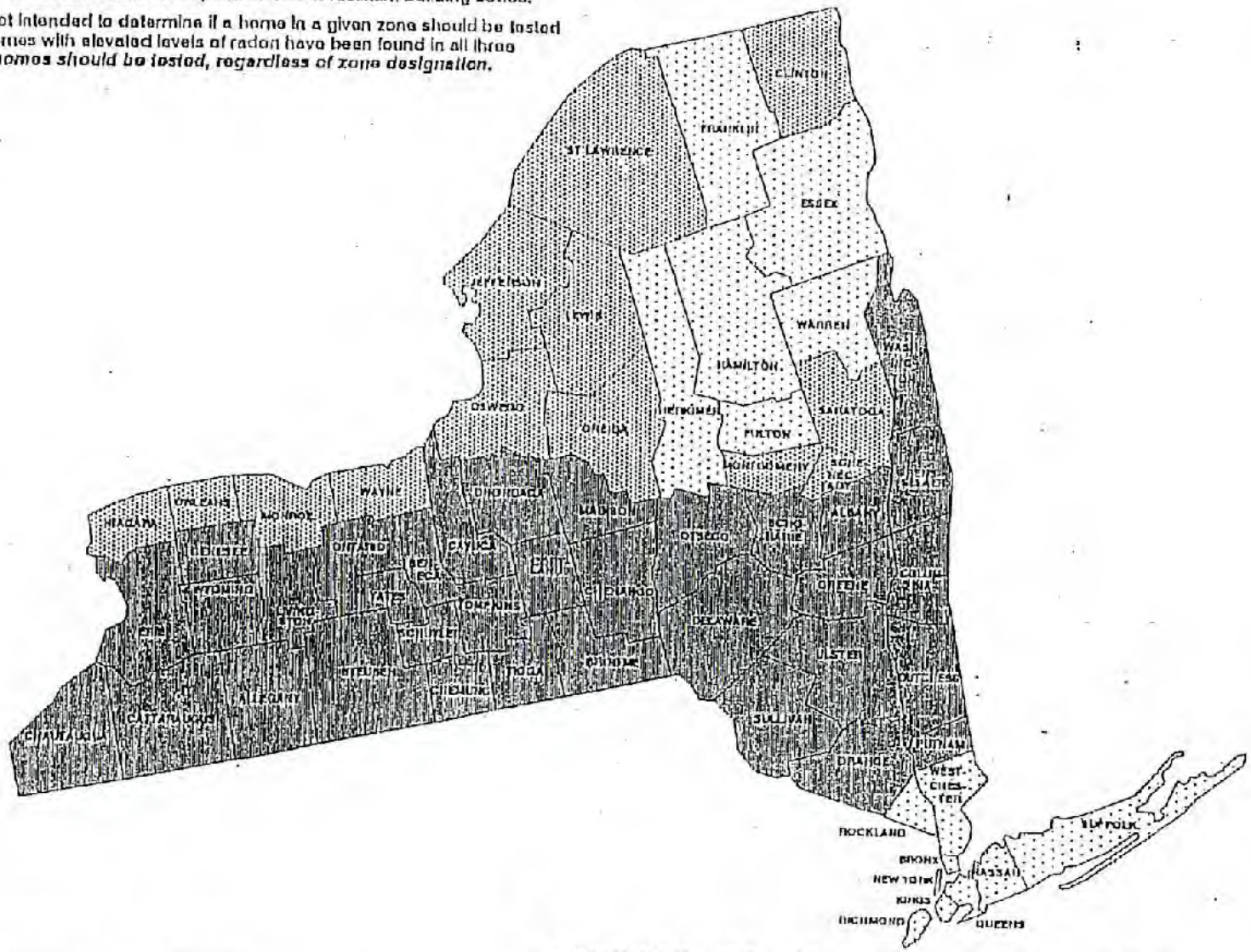
BORDER TO THE WEST

MAP OF RADON ZONES

NEW YORK - EPA Map of Radon Zones

The purpose of this map is to assist National, State and local organizations to target their resources and to implement radon-resistant building codes.

This map is not intended to determine if a home in a given zone should be tested for radon. Homes with elevated levels of radon have been found in all three zones. *All homes should be tested, regardless of zone designation.*



Zone 1 Zone 2 Zone 3

IMPORTANT: Consult the publication entitled "Preliminary Geologic Radon Potential Assessment of New York" before using this map. This document contains information on radon potential variations within counties. EPA also recommends that this map be supplemented with any available local data in order to further understand and predict the radon potential of a specific area.

A-95A (4/90) 88-901038-110

FIRE DEPARTMENT • CITY OF NEW YORK
BUREAU OF FIRE PREVENTION
ROOM 439, 250 LIVINGSTON STREET
BROOKLYN, N.Y. 11201-5884

RECORD SEARCH REQUEST
UNDERGROUND STORAGE TANKS

MAIL TO:

MKA
MIDDLETON, MONTGOMERY & ASSOCIATES, LTD.
Environmental Planners, Engineers and Advisors
754 DEER PARK AVE., NORTH BABYLON, NY 11703

Search No. _____

The undersigned requests the following information:

77 Commercial Street in Brooklyn
ADDRESS BOROUGH

For Buried Motor **Vehicle Fuel Tanks** Only

- [X] 1. No. and size of tanks (includes date of installation) ..... Fee $10.00
- [ ] 2. No. and size of sealed and/or removed tanks ..... Fee $10.00
- [ ] 3. Most recent tank and/or piping test results, including type of test performed Fee $10.00
- [ ] 4. History of leaks ..... Fee $10.00
- [ ] 5. Pending Headquarters violation orders ..... Fee $10.00
- [ ] 6. Other _____ Fee $10.00

Total 10.00

State applicants interest in or relation to premises:

(THE CITY OF NEW YORK IS NOT BEING SUED, NOR IS THERE ANY INTENTION TO SUE THE CITY OF NEW YORK)

Signed Stacy McCoichie

Date 9/16/98

DO NOT WRITE BELOW THIS LINE

Gentlemen:

In reply to your request concerning the premises mentioned above, please be advised that as of 9 A.M., _____ our records show the following: (ADDITIONAL COMMENTS ARE MADE ON REVERSE SIDE).

DOH 0691852 15000 Gallons UST #2 Oil

Searched By: _____

VIOLATIONS RECORDED ABOVE ARE ONLY THOSE WHICH ARE A MATTER OF RECORD IN HEADQUARTERS OF THE BUREAU OF FIRE PREVENTION, AND MAY NOT INCLUDE VIOLATIONS ISSUED BY LOCAL UNITS.

MAXIMUM RESPONSE TIME 20 BUSINESS DAYS.

Hydro Tech Environmental, Corp.

Main Office:
2171 Jericho Turnpike, Suite 240
Commack, New York 11725

NYC Office:
15 Ocean Avenue, Second Floor
Brooklyn, New York 11225

Phone (631) 462-5866 • Fax (631) 462-5877
www.hydrotechenvironmental.com
Toll Free: (866) HYDRO-TK

February 26, 2004

Mr. Mordechai Milworn
International Design Realty, Inc.
394 Marcy Avenue
Brooklyn, New York 11206

Re: 77 Commercial Street, Brooklyn, NY
HTE Job #040022

Dear Mr. Milworn:

This letter is intended to provide you with the results of the recent groundwater sampling exercise conducted at the above-referenced location. Hydro Tech Environmental, Corp. (HTE) was retained to sample 5 groundwater monitoring wells at the Site. Ms. Rachel Green provided a Site Plan indicating that the 5 wells that were accessible were MW-1, MW-3, MW-4, MW-6 and MW-7. Each of the wells is 2-inches in diameter and is located in the northern (rear) portion of the Site. A Site Plan is provided in *Attachment* #1.

Each well was monitored utilizing a Solinst® Oil/Water Interface Probe. The Interface Probe can accurately measure depths to the precision of 0.01 feet. All measurements were made from the top of casing. The depth to groundwater ranged from 5.20 feet in MW-1 to 5.55 feet in MW-3 and MW-6. The total depth of the wells ranges from 18 to 20 feet. No free product was encountered in any well.

Each well was then purged and sampled in accordance with applicable regulations. Two 40-milliliter glass vials and 2 1,000-milliliter amber jars were obtained from each well utilizing a submersible pump. All equipment was decontaminated prior to each use. Each groundwater sample was appropriately labeled, transmitted to a State-certified laboratory and analyzed for common petroleum constituents in accordance with New York State Department of Environmental Conservation (NYSDEC) STARS 8021 and NYSDEC STARS 8270. The STARS 8021 analysis detects volatile organic compounds (VOCs) and the STARS 8270 analysis detects semi-volatile organic compounds (SVOCs). The laboratory reports are provided as *Attachment* #2.

Table 1 provides the STARS 8021 results for each groundwater sample. The concentrations reported in Table 1 are in micrograms per Liter (µg/L). Table 1 also provides a comparison of

Hydro Tech Environmental, Corp.

Main Office:
2171 Jericho Turnpike, Suite 240
Commack, New York 11725

NYC Office:
15 Ocean Avenue, Second Floor
Brooklyn, New York 11225

Phone (631) 462-5866 ▪ Fax (631) 462-5877
www.hydrotechenvironmental.com
Toll Free: (866) HYDRO-TK

May 10, 2004

Mr. Mordechai Milworn
International Design Realty, Inc.
394 Marcy Avenue
Brooklyn, New York 11206

Re: **77 Commercial Street, Brooklyn, NY**
HTE Job #040022

Dear Mr. Milworn:

Hydro Tech recently completed a groundwater sampling exercise for five (5) monitoring wells at the above property. The results of the exercise identified four (4) monitoring wells found to be free of any contamination and only one well slightly exceeded regulatory standards. Hydro Tech also reviewed the file for the site regarding the existing monitoring wells and our review indicated that No Further Action letter by the New York State Department of Environmental Conservation (NYSDEC) was issued and the remediation was completed. As such, the levels that was found in One well appear to be insignificant and should biodegrade to acceptable levels over time. At this time, it is recommended that all of the monitoring wells be permanently abandoned in accordance with NYSDEC regulations.

I hope that this information has proven valuable to this phase of your project. Should you have any questions or comments, please feel free to contact me at your convenience.

Very Truly Yours,
Hydro Tech Environmental, Corp.

Mostafa El Sehamy, P.G., C.G.W.P.
Operations Director

MER/ra

cc: HTE Job #040022

C:\Documents and Settings\Mostafa El Sehamy\Desktop\IDR letter 5-10-04.doc

the analytical results to each compound's NYSDEC Groundwater Quality Standard (GQS) from Technical and Operational Guidance Series (TOGS) 1.1.1.

As Table 1 indicates, no VOCs were detected in monitoring wells MW-1, MW-3, MW-4 and MW-6 at concentrations exceeding the method detection limit (MDL) of 1 µg/L. The total VOC concentration detected in monitoring well MW-7 is 52 µg/L. Two compounds, Isopropylbenzene and n-Propylbenzene, were detected in MW-7 at concentrations exceeding their respective GQS. The Isopropylbenzene concentration in MW-7 is 29 µg/L, which exceeds the GQS for Isopropylbenzene of 5 µg/L. The n-Propylbenzene concentration in MW-7 is 15 µg/L, which exceeds the GQS for n-Propylbenzene of 5 µg/L. Four additional VOCs, Benzene, sec-Butylbenzene, n-Butylbenzene and tert-Butylbenzene, were detected at concentrations less than their respective GQS.

Table 2 provides the STARS 8270 results for each groundwater sample. The concentrations reported in Table 2 are in µg/L. Table 2 also provides a comparison of the analytical results to each compound's NYSDEC GQS from TOGS 1.1.1.

As Table 2 indicates, no SVOCs were detected in monitoring wells MW-1, MW-3, MW-4 and MW-7 at concentrations exceeding the MDL of 1 µg/L. The total SVOC concentration in monitoring well MW-6 is 4 µg/L. Three SVOCs, Acenaphthene, Fluoranthene and Pyrene, were detected at concentrations less than their respective GQS.

The overall results of the groundwater sampling exercise indicate that elevated levels of VOCs are present in monitoring well MW-7. These VOCs, which are associated with petroleum products, are present at concentrations exceeding NYSDEC Groundwater Standards. No SVOCs were identified in any of the monitoring wells at concentrations exceeding NYSDEC Groundwater Standards. It is recommended that these results be provided to the NYSDEC for further their review and comment. If necessary, this may involve contacting the NYSDEC Spill Hotline and obtaining a Spill Number.

I hope that this information has proven valuable to this phase of your project. Should you have any questions or comments, please feel free to contact me at your convenience.

Very Truly Yours,
Hydro Tech Environmental, Corp.

Mark E. Robbins, C.P.G., C.E.I.
Senior Geologist

MER/pk

Encl.

1. Site Plan
2. Laboratory Reports

cc: HTE Job #040022 w/ Encl.

Table 1

NYSDEC STARS 8021 Results - February 18, 2004 (ug/L)

77 Commercial Street, Brooklyn, NY

Compound	MW-1	MW-3	MW-4	MW-6	MW-7	GQS*
MTBE	<1	<1	<1	<1	<1	10
Benzene	<1	<1	<1	<1	1	1
Toluene	<1	<1	<1	<1	<1	5
Ethylbenzene	<1	<1	<1	<1	<1	5
m,p-Xylene	<2	<2	<2	<2	<2	5
o-Xylene	<1	<1	<1	<1	<1	5
Isopropylbenzene	<1	<1	<1	<1	29	5
n-Propylbenzene	<1	<1	<1	<1	15	5
1,3,5-Trimethylbenzene	<1	<1	<1	<1	<1	5
1,2,4-Trimethylbenzene	<1	<1	<1	<1	<1	5
sec-Butylbenzene	<1	<1	<1	<1	5	5
4-Isopropyltoluene	<1	<1	<1	<1	<1	5
n-Butylbenzene	<1	<1	<1	<1	1	5
Naphthalene	<1	<1	<1	<1	<1	10
tert-Butylbenzene	<1	<1	<1	<1	1	5
TOTAL VOCs	<2	<2	<2	<2	52	NS

ug/L...micrograms per liter

**...NYSDEC TOGS 1.1.1*

Shaded value represents concentration exceeding GQS

VOCs...Volatile Organic Compounds

NS...No Standard

GQS...Groundwater Quality Standard

Table 2
NYSDEC STARS 8270 Results - February 18, 2004 (ug/L)
77 Commercial Street, Brooklyn, NY

Compound	MW-1	MW-3	MW-4	MW-6	MW-7	GQS*
Naphthalene	<1	<1	<1	<1	<1	10
Acenaphthene	<1	<1	<1	1	<1	20
Fluorene	<1	<1	<1	<1	<1	50
Phenanthrene	<1	<1	<1	<1	<1	50
Anthracene	<1	<1	<1	<1	<1	50
Fluoranthene	<1	<1	<1	2	<1	50
Pyrene	<1	<1	<1	1	<1	50
Benzo (a) Anthracene	<1	<1	<1	<1	<1	0.002
Clurysene	<1	<1	<1	<1	<1	0.002
Benzo (b) Fluoranthene	<1	<1	<1	<1	<1	0.002
Benzo (k) Fluoranthene	<1	<1	<1	<1	<1	0.002
Benzo (a) Pyrene	<1	<1	<1	<1	<1	NS
Indeno (1,2,3-cd) Pyrene	<1	<1	<1	<1	<1	0.002
Dibenzo (a,h) Anthracene	<1	<1	<1	<1	<1	NS
Benzo (g,h,i) Perylene	<1	<1	<1	<1	<1	NS
TOTAL SVOCs	<1	<1	<1	4	<1	NS

ug/L...micrograms per liter

**...NYSDEC TOGS 1.1.1*

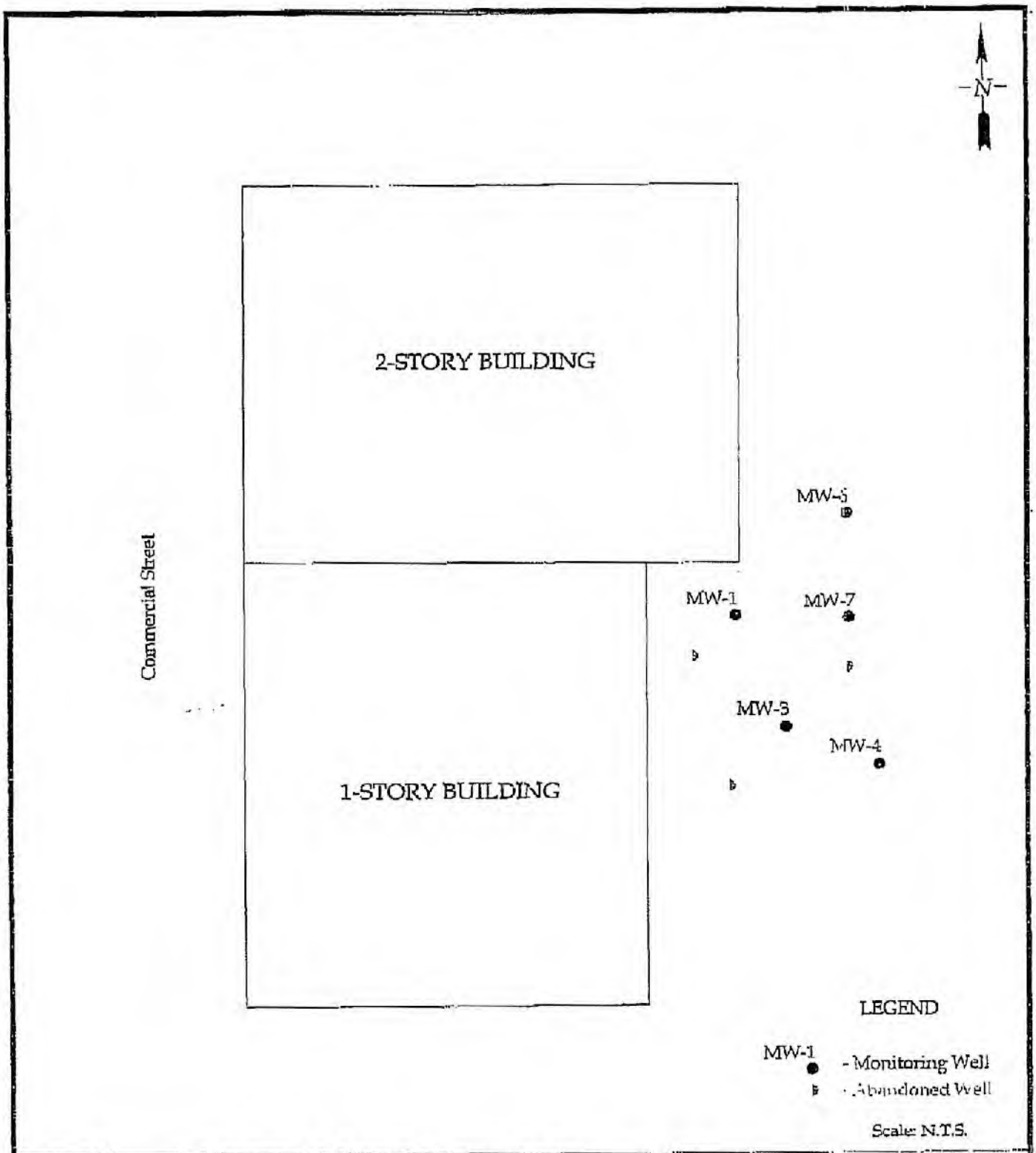
SVOCs...Semi-Volatile Organic Compounds

NS...No Standard

GQS...Groundwater Quality Standard

ATTACHMENT #1

SITE PLAN



Hydro Tech Environmental, Corp.
Main Office:
2171 Jericho Turnpike, Suite 240
Commack, New York 11725
NYC Office:
15 Ocean Avenue, Second Floor
Brooklyn, New York 11225
Phone: (631) 462-5866 Fax: (631) 462-5877
www.hydrotechenvironmental.com

Figure 1: Sampling Plan

77 Commercial Street
Brooklyn, New York

ATTACHMENT #2

LABORATORY REPORTS

Ecotest Laboratories Inc.
377 Sheffield Ave
North Babylon, NY 11703
631 422-5777

LAB NO.240594.05 02/24/04

Hydro Tech Environmental
2171 Jericho Turnpike, Suite 240
Commack, NY 11725
ATTN: Mark Robbins PO#:

SOURCE OF SAMPLE: 77 Comercial Street, Brooklyn, #040022
SOURCE OF SAMPLE:
COLLECTED BY: Client DATE COL'D:02/18/04 RECEIVED:02/19/04
TIME COL'D:1150

MATRIX:Water SAMPLE: MW1

ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	DATE OF ANALYSIS	LRL	ANALYTICAL METHOD
ter.ButylMethylEther	ug/L	< 1		02/19/04	1	EPA8021
Benzene	ug/L	< 1		02/19/04	1	EPA8021
Toluene	ug/L	< 1		02/19/04	1	EPA8021
Ethyl Benzene	ug/L	< 1		02/19/04	1	EPA8021
m + p Xylene	ug/L	< 2		02/19/04	2	EPA8021
o Xylene	ug/L	< 1		02/19/04	1	EPA8021
Xylene	ug/L	< 3		02/19/04	3	EPA8021
Isopropylbenzene	ug/L	< 1		02/19/04	1	EPA8021
n-Propylbenzene	ug/L	< 1		02/19/04	1	EPA8021
135-Trimethylbenzene	ug/L	< 1		02/19/04	1	EPA8021
124-Trimethylbenzene	ug/L	< 1		02/19/04	1	EPA8021
sec-Butylbenzene	ug/L	< 1		02/19/04	1	EPA8021
p-Isopropyltoluene	ug/L	< 1		02/19/04	1	EPA8021
n-Butylbenzene	ug/L	< 1		02/19/04	1	EPA8021
Naphthalene(v)	ug/L	< 1		02/19/04	1	EPA8021
tert-Butylbenzene	ug/L	< 1		02/19/04	1	EPA8021

cc:

LRL=laboratory Reporting Limit

REMARKS:

DIRECTOR

rn = 5244 NYSDOH ID # 10320

EcoTest Laboratories
377 Sheffield Ave
North Babylon, NY 11703
631 422-5777

LAB NO.240594.05 02/24/04

Hydro Tech Environmental
2171 Jericho Turnpike, Suite 240
Commack, NY 11725
ATTN: Mark Robbins PO#:

SOURCE OF SAMPLE: 77 Comercial Street, Brooklyn, #040022
SOURCE OF SAMPLE:
COLLECTED BY: Client DATE COL'D:02/18/04 RECEIVED:02/19/04
TIME COL'D:1150

MATRIX:Water SAMPLE: MW1

ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	DATE OF ANALYSIS	LRL	ANALYTICAL METHOD
Naphthalene(sv)	ug/L	< 1		02/20/04	1	EPA8270
Acenaphthene	ug/L	< 1		02/20/04	1	EPA8270
Fluorene	ug/L	< 1		02/20/04	1	EPA8270
Phenanthrene	ug/L	< 1		02/20/04	1	EPA8270
Anthracene	ug/L	< 1		02/20/04	1	EPA8270
Fluoranthene	ug/L	< 1		02/20/04	1	EPA8270
Pyrene	ug/L	< 1		02/20/04	1	EPA8270
Benzo(a)anthracene	ug/L	< 1		02/20/04	1	EPA8270
Chrysene	ug/L	< 1		02/20/04	1	EPA8270
Benzo(b)fluoranthene	ug/L	< 1		02/20/04	1	EPA8270
Benzo(k)fluoranthene	ug/L	< 1		02/20/04	1	EPA8270
Benzo(a)pyrene	ug/L	< 1		02/20/04	1	EPA8270
Indeno(1,2,3-cd)pyrene	ug/L	< 1		02/20/04	1	EPA8270
Dibenzo(a,h)anthracene	ug/L	< 1		02/20/04	1	EPA8270
Benzo(ghi)perylene	ug/L	< 1		02/20/04	1	EPA8270

cc:

LRL=laboratory Reporting Limit

REMARKS:

DIRECTOR

rn = 5245 NYSDOH ID # 10320

Ecotest Laboratories
377 Sheffield Ave
North Babylon, NY 11703
631 422-5777

LAB NO.240594.04 02/24/04

Hydro Tech Environmental
2171 Jericho Turnpike, Suite 240
Commack, NY 11725
ATTN: Mark Robbins PO#:

SOURCE OF SAMPLE: 77 Comercial Street, Brooklyn, #040022
SOURCE OF SAMPLE:
COLLECTED BY: Client DATE COL'D:02/18/04 RECEIVED:02/19/04
TIME COL'D:1125

MATRIX:Water SAMPLE: MW3

ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	DATE OF ANALYSIS	LRL	ANALYTICAL METHOD
ter.ButylMethylEther	ug/L	< 1		02/19/04	1	EPA8021
Benzene	ug/L	< 1		02/19/04	1	EPA8021
Toluene	ug/L	< 1		02/19/04	1	EPA8021
Ethyl Benzene	ug/L	< 1		02/19/04	1	EPA8021
m + p Xylene	ug/L	< 2		02/19/04	2	EPA8021
o Xylene	ug/L	< 1		02/19/04	1	EPA8021
Xylene	ug/L	< 3		02/19/04	3	EPA8021
Isopropylbenzene	ug/L	< 1		02/19/04	1	EPA8021
n-Propylbenzene	ug/L	< 1		02/19/04	1	EPA8021
135-Trimethylbenzene	ug/L	< 1		02/19/04	1	EPA8021
124-Trimethylbenzene	ug/L	< 1		02/19/04	1	EPA8021
sec-Butylbenzene	ug/L	< 1		02/19/04	1	EPA8021
p-Isopropyltoluene	ug/L	< 1		02/19/04	1	EPA8021
n-Butylbenzene	ug/L	< 1		02/19/04	1	EPA8021
Naphthalene(v)	ug/L	< 1		02/19/04	1	EPA8021
tert-Butylbenzene	ug/L	< 1		02/19/04	1	EPA8021

cc:

LRL=laboratory Reporting Limit

REMARKS:

DIRECTOR

rn = 5242 NYSDOH ID # 10320

EcoTest Laboratory
377 Sheffield Ave
North Babylon, NY 11703
631 422-5777

LAB NO.240594.04 02/24/04

Hydro Tech Environmental
21/1 Jericho Turnpike, Suite 240
Commack, NY 11725
ATTN: Mark Robbins PO#:

SOURCE OF SAMPLE: 77 Comercial Street, Brooklyn, #040022
SOURCE OF SAMPLE:
COLLECTED BY: Client DATE COL'D:02/18/04 RECEIVED:02/19/04
TIME COL'D:1125

MATRIX:Water SAMPLE: MW3

ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	DATE OF ANALYSIS	LRL	ANALYTICAL METHOD
Naphthalene(sv)	ug/L	< 1		02/20/04	1	EPA8270
Acenaphthene	ug/L	< 1		02/20/04	1	EPA8270
Fluorene	ug/L	< 1		02/20/04	1	EPA8270
Phenanthrene	ug/L	< 1		02/20/04	1	EPA8270
Anthracene	ug/L	< 1		02/20/04	1	EPA8270
Fluoranthene	ug/L	< 1		02/20/04	1	EPA8270
Pyrene	ug/L	< 1		02/20/04	1	EPA8270
Benzo(a)anthracene	ug/L	< 1		02/20/04	1	EPA8270
Chrysene	ug/L	< 1		02/20/04	1	EPA8270
Benzo(b)fluoranthene	ug/L	< 1		02/20/04	1	EPA8270
Benzo(k)fluoranthene	ug/L	< 1		02/20/04	1	EPA8270
Benzo(a)pyrene	ug/L	< 1		02/20/04	1	EPA8270
Indeno(1,2,3-cd)pyrene	ug/L	< 1		02/20/04	1	EPA8270
Dibenzo(a,h)anthracene	ug/L	< 1		02/20/04	1	EPA8270
Benzo(ghi)perylene	ug/L	< 1		02/20/04	1	EPA8270

cc:

LRL=laboratory Reporting Limit

REMARKS:

DIRECTOR

rn = 5243 NYSDOH ID # 10320

EcoTest Laboratory
377 Sheffield Ave
North Babylon, NY 11703
631 422-5777

LAB NO.240594.03 02/24/04

Hydro Tech Environmental
2171 Jericho Turnpike, Suite 240
Commack, NY 11725
ATTN: Mark Robbins PO#:

SOURCE OF SAMPLE: 77 Comercial Street, Brooklyn, #040022
SOURCE OF SAMPLE:
COLLECTED BY: Client DATE COL'D:02/18/04 RECEIVED:02/19/04
TIME COL'D:1100

MATRIX:Water SAMPLE: MW4

ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	DATE OF ANALYSIS	LRL	ANALYTICAL METHOD
ter.ButylMethylEther	ug/L	< 1		02/19/04	1	EPA8021
Benzene	ug/L	< 1		02/19/04	1	EPA8021
Toluene	ug/L	< 1		02/19/04	1	EPA8021
Ethyl Benzene	ug/L	< 1		02/19/04	1	EPA8021
m + p Xylene	ug/L	< 2		02/19/04	2	EPA8021
o Xylene	ug/L	< 1		02/19/04	1	EPA8021
Xylene	ug/L	< 3		02/19/04	3	EPA8021
Isopropylbenzene	ug/L	< 1		02/19/04	1	EPA8021
n-Propylbenzene	ug/L	< 1		02/19/04	1	EPA8021
135-Trimethylbenzene	ug/L	< 1		02/19/04	1	EPA8021
124-Trimethylbenzene	ug/L	< 1		02/19/04	1	EPA8021
sec-Butylbenzene	ug/L	< 1		02/19/04	1	EPA8021
p-Isopropyltoluene	ug/L	< 1		02/19/04	1	EPA8021
n-Butylbenzene	ug/L	< 1		02/19/04	1	EPA8021
Naphthalene(v)	ug/L	< 1		02/19/04	1	EPA8021
tert-Butylbenzene	ug/L	< 1		02/19/04	1	EPA8021

cc:

LRL=laboratory Reporting Limit

REMARKS:

DIRECTOR

rn = 5240 NYSDOH ID # 10320

EcoTest Laboratories
377 Sheffield Ave
North Babylon, NY 11703
631 422-5777

LAB NO.240594.03 02/24/04

Hydro Tech Environmental
2171 Jericho Turnpike, Suite 240
Commack, NY 11725
ATTN: Mark Robbins PO#:

SOURCE OF SAMPLE: 77 Comercial Street, Brooklyn, #040022
SOURCE OF SAMPLE:
COLLECTED BY: Client DATE COL'D:02/18/04 RECEIVED:02/19/04
TIME COL'D:1100

MATRIX:Water SAMPLE: MW4

ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	DATE OF ANALYSIS	LRL	ANALYTICAL METHOD
Naphthalene(sv)	ug/L	< 1		02/20/04	1	EPA8270
Acenaphthene	ug/L	< 1		02/20/04	1	EPA8270
Fluorene	ug/L	< 1		02/20/04	1	EPA8270
Phenanthrene	ug/L	< 1		02/20/04	1	EPA8270
Anthracene	ug/L	< 1		02/20/04	1	EPA8270
Fluoranthene	ug/L	< 1		02/20/04	1	EPA8270
Pyrene	ug/L	< 1		02/20/04	1	EPA8270
Benzo(a)anthracene	ug/L	< 1		02/20/04	1	EPA8270
Chrysene	ug/L	< 1		02/20/04	1	EPA8270
Benzo(b)fluoranthene	ug/L	< 1		02/20/04	1	EPA8270
Benzo(k)fluoranthene	ug/L	< 1		02/20/04	1	EPA8270
Benzo(a)pyrene	ug/L	< 1		02/20/04	1	EPA8270
Indeno(1,2,3-cd)pyrene	ug/L	< 1		02/20/04	1	EPA8270
Dibenzo(a,h)anthracene	ug/L	< 1		02/20/04	1	EPA8270
Benzo(ghi)perylene	ug/L	< 1		02/20/04	1	EPA8270

cc:

LRL=laboratory Reporting Limit

REMARKS:

DIRECTOR

rn = 5241 NYSDOH ID # 10320

EcoTest Laboratories Inc
377 Sheffield Ave
North Babylon, NY 11703
631 422-5777

LAB NO.240594.01 02/24/04

Hydro Tech Environmental
2171 Jericho Turnpike, Suite 240
Commack, NY 11725
ATTN: Mark Robbins PO#:

SOURCE OF SAMPLE: 77 Comercial Street, Brooklyn. #040022
SOURCE OF SAMPLE:
COLLECTED BY: Client DATE COL'D:02/18/04 RECEIVED:02/19/04
TIME COL'D:1250

MATRIX:Water SAMPLE: MW6

ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	DATE OF ANALYSIS	LRL	ANALYTICAL METHOD
ter.ButylMethylEther	ug/L	< 1		02/19/04	1	EPA8021
Benzene	ug/L	< 1		02/19/04	1	EPA8021
Toluene	ug/L	< 1		02/19/04	1	EPA8021
Ethyl Benzene	ug/L	< 1		02/19/04	1	EPA8021
m + p Xylene	ug/L	< 2		02/19/04	2	EPA8021
o Xylene	ug/L	< 1		02/19/04	1	EPA8021
Xylene	ug/L	< 3		02/19/04	3	EPA8021
Isopropylbenzene	ug/L	< 1		02/19/04	1	EPA8021
n-Propylbenzene	ug/L	< 1		02/19/04	1	EPA8021
135-Trimethylbenzene	ug/L	< 1		02/19/04	1	EPA8021
124-Trimethylbenzene	ug/L	< 1		02/19/04	1	EPA8021
sec-Butylbenzene	ug/L	< 1		02/19/04	1	EPA8021
p-Isopropyltoluene	ug/L	< 1		02/19/04	1	EPA8021
n-Butylbenzene	ug/L	< 1		02/19/04	1	EPA8021
Naphthalene(v)	ug/L	< 1		02/19/04	1	EPA8021
tert-Butylbenzene	ug/L	< 1		02/19/04	1	EPA8021

cc:

LRL=laboratory Reporting Limit

REMARKS:

DIRECTOR

rn = 5236 NYSDOH ID # 10320

EcoTest Laboratory
377 Sheffield Ave
North Babylon, NY 11703
631 422-5777

LAB NO.240594.01 02/24/04

Hydro Tech Environmental
2171 Jericho Turnpike, Suite 240
Commack, NY 11725
ATTN: Mark Robbins PO#:

SOURCE OF SAMPLE: 77 Comercial Street, Brooklyn, #040022
SOURCE OF SAMPLE:
COLLECTED BY: Client DATE COL'D:02/18/04 RECEIVED:02/19/04
TIME COL'D:1250

MATRIX:Water SAMPLE: MW6

ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	DATE OF ANALYSIS	LRL	ANALYTICAL METHOD
Naphthalene(sv)	ug/L	< 1		02/20/04	1	EPA8270
Acenaphthene	ug/L	1		02/20/04	1	EPA8270
Fluorene	ug/L	< 1		02/20/04	1	EPA8270
Phenanthrene	ug/L	< 1		02/20/04	1	EPA8270
Anthracene	ug/L	< 1		02/20/04	1	EPA8270
Fluoranthene	ug/L	2		02/20/04	1	EPA8270
Pyrene	ug/L	1		02/20/04	1	EPA8270
Benzo(a)anthracene	ug/L	< 1		02/20/04	1	EPA8270
Chrysene	ug/L	< 1		02/20/04	1	EPA8270
Benzo(b)fluoranthene	ug/L	< 1		02/20/04	1	EPA8270
Benzo(k)fluoranthene	ug/L	< 1		02/20/04	1	EPA8270
Benzo(a)pyrene	ug/L	< 1		02/20/04	1	EPA8270
Indeno(1,2,3-cd)pyrene	ug/L	< 1		02/20/04	1	EPA8270
Dibenzo(a,h)anthracene	ug/L	< 1		02/20/04	1	EPA8270
Benzo(ghi)perylene	ug/L	< 1		02/20/04	1	EPA8270

cc:

LRL=laboratory Reporting Limit

REMARKS:

DIRECTOR

rn = 5237 NYSDOH ID # 10320

EcoTest Laboratory
377 Sheffield Ave
North Babylon, NY 11703
631 422-5777

02/24/04

LAB NO.240594.02

Hydro Tech Environmental
2171 Jericho Turnpike, Suite 240
Commack, NY 11725

ATTN: Mark Robbins

PO#:

SOURCE OF SAMPLE: 77 Comercial Street, Brooklyn, #040022
SOURCE OF SAMPLE:
COLLECTED BY: Client

DATE COL'D:02/18/04 RECEIVED:02/19/04
TIME COL'D:1225

MATRIX:Water SAMPLE: MW7

ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	DATE OF ANALYSIS	LRL	ANALYTICAL METHOD
ter.ButylMethylEther	ug/L	< 1		02/20/04	1	EPA8021
Benzene	ug/L	1		02/20/04	1	EPA8021
Toluene	ug/L	< 1		02/20/04	1	EPA8021
Ethyl Benzene	ug/L	< 1		02/20/04	1	EPA8021
m + p Xylene	ug/L	< 2		02/20/04	2	EPA8021
o Xylene	ug/L	< 1		02/20/04	1	EPA8021
Xylene	ug/L	< 3		02/20/04	3	EPA8021
Isopropylbenzene	ug/L	29		02/20/04	1	EPA8021
n-Propylbenzene	ug/L	15		02/20/04	1	EPA8021
135-Trimethylbenzene	ug/L	< 1		02/20/04	1	EPA8021
124-Trimethylbenzene	ug/L	< 1		02/20/04	1	EPA8021
sec-Butylbenzene	ug/L	5		02/20/04	1	EPA8021
p-Isopropyltoluene	ug/L	< 1		02/20/04	1	EPA8021
n-Butylbenzene	ug/L	1		02/20/04	1	EPA8021
Naphthalene(v)	ug/L	< 1		02/20/04	1	EPA8021
tert-Butylbenzene	ug/L	1		02/20/04	1	EPA8021

cc:

LRL=laboratory Reporting Limit

REMARKS:

DIRECTOR

rn = 5238 NYSDOH ID # 10320

EcoTest Laboratories
377 Sheffield Ave
North Babylon, NY 11703
631 422-5777

LAB NO.240594.02 02/24/04

Hydro Tech Environmental
2171 Jericho Turnpike, Suite 240
Commack, NY 11725
ATTN: Mark Robbins PO#:

SOURCE OF SAMPLE: 77 Comercial Street, Brooklyn. #040022
SOURCE OF SAMPLE:
COLLECTED BY: Client DATE COL'D:02/18/04 RECEIVED:02/19/04
TIME COL'D:1225

MATRIX:Water SAMPLE: MW7

ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	DATE OF ANALYSIS	LRL	ANALYTICAL METHOD
Naphthalene(sv)	ug/L	< 1		02/20/04	1	EPA8270
Acenaphthene	ug/L	< 1		02/20/04	1	EPA8270
Fluorene	ug/L	< 1		02/20/04	1	EPA8270
Phenanthrene	ug/L	< 1		02/20/04	1	EPA8270
Anthracene	ug/L	< 1		02/20/04	1	EPA8270
Fluoranthene	ug/L	< 1		02/20/04	1	EPA8270
Pyrene	ug/L	< 1		02/20/04	1	EPA8270
Benzo(a)anthracene	ug/L	< 1		02/20/04	1	EPA8270
Chrysene	ug/L	< 1		02/20/04	1	EPA8270
Benzo(b)fluoranthene	ug/L	< 1		02/20/04	1	EPA8270
Benzo(k)fluoranthene	ug/L	< 1		02/20/04	1	EPA8270
Benzo(a)pyrene	ug/L	< 1		02/20/04	1	EPA8270
Indeno(1,2,3-cd)pyrene	ug/L	< 1		02/20/04	1	EPA8270
Dibenzo(a,h)anthracene	ug/L	< 1		02/20/04	1	EPA8270
Benzo(ghi)perylene	ug/L	< 1		02/20/04	1	EPA8270

cc:

LRL=laboratory Reporting Limit

REMARKS:

DIRECTOR

rn = 5239 NYSDOH ID # 10320

New York State Department of Environmental Conservation
Division of Environmental Remediation, Region 2
30-20 Thomson Avenue, Long Island City, N.Y. 11101
Phone: (718) 482-4933 ext. 7110 FAX: (718) 482-4043

John P. Cahill
Commissioner

July 2, 1999

Belfer Realty & Development Company
80 Cutter Mill Road
Great Neck, N.Y. 11021

ATT: Andrew B. Belfer, Partner

RE: DEC Spill Investigation No. 9811015 - 77 Commercial Street, Brooklyn, N.Y. (The "Site") - Petroleum Bulk Storage No. 02-601397..

Dear Mr. Belfer:

This letter provides Belfer Realty & Development Company (BR&DC) with the DEC's comments regarding site investigation and remediation at the above referenced location. The results of this investigatory and remedial work was documented in a series of reports prepared for this Department by Soil Mechanics Environmental Services (SMES) between December 1998 and June 1999. The results of the remedial and groundwater testing meets the DEC's requirements for Petroleum Site Inactivation & Closure, as specified in DEC's current guidelines. Therefore, the DEC will not require any further investigatory or remedial work at this point.

The spill report closure is based on the findings presented in the following documents:

- Petroleum Bulk Storage (PBS) registration No. 02-601397 for closure and/or removal of 2 - 550 gallon Underground Storage Tanks (USTs)
- Flour Daniel GTI - Phase II Site Assessment Report, dated November 13, 1998
- Flour Daniel GTI - Additional Phase II Site Assessment Report, dated November 30, 1998
- SMES proposed remedial action plan , dated December 16, 1998. This plan was approved by the DEC in a letter to BR&DC on December 18, 1998.
- Results of SMES's remedial action plan , dated January 22, 1999
- Results of SMES's additional groundwater monitoring and testing , dated February 3, 1999

- Results of SMES's remediation of oil/water separator, investigation of sewer connections, and installation of additional groundwater monitoring wells , dated March 22, 1999.

- Results of SMES's remediation of contaminated groundwater and additional monitoring and testing of selected wells, dated April 29, 1999.

- Results of SMES's follow-up remediation of contaminated groundwater and additional monitoring and testing of selected wells, dated June 21, 1999.

The site assessment, subsurface investigation and UST closure registration is satisfactory. This included soil sampling during the 550 gallon tank closure/removal work, combined with follow-up groundwater sampling. In addition, SMES performed significant remedial work to properly address the removal of contaminated source material. SMES's follow-up groundwater pumping and testing indicated that there is only marginal levels of volatile and semi-volatile contamination at this site. The levels of contamination present are only slightly above NYS Groundwater standards. Moreover, the petroleum contamination has been effectively reduced to a level which is appropriate for cleanups on industrial sites with fill material present. Therefore, effective immediately this spill investigation case is closed.

Please be advised, the DEC's decision to close this spill investigation is strictly limited to this site. It does not affect future regulatory determinations that may arise from unforeseen or newly discovered site contamination. Moreover, handling and disposal of excavated site soils related to future development must be managed in accordance with applicable department regulations. If there are any questions, please feel free to call me at (718)482-4933 ext. 7110.

Sincerely,

Anthony Sigona

Anthony J. Sigona, P.E.
Environmental Engineer II
Bureau of Spill Prevention & Response

cc: Mr. Daren Murphy, SMES

SOIL MECHANICS
ENVIRONMENTAL SERVICES
3770 MERRICK ROAD • SEAFORD, L.I., NEW YORK 11783
(516) 221-7500 • FAX (516) 679-1900

June 21, 1999

NYSDEC
47-40 21st Street
Long Island City, N.Y. 11101
Attn: Mr. Anthony Sigona

Re: 77 Commercial Street
Brooklyn, N.Y.
NYSDEC Spill #: 98-11015
SMES Project #: 98-921

Dear Anthony:

Forwarded herewith is a summary of remedial and sampling activities, recently conducted at the above referenced property, pertaining to monitoring wells MW#1, MW#2, and MW#6 which were installed to address the former 550-gallon gasoline UST (please refer to our previous reports dated 1/22/99, 2/3/99, 3/22/99, and 4/29/99).

1.0 REMEDIAL ACTIVITIES

Commencing 5/6/99, monitoring wells MW#1 and MW#2 were pumped-out, utilizing a pump truck, on a weekly basis for four (4) consecutive weeks (5/6, 5/13, 5/20, and 5/27). An estimated total of 4,967-gallons was pumped from the monitoring wells during the four (4) rounds of pump-out activities. All contaminated water was containerized into a pump truck and subsequently transported to a regulated facility (Republic Environmental Recycling, Inc., Cenco Boulevard, Clayton, N.J. 08312). Manifests will be forwarded to all parties as they become available.

2.0 LABORATORY RESULTS

Wells MW#1, MW#2, and MW#6 were monitored, purged, and sampled on 6/10/99. As has been the case since commencement of investigative and remedial activities, no floating product was detected within any of the monitoring wells. Please see Tables #1, #2, & #3 for results of recent sampling activities and previous sampling data (see attached laboratory reports and chain of custody):

SOIL MECHANICS ENVIRONMENTAL SERVICES
3770 MERRICK ROAD • SEAFORD, L.I., NEW YORK 11783
(516) 221-2500 • FAX (516) 679-1900

NYSDEC (2) June 21, 1999

3.0 DISCUSSIONS, CONCLUSIONS, & RECOMMENDATIONS

Review of recent laboratory results of aqueous samples collected from MW#1, MW#2, and MW#6, when compared to previous sampling results, indicate that a significant reduction has occurred in volatile and semi-volatile organics since commencement of remedial activities. In many cases, the reported concentrations of volatile and semi-volatile organics were below applicable regulatory guidelines or non-detect. The detected concentrations of select RCRA metals have remained consistent. However, silver and barium are not normally associated with a release of gasoline. In any event, the most recently detected concentrations of volatile organics, semi-volatile organics, and RCRA metals found in the monitoring wells are typical of anticipated background concentrations in a highly industrialized/commercialized area such as the subject property where ground water is not utilized as a potable source.

Accordingly, based on the aforementioned as well as the fact that the source of the identified contamination i.e., former 550-gallon gasoline UST and all accessible impacted soil and/or brick have been removed, it is our opinion, that no further investigative/remedial activities are warranted.

As our prior reports indicate, based on the results of investigative and/or remedial activities, we have also recommended no further action with respect to the 15,000-gallon fuel oil UST and oil/water separator.

As such, we respectfully request that Spill # 98-11015 be closed and no further action required. Should you have any questions regarding this project, please feel free to contact this office.

Very truly yours,

SOIL MECHANICS ENVIRONMENTAL SERVICES

Daren Murphy
Environmental Scientist

Carl Vernick, P.E.
President

98-921.10

APPENDIX C
GEOPHYSICAL INVESTIGATION REPORT

GEOPHYSICAL INVESTIGATION REPORT

PERFORMED AT:

77 Commercial Street
Brooklyn, NY 11222

PREPARED FOR:

Mark Jepsen
AKRF
440 Park Ave South 7th Floor
New York, NY 10016

PREPARED BY:

Shan Wei
Senior Geophysicist
Enviroprobe Service, Inc.
908 N Lenola Road
Moorestown, NJ 08057
Phone: (856) 858-8584
Toll Free: (800) 596-7472

October 27, 2014

1.0 INTRODUCTION

Enviroprobe Service, Inc. (Enviroprobe) is an environmental investigation services firm which provides monitoring well installation (HSA), Geoprobe (DPT) drilling services and Environmental & Engineering Geophysics (EEG) services to the environmental consulting and engineering community.

Enviroprobe conducted a subsurface geophysical investigation at the subject property within client-specified areas of concern. Due to conditions and objectives, the investigation utilized a Geophysical Survey Systems, Inc (GSSI) SIR-3000 cart-mounted ground penetrating radar (GPR) unit with a 270 MHz antenna, a Radiodetection receiver, a Radiodetection transmitter and a Fisher TW-6 metallic locator.

GPR is a geophysical method that has been developed over the past thirty years for shallow, high-resolution, subsurface investigations of the earth. GPR uses high frequency pulsed electromagnetic waves (generally 10 MHz to 2,000 MHz) to acquire subsurface information. An EM wave is propagated downward into the ground by a transmitting antenna. Where abrupt changes in electrical properties occur in the subsurface, a portion of the energy is reflected back to the surface. This reflected wave is detected by a receiver antenna and transmitted to a control unit for real time processing and display. The penetration depth of the GPR unit varies from several inches to tens of feet according to site-specific conditions. The penetration depth decreases with increased soil conductivity. The penetration depth is the greatest in ice, dry sands, and fine gravels. Clayey, highly saline or saturated soils, areas covered by concrete, foundry slag, or other highly conductive materials greatly reduce GPR penetration. GPR is a method commonly used for environmental, engineering, archaeological, and other shallow investigations.

The Radiodetection (RD) transmitter and receiver are commonly used for pipe and cable locating. The multi-frequency transmitter can be directly connected, clamped, or used to induce a signal in a target line while the multi-frequency receiver is used to measure the signal from energized lines.

The Fisher TW-6 metallic locator is designed to find pipes, cables and other metallic objects such as underground storage tanks (USTs). The TW-6 transmitter generates an electromagnetic field that induces electrical currents in the subsurface. These currents produce a secondary electromagnetic field that is measured by the TW-6 receiver. One surveyor can carry both the transmitter and receiver together to search for underground metallic objects, although the TW-6 response can also be affected by the electrical properties of non-metallic materials in the subsurface.

2.0 SCOPE OF WORK

On October 23, 2014, a geophysicist from Enviroprobe Service Inc. was mobilized to the subject property to perform a geophysical investigation. The purpose of the investigation was to detect possible USTs, designate underground conduits/utilities,

and investigate proposed drilling locations within client-specified areas of the property. The survey area included proposed drilling locations in both exterior and interior portions of subject property. The ground surface of the survey area consisted of asphalt and concrete surfaces.

3.0 SURVEY RESULTS

The utility survey was conducted using a cart-mounted GPR unit and a RD unit. The RD unit was used to trace common utilities from sources in and around the survey area. The RD receiver was also used in the passive mode to search for live underground electrical power cables and other utilities emitting 60Hz electromagnetic signals. When possible, the location of utilities was confirmed with the GPR. The GPR survey was also performed in a grid pattern in at least two orthogonal directions to search for evident and non-evident underground utilities. Whenever possible and necessary, the manhole covers in and around the survey area were opened and the manholes were visually inspected for underground utilities. Designated utilities were marked on-site with pink spray paint.

In a suspected UST area, a survey utilizing a TW-6 unit and a GPR unit was conducted. The TW-6 survey was not effective due to the reinforced concrete pavement. Approximate scope of a suspected UST was delineated through the GPR survey. Its approximate location is shown in Figure 1. To the north of the suspected UST, there were water puddles and the GPR survey was not effective. As a result, it's unknown whether there was another UST next to the suspected UST.

4.0 LIMITATIONS

Due to surface conditions and subsurface content, the GPR penetration depth was estimated as about 3 feet in the majority of the survey area.

The TW-6 survey was not effective due to reinforced concrete.

Due to the dielectric properties of the subsurface, plastic polymer and fiberglass utilities may not have been detected.

The underground utility survey was conducted in compliance with the industry standard of care guidelines found in ASCE 38-02 (Level B).

5.0 WARRANTIES

The field observations and measurements reported herein are considered sufficient in detail and scope for this project. Enviroprobe Service, Inc. warrants that the findings and conclusions contained herein have been promulgated in accordance with generally accepted environmental engineering methods. There is a possibility that conditions may

exist which could not be identified within the scope of this project and were not apparent during the site activities performed for this project.

Enviroprobe represents that the services were performed in a manner consistent with that level of care and skill ordinarily exercised by environmental consultants under similar circumstances. No other representations to Client, express or implied, and no warranty or guarantee is included or intended in this agreement, or in any report, document, or otherwise.

Enviroprobe Service, Inc. believes that the information provided in this report is reliable. However, Enviroprobe cannot warrant or guarantee that the information provided by others is complete or accurate. No other warranties or guarantees are implied or expressed.

GPR data is subject to signal anomalies and operator interpretation. The GPR data is intended to provide the locations of areas of concern requiring additional investigation or the approximate location of underground structures and utilities. Great care must be utilized when excavating and/or drilling around underground structures and utilities since GPR data can only be used for estimation purposes and GPR data is subject to misinterpretation. Enviroprobe can not guarantee that utilities, post-tension cables, and/or rebar will not be incurred during drilling, cutting, coring, or excavating activities.

This report was prepared pursuant to the contract Enviroprobe has with the Client. That contractual relationship included an exchange of information about the property that was unique and between Enviroprobe and its client and serves as the basis upon which this report was prepared. Because of the importance of the communication between Enviroprobe and its client, reliance or any use of this report by anyone other than the Client, for whom it was prepared, is prohibited and therefore not foreseeable to Enviroprobe.

Reliance or use by any such third party without explicit authorization in the report does not make said third party a third party beneficiary to Enviroprobe contract with the Client. Any such unauthorized reliance on or use of this report, including any of its information or conclusions, will be at the third party's risk. For the same reasons, no warranties or representations, expressed or implied in this report, are made to any such third party.

FIG. 1. The approximate location of the suspected UST.

APPENDIX D
SOIL BORING LOGS

SOIL BORING LOG

77 Commercial Street
Brooklyn, NY

AKRF Project Number: 12015

Boring No. **SB-1**

Sheet 1 of 1

AKRF
440 Park Avenue South, New York, NY
Phone (212) 696-0670 Fax (212) 726-

Drilling Method: Geoprobe
Sampling Method: 5' Macrocore
Driller : Zebra
Sampler: MJ

Drilling
Start Time 14:50 **Finish Time** 15:20
Date 10/23/2014
Weather: 65° Rain

Depth (feet)	Recovery (Inches)	Surface Condition: Concrete	Odor	Moisture	PID	NAPL	Comments and Samples Collected for Lab Analysis
1	36"	Top 8": CONCRETE.	None	Dry	ND	ND	SB-1(1'-2')
2							
3		Bottom 28": Brown SAND, trace Asphalt(FILL).	None	Dry	ND	ND	
4							
5							
6	40"	3": SLOUGH.	None	Dry	ND	ND	
7		37": Fine Brown SAND.	None	Dry	ND	ND	SB-1(8'-9')
8							
9			None	Wet	ND	ND	
10							
11	6"	ALL: Brown SAND.	None	Wet	ND	ND	
12							
13							
14							
15							

Notes: End of boring at 15 feet below ground surface
Groundwater encountered at 9' below grade.
PID = photoionization detector (PPM= parts per million) ND = Not Detected

SOIL BORING LOG

77 Commercial Street
Brooklyn, NY

AKRF Project Number: 12015

Boring No. **SB-2**

Sheet 1 of 1

AKRF
440 Park Avenue South, New York, NY
Phone (212) 696-0670 Fax (212) 726-

Drilling Method: Geoprobe
Sampling Method: 5' Macrocore
Driller : Zebra
Sampler: MJ

Drilling

Start Time	15:35	**Finish Time**	15:50
Date	10/23/2014		
Weather:	65° Rain		

Depth (feet)	Recovery (Inches)	Surface Condition: Concrete	Odor	Moisture	PID	NAPL	Comments and Samples Collected for Lab Analysis
1	30"	Top 10": CONCRETE.	None	Dry	ND	ND	SB-2(1'-2')
2							
3		Bottom 20": Dark Brown SAND, trace Asphalt and Brick(FILL).	None	Dry	ND	ND	
4							
5							
6	40"	Top 4": SLOUGH.	None	Dry	ND	ND	SB-2(6'-7')
7							
8		Bottom 36": Fine Brown SAND.	None	Wet	ND	ND	
9							
10							
11	60"	Top 12": Fine Brown SAND.	None	Wet	ND	ND	
12							
13		Bottom 48": White SILT, little Sand.	None	Wet	ND	ND	
14							
15							

Notes: End of boring at 15 feet below ground surface
Groundwater encountered at 7' below grade.
PID = photoionization detector (PPM= parts per million) ND = Not Detected

SOIL BORING LOG

77 Commercial Street
Brooklyn, NY

AKRF Project Number: 12015

Boring No. **SB-3**

Sheet 1 of 1

AKRF
440 Park Avenue South, New York, NY
Phone (212) 696-0670 Fax (212) 726-

Drilling Method: Geoprobe
Sampling Method: 5' Macrocore
Driller : Zebra
Sampler: MJ

Drilling

Start Time	11:40	**Finish Time**	11:55
Date	10/23/2014		
Weather:	60° Rain		

Depth (feet)	Recovery (Inches)	Surface Condition: Concrete	Odor	Moisture	PID	NAPL	Comments and Samples Collected for Lab Analysis
1	50"	Top 6": CONCRETE.	None	Dry	ND	ND	SB-3(1'-2')
2		Bottom 44": Dark Grey SAND and some Rock and Asphalt(FILL), trace Gravel(FILL).	None	Dry	ND	ND	
3							
4							
5							
6	48"	Top 6": SLOUGH.	None	Dry	ND	ND	SB-3(8'-9')
7		Bottom 42": Fine Brown SAND, trace Asphalt(FILL).	None	Dry	ND	ND	
8							
9			None	Wet	ND	ND	
10							
11	60"	Top 8": SLOUGH.	None	Wet	ND	ND	
12		Bottom 52": Grey SAND, little SILT.	None	Wet	ND	ND	
13							
14							
15							

Notes: End of boring at 15 feet below ground surface
Groundwater encountered at 9' below grade.
PID = photoionization detector (PPM= parts per million) ND = Not Detected

SOIL BORING LOG

77 Commercial Street
Brooklyn, NY

AKRF Project Number: 12015

Boring No. **SB-4**

Sheet 1 of 1

AKRF
440 Park Avenue South, New York, NY
Phone (212) 696-0670 Fax (212) 726-

Drilling Method: Geoprobe
Sampling Method: 5' Macrocore
Driller : Zebra
Sampler: MJ

Drilling			
Start Time	15:55	**Finish Time**	16:15
Date	10/23/2014		
Weather:	65° Rain		

Depth (feet)	Recovery (Inches)	Surface Condition: Concrete	Odor	Moisture	PID	NAPL	Comments and Samples Collected for Lab Analysis
1	48"	Top 10": CONCRETE.	None	Dry	ND	ND	
2		Bottom 38": Brown SAND, little Asphalt and Rock(FILL), trace Wood(FILL).	None	Dry	1.8	ND	SB-4(1'-2')
3							Slight staining observed in trace wood fragments
4							
5			None	Dry	ND	ND	
6	40"	Top 8": SLOUGH.	None	Dry	ND	ND	
7		Bottom 32": Brown SAND, trace Brick and Wood(FILL).	None	Dry	1.2	ND	SB-4(7'-8')
8							SB-X(7'-8')
9							
10			None	Wet	ND	ND	
11	60"	ALL: Fine Brown SAND.	None	Wet	ND	ND	
12							
13							
14							
15							

Notes: End of boring at 15 feet below ground surface
Groundwater encountered at 10' below grade.
PID = photoionization detector (PPM= parts per million) ND = Not Detected

SOIL BORING LOG

77 Commercial Street
Brooklyn, NY

AKRF Project Number: 12015

Boring No. **SB-5**

Sheet 1 of 1

AKRF
440 Park Avenue South, New York, NY
Phone (212) 696-0670 Fax (212) 726-

Drilling Method: Geoprobe
Sampling Method: 5' Macrocore
Driller : Zebra
Sampler: MJ

Drilling			
Start Time	9:30	Finish Time	9:45
Date	10/24/2014		
Weather:	58° Cloudy		

Depth (feet)	Recovery (Inches)	Surface Condition: Concrete	Odor	Moisture	PID	NAPL	Comments and Samples Collected for Lab Analysis
1	44"	Top 10": CONCRETE.	None	Dry	ND	ND	SB-5(1'-2')
2		Bottom 38": Brown SAND, little Asphalt and Rock(FILL), trace Wood(FILL).	None	Dry	ND	ND	
3							
4							
5							
6	36"	ALL: Brown SAND, little Rock and Brick(FILL), trace Wood(FILL).	None	Dry	ND	ND	SB-5(6'-7')
7			None	Wet	ND	ND	
8							
9							
10							
11	34"	ALL: Grey SAND, some Silt.	None	Wet	ND	ND	
12							
13							
14							
15							

Notes: End of boring at 15 feet below ground surface
Groundwater encountered at 7.5' below grade.
PID = photoionization detector (PPM= parts per million) ND = Not Detected

SOIL BORING LOG

77 Commercial Street
Brooklyn, NY

AKRF Project Number: 12015

Boring No. **SB-6**

Sheet 1 of 1

AKRF
440 Park Avenue South, New York, NY
Phone (212) 696-0670 Fax (212) 726-

Drilling Method: Geoprobe
Sampling Method: 5' Macrocore
Driller : Zebra
Sampler: MJ

Drilling
Start Time 11:10 **Finish Time** 11:40
Date 10/22/2014
Weather: 60° Rain

Depth (feet)	Recovery (Inches)	Surface Condition: Concrete	Odor	Moisture	PID	NAPL	Comments and Samples Collected for Lab Analysis
1	42"	Top 6": CONCRETE.	None	Dry	ND	ND	SB-6(1'-2')
2		Bottom 36": Dark Grey SAND, some Asphalt(FILL), trace Rock(FILL).	None	Dry	ND	ND	
3							
4							
5							
6	40"	ALL: Brown SAND, trace Wood, Asphalt, and Rock(FILL).	None	Dry	ND	ND	
7							
8							
9							
10							
11	60"	ALL: Dark Grey SAND, some Silt.		Wet	5.3	ND	SB-6(10'-11')
12			Slight Sulfur Odor	Wet	18.8	ND	
13							
14				Wet	0.3	ND	
15							

Notes: End of boring at 15 feet below ground surface
Groundwater encountered at 11' below grade.
PID = photoionization detector (PPM= parts per million) ND = Not Detected

SOIL BORING LOG

77 Commercial Street
Brooklyn, NY

AKRF Project Number: 12015

Boring No. **SB-7**

Sheet 1 of 1

AKRF
440 Park Avenue South, New York, NY
Phone (212) 696-0670 Fax (212) 726-

Drilling Method: Geoprobe
Sampling Method: 5' Macrocore
Driller : Zebra
Sampler: MJ

Drilling
Start Time 14:30 **Finish Time** 14:40
Date 10/23/2014
Weather: 65° Rain

Depth (feet)	Recovery (Inches)	Surface Condition: Concrete	Odor	Moisture	PID	NAPL	Comments and Samples Collected for Lab Analysis
1 2 3 4 5	44"	Top 10": CONCRETE. Bottom 34': Dark Brown SAND, trace Asphalt, Brick, and Rock(FILL).	None None	Dry Dry	ND ND	ND ND	SB-7(1'-2')
6 7 8 9 10	40"	Top 6": SLOUGH. Bottom 34': Brown SAND, little Rock(FILL).	None None	Dry Wet	ND ND	ND ND	SB-7(7'-8')
11 12 13 14 15	50"	ALL: Dark Brown SAND.	None	Wet	ND	ND	

Notes: End of boring at 15 feet below ground surface
Groundwater encountered at 8' below grade.
PID = photoionization detector (PPM= parts per million) ND = Not Detected

SOIL BORING LOG

77 Commercial Street
Brooklyn, NY

AKRF Project Number: 12015

Boring No. **SB-8**

Sheet 1 of 1

AKRF
440 Park Avenue South, New York, NY
Phone (212) 696-0670 Fax (212) 726-

Drilling Method: Geoprobe
Sampling Method: 5' Macrocore
Driller : Zebra
Sampler: MJ

Drilling			
Start Time	13:20	**Finish Time**	13:30
Date	10/24/2014		
Weather:	60° Rain		

Depth (feet)	Recovery (Inches)	Surface Condition: Concrete	Odor	Moisture	PID	NAPL	Comments and Samples Collected for Lab Analysis
1	36"	Top 8": CONCRETE.	None	Dry	ND	ND	SB-8(1'-2')
2							
3		Bottom 28": Fine Brown SAND, little Rock and Brick(FILL).	None	Dry	ND	ND	
4							
5							
6	56"	ALL: Fine Brown SAND and BRICK(FILL).	None	Dry	ND	ND	
7							
8							
9							SB-8(9'-10')
10		Refusal at 10'	None	Wet	ND	ND	

Notes: End of boring at 10 feet below ground surface
Groundwater encountered at 10' below grade.
PID = photoionization detector (PPM= parts per million) ND = Not Detected

SOIL BORING LOG

77 Commercial Street
Brooklyn, NY

AKRF Project Number: 12015

Boring No. **SB-9**

Sheet 1 of 1

AKRF
440 Park Avenue South, New York, NY
Phone (212) 696-0670 Fax (212) 726-

Drilling Method: Geoprobe
Sampling Method: 5' Macrocore
Driller : Zebra
Sampler: MJ

Drilling			
Start Time	13:25	**Finish Time**	13:40
Date	10/23/2014		
Weather:	65° Rain		

Depth (feet)	Recovery (Inches)	Surface Condition: Concrete	Odor	Moisture	PID	NAPL	Comments and Samples Collected for Lab Analysis
1	60"	Top 4": CONCRETE.	None	Dry	ND	ND	SB-9(1'-2')
2		Bottom 56": Dark Brown SAND, trace Asphalt and Rock(FILL).	None	Dry	ND	ND	
3							
4							
5							
6	48"	ALL: Fine Dark Brown SAND, trace Rock and Brick(FILL).	None	Dry	ND	ND	SB-9(8'-9')
7							
8							
9			None	Wet	ND	ND	
10							
11	60"	ALL: Dark Brown SAND.	None	Wet	ND	ND	
12							
13							
14							
15							

Notes: End of boring at 15 feet below ground surface
Groundwater encountered at 9' below grade.
PID = photoionization detector (PPM= parts per million) ND = Not Detected

SOIL BORING LOG

77 Commercial Street
Brooklyn, NY

AKRF Project Number: 12015

Boring No. **SB-10**

Sheet 1 of 1

AKRF
440 Park Avenue South, New York, NY
Phone (212) 696-0670 Fax (212) 726-

Drilling Method: Geoprobe
Sampling Method: 5' Macrocore
Driller : Zebra
Sampler: MJ

Drilling

Start Time	12:05	**Finish Time**	12:15
Date	10/23/2014		
Weather:	65° Rain		

Depth (feet)	Recovery (Inches)	Surface Condition: Concrete	Odor	Moisture	PID	NAPL	Comments and Samples Collected for Lab Analysis
1	28"	Top 4": CONCRETE.	None	Dry	ND	ND	SB-10(1'-2')
2		Bottom 24': Brown SAND, little Rock(FILL).	None	Dry	ND	ND	
3							
4							
5							
6	44"	Top 6": SLOUGH.	None	Dry	ND	ND	SB-10(7'-8')
7		Bottom 38": Fine Brown SAND, little Silt, trace Asphalt and Brick(FILL).	None	Wet	ND	ND	
8							
9							
10							
11	48"	ALL: Fine Brown SAND, little Silt.	None	Wet	ND	ND	
12							
13							
14							
15							

Notes: End of boring at 15 feet below ground surface
Groundwater encountered at 8' below grade.
PID = photoionization detector (PPM= parts per million) ND = Not Detected

SOIL BORING LOG

77 Commercial Street
Brooklyn, NY

AKRF Project Number: 12015

Boring No. **SB-11**

Sheet 1 of 1

AKRF
440 Park Avenue South, New York, NY
Phone (212) 696-0670 Fax (212) 726-

Drilling Method: Geoprobe
Sampling Method: 5' Macrocore
Driller : Zebra
Sampler: MJ

Drilling			
Start Time	12:45	Finish Time	13:00
Date	10/24/2014		
Weather:	60° Cloudy		

Depth (feet)	Recovery (Inches)	Surface Condition: Concrete	Odor	Moisture	PID	NAPL	Comments and Samples Collected for Lab Analysis
1	48"	Top 8": CONCRETE.	None	Dry	ND	ND	SB-11(1'-2')
2							
3		Bottom 40": Dark Brown SAND, trace Brick and Rock(FILL).	None	Dry	ND	ND	
4							
5							
6	40"	ALL: Dark Brown SAND, some Rock and Brick(FILL).	None	Dry	ND	ND	SB-11(5'-6')
7			None	Wet	ND	ND	
8							
9							
10							
11	54"	ALL: Fine Dark Grey SAND, little Silt.	None	Wet	ND	ND	
12							
13							
14							
15							

Notes: End of boring at 15 feet below ground surface
Groundwater encountered at 6' below grade.
PID = photoionization detector (PPM= parts per million) ND = Not Detected

SOIL BORING LOG

77 Commercial Street
Brooklyn, NY

AKRF Project Number: 12015

Boring No. **SB-12**

Sheet 1 of 1

AKRF
440 Park Avenue South, New York, NY
Phone (212) 696-0670 Fax (212) 726-

Drilling Method: Geoprobe
Sampling Method: 5' Macrocore
Driller : Zebra
Sampler: MJ

Drilling

Start Time	14:20	**Finish Time**	14:45
Date	10/22/2014		
Weather:	60° Rain		

Depth (feet)	Recovery (Inches)	Surface Condition: Concrete	Odor	Moisture	PID	NAPL	Comments and Samples Collected for Lab Analysis
1	44"	Top 6": CONCRETE.	None	Dry	ND	ND	SB-12(1'-2')
2							
3		Bottom 38": Brown SAND, little Rock, trace Asphalt(FILL).	None	Dry	ND	ND	
4							
5							
6	42"	Top 20": Brown SAND, little Concrete, Rock, and Asphalt(FILL).	None	Dry	ND	ND	
7							
8		Bottom 22: Brown SAND, some Silt.	None	Dry	ND	ND	
9							
10							
11	48"	Top 10": SLOUGH.	None	Dry	ND	ND	SB-12(11'-12')
12		Bottom 38": Brown SAND and SILT.	None	Wet	ND	ND	
13							
14							
15							

Notes: End of boring at 15 feet below ground surface
Groundwater encountered at 13' below grade.
PID = photoionization detector (PPM= parts per million) ND = Not Detected

SOIL BORING LOG

77 Commercial Street
Brooklyn, NY

AKRF Project Number: 12015

Boring No. **SB-13**

Sheet 1 of 1

AKRF
440 Park Avenue South, New York, NY
Phone (212) 696-0670 Fax (212) 726-

Drilling Method: Geoprobe
Sampling Method: 5' Macrocore
Driller : Zebra
Sampler: MJ

Drilling			
Start Time	11:35	**Finish Time**	11:50
Date	10/24/2014		
Weather:	60° Rain		

Depth (feet)	Recovery (Inches)	Surface Condition: Concrete	Odor	Moisture	PID	NAPL	Comments and Samples Collected for Lab Analysis
1	38"	Top 6": CONCRETE.	None	Dry	ND	ND	SB-13(1'-2')
2							
3		Bottom 32": Brown SAND, trace Brick, Asphalt, Glass, and Gravel(FILL).	None	Dry	ND	ND	SB-13(3'-4')
4							
5			None	Wet	ND	ND	
6	36"	ALL: Fine Grey SAND, little Silt.	None	Wet	ND	ND	
7							
8							
9							
10							
11	48"	ALL: Fine Grey SAND, trace Silt.	None	Wet	ND	ND	
12							
13							
14							
15							

Notes: End of boring at 15 feet below ground surface
Groundwater encountered at 5' below grade.
PID = photoionization detector (PPM= parts per million) ND = Not Detected

SOIL BORING LOG

77 Commercial Street Brooklyn, NY

AKRF Project Number: 12015

Boring No. **SB-14**

Sheet 1 of 1

AKRF
440 Park Avenue South, New York, NY
Phone (212) 696-0670 Fax (212) 726-

Drilling Method: Geoprobe
Sampling Method: 5' Macrocore
Driller : Zebra
Sampler: MJ

Drilling

Start Time	11:08	**Finish Time**	11:25
Date	10/24/2014		
Weather:	60° Rain		

Depth (feet)	Recovery (Inches)	Surface Condition: Concrete	Odor	Moisture	PID	NAPL	Comments and Samples Collected for Lab Analysis
1	38"	Top 1": CONCRETE.	None	Dry	ND	ND	SB-14(1'-2')
2		Middle 26": Fine Dark Grey SAND, little Rock(FILL).	None	Dry	ND	ND	
3		Bottom 11": Fine Red-Brown SAND, trace Rock(FILL).	None	Dry	ND	ND	
4							
5							
6	34"	Top 17": Fine Red-Brown SAND, trace Rock(FILL).	None	Dry	ND	ND	SB-14(6'-7')
7			None	Wet	ND	ND	
8							
9							
10		Bottom 17": Fine Dark Grey SAND, some Silt, trace Wood(FILL).	None	Wet	ND	ND	
11	48"	ALL: Light Brown SAND, some Silt.	None	Wet	ND	ND	
12							
13							
14							
15							

Notes: End of boring at 15 feet below ground surface

Groundwater encountered at 7' below grade.

PID = photoionization detector (PPM= parts per million) ND = Not Detected

SOIL BORING LOG

77 Commercial Street
Brooklyn, NY

AKRF Project Number: 12015

Boring No. **SB-15**

Sheet 1 of 1

AKRF
440 Park Avenue South, New York, NY
Phone (212) 696-0670 Fax (212) 726-

Drilling Method: Geoprobe
Sampling Method: 5' Macrocore
Driller : Zebra
Sampler: MJ

Drilling			
Start Time	10:25	Finish Time	10:45
Date	10/24/2014		
Weather:	60° Rain		

Depth (feet)	Recovery (Inches)	Surface Condition: Concrete	Odor	Moisture	PID	NAPL	Comments and Samples Collected for Lab Analysis
1	36"	Top 10": Brown SAND, trace Rock(FILL).	None	Dry	ND	ND	SB-15(1'-2')
2		Middle 16": ROCK(FILL).	None	Dry	ND	ND	
3							
4		Bottom 10": Dark Brown SAND, trace Brick(FILL).	None	Dry	ND	ND	
5							
6	34"	ALL: Fine Dark Brown SAND, little Silt, trace Brick(FILL).	None	Wet	ND	ND	SB-15(5'-6')
7			None	Wet	ND	ND	
8							
9							
10							
11	36"	ALL:Grey SAND, some Silt.	None	Wet	ND	ND	
12							
13							
14							
15							

Notes: End of boring at 15 feet below ground surface
Groundwater encountered at 6' below grade.
PID = photoionization detector (PPM= parts per million) ND = Not Detected

SOIL BORING LOG

77 Commercial Street Brooklyn, NY

AKRF Project Number: 12015

Boring No. **SB-16**

Sheet 1 of 1

AKRF
440 Park Avenue South, New York, NY
Phone (212) 696-0670 Fax (212) 726-

Drilling Method: Geoprobe
Sampling Method: 5' Macrocore
Driller : Zebra
Sampler: MJ

Drilling			
Start Time	9:55	Finish Time	10:20
Date	10/24/2014		
Weather:	55° Cloudy		

Depth (feet)	Recovery (Inches)	Surface Condition: Concrete	Odor	Moisture	PID	NAPL	Comments and Samples Collected for Lab Analysis
1	38''	Top 10'': CONCRETE.	None	Dry	ND	ND	SB-16(1'-2')
2							
3		Bottom 28'': Fine Brown SAND, trace Asphalt and Wood(FILL).	None	Dry	ND	ND	
4							
5							
6	30''	ALL: Fine Brown SAND, trace Rock, Brick, and Wood(FILL).	None	Dry	ND	ND	SB-16(7'-8')
7							
8			None	Wet	ND	ND	
9							
10							
11	50''	ALL: Grey SAND, some Silt, trace Marine sediment(shell).	None	Wet	ND	ND	
12							
13							
14							
15							

Notes: End of boring at 15 feet below ground surface
Groundwater encountered at 8' below grade.
PID = photoionization detector (PPM= parts per million) ND = Not Detected

SOIL BORING LOG

77 Commercial Street
Brooklyn, NY

AKRF Project Number: 12015

Boring No. **SB-17**

Sheet 1 of 1

AKRF
440 Park Avenue South, New York, NY
Phone (212) 696-0670 Fax (212) 726-

Drilling Method: Geoprobe
Sampling Method: 5' Macrocore
Driller : Zebra
Sampler: MJ

Drilling			
Start Time	10:30	**Finish Time**	10:45
Date	10/22/2014		
Weather:	60° Rain		

Depth (feet)	Recovery (Inches)	Surface Condition: Concrete	Odor	Moisture	PID	NAPL	Comments and Samples Collected for Lab Analysis
1	40"	Top 8": CONCRETE.	None	Dry	ND	ND	SB-17(1'-2')
2							
3		Bottom 32": Dark Brown SAND, little Silt, trace Asphalt and Rock(FILL).	None	Dry	ND	ND	
4							
5							
6	36"	ALL: Brown SAND, little Asphalt(FILL), trace Rock(FILL).	None	Dry	ND	ND	
7							
8							
9							
10							
11	36"	Top 16": Brown SAND, little fine to medium Gravel(FILL).	Slight Sulfur Odor	Dry	ND	ND	SB-17(11'-12')
12							
13		Bottom 20": Dark Brown SAND, some Silt.		Wet	ND	ND	
14							
15							

Notes: End of boring at 15 feet below ground surface
Groundwater encountered at 12' below grade.
PID = photoionization detector (PPM= parts per million) ND = Not Detected

SOIL BORING LOG

77 Commercial Street
Brooklyn, NY

AKRF Project Number: 12015

Boring No. **SB-18**

Sheet 1 of 1

AKRF
440 Park Avenue South, New York, NY
Phone (212) 696-0670 Fax (212) 726-

Drilling Method: Geoprobe
Sampling Method: 5' Macrocore
Driller : Zebra
Sampler: MJ

Drilling			
Start Time	12:02	Finish Time	12:20
Date	10/22/2014		
Weather:	60° Rain		

Depth (feet)	Recovery (Inches)	Surface Condition: Concrete	Odor	Moisture	PID	NAPL	Comments and Samples Collected for Lab Analysis
1	24"	Top 6": CONCRETE.	None	Dry	ND	ND	SB-18(1'-2')
2							
3		Bottom 18": Dark Brown SAND.	None	Dry	ND	ND	
4							
5							
6	24"	Top 4": SLOUGH.	None	Dry	ND	ND	
7							
8		Bottom 20": Brown SAND, trace Brick and Rock(FILL).	None	Dry	ND	ND	
9							
10							
11	36"	ALL: Grey SAND and SILT, little stained Wood and Rock(FILL).	Strong Petro Odor	Dry	ND	ND	
12				Wet	1100	ND	SB-18(12'-13')
13							Wood appears to have absorbed petroleum
14							
15				Wet	4.9	ND	

Notes: End of boring at 15 feet below ground surface
Groundwater encountered at 12' below grade.
PID = photoionization detector (PPM= parts per million) ND = Not Detected

SOIL BORING LOG

77 Commercial Street
Brooklyn, NY

AKRF Project Number: 12015

Boring No. **SB-19**

Sheet 1 of 1

AKRF
440 Park Avenue South, New York, NY
Phone (212) 696-0670 Fax (212) 726-

Drilling Method: Geoprobe
Sampling Method: 5' Macrocore
Driller : Zebra
Sampler: MJ

Drilling			
Start Time	12:20	Finish Time	12:35
Date	10/23/2014		
Weather:	65° Rain		

Depth (feet)	Recovery (Inches)	Surface Condition: Concrete	Odor	Moisture	PID	NAPL	Comments and Samples Collected for Lab Analysis
1	48"	Top 12": CONCRETE.	None	Dry	ND	ND	SB-19(1'-2')
2							
3		Bottom 36": Fine Brown SAND, trace Rock(FILL).	None	Dry	ND	ND	
4							
5							
6	52"	Top 10": SLOUGH	None	Dry	ND	ND	
7							SB-19(7'-8')
8		Bottom 42": Fine Brown SAND.	None	Wet	ND	ND	
9							
10							
11	56"	ALL: Fine Dark Brown SAND.	None	Wet	ND	ND	
12							
13							
14							
15							

Notes: End of boring at 15 feet below ground surface
Groundwater encountered at 8' below grade.
PID = photoionization detector (PPM= parts per million) ND = Not Detected

APPENDIX E
GROUNDWATER SAMPLING LOGS

Well Sampling Log

Job No: 12015		**Client:** Waterview at Greenpoint, LLC	**Well No:**
Project Location: 77 Commercial St.		**Sampled By:** MJ	**TW-1**
Date: 10/24/2014		**Sampling Time:** 16:35	
PID at surface:			
Total Depth:	14.70 ft. below top of casing	**Water Column (WC) :** 7.82 feet	*= 0.163 * WC for 2" wells
Depth to Water:	6.88 ft. below top of casing	**Well Volume*:** 0.32 gallons	*= 0.653 * WC for 4" wells
Depth to Product: ND	ft. below top of casing	**Volume Purged:** 0.96 gallons	*= 1.469 * WC for 6" wells
Depth to top of screen:	4.70 ft. below top of casing	**Well Diam.:** 1 inches	Target maximum flow rate is 100 ml/min
Depth to bottom of screen:	14.70 ft. below top of casing	**Purging Device (pump type):** Peristaltic pump	
Approx. Pump Intake:	13.70 ft. below top of casing		

Time	Depth to Water (Ft.)	Purge Rate (ml/min)	Temp (°C)	Conductivity (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Comments (problems, odor, sheen)
14:05	6.88	100/1	19.18	2.55	3.34	8.32	-99.0	722	There were no odors or sheen observed. The well ran dry at 14:55 and did not stabilize, due to poor recharge only VOC samples could be collected. We will return to sample the remaining paramters next week.
14:10	6.88	100/1	19.35	2.55	2.36	8.09	-121.0	464	
14:15	6.88	100/1	19.18	2.52	5.41	7.99	-93.0	389	
14:20	6.88	100/1	18.99	2.51	7.25	8.11	-57.0	342	
14:25	6.88	100/1	18.83	2.48	7.18	8.65	-52.0	311	
14:30	6.88	100/1	18.72	2.35	5.14	9.25	-55.0	288	
14:35	6.88	100/1	18.62	2.25	5.54	9.83	-53.0	279	
14:40	6.88	100/1	18.50	2.28	12.26	9.94	-17.0	285	
14:45	6.88	100/1	18.39	2.29	7.94	9.94	-3.0	266	
14:50	6.88	100/1	18.29	2.3	8.32	9.92	8.0	247	
Stabilization Criteria:				**+/- 3 mS/cm**	**+/- 0.3 mg/L**	**+/- 0.1 pH units**	**+/- 10 mV**	**<50 NTU**	If water quality parameters do not stabilize and/or turbidity is greater than 50 NTU within two hours, discontinue purging and collect sample.

Groundwater samples analyzed for: TCL VOCs

Well Sampling Log

Job No: 12015		**Client:** Waterview at Greenpoint, LLC	**Well No:**
Project Location: 77 Commercial St.		**Sampled By:** MJ	**TW-1 Re-sample**
Date: 10/28/2014		**Sampling Time:** 12:45	
PID at surface:			
Total Depth:	15.00 ft. below top of casing	**Water Column (WC):** 7.53 feet	*= 0.163 * WC for 2" wells
Depth to Water:	7.47 ft. below top of casing	**Well Volume*:** 0.31 gallons	*= 0.653 * WC for 4" wells
Depth to Product: ND	ft. below top of casing	**Volume Purged:** 0.92 gallons	*= 1.469 * WC for 6" wells
Depth to top of screen:	5.00 ft. below top of casing	**Well Diam.:** 1 inches	Target maximum flow rate is 100 ml/min
Depth to bottom of screen:	15.00 ft. below top of casing	**Purging Device (pump type):** Peristaltic pump	
Approx. Pump Intake:	14.00 ft. below top of casing		

Time	Depth to Water (Ft.)	Purge Rate (ml/min)	Temp (°C)	Conductivity (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Comments (problems, odor, sheen)
10:15	7.47	100/1	18.25	2.55	10.22	7.85	-24.0	493	Well had a very slow recharge and we were unable to be stabilized prior to sampling. In addition, only a limited liquid volume could be obtained. The laboratory was advised and we were informed they could proceed with teh volume obtained.
10:20	Well pumped close to dry, Purging discontinued.								
Stabilization Criteria:				+/- 3 mS/cm	+/- 0.3 mg/L	+/- 0.1 pH units	+/- 10 mV	<50 NTU	If water quality parameters do not stabilize and/or turbidity is greater than 50 NTU within two hours, discontinue purging and collect sample.

Groundwater samples analyzed for: TCL SVOCs, total and dissolved TAL Metals, PCBs, and pesticides

Well Sampling Log

Job No: 12015		**Client:** Waterview at Greenpoint, LLC	**Well No:**
Project Location: 77 Commercial St.		**Sampled By:** MJ	**TW-2**
Date: 10/24/2014		**Sampling Time:** 13:00	
PID at surface:			
Total Depth:	14.20 ft. below top of casing	**Water Column (WC):** 6.10 feet	*= 0.163 * WC for 2" wells
Depth to Water:	8.10 ft. below top of casing	**Well Volume*:** 0.58 gallons	*= 0.653 * WC for 4" wells
Depth to Product: ND	ft. below top of casing	**Volume Purged:** 1.74 gallons	*= 1.469 * WC for 6" wells
Depth to top of screen:	4.20 ft. below top of casing	**Well Diam.:** 1 inches	Target maximum flow rate is 100 ml/min
Depth to bottom of screen:	14.20 ft. below top of casing	**Purging Device (pump type):** Peristaltic pump	
Approx. Pump Intake:	13.20 ft. below top of casing		

Time	Depth to Water (Ft.)	Purge Rate (ml/min)	Temp (°C)	Conductivity (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Comments (problems, odor, sheen)
11:55	8.10	100/1	17.74	0.002	12.21	8.25	-21.0	153	No odors or sheen observed
12:00	8.10	100/1	19.41	1.74	1.22	7.61	-113.0	0	
12:05	8.10	100/1	19.58	1.76	0.95	7.33	-103.0	554	
12:10	8.10	100/1	19.62	1.75	0.98	7.27	-97.0	716	
12:15	8.10	100/1	19.62	1.75	1.30	7.25	-91.0	396	
12:20	8.10	100/1	19.60	1.75	1.64	7.23	-80.0	0	
12:25	8.10	100/1	19.62	1.74	2.47	7.24	-68.0	0	
12:30	8.10	100/1	19.39	1.73	2.07	7.24	-61.0	0	
12:35	8.10	100/1	19.52	1.75	1.72	7.19	-57.0	751	
12:40	8.10	100/1	19.52	1.74	2.71	7.20	-50.0	803	
12:45	8.10	100/1	19.56	1.74	2.95	7.20	-44.0	106	
12:50	8.10	100/1	19.52	1.74	3.24	7.21	-41.0	35	
12:55	8.10	100/1	19.42	1.74	2.90	7.21	-34.0	9	
Stabilization Criteria:				**+/- 3 mS/cm**	**+/- 0.3 mg/L**	**+/- 0.1 pH units**	**+/- 10 mV**	**<50 NTU**	If water quality parameters do not stabilize and/or turbidity is greater than 50 NTU within two hours, discontinue purging and collect sample.

Groundwater samples analyzed for: TCL VOCs, TCL SVOCs, total and dissolved TAL Metals, PCBs, and pesticides

Well Sampling Log

Job No: 12015		**Client:** Waterview at Greenpoint, LLC	**Well No:**
Project Location:	77 Commercial St.	**Sampled By:** MJ	**TW-3**
Date: 10/23/2014		**Sampling Time:** 16:30	
PID at surface:			
Total Depth:	15.18 ft. below top of casing	**Water Column (WC):** 6.08 feet	*= 0.163 * WC for 2" wells
Depth to Water:	9.10 ft. below top of casing	**Well Volume*:** 0.25 gallons	*= 0.653 * WC for 4" wells
Depth to Product:	ND ft. below top of casing	**Volume Purged:** 0.74 gallons	*= 1.469 * WC for 6" wells
Depth to top of screen:	5.18 ft. below top of casing	**Well Diam.:** 1 inches	Target maximum flow rate is 100 ml/min
Depth to bottom of screen:	15.18 ft. below top of casing	**Purging Device (pump type):** Peristaltic pump	
Approx. Pump Intake:	14.18 ft. below top of casing		

Time	Depth to Water (Ft.)	Purge Rate (ml/min)	Temp (°C)	Conductivity (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Comments (problems, odor, sheen)
14:10	9.10	100/1	17.31	5.94	14.05	11.61	-79.0	937	Well did not stabilize; had to wait ~2 hours for well to recharge; sulfur-like odor observed; no sheen
14:15	9.10	100/1	17.20	5.01	9.32	11.79	-150.0	890	
14:20	9.10	100/1	16.74	5	2.52	11.85	-203.0	1000	
14:25	9.10	100/1	17.68	4.36	6.44	11.58	-199.0	256	
14:30	9.10	100/1	17.34	3.78	9.99	11.23	-152.0	608	
14:35	9.10	100/1	17.51	3.5	9.08	10.48	-88.0	320	
14:45	9.10	100/1	17.31	3.58	10.70	9.75	-26.0	193	
14:50	9.10	100/1	17.30	3.1	10.27	9.02	4.0	165	
14:55	9.10	100/1	17.06	3.45	10.50	8.83	20.0	149	
Stabilization Criteria:				**+/- 3 mS/cm**	**+/- 0.3 mg/L**	**+/- 0.1 pH units**	**+/- 10 mV**	**<50 NTU**	If water quality parameters do not stabilize and/or turbidity is greater than 50 NTU within two hours, discontinue purging and collect sample.

Groundwater samples analyzed for: TCL VOCs, TCL SVOCs, total and dissolved TAL Metals, PCBs, and pesticides

Well Sampling Log

Job No: 12015		**Client:** Waterview at Greenpoint, LLC	**Well No:**
Project Location: 77 Commercial St.		**Sampled By:** MJ	**TW-4**
Date: 10/24/2014		**Sampling Time:** 10:45	
PID at surface:			
Total Depth:	13.80 ft. below top of casing	**Water Column (WC):** 5.05 feet	*= 0.163 * WC for 2" wells
Depth to Water:	8.75 ft. below top of casing	**Well Volume*:** 0.21 gallons	*= 0.653 * WC for 4" wells
Depth to Product:	ND ft. below top of casing	**Volume Purged:** 0.62 gallons	*= 1.469 * WC for 6" wells
Depth to top of screen:	3.80 ft. below top of casing	**Well Diam.:** 1 inches	Target maximum flow rate is 100 ml/min
Depth to bottom of screen:	13.80 ft. below top of casing	**Purging Device (pump type):** Peristaltic pump	
Approx. Pump Intake:	12.80 ft. below top of casing		

Time	Depth to Water (Ft.)	Purge Rate (ml/min)	Temp (°C)	Conductivity (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Comments (problems, odor, sheen)
9:45	8.75	100/1	18.55	3.15	2.12	8.14	-175.0	0	Turbidity reading was 0.0 and purging was halted to clean the Horiba meter to obtain readings. The water is visibly clear despite a high turbidity reading. The well did not stabilize and a sulfur-like odor was observed. No sheed observed.
10:05	8.75	100/1	18.46	2.96	0.97	7.46	-118.0	118	
10:10	8.75	100/1	19.08	2.89	0.87	7.40	-145.0	66.5	
10:15	8.75	100/1	19.21	2.85	0.83	7.39	-150.0	52.8	
10:20	8.75	100/1	19.21	2.82	0.77	7.40	-152.0	116	
10:25	8.75	100/1	19.15	2.81	0.72	7.39	-152.0	165	
Stabilization Criteria:				**+/- 3 mS/cm**	**+/- 0.3 mg/L**	**+/- 0.1 pH units**	**+/- 10 mV**	**<50 NTU**	If water quality parameters do not stabilize and/or turbidity is greater than 50 NTU within two hours, discontinue purging and collect sample.

Groundwater samples analyzed for: TCL VOCs, TCL SVOCs, total and dissolved TAL Metals, PCBs, and pesticides

Well Sampling Log

Job No: 12015		**Client:** Waterview at Greenpoint, LLC	**Well No:**
Project Location: 77 Commercial St.		**Sampled By:** MJ	**TW-5**
Date: 10/24/2014		**Sampling Time:** 17:10	
PID at surface:			
Total Depth:	14.60 ft. below top of casing	**Water Column (WC):** 7.65 feet	*= 0.163 * WC for 2" wells
Depth to Water:	6.95 ft. below top of casing	**Well Volume*:** 0.31 gallons	*= 0.653 * WC for 4" wells
Depth to Product: ND	ft. below top of casing	**Volume Purged:** 0.94 gallons	*= 1.469 * WC for 6" wells
Depth to top of screen:	4.60 ft. below top of casing	**Well Diam.:** 1 inches	Target maximum flow rate is 100 ml/min
Depth to bottom of screen:	14.60 ft. below top of casing	**Purging Device (pump type):** Peristaltic pump	
Approx. Pump Intake:	13.60 ft. below top of casing		

Time	Depth to Water (Ft.)	Purge Rate (ml/min)	Temp (°C)	Conductivity (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Comments (problems, odor, sheen)
15:05	6.95	100/1	18.71	1.67	0.99	7.88	-109.0	0	Well did not stabilize; waited ~1 hour for well to recharge for sample collection.
15:10	6.95	100/1	18.60	1.55	5.76	7.86	-105.0	0	
15:15	6.95	100/1	18.42	1.56	8.19	8.07	-68.0	1000	
15:20	6.95	100/1	18.38	1.66	7.44	7.94	-75.0	985	
15:25	6.95	100/1	18.35	1.65	8.35	8.06	-53.0	791	
15:30	6.95	100/1	18.33	1.65	8.76	8.10	-39.0	716	
15:35	6.95	100/1	18.32	1.66	8.92	8.13	-23.0	651	
15:40	6.95	100/1	18.31	1.66	11.57	8.16	-5.0	524	
15:45	6.95	100/1	18.35	1.67	8.98	8.14	-5.0	435	
15:50	6.95	100/1	18.45	1.68	8.94	8.15	-4.0	403	
Stabilization Criteria:				**+/- 3 mS/cm**	**+/- 0.3 mg/L**	**+/- 0.1 pH units**	**+/- 10 mV**	**<50 NTU**	If water quality parameters do not stabilize and/or turbidity is greater than 50 NTU within two hours, discontinue purging and collect sample.

Groundwater samples analyzed for: TCL VOCs, TCL SVOCs, total and dissolved TAL Metals, PCBs, and pesticides

Well Sampling Log

Job No: 12015		**Client:** Waterview at Greenpoint, LLC	**Well No:**
Project Location:	77 Commercial St.	**Sampled By:** MJ	
Date: 10/23/2014		**Sampling Time:** 9:40	**TW-6**
PID at surface:			
Total Depth:	15.10 ft. below top of casing	**Water Column (WC):** 4.15 feet	*= 0.163 * WC for 2" wells
Depth to Water:	10.95 ft. below top of casing	**Well Volume*:** 0.17 gallons	*= 0.653 * WC for 4" wells
Depth to Product:	ND ft. below top of casing	**Volume Purged:** 0.51 gallons	*= 1.469 * WC for 6" wells
Depth to top of screen:	5.10 ft. below top of casing	**Well Diam.:** 1 inches	Target maximum flow rate is 100 ml/min
Depth to bottom of screen:	15.10 ft. below top of casing	**Purging Device (pump type):**	
Approx. Pump Intake:	14.10 ft. below top of casing	Peristaltic pump	

Time	Depth to Water (Ft.)	Purge Rate (ml/min)	Temp (°C)	Conductivity (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Comments (problems, odor, sheen)
8:50	10.95	100/1	16.91	4.44	1.59	6.78	21.0	922	Slight sulfur-like odor observed; no sheen
8:55	10.95	100/1	18.55	4.27	4.05	7.09	-89.0	310	
9:00	10.95	100/1	18.73	4.21	5.06	7.10	-101.0	18.2	
9:05	10.95	100/1	18.51	4	9.26	7.15	-100.0	17.5	
9:10	10.95	100/1	19.04	4.18	7.74	7.20	-98.0	8	
9:15	10.95	100/1	19.12	4.17	5.75	7.15	-94.0	3.2	
9:20	10.95	100/1	18.99	4.18	4.93	7.12	-92.0	4.9	
9:25	10.95	100/1	19.20	4.17	4.49	7.08	-94.0	5	
Stabilization Criteria:				**+/- 3 mS/cm**	**+/- 0.3 mg/L**	**+/- 0.1 pH units**	**+/- 10 mV**	**<50 NTU**	If water quality parameters do not stabilize and/or turbidity is greater than 50 NTU within two hours, discontinue purging and collect sample.

Groundwater samples analyzed for: TCL SVOCs, TAL Metals, TCL VOCs, Dissolved TAL Metals, Mercury, PCBs, Pesticides

APPENDIX F
SOIL VAPOR SAMPLING LOGS

AKRF, Inc.
Environmental Consultants

Soil Vapor Sampling Log

Job No:	12015	**Client:**	Waterview at Greenpoint, LLC
Project Location:	77 Commercial St.	**Sampled By:**	MJ
Date:	10/24/14		

Sample ID:	SV-1
Canister ID:	09879
Flow Controller ID:	10631

Purging

Time Started:	12:34	
Time Stopped:	12:44	
Vol. Purged:	1.0	liters
Flow Rate:	0.1	L/min

Laboratory Sample (Summa Canister)

Time Started:	12:44	**Vacuum:**	-30.0 inHg
Time Stopped:	14:45	**Vacuum:**	-4.00 inHg

Field Sample

PID Calibration:	100 ppm
Time Started:	8:10
Time Stopped:	8:20
PID Reading:	0.3 ppm
He Reading	0.0 ppm

AKRF, Inc.
Environmental Consultants

Soil Vapor Sampling Log

Job No:	12015	**Client:**	Waterview at Greenpoint, LLC
Project Location:	77 Commercial St.	**Sampled By:**	MJ
Date:	10/24/14		

Sample ID:	SV-2
Canister ID:	10273
Flow Controller ID:	10302

Purging

Time Started:	12:20	
Time Stopped:	12:30	
Vol. Purged:	1.0	liters
Flow Rate:	0.1	L/min

Laboratory Sample (Summa Canister)

Time Started:	12:30	**Vacuum:**	-30.0 inHg
Time Stopped:	13:20	**Vacuum:**	-3.00 inHg

Field Sample

PID Calibration:	100 ppm
Time Started:	8:10
Time Stopped:	8:20
PID Reading:	0.7 ppm
He Reading	0.0 ppm

AKRF, Inc.
Environmental Consultants

Soil Vapor Sampling Log

Job No:	12015	**Client:**	Waterview at Greenpoint, LLC
Project Location:	77 Commercial St.	**Sampled By:**	MJ
Date:	10/23/14		

Sample ID:	SV-3 (defective)
Canister ID:	10044
Flow Controller ID:	10239

Purging

Time Started:	10:53	
Time Stopped:	11:03	
Vol. Purged:	1.0	liters
Flow Rate:	0.1	L/min

Laboratory Sample (Summa Canister)

Time Started:	11:05	**Vacuum:**	-30.0 inHg
Time Stopped:	11:30	**Vacuum:**	-5.00 inHg

Field Sample

PID Calibration:	100 ppm
Time Started:	8:00
Time Stopped:	8:10
PID Reading:	3.5 ppm
He Reading	0.0 ppm

Note: Flow controller pressure issue encountered. Sample not submitted for laboratory analysis.

AKRF, Inc.
Environmental Consultants

Soil Vapor Sampling Log

Job No:	12015	**Client:**	Waterview at Greenpoint, LLC
Project Location:	77 Commercial St.	**Sampled By:**	MJ
Date:	10/23/14		

Sample ID:	SV-3 (re-test)
Canister ID:	11137
Flow Controller ID:	09754

Purging

Time Started:	10:53	
Time Stopped:	11:03	
Vol. Purged:	1.0	liters
Flow Rate:	0.1	L/min

Laboratory Sample (Summa Canister)

Time Started:	11:38	**Vacuum:**	-30.0 inHg
Time Stopped:	13:05	**Vacuum:**	-4.00 inHg

Field Sample

PID Calibration:	100 ppm
Time Started:	8:00
Time Stopped:	8:10
PID Reading:	3.5 ppm
He Reading	0.0 ppm

AKRF, Inc.
Environmental Consultants

Soil Vapor Sampling Log

Job No:	12015	**Client:**	Waterview at Greenpoint, LLC
Project Location:	77 Commercial St.	**Sampled By:**	MJ
Date:	10/23/14		

Sample ID:	SV-4
Canister ID:	10425
Flow Controller ID:	10057/K494

Purging

Time Started:	10:30	
Time Stopped:	10:40	
Vol. Purged:	1.0	liters
Flow Rate:	0.1	L/min

Laboratory Sample (Summa Canister)

Time Started:	10:45	**Vacuum:**	-30.0 inHg
Time Stopped:	12:35	**Vacuum:**	-6.00 inHg

Field Sample

PID Calibration:	100 ppm
Time Started:	8:00
Time Stopped:	8:10
PID Reading:	2.2 ppm
He Reading	0.0 ppm

AKRF, Inc.
Environmental Consultants

Soil Vapor Sampling Log

Job No:	12015	**Client:**	Waterview at Greenpoint, LLC
Project Location:	77 Commercial St.	**Sampled By:**	MJ
Date:	10/24/14		

Sample ID:	SV-5 (Failure)
Canister ID:	10805
Flow Controller ID:	10619

Purging

Time Started:	13:15	
Time Stopped:	13:25	
Vol. Purged:	1.0	liters
Flow Rate:	0.1	L/min

Laboratory Sample (Summa Canister)

Time Started:	13:25	**Vacuum:**	-30.2 inHg
Time Stopped:	14:40	**Vacuum:**	0.00 inHg

Field Sample

PID Calibration:	100 ppm
Time Started:	8:10
Time Stopped:	8:20
PID Reading:	0.8 ppm
He Reading	0.0 ppm

Note: Flow controller pressure issue encountered. Sample not submitted for laboratory analysis.

AKRF, Inc.
Environmental Consultants

Soil Vapor Sampling Log

Job No:	12015	**Client:**	Waterview at Greenpoint, LLC
Project Location:	77 Commercial St.	**Sampled By:**	MJ
Date:	10/28/14		

Sample ID:	SV-5
Canister ID:	10687
Flow Controller ID:	10052

Purging (tested on 10/24/14)

Time Started:	17:15	
Time Stopped:	17:25	
Vol. Purged:	1.0	liters
Flow Rate:	0.1	L/min

Laboratory Sample (Summa Canister)

Time Started:	9:51	**Vacuum:**	-30.00 inHg
Time Stopped:	11:42	**Vacuum:**	-6.00 inHg

Field Sample

PID Calibration:	-
Time Started:	-
Time Stopped:	-
PID Reading:	-
He Reading	-

AKRF, Inc.
Environmental Consultants

Soil Vapor Sampling Log

Job No:	12015	**Client:**	Waterview at Greenpoint, LLC
Project Location:	77 Commercial St.	**Sampled By:**	MJ
Date:	10/23/14		

Sample ID:	SV-6
Canister ID:	09817
Flow Controller ID:	09702

Purging

Time Started:	11:06	
Time Stopped:	11:16	
Vol. Purged:	1.0	liters
Flow Rate:	0.1	L/min

Laboratory Sample (Summa Canister)

Time Started:	11:17	**Vacuum:**	-27.0 inHg
Time Stopped:	13:06	**Vacuum:**	-5.00 inHg

Field Sample

PID Calibration:	100 ppm
Time Started:	8:00
Time Stopped:	8:10
PID Reading:	1.9 ppm
He Reading	0.0 ppm

AKRF, Inc.
Environmental Consultants

Soil Vapor Sampling Log

Job No:	12015	**Client:**	Waterview at Greenpoint, LLC
Project Location:	77 Commercial St.	**Sampled By:**	MJ
Date:	10/24/14		

Sample ID:	SV-7
Canister ID:	10373
Flow Controller ID:	10597

Purging

Time Started:	12:45	
Time Stopped:	12:55	
Vol. Purged:	1.0	liters
Flow Rate:	0.1	L/min

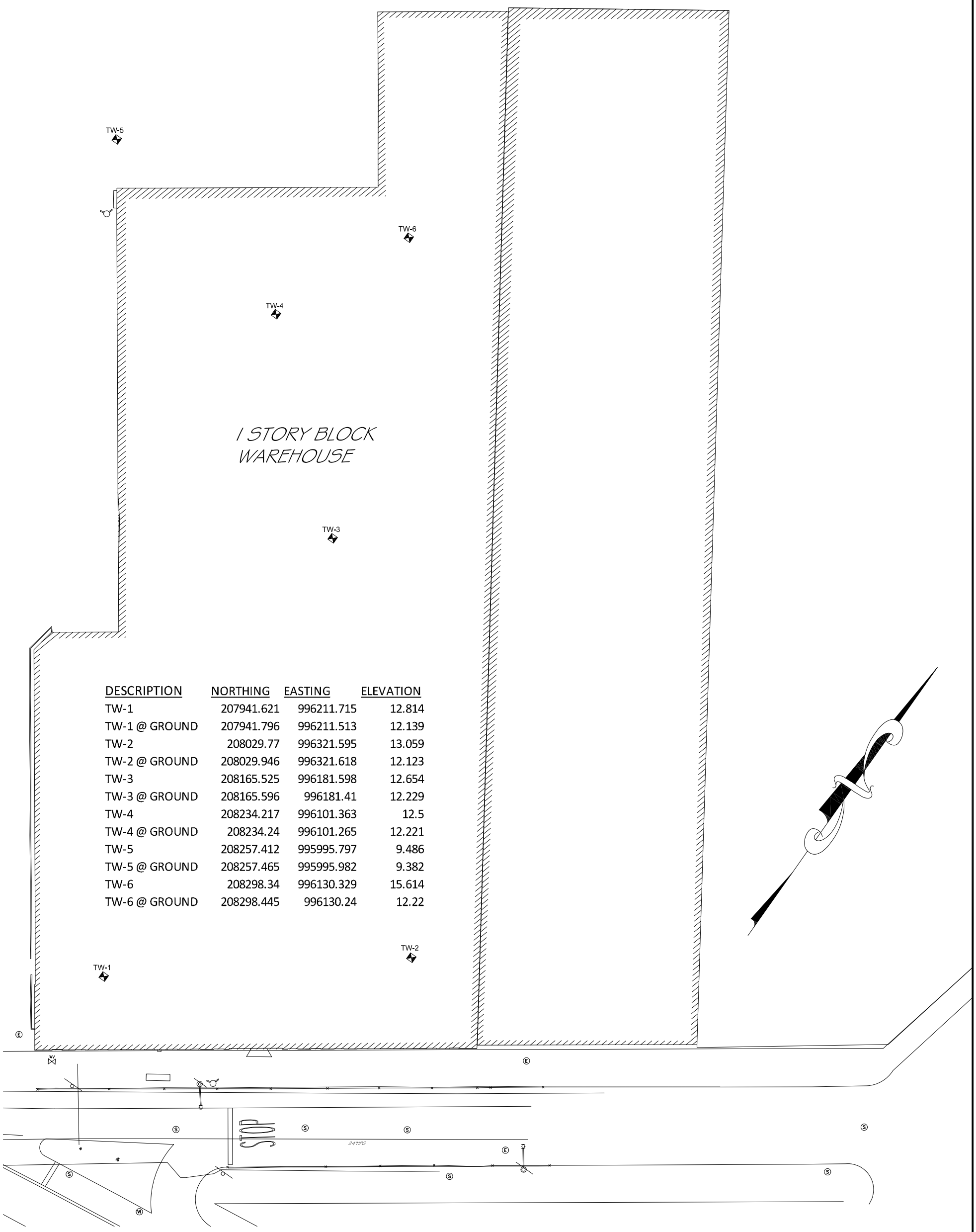
Laboratory Sample (Summa Canister)

Time Started:	12:55	**Vacuum:**	-30.0 inHg
Time Stopped:	14:55	**Vacuum:**	-6.00 inHg

Field Sample

PID Calibration:	100 ppm
Time Started:	8:10
Time Stopped:	8:20
PID Reading:	0.4 ppm
He Reading	0.0 ppm

APPENDIX G
ELEVATION SURVEY



DESCRIPTION	NORTHING	EASTING	ELEVATION
TW-1	207941.621	996211.715	12.814
TW-1 @ GROUND	207941.796	996211.513	12.139
TW-2	208029.77	996321.595	13.059
TW-2 @ GROUND	208029.946	996321.618	12.123
TW-3	208165.525	996181.598	12.654
TW-3 @ GROUND	208165.596	996181.41	12.229
TW-4	208234.217	996101.363	12.5
TW-4 @ GROUND	208234.24	996101.265	12.221
TW-5	208257.412	995995.797	9.486
TW-5 @ GROUND	208257.465	995995.982	9.382
TW-6	208298.34	996130.329	15.614
TW-6 @ GROUND	208298.445	996130.24	12.22

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I, DONALD O. VIELE PLS (NYS LS # 050454) THAT THIS MAP WAS PREPARED FROM A FIELD SURVEY PERFORMED UNDER MY DIRECTION DURING

ONLY COPIES FROM THE ORIGINAL OF THIS SURVEY MARKED WITH AN ORIGINAL OF THE LAND SURVEYOR'S EMBOSSED SEAL SHALL BE CONSIDERED TO BE VALID TRUE COPIES.

UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR'S SEAL IS A VIOLATION OF SECTION 7208 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW.

SEAL

DONALD O. VIELE P.L.S. 050454

PROJECT NO. 140563
SCALE NTS
DATE
DRAWN BY LJC
CHECKED BY

OF SHTS

PROJECT

77 COMMERCIAL ST.

GREENPOINT

DRAWING

TEST WELL LOCATIONS
TWL-1

NO.	DATE	REVISION	BY

Land Metrics ENGINEERING & LAND SURVEYING, PC
100 Snake Hill Road, West Nyack, NY 10994
A DIVISION OF THE McLAREN ENGINEERING GROUP

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APPENDIX H

LABORATORY ANALYTICAL REPORTS FOR SOIL AND GROUNDWATER SAMPLES

ANALYTICAL REPORT

Job Number: 460-84965-1

Job Description: 77 Commercial Street, Brooklyn, NY

For:
AKRF Inc
440 Park Avenue South
7th Floor
New York, NY 10016

Attention: Stephen Malinowski

Approved for release.
Janet Mosley
Manager of Project Management Assistants
10/29/2014 2:35 PM

Designee for
Melissa Haas, Project Manager I
777 New Durham Road, Edison, NJ, 08817
(203)944-1310
melissa.haas@testamericainc.com
10/29/2014

The test results in this report meet all NELAP requirements unless specified within the case narrative. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Edison Project Manager.

TestAmerica Edison Certifications and Approvals: Connecticut: CTDOH #PH-0200, New Jersey: NJDEP (NELAP) #12028, New York: NYDOH (NELAP) #11452, NYDOH (ELAP) #11452, Pennsylvania: PADEP (NELAP) 68-00522 and Rhode Island: RIDOH LAO00132

CASE NARRATIVE

Client: AKRF Inc

Project: 77 Commercial Street, Brooklyn, NY

Report Number: 460-84965-1

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

It should be noted that samples with elevated Reporting Limits (RLs) as a result of a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the RLs are unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes or interferences which exceed the calibration range of the instrument.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 10/22/2014; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 3.2 C.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

VOLATILE ORGANICS

Samples SB-17 (1-2') (460-84965-1), SB-17 (11-12') (460-84965-2), SB-18 (1-2') (460-84965-3), SB-18 (12-13') (460-84965-4), SB-6 (1-2') (460-84965-5), SB-6 (10-11') (460-84965-6), SB-12 (1-2') (460-84965-7) and SB-12 (11-12') (460-84965-8) were analyzed for Volatile organics in accordance with EPA SW-846 Methods 8260C. The samples were prepared on 10/22/2014 and analyzed on 10/24/2014 and 10/25/2014.

Acetone was detected in method blank MB 460-257988/6 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

The continuing calibration verification (CCV) associated with batch 257917 recovered outside control limit for Methylcyclohexane and Bromomethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

The continuing calibration verification (CCV) associated with batch 257988 recovered outside control limit for Vinyl chloride, Bromoform, 1,2-Dibromo-3-Chloropropane and 2-Butanone. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Internal standard (ISTD) response for 1,4-Dioxane-d8 for the following samples was outside of acceptance limits: SB-18 (12-13') (460-84965-4). The corresponding target analyte, 1,4-Dioxane, was not detected. Re-analysis was not performed.

Internal standard (ISTD) response and surrogate for the following sample was outside control limits: SB-17 (1-2') (460-84965-1). The sample was re-analyzed with concurring results in batch 257988.

Internal standard (ISTD) response for the following sample was outside control limits: SB-6 (1-2') (460-84965-5). The sample was re-analyzed with concurring results in batch 258257. The original set of data has been reported.

The continuing calibration verification (CCV) associated with batch 258257 recovered outside control limit for 1,1,2,2-Tetrachloroethane and 2-Butanone. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

The peaks observed at 3.9 and 4.6 minutes are septum bleed and therefore not reported as TICs in the following samples: SB-17 (1-2') (460-84965-1).

4-Bromofluorobenzene failed the surrogate recovery criteria low for SB-17 (1-2') (460-84965-1). Toluene-d8 (Surr) failed the surrogate recovery criteria high.

Acetone and Methylene Chloride were detected in method blank LB3 460-257683/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Refer to the QC report for details.

No other difficulties were encountered during the Volatile organics analysis.

All other quality control parameters were within the acceptance limits.

VOLATILE ORGANICS

Sample TB (460-84965-9) was analyzed for Volatile organics in accordance with EPA SW-846 Methods 8260C. The samples were analyzed on 10/24/2014.

No difficulties were encountered during the Volatile organics analysis.

All quality control parameters were within the acceptance limits.

PESTICIDES

Samples SB-17 (1-2') (460-84965-1), SB-17 (11-12') (460-84965-2), SB-18 (1-2') (460-84965-3), SB-18 (12-13') (460-84965-4), SB-6 (1-2') (460-84965-5), SB-6 (10-11') (460-84965-6), SB-12 (1-2') (460-84965-7) and SB-12 (11-12') (460-84965-8) were analyzed for Pesticides in accordance with EPA SW-846 Methods 8081A. The samples were prepared and analyzed on 10/23/2014.

No difficulties were encountered during the Pesticides analysis.

All quality control parameters were within the acceptance limits.

POLYCHLORINATED BIPHENYLS

Samples SB-17 (1-2') (460-84965-1), SB-17 (11-12') (460-84965-2), SB-18 (1-2') (460-84965-3), SB-18 (12-13') (460-84965-4), SB-6 (1-2') (460-84965-5), SB-6 (10-11') (460-84965-6), SB-12 (1-2') (460-84965-7) and SB-12 (11-12') (460-84965-8) were analyzed for polychlorinated biphenyls in accordance with EPA SW-846 Method 8082. The samples were prepared on 10/23/2014 and analyzed on 10/23/2014 and 10/24/2014.

No difficulties were encountered during the PCBs analysis.

All quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS

Samples SB-17 (1-2') (460-84965-1), SB-17 (11-12') (460-84965-2), SB-18 (1-2') (460-84965-3), SB-18 (12-13') (460-84965-4), SB-6 (1-2') (460-84965-5), SB-6 (10-11') (460-84965-6), SB-12 (1-2') (460-84965-7) and SB-12 (11-12') (460-84965-8) were analyzed for Semivolatile organic compounds in accordance with EPA SW-846 Method 8270D. The samples were prepared on 10/23/2014 and analyzed on 10/24/2014 and 10/27/2014.

A full list spike was utilized for this method. Due to the large number of spiked analytes, there is a high probability that one or more analytes will recover outside acceptance limits. The laboratory's SOP allows for five analytes to recover outside criteria for this method when a full list spike is utilized. The LCS associated with batch 257808 had one analyte (Benzo(a)pyrene) outside control limits; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

Six surrogates are used for this analysis, three acid and three base neutrals. The laboratory's SOP allows one surrogate from each fraction to be outside acceptance criteria without performing re-extraction/re-analysis. The following sample(s) contained an allowable number of surrogate compounds outside limits: SB-12 (11-12') (460-84965-8). These results have been reported and qualified.

2-Fluorophenol (Surr) failed the surrogate recovery criteria low for SB-12 (11-12') (460-84965-8).

Several analytes failed the recovery criteria low for the MS of sample SB-18 (1-2')MS (460-84965-3) in batch 460-258093.

Several analytes failed the recovery criteria low for the MSD of sample SB-18 (1-2')MSD (460-84965-3) in batch 460-258093. Bis(2-chloroethyl)ether exceeded the RPD limit.

Refer to the QC report for details.

Sample SB-17 (11-12') (460-84965-2)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the Semivolatile organic compounds analysis.

All other quality control parameters were within the acceptance limits.

METALS

Samples SB-17 (1-2') (460-84965-1), SB-17 (11-12') (460-84965-2), SB-18 (1-2') (460-84965-3), SB-18 (12-13') (460-84965-4), SB-6 (1-2') (460-84965-5), SB-6 (10-11') (460-84965-6), SB-12 (1-2') (460-84965-7) and SB-12 (11-12') (460-84965-8) were analyzed for Metals in accordance with EPA SW-846 6010C. The samples were prepared and analyzed on 10/24/2014.

Antimony and Iron failed the recovery criteria low for the MS of sample 460-84928-1 in batch 460-258098. Aluminum, Magnesium and Manganese failed the recovery criteria high.

Refer to the QC report for details.

Samples SB-17 (1-2') (460-84965-1)[4X], SB-17 (11-12') (460-84965-2)[4X], SB-18 (1-2') (460-84965-3)[4X], SB-18 (12-13') (460-84965-4)[4X], SB-6 (1-2') (460-84965-5)[4X], SB-6 (10-11') (460-84965-6)[4X], SB-12 (1-2') (460-84965-7)[4X] and SB-12 (11-12') (460-84965-8)[4X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the Metals analysis.

All other quality control parameters were within the acceptance limits.

TOTAL MERCURY

Samples SB-17 (1-2') (460-84965-1), SB-17 (11-12') (460-84965-2), SB-18 (1-2') (460-84965-3), SB-18 (12-13') (460-84965-4), SB-6 (1-2') (460-84965-5), SB-6 (10-11') (460-84965-6), SB-12 (1-2') (460-84965-7) and SB-12 (11-12') (460-84965-8) were analyzed for total mercury in accordance with EPA SW-846 Method 7471B. The samples were prepared and analyzed on 10/23/2014.

Mercury failed the recovery criteria high for the MS of sample SB-18 (12-13')MS (460-84965-4) in batch 460-257840.

The presence of the '4' qualifier in the data indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount.

Refer to the QC report for details.

No other difficulties were encountered during the Hg analysis.

All other quality control parameters were within the acceptance limits.

PERCENT SOLIDS/PERCENT MOISTURE

Samples SB-17 (1-2') (460-84965-1), SB-17 (11-12') (460-84965-2), SB-18 (1-2') (460-84965-3), SB-18 (12-13') (460-84965-4), SB-6 (1-2') (460-84965-5), SB-6 (10-11') (460-84965-6), SB-12 (1-2') (460-84965-7) and SB-12 (11-12') (460-84965-8) were analyzed for percent solids/percent moisture in accordance with EPA Method CLPISM01.2 (Exhibit D). The samples were analyzed on 10/23/2014.

No difficulties were encountered during the %solids/moisture analysis.

All quality control parameters were within the acceptance limits.

EXECUTIVE SUMMARY - Detections

Client: AKRF Inc

Job Number: 460-84965-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
460-84965-1	**SB-17 (1-2')**					
Methylcyclohexane		1.3	J	1.7	ug/Kg	8260C
Naphthalene		73	J	380	ug/Kg	8270D
2-Methylnaphthalene		59	J	380	ug/Kg	8270D
Acenaphthylene		11	J	380	ug/Kg	8270D
Acenaphthene		44	J	380	ug/Kg	8270D
Dibenzofuran		43	J	380	ug/Kg	8270D
Fluorene		42	J	380	ug/Kg	8270D
Phenanthrene		640		380	ug/Kg	8270D
Anthracene		99	J	380	ug/Kg	8270D
Carbazole		37	J	380	ug/Kg	8270D
Fluoranthene		680		380	ug/Kg	8270D
Pyrene		630		380	ug/Kg	8270D
Benzo[a]anthracene		310		38	ug/Kg	8270D
Chrysene		370	J	380	ug/Kg	8270D
Bis(2-ethylhexyl) phthalate		33	J	380	ug/Kg	8270D
Benzo[b]fluoranthene		370		38	ug/Kg	8270D
Benzo[k]fluoranthene		150		38	ug/Kg	8270D
Benzo[a]pyrene		280	*	38	ug/Kg	8270D
Indeno[1,2,3-cd]pyrene		220		38	ug/Kg	8270D
Dibenz(a,h)anthracene		43		38	ug/Kg	8270D
Benzo[g,h,i]perylene		200	J	380	ug/Kg	8270D
Aluminum		5580		42.9	mg/Kg	6010C
Arsenic		7.0		3.2	mg/Kg	6010C
Barium		82.3		42.9	mg/Kg	6010C
Beryllium		0.31	J	0.43	mg/Kg	6010C
Calcium		22000		1070	mg/Kg	6010C
Cadmium		0.88		0.86	mg/Kg	6010C
Cobalt		5.3	J	10.7	mg/Kg	6010C
Chromium		17.9		2.1	mg/Kg	6010C
Copper		31.8		5.4	mg/Kg	6010C
Iron		14700		32.2	mg/Kg	6010C
Potassium		858	J	1070	mg/Kg	6010C
Magnesium		2920		1070	mg/Kg	6010C
Manganese		186		3.2	mg/Kg	6010C
Sodium		309	J	1070	mg/Kg	6010C
Nickel		12.3		8.6	mg/Kg	6010C
Lead		98.8		2.1	mg/Kg	6010C
Vanadium		17.1		10.7	mg/Kg	6010C
Zinc		72.7		6.4	mg/Kg	6010C
Mercury		0.24	^	0.018	mg/Kg	7471B
Percent Moisture		12.0		1.0	%	Moisture
Percent Solids		88.0		1.0	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: AKRF Inc

Job Number: 460-84965-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
460-84965-2	**SB-17 (11-12')**					
Acetone		4.7	J B	5.7	ug/Kg	8260C
Tetrachloroethene		0.16	J	1.1	ug/Kg	8260C
Naphthalene		2700		2000	ug/Kg	8270D
2-Methylnaphthalene		580	J	2000	ug/Kg	8270D
2-Chloronaphthalene		190	J	2000	ug/Kg	8270D
Acenaphthylene		640	J	2000	ug/Kg	8270D
Acenaphthene		840	J	2000	ug/Kg	8270D
Dibenzofuran		840	J	2000	ug/Kg	8270D
Fluorene		1100	J	2000	ug/Kg	8270D
Phenanthrene		9300		2000	ug/Kg	8270D
Anthracene		1800	J	2000	ug/Kg	8270D
Carbazole		130	J	2000	ug/Kg	8270D
Fluoranthene		7400		2000	ug/Kg	8270D
Pyrene		4700		2000	ug/Kg	8270D
Benzo[a]anthracene		2700		200	ug/Kg	8270D
Chrysene		3300		2000	ug/Kg	8270D
Benzo[b]fluoranthene		4400		200	ug/Kg	8270D
Benzo[k]fluoranthene		1600		200	ug/Kg	8270D
Benzo[a]pyrene		1300	*	200	ug/Kg	8270D
Indeno[1,2,3-cd]pyrene		1400		200	ug/Kg	8270D
Dibenz(a,h)anthracene		470		200	ug/Kg	8270D
Benzo[g,h,i]perylene		1000	J	2000	ug/Kg	8270D
1,1'-Biphenyl		300	J	2000	ug/Kg	8270D
Aluminum		4950		44.2	mg/Kg	6010C
Arsenic		11.1		3.3	mg/Kg	6010C
Barium		61.3		44.2	mg/Kg	6010C
Beryllium		0.37	J	0.44	mg/Kg	6010C
Calcium		1250		1100	mg/Kg	6010C
Cadmium		1.2		0.88	mg/Kg	6010C
Cobalt		15.2		11.0	mg/Kg	6010C
Chromium		18.2		2.2	mg/Kg	6010C
Copper		39.5		5.5	mg/Kg	6010C
Iron		21300		33.1	mg/Kg	6010C
Potassium		1100		1100	mg/Kg	6010C
Magnesium		1970		1100	mg/Kg	6010C
Manganese		110		3.3	mg/Kg	6010C
Sodium		1700		1100	mg/Kg	6010C
Nickel		37.0		8.8	mg/Kg	6010C
Lead		79.9		2.2	mg/Kg	6010C
Vanadium		30.1		11.0	mg/Kg	6010C
Zinc		66.8		6.6	mg/Kg	6010C
Mercury		0.11	^	0.019	mg/Kg	7471B
Percent Moisture		17.7		1.0	%	Moisture
Percent Solids		82.3		1.0	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: AKRF Inc

Job Number: 460-84965-1

Lab Sample ID	Client Sample ID			Reporting		
Analyte		Result	Qualifier	Limit	Units	Method
460-84965-3	**SB-18 (1-2')**					
Acetone		4.2	J B	5.1	ug/Kg	8260C
Isophorone		53	J	150	ug/Kg	8270D
Naphthalene		71	J	370	ug/Kg	8270D
2-Methylnaphthalene		71	J	370	ug/Kg	8270D
Acenaphthylene		28	J	370	ug/Kg	8270D
Acenaphthene		69	J	370	ug/Kg	8270D
Dibenzofuran		96	J	370	ug/Kg	8270D
Fluorene		60	J	370	ug/Kg	8270D
Phenanthrene		940		370	ug/Kg	8270D
Anthracene		190	J	370	ug/Kg	8270D
Carbazole		70	J	370	ug/Kg	8270D
Fluoranthene		1400		370	ug/Kg	8270D
Pyrene		1300		370	ug/Kg	8270D
Benzo[a]anthracene		750		37	ug/Kg	8270D
Chrysene		830		370	ug/Kg	8270D
Bis(2-ethylhexyl) phthalate		2100		370	ug/Kg	8270D
Benzo[b]fluoranthene		1000		37	ug/Kg	8270D
Benzo[k]fluoranthene		340		37	ug/Kg	8270D
Benzo[a]pyrene		720	*	37	ug/Kg	8270D
Indeno[1,2,3-cd]pyrene		680		37	ug/Kg	8270D
Dibenz(a,h)anthracene		160		37	ug/Kg	8270D
Benzo[g,h,i]perylene		570		370	ug/Kg	8270D
1,1'-Biphenyl		36	J	370	ug/Kg	8270D
Aluminum		6120		42.7	mg/Kg	6010C
Arsenic		6.2		3.2	mg/Kg	6010C
Barium		80.9		42.7	mg/Kg	6010C
Beryllium		0.31	J	0.43	mg/Kg	6010C
Calcium		22600		1070	mg/Kg	6010C
Cadmium		1.3		0.85	mg/Kg	6010C
Cobalt		5.1	J	10.7	mg/Kg	6010C
Chromium		17.4		2.1	mg/Kg	6010C
Copper		41.0		5.3	mg/Kg	6010C
Iron		19000		32.0	mg/Kg	6010C
Potassium		1200		1070	mg/Kg	6010C
Magnesium		4080		1070	mg/Kg	6010C
Manganese		261		3.2	mg/Kg	6010C
Sodium		301	J	1070	mg/Kg	6010C
Nickel		12.5		8.5	mg/Kg	6010C
Lead		122		2.1	mg/Kg	6010C
Vanadium		25.7		10.7	mg/Kg	6010C
Zinc		119		6.4	mg/Kg	6010C
Mercury		0.23	^	0.019	mg/Kg	7471B
Percent Moisture		11.6		1.0	%	Moisture
Percent Solids		88.4		1.0	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: AKRF Inc

Job Number: 460-84965-1

Lab Sample ID	Client Sample ID			Reporting		
Analyte		Result	Qualifier	Limit	Units	Method
460-84965-4	**SB-18 (12-13')**					
Acetone		82	B	5.7	ug/Kg	8260C
Carbon disulfide		0.99	J	1.1	ug/Kg	8260C
2-Methylnaphthalene		18	J	450	ug/Kg	8270D
Dibenzofuran		30	J	450	ug/Kg	8270D
Fluorene		21	J	450	ug/Kg	8270D
Phenanthrene		61	J	450	ug/Kg	8270D
Carbazole		12	J	450	ug/Kg	8270D
Fluoranthene		87	J	450	ug/Kg	8270D
Pyrene		81	J	450	ug/Kg	8270D
Benzo[b]fluoranthene		59		45	ug/Kg	8270D
Benzo[k]fluoranthene		29	J	45	ug/Kg	8270D
Benzo[a]pyrene		55	*	45	ug/Kg	8270D
Indeno[1,2,3-cd]pyrene		40	J	45	ug/Kg	8270D
Benzo[g,h,i]perylene		45	J	450	ug/Kg	8270D
Benzaldehyde		270	J	450	ug/Kg	8270D
Aluminum		11500		48.7	mg/Kg	6010C
Arsenic		3.6	J	3.7	mg/Kg	6010C
Barium		43.8	J	48.7	mg/Kg	6010C
Beryllium		0.40	J	0.49	mg/Kg	6010C
Calcium		1530		1220	mg/Kg	6010C
Cadmium		1.1		0.97	mg/Kg	6010C
Cobalt		8.2	J	12.2	mg/Kg	6010C
Chromium		15.7		2.4	mg/Kg	6010C
Copper		18.0		6.1	mg/Kg	6010C
Iron		23900		36.5	mg/Kg	6010C
Potassium		945	J	1220	mg/Kg	6010C
Magnesium		3320		1220	mg/Kg	6010C
Manganese		298		3.7	mg/Kg	6010C
Sodium		372	J	1220	mg/Kg	6010C
Nickel		19.0		9.7	mg/Kg	6010C
Lead		27.0		2.4	mg/Kg	6010C
Vanadium		20.6		12.2	mg/Kg	6010C
Zinc		50.0		7.3	mg/Kg	6010C
Percent Moisture		27.4		1.0	%	Moisture
Percent Solids		72.6		1.0	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: AKRF Inc

Job Number: 460-84965-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
460-84965-5	**SB-6 (1-2')**					
Acetone		5.3	J B	6.1	ug/Kg	8260C
Isophorone		150		150	ug/Kg	8270D
Naphthalene		250	J	370	ug/Kg	8270D
2-Methylnaphthalene		210	J	370	ug/Kg	8270D
Acenaphthylene		21	J	370	ug/Kg	8270D
Acenaphthene		100	J	370	ug/Kg	8270D
Dibenzofuran		210	J	370	ug/Kg	8270D
Fluorene		97	J	370	ug/Kg	8270D
Phenanthrene		1700		370	ug/Kg	8270D
Anthracene		270	J	370	ug/Kg	8270D
Carbazole		95	J	370	ug/Kg	8270D
Fluoranthene		1600		370	ug/Kg	8270D
Pyrene		1600		370	ug/Kg	8270D
Benzo[a]anthracene		800		37	ug/Kg	8270D
Chrysene		900		370	ug/Kg	8270D
Bis(2-ethylhexyl) phthalate		540		370	ug/Kg	8270D
Benzo[b]fluoranthene		990		37	ug/Kg	8270D
Benzo[k]fluoranthene		340		37	ug/Kg	8270D
Benzo[a]pyrene		730	*	37	ug/Kg	8270D
Indeno[1,2,3-cd]pyrene		610		37	ug/Kg	8270D
Dibenz(a,h)anthracene		120		37	ug/Kg	8270D
Benzo[g,h,i]perylene		550		370	ug/Kg	8270D
1,1'-Biphenyl		67	J	370	ug/Kg	8270D
Acetophenone		24	J	370	ug/Kg	8270D
Aluminum		5170		43.5	mg/Kg	6010C
Arsenic		13.1		3.3	mg/Kg	6010C
Barium		155		43.5	mg/Kg	6010C
Calcium		34700		1090	mg/Kg	6010C
Cadmium		1.0		0.87	mg/Kg	6010C
Cobalt		7.7	J	10.9	mg/Kg	6010C
Chromium		15.2		2.2	mg/Kg	6010C
Copper		47.7		5.4	mg/Kg	6010C
Iron		15200		32.6	mg/Kg	6010C
Potassium		916	J	1090	mg/Kg	6010C
Magnesium		6870		1090	mg/Kg	6010C
Manganese		282		3.3	mg/Kg	6010C
Sodium		205	J	1090	mg/Kg	6010C
Nickel		13.4		8.7	mg/Kg	6010C
Lead		398		2.2	mg/Kg	6010C
Vanadium		26.6		10.9	mg/Kg	6010C
Zinc		262		6.5	mg/Kg	6010C
Mercury		0.19		0.017	mg/Kg	7471B
Percent Moisture		10.7		1.0	%	Moisture
Percent Solids		89.3		1.0	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: AKRF Inc

Job Number: 460-84965-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
460-84965-6	**SB-6 (10-11')**					
Acetone		16	B	5.5	ug/Kg	8260C
4-Methylphenol		43	J	420	ug/Kg	8270D
Naphthalene		430		420	ug/Kg	8270D
2-Methylnaphthalene		200	J	420	ug/Kg	8270D
Acenaphthylene		180	J	420	ug/Kg	8270D
Acenaphthene		580		420	ug/Kg	8270D
Dibenzofuran		570		420	ug/Kg	8270D
Fluorene		710		420	ug/Kg	8270D
Phenanthrene		6900		420	ug/Kg	8270D
Anthracene		1500		420	ug/Kg	8270D
Carbazole		690		420	ug/Kg	8270D
Fluoranthene		6800		420	ug/Kg	8270D
Pyrene		5900		420	ug/Kg	8270D
Benzo[a]anthracene		3100		42	ug/Kg	8270D
Chrysene		2900		420	ug/Kg	8270D
Bis(2-ethylhexyl) phthalate		240	J	420	ug/Kg	8270D
Benzo[b]fluoranthene		4400		42	ug/Kg	8270D
Benzo[k]fluoranthene		1600		42	ug/Kg	8270D
Benzo[a]pyrene		3700	*	42	ug/Kg	8270D
Indeno[1,2,3-cd]pyrene		3700		42	ug/Kg	8270D
Dibenz(a,h)anthracene		770		42	ug/Kg	8270D
Benzo[g,h,i]perylene		3900		420	ug/Kg	8270D
1,1'-Biphenyl		86	J	420	ug/Kg	8270D
Aluminum		5720		49.6	mg/Kg	6010C
Arsenic		4.9		3.7	mg/Kg	6010C
Barium		71.9		49.6	mg/Kg	6010C
Calcium		21800		1240	mg/Kg	6010C
Cadmium		0.94	J	0.99	mg/Kg	6010C
Cobalt		7.4	J	12.4	mg/Kg	6010C
Chromium		13.7		2.5	mg/Kg	6010C
Copper		18.9		6.2	mg/Kg	6010C
Iron		17100		37.2	mg/Kg	6010C
Potassium		1050	J	1240	mg/Kg	6010C
Magnesium		2350		1240	mg/Kg	6010C
Manganese		283		3.7	mg/Kg	6010C
Sodium		444	J	1240	mg/Kg	6010C
Nickel		17.2		9.9	mg/Kg	6010C
Lead		65.0		2.5	mg/Kg	6010C
Vanadium		21.0		12.4	mg/Kg	6010C
Zinc		77.4		7.4	mg/Kg	6010C
Mercury		0.027		0.021	mg/Kg	7471B
Percent Moisture		20.9		1.0	%	Moisture
Percent Solids		79.1		1.0	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: AKRF Inc

Job Number: 460-84965-1

Lab Sample ID	Client Sample ID			Reporting		
Analyte		Result	Qualifier	Limit	Units	Method
460-84965-7	**SB-12 (1-2')**					
Acetone		37	B	6.1	ug/Kg	8260C
Ethylbenzene		0.31	J	1.2	ug/Kg	8260C
Methylcyclohexane		0.41	J	1.2	ug/Kg	8260C
m-Xylene & p-Xylene		1.0	J	1.2	ug/Kg	8260C
o-Xylene		0.31	J	1.2	ug/Kg	8260C
Toluene		0.63	J	1.2	ug/Kg	8260C
Naphthalene		100	J	350	ug/Kg	8270D
2-Methylnaphthalene		420		350	ug/Kg	8270D
Fluorene		80	J	350	ug/Kg	8270D
Phenanthrene		590		350	ug/Kg	8270D
Fluoranthene		380		350	ug/Kg	8270D
Pyrene		410		350	ug/Kg	8270D
Benzo[a]anthracene		210		35	ug/Kg	8270D
Chrysene		310	J	350	ug/Kg	8270D
Bis(2-ethylhexyl) phthalate		98	J	350	ug/Kg	8270D
Benzo[b]fluoranthene		320		35	ug/Kg	8270D
Benzo[k]fluoranthene		92		35	ug/Kg	8270D
Benzo[a]pyrene		200	*	35	ug/Kg	8270D
Indeno[1,2,3-cd]pyrene		200		35	ug/Kg	8270D
Dibenz(a,h)anthracene		38		35	ug/Kg	8270D
Benzo[g,h,i]perylene		170	J	350	ug/Kg	8270D
1,1'-Biphenyl		82	J	350	ug/Kg	8270D
Aluminum		4260		42.8	mg/Kg	6010C
Arsenic		9.1		3.2	mg/Kg	6010C
Barium		64.0		42.8	mg/Kg	6010C
Calcium		45000		1070	mg/Kg	6010C
Cadmium		0.72	J	0.86	mg/Kg	6010C
Cobalt		2.7	J	10.7	mg/Kg	6010C
Chromium		8.0		2.1	mg/Kg	6010C
Copper		23.4		5.4	mg/Kg	6010C
Iron		10100		32.1	mg/Kg	6010C
Potassium		682	J	1070	mg/Kg	6010C
Magnesium		3880		1070	mg/Kg	6010C
Manganese		152		3.2	mg/Kg	6010C
Sodium		284	J	1070	mg/Kg	6010C
Nickel		9.2		8.6	mg/Kg	6010C
Lead		86.2		2.1	mg/Kg	6010C
Selenium		4.8		4.3	mg/Kg	6010C
Vanadium		19.2		10.7	mg/Kg	6010C
Zinc		48.3		6.4	mg/Kg	6010C
Mercury		0.065		0.018	mg/Kg	7471B
Percent Moisture		6.5		1.0	%	Moisture
Percent Solids		93.5		1.0	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: AKRF Inc

Job Number: 460-84965-1

Lab Sample ID	Client Sample ID			Reporting		
Analyte		Result	Qualifier	Limit	Units	Method
460-84965-8	**SB-12 (11-12')**					
Acetone		6.7	B	5.1	ug/Kg	8260C
Isophorone		8700		150	ug/Kg	8270D
Naphthalene		470		380	ug/Kg	8270D
2-Methylnaphthalene		59	J	380	ug/Kg	8270D
2-Chloronaphthalene		70	J	380	ug/Kg	8270D
Acenaphthylene		180	J	380	ug/Kg	8270D
Acenaphthene		21	J	380	ug/Kg	8270D
Dibenzofuran		14	J	380	ug/Kg	8270D
Fluorene		40	J	380	ug/Kg	8270D
Phenanthrene		300	J	380	ug/Kg	8270D
Anthracene		41	J	380	ug/Kg	8270D
Carbazole		11	J	380	ug/Kg	8270D
Fluoranthene		160	J	380	ug/Kg	8270D
Pyrene		170	J	380	ug/Kg	8270D
Benzo[a]anthracene		63		38	ug/Kg	8270D
Chrysene		86	J	380	ug/Kg	8270D
Bis(2-ethylhexyl) phthalate		230	J	380	ug/Kg	8270D
Benzo[b]fluoranthene		81		38	ug/Kg	8270D
Benzo[k]fluoranthene		20	J	38	ug/Kg	8270D
Benzo[a]pyrene		49	*	38	ug/Kg	8270D
Indeno[1,2,3-cd]pyrene		43		38	ug/Kg	8270D
Benzo[g,h,i]perylene		50	J	380	ug/Kg	8270D
1,1'-Biphenyl		52	J	380	ug/Kg	8270D
Aluminum		4720		45.5	mg/Kg	6010C
Arsenic		8.5		3.4	mg/Kg	6010C
Barium		98.7		45.5	mg/Kg	6010C
Calcium		25200		1140	mg/Kg	6010C
Cadmium		1.2		0.91	mg/Kg	6010C
Cobalt		4.9	J	11.4	mg/Kg	6010C
Chromium		33.6		2.3	mg/Kg	6010C
Copper		52.2		5.7	mg/Kg	6010C
Iron		24800		34.1	mg/Kg	6010C
Potassium		899	J	1140	mg/Kg	6010C
Magnesium		2230		1140	mg/Kg	6010C
Manganese		179		3.4	mg/Kg	6010C
Sodium		324	J	1140	mg/Kg	6010C
Nickel		15.3		9.1	mg/Kg	6010C
Lead		102		2.3	mg/Kg	6010C
Vanadium		16.4		11.4	mg/Kg	6010C
Zinc		236		6.8	mg/Kg	6010C
Mercury		0.093		0.018	mg/Kg	7471B
Percent Moisture		13.0		1.0	%	Moisture
Percent Solids		87.0		1.0	%	Moisture

METHOD SUMMARY

Client: AKRF Inc

Job Number: 460-84965-1

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Volatile Organic Compounds by GC/MS	TAL EDI	SW846 8260C	
Closed System Purge and Trap	TAL EDI		SW846 5035
Semivolatile Organic Compounds (GC/MS)	TAL EDI	SW846 8270D	
Microwave Extraction	TAL EDI		SW846 3546
Organochlorine Pesticides (GC)	TAL EDI	SW846 8081B	
Microwave Extraction	TAL EDI		SW846 3546
Polychlorinated Biphenyls (PCBs) by Gas Chromatography	TAL EDI	SW846 8082A	
Microwave Extraction	TAL EDI		SW846 3546
Metals (ICP)	TAL EDI	SW846 6010C	
Preparation, Metals	TAL EDI		SW846 3050B
Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)	TAL EDI	SW846 7471B	
Preparation, Mercury	TAL EDI		SW846 7471B
Percent Moisture	TAL EDI	EPA Moisture	
Matrix: Water			
Volatile Organic Compounds by GC/MS	TAL EDI	SW846 8260C	
Purge and Trap	TAL EDI		SW846 5030C

Lab References:

TAL EDI = TestAmerica Edison

Method References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: AKRF Inc

Job Number: 460-84965-1

Method	Analyst	Analyst ID
SW846 8260C	Starzec, Margaret	MZS
SW846 8260C	Tupayachi, Audberto	AAT
SW846 8270D	Crocco, Michael	MMC
SW846 8270D	Szczech, Anna	AAS
SW846 8081B	Foleyson, Temitope S	TSF
SW846 8082A	Patel, Jignesh	JHP
SW846 6010C	Huang, Yixin	YZH
SW846 7471B	Staib, Thomas	TJS
EPA Moisture	Armbruster, Chris	CJA

SAMPLE SUMMARY

Client: AKRF Inc

Job Number: 460-84965-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
460-84965-1	SB-17 (1-2')	Solid	10/22/2014 1040	10/22/2014 1610
460-84965-2	SB-17 (11-12')	Solid	10/22/2014 1055	10/22/2014 1610
460-84965-3	SB-18 (1-2')	Solid	10/22/2014 1225	10/22/2014 1610
460-84965-4	SB-18 (12-13')	Solid	10/22/2014 1230	10/22/2014 1610
460-84965-5	SB-6 (1-2')	Solid	10/22/2014 1145	10/22/2014 1610
460-84965-6	SB-6 (10-11')	Solid	10/22/2014 1150	10/22/2014 1610
460-84965-7	SB-12 (1-2')	Solid	10/22/2014 1440	10/22/2014 1610
460-84965-8	SB-12 (11-12')	Solid	10/22/2014 1445	10/22/2014 1610
460-84965-9TB	TB	Water	10/22/2014 1500	10/22/2014 1610

SAMPLE RESULTS

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-17 (1-2')**

Lab Sample ID: 460-84965-1

Client Matrix: Solid

% Moisture: 12.0

Date Sampled: 10/22/2014 1040

Date Received: 10/22/2014 1610

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258257	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-257683	Lab File ID:	K33332.D
Dilution:	1.0			Initial Weight/Volume:	3.37 g
Analysis Date:	10/25/2014 1311			Final Weight/Volume:	5 mL
Prep Date:	10/22/2014 1911				

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.7	U	0.22	1.7
1,1,2,2-Tetrachloroethane	1.7	U *	0.15	1.7
1,1,2-Trichloro-1,2,2-trifluoroethane	1.7	U	0.19	1.7
1,1,2-Trichloroethane	1.7	U *	0.24	1.7
1,1-Dichloroethane	1.7	U	0.19	1.7
1,1-Dichloroethene	1.7	U	0.32	1.7
1,2,3-Trichlorobenzene	1.7	U *	0.27	1.7
1,2,4-Trichlorobenzene	1.7	U *	0.32	1.7
1,2-Dichloropropane	1.7	U	0.25	1.7
1,3-Dichlorobenzene	1.7	U *	0.27	1.7
1,4-Dichlorobenzene	1.7	U *	0.19	1.7
1,4-Dioxane	34	U	21	34
2-Butanone (MEK)	8.4	U	1.1	8.4
2-Hexanone	8.4	U *	0.22	8.4
4-Methyl-2-pentanone (MIBK)	8.4	U *	0.34	8.4
Acetone	8.4	U	2.8	8.4
Benzene	1.7	U *	0.25	1.7
Bromoform	1.7	U *	0.29	1.7
Bromomethane	1.7	U	0.72	1.7
Carbon disulfide	1.7	U	0.25	1.7
Carbon tetrachloride	1.7	U	0.25	1.7
Chlorobenzene	1.7	U *	0.30	1.7
Chlorobromomethane	1.7	U	0.19	1.7
Chlorodibromomethane	1.7	U *	0.17	1.7
Chloroethane	1.7	U	0.56	1.7
Chloroform	1.7	U	0.40	1.7
Chloromethane	1.7	U	0.27	1.7
cis-1,2-Dichloroethene	1.7	U	0.19	1.7
cis-1,3-Dichloropropene	1.7	U *	0.24	1.7
Cyclohexane	1.7	U	0.22	1.7
Dichlorobromomethane	1.7	U	0.54	1.7
Dichlorodifluoromethane	1.7	U	0.37	1.7
Ethylbenzene	1.7	U *	0.29	1.7
Ethylene Dibromide	1.7	U *	0.25	1.7
Isopropylbenzene	1.7	U *	0.19	1.7
Methyl acetate	8.4	U	0.54	8.4
Methyl tert-butyl ether	1.7	U	0.19	1.7
Methylcyclohexane	1.3	J	0.17	1.7
Methylene Chloride	1.7	U	0.25	1.7
m-Xylene & p-Xylene	1.7	U *	0.99	1.7
o-Xylene	1.7	U *	0.32	1.7
Styrene	1.7	U *	0.47	1.7
Tetrachloroethene	1.7	U *	0.20	1.7
Toluene	1.7	U *	0.24	1.7
trans-1,2-Dichloroethene	1.7	U	0.22	1.7
trans-1,3-Dichloropropene	1.7	U *	0.17	1.7

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-17 (1-2')**

Lab Sample ID: 460-84965-1

Client Matrix: Solid

% Moisture: 12.0

Date Sampled: 10/22/2014 1040

Date Received: 10/22/2014 1610

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258257	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-257683	Lab File ID:	K33332.D
Dilution:	1.0			Initial Weight/Volume:	3.37 g
Analysis Date:	10/25/2014 1311			Final Weight/Volume:	5 mL
Prep Date:	10/22/2014 1911				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Trichloroethene		1.7	U	0.20	1.7
Trichlorofluoromethane		1.7	U	0.27	1.7
Vinyl chloride		1.7	U	0.57	1.7
1,2-Dichloroethane		1.7	U	0.30	1.7
1,2-Dichlorobenzene		1.7	U *	0.17	1.7
1,2-Dibromo-3-Chloropropane		1.7	U *	0.74	1.7

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	111		70 - 130
4-Bromofluorobenzene	48	*	70 - 130
Dibromofluoromethane (Surr)	119		70 - 130
Toluene-d8 (Surr)	160	*	70 - 130

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-17 (1-2')**

Lab Sample ID: 460-84965-1

Client Matrix: Solid

% Moisture: 12.0

Date Sampled: 10/22/2014 1040

Date Received: 10/22/2014 1610

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258257	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-257683	Lab File ID:	K33332.D
Dilution:	1.0			Initial Weight/Volume:	3.37 g
Analysis Date:	10/25/2014 1311			Final Weight/Volume:	5 mL
Prep Date:	10/22/2014 1911				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-17 (11-12')**

Lab Sample ID: 460-84965-2

Client Matrix: Solid

% Moisture: 17.7

Date Sampled: 10/22/2014 1055

Date Received: 10/22/2014 1610

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-257988	Instrument ID:	CVOAMS4
Prep Method:	5035	Prep Batch:	460-257683	Lab File ID:	D5452.D
Dilution:	1.0			Initial Weight/Volume:	5.35 g
Analysis Date:	10/24/2014 0745			Final Weight/Volume:	5 mL
Prep Date:	10/22/2014 1912				

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.1	U	0.15	1.1
1,1,2,2-Tetrachloroethane	1.1	U	0.10	1.1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.1	U	0.12	1.1
1,1,2-Trichloroethane	1.1	U	0.16	1.1
1,1-Dichloroethane	1.1	U	0.12	1.1
1,1-Dichloroethene	1.1	U	0.22	1.1
1,2,3-Trichlorobenzene	1.1	U	0.18	1.1
1,2,4-Trichlorobenzene	1.1	U	0.22	1.1
1,2-Dichloropropane	1.1	U	0.17	1.1
1,3-Dichlorobenzene	1.1	U	0.18	1.1
1,4-Dichlorobenzene	1.1	U	0.12	1.1
1,4-Dioxane	23	U	14	23
2-Butanone (MEK)	5.7	U	0.72	5.7
2-Hexanone	5.7	U	0.15	5.7
4-Methyl-2-pentanone (MIBK)	5.7	U	0.23	5.7
Acetone	4.7	J B	1.9	5.7
Benzene	1.1	U	0.17	1.1
Bromoform	1.1	U	0.19	1.1
Bromomethane	1.1	U	0.49	1.1
Carbon disulfide	1.1	U	0.17	1.1
Carbon tetrachloride	1.1	U	0.17	1.1
Chlorobenzene	1.1	U	0.20	1.1
Chlorobromomethane	1.1	U	0.12	1.1
Chlorodibromomethane	1.1	U	0.11	1.1
Chloroethane	1.1	U	0.37	1.1
Chloroform	1.1	U	0.27	1.1
Chloromethane	1.1	U	0.18	1.1
cis-1,2-Dichloroethene	1.1	U	0.12	1.1
cis-1,3-Dichloropropene	1.1	U	0.16	1.1
Cyclohexane	1.1	U	0.15	1.1
Dichlorobromomethane	1.1	U	0.36	1.1
Dichlorodifluoromethane	1.1	U	0.25	1.1
Ethylbenzene	1.1	U	0.19	1.1
Ethylene Dibromide	1.1	U	0.17	1.1
Isopropylbenzene	1.1	U	0.12	1.1
Methyl acetate	5.7	U	0.36	5.7
Methyl tert-butyl ether	1.1	U	0.12	1.1
Methylcyclohexane	1.1	U	0.11	1.1
Methylene Chloride	1.1	U	0.17	1.1
m-Xylene & p-Xylene	1.1	U	0.67	1.1
o-Xylene	1.1	U	0.22	1.1
Styrene	1.1	U	0.32	1.1
Tetrachloroethene	0.16	J	0.14	1.1
Toluene	1.1	U	0.16	1.1
trans-1,2-Dichloroethene	1.1	U	0.15	1.1
trans-1,3-Dichloropropene	1.1	U	0.11	1.1

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-17 (11-12')**

Lab Sample ID: 460-84965-2

Client Matrix: Solid

% Moisture: 17.7

Date Sampled: 10/22/2014 1055

Date Received: 10/22/2014 1610

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-257988	Instrument ID:	CVOAMS4
Prep Method:	5035	Prep Batch:	460-257683	Lab File ID:	D5452.D
Dilution:	1.0			Initial Weight/Volume:	5.35 g
Analysis Date:	10/24/2014 0745			Final Weight/Volume:	5 mL
Prep Date:	10/22/2014 1912				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Trichloroethene		1.1	U	0.14	1.1
Trichlorofluoromethane		1.1	U	0.18	1.1
Vinyl chloride		1.1	U	0.39	1.1
1,2-Dichloroethane		1.1	U	0.20	1.1
1,2-Dichlorobenzene		1.1	U	0.11	1.1
1,2-Dibromo-3-Chloropropane		1.1	U	0.50	1.1

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	82		70 - 130
4-Bromofluorobenzene	92		70 - 130
Dibromofluoromethane (Surr)	80		70 - 130
Toluene-d8 (Surr)	95		70 - 130

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-17 (11-12')**

Lab Sample ID: 460-84965-2

Client Matrix: Solid

% Moisture: 17.7

Date Sampled: 10/22/2014 1055

Date Received: 10/22/2014 1610

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-257988	Instrument ID:	CVOAMS4
Prep Method:	5035	Prep Batch:	460-257683	Lab File ID:	D5452.D
Dilution:	1.0			Initial Weight/Volume:	5.35 g
Analysis Date:	10/24/2014 0745			Final Weight/Volume:	5 mL
Prep Date:	10/22/2014 1912				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-18 (1-2')**

Lab Sample ID: 460-84965-3

Client Matrix: Solid

% Moisture: 11.6

Date Sampled: 10/22/2014 1225

Date Received: 10/22/2014 1610

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-257988	Instrument ID:	CVOAMS4
Prep Method:	5035	Prep Batch:	460-257683	Lab File ID:	D5453.D
Dilution:	1.0			Initial Weight/Volume:	5.58 g
Analysis Date:	10/24/2014 0809			Final Weight/Volume:	5 mL
Prep Date:	10/22/2014 1913				

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.13	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.091	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	0.11	1.0
1,1,2-Trichloroethane	1.0	U	0.14	1.0
1,1-Dichloroethane	1.0	U	0.11	1.0
1,1-Dichloroethene	1.0	U	0.19	1.0
1,2,3-Trichlorobenzene	1.0	U	0.16	1.0
1,2,4-Trichlorobenzene	1.0	U	0.19	1.0
1,2-Dichloropropane	1.0	U	0.15	1.0
1,3-Dichlorobenzene	1.0	U	0.16	1.0
1,4-Dichlorobenzene	1.0	U	0.11	1.0
1,4-Dioxane	20	U	13	20
2-Butanone (MEK)	5.1	U	0.64	5.1
2-Hexanone	5.1	U	0.13	5.1
4-Methyl-2-pentanone (MIBK)	5.1	U	0.20	5.1
Acetone	4.2	J B	1.7	5.1
Benzene	1.0	U	0.15	1.0
Bromoform	1.0	U	0.17	1.0
Bromomethane	1.0	U	0.44	1.0
Carbon disulfide	1.0	U	0.15	1.0
Carbon tetrachloride	1.0	U	0.15	1.0
Chlorobenzene	1.0	U	0.18	1.0
Chlorobromomethane	1.0	U	0.11	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	0.33	1.0
Chloroform	1.0	U	0.24	1.0
Chloromethane	1.0	U	0.16	1.0
cis-1,2-Dichloroethene	1.0	U	0.11	1.0
cis-1,3-Dichloropropene	1.0	U	0.14	1.0
Cyclohexane	1.0	U	0.13	1.0
Dichlorobromomethane	1.0	U	0.32	1.0
Dichlorodifluoromethane	1.0	U	0.22	1.0
Ethylbenzene	1.0	U	0.17	1.0
Ethylene Dibromide	1.0	U	0.15	1.0
Isopropylbenzene	1.0	U	0.11	1.0
Methyl acetate	5.1	U	0.32	5.1
Methyl tert-butyl ether	1.0	U	0.11	1.0
Methylcyclohexane	1.0	U	0.10	1.0
Methylene Chloride	1.0	U	0.15	1.0
m-Xylene & p-Xylene	1.0	U	0.60	1.0
o-Xylene	1.0	U	0.19	1.0
Styrene	1.0	U	0.28	1.0
Tetrachloroethene	1.0	U	0.12	1.0
Toluene	1.0	U	0.14	1.0
trans-1,2-Dichloroethene	1.0	U	0.13	1.0
trans-1,3-Dichloropropene	1.0	U	0.10	1.0

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-18 (1-2')**

Lab Sample ID: 460-84965-3

Client Matrix: Solid

% Moisture: 11.6

Date Sampled: 10/22/2014 1225

Date Received: 10/22/2014 1610

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-257988	Instrument ID:	CVOAMS4
Prep Method:	5035	Prep Batch:	460-257683	Lab File ID:	D5453.D
Dilution:	1.0			Initial Weight/Volume:	5.58 g
Analysis Date:	10/24/2014 0809			Final Weight/Volume:	5 mL
Prep Date:	10/22/2014 1913				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Trichloroethene		1.0	U	0.12	1.0
Trichlorofluoromethane		1.0	U	0.16	1.0
Vinyl chloride		1.0	U	0.34	1.0
1,2-Dichloroethane		1.0	U	0.18	1.0
1,2-Dichlorobenzene		1.0	U	0.10	1.0
1,2-Dibromo-3-Chloropropane		1.0	U	0.45	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	80		70 - 130
4-Bromofluorobenzene	92		70 - 130
Dibromofluoromethane (Surr)	79		70 - 130
Toluene-d8 (Surr)	93		70 - 130

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-18 (1-2')**

Lab Sample ID: 460-84965-3

Client Matrix: Solid

% Moisture: 11.6

Date Sampled: 10/22/2014 1225

Date Received: 10/22/2014 1610

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-257988	Instrument ID:	CVOAMS4
Prep Method:	5035	Prep Batch:	460-257683	Lab File ID:	D5453.D
Dilution:	1.0			Initial Weight/Volume:	5.58 g
Analysis Date:	10/24/2014 0809			Final Weight/Volume:	5 mL
Prep Date:	10/22/2014 1913				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-18 (12-13')**

Lab Sample ID: 460-84965-4

Client Matrix: Solid

% Moisture: 27.4

Date Sampled: 10/22/2014 1230

Date Received: 10/22/2014 1610

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-257988	Instrument ID:	CVOAMS4
Prep Method:	5035	Prep Batch:	460-257683	Lab File ID:	D5454.D
Dilution:	1.0			Initial Weight/Volume:	6.00 g
Analysis Date:	10/24/2014 0833			Final Weight/Volume:	5 mL
Prep Date:	10/22/2014 1913				

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.1	U	0.15	1.1
1,1,2,2-Tetrachloroethane	1.1	U	0.10	1.1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.1	U	0.13	1.1
1,1,2-Trichloroethane	1.1	U	0.16	1.1
1,1-Dichloroethane	1.1	U	0.13	1.1
1,1-Dichloroethene	1.1	U	0.22	1.1
1,2,3-Trichlorobenzene	1.1	U	0.18	1.1
1,2,4-Trichlorobenzene	1.1	U	0.22	1.1
1,2-Dichloropropane	1.1	U	0.17	1.1
1,3-Dichlorobenzene	1.1	U	0.18	1.1
1,4-Dichlorobenzene	1.1	U	0.13	1.1
1,4-Dioxane	23	U *	15	23
2-Butanone (MEK)	5.7	U	0.72	5.7
2-Hexanone	5.7	U	0.15	5.7
4-Methyl-2-pentanone (MIBK)	5.7	U	0.23	5.7
Acetone	82	B	1.9	5.7
Benzene	1.1	U	0.17	1.1
Bromoform	1.1	U	0.20	1.1
Bromomethane	1.1	U	0.49	1.1
Carbon disulfide	0.99	J	0.17	1.1
Carbon tetrachloride	1.1	U	0.17	1.1
Chlorobenzene	1.1	U	0.21	1.1
Chlorobromomethane	1.1	U	0.13	1.1
Chlorodibromomethane	1.1	U	0.11	1.1
Chloroethane	1.1	U	0.38	1.1
Chloroform	1.1	U	0.28	1.1
Chloromethane	1.1	U	0.18	1.1
cis-1,2-Dichloroethene	1.1	U	0.13	1.1
cis-1,3-Dichloropropene	1.1	U	0.16	1.1
Cyclohexane	1.1	U	0.15	1.1
Dichlorobromomethane	1.1	U	0.37	1.1
Dichlorodifluoromethane	1.1	U	0.25	1.1
Ethylbenzene	1.1	U	0.20	1.1
Ethylene Dibromide	1.1	U	0.17	1.1
Isopropylbenzene	1.1	U	0.13	1.1
Methyl acetate	5.7	U	0.37	5.7
Methyl tert-butyl ether	1.1	U	0.13	1.1
Methylcyclohexane	1.1	U	0.11	1.1
Methylene Chloride	1.1	U	0.17	1.1
m-Xylene & p-Xylene	1.1	U	0.68	1.1
o-Xylene	1.1	U	0.22	1.1
Styrene	1.1	U	0.32	1.1
Tetrachloroethene	1.1	U	0.14	1.1
Toluene	1.1	U	0.16	1.1
trans-1,2-Dichloroethene	1.1	U	0.15	1.1
trans-1,3-Dichloropropene	1.1	U	0.11	1.1

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-18 (12-13')**

Lab Sample ID: 460-84965-4

Client Matrix: Solid

% Moisture: 27.4

Date Sampled: 10/22/2014 1230

Date Received: 10/22/2014 1610

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-257988	Instrument ID:	CVOAMS4
Prep Method:	5035	Prep Batch:	460-257683	Lab File ID:	D5454.D
Dilution:	1.0			Initial Weight/Volume:	6.00 g
Analysis Date:	10/24/2014 0833			Final Weight/Volume:	5 mL
Prep Date:	10/22/2014 1913				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Trichloroethene		1.1	U	0.14	1.1
Trichlorofluoromethane		1.1	U	0.18	1.1
Vinyl chloride		1.1	U	0.39	1.1
1,2-Dichloroethane		1.1	U	0.21	1.1
1,2-Dichlorobenzene		1.1	U	0.11	1.1
1,2-Dibromo-3-Chloropropane		1.1	U	0.50	1.1

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	78		70 - 130
4-Bromofluorobenzene	89		70 - 130
Dibromofluoromethane (Surr)	76		70 - 130
Toluene-d8 (Surr)	91		70 - 130

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-18 (12-13')**

Lab Sample ID: 460-84965-4

Client Matrix: Solid

% Moisture: 27.4

Date Sampled: 10/22/2014 1230

Date Received: 10/22/2014 1610

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-257988	Instrument ID:	CVOAMS4
Prep Method:	5035	Prep Batch:	460-257683	Lab File ID:	D5454.D
Dilution:	1.0			Initial Weight/Volume:	6.00 g
Analysis Date:	10/24/2014 0833			Final Weight/Volume:	5 mL
Prep Date:	10/22/2014 1913				

Tentatively Identified Compounds **Number TIC's Found:** **10**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
80-56-8	.alpha.-Pinene	10.04	2100	J N
79-92-5	Camphene	10.26	110	J N
6069-98-3	Cyclohexane, 1-methyl-4-(1-methylethyl)-	10.43	150	J N
18172-67-3	Bicyclo[3.1.1]heptane, 6,6-dimethyl-2-me	10.55	160	J N
5989-27-5	D-Limonene	10.97	120	J N
527-84-4	Benzene, 1-methyl-2-(1-methylethyl)-	11.02	1700	J N
4695-62-9	Bicyclo[2.2.1]heptan-2-one, 1,3,3-trimet	11.91	97	J N
1632-73-1	Bicyclo[2.2.1]heptan-2-ol, 1,3,3-trimeth	12.16	52	J N
554-59-6	Bicyclo[4.1.0]heptane, 3,7,7-trimethyl-	12.35	51	J N
76-22-2	Camphor	12.62	160	J N

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-6 (1-2')**

Lab Sample ID: 460-84965-5

Client Matrix: Solid

% Moisture: 10.7

Date Sampled: 10/22/2014 1145

Date Received: 10/22/2014 1610

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-257988	Instrument ID:	CVOAMS4
Prep Method:	5035	Prep Batch:	460-257683	Lab File ID:	D5455.D
Dilution:	1.0			Initial Weight/Volume:	4.60 g
Analysis Date:	10/24/2014 0857			Final Weight/Volume:	5 mL
Prep Date:	10/22/2014 1914				

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.2	U	0.16	1.2
1,1,2,2-Tetrachloroethane	1.2	U *	0.11	1.2
1,1,2-Trichloro-1,2,2-trifluoroethane	1.2	U	0.13	1.2
1,1,2-Trichloroethane	1.2	U	0.17	1.2
1,1-Dichloroethane	1.2	U	0.13	1.2
1,1-Dichloroethene	1.2	U	0.23	1.2
1,2,3-Trichlorobenzene	1.2	U *	0.19	1.2
1,2,4-Trichlorobenzene	1.2	U *	0.23	1.2
1,2-Dichloropropane	1.2	U	0.18	1.2
1,3-Dichlorobenzene	1.2	U *	0.19	1.2
1,4-Dichlorobenzene	1.2	U *	0.13	1.2
1,4-Dioxane	24	U	15	24
2-Butanone (MEK)	6.1	U	0.77	6.1
2-Hexanone	6.1	U	0.16	6.1
4-Methyl-2-pentanone (MIBK)	6.1	U	0.24	6.1
Acetone	5.3	J B	2.1	6.1
Benzene	1.2	U	0.18	1.2
Bromoform	1.2	U	0.21	1.2
Bromomethane	1.2	U	0.52	1.2
Carbon disulfide	1.2	U	0.18	1.2
Carbon tetrachloride	1.2	U	0.18	1.2
Chlorobenzene	1.2	U	0.22	1.2
Chlorobromomethane	1.2	U	0.13	1.2
Chlorodibromomethane	1.2	U	0.12	1.2
Chloroethane	1.2	U	0.40	1.2
Chloroform	1.2	U	0.29	1.2
Chloromethane	1.2	U	0.19	1.2
cis-1,2-Dichloroethene	1.2	U	0.13	1.2
cis-1,3-Dichloropropene	1.2	U	0.17	1.2
Cyclohexane	1.2	U	0.16	1.2
Dichlorobromomethane	1.2	U	0.39	1.2
Dichlorodifluoromethane	1.2	U	0.27	1.2
Ethylbenzene	1.2	U	0.21	1.2
Ethylene Dibromide	1.2	U	0.18	1.2
Isopropylbenzene	1.2	U	0.13	1.2
Methyl acetate	6.1	U	0.39	6.1
Methyl tert-butyl ether	1.2	U	0.13	1.2
Methylcyclohexane	1.2	U	0.12	1.2
Methylene Chloride	1.2	U	0.18	1.2
m-Xylene & p-Xylene	1.2	U	0.72	1.2
o-Xylene	1.2	U	0.23	1.2
Styrene	1.2	U	0.34	1.2
Tetrachloroethene	1.2	U	0.15	1.2
Toluene	1.2	U	0.17	1.2
trans-1,2-Dichloroethene	1.2	U	0.16	1.2
trans-1,3-Dichloropropene	1.2	U	0.12	1.2

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-6 (1-2')**

Lab Sample ID: 460-84965-5

Client Matrix: Solid

% Moisture: 10.7

Date Sampled: 10/22/2014 1145

Date Received: 10/22/2014 1610

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-257988	Instrument ID:	CVOAMS4
Prep Method:	5035	Prep Batch:	460-257683	Lab File ID:	D5455.D
Dilution:	1.0			Initial Weight/Volume:	4.60 g
Analysis Date:	10/24/2014 0857			Final Weight/Volume:	5 mL
Prep Date:	10/22/2014 1914				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Trichloroethene		1.2	U	0.15	1.2
Trichlorofluoromethane		1.2	U	0.19	1.2
Vinyl chloride		1.2	U	0.41	1.2
1,2-Dichloroethane		1.2	U	0.22	1.2
1,2-Dichlorobenzene		1.2	U *	0.12	1.2
1,2-Dibromo-3-Chloropropane		1.2	U *	0.54	1.2

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	79		70 - 130
4-Bromofluorobenzene	104	*	70 - 130
Dibromofluoromethane (Surr)	80		70 - 130
Toluene-d8 (Surr)	104		70 - 130

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-6 (1-2')**

Lab Sample ID: 460-84965-5

Client Matrix: Solid

% Moisture: 10.7

Date Sampled: 10/22/2014 1145

Date Received: 10/22/2014 1610

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-257988	Instrument ID:	CVOAMS4
Prep Method:	5035	Prep Batch:	460-257683	Lab File ID:	D5455.D
Dilution:	1.0			Initial Weight/Volume:	4.60 g
Analysis Date:	10/24/2014 0857			Final Weight/Volume:	5 mL
Prep Date:	10/22/2014 1914				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-6 (10-11')**

Lab Sample ID: 460-84965-6

Client Matrix: Solid

% Moisture: 20.9

Date Sampled: 10/22/2014 1150

Date Received: 10/22/2014 1610

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-257988	Instrument ID:	CVOAMS4
Prep Method:	5035	Prep Batch:	460-257683	Lab File ID:	D5456.D
Dilution:	1.0			Initial Weight/Volume:	5.73 g
Analysis Date:	10/24/2014 0921			Final Weight/Volume:	5 mL
Prep Date:	10/22/2014 1915				

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.1	U	0.14	1.1
1,1,2,2-Tetrachloroethane	1.1	U	0.099	1.1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.1	U	0.12	1.1
1,1,2-Trichloroethane	1.1	U	0.15	1.1
1,1-Dichloroethane	1.1	U	0.12	1.1
1,1-Dichloroethene	1.1	U	0.21	1.1
1,2,3-Trichlorobenzene	1.1	U	0.18	1.1
1,2,4-Trichlorobenzene	1.1	U	0.21	1.1
1,2-Dichloropropane	1.1	U	0.17	1.1
1,3-Dichlorobenzene	1.1	U	0.18	1.1
1,4-Dichlorobenzene	1.1	U	0.12	1.1
1,4-Dioxane	22	U	14	22
2-Butanone (MEK)	5.5	U	0.69	5.5
2-Hexanone	5.5	U	0.14	5.5
4-Methyl-2-pentanone (MIBK)	5.5	U	0.22	5.5
Acetone	16	B	1.9	5.5
Benzene	1.1	U	0.17	1.1
Bromoform	1.1	U	0.19	1.1
Bromomethane	1.1	U	0.47	1.1
Carbon disulfide	1.1	U	0.17	1.1
Carbon tetrachloride	1.1	U	0.17	1.1
Chlorobenzene	1.1	U	0.20	1.1
Chlorobromomethane	1.1	U	0.12	1.1
Chlorodibromomethane	1.1	U	0.11	1.1
Chloroethane	1.1	U	0.36	1.1
Chloroform	1.1	U	0.26	1.1
Chloromethane	1.1	U	0.18	1.1
cis-1,2-Dichloroethene	1.1	U	0.12	1.1
cis-1,3-Dichloropropene	1.1	U	0.15	1.1
Cyclohexane	1.1	U	0.14	1.1
Dichlorobromomethane	1.1	U	0.35	1.1
Dichlorodifluoromethane	1.1	U	0.24	1.1
Ethylbenzene	1.1	U	0.19	1.1
Ethylene Dibromide	1.1	U	0.17	1.1
Isopropylbenzene	1.1	U	0.12	1.1
Methyl acetate	5.5	U	0.35	5.5
Methyl tert-butyl ether	1.1	U	0.12	1.1
Methylcyclohexane	1.1	U	0.11	1.1
Methylene Chloride	1.1	U	0.17	1.1
m-Xylene & p-Xylene	1.1	U	0.65	1.1
o-Xylene	1.1	U	0.21	1.1
Styrene	1.1	U	0.31	1.1
Tetrachloroethene	1.1	U	0.13	1.1
Toluene	1.1	U	0.15	1.1
trans-1,2-Dichloroethene	1.1	U	0.14	1.1
trans-1,3-Dichloropropene	1.1	U	0.11	1.1

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-6 (10-11')**

Lab Sample ID: 460-84965-6

Client Matrix: Solid

% Moisture: 20.9

Date Sampled: 10/22/2014 1150

Date Received: 10/22/2014 1610

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-257988	Instrument ID:	CVOAMS4
Prep Method:	5035	Prep Batch:	460-257683	Lab File ID:	D5456.D
Dilution:	1.0			Initial Weight/Volume:	5.73 g
Analysis Date:	10/24/2014 0921			Final Weight/Volume:	5 mL
Prep Date:	10/22/2014 1915				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Trichloroethene		1.1	U	0.13	1.1
Trichlorofluoromethane		1.1	U	0.18	1.1
Vinyl chloride		1.1	U	0.37	1.1
1,2-Dichloroethane		1.1	U	0.20	1.1
1,2-Dichlorobenzene		1.1	U	0.11	1.1
1,2-Dibromo-3-Chloropropane		1.1	U	0.49	1.1

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	80		70 - 130
4-Bromofluorobenzene	98		70 - 130
Dibromofluoromethane (Surr)	81		70 - 130
Toluene-d8 (Surr)	97		70 - 130

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-6 (10-11')**

Lab Sample ID: 460-84965-6

Client Matrix: Solid

% Moisture: 20.9

Date Sampled: 10/22/2014 1150

Date Received: 10/22/2014 1610

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-257988	Instrument ID:	CVOAMS4
Prep Method:	5035	Prep Batch:	460-257683	Lab File ID:	D5456.D
Dilution:	1.0			Initial Weight/Volume:	5.73 g
Analysis Date:	10/24/2014 0921			Final Weight/Volume:	5 mL
Prep Date:	10/22/2014 1915				

Tentatively Identified Compounds **Number TIC's Found:** **1**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
80-56-8	.alpha.-Pinene	10.04	16	J N

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-12 (1-2')**

Lab Sample ID: 460-84965-7

Client Matrix: Solid

% Moisture: 6.5

Date Sampled: 10/22/2014 1440

Date Received: 10/22/2014 1610

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258257	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-257683	Lab File ID:	K33334.D
Dilution:	1.0			Initial Weight/Volume:	4.41 g
Analysis Date:	10/25/2014 1359			Final Weight/Volume:	5 mL
Prep Date:	10/22/2014 1916				

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.2	U	0.16	1.2
1,1,2,2-Tetrachloroethane	1.2	U	0.11	1.2
1,1,2-Trichloro-1,2,2-trifluoroethane	1.2	U	0.13	1.2
1,1,2-Trichloroethane	1.2	U	0.17	1.2
1,1-Dichloroethane	1.2	U	0.13	1.2
1,1-Dichloroethene	1.2	U	0.23	1.2
1,2,3-Trichlorobenzene	1.2	U	0.19	1.2
1,2,4-Trichlorobenzene	1.2	U	0.23	1.2
1,2-Dichloropropane	1.2	U	0.18	1.2
1,3-Dichlorobenzene	1.2	U	0.19	1.2
1,4-Dichlorobenzene	1.2	U	0.13	1.2
1,4-Dioxane	24	U	15	24
2-Butanone (MEK)	6.1	U	0.76	6.1
2-Hexanone	6.1	U	0.16	6.1
4-Methyl-2-pentanone (MIBK)	6.1	U	0.24	6.1
Acetone	37	B	2.1	6.1
Benzene	1.2	U	0.18	1.2
Bromoform	1.2	U	0.21	1.2
Bromomethane	1.2	U	0.52	1.2
Carbon disulfide	1.2	U	0.18	1.2
Carbon tetrachloride	1.2	U	0.18	1.2
Chlorobenzene	1.2	U	0.22	1.2
Chlorobromomethane	1.2	U	0.13	1.2
Chlorodibromomethane	1.2	U	0.12	1.2
Chloroethane	1.2	U	0.40	1.2
Chloroform	1.2	U	0.29	1.2
Chloromethane	1.2	U	0.19	1.2
cis-1,2-Dichloroethene	1.2	U	0.13	1.2
cis-1,3-Dichloropropene	1.2	U	0.17	1.2
Cyclohexane	1.2	U	0.16	1.2
Dichlorobromomethane	1.2	U	0.39	1.2
Dichlorodifluoromethane	1.2	U	0.27	1.2
Ethylbenzene	0.31	J	0.21	1.2
Ethylene Dibromide	1.2	U	0.18	1.2
Isopropylbenzene	1.2	U	0.13	1.2
Methyl acetate	6.1	U	0.39	6.1
Methyl tert-butyl ether	1.2	U	0.13	1.2
Methylcyclohexane	0.41	J	0.12	1.2
Methylene Chloride	1.2	U	0.18	1.2
m-Xylene & p-Xylene	1.0	J	0.72	1.2
o-Xylene	0.31	J	0.23	1.2
Styrene	1.2	U	0.34	1.2
Tetrachloroethene	1.2	U	0.15	1.2
Toluene	0.63	J	0.17	1.2
trans-1,2-Dichloroethene	1.2	U	0.16	1.2
trans-1,3-Dichloropropene	1.2	U	0.12	1.2

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-12 (1-2')**

Lab Sample ID: 460-84965-7

Client Matrix: Solid

% Moisture: 6.5

Date Sampled: 10/22/2014 1440

Date Received: 10/22/2014 1610

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258257	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-257683	Lab File ID:	K33334.D
Dilution:	1.0			Initial Weight/Volume:	4.41 g
Analysis Date:	10/25/2014 1359			Final Weight/Volume:	5 mL
Prep Date:	10/22/2014 1916				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Trichloroethene		1.2	U	0.15	1.2
Trichlorofluoromethane		1.2	U	0.19	1.2
Vinyl chloride		1.2	U	0.41	1.2
1,2-Dichloroethane		1.2	U	0.22	1.2
1,2-Dichlorobenzene		1.2	U	0.12	1.2
1,2-Dibromo-3-Chloropropane		1.2	U	0.53	1.2

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	99		70 - 130
4-Bromofluorobenzene	91		70 - 130
Dibromofluoromethane (Surr)	98		70 - 130
Toluene-d8 (Surr)	98		70 - 130

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-12 (1-2')**

Lab Sample ID: 460-84965-7

Client Matrix: Solid

% Moisture: 6.5

Date Sampled: 10/22/2014 1440

Date Received: 10/22/2014 1610

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258257	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-257683	Lab File ID:	K33334.D
Dilution:	1.0			Initial Weight/Volume:	4.41 g
Analysis Date:	10/25/2014 1359			Final Weight/Volume:	5 mL
Prep Date:	10/22/2014 1916				

Tentatively Identified Compounds **Number TIC's Found:** **10**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
17301-23-4	Undecane, 2,6-dimethyl-	11.97	220	J N
17312-79-7	Undecane, 4,5-dimethyl-	12.33	300	J N
13287-21-3	Tridecane, 6-methyl-	12.64	190	J N
31295-56-4	Dodecane, 2,6,11-trimethyl-	13.03	280	J N
	Unknown	13.31	160	J
3891-98-3	Dodecane, 2,6,10-trimethyl-	13.70	270	J N
	Unknown	14.09	420	J
581-42-0	Naphthalene, 2,6-dimethyl-	14.24	210	J N
582-16-1	Naphthalene, 2,7-dimethyl-	14.41	240	J N
80655-44-3	Decahydro-4,4,8,9,10-pentamethylnaphthal	14.48	280	J N

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-12 (11-12')**

Lab Sample ID: 460-84965-8

Client Matrix: Solid

% Moisture: 13.0

Date Sampled: 10/22/2014 1445

Date Received: 10/22/2014 1610

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-257988	Instrument ID:	CVOAMS4
Prep Method:	5035	Prep Batch:	460-257683	Lab File ID:	D5458.D
Dilution:	1.0			Initial Weight/Volume:	5.58 g
Analysis Date:	10/24/2014 1010			Final Weight/Volume:	5 mL
Prep Date:	10/22/2014 1917				

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.13	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.093	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	0.11	1.0
1,1,2-Trichloroethane	1.0	U	0.14	1.0
1,1-Dichloroethane	1.0	U	0.11	1.0
1,1-Dichloroethene	1.0	U	0.20	1.0
1,2,3-Trichlorobenzene	1.0	U	0.16	1.0
1,2,4-Trichlorobenzene	1.0	U	0.20	1.0
1,2-Dichloropropane	1.0	U	0.15	1.0
1,3-Dichlorobenzene	1.0	U	0.16	1.0
1,4-Dichlorobenzene	1.0	U	0.11	1.0
1,4-Dioxane	21	U	13	21
2-Butanone (MEK)	5.1	U	0.65	5.1
2-Hexanone	5.1	U	0.13	5.1
4-Methyl-2-pentanone (MIBK)	5.1	U	0.21	5.1
Acetone	6.7	B	1.7	5.1
Benzene	1.0	U	0.15	1.0
Bromoform	1.0	U	0.18	1.0
Bromomethane	1.0	U	0.44	1.0
Carbon disulfide	1.0	U	0.15	1.0
Carbon tetrachloride	1.0	U	0.15	1.0
Chlorobenzene	1.0	U	0.19	1.0
Chlorobromomethane	1.0	U	0.11	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	0.34	1.0
Chloroform	1.0	U	0.25	1.0
Chloromethane	1.0	U	0.16	1.0
cis-1,2-Dichloroethene	1.0	U	0.11	1.0
cis-1,3-Dichloropropene	1.0	U	0.14	1.0
Cyclohexane	1.0	U	0.13	1.0
Dichlorobromomethane	1.0	U	0.33	1.0
Dichlorodifluoromethane	1.0	U	0.23	1.0
Ethylbenzene	1.0	U	0.18	1.0
Ethylene Dibromide	1.0	U	0.15	1.0
Isopropylbenzene	1.0	U	0.11	1.0
Methyl acetate	5.1	U	0.33	5.1
Methyl tert-butyl ether	1.0	U	0.11	1.0
Methylcyclohexane	1.0	U	0.10	1.0
Methylene Chloride	1.0	U	0.15	1.0
m-Xylene & p-Xylene	1.0	U	0.61	1.0
o-Xylene	1.0	U	0.20	1.0
Styrene	1.0	U	0.29	1.0
Tetrachloroethene	1.0	U	0.12	1.0
Toluene	1.0	U	0.14	1.0
trans-1,2-Dichloroethene	1.0	U	0.13	1.0
trans-1,3-Dichloropropene	1.0	U	0.10	1.0

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-12 (11-12')**

Lab Sample ID: 460-84965-8

Client Matrix: Solid

% Moisture: 13.0

Date Sampled: 10/22/2014 1445

Date Received: 10/22/2014 1610

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-257988	Instrument ID:	CVOAMS4
Prep Method:	5035	Prep Batch:	460-257683	Lab File ID:	D5458.D
Dilution:	1.0			Initial Weight/Volume:	5.58 g
Analysis Date:	10/24/2014 1010			Final Weight/Volume:	5 mL
Prep Date:	10/22/2014 1917				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Trichloroethene		1.0	U	0.12	1.0
Trichlorofluoromethane		1.0	U	0.16	1.0
Vinyl chloride		1.0	U	0.35	1.0
1,2-Dichloroethane		1.0	U	0.19	1.0
1,2-Dichlorobenzene		1.0	U	0.10	1.0
1,2-Dibromo-3-Chloropropane		1.0	U	0.45	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	81		70 - 130
4-Bromofluorobenzene	92		70 - 130
Dibromofluoromethane (Surr)	78		70 - 130
Toluene-d8 (Surr)	92		70 - 130

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-12 (11-12')**

Lab Sample ID: 460-84965-8

Client Matrix: Solid

% Moisture: 13.0

Date Sampled: 10/22/2014 1445

Date Received: 10/22/2014 1610

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-257988	Instrument ID:	CVOAMS4
Prep Method:	5035	Prep Batch:	460-257683	Lab File ID:	D5458.D
Dilution:	1.0			Initial Weight/Volume:	5.58 g
Analysis Date:	10/24/2014 1010			Final Weight/Volume:	5 mL
Prep Date:	10/22/2014 1917				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **TB**

Lab Sample ID: 460-84965-9TB

Client Matrix: Water

Date Sampled: 10/22/2014 1500

Date Received: 10/22/2014 1610

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-257917	Instrument ID:	CVOAMS5
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	E34497.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/24/2014 0036			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 0036				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.060	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.16	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	0.080	1.0
1,1,2-Trichloroethane	1.0	U	0.19	1.0
1,1-Dichloroethane	1.0	U	0.13	1.0
1,1-Dichloroethene	1.0	U	0.090	1.0
1,2,3-Trichlorobenzene	1.0	U	0.51	1.0
1,2,4-Trichlorobenzene	1.0	U	0.34	1.0
1,2-Dichloropropane	1.0	U	0.090	1.0
1,3-Dichlorobenzene	1.0	U	0.14	1.0
1,4-Dichlorobenzene	1.0	U	0.23	1.0
1,4-Dioxane	50	U	36	50
2-Butanone (MEK)	5.0	U	2.3	5.0
2-Hexanone	5.0	U	0.50	5.0
4-Methyl-2-pentanone (MIBK)	5.0	U	0.99	5.0
Acetone	5.0	U	2.7	5.0
Benzene	1.0	U	0.080	1.0
Bromoform	1.0	U	0.19	1.0
Bromomethane	1.0	U	0.18	1.0
Carbon disulfide	1.0	U	0.13	1.0
Carbon tetrachloride	1.0	U	0.060	1.0
Chlorobenzene	1.0	U	0.11	1.0
Chlorobromomethane	1.0	U	0.27	1.0
Chlorodibromomethane	1.0	U	0.20	1.0
Chloroethane	1.0	U	0.17	1.0
Chloroform	1.0	U	0.080	1.0
Chloromethane	1.0	U	0.10	1.0
cis-1,2-Dichloroethene	1.0	U	0.18	1.0
cis-1,3-Dichloropropene	1.0	U	0.18	1.0
Cyclohexane	1.0	U	0.16	1.0
Dichlorobromomethane	1.0	U	0.12	1.0
Dichlorodifluoromethane	1.0	U	0.22	1.0
Ethylbenzene	1.0	U	0.10	1.0
Ethylene Dibromide	1.0	U	0.28	1.0
Isopropylbenzene	1.0	U	0.080	1.0
Methyl acetate	5.0	U	0.34	5.0
Methyl tert-butyl ether	1.0	U	0.14	1.0
Methylcyclohexane	1.0	U	0.14	1.0
Methylene Chloride	1.0	U	0.18	1.0
m-Xylene & p-Xylene	1.0	U	0.25	1.0
o-Xylene	1.0	U	0.13	1.0
Styrene	1.0	U	0.12	1.0
Tetrachloroethene	1.0	U	0.10	1.0
Toluene	1.0	U	0.15	1.0
trans-1,2-Dichloroethene	1.0	U	0.13	1.0
trans-1,3-Dichloropropene	1.0	U	0.24	1.0

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **TB**

Lab Sample ID: 460-84965-9TB

Client Matrix: Water

Date Sampled: 10/22/2014 1500

Date Received: 10/22/2014 1610

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-257917	Instrument ID:	CVOAMS5
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	E34497.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/24/2014 0036			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 0036				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Trichloroethene	1.0	U	0.090	1.0
Trichlorofluoromethane	1.0	U	0.15	1.0
Vinyl chloride	1.0	U	0.14	1.0
1,2-Dichloroethane	1.0	U	0.19	1.0
1,2-Dichlorobenzene	1.0	U	0.21	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.40	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	102		70 - 130
4-Bromofluorobenzene	99		64 - 135
Dibromofluoromethane (Surr)	101		72 - 137
Toluene-d8 (Surr)	101		70 - 130

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **TB**

Lab Sample ID: 460-84965-9TB

Client Matrix: Water

Date Sampled: 10/22/2014 1500

Date Received: 10/22/2014 1610

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-257917	Instrument ID:	CVOAMS5
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	E34497.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/24/2014 0036			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 0036				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/L)	Qualifier
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-17 (1-2')**

Lab Sample ID: 460-84965-1

Client Matrix: Solid

% Moisture: 12.0

Date Sampled: 10/22/2014 1040

Date Received: 10/22/2014 1610

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-257956	Instrument ID:	CBNAMS5
Prep Method:	3546	Prep Batch:	460-257808	Lab File ID:	x6164.D
Dilution:	1.0			Initial Weight/Volume:	14.9554 g
Analysis Date:	10/24/2014 0757			Final Weight/Volume:	1 mL
Prep Date:	10/23/2014 1008			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Phenol		380	U	12	380
2-Chlorophenol		380	U	9.6	380
2-Methylphenol		380	U	16	380
4-Methylphenol		380	U	10	380
2-Nitrophenol		380	U	13	380
2,4-Dimethylphenol		380	U	83	380
2,4-Dichlorophenol		380	U	8.9	380
4-Chloro-3-methylphenol		380	U	16	380
2,4,6-Trichlorophenol		150	U	11	150
2,4,5-Trichlorophenol		380	U	37	380
2,4-Dinitrotoluene		76	U	15	76
4-Nitrophenol		760	U	180	760
4,6-Dinitro-2-methylphenol		300	U	100	300
Pentachlorophenol		300	U	46	300
Bis(2-chloroethyl)ether		38	U	8.9	38
N-Nitrosodi-n-propylamine		38	U	13	38
Hexachloroethane		38	U	14	38
Nitrobenzene		38	U	12	38
Isophorone		150	U	8.1	150
Naphthalene		73	J	9.6	380
4-Chloroaniline		380	U	9.7	380
Hexachlorobutadiene		76	U	11	76
2-Methylnaphthalene		59	J	8.3	380
Hexachlorocyclopentadiene		380	U	23	380
2-Chloronaphthalene		380	U	8.5	380
2-Nitroaniline		380	U	12	380
Dimethyl phthalate		380	U	11	380
Acenaphthylene		11	J	9.7	380
2,6-Dinitrotoluene		76	U	20	76
3-Nitroaniline		380	U	11	380
Acenaphthene		44	J	9.1	380
Dibenzofuran		43	J	11	380
2,4-Dinitrophenol		300	U	280	300
Diethyl phthalate		380	U	11	380
4-Chlorophenyl phenyl ether		380	U	11	380
Fluorene		42	J	8.2	380
4-Nitroaniline		380	U	14	380
N-Nitrosodiphenylamine		380	U	34	380
4-Bromophenyl phenyl ether		380	U	12	380
Hexachlorobenzene		38	U	15	38
Phenanthrene		640		10	380
Anthracene		99	J	36	380
Carbazole		37	J	9.3	380
Di-n-butyl phthalate		380	U	11	380
Fluoranthene		680		11	380
Pyrene		630		17	380

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-17 (1-2')**

Lab Sample ID: 460-84965-1

Client Matrix: Solid

% Moisture: 12.0

Date Sampled: 10/22/2014 1040

Date Received: 10/22/2014 1610

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-257956	Instrument ID:	CBNAMS5
Prep Method:	3546	Prep Batch:	460-257808	Lab File ID:	x6164.D
Dilution:	1.0			Initial Weight/Volume:	14.9554 g
Analysis Date:	10/24/2014 0757			Final Weight/Volume:	1 mL
Prep Date:	10/23/2014 1008			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Butyl benzyl phthalate		380	U	12	380
Benzo[a]anthracene		310		31	38
Chrysene		370	J	10	380
Bis(2-ethylhexyl) phthalate		33	J	15	380
Di-n-octyl phthalate		380	U	19	380
Benzo[b]fluoranthene		370		15	38
Benzo[k]fluoranthene		150		16	38
Benzo[a]pyrene		280	*	11	38
Indeno[1,2,3-cd]pyrene		220		25	38
Dibenz(a,h)anthracene		43		20	38
Benzo[g,h,i]perylene		200	J	22	380
1,1'-Biphenyl		380	U	32	380
Acetophenone		380	U	8.2	380
Benzaldehyde		380	U	29	380
Caprolactam		380	U	27	380
Atrazine		150	U	17	150
2,2'-oxybis[1-chloropropane]		380	U	15	380
1,2,4,5-Tetrachlorobenzene		380	U	28	380
2,3,4,6-Tetrachlorophenol		380	U	35	380
3,3'-Dichlorobenzidine		150	U	42	150
Bis(2-chloroethoxy)methane		380	U	12	380

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5 (Surr)	56		38 - 105
Phenol-d5 (Surr)	53		41 - 118
Terphenyl-d14 (Surr)	62		16 - 151
2,4,6-Tribromophenol (Surr)	49		10 - 120
2-Fluorophenol (Surr)	52		37 - 125
2-Fluorobiphenyl	61		40 - 109

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-17 (1-2')**

Lab Sample ID: 460-84965-1

Client Matrix: Solid

% Moisture: 12.0

Date Sampled: 10/22/2014 1040

Date Received: 10/22/2014 1610

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-257956	Instrument ID:	CBNAMS5
Prep Method:	3546	Prep Batch:	460-257808	Lab File ID:	x6164.D
Dilution:	1.0			Initial Weight/Volume:	14.9554 g
Analysis Date:	10/24/2014 0757			Final Weight/Volume:	1 mL
Prep Date:	10/23/2014 1008			Injection Volume:	1 uL

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-17 (11-12')**

Lab Sample ID: 460-84965-2

Client Matrix: Solid

% Moisture: 17.7

Date Sampled: 10/22/2014 1055

Date Received: 10/22/2014 1610

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258408	Instrument ID:	CBNAMS12
Prep Method:	3546	Prep Batch:	460-257808	Lab File ID:	L118071.D
Dilution:	5.0			Initial Weight/Volume:	15.0204 g
Analysis Date:	10/27/2014 1156			Final Weight/Volume:	1 mL
Prep Date:	10/23/2014 1008			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Phenol		2000	U	65	2000
2-Chlorophenol		2000	U	51	2000
2-Methylphenol		2000	U	87	2000
4-Methylphenol		2000	U	55	2000
2-Nitrophenol		2000	U	67	2000
2,4-Dimethylphenol		2000	U	440	2000
2,4-Dichlorophenol		2000	U	47	2000
4-Chloro-3-methylphenol		2000	U	86	2000
2,4,6-Trichlorophenol		810	U	57	810
2,4,5-Trichlorophenol		2000	U	200	2000
2,4-Dinitrotoluene		410	U	79	410
4-Nitrophenol		4100	U	960	4100
4,6-Dinitro-2-methylphenol		1600	U	530	1600
Pentachlorophenol		1600	U	240	1600
Bis(2-chloroethyl)ether		200	U	47	200
N-Nitrosodi-n-propylamine		200	U	67	200
Hexachloroethane		200	U	73	200
Nitrobenzene		200	U	63	200
Isophorone		810	U	43	810
Naphthalene		2700		51	2000
4-Chloroaniline		2000	U	52	2000
Hexachlorobutadiene		410	U	56	410
2-Methylnaphthalene		580	J	44	2000
Hexachlorocyclopentadiene		2000	U	120	2000
2-Chloronaphthalene		190	J	45	2000
2-Nitroaniline		2000	U	66	2000
Dimethyl phthalate		2000	U	58	2000
Acenaphthylene		640	J	52	2000
2,6-Dinitrotoluene		410	U	110	410
3-Nitroaniline		2000	U	59	2000
Acenaphthene		840	J	49	2000
Dibenzofuran		840	J	61	2000
2,4-Dinitrophenol		1600	U	1500	1600
Diethyl phthalate		2000	U	57	2000
4-Chlorophenyl phenyl ether		2000	U	60	2000
Fluorene		1100	J	44	2000
4-Nitroaniline		2000	U	76	2000
N-Nitrosodiphenylamine		2000	U	180	2000
4-Bromophenyl phenyl ether		2000	U	63	2000
Hexachlorobenzene		200	U	81	200
Phenanthrene		9300		53	2000
Anthracene		1800	J	190	2000
Carbazole		130	J	50	2000
Di-n-butyl phthalate		2000	U	60	2000
Fluoranthene		7400		59	2000
Pyrene		4700		91	2000

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-17 (11-12')**

Lab Sample ID: 460-84965-2

Client Matrix: Solid

% Moisture: 17.7

Date Sampled: 10/22/2014 1055

Date Received: 10/22/2014 1610

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258408	Instrument ID:	CBNAMS12
Prep Method:	3546	Prep Batch:	460-257808	Lab File ID:	L118071.D
Dilution:	5.0			Initial Weight/Volume:	15.0204 g
Analysis Date:	10/27/2014 1156			Final Weight/Volume:	1 mL
Prep Date:	10/23/2014 1008			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Butyl benzyl phthalate		2000	U	62	2000
Benzo[a]anthracene		2700		170	200
Chrysene		3300		55	2000
Bis(2-ethylhexyl) phthalate		2000	U	78	2000
Di-n-octyl phthalate		2000	U	100	2000
Benzo[b]fluoranthene		4400		78	200
Benzo[k]fluoranthene		1600		87	200
Benzo[a]pyrene		1300	*	61	200
Indeno[1,2,3-cd]pyrene		1400		130	200
Dibenz(a,h)anthracene		470		100	200
Benzo[g,h,i]perylene		1000	J	120	2000
1,1'-Biphenyl		300	J	170	2000
Acetophenone		2000	U	44	2000
Benzaldehyde		2000	U	150	2000
Caprolactam		2000	U	140	2000
Atrazine		810	U	89	810
2,2'-oxybis[1-chloropropane]		2000	U	82	2000
1,2,4,5-Tetrachlorobenzene		2000	U	150	2000
2,3,4,6-Tetrachlorophenol		2000	U	190	2000
3,3'-Dichlorobenzidine		810	U	220	810
Bis(2-chloroethoxy)methane		2000	U	62	2000

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5 (Surr)	48		38 - 105
Phenol-d5 (Surr)	43		41 - 118
Terphenyl-d14 (Surr)	49		16 - 151
2,4,6-Tribromophenol (Surr)	46		10 - 120
2-Fluorophenol (Surr)	42		37 - 125
2-Fluorobiphenyl	65		40 - 109

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-17 (11-12')**

Lab Sample ID: 460-84965-2

Client Matrix: Solid

% Moisture: 17.7

Date Sampled: 10/22/2014 1055

Date Received: 10/22/2014 1610

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258408	Instrument ID:	CBNAMS12
Prep Method:	3546	Prep Batch:	460-257808	Lab File ID:	L118071.D
Dilution:	5.0			Initial Weight/Volume:	15.0204 g
Analysis Date:	10/27/2014 1156			Final Weight/Volume:	1 mL
Prep Date:	10/23/2014 1008			Injection Volume:	1 uL

Tentatively Identified Compounds **Number TIC's Found:** **3**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
536-74-3	Phenylethyne	3.00	2300	J N
79-34-5	Ethane, 1,1,2,2-tetrachloro-	3.40	2500	J N
198-55-0	Perylene	13.27	2000	J N

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-18 (1-2')**

Lab Sample ID: 460-84965-3

Client Matrix: Solid

% Moisture: 11.6

Date Sampled: 10/22/2014 1225

Date Received: 10/22/2014 1610

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-257956	Instrument ID:	CBNAMS5
Prep Method:	3546	Prep Batch:	460-257808	Lab File ID:	x6165.D
Dilution:	1.0			Initial Weight/Volume:	15.0335 g
Analysis Date:	10/24/2014 0820			Final Weight/Volume:	1 mL
Prep Date:	10/23/2014 1008			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Phenol		370	U	12	370
2-Chlorophenol		370	U	9.5	370
2-Methylphenol		370	U	16	370
4-Methylphenol		370	U	10	370
2-Nitrophenol		370	U	13	370
2,4-Dimethylphenol		370	U	82	370
2,4-Dichlorophenol		370	U	8.8	370
4-Chloro-3-methylphenol		370	U	16	370
2,4,6-Trichlorophenol		150	U	11	150
2,4,5-Trichlorophenol		370	U	37	370
2,4-Dinitrotoluene		76	U	15	76
4-Nitrophenol		760	U	180	760
4,6-Dinitro-2-methylphenol		300	U	100	300
Pentachlorophenol		300	U	45	300
Bis(2-chloroethyl)ether		37	U	8.8	37
N-Nitrosodi-n-propylamine		37	U	13	37
Hexachloroethane		37	U	14	37
Nitrobenzene		37	U	12	37
Isophorone		53	J	8.0	150
Naphthalene		71	J	9.5	370
4-Chloroaniline		370	U	9.6	370
Hexachlorobutadiene		76	U	10	76
2-Methylnaphthalene		71	J	8.2	370
Hexachlorocyclopentadiene		370	U	23	370
2-Chloronaphthalene		370	U	8.5	370
2-Nitroaniline		370	U	12	370
Dimethyl phthalate		370	U	11	370
Acenaphthylene		28	J	9.6	370
2,6-Dinitrotoluene		76	U	20	76
3-Nitroaniline		370	U	11	370
Acenaphthene		69	J	9.0	370
Dibenzofuran		96	J	11	370
2,4-Dinitrophenol		300	U	280	300
Diethyl phthalate		370	U	11	370
4-Chlorophenyl phenyl ether		370	U	11	370
Fluorene		60	J	8.1	370
4-Nitroaniline		370	U	14	370
N-Nitrosodiphenylamine		370	U	34	370
4-Bromophenyl phenyl ether		370	U	12	370
Hexachlorobenzene		37	U	15	37
Phenanthrene		940		9.9	370
Anthracene		190	J	35	370
Carbazole		70	J	9.3	370
Di-n-butyl phthalate		370	U	11	370
Fluoranthene		1400		11	370
Pyrene		1300		17	370

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-18 (1-2')**

Lab Sample ID: 460-84965-3

Client Matrix: Solid

% Moisture: 11.6

Date Sampled: 10/22/2014 1225

Date Received: 10/22/2014 1610

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-257956	Instrument ID:	CBNAMS5
Prep Method:	3546	Prep Batch:	460-257808	Lab File ID:	x6165.D
Dilution:	1.0			Initial Weight/Volume:	15.0335 g
Analysis Date:	10/24/2014 0820			Final Weight/Volume:	1 mL
Prep Date:	10/23/2014 1008			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Butyl benzyl phthalate		370	U	12	370
Benzo[a]anthracene		750		31	37
Chrysene		830		10	370
Bis(2-ethylhexyl) phthalate		2100		15	370
Di-n-octyl phthalate		370	U	19	370
Benzo[b]fluoranthene		1000		15	37
Benzo[k]fluoranthene		340		16	37
Benzo[a]pyrene		720	*	11	37
Indeno[1,2,3-cd]pyrene		680		25	37
Dibenz(a,h)anthracene		160		19	37
Benzo[g,h,i]perylene		570		21	370
1,1'-Biphenyl		36	J	32	370
Acetophenone		370	U	8.1	370
Benzaldehyde		370	U	28	370
Caprolactam		370	U	27	370
Atrazine		150	U	17	150
2,2'-oxybis[1-chloropropane]		370	U	15	370
1,2,4,5-Tetrachlorobenzene		370	U	28	370
2,3,4,6-Tetrachlorophenol		370	U	35	370
3,3'-Dichlorobenzidine		150	U	42	150
Bis(2-chloroethoxy)methane		370	U	12	370

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5 (Surr)	60		38 - 105
Phenol-d5 (Surr)	55		41 - 118
Terphenyl-d14 (Surr)	65		16 - 151
2,4,6-Tribromophenol (Surr)	37		10 - 120
2-Fluorophenol (Surr)	52		37 - 125
2-Fluorobiphenyl	67		40 - 109

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-18 (1-2')**

Lab Sample ID: 460-84965-3

Client Matrix: Solid

% Moisture: 11.6

Date Sampled: 10/22/2014 1225

Date Received: 10/22/2014 1610

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-257956	Instrument ID:	CBNAMS5
Prep Method:	3546	Prep Batch:	460-257808	Lab File ID:	x6165.D
Dilution:	1.0			Initial Weight/Volume:	15.0335 g
Analysis Date:	10/24/2014 0820			Final Weight/Volume:	1 mL
Prep Date:	10/23/2014 1008			Injection Volume:	1 uL

Tentatively Identified Compounds **Number TIC's Found:** **1**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
629-78-7	Heptadecane	8.49	520	J N

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-18 (12-13')**

Lab Sample ID: 460-84965-4

Client Matrix: Solid

% Moisture: 27.4

Date Sampled: 10/22/2014 1230

Date Received: 10/22/2014 1610

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258093	Instrument ID:	CBNAMS5
Prep Method:	3546	Prep Batch:	460-257808	Lab File ID:	x6193.D
Dilution:	1.0			Initial Weight/Volume:	15.0227 g
Analysis Date:	10/24/2014 2021			Final Weight/Volume:	1 mL
Prep Date:	10/23/2014 1008			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Phenol		450	U	15	450
2-Chlorophenol		450	U	12	450
2-Methylphenol		450	U	20	450
4-Methylphenol		450	U	12	450
2-Nitrophenol		450	U	15	450
2,4-Dimethylphenol		450	U	100	450
2,4-Dichlorophenol		450	U	11	450
4-Chloro-3-methylphenol		450	U	20	450
2,4,6-Trichlorophenol		180	U	13	180
2,4,5-Trichlorophenol		450	U	45	450
2,4-Dinitrotoluene		92	U	18	92
4-Nitrophenol		920	U	220	920
4,6-Dinitro-2-methylphenol		370	U	120	370
Pentachlorophenol		370	U	55	370
Bis(2-chloroethyl)ether		45	U	11	45
N-Nitrosodi-n-propylamine		45	U	15	45
Hexachloroethane		45	U	17	45
Nitrobenzene		45	U	14	45
Isophorone		180	U	9.8	180
Naphthalene		450	U	12	450
4-Chloroaniline		450	U	12	450
Hexachlorobutadiene		92	U	13	92
2-Methylnaphthalene		18	J	10	450
Hexachlorocyclopentadiene		450	U	28	450
2-Chloronaphthalene		450	U	10	450
2-Nitroaniline		450	U	15	450
Dimethyl phthalate		450	U	13	450
Acenaphthylene		450	U	12	450
2,6-Dinitrotoluene		92	U	24	92
3-Nitroaniline		450	U	13	450
Acenaphthene		450	U	11	450
Dibenzofuran		30	J	14	450
2,4-Dinitrophenol		370	U	340	370
Diethyl phthalate		450	U	13	450
4-Chlorophenyl phenyl ether		450	U	14	450
Fluorene		21	J	9.9	450
4-Nitroaniline		450	U	17	450
N-Nitrosodiphenylamine		450	U	41	450
4-Bromophenyl phenyl ether		450	U	14	450
Hexachlorobenzene		45	U	18	45
Phenanthrene		61	J	12	450
Anthracene		450	U	43	450
Carbazole		12	J	11	450
Di-n-butyl phthalate		450	U	14	450
Fluoranthene		87	J	13	450
Pyrene		81	J	21	450

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-18 (12-13')**

Lab Sample ID: 460-84965-4

Client Matrix: Solid

% Moisture: 27.4

Date Sampled: 10/22/2014 1230

Date Received: 10/22/2014 1610

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258093	Instrument ID:	CBNAMS5
Prep Method:	3546	Prep Batch:	460-257808	Lab File ID:	x6193.D
Dilution:	1.0			Initial Weight/Volume:	15.0227 g
Analysis Date:	10/24/2014 2021			Final Weight/Volume:	1 mL
Prep Date:	10/23/2014 1008			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Butyl benzyl phthalate		450	U	14	450
Benzo[a]anthracene		45	U	38	45
Chrysene		450	U	12	450
Bis(2-ethylhexyl) phthalate		450	U	18	450
Di-n-octyl phthalate		450	U	23	450
Benzo[b]fluoranthene		59		18	45
Benzo[k]fluoranthene		29	J	20	45
Benzo[a]pyrene		55	*	14	45
Indeno[1,2,3-cd]pyrene		40	J	30	45
Dibenz(a,h)anthracene		45	U	24	45
Benzo[g,h,i]perylene		45	J	26	450
1,1'-Biphenyl		450	U	39	450
Acetophenone		450	U	9.9	450
Benzaldehyde		270	J	35	450
Caprolactam		450	U	33	450
Atrazine		180	U	20	180
2,2'-oxybis[1-chloropropane]		450	U	19	450
1,2,4,5-Tetrachlorobenzene		450	U	34	450
2,3,4,6-Tetrachlorophenol		450	U	43	450
3,3'-Dichlorobenzidine		180	U	51	180
Bis(2-chloroethoxy)methane		450	U	14	450

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5 (Surr)	65		38 - 105
Phenol-d5 (Surr)	67		41 - 118
Terphenyl-d14 (Surr)	79		16 - 151
2,4,6-Tribromophenol (Surr)	77		10 - 120
2-Fluorophenol (Surr)	64		37 - 125
2-Fluorobiphenyl	81		40 - 109

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-18 (12-13')**

Lab Sample ID: 460-84965-4

Client Matrix: Solid

% Moisture: 27.4

Date Sampled: 10/22/2014 1230

Date Received: 10/22/2014 1610

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258093	Instrument ID:	CBNAMS5
Prep Method:	3546	Prep Batch:	460-257808	Lab File ID:	x6193.D
Dilution:	1.0			Initial Weight/Volume:	15.0227 g
Analysis Date:	10/24/2014 2021			Final Weight/Volume:	1 mL
Prep Date:	10/23/2014 1008			Injection Volume:	1 uL

Tentatively Identified Compounds **Number TIC's Found:** **20**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
7785-70-8	1R-.alpha.-Pinene	3.86	19000	J N
79-92-5	Camphene	4.01	1300	J N
127-91-3	.beta.-Pinene	4.24	2900	J N
527-84-4	Benzene, 1-methyl-2-(1-methylethyl)-	4.60	9900	J N
5989-27-5	D-Limonene	4.64	2700	J N
22627-95-8	Fenchol, exo-	5.33	1700	J N
498-81-7	Cyclohexanemethanol, .alpha.,.alpha.,4-t	5.53	2300	J N
464-48-2	Bicyclo[2.2.1]heptan-2-one, 1,7,7-trimet	5.55	3300	J N
1000157-89-9	p-menth-1-en-8-ol	5.83	2200	J N
475-20-7	1,4-Methanoazulene, decahydro-4,8,8-trim	7.19	2100	J N
33675-75-1	Phenol, 3-(2-phenylethyl)-	9.15	7000	J N
15638-11-6	Benzene, 1-methoxy-3-(2-phenylethenyl)-	9.77	2500	J N
1000197-14-1	4b,8-Dimethyl-2-isopropylphenanthrene, 4	9.98	20000	J N
3839-46-1	Phenol, 4-(2-phenylethenyl)-	10.02	3100	J N
6566-19-4	10,18-Bisnorabieta-5,7,9(10),11,13-penta	10.27	4500	J N
483-65-8	Phenanthrene, 1-methyl-7-(1-methylethyl)	10.77	1600	J N
	Unknown	11.50	3400	J
1000251-96-9	Tetrahydroabietic acid	11.62	1100	J N
1740-19-8	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	11.66	2900	J N
83-47-6	.gamma.-Sitosterol	16.25	4200	J N

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-6 (1-2')**

Lab Sample ID: 460-84965-5

Client Matrix: Solid

% Moisture: 10.7

Date Sampled: 10/22/2014 1145

Date Received: 10/22/2014 1610

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-257956	Instrument ID:	CBNAMS5
Prep Method:	3546	Prep Batch:	460-257808	Lab File ID:	x6167.D
Dilution:	1.0			Initial Weight/Volume:	15.0081 g
Analysis Date:	10/24/2014 0905			Final Weight/Volume:	1 mL
Prep Date:	10/23/2014 1008			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Phenol		370	U	12	370
2-Chlorophenol		370	U	9.4	370
2-Methylphenol		370	U	16	370
4-Methylphenol		370	U	10	370
2-Nitrophenol		370	U	12	370
2,4-Dimethylphenol		370	U	81	370
2,4-Dichlorophenol		370	U	8.7	370
4-Chloro-3-methylphenol		370	U	16	370
2,4,6-Trichlorophenol		150	U	11	150
2,4,5-Trichlorophenol		370	U	37	370
2,4-Dinitrotoluene		75	U	15	75
4-Nitrophenol		750	U	180	750
4,6-Dinitro-2-methylphenol		300	U	99	300
Pentachlorophenol		300	U	45	300
Bis(2-chloroethyl)ether		37	U	8.7	37
N-Nitrosodi-n-propylamine		37	U	12	37
Hexachloroethane		37	U	14	37
Nitrobenzene		37	U	12	37
Isophorone		150		7.9	150
Naphthalene		250	J	9.4	370
4-Chloroaniline		370	U	9.5	370
Hexachlorobutadiene		75	U	10	75
2-Methylnaphthalene		210	J	8.2	370
Hexachlorocyclopentadiene		370	U	23	370
2-Chloronaphthalene		370	U	8.4	370
2-Nitroaniline		370	U	12	370
Dimethyl phthalate		370	U	11	370
Acenaphthylene		21	J	9.5	370
2,6-Dinitrotoluene		75	U	20	75
3-Nitroaniline		370	U	11	370
Acenaphthene		100	J	9.0	370
Dibenzofuran		210	J	11	370
2,4-Dinitrophenol		300	U	280	300
Diethyl phthalate		370	U	11	370
4-Chlorophenyl phenyl ether		370	U	11	370
Fluorene		97	J	8.1	370
4-Nitroaniline		370	U	14	370
N-Nitrosodiphenylamine		370	U	34	370
4-Bromophenyl phenyl ether		370	U	12	370
Hexachlorobenzene		37	U	15	37
Phenanthrene		1700		9.8	370
Anthracene		270	J	35	370
Carbazole		95	J	9.2	370
Di-n-butyl phthalate		370	U	11	370
Fluoranthene		1600		11	370
Pyrene		1600		17	370

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-6 (1-2')**

Lab Sample ID: 460-84965-5

Client Matrix: Solid

% Moisture: 10.7

Date Sampled: 10/22/2014 1145

Date Received: 10/22/2014 1610

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-257956	Instrument ID:	CBNAMS5
Prep Method:	3546	Prep Batch:	460-257808	Lab File ID:	x6167.D
Dilution:	1.0			Initial Weight/Volume:	15.0081 g
Analysis Date:	10/24/2014 0905			Final Weight/Volume:	1 mL
Prep Date:	10/23/2014 1008			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Butyl benzyl phthalate		370	U	11	370
Benzo[a]anthracene		800		31	37
Chrysene		900		10	370
Bis(2-ethylhexyl) phthalate		540		14	370
Di-n-octyl phthalate		370	U	19	370
Benzo[b]fluoranthene		990		14	37
Benzo[k]fluoranthene		340		16	37
Benzo[a]pyrene		730	*	11	37
Indeno[1,2,3-cd]pyrene		610		25	37
Dibenz(a,h)anthracene		120		19	37
Benzo[g,h,i]perylene		550		21	370
1,1'-Biphenyl		67	J	32	370
Acetophenone		24	J	8.1	370
Benzaldehyde		370	U	28	370
Caprolactam		370	U	27	370
Atrazine		150	U	16	150
2,2'-oxybis[1-chloropropane]		370	U	15	370
1,2,4,5-Tetrachlorobenzene		370	U	28	370
2,3,4,6-Tetrachlorophenol		370	U	35	370
3,3'-Dichlorobenzidine		150	U	41	150
Bis(2-chloroethoxy)methane		370	U	12	370

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5 (Surr)	50		38 - 105
Phenol-d5 (Surr)	48		41 - 118
Terphenyl-d14 (Surr)	58		16 - 151
2,4,6-Tribromophenol (Surr)	43		10 - 120
2-Fluorophenol (Surr)	44		37 - 125
2-Fluorobiphenyl	57		40 - 109

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-6 (1-2')**

Lab Sample ID: 460-84965-5

Client Matrix: Solid

% Moisture: 10.7

Date Sampled: 10/22/2014 1145

Date Received: 10/22/2014 1610

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-257956	Instrument ID:	CBNAMS5
Prep Method:	3546	Prep Batch:	460-257808	Lab File ID:	x6167.D
Dilution:	1.0			Initial Weight/Volume:	15.0081 g
Analysis Date:	10/24/2014 0905			Final Weight/Volume:	1 mL
Prep Date:	10/23/2014 1008			Injection Volume:	1 uL

Tentatively Identified Compounds **Number TIC's Found:** **1**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
629-78-7	Heptadecane	8.49	610	J N

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-6 (10-11')**

Lab Sample ID: 460-84965-6

Client Matrix: Solid

% Moisture: 20.9

Date Sampled: 10/22/2014 1150

Date Received: 10/22/2014 1610

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-257956	Instrument ID:	CBNAMS5
Prep Method:	3546	Prep Batch:	460-257808	Lab File ID:	x6169.D
Dilution:	1.0			Initial Weight/Volume:	15.0309 g
Analysis Date:	10/24/2014 0951			Final Weight/Volume:	1 mL
Prep Date:	10/23/2014 1008			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Phenol		420	U	14	420
2-Chlorophenol		420	U	11	420
2-Methylphenol		420	U	18	420
4-Methylphenol		43	J	11	420
2-Nitrophenol		420	U	14	420
2,4-Dimethylphenol		420	U	92	420
2,4-Dichlorophenol		420	U	9.8	420
4-Chloro-3-methylphenol		420	U	18	420
2,4,6-Trichlorophenol		170	U	12	170
2,4,5-Trichlorophenol		420	U	41	420
2,4-Dinitrotoluene		84	U	17	84
4-Nitrophenol		840	U	200	840
4,6-Dinitro-2-methylphenol		340	U	110	340
Pentachlorophenol		340	U	50	340
Bis(2-chloroethyl)ether		42	U	9.8	42
N-Nitrosodi-n-propylamine		42	U	14	42
Hexachloroethane		42	U	15	42
Nitrobenzene		42	U	13	42
Isophorone		170	U	9.0	170
Naphthalene		430		11	420
4-Chloroaniline		420	U	11	420
Hexachlorobutadiene		84	U	12	84
2-Methylnaphthalene		200	J	9.2	420
Hexachlorocyclopentadiene		420	U	26	420
2-Chloronaphthalene		420	U	9.5	420
2-Nitroaniline		420	U	14	420
Dimethyl phthalate		420	U	12	420
Acenaphthylene		180	J	11	420
2,6-Dinitrotoluene		84	U	22	84
3-Nitroaniline		420	U	12	420
Acenaphthene		580		10	420
Dibenzofuran		570		13	420
2,4-Dinitrophenol		340	U	320	340
Diethyl phthalate		420	U	12	420
4-Chlorophenyl phenyl ether		420	U	12	420
Fluorene		710		9.1	420
4-Nitroaniline		420	U	16	420
N-Nitrosodiphenylamine		420	U	38	420
4-Bromophenyl phenyl ether		420	U	13	420
Hexachlorobenzene		42	U	17	42
Phenanthrene		6900		11	420
Anthracene		1500		40	420
Carbazole		690		10	420
Di-n-butyl phthalate		420	U	12	420
Fluoranthene		6800		12	420
Pyrene		5900		19	420

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-6 (10-11')**

Lab Sample ID: 460-84965-6

Client Matrix: Solid

% Moisture: 20.9

Date Sampled: 10/22/2014 1150

Date Received: 10/22/2014 1610

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-257956	Instrument ID:	CBNAMS5
Prep Method:	3546	Prep Batch:	460-257808	Lab File ID:	x6169.D
Dilution:	1.0			Initial Weight/Volume:	15.0309 g
Analysis Date:	10/24/2014 0951			Final Weight/Volume:	1 mL
Prep Date:	10/23/2014 1008			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Butyl benzyl phthalate		420	U	13	420
Benzo[a]anthracene		3100		35	42
Chrysene		2900		11	420
Bis(2-ethylhexyl) phthalate		240	J	16	420
Di-n-octyl phthalate		420	U	21	420
Benzo[b]fluoranthene		4400		16	42
Benzo[k]fluoranthene		1600		18	42
Benzo[a]pyrene		3700	*	13	42
Indeno[1,2,3-cd]pyrene		3700		28	42
Dibenz(a,h)anthracene		770		22	42
Benzo[g,h,i]perylene		3900		24	420
1,1'-Biphenyl		86	J	36	420
Acetophenone		420	U	9.1	420
Benzaldehyde		420	U	32	420
Caprolactam		420	U	30	420
Atrazine		170	U	19	170
2,2'-oxybis[1-chloropropane]		420	U	17	420
1,2,4,5-Tetrachlorobenzene		420	U	31	420
2,3,4,6-Tetrachlorophenol		420	U	39	420
3,3'-Dichlorobenzidine		170	U	47	170
Bis(2-chloroethoxy)methane		420	U	13	420

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5 (Surr)	58		38 - 105
Phenol-d5 (Surr)	56		41 - 118
Terphenyl-d14 (Surr)	67		16 - 151
2,4,6-Tribromophenol (Surr)	52		10 - 120
2-Fluorophenol (Surr)	51		37 - 125
2-Fluorobiphenyl	70		40 - 109

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-6 (10-11')**

Lab Sample ID: 460-84965-6

Client Matrix: Solid

% Moisture: 20.9

Date Sampled: 10/22/2014 1150

Date Received: 10/22/2014 1610

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-257956	Instrument ID:	CBNAMS5
Prep Method:	3546	Prep Batch:	460-257808	Lab File ID:	x6169.D
Dilution:	1.0			Initial Weight/Volume:	15.0309 g
Analysis Date:	10/24/2014 0951			Final Weight/Volume:	1 mL
Prep Date:	10/23/2014 1008			Injection Volume:	1 uL

Tentatively Identified Compounds **Number TIC's Found:** **10**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	5.46	560	J
	Unknown	5.78	590	J
80-53-5	Cyclohexanemethanol, 4-hydroxy-.alpha.,.	6.58	1400	J N
80-53-5	Cyclohexanemethanol, 4-hydroxy-.alpha.,.	6.70	610	J N
132-65-0	Dibenzothiophene	8.95	430	J N
2531-84-2	Phenanthrene, 2-methyl-	9.55	510	J N
2531-84-2	Phenanthrene, 2-methyl-	9.58	660	J N
203-64-5	4H-Cyclopenta[def]phenanthrene	9.66	850	J N
192-97-2	Benzo[e]pyrene	13.74	2800	J N
205-82-3	Benzo[j]fluoranthene	13.93	1200	J N

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-12 (1-2')**

Lab Sample ID: 460-84965-7

Client Matrix: Solid

% Moisture: 6.5

Date Sampled: 10/22/2014 1440

Date Received: 10/22/2014 1610

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-257956	Instrument ID:	CBNAMS5
Prep Method:	3546	Prep Batch:	460-257808	Lab File ID:	x6168.D
Dilution:	1.0			Initial Weight/Volume:	15.0387 g
Analysis Date:	10/24/2014 0928			Final Weight/Volume:	1 mL
Prep Date:	10/23/2014 1008			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Phenol		350	U	12	350
2-Chlorophenol		350	U	9.0	350
2-Methylphenol		350	U	15	350
4-Methylphenol		350	U	9.6	350
2-Nitrophenol		350	U	12	350
2,4-Dimethylphenol		350	U	78	350
2,4-Dichlorophenol		350	U	8.3	350
4-Chloro-3-methylphenol		350	U	15	350
2,4,6-Trichlorophenol		140	U	10	140
2,4,5-Trichlorophenol		350	U	35	350
2,4-Dinitrotoluene		72	U	14	72
4-Nitrophenol		720	U	170	720
4,6-Dinitro-2-methylphenol		280	U	94	280
Pentachlorophenol		280	U	43	280
Bis(2-chloroethyl)ether		35	U	8.3	35
N-Nitrosodi-n-propylamine		35	U	12	35
Hexachloroethane		35	U	13	35
Nitrobenzene		35	U	11	35
Isophorone		140	U	7.6	140
Naphthalene		100	J	9.0	350
4-Chloroaniline		350	U	9.1	350
Hexachlorobutadiene		72	U	9.9	72
2-Methylnaphthalene		420		7.8	350
Hexachlorocyclopentadiene		350	U	22	350
2-Chloronaphthalene		350	U	8.0	350
2-Nitroaniline		350	U	12	350
Dimethyl phthalate		350	U	10	350
Acenaphthylene		350	U	9.1	350
2,6-Dinitrotoluene		72	U	19	72
3-Nitroaniline		350	U	10	350
Acenaphthene		350	U	8.5	350
Dibenzofuran		350	U	11	350
2,4-Dinitrophenol		280	U	270	280
Diethyl phthalate		350	U	10	350
4-Chlorophenyl phenyl ether		350	U	11	350
Fluorene		80	J	7.7	350
4-Nitroaniline		350	U	13	350
N-Nitrosodiphenylamine		350	U	32	350
4-Bromophenyl phenyl ether		350	U	11	350
Hexachlorobenzene		35	U	14	35
Phenanthrene		590		9.4	350
Anthracene		350	U	34	350
Carbazole		350	U	8.8	350
Di-n-butyl phthalate		350	U	11	350
Fluoranthene		380		10	350
Pyrene		410		16	350

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-12 (1-2')**

Lab Sample ID: 460-84965-7

Client Matrix: Solid

% Moisture: 6.5

Date Sampled: 10/22/2014 1440

Date Received: 10/22/2014 1610

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-257956	Instrument ID:	CBNAMS5
Prep Method:	3546	Prep Batch:	460-257808	Lab File ID:	x6168.D
Dilution:	1.0			Initial Weight/Volume:	15.0387 g
Analysis Date:	10/24/2014 0928			Final Weight/Volume:	1 mL
Prep Date:	10/23/2014 1008			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Butyl benzyl phthalate		350	U	11	350
Benzo[a]anthracene		210		29	35
Chrysene		310	J	9.6	350
Bis(2-ethylhexyl) phthalate		98	J	14	350
Di-n-octyl phthalate		350	U	18	350
Benzo[b]fluoranthene		320		14	35
Benzo[k]fluoranthene		92		15	35
Benzo[a]pyrene		200	*	11	35
Indeno[1,2,3-cd]pyrene		200		23	35
Dibenz(a,h)anthracene		38		18	35
Benzo[g,h,i]perylene		170	J	20	350
1,1'-Biphenyl		82	J	30	350
Acetophenone		350	U	7.7	350
Benzaldehyde		350	U	27	350
Caprolactam		350	U	25	350
Atrazine		140	U	16	140
2,2'-oxybis[1-chloropropane]		350	U	15	350
1,2,4,5-Tetrachlorobenzene		350	U	26	350
2,3,4,6-Tetrachlorophenol		350	U	33	350
3,3'-Dichlorobenzidine		140	U	39	140
Bis(2-chloroethoxy)methane		350	U	11	350

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5 (Surr)	62		38 - 105
Phenol-d5 (Surr)	60		41 - 118
Terphenyl-d14 (Surr)	64		16 - 151
2,4,6-Tribromophenol (Surr)	56		10 - 120
2-Fluorophenol (Surr)	56		37 - 125
2-Fluorobiphenyl	64		40 - 109

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-12 (1-2')**

Lab Sample ID: 460-84965-7

Client Matrix: Solid

% Moisture: 6.5

Date Sampled: 10/22/2014 1440

Date Received: 10/22/2014 1610

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-257956	Instrument ID:	CBNAMS5
Prep Method:	3546	Prep Batch:	460-257808	Lab File ID:	x6168.D
Dilution:	1.0			Initial Weight/Volume:	15.0387 g
Analysis Date:	10/24/2014 0928			Final Weight/Volume:	1 mL
Prep Date:	10/23/2014 1008			Injection Volume:	1 uL

Tentatively Identified Compounds **Number TIC's Found:** **20**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
6418-41-3	Tridecane, 3-methyl-	8.25	4200	J N
1921-70-6	Pentadecane, 2,6,10,14-tetramethyl-	8.52	9200	J N
2523-37-7	9H-Fluorene, 9-methyl-	8.70	3300	J N
	Unknown	8.82	2700	J
593-45-3	Octadecane	8.92	2500	J N
593-45-3	Octadecane	8.95	3800	J N
638-36-8	Hexadecane, 2,6,10,14-tetramethyl-	8.98	5300	J N
112-95-8	Eicosane	9.12	3200	J N
629-78-7	Heptadecane	9.32	3500	J N
629-78-7	Heptadecane	9.36	4700	J N
	Unknown	9.41	3100	J
	Unknown	9.46	3100	J
	Unknown	9.52	3800	J
2531-84-2	Phenanthrene, 2-methyl-	9.58	2700	J N
	Unknown	9.66	2900	J
1795-17-1	Dodecylcyclohexane	9.70	2600	J N
112-95-8	Eicosane	9.77	2900	J N
	Unknown	9.99	2600	J
13187-99-0	2-Bromo dodecane	10.05	3200	J N
629-94-7	Heneicosane	10.15	2400	J N

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-12 (11-12')**

Lab Sample ID: 460-84965-8

Client Matrix: Solid

% Moisture: 13.0

Date Sampled: 10/22/2014 1445

Date Received: 10/22/2014 1610

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-257956	Instrument ID:	CBNAMS5
Prep Method:	3546	Prep Batch:	460-257808	Lab File ID:	x6166.D
Dilution:	1.0			Initial Weight/Volume:	15.0574 g
Analysis Date:	10/24/2014 0842			Final Weight/Volume:	1 mL
Prep Date:	10/23/2014 1008			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Phenol		380	U	12	380
2-Chlorophenol		380	U	9.6	380
2-Methylphenol		380	U	16	380
4-Methylphenol		380	U	10	380
2-Nitrophenol		380	U	13	380
2,4-Dimethylphenol		380	U	83	380
2,4-Dichlorophenol		380	U	8.9	380
4-Chloro-3-methylphenol		380	U	16	380
2,4,6-Trichlorophenol		150	U	11	150
2,4,5-Trichlorophenol		380	U	38	380
2,4-Dinitrotoluene		77	U	15	77
4-Nitrophenol		770	U	180	770
4,6-Dinitro-2-methylphenol		300	U	100	300
Pentachlorophenol		300	U	46	300
Bis(2-chloroethyl)ether		38	U	8.9	38
N-Nitrosodi-n-propylamine		38	U	13	38
Hexachloroethane		38	U	14	38
Nitrobenzene		38	U	12	38
Isophorone		8700		8.1	150
Naphthalene		470		9.6	380
4-Chloroaniline		380	U	9.7	380
Hexachlorobutadiene		77	U	11	77
2-Methylnaphthalene		59	J	8.4	380
Hexachlorocyclopentadiene		380	U	24	380
2-Chloronaphthalene		70	J	8.6	380
2-Nitroaniline		380	U	12	380
Dimethyl phthalate		380	U	11	380
Acenaphthylene		180	J	9.7	380
2,6-Dinitrotoluene		77	U	20	77
3-Nitroaniline		380	U	11	380
Acenaphthene		21	J	9.2	380
Dibenzofuran		14	J	11	380
2,4-Dinitrophenol		300	U	290	300
Diethyl phthalate		380	U	11	380
4-Chlorophenyl phenyl ether		380	U	11	380
Fluorene		40	J	8.2	380
4-Nitroaniline		380	U	14	380
N-Nitrosodiphenylamine		380	U	34	380
4-Bromophenyl phenyl ether		380	U	12	380
Hexachlorobenzene		38	U	15	38
Phenanthrene		300	J	10	380
Anthracene		41	J	36	380
Carbazole		11	J	9.4	380
Di-n-butyl phthalate		380	U	11	380
Fluoranthene		160	J	11	380
Pyrene		170	J	17	380

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-12 (11-12')**

Lab Sample ID: 460-84965-8

Client Matrix: Solid

% Moisture: 13.0

Date Sampled: 10/22/2014 1445

Date Received: 10/22/2014 1610

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-257956	Instrument ID:	CBNAMS5
Prep Method:	3546	Prep Batch:	460-257808	Lab File ID:	x6166.D
Dilution:	1.0			Initial Weight/Volume:	15.0574 g
Analysis Date:	10/24/2014 0842			Final Weight/Volume:	1 mL
Prep Date:	10/23/2014 1008			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Butyl benzyl phthalate		380	U	12	380
Benzo[a]anthracene		63		32	38
Chrysene		86	J	10	380
Bis(2-ethylhexyl) phthalate		230	J	15	380
Di-n-octyl phthalate		380	U	19	380
Benzo[b]fluoranthene		81		15	38
Benzo[k]fluoranthene		20	J	16	38
Benzo[a]pyrene		49	*	11	38
Indeno[1,2,3-cd]pyrene		43		25	38
Dibenz(a,h)anthracene		38	U	20	38
Benzo[g,h,i]perylene		50	J	22	380
1,1'-Biphenyl		52	J	32	380
Acetophenone		380	U	8.2	380
Benzaldehyde		380	U	29	380
Caprolactam		380	U	27	380
Atrazine		150	U	17	150
2,2'-oxybis[1-chloropropane]		380	U	16	380
1,2,4,5-Tetrachlorobenzene		380	U	28	380
2,3,4,6-Tetrachlorophenol		380	U	36	380
3,3'-Dichlorobenzidine		150	U	42	150
Bis(2-chloroethoxy)methane		380	U	12	380

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5 (Surr)	45		38 - 105
Phenol-d5 (Surr)	41		41 - 118
Terphenyl-d14 (Surr)	53		16 - 151
2,4,6-Tribromophenol (Surr)	11		10 - 120
2-Fluorophenol (Surr)	26	*	37 - 125
2-Fluorobiphenyl	51		40 - 109

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-12 (11-12')**

Lab Sample ID: 460-84965-8

Client Matrix: Solid

% Moisture: 13.0

Date Sampled: 10/22/2014 1445

Date Received: 10/22/2014 1610

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-257956	Instrument ID:	CBNAMS5
Prep Method:	3546	Prep Batch:	460-257808	Lab File ID:	x6166.D
Dilution:	1.0			Initial Weight/Volume:	15.0574 g
Analysis Date:	10/24/2014 0842			Final Weight/Volume:	1 mL
Prep Date:	10/23/2014 1008			Injection Volume:	1 uL

Tentatively Identified Compounds **Number TIC's Found:** **15**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
71-43-2	Benzene	1.68	350	J N
536-74-3	Phenylethyne	3.45	400	J N
100-42-5	Styrene	3.58	600	J N
	Unknown	4.72	1300	J
	Unknown	4.77	760	J
1193-18-6	2-Cyclohexen-1-one, 3-methyl-	4.90	7000	J N
	Unknown	5.16	920	J
504-20-1	2,5-Heptadien-4-one, 2,6-dimethyl-	5.25	7500	J N
	Unknown	5.48	3500	J
	Unknown	5.79	1600	J
	Unknown	6.19	370	J
875-59-2	4-Hydroxy-2-methylacetophenone	6.33	640	J N
	Unknown	6.70	520	J
491-09-8	2-Cyclohexen-1-one, 3-methyl-6-(1-methyl	6.75	820	J N
16695-73-1	2-Propanone, 1-(3,5,5-trimethyl-2-cycloh	6.93	320	J N

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-17 (1-2')**

Lab Sample ID: 460-84965-1

Client Matrix: Solid

% Moisture: 12.0

Date Sampled: 10/22/2014 1040

Date Received: 10/22/2014 1610

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-257777	Instrument ID:	CPESTGC9
Prep Method:	3546	Prep Batch:	460-257732	Initial Weight/Volume:	15.0058 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/23/2014 1103			Injection Volume:	1 uL
Prep Date:	10/23/2014 0211			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		7.6	U	1.5	7.6
4,4'-DDE		7.6	U	1.5	7.6
4,4'-DDT		7.6	U	1.8	7.6
Aldrin		7.6	U	1.6	7.6
alpha-BHC		2.3	U	1.7	2.3
beta-BHC		2.3	U	1.8	2.3
Chlordane (technical)		76	U	22	76
delta-BHC		2.3	U	1.4	2.3
Dieldrin		2.3	U	1.4	2.3
Endosulfan I		7.6	U	1.7	7.6
Endosulfan II		7.6	U	1.5	7.6
Endosulfan sulfate		7.6	U	1.5	7.6
Endrin		7.6	U	1.8	7.6
Endrin aldehyde		7.6	U	1.1	7.6
Endrin ketone		7.6	U	1.5	7.6
gamma-BHC (Lindane)		2.3	U	1.4	2.3
Heptachlor		7.6	U	1.8	7.6
Heptachlor epoxide		7.6	U	1.7	7.6
Methoxychlor		7.6	U	1.8	7.6
Toxaphene		76	U	20	76

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	119		76 - 149
Tetrachloro-m-xylene	111		72 - 136

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-17 (1-2')**

Lab Sample ID: 460-84965-1

Client Matrix: Solid

% Moisture: 12.0

Date Sampled: 10/22/2014 1040

Date Received: 10/22/2014 1610

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-257777	Instrument ID:	CPESTGC9
Prep Method:	3546	Prep Batch:	460-257732	Initial Weight/Volume:	15.0058 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/23/2014 1103			Injection Volume:	1 uL
Prep Date:	10/23/2014 0211			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	107		76 - 149
Tetrachloro-m-xylene	104		72 - 136

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-17 (11-12')**

Lab Sample ID: 460-84965-2

Client Matrix: Solid

% Moisture: 17.7

Date Sampled: 10/22/2014 1055

Date Received: 10/22/2014 1610

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-257777	Instrument ID:	CPESTGC9
Prep Method:	3546	Prep Batch:	460-257732	Initial Weight/Volume:	15.0060 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/23/2014 1115			Injection Volume:	1 uL
Prep Date:	10/23/2014 0211			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		8.1	U	1.6	8.1
4,4'-DDE		8.1	U	1.6	8.1
4,4'-DDT		8.1	U	1.9	8.1
Aldrin		8.1	U	1.7	8.1
alpha-BHC		2.4	U	1.8	2.4
beta-BHC		2.4	U	1.9	2.4
Chlordane (technical)		81	U	23	81
delta-BHC		2.4	U	1.5	2.4
Dieldrin		2.4	U	1.5	2.4
Endosulfan I		8.1	U	1.8	8.1
Endosulfan II		8.1	U	1.6	8.1
Endosulfan sulfate		8.1	U	1.6	8.1
Endrin		8.1	U	1.9	8.1
Endrin aldehyde		8.1	U	1.2	8.1
Endrin ketone		8.1	U	1.6	8.1
gamma-BHC (Lindane)		2.4	U	1.5	2.4
Heptachlor		8.1	U	1.9	8.1
Heptachlor epoxide		8.1	U	1.8	8.1
Methoxychlor		8.1	U	1.9	8.1
Toxaphene		81	U	22	81

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	127		76 - 149
Tetrachloro-m-xylene	114		72 - 136

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-17 (11-12')**

Lab Sample ID: 460-84965-2

Client Matrix: Solid

% Moisture: 17.7

Date Sampled: 10/22/2014 1055

Date Received: 10/22/2014 1610

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-257777	Instrument ID:	CPESTGC9
Prep Method:	3546	Prep Batch:	460-257732	Initial Weight/Volume:	15.0060 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/23/2014 1115			Injection Volume:	1 uL
Prep Date:	10/23/2014 0211			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	107		76 - 149
Tetrachloro-m-xylene	112		72 - 136

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-18 (1-2')**

Lab Sample ID: 460-84965-3

Client Matrix: Solid

% Moisture: 11.6

Date Sampled: 10/22/2014 1225

Date Received: 10/22/2014 1610

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-257777	Instrument ID:	CPESTGC9
Prep Method:	3546	Prep Batch:	460-257732	Initial Weight/Volume:	15.0011 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/23/2014 1126			Injection Volume:	1 uL
Prep Date:	10/23/2014 0211			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		7.6	U	1.5	7.6
4,4'-DDE		7.6	U	1.5	7.6
4,4'-DDT		7.6	U	1.8	7.6
Aldrin		7.6	U	1.6	7.6
alpha-BHC		2.3	U	1.7	2.3
beta-BHC		2.3	U	1.8	2.3
Chlordane (technical)		76	U	21	76
delta-BHC		2.3	U	1.4	2.3
Dieldrin		2.3	U	1.4	2.3
Endosulfan I		7.6	U	1.7	7.6
Endosulfan II		7.6	U	1.5	7.6
Endosulfan sulfate		7.6	U	1.5	7.6
Endrin		7.6	U	1.8	7.6
Endrin aldehyde		7.6	U	1.1	7.6
Endrin ketone		7.6	U	1.5	7.6
gamma-BHC (Lindane)		2.3	U	1.4	2.3
Heptachlor		7.6	U	1.8	7.6
Heptachlor epoxide		7.6	U	1.7	7.6
Methoxychlor		7.6	U	1.8	7.6
Toxaphene		76	U	20	76

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	119		76 - 149
Tetrachloro-m-xylene	111		72 - 136

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-18 (1-2')**

Lab Sample ID: 460-84965-3

Client Matrix: Solid

% Moisture: 11.6

Date Sampled: 10/22/2014 1225

Date Received: 10/22/2014 1610

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-257777	Instrument ID:	CPESTGC9
Prep Method:	3546	Prep Batch:	460-257732	Initial Weight/Volume:	15.0011 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/23/2014 1126			Injection Volume:	1 uL
Prep Date:	10/23/2014 0211			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	102		76 - 149
Tetrachloro-m-xylene	107		72 - 136

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-18 (12-13')**

Lab Sample ID: 460-84965-4

Client Matrix: Solid

% Moisture: 27.4

Date Sampled: 10/22/2014 1230

Date Received: 10/22/2014 1610

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-257777	Instrument ID:	CPESTGC9
Prep Method:	3546	Prep Batch:	460-257732	Initial Weight/Volume:	15.0057 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/23/2014 1137			Injection Volume:	1 uL
Prep Date:	10/23/2014 0211			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		9.2	U	1.8	9.2
4,4'-DDE		9.2	U	1.8	9.2
4,4'-DDT		9.2	U	2.2	9.2
Aldrin		9.2	U	1.9	9.2
alpha-BHC		2.8	U	2.1	2.8
beta-BHC		2.8	U	2.2	2.8
Chlordane (technical)		92	U	26	92
delta-BHC		2.8	U	1.7	2.8
Dieldrin		2.8	U	1.7	2.8
Endosulfan I		9.2	U	2.1	9.2
Endosulfan II		9.2	U	1.8	9.2
Endosulfan sulfate		9.2	U	1.8	9.2
Endrin		9.2	U	2.2	9.2
Endrin aldehyde		9.2	U	1.4	9.2
Endrin ketone		9.2	U	1.8	9.2
gamma-BHC (Lindane)		2.8	U	1.7	2.8
Heptachlor		9.2	U	2.2	9.2
Heptachlor epoxide		9.2	U	2.1	9.2
Methoxychlor		9.2	U	2.2	9.2
Toxaphene		92	U	25	92

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	113		76 - 149
Tetrachloro-m-xylene	111		72 - 136

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-18 (12-13')**

Lab Sample ID: 460-84965-4

Client Matrix: Solid

% Moisture: 27.4

Date Sampled: 10/22/2014 1230

Date Received: 10/22/2014 1610

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-257777	Instrument ID:	CPESTGC9
Prep Method:	3546	Prep Batch:	460-257732	Initial Weight/Volume:	15.0057 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/23/2014 1137			Injection Volume:	1 uL
Prep Date:	10/23/2014 0211			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	106		76 - 149
Tetrachloro-m-xylene	107		72 - 136

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-6 (1-2')**

Lab Sample ID: 460-84965-5

Client Matrix: Solid

% Moisture: 10.7

Date Sampled: 10/22/2014 1145

Date Received: 10/22/2014 1610

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-257777	Instrument ID:	CPESTGC9
Prep Method:	3546	Prep Batch:	460-257732	Initial Weight/Volume:	15.0046 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/23/2014 1149			Injection Volume:	1 uL
Prep Date:	10/23/2014 0211			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		7.5	U	1.5	7.5
4,4'-DDE		7.5	U	1.5	7.5
4,4'-DDT		7.5	U	1.8	7.5
Aldrin		7.5	U	1.6	7.5
alpha-BHC		2.2	U	1.7	2.2
beta-BHC		2.2	U	1.8	2.2
Chlordane (technical)		75	U	21	75
delta-BHC		2.2	U	1.3	2.2
Dieldrin		2.2	U	1.3	2.2
Endosulfan I		7.5	U	1.7	7.5
Endosulfan II		7.5	U	1.5	7.5
Endosulfan sulfate		7.5	U	1.5	7.5
Endrin		7.5	U	1.8	7.5
Endrin aldehyde		7.5	U	1.1	7.5
Endrin ketone		7.5	U	1.5	7.5
gamma-BHC (Lindane)		2.2	U	1.3	2.2
Heptachlor		7.5	U	1.8	7.5
Heptachlor epoxide		7.5	U	1.7	7.5
Methoxychlor		7.5	U	1.8	7.5
Toxaphene		75	U	20	75

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	130		76 - 149
Tetrachloro-m-xylene	115		72 - 136

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-6 (1-2')**

Lab Sample ID: 460-84965-5

Client Matrix: Solid

% Moisture: 10.7

Date Sampled: 10/22/2014 1145

Date Received: 10/22/2014 1610

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-257777	Instrument ID:	CPESTGC9
Prep Method:	3546	Prep Batch:	460-257732	Initial Weight/Volume:	15.0046 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/23/2014 1149			Injection Volume:	1 uL
Prep Date:	10/23/2014 0211			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	111		76 - 149
Tetrachloro-m-xylene	107		72 - 136

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-6 (10-11')**

Lab Sample ID: 460-84965-6

Client Matrix: Solid

% Moisture: 20.9

Date Sampled: 10/22/2014 1150

Date Received: 10/22/2014 1610

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-257777	Instrument ID:	CPESTGC9
Prep Method:	3546	Prep Batch:	460-257732	Initial Weight/Volume:	15.0037 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/23/2014 1200			Injection Volume:	1 uL
Prep Date:	10/23/2014 0211			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		8.5	U	1.6	8.5
4,4'-DDE		8.5	U	1.6	8.5
4,4'-DDT		8.5	U	2.0	8.5
Aldrin		8.5	U	1.8	8.5
alpha-BHC		2.5	U	1.9	2.5
beta-BHC		2.5	U	2.0	2.5
Chlordane (technical)		85	U	24	85
delta-BHC		2.5	U	1.5	2.5
Dieldrin		2.5	U	1.5	2.5
Endosulfan I		8.5	U	1.9	8.5
Endosulfan II		8.5	U	1.6	8.5
Endosulfan sulfate		8.5	U	1.6	8.5
Endrin		8.5	U	2.0	8.5
Endrin aldehyde		8.5	U	1.3	8.5
Endrin ketone		8.5	U	1.6	8.5
gamma-BHC (Lindane)		2.5	U	1.5	2.5
Heptachlor		8.5	U	2.0	8.5
Heptachlor epoxide		8.5	U	1.9	8.5
Methoxychlor		8.5	U	2.0	8.5
Toxaphene		85	U	23	85

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	120		76 - 149
Tetrachloro-m-xylene	110		72 - 136

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-6 (10-11')**

Lab Sample ID: 460-84965-6

Client Matrix: Solid

% Moisture: 20.9

Date Sampled: 10/22/2014 1150

Date Received: 10/22/2014 1610

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-257777	Instrument ID:	CPESTGC9
Prep Method:	3546	Prep Batch:	460-257732	Initial Weight/Volume:	15.0037 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/23/2014 1200			Injection Volume:	1 uL
Prep Date:	10/23/2014 0211			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	108		76 - 149
Tetrachloro-m-xylene	107		72 - 136

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-12 (1-2')**

Lab Sample ID: 460-84965-7

Client Matrix: Solid

% Moisture: 6.5

Date Sampled: 10/22/2014 1440

Date Received: 10/22/2014 1610

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-257777	Instrument ID:	CPESTGC9
Prep Method:	3546	Prep Batch:	460-257732	Initial Weight/Volume:	15.0077 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/23/2014 1212			Injection Volume:	1 uL
Prep Date:	10/23/2014 0211			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		7.2	U	1.4	7.2
4,4'-DDE		7.2	U	1.4	7.2
4,4'-DDT		7.2	U	1.7	7.2
Aldrin		7.2	U	1.5	7.2
alpha-BHC		2.1	U	1.6	2.1
beta-BHC		2.1	U	1.7	2.1
Chlordane (technical)		72	U	20	72
delta-BHC		2.1	U	1.3	2.1
Dieldrin		2.1	U	1.3	2.1
Endosulfan I		7.2	U	1.6	7.2
Endosulfan II		7.2	U	1.4	7.2
Endosulfan sulfate		7.2	U	1.4	7.2
Endrin		7.2	U	1.7	7.2
Endrin aldehyde		7.2	U	1.1	7.2
Endrin ketone		7.2	U	1.4	7.2
gamma-BHC (Lindane)		2.1	U	1.3	2.1
Heptachlor		7.2	U	1.7	7.2
Heptachlor epoxide		7.2	U	1.6	7.2
Methoxychlor		7.2	U	1.7	7.2
Toxaphene		72	U	19	72

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	115		76 - 149
Tetrachloro-m-xylene	111		72 - 136

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-12 (1-2')**

Lab Sample ID: 460-84965-7

Client Matrix: Solid

% Moisture: 6.5

Date Sampled: 10/22/2014 1440

Date Received: 10/22/2014 1610

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-257777	Instrument ID:	CPESTGC9
Prep Method:	3546	Prep Batch:	460-257732	Initial Weight/Volume:	15.0077 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/23/2014 1212			Injection Volume:	1 uL
Prep Date:	10/23/2014 0211			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	100		76 - 149
Tetrachloro-m-xylene	99		72 - 136

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-12 (11-12')**

Lab Sample ID: 460-84965-8

Client Matrix: Solid

% Moisture: 13.0

Date Sampled: 10/22/2014 1445

Date Received: 10/22/2014 1610

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-257777	Instrument ID:	CPESTGC9
Prep Method:	3546	Prep Batch:	460-257732	Initial Weight/Volume:	15.0092 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/23/2014 1223			Injection Volume:	1 uL
Prep Date:	10/23/2014 0211			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		7.7	U	1.5	7.7
4,4'-DDE		7.7	U	1.5	7.7
4,4'-DDT		7.7	U	1.8	7.7
Aldrin		7.7	U	1.6	7.7
alpha-BHC		2.3	U	1.7	2.3
beta-BHC		2.3	U	1.8	2.3
Chlordane (technical)		77	U	22	77
delta-BHC		2.3	U	1.4	2.3
Dieldrin		2.3	U	1.4	2.3
Endosulfan I		7.7	U	1.7	7.7
Endosulfan II		7.7	U	1.5	7.7
Endosulfan sulfate		7.7	U	1.5	7.7
Endrin		7.7	U	1.8	7.7
Endrin aldehyde		7.7	U	1.1	7.7
Endrin ketone		7.7	U	1.5	7.7
gamma-BHC (Lindane)		2.3	U	1.4	2.3
Heptachlor		7.7	U	1.8	7.7
Heptachlor epoxide		7.7	U	1.7	7.7
Methoxychlor		7.7	U	1.8	7.7
Toxaphene		77	U	21	77

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	124		76 - 149
Tetrachloro-m-xylene	121		72 - 136

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-12 (11-12')**

Lab Sample ID: 460-84965-8

Client Matrix: Solid

% Moisture: 13.0

Date Sampled: 10/22/2014 1445

Date Received: 10/22/2014 1610

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-257777	Instrument ID:	CPESTGC9
Prep Method:	3546	Prep Batch:	460-257732	Initial Weight/Volume:	15.0092 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/23/2014 1223			Injection Volume:	1 uL
Prep Date:	10/23/2014 0211			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	117		76 - 149
Tetrachloro-m-xylene	118		72 - 136

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-17 (1-2')**

Lab Sample ID: 460-84965-1

Client Matrix: Solid

% Moisture: 12.0

Date Sampled: 10/22/2014 1040

Date Received: 10/22/2014 1610

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-257834	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-257735	Initial Weight/Volume:	15.0077 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/23/2014 1558			Injection Volume:	1 uL
Prep Date:	10/23/2014 0223			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		76	U	17	76
Aroclor 1221		76	U	17	76
Aroclor 1232		76	U	17	76
Aroclor 1242		76	U	17	76
Aroclor 1248		76	U	17	76
Aroclor 1254		76	U	22	76
Aroclor 1260		76	U	22	76
Aroclor-1262		76	U	22	76
Aroclor 1268		76	U	22	76
Polychlorinated biphenyls, Total		76	U	22	76

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	110		53 - 150

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-17 (1-2')**

Lab Sample ID: 460-84965-1

Client Matrix: Solid

% Moisture: 12.0

Date Sampled: 10/22/2014 1040

Date Received: 10/22/2014 1610

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-257834	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-257735	Initial Weight/Volume:	15.0077 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/23/2014 1558			Injection Volume:	1 uL
Prep Date:	10/23/2014 0223			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	109		53 - 150

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-17 (11-12')**

Lab Sample ID: 460-84965-2

Client Matrix: Solid

% Moisture: 17.7

Date Sampled: 10/22/2014 1055

Date Received: 10/22/2014 1610

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-257834	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-257735	Initial Weight/Volume:	15.0092 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/23/2014 1615			Injection Volume:	1 uL
Prep Date:	10/23/2014 0223			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		81	U	18	81
Aroclor 1221		81	U	18	81
Aroclor 1232		81	U	18	81
Aroclor 1242		81	U	18	81
Aroclor 1248		81	U	18	81
Aroclor 1254		81	U	23	81
Aroclor 1260		81	U	23	81
Aroclor-1262		81	U	23	81
Aroclor 1268		81	U	23	81
Polychlorinated biphenyls, Total		81	U	23	81

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	113		53 - 150

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-17 (11-12')**

Lab Sample ID: 460-84965-2

Client Matrix: Solid

% Moisture: 17.7

Date Sampled: 10/22/2014 1055

Date Received: 10/22/2014 1610

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-257834	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-257735	Initial Weight/Volume:	15.0092 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/23/2014 1615			Injection Volume:	1 uL
Prep Date:	10/23/2014 0223			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	113		53 - 150

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-18 (1-2')**

Lab Sample ID: 460-84965-3

Client Matrix: Solid

% Moisture: 11.6

Date Sampled: 10/22/2014 1225

Date Received: 10/22/2014 1610

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258049	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-257735	Initial Weight/Volume:	15.0228 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/24/2014 1205			Injection Volume:	1 uL
Prep Date:	10/23/2014 0223			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		76	U	17	76
Aroclor 1221		76	U	17	76
Aroclor 1232		76	U	17	76
Aroclor 1242		76	U	17	76
Aroclor 1248		76	U	17	76
Aroclor 1254		76	U	21	76
Aroclor 1260		76	U	21	76
Aroclor-1262		76	U	21	76
Aroclor 1268		76	U	21	76
Polychlorinated biphenyls, Total		76	U	21	76

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	113		53 - 150

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-18 (1-2')**

Lab Sample ID: 460-84965-3

Client Matrix: Solid

% Moisture: 11.6

Date Sampled: 10/22/2014 1225

Date Received: 10/22/2014 1610

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258049	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-257735	Initial Weight/Volume:	15.0228 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/24/2014 1205			Injection Volume:	1 uL
Prep Date:	10/23/2014 0223			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	107		53 - 150

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-18 (12-13')**

Lab Sample ID: 460-84965-4

Client Matrix: Solid

% Moisture: 27.4

Date Sampled: 10/22/2014 1230

Date Received: 10/22/2014 1610

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-257834	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-257735	Initial Weight/Volume:	15.0010 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/23/2014 1648			Injection Volume:	1 uL
Prep Date:	10/23/2014 0223			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		92	U	21	92
Aroclor 1221		92	U	21	92
Aroclor 1232		92	U	21	92
Aroclor 1242		92	U	21	92
Aroclor 1248		92	U	21	92
Aroclor 1254		92	U	26	92
Aroclor 1260		92	U	26	92
Aroclor-1262		92	U	26	92
Aroclor 1268		92	U	26	92
Polychlorinated biphenyls, Total		92	U	26	92

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	131		53 - 150

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-18 (12-13')**

Lab Sample ID: 460-84965-4

Client Matrix: Solid

% Moisture: 27.4

Date Sampled: 10/22/2014 1230

Date Received: 10/22/2014 1610

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-257834	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-257735	Initial Weight/Volume:	15.0010 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/23/2014 1648			Injection Volume:	1 uL
Prep Date:	10/23/2014 0223			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	116		53 - 150

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-6 (1-2')**

Lab Sample ID: 460-84965-5

Client Matrix: Solid

% Moisture: 10.7

Date Sampled: 10/22/2014 1145

Date Received: 10/22/2014 1610

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-257834	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-257735	Initial Weight/Volume:	15.0036 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/23/2014 1704			Injection Volume:	1 uL
Prep Date:	10/23/2014 0223			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		75	U	17	75
Aroclor 1221		75	U	17	75
Aroclor 1232		75	U	17	75
Aroclor 1242		75	U	17	75
Aroclor 1248		75	U	17	75
Aroclor 1254		75	U	21	75
Aroclor 1260		75	U	21	75
Aroclor-1262		75	U	21	75
Aroclor 1268		75	U	21	75
Polychlorinated biphenyls, Total		75	U	21	75

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	122		53 - 150

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-6 (1-2')**

Lab Sample ID: 460-84965-5

Client Matrix: Solid

% Moisture: 10.7

Date Sampled: 10/22/2014 1145

Date Received: 10/22/2014 1610

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-257834	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-257735	Initial Weight/Volume:	15.0036 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/23/2014 1704			Injection Volume:	1 uL
Prep Date:	10/23/2014 0223			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	121		53 - 150

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-6 (10-11')**

Lab Sample ID: 460-84965-6

Client Matrix: Solid

% Moisture: 20.9

Date Sampled: 10/22/2014 1150

Date Received: 10/22/2014 1610

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-257834	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-257735	Initial Weight/Volume:	15.0052 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/23/2014 1720			Injection Volume:	1 uL
Prep Date:	10/23/2014 0223			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		85	U	19	85
Aroclor 1221		85	U	19	85
Aroclor 1232		85	U	19	85
Aroclor 1242		85	U	19	85
Aroclor 1248		85	U	19	85
Aroclor 1254		85	U	24	85
Aroclor 1260		85	U	24	85
Aroclor-1262		85	U	24	85
Aroclor 1268		85	U	24	85
Polychlorinated biphenyls, Total		85	U	24	85

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	118		53 - 150

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-6 (10-11')**

Lab Sample ID: 460-84965-6

Client Matrix: Solid

% Moisture: 20.9

Date Sampled: 10/22/2014 1150

Date Received: 10/22/2014 1610

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-257834	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-257735	Initial Weight/Volume:	15.0052 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/23/2014 1720			Injection Volume:	1 uL
Prep Date:	10/23/2014 0223			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	114		53 - 150

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-12 (1-2')**

Lab Sample ID: 460-84965-7

Client Matrix: Solid

% Moisture: 6.5

Date Sampled: 10/22/2014 1440

Date Received: 10/22/2014 1610

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-257834	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-257735	Initial Weight/Volume:	15.0069 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/23/2014 1737			Injection Volume:	1 uL
Prep Date:	10/23/2014 0223			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		72	U	16	72
Aroclor 1221		72	U	16	72
Aroclor 1232		72	U	16	72
Aroclor 1242		72	U	16	72
Aroclor 1248		72	U	16	72
Aroclor 1254		72	U	20	72
Aroclor 1260		72	U	20	72
Aroclor-1262		72	U	20	72
Aroclor 1268		72	U	20	72
Polychlorinated biphenyls, Total		72	U	20	72

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	113		53 - 150

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-12 (1-2')**

Lab Sample ID: 460-84965-7

Client Matrix: Solid

% Moisture: 6.5

Date Sampled: 10/22/2014 1440

Date Received: 10/22/2014 1610

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-257834	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-257735	Initial Weight/Volume:	15.0069 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/23/2014 1737			Injection Volume:	1 uL
Prep Date:	10/23/2014 0223			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	112		53 - 150

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-12 (11-12')**

Lab Sample ID: 460-84965-8

Client Matrix: Solid

% Moisture: 13.0

Date Sampled: 10/22/2014 1445

Date Received: 10/22/2014 1610

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-257834	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-257735	Initial Weight/Volume:	15.0044 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/23/2014 1753			Injection Volume:	1 uL
Prep Date:	10/23/2014 0223			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		77	U	17	77
Aroclor 1221		77	U	17	77
Aroclor 1232		77	U	17	77
Aroclor 1242		77	U	17	77
Aroclor 1248		77	U	17	77
Aroclor 1254		77	U	22	77
Aroclor 1260		77	U	22	77
Aroclor-1262		77	U	22	77
Aroclor 1268		77	U	22	77
Polychlorinated biphenyls, Total		77	U	22	77

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	117		53 - 150

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-12 (11-12')**

Lab Sample ID: 460-84965-8

Client Matrix: Solid

% Moisture: 13.0

Date Sampled: 10/22/2014 1445

Date Received: 10/22/2014 1610

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-257834	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-257735	Initial Weight/Volume:	15.0044 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/23/2014 1753			Injection Volume:	1 uL
Prep Date:	10/23/2014 0223			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	111		53 - 150

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-17 (1-2')**

Lab Sample ID: 460-84965-1

Client Matrix: Solid

% Moisture: 12.0

Date Sampled: 10/22/2014 1040

Date Received: 10/22/2014 1610

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-258098	Instrument ID:	ICP4
Prep Method:	3050B	Prep Batch:	460-258010	Lab File ID:	257924.asc
Dilution:	4.0			Initial Weight/Volume:	1.06 g
Analysis Date:	10/24/2014 1710			Final Weight/Volume:	50 mL
Prep Date:	10/24/2014 0717				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Silver		2.1	U	0.42	2.1
Aluminum		5580		23.7	42.9
Arsenic		7.0		0.88	3.2
Barium		82.3		1.9	42.9
Beryllium		0.31	J	0.29	0.43
Calcium		22000		82.0	1070
Cadmium		0.88		0.30	0.86
Cobalt		5.3	J	0.97	10.7
Chromium		17.9		0.86	2.1
Copper		31.8		1.9	5.4
Iron		14700		26.7	32.2
Potassium		858	J	29.6	1070
Magnesium		2920		71.2	1070
Manganese		186		0.92	3.2
Sodium		309	J	81.0	1070
Nickel		12.3		1.9	8.6
Lead		98.8		0.88	2.1
Antimony		4.3	U	1.6	4.3
Selenium		4.3	U	1.2	4.3
Thallium		4.3	U	2.1	4.3
Vanadium		17.1		0.89	10.7
Zinc		72.7		1.8	6.4

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	460-257840	Instrument ID:	LEEMAN5
Prep Method:	7471B	Prep Batch:	460-257746	Lab File ID:	257745HG1.PRN
Dilution:	1.0			Initial Weight/Volume:	0.64 g
Analysis Date:	10/23/2014 1128			Final Weight/Volume:	50 mL
Prep Date:	10/23/2014 0521				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.24	^	0.013	0.018

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-17 (11-12')**

Lab Sample ID: 460-84965-2

Client Matrix: Solid

% Moisture: 17.7

Date Sampled: 10/22/2014 1055

Date Received: 10/22/2014 1610

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-258098	Instrument ID:	ICP4
Prep Method:	3050B	Prep Batch:	460-258010	Lab File ID:	257924.asc
Dilution:	4.0			Initial Weight/Volume:	1.10 g
Analysis Date:	10/24/2014 1714			Final Weight/Volume:	50 mL
Prep Date:	10/24/2014 0717				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Silver		2.2	U	0.43	2.2
Aluminum		4950		24.4	44.2
Arsenic		11.1		0.90	3.3
Barium		61.3		1.9	44.2
Beryllium		0.37	J	0.30	0.44
Calcium		1250		84.5	1100
Cadmium		1.2		0.31	0.88
Cobalt		15.2		1.0	11.0
Chromium		18.2		0.88	2.2
Copper		39.5		1.9	5.5
Iron		21300		27.5	33.1
Potassium		1100		30.5	1100
Magnesium		1970		73.3	1100
Manganese		110		0.95	3.3
Sodium		1700		83.5	1100
Nickel		37.0		2.0	8.8
Lead		79.9		0.91	2.2
Antimony		4.4	U	1.7	4.4
Selenium		4.4	U	1.3	4.4
Thallium		4.4	U	2.2	4.4
Vanadium		30.1		0.91	11.0
Zinc		66.8		1.9	6.6

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	460-257840	Instrument ID:	LEEMAN5
Prep Method:	7471B	Prep Batch:	460-257746	Lab File ID:	257745HG1.PRN
Dilution:	1.0			Initial Weight/Volume:	0.66 g
Analysis Date:	10/23/2014 1130			Final Weight/Volume:	50 mL
Prep Date:	10/23/2014 0521				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.11	^	0.013	0.019

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-18 (1-2')**

Lab Sample ID: 460-84965-3

Client Matrix: Solid

% Moisture: 11.6

Date Sampled: 10/22/2014 1225

Date Received: 10/22/2014 1610

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-258098	Instrument ID:	ICP4
Prep Method:	3050B	Prep Batch:	460-258010	Lab File ID:	257924.asc
Dilution:	4.0			Initial Weight/Volume:	1.06 g
Analysis Date:	10/24/2014 1717			Final Weight/Volume:	50 mL
Prep Date:	10/24/2014 0717				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Silver		2.1	U	0.41	2.1
Aluminum		6120		23.6	42.7
Arsenic		6.2		0.87	3.2
Barium		80.9		1.8	42.7
Beryllium		0.31	J	0.29	0.43
Calcium		22600		81.6	1070
Cadmium		1.3		0.30	0.85
Cobalt		5.1	J	0.96	10.7
Chromium		17.4		0.85	2.1
Copper		41.0		1.9	5.3
Iron		19000		26.6	32.0
Potassium		1200		29.5	1070
Magnesium		4080		70.9	1070
Manganese		261		0.92	3.2
Sodium		301	J	80.7	1070
Nickel		12.5		1.9	8.5
Lead		122		0.88	2.1
Antimony		4.3	U	1.6	4.3
Selenium		4.3	U	1.2	4.3
Thallium		4.3	U	2.1	4.3
Vanadium		25.7		0.88	10.7
Zinc		119		1.8	6.4

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	460-257840	Instrument ID:	LEEMAN5
Prep Method:	7471B	Prep Batch:	460-257746	Lab File ID:	257745HG1.PRN
Dilution:	1.0			Initial Weight/Volume:	0.61 g
Analysis Date:	10/23/2014 1132			Final Weight/Volume:	50 mL
Prep Date:	10/23/2014 0521				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.23	^	0.013	0.019

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-18 (12-13')**

Lab Sample ID: 460-84965-4

Client Matrix: Solid

% Moisture: 27.4

Date Sampled: 10/22/2014 1230

Date Received: 10/22/2014 1610

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-258098	Instrument ID:	ICP4
Prep Method:	3050B	Prep Batch:	460-258010	Lab File ID:	257924.asc
Dilution:	4.0			Initial Weight/Volume:	1.13 g
Analysis Date:	10/24/2014 1721			Final Weight/Volume:	50 mL
Prep Date:	10/24/2014 0717				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Silver		2.4	U	0.47	2.4
Aluminum		11500		26.9	48.7
Arsenic		3.6	J	1.0	3.7
Barium		43.8	J	2.1	48.7
Beryllium		0.40	J	0.33	0.49
Calcium		1530		93.2	1220
Cadmium		1.1		0.34	0.97
Cobalt		8.2	J	1.1	12.2
Chromium		15.7		0.98	2.4
Copper		18.0		2.1	6.1
Iron		23900		30.3	36.5
Potassium		945	J	33.6	1220
Magnesium		3320		80.9	1220
Manganese		298		1.1	3.7
Sodium		372	J	92.1	1220
Nickel		19.0		2.2	9.7
Lead		27.0		1.0	2.4
Antimony		4.9	U	1.8	4.9
Selenium		4.9	U	1.4	4.9
Thallium		4.9	U	2.4	4.9
Vanadium		20.6		1.0	12.2
Zinc		50.0		2.1	7.3

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	460-257840	Instrument ID:	LEEMAN5
Prep Method:	7471B	Prep Batch:	460-257752	Lab File ID:	257745HG1.PRN
Dilution:	1.0			Initial Weight/Volume:	0.67 g
Analysis Date:	10/23/2014 1145			Final Weight/Volume:	50 mL
Prep Date:	10/23/2014 0607				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.021	U	0.015	0.021

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-6 (1-2')**

Lab Sample ID: 460-84965-5

Client Matrix: Solid

% Moisture: 10.7

Date Sampled: 10/22/2014 1145

Date Received: 10/22/2014 1610

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-258098	Instrument ID:	ICP4
Prep Method:	3050B	Prep Batch:	460-258010	Lab File ID:	257924.asc
Dilution:	4.0			Initial Weight/Volume:	1.03 g
Analysis Date:	10/24/2014 1724			Final Weight/Volume:	50 mL
Prep Date:	10/24/2014 0717				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Silver		2.2	U	0.42	2.2
Aluminum		5170		24.0	43.5
Arsenic		13.1		0.89	3.3
Barium		155		1.9	43.5
Beryllium		0.43	U	0.30	0.43
Calcium		34700		83.2	1090
Cadmium		1.0		0.31	0.87
Cobalt		7.7	J	0.98	10.9
Chromium		15.2		0.87	2.2
Copper		47.7		1.9	5.4
Iron		15200		27.1	32.6
Potassium		916	J	30.0	1090
Magnesium		6870		72.2	1090
Manganese		282		0.94	3.3
Sodium		205	J	82.2	1090
Nickel		13.4		1.9	8.7
Lead		398		0.89	2.2
Antimony		4.3	U	1.6	4.3
Selenium		4.3	U	1.2	4.3
Thallium		4.3	U	2.1	4.3
Vanadium		26.6		0.90	10.9
Zinc		262		1.9	6.5

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	460-257840	Instrument ID:	LEEMAN5
Prep Method:	7471B	Prep Batch:	460-257752	Lab File ID:	257745HG1.PRN
Dilution:	1.0			Initial Weight/Volume:	0.66 g
Analysis Date:	10/23/2014 1152			Final Weight/Volume:	50 mL
Prep Date:	10/23/2014 0607				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.19		0.012	0.017

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-6 (10-11')**

Lab Sample ID: 460-84965-6

Client Matrix: Solid

% Moisture: 20.9

Date Sampled: 10/22/2014 1150

Date Received: 10/22/2014 1610

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-258098	Instrument ID:	ICP4
Prep Method:	3050B	Prep Batch:	460-258010	Lab File ID:	257924.asc
Dilution:	4.0			Initial Weight/Volume:	1.02 g
Analysis Date:	10/24/2014 1728			Final Weight/Volume:	50 mL
Prep Date:	10/24/2014 0717				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Silver		2.5	U	0.48	2.5
Aluminum		5720		27.4	49.6
Arsenic		4.9		1.0	3.7
Barium		71.9		2.1	49.6
Beryllium		0.50	U	0.34	0.50
Calcium		21800		94.8	1240
Cadmium		0.94	J	0.35	0.99
Cobalt		7.4	J	1.1	12.4
Chromium		13.7		0.99	2.5
Copper		18.9		2.2	6.2
Iron		17100		30.8	37.2
Potassium		1050	J	34.2	1240
Magnesium		2350		82.3	1240
Manganese		283		1.1	3.7
Sodium		444	J	93.7	1240
Nickel		17.2		2.2	9.9
Lead		65.0		1.0	2.5
Antimony		5.0	U	1.9	5.0
Selenium		5.0	U	1.4	5.0
Thallium		5.0	U	2.4	5.0
Vanadium		21.0		1.0	12.4
Zinc		77.4		2.1	7.4

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	460-257840	Instrument ID:	LEEMAN5
Prep Method:	7471B	Prep Batch:	460-257752	Lab File ID:	257745HG1.PRN
Dilution:	1.0			Initial Weight/Volume:	0.62 g
Analysis Date:	10/23/2014 1155			Final Weight/Volume:	50 mL
Prep Date:	10/23/2014 0607				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.027		0.015	0.021

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-12 (1-2')**

Lab Sample ID: 460-84965-7

Client Matrix: Solid

% Moisture: 6.5

Date Sampled: 10/22/2014 1440

Date Received: 10/22/2014 1610

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-258098	Instrument ID:	ICP4
Prep Method:	3050B	Prep Batch:	460-258010	Lab File ID:	257924.asc
Dilution:	4.0			Initial Weight/Volume:	1.00 g
Analysis Date:	10/24/2014 1732			Final Weight/Volume:	50 mL
Prep Date:	10/24/2014 0717				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Silver		2.1	U	0.42	2.1
Aluminum		4260		23.6	42.8
Arsenic		9.1		0.88	3.2
Barium		64.0		1.9	42.8
Beryllium		0.43	U	0.29	0.43
Calcium		45000		81.9	1070
Cadmium		0.72	J	0.30	0.86
Cobalt		2.7	J	0.97	10.7
Chromium		8.0		0.86	2.1
Copper		23.4		1.9	5.4
Iron		10100		26.6	32.1
Potassium		682	J	29.5	1070
Magnesium		3880		71.1	1070
Manganese		152		0.92	3.2
Sodium		284	J	80.9	1070
Nickel		9.2		1.9	8.6
Lead		86.2		0.88	2.1
Antimony		4.3	U	1.6	4.3
Selenium		4.8		1.2	4.3
Thallium		4.3	U	2.1	4.3
Vanadium		19.2		0.88	10.7
Zinc		48.3		1.8	6.4

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	460-257840	Instrument ID:	LEEMAN5
Prep Method:	7471B	Prep Batch:	460-257752	Lab File ID:	257745HG1.PRN
Dilution:	1.0			Initial Weight/Volume:	0.61 g
Analysis Date:	10/23/2014 1157			Final Weight/Volume:	50 mL
Prep Date:	10/23/2014 0607				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.065		0.013	0.018

Client: AKRF Inc

Job Number: 460-84965-1

Client Sample ID: **SB-12 (11-12')**

Lab Sample ID: 460-84965-8

Client Matrix: Solid

% Moisture: 13.0

Date Sampled: 10/22/2014 1445

Date Received: 10/22/2014 1610

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-258098	Instrument ID:	ICP4
Prep Method:	3050B	Prep Batch:	460-258010	Lab File ID:	257924.asc
Dilution:	4.0			Initial Weight/Volume:	1.01 g
Analysis Date:	10/24/2014 1735			Final Weight/Volume:	50 mL
Prep Date:	10/24/2014 0717				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Silver		2.3	U	0.44	2.3
Aluminum		4720		25.1	45.5
Arsenic		8.5		0.93	3.4
Barium		98.7		2.0	45.5
Beryllium		0.46	U	0.31	0.46
Calcium		25200		87.0	1140
Cadmium		1.2		0.32	0.91
Cobalt		4.9	J	1.0	11.4
Chromium		33.6		0.91	2.3
Copper		52.2		2.0	5.7
Iron		24800		28.3	34.1
Potassium		899	J	31.4	1140
Magnesium		2230		75.6	1140
Manganese		179		0.98	3.4
Sodium		324	J	86.0	1140
Nickel		15.3		2.0	9.1
Lead		102		0.93	2.3
Antimony		4.6	U	1.7	4.6
Selenium		4.6	U	1.3	4.6
Thallium		4.6	U	2.2	4.6
Vanadium		16.4		0.94	11.4
Zinc		236		1.9	6.8

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	460-257840	Instrument ID:	LEEMAN5
Prep Method:	7471B	Prep Batch:	460-257752	Lab File ID:	257745HG1.PRN
Dilution:	1.0			Initial Weight/Volume:	0.64 g
Analysis Date:	10/23/2014 1159			Final Weight/Volume:	50 mL
Prep Date:	10/23/2014 0607				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.093		0.013	0.018

General Chemistry

Client Sample ID: **SB-17 (1-2')**

Lab Sample ID: 460-84965-1

Client Matrix: Solid

Date Sampled: 10/22/2014 1040

Date Received: 10/22/2014 1610

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	12.0		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-257783		Analysis Date: 10/23/2014 0902				DryWt Corrected: N
Percent Solids	88.0		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-257783		Analysis Date: 10/23/2014 0902				DryWt Corrected: N

General Chemistry

Client Sample ID: **SB-17 (11-12')**

Lab Sample ID: 460-84965-2

Client Matrix: Solid

Date Sampled: 10/22/2014 1055

Date Received: 10/22/2014 1610

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	17.7		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-257783		Analysis Date: 10/23/2014 0902				DryWt Corrected: N
Percent Solids	82.3		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-257783		Analysis Date: 10/23/2014 0902				DryWt Corrected: N

General Chemistry

Client Sample ID: **SB-18 (1-2')**

Lab Sample ID: 460-84965-3

Client Matrix: Solid

Date Sampled: 10/22/2014 1225

Date Received: 10/22/2014 1610

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	11.6		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-257783		Analysis Date: 10/23/2014 0902				DryWt Corrected: N
Percent Solids	88.4		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-257783		Analysis Date: 10/23/2014 0902				DryWt Corrected: N

General Chemistry

Client Sample ID: **SB-18 (12-13')**

Lab Sample ID: 460-84965-4

Client Matrix: Solid

Date Sampled: 10/22/2014 1230

Date Received: 10/22/2014 1610

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	27.4		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-257783		Analysis Date: 10/23/2014 0902				DryWt Corrected: N
Percent Solids	72.6		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-257783		Analysis Date: 10/23/2014 0902				DryWt Corrected: N

General Chemistry

Client Sample ID: **SB-6 (1-2')**

Lab Sample ID: 460-84965-5

Client Matrix: Solid

Date Sampled: 10/22/2014 1145

Date Received: 10/22/2014 1610

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	10.7		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-257783		Analysis Date: 10/23/2014 0902				DryWt Corrected: N
Percent Solids	89.3		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-257783		Analysis Date: 10/23/2014 0902				DryWt Corrected: N

General Chemistry

Client Sample ID: **SB-6 (10-11')**

Lab Sample ID: 460-84965-6

Client Matrix: Solid

Date Sampled: 10/22/2014 1150

Date Received: 10/22/2014 1610

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	20.9		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-257783		Analysis Date: 10/23/2014 0902				DryWt Corrected: N
Percent Solids	79.1		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-257783		Analysis Date: 10/23/2014 0902				DryWt Corrected: N

General Chemistry

Client Sample ID: **SB-12 (1-2')**

Lab Sample ID: 460-84965-7

Client Matrix: Solid

Date Sampled: 10/22/2014 1440

Date Received: 10/22/2014 1610

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	6.5		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-257783		Analysis Date: 10/23/2014 0902				DryWt Corrected: N
Percent Solids	93.5		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-257783		Analysis Date: 10/23/2014 0902				DryWt Corrected: N

General Chemistry

Client Sample ID: **SB-12 (11-12')**

Lab Sample ID: 460-84965-8

Client Matrix: Solid

Date Sampled: 10/22/2014 1445

Date Received: 10/22/2014 1610

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	13.0		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-257783		Analysis Date: 10/23/2014 0902				DryWt Corrected: N
Percent Solids	87.0		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-257783		Analysis Date: 10/23/2014 0902				DryWt Corrected: N

DATA REPORTING QUALIFIERS

Client: AKRF Inc

Job Number: 460-84965-1

Lab Section	Qualifier	Description
GC/MS VOA		
	U	Analyzed for but not detected.
	J	Indicates an estimated value.
	*	ISTD response or retention time outside acceptable limits
	*	Surrogate exceeds the control limit
	B	The analyte was found in an associated blank, as well as in the sample.
	N	This flag indicates the presumptive evidence of a compound.
GC/MS Semi VOA		
	U	Analyzed for but not detected.
	*	Duplicate RPD exceeds control limits
	J	Indicates an estimated value.
	*	LCS or LCSD exceeds the control limits
	*	MS or MSD exceeds the control limits
	*	Surrogate exceeds the control limit
	A	The tentatively identified compound is a suspected aldol-condensation product.
	N	This flag indicates the presumptive evidence of a compound.
GC Semi VOA		
	U	Analyzed for but not detected.
Metals		
	^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC exceeds the control limits.
	U	Indicates analyzed for but not detected.
	4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
	J	Sample result is greater than the MDL but below the CRDL
	N	Spiked sample recovery is not within control limits.

QUALITY CONTROL RESULTS

Client: AKRF Inc

Job Number: 460-84965-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Prep Batch: 460-257683					
LB3 460-257683/1-A	Neutral Leach or MeOH Extraction Blank	T	Solid	5035	
460-84965-1	SB-17 (1-2')	T	Solid	5035	
460-84965-2	SB-17 (11-12')	T	Solid	5035	
460-84965-3	SB-18 (1-2')	T	Solid	5035	
460-84965-4	SB-18 (12-13')	T	Solid	5035	
460-84965-5	SB-6 (1-2')	T	Solid	5035	
460-84965-6	SB-6 (10-11')	T	Solid	5035	
460-84965-7	SB-12 (1-2')	T	Solid	5035	
460-84965-8	SB-12 (11-12')	T	Solid	5035	
Analysis Batch:460-257917					
LCS 460-257917/3	Lab Control Sample	T	Water	8260C	
LCSD 460-257917/4	Lab Control Sample Duplicate	T	Water	8260C	
MB 460-257917/6	Method Blank	T	Water	8260C	
460-84965-9TB	TB	T	Water	8260C	
Analysis Batch:460-257988					
LCS 460-257988/3	Lab Control Sample	T	Solid	8260C	
LCSD 460-257988/4	Lab Control Sample Duplicate	T	Solid	8260C	
MB 460-257988/6	Method Blank	T	Solid	8260C	
LB3 460-257683/1-A	Neutral Leach or MeOH Extraction Blank	T	Solid	8260C	460-257683
460-84965-2	SB-17 (11-12')	T	Solid	8260C	460-257683
460-84965-3	SB-18 (1-2')	T	Solid	8260C	460-257683
460-84965-4	SB-18 (12-13')	T	Solid	8260C	460-257683
460-84965-5	SB-6 (1-2')	T	Solid	8260C	460-257683
460-84965-6	SB-6 (10-11')	T	Solid	8260C	460-257683
460-84965-8	SB-12 (11-12')	T	Solid	8260C	460-257683
Analysis Batch:460-258257					
LCS 460-258257/4	Lab Control Sample	T	Solid	8260C	
LCSD 460-258257/5	Lab Control Sample Duplicate	T	Solid	8260C	
MB 460-258257/7	Method Blank	T	Solid	8260C	
460-84965-1	SB-17 (1-2')	T	Solid	8260C	460-257683
460-84965-7	SB-12 (1-2')	T	Solid	8260C	460-257683

Report Basis
T = Total

Client: AKRF Inc

Job Number: 460-84965-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 460-257808					
LCS 460-257808/2-A	Lab Control Sample	T	Solid	3546	
LCS 460-257808/20-A	Lab Control Sample	T	Solid	3546	
MB 460-257808/1-A	Method Blank	T	Solid	3546	
460-84965-1	SB-17 (1-2')	T	Solid	3546	
460-84965-2	SB-17 (11-12')	T	Solid	3546	
460-84965-3	SB-18 (1-2')	T	Solid	3546	
460-84965-3MS	Matrix Spike	T	Solid	3546	
460-84965-3MSD	Matrix Spike Duplicate	T	Solid	3546	
460-84965-4	SB-18 (12-13')	T	Solid	3546	
460-84965-5	SB-6 (1-2')	T	Solid	3546	
460-84965-6	SB-6 (10-11')	T	Solid	3546	
460-84965-7	SB-12 (1-2')	T	Solid	3546	
460-84965-8	SB-12 (11-12')	T	Solid	3546	
Analysis Batch:460-257956					
LCS 460-257808/2-A	Lab Control Sample	T	Solid	8270D	460-257808
LCS 460-257808/20-A	Lab Control Sample	T	Solid	8270D	460-257808
MB 460-257808/1-A	Method Blank	T	Solid	8270D	460-257808
460-84965-1	SB-17 (1-2')	T	Solid	8270D	460-257808
460-84965-3	SB-18 (1-2')	T	Solid	8270D	460-257808
460-84965-5	SB-6 (1-2')	T	Solid	8270D	460-257808
460-84965-6	SB-6 (10-11')	T	Solid	8270D	460-257808
460-84965-7	SB-12 (1-2')	T	Solid	8270D	460-257808
460-84965-8	SB-12 (11-12')	T	Solid	8270D	460-257808
Analysis Batch:460-258093					
460-84965-3MS	Matrix Spike	T	Solid	8270D	460-257808
460-84965-3MSD	Matrix Spike Duplicate	T	Solid	8270D	460-257808
460-84965-4	SB-18 (12-13')	T	Solid	8270D	460-257808
Analysis Batch:460-258408					
460-84965-2	SB-17 (11-12')	T	Solid	8270D	460-257808

Report Basis

T = Total

Client: AKRF Inc

Job Number: 460-84965-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 460-257732					
LCS 460-257732/2-A	Lab Control Sample	T	Solid	3546	
MB 460-257732/1-A	Method Blank	T	Solid	3546	
460-84805-A-1-B MS	Matrix Spike	T	Solid	3546	
460-84805-A-1-C MSD	Matrix Spike Duplicate	T	Solid	3546	
460-84965-1	SB-17 (1-2')	T	Solid	3546	
460-84965-2	SB-17 (11-12')	T	Solid	3546	
460-84965-3	SB-18 (1-2')	T	Solid	3546	
460-84965-4	SB-18 (12-13')	T	Solid	3546	
460-84965-5	SB-6 (1-2')	T	Solid	3546	
460-84965-6	SB-6 (10-11')	T	Solid	3546	
460-84965-7	SB-12 (1-2')	T	Solid	3546	
460-84965-8	SB-12 (11-12')	T	Solid	3546	
Prep Batch: 460-257735					
LCS 460-257735/2-A	Lab Control Sample	T	Solid	3546	
MB 460-257735/1-A	Method Blank	T	Solid	3546	
460-84873-A-11-C MS	Matrix Spike	T	Solid	3546	
460-84873-A-11-D MSD	Matrix Spike Duplicate	T	Solid	3546	
460-84965-1	SB-17 (1-2')	T	Solid	3546	
460-84965-2	SB-17 (11-12')	T	Solid	3546	
460-84965-3	SB-18 (1-2')	T	Solid	3546	
460-84965-4	SB-18 (12-13')	T	Solid	3546	
460-84965-5	SB-6 (1-2')	T	Solid	3546	
460-84965-6	SB-6 (10-11')	T	Solid	3546	
460-84965-7	SB-12 (1-2')	T	Solid	3546	
460-84965-8	SB-12 (11-12')	T	Solid	3546	
Analysis Batch:460-257777					
LCS 460-257732/2-A	Lab Control Sample	T	Solid	8081B	460-257732
MB 460-257732/1-A	Method Blank	T	Solid	8081B	460-257732
460-84805-A-1-B MS	Matrix Spike	T	Solid	8081B	460-257732
460-84805-A-1-C MSD	Matrix Spike Duplicate	T	Solid	8081B	460-257732
460-84965-1	SB-17 (1-2')	T	Solid	8081B	460-257732
460-84965-2	SB-17 (11-12')	T	Solid	8081B	460-257732
460-84965-3	SB-18 (1-2')	T	Solid	8081B	460-257732
460-84965-4	SB-18 (12-13')	T	Solid	8081B	460-257732
460-84965-5	SB-6 (1-2')	T	Solid	8081B	460-257732
460-84965-6	SB-6 (10-11')	T	Solid	8081B	460-257732
460-84965-7	SB-12 (1-2')	T	Solid	8081B	460-257732
460-84965-8	SB-12 (11-12')	T	Solid	8081B	460-257732

Client: AKRF Inc

Job Number: 460-84965-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Analysis Batch:460-257834					
LCS 460-257735/2-A	Lab Control Sample	T	Solid	8082A	460-257735
MB 460-257735/1-A	Method Blank	T	Solid	8082A	460-257735
460-84873-A-11-C MS	Matrix Spike	T	Solid	8082A	460-257735
460-84873-A-11-D MSD	Matrix Spike Duplicate	T	Solid	8082A	460-257735
460-84965-1	SB-17 (1-2')	T	Solid	8082A	460-257735
460-84965-2	SB-17 (11-12')	T	Solid	8082A	460-257735
460-84965-4	SB-18 (12-13')	T	Solid	8082A	460-257735
460-84965-5	SB-6 (1-2')	T	Solid	8082A	460-257735
460-84965-6	SB-6 (10-11')	T	Solid	8082A	460-257735
460-84965-7	SB-12 (1-2')	T	Solid	8082A	460-257735
460-84965-8	SB-12 (11-12')	T	Solid	8082A	460-257735
Analysis Batch:460-258049					
460-84965-3	SB-18 (1-2')	T	Solid	8082A	460-257735

Report Basis

T = Total

Client: AKRF Inc

Job Number: 460-84965-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 460-257746					
LCSSRM 460-257746/11-A ^20	LCS-Certified Reference Material	T	Solid	7471B	
MB 460-257746/10-A	Method Blank	T	Solid	7471B	
460-84570-D-1-R DU	Duplicate	T	Solid	7471B	
460-84570-D-1-S MS	Matrix Spike	T	Solid	7471B	
460-84965-1	SB-17 (1-2')	T	Solid	7471B	
460-84965-2	SB-17 (11-12')	T	Solid	7471B	
460-84965-3	SB-18 (1-2')	T	Solid	7471B	
Prep Batch: 460-257752					
LCSSRM 460-257752/11-A ^20	LCS-Certified Reference Material	T	Solid	7471B	
MB 460-257752/10-A	Method Blank	T	Solid	7471B	
460-84965-4	SB-18 (12-13')	T	Solid	7471B	
460-84965-4DU	Duplicate	T	Solid	7471B	
460-84965-4MS	Matrix Spike	T	Solid	7471B	
460-84965-5	SB-6 (1-2')	T	Solid	7471B	
460-84965-6	SB-6 (10-11')	T	Solid	7471B	
460-84965-7	SB-12 (1-2')	T	Solid	7471B	
460-84965-8	SB-12 (11-12')	T	Solid	7471B	
Analysis Batch:460-257840					
LCSSRM 460-257746/11-A ^20	LCS-Certified Reference Material	T	Solid	7471B	460-257746
MB 460-257746/10-A	Method Blank	T	Solid	7471B	460-257746
LCSSRM 460-257752/11-A ^20	LCS-Certified Reference Material	T	Solid	7471B	460-257752
MB 460-257752/10-A	Method Blank	T	Solid	7471B	460-257752
460-84570-D-1-R DU	Duplicate	T	Solid	7471B	460-257746
460-84570-D-1-S MS	Matrix Spike	T	Solid	7471B	460-257746
460-84965-1	SB-17 (1-2')	T	Solid	7471B	460-257746
460-84965-2	SB-17 (11-12')	T	Solid	7471B	460-257746
460-84965-3	SB-18 (1-2')	T	Solid	7471B	460-257746
460-84965-4	SB-18 (12-13')	T	Solid	7471B	460-257752
460-84965-4DU	Duplicate	T	Solid	7471B	460-257752
460-84965-4MS	Matrix Spike	T	Solid	7471B	460-257752
460-84965-5	SB-6 (1-2')	T	Solid	7471B	460-257752
460-84965-6	SB-6 (10-11')	T	Solid	7471B	460-257752
460-84965-7	SB-12 (1-2')	T	Solid	7471B	460-257752
460-84965-8	SB-12 (11-12')	T	Solid	7471B	460-257752

Client: AKRF Inc

Job Number: 460-84965-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 460-258010					
LCSSRM 460-258010/2-A	LCS-Certified Reference Material	T	Solid	3050B	
MB 460-258010/1-A ^2	Method Blank	T	Solid	3050B	
460-84928-A-1-E DU ^4	Duplicate	T	Solid	3050B	
460-84928-A-1-F MS ^4	Matrix Spike	T	Solid	3050B	
460-84965-1	SB-17 (1-2')	T	Solid	3050B	
460-84965-2	SB-17 (11-12')	T	Solid	3050B	
460-84965-3	SB-18 (1-2')	T	Solid	3050B	
460-84965-4	SB-18 (12-13')	T	Solid	3050B	
460-84965-5	SB-6 (1-2')	T	Solid	3050B	
460-84965-6	SB-6 (10-11')	T	Solid	3050B	
460-84965-7	SB-12 (1-2')	T	Solid	3050B	
460-84965-8	SB-12 (11-12')	T	Solid	3050B	
Analysis Batch:460-258098					
LCSSRM 460-258010/2-A	LCS-Certified Reference Material	T	Solid	6010C	460-258010
MB 460-258010/1-A ^2	Method Blank	T	Solid	6010C	460-258010
460-84928-A-1-E DU ^4	Duplicate	T	Solid	6010C	460-258010
460-84928-A-1-F MS ^4	Matrix Spike	T	Solid	6010C	460-258010
460-84965-1	SB-17 (1-2')	T	Solid	6010C	460-258010
460-84965-2	SB-17 (11-12')	T	Solid	6010C	460-258010
460-84965-3	SB-18 (1-2')	T	Solid	6010C	460-258010
460-84965-4	SB-18 (12-13')	T	Solid	6010C	460-258010
460-84965-5	SB-6 (1-2')	T	Solid	6010C	460-258010
460-84965-6	SB-6 (10-11')	T	Solid	6010C	460-258010
460-84965-7	SB-12 (1-2')	T	Solid	6010C	460-258010
460-84965-8	SB-12 (11-12')	T	Solid	6010C	460-258010

Report Basis

T = Total

Client: AKRF Inc

Job Number: 460-84965-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:460-257783					
460-84965-1	SB-17 (1-2')	T	Solid	Moisture	
460-84965-2	SB-17 (11-12')	T	Solid	Moisture	
460-84965-3	SB-18 (1-2')	T	Solid	Moisture	
460-84965-4	SB-18 (12-13')	T	Solid	Moisture	
460-84965-5	SB-6 (1-2')	T	Solid	Moisture	
460-84965-6	SB-6 (10-11')	T	Solid	Moisture	
460-84965-7	SB-12 (1-2')	T	Solid	Moisture	
460-84965-8	SB-12 (11-12')	T	Solid	Moisture	
460-84970-D-7 DU	Duplicate	T	Solid	Moisture	

Report Basis

T = Total

Client: AKRF Inc

Job Number: 460-84965-1

Surrogate Recovery Report

8260C Volatile Organic Compounds by GC/MS

Client Matrix: Solid

Lab Sample ID	Client Sample ID	DCA %Rec	BFB %Rec	DBFM %Rec	TOL %Rec
460-84965-1	SB-17 (1-2')	111	48*	119	160*
460-84965-2	SB-17 (11-12')	82	92	80	95
460-84965-3	SB-18 (1-2')	80	92	79	93
460-84965-4	SB-18 (12-13')	78	89	76	91
460-84965-5	SB-6 (1-2')	79	104*	80	104
460-84965-6	SB-6 (10-11')	80	98	81	97
460-84965-7	SB-12 (1-2')	99	91	98	98
460-84965-8	SB-12 (11-12')	81	92	78	92
MB 460-257988/6		74	85	75	94
MB 460-258257/7		98	93	99	100
LB3 460-257683/1-A		79	92	79	98
LCS 460-257988/3		104	84	104	98
LCS 460-258257/4		95	94	95	99
LCSD 460-257988/4		97	80	98	92
LCSD 460-258257/5		100	97	100	102

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	70-130
BFB = 4-Bromofluorobenzene	70-130
DBFM = Dibromofluoromethane (Surr)	70-130
TOL = Toluene-d8 (Surr)	70-130

Client: AKRF Inc

Job Number: 460-84965-1

Surrogate Recovery Report

8260C Volatile Organic Compounds by GC/MS

Client Matrix: Water

Lab Sample ID	Client Sample ID	DCA %Rec	BFB %Rec	DBFM %Rec	TOL %Rec
460-84965-9	TB	102	99	101	101
MB 460-257917/6		102	99	102	101
LCS 460-257917/3		97	99	99	98
LCSD 460-257917/4		101	102	103	100

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	70-130
BFB = 4-Bromofluorobenzene	64-135
DBFM = Dibromofluoromethane (Surr)	72-137
TOL = Toluene-d8 (Surr)	70-130

Client: AKRF Inc

Job Number: 460-84965-1

Surrogate Recovery Report

8270D Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	NBZ %Rec	PHL %Rec	TPH %Rec	TBP %Rec	2FP %Rec	FBP %Rec
460-84965-1	SB-17 (1-2')	56	53	62	49	52	61
460-84965-2	SB-17 (11-12')	48	43	49	46	42	65
460-84965-3	SB-18 (1-2')	60	55	65	37	52	67
460-84965-4	SB-18 (12-13')	65	67	79	77	64	81
460-84965-5	SB-6 (1-2')	50	48	58	43	44	57
460-84965-6	SB-6 (10-11')	58	56	67	52	51	70
460-84965-7	SB-12 (1-2')	62	60	64	56	56	64
460-84965-8	SB-12 (11-12')	45	41	53	11	26*	51
MB 460-257808/1-A		76	80	91	92	76	75
LCS 460-257808/2-A		78	79	84	93	76	83
LCS 460-257808/20-A		75	77	84	92	74	74
460-84965-3 MS	SB-18 (1-2') MS	54	50	64	34	43	61
460-84965-3 MSD	SB-18 (1-2') MSD	55	51	63	34	44	62

Surrogate	Acceptance Limits
NBZ = Nitrobenzene-d5 (Surr)	38-105
PHL = Phenol-d5 (Surr)	41-118
TPH = Terphenyl-d14 (Surr)	16-151
TBP = 2,4,6-Tribromophenol (Surr)	10-120
2FP = 2-Fluorophenol (Surr)	37-125
FBP = 2-Fluorobiphenyl	40-109

Client: AKRF Inc

Job Number: 460-84965-1

Surrogate Recovery Report

8081B Organochlorine Pesticides (GC)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	DCB1 %Rec	DCB2 %Rec	TCX1 %Rec	TCX2 %Rec
460-84965-1	SB-17 (1-2')	107	119	104	111
460-84965-2	SB-17 (11-12')	107	127	112	114
460-84965-3	SB-18 (1-2')	102	119	107	111
460-84965-4	SB-18 (12-13')	106	113	111	107
460-84965-5	SB-6 (1-2')	111	130	107	115
460-84965-6	SB-6 (10-11')	108	120	107	110
460-84965-7	SB-12 (1-2')	100	115	99	111
460-84965-8	SB-12 (11-12')	117	124	121	118
MB 460-257732/1-A		94	93	86	84
LCS 460-257732/2-A		95	93	94	85
460-84805-A-1-B MS		98	118	112	102
460-84805-A-1-C MSD		104	127	122	112

Surrogate	Acceptance Limits
DCB = DCB Decachlorobiphenyl	76-149
TCX = Tetrachloro-m-xylene	72-136

Client: AKRF Inc

Job Number: 460-84965-1

Surrogate Recovery Report

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Matrix: Solid

Lab Sample ID	Client Sample ID	DCB1 %Rec	DCB2 %Rec
460-84965-1	SB-17 (1-2')	109	110
460-84965-2	SB-17 (11-12')	113	113
460-84965-3	SB-18 (1-2')	107	113
460-84965-4	SB-18 (12-13')	131	116
460-84965-5	SB-6 (1-2')	122	121
460-84965-6	SB-6 (10-11')	118	114
460-84965-7	SB-12 (1-2')	112	113
460-84965-8	SB-12 (11-12')	117	111
MB 460-257735/1-A		117	107
LCS 460-257735/2-A		120	111
460-84873-A-11-C MS		109	117
460-84873-A-11-D MSD		110	118

Surrogate	Acceptance Limits
DCB = DCB Decachlorobiphenyl	53-150

Client: AKRF Inc

Job Number: 460-84965-1

Neutral Leach or MeOH Extraction Blank - Batch: 460-257683

Method: 8260C
Preparation: 5035

Lab Sample ID:	LB3 460-257683/1-A	Analysis Batch:	460-257988	Instrument ID:	CVOAMS4
Client Matrix:	Solid	Prep Batch:	460-257683	Lab File ID:	D5450.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	10/24/2014 0657	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	10/22/2014 1911				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.13	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.090	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	0.11	1.0
1,1,2-Trichloroethane	1.0	U	0.14	1.0
1,1-Dichloroethane	1.0	U	0.11	1.0
1,1-Dichloroethene	1.0	U	0.19	1.0
1,2,3-Trichlorobenzene	1.0	U	0.16	1.0
1,2,4-Trichlorobenzene	1.0	U	0.19	1.0
1,2-Dichloropropane	1.0	U	0.15	1.0
1,3-Dichlorobenzene	1.0	U	0.16	1.0
1,4-Dichlorobenzene	1.0	U	0.11	1.0
1,4-Dioxane	20	U	13	20
2-Butanone (MEK)	5.0	U	0.63	5.0
2-Hexanone	5.0	U	0.13	5.0
4-Methyl-2-pentanone (MIBK)	5.0	U	0.20	5.0
Acetone	3.49	J	1.7	5.0
Benzene	1.0	U	0.15	1.0
Bromoform	1.0	U	0.17	1.0
Bromomethane	1.0	U	0.43	1.0
Carbon disulfide	1.0	U	0.15	1.0
Carbon tetrachloride	1.0	U	0.15	1.0
Chlorobenzene	1.0	U	0.18	1.0
Chlorobromomethane	1.0	U	0.11	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	0.33	1.0
Chloroform	1.0	U	0.24	1.0
Chloromethane	1.0	U	0.16	1.0
cis-1,2-Dichloroethene	1.0	U	0.11	1.0
cis-1,3-Dichloropropene	1.0	U	0.14	1.0
Cyclohexane	1.0	U	0.13	1.0
Dichlorobromomethane	1.0	U	0.32	1.0
Dichlorodifluoromethane	1.0	U	0.22	1.0
Ethylbenzene	1.0	U	0.17	1.0
Ethylene Dibromide	1.0	U	0.15	1.0
Isopropylbenzene	1.0	U	0.11	1.0
Methyl acetate	5.0	U	0.32	5.0
Methyl tert-butyl ether	1.0	U	0.11	1.0
Methylcyclohexane	1.0	U	0.10	1.0
Methylene Chloride	0.279	J	0.15	1.0
m-Xylene & p-Xylene	1.0	U	0.59	1.0
o-Xylene	1.0	U	0.19	1.0
Styrene	1.0	U	0.28	1.0
Tetrachloroethene	1.0	U	0.12	1.0
Toluene	1.0	U	0.14	1.0
trans-1,2-Dichloroethene	1.0	U	0.13	1.0

Client: AKRF Inc

Job Number: 460-84965-1

Neutral Leach or MeOH Extraction Blank - Batch: 460-257683

Method: 8260C
Preparation: 5035

Lab Sample ID:	LB3 460-257683/1-A	Analysis Batch:	460-257988	Instrument ID:	CVOAMS4
Client Matrix:	Solid	Prep Batch:	460-257683	Lab File ID:	D5450.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	10/24/2014 0657	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	10/22/2014 1911				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
trans-1,3-Dichloropropene	1.0	U	0.10	1.0
Trichloroethene	1.0	U	0.12	1.0
Trichlorofluoromethane	1.0	U	0.16	1.0
Vinyl chloride	1.0	U	0.34	1.0
1,2-Dichloroethane	1.0	U	0.18	1.0
1,2-Dichlorobenzene	1.0	U	0.10	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	79	70 - 130
4-Bromofluorobenzene	92	70 - 130
Dibromofluoromethane (Surr)	79	70 - 130
Toluene-d8 (Surr)	98	70 - 130

Method Blank TICs- Batch: 460-257683

Cas Number	Analyte	RT	Est. Result (ug/K	Qual
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-84965-1

Method Blank - Batch: 460-257917

Method: 8260C
Preparation: 5030C

Lab Sample ID:	MB 460-257917/6	Analysis Batch:	460-257917	Instrument ID:	CVOAMS5
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E34492.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/23/2014 2216	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	10/23/2014 2216				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.060	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.16	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	0.080	1.0
1,1,2-Trichloroethane	1.0	U	0.19	1.0
1,1-Dichloroethane	1.0	U	0.13	1.0
1,1-Dichloroethene	1.0	U	0.090	1.0
1,2,3-Trichlorobenzene	1.0	U	0.51	1.0
1,2,4-Trichlorobenzene	1.0	U	0.34	1.0
1,2-Dichloropropane	1.0	U	0.090	1.0
1,3-Dichlorobenzene	1.0	U	0.14	1.0
1,4-Dichlorobenzene	1.0	U	0.23	1.0
1,4-Dioxane	50	U	36	50
2-Butanone (MEK)	5.0	U	2.3	5.0
2-Hexanone	5.0	U	0.50	5.0
4-Methyl-2-pentanone (MIBK)	5.0	U	0.99	5.0
Acetone	5.0	U	2.7	5.0
Benzene	1.0	U	0.080	1.0
Bromoform	1.0	U	0.19	1.0
Bromomethane	1.0	U	0.18	1.0
Carbon disulfide	1.0	U	0.13	1.0
Carbon tetrachloride	1.0	U	0.060	1.0
Chlorobenzene	1.0	U	0.11	1.0
Chlorobromomethane	1.0	U	0.27	1.0
Chlorodibromomethane	1.0	U	0.20	1.0
Chloroethane	1.0	U	0.17	1.0
Chloroform	1.0	U	0.080	1.0
Chloromethane	1.0	U	0.10	1.0
cis-1,2-Dichloroethene	1.0	U	0.18	1.0
cis-1,3-Dichloropropene	1.0	U	0.18	1.0
Cyclohexane	1.0	U	0.16	1.0
Dichlorobromomethane	1.0	U	0.12	1.0
Dichlorodifluoromethane	1.0	U	0.22	1.0
Ethylbenzene	1.0	U	0.10	1.0
Ethylene Dibromide	1.0	U	0.28	1.0
Isopropylbenzene	1.0	U	0.080	1.0
Methyl acetate	5.0	U	0.34	5.0
Methyl tert-butyl ether	1.0	U	0.14	1.0
Methylcyclohexane	1.0	U	0.14	1.0
Methylene Chloride	1.0	U	0.18	1.0
m-Xylene & p-Xylene	1.0	U	0.25	1.0
o-Xylene	1.0	U	0.13	1.0
Styrene	1.0	U	0.12	1.0
Tetrachloroethene	1.0	U	0.10	1.0
Toluene	1.0	U	0.15	1.0
trans-1,2-Dichloroethene	1.0	U	0.13	1.0

Client: AKRF Inc

Job Number: 460-84965-1

Method Blank - Batch: 460-257917

Method: 8260C
Preparation: 5030C

Lab Sample ID:	MB 460-257917/6	Analysis Batch:	460-257917	Instrument ID:	CVOAMS5
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E34492.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/23/2014 2216	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	10/23/2014 2216				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
trans-1,3-Dichloropropene	1.0	U	0.24	1.0
Trichloroethene	1.0	U	0.090	1.0
Trichlorofluoromethane	1.0	U	0.15	1.0
Vinyl chloride	1.0	U	0.14	1.0
1,2-Dichloroethane	1.0	U	0.19	1.0
1,2-Dichlorobenzene	1.0	U	0.21	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.40	1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	102	70 - 130
4-Bromofluorobenzene	99	64 - 135
Dibromofluoromethane (Surr)	102	72 - 137
Toluene-d8 (Surr)	101	70 - 130

Method Blank TICs- Batch: 460-257917

Cas Number	Analyte	RT	Est. Result (ug/L	Qual
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-84965-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 460-257917

Method: 8260C
Preparation: 5030C

LCS Lab Sample ID:	LCS 460-257917/3	Analysis Batch:	460-257917	Instrument ID:	CVOAMS5
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E34489.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/23/2014 2101	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	10/23/2014 2101				5 mL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 460-257917/4	Analysis Batch:	460-257917	Instrument ID:	CVOAMS5
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E34490.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/23/2014 2126	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	10/23/2014 2126				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
1,1,1-Trichloroethane	99	97	73 - 134	2	30		
1,1,2,2-Tetrachloroethane	116	116	55 - 133	0	30		
1,1,2-Trichloro-1,2,2-trifluoroethane	107	102	60 - 144	5	30		
1,1,2-Trichloroethane	113	109	68 - 121	3	30		
1,1-Dichloroethane	109	110	75 - 126	2	30		
1,1-Dichloroethene	98	94	71 - 123	5	30		
1,2,3-Trichlorobenzene	93	97	72 - 135	4	30		
1,2,4-Trichlorobenzene	101	101	76 - 129	1	30		
1,2-Dichloropropane	106	104	70 - 120	1	30		
1,3-Dichlorobenzene	101	99	75 - 120	2	30		
1,4-Dichlorobenzene	94	96	75 - 120	2	30		
1,4-Dioxane	103	105	46 - 150	2	30		
2-Butanone (MEK)	81	82	52 - 140	1	30		
2-Hexanone	111	115	49 - 131	4	30		
4-Methyl-2-pentanone (MIBK)	117	121	56 - 132	3	30		
Acetone	106	104	26 - 150	1	30		
Benzene	100	103	69 - 125	3	30		
Bromoform	89	91	50 - 134	2	30		
Bromomethane	53	57	27 - 150	7	30		
Carbon disulfide	102	100	61 - 126	2	30		
Carbon tetrachloride	96	97	58 - 150	2	30		
Chlorobenzene	93	95	77 - 120	3	30		
Chlorobromomethane	104	100	70 - 134	5	30		
Chlorodibromomethane	97	100	63 - 131	3	30		
Chloroethane	110	111	58 - 145	1	30		
Chloroform	99	100	81 - 122	2	30		
Chloromethane	110	114	43 - 145	3	30		
cis-1,2-Dichloroethene	102	104	78 - 121	3	30		
cis-1,3-Dichloropropene	108	111	71 - 120	3	30		
Cyclohexane	103	100	62 - 135	3	30		
Dichlorobromomethane	103	102	72 - 123	1	30		
Dichlorodifluoromethane	102	98	40 - 150	4	30		
Ethylbenzene	96	97	74 - 120	1	30		
Ethylene Dibromide	104	108	77 - 117	4	30		
Isopropylbenzene	98	101	74 - 127	2	30		

Client: AKRF Inc

Job Number: 460-84965-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 460-257917

Method: 8260C
Preparation: 5030C

LCS Lab Sample ID:	LCS 460-257917/3	Analysis Batch:	460-257917	Instrument ID:	CVOAMS5
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E34489.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/23/2014 2101	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	10/23/2014 2101				5 mL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 460-257917/4	Analysis Batch:	460-257917	Instrument ID:	CVOAMS5
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E34490.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/23/2014 2126	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	10/23/2014 2126				5 mL
Leach Date:	N/A				

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Methyl acetate	104	96	62 - 140	8	30		
Methyl tert-butyl ether	101	103	73 - 125	2	30		
Methylcyclohexane	114	112	64 - 136	2	30		
Methylene Chloride	95	104	76 - 123	9	30		
m-Xylene & p-Xylene	95	94	78 - 119	1	30		
o-Xylene	94	96	79 - 120	2	30		
Styrene	97	99	76 - 120	2	30		
Tetrachloroethene	90	94	70 - 136	5	30		
Toluene	89	93	78 - 120	4	30		
trans-1,2-Dichloroethene	101	103	79 - 120	2	30		
trans-1,3-Dichloropropene	106	119	71 - 123	12	30		
Trichloroethene	96	99	74 - 120	2	30		
Trichlorofluoromethane	97	99	65 - 142	2	30		
Vinyl chloride	108	108	56 - 137	0	30		
1,2-Dichloroethane	95	96	75 - 127	0	30		
1,2-Dichlorobenzene	98	102	81 - 120	4	30		
1,2-Dibromo-3-Chloropropane	97	103	53 - 136	6	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	97	101	70 - 130
4-Bromofluorobenzene	99	102	64 - 135
Dibromofluoromethane (Surr)	99	103	72 - 137
Toluene-d8 (Surr)	98	100	70 - 130

Client: AKRF Inc

Job Number: 460-84965-1

Method Blank - Batch: 460-257988

Method: 8260C
Preparation: N/A

Lab Sample ID:	MB 460-257988/6	Analysis Batch:	460-257988	Instrument ID:	CVOAMS4
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	D5444.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/24/2014 0427	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.13	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.090	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	0.11	1.0
1,1,2-Trichloroethane	1.0	U	0.14	1.0
1,1-Dichloroethane	1.0	U	0.11	1.0
1,1-Dichloroethene	1.0	U	0.19	1.0
1,2,3-Trichlorobenzene	1.0	U	0.16	1.0
1,2,4-Trichlorobenzene	1.0	U	0.19	1.0
1,2-Dichloropropane	1.0	U	0.15	1.0
1,3-Dichlorobenzene	1.0	U	0.16	1.0
1,4-Dichlorobenzene	1.0	U	0.11	1.0
1,4-Dioxane	20	U	13	20
2-Butanone (MEK)	5.0	U	0.63	5.0
2-Hexanone	5.0	U	0.13	5.0
4-Methyl-2-pentanone (MIBK)	5.0	U	0.20	5.0
Acetone	4.46	J	1.7	5.0
Benzene	1.0	U	0.15	1.0
Bromoform	1.0	U	0.17	1.0
Bromomethane	1.0	U	0.43	1.0
Carbon disulfide	1.0	U	0.15	1.0
Carbon tetrachloride	1.0	U	0.15	1.0
Chlorobenzene	1.0	U	0.18	1.0
Chlorobromomethane	1.0	U	0.11	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	0.33	1.0
Chloroform	1.0	U	0.24	1.0
Chloromethane	1.0	U	0.16	1.0
cis-1,2-Dichloroethene	1.0	U	0.11	1.0
cis-1,3-Dichloropropene	1.0	U	0.14	1.0
Cyclohexane	1.0	U	0.13	1.0
Dichlorobromomethane	1.0	U	0.32	1.0
Dichlorodifluoromethane	1.0	U	0.22	1.0
Ethylbenzene	1.0	U	0.17	1.0
Ethylene Dibromide	1.0	U	0.15	1.0
Isopropylbenzene	1.0	U	0.11	1.0
Methyl acetate	5.0	U	0.32	5.0
Methyl tert-butyl ether	1.0	U	0.11	1.0
Methylcyclohexane	1.0	U	0.10	1.0
Methylene Chloride	1.0	U	0.15	1.0
m-Xylene & p-Xylene	1.0	U	0.59	1.0
o-Xylene	1.0	U	0.19	1.0
Styrene	1.0	U	0.28	1.0
Tetrachloroethene	1.0	U	0.12	1.0
Toluene	1.0	U	0.14	1.0
trans-1,2-Dichloroethene	1.0	U	0.13	1.0

Client: AKRF Inc

Job Number: 460-84965-1

Method Blank - Batch: 460-257988

Method: 8260C
Preparation: N/A

Lab Sample ID:	MB 460-257988/6	Analysis Batch:	460-257988	Instrument ID:	CVOAMS4
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	D5444.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/24/2014 0427	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
trans-1,3-Dichloropropene	1.0	U	0.10	1.0
Trichloroethene	1.0	U	0.12	1.0
Trichlorofluoromethane	1.0	U	0.16	1.0
Vinyl chloride	1.0	U	0.34	1.0
1,2-Dichloroethane	1.0	U	0.18	1.0
1,2-Dichlorobenzene	1.0	U	0.10	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	74	70 - 130
4-Bromofluorobenzene	85	70 - 130
Dibromofluoromethane (Surr)	75	70 - 130
Toluene-d8 (Surr)	94	70 - 130

Method Blank TICs- Batch: 460-257988

Cas Number	Analyte	RT	Est. Result (ug/K	Qual
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-84965-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 460-257988

Method: 8260C
Preparation: N/A

LCS Lab Sample ID:	LCS 460-257988/3	Analysis Batch:	460-257988	Instrument ID:	CVOAMS4
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	D5441.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/24/2014 0257	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				5 mL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 460-257988/4	Analysis Batch:	460-257988	Instrument ID:	CVOAMS4
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	D5442.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/24/2014 0327	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
1,1,1-Trichloroethane	103	99	82 - 129	4	30		
1,1,2,2-Tetrachloroethane	92	89	66 - 121	2	30		
1,1,2-Trichloro-1,2,2-trifluoroethane	105	92	73 - 134	13	30		
1,1,2-Trichloroethane	91	91	74 - 116	0	30		
1,1-Dichloroethane	106	102	78 - 125	4	30		
1,1-Dichloroethene	106	100	74 - 128	6	30		
1,2,3-Trichlorobenzene	88	85	81 - 123	4	30		
1,2,4-Trichlorobenzene	92	88	81 - 127	5	30		
1,2-Dichloropropane	100	98	72 - 123	2	30		
1,3-Dichlorobenzene	85	81	78 - 120	4	30		
1,4-Dichlorobenzene	85	82	77 - 120	4	30		
1,4-Dioxane	110	105	69 - 142	5	30		
2-Butanone (MEK)	72	73	58 - 140	1	30		
2-Hexanone	93	91	52 - 134	3	30		
4-Methyl-2-pentanone (MIBK)	103	100	55 - 133	3	30		
Acetone	111	113	58 - 139	2	30		
Benzene	98	93	75 - 123	5	30		
Bromoform	73	70	70 - 130	3	30		
Bromomethane	106	107	62 - 150	0	30		
Carbon disulfide	109	101	73 - 127	7	30		
Carbon tetrachloride	107	98	77 - 137	8	30		
Chlorobenzene	89	86	80 - 120	3	30		
Chlorobromomethane	98	95	82 - 127	3	30		
Chlorodibromomethane	87	83	74 - 124	6	30		
Chloroethane	103	101	60 - 140	2	30		
Chloroform	103	97	77 - 122	6	30		
Chloromethane	101	100	48 - 144	0	30		
cis-1,2-Dichloroethene	102	96	82 - 121	6	30		
cis-1,3-Dichloropropene	94	88	75 - 119	6	30		
Cyclohexane	109	103	66 - 128	6	30		
Dichlorobromomethane	93	90	77 - 122	4	30		
Dichlorodifluoromethane	96	94	52 - 145	1	30		
Ethylbenzene	93	88	80 - 120	5	30		
Ethylene Dibromide	88	86	78 - 117	2	30		
Isopropylbenzene	106	100	80 - 120	6	30		

Client: AKRF Inc

Job Number: 460-84965-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 460-257988

Method: 8260C
Preparation: N/A

LCS Lab Sample ID:	LCS 460-257988/3	Analysis Batch:	460-257988	Instrument ID:	CVOAMS4
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	D5441.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/24/2014 0257	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				5 mL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 460-257988/4	Analysis Batch:	460-257988	Instrument ID:	CVOAMS4
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	D5442.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/24/2014 0327	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				5 mL
Leach Date:	N/A				

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Methyl acetate	106	100	61 - 137	6	30		
Methyl tert-butyl ether	99	97	75 - 124	1	30		
Methylcyclohexane	109	105	80 - 125	4	30		
Methylene Chloride	107	101	75 - 124	6	30		
m-Xylene & p-Xylene	94	89	79 - 120	5	30		
o-Xylene	100	96	77 - 120	4	30		
Styrene	92	88	78 - 120	4	30		
Tetrachloroethene	89	85	80 - 127	5	30		
Toluene	95	89	82 - 117	6	30		
trans-1,2-Dichloroethene	102	97	83 - 124	6	30		
trans-1,3-Dichloropropene	86	83	74 - 119	4	30		
Trichloroethene	99	94	78 - 122	6	30		
Trichlorofluoromethane	92	87	63 - 147	6	30		
Vinyl chloride	108	114	62 - 132	5	30		
1,2-Dichloroethane	104	100	79 - 120	4	30		
1,2-Dichlorobenzene	89	83	77 - 120	7	30		
1,2-Dibromo-3-Chloropropane	77	75	61 - 125	3	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	104	97	70 - 130
4-Bromofluorobenzene	84	80	70 - 130
Dibromofluoromethane (Surr)	104	98	70 - 130
Toluene-d8 (Surr)	98	92	70 - 130

Client: AKRF Inc

Job Number: 460-84965-1

Method Blank - Batch: 460-258257

Method: 8260C
Preparation: N/A

Lab Sample ID:	MB 460-258257/7	Analysis Batch:	460-258257	Instrument ID:	CVOAMS9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	K33330.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/25/2014 1222	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.13	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.090	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	0.11	1.0
1,1,2-Trichloroethane	1.0	U	0.14	1.0
1,1-Dichloroethane	1.0	U	0.11	1.0
1,1-Dichloroethene	1.0	U	0.19	1.0
1,2,3-Trichlorobenzene	1.0	U	0.16	1.0
1,2,4-Trichlorobenzene	1.0	U	0.19	1.0
1,2-Dichloropropane	1.0	U	0.15	1.0
1,3-Dichlorobenzene	1.0	U	0.16	1.0
1,4-Dichlorobenzene	1.0	U	0.11	1.0
1,4-Dioxane	20	U	13	20
2-Butanone (MEK)	5.0	U	0.63	5.0
2-Hexanone	5.0	U	0.13	5.0
4-Methyl-2-pentanone (MIBK)	5.0	U	0.20	5.0
Acetone	5.0	U	1.7	5.0
Benzene	1.0	U	0.15	1.0
Bromoform	1.0	U	0.17	1.0
Bromomethane	1.0	U	0.43	1.0
Carbon disulfide	1.0	U	0.15	1.0
Carbon tetrachloride	1.0	U	0.15	1.0
Chlorobenzene	1.0	U	0.18	1.0
Chlorobromomethane	1.0	U	0.11	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	0.33	1.0
Chloroform	1.0	U	0.24	1.0
Chloromethane	1.0	U	0.16	1.0
cis-1,2-Dichloroethene	1.0	U	0.11	1.0
cis-1,3-Dichloropropene	1.0	U	0.14	1.0
Cyclohexane	1.0	U	0.13	1.0
Dichlorobromomethane	1.0	U	0.32	1.0
Dichlorodifluoromethane	1.0	U	0.22	1.0
Ethylbenzene	1.0	U	0.17	1.0
Ethylene Dibromide	1.0	U	0.15	1.0
Isopropylbenzene	1.0	U	0.11	1.0
Methyl acetate	5.0	U	0.32	5.0
Methyl tert-butyl ether	1.0	U	0.11	1.0
Methylcyclohexane	1.0	U	0.10	1.0
Methylene Chloride	1.0	U	0.15	1.0
m-Xylene & p-Xylene	1.0	U	0.59	1.0
o-Xylene	1.0	U	0.19	1.0
Styrene	1.0	U	0.28	1.0
Tetrachloroethene	1.0	U	0.12	1.0
Toluene	1.0	U	0.14	1.0
trans-1,2-Dichloroethene	1.0	U	0.13	1.0

Client: AKRF Inc

Job Number: 460-84965-1

Method Blank - Batch: 460-258257

Method: 8260C
Preparation: N/A

Lab Sample ID:	MB 460-258257/7	Analysis Batch:	460-258257	Instrument ID:	CVOAMS9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	K33330.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/25/2014 1222	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
trans-1,3-Dichloropropene	1.0	U	0.10	1.0
Trichloroethene	1.0	U	0.12	1.0
Trichlorofluoromethane	1.0	U	0.16	1.0
Vinyl chloride	1.0	U	0.34	1.0
1,2-Dichloroethane	1.0	U	0.18	1.0
1,2-Dichlorobenzene	1.0	U	0.10	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	98	70 - 130
4-Bromofluorobenzene	93	70 - 130
Dibromofluoromethane (Surr)	99	70 - 130
Toluene-d8 (Surr)	100	70 - 130

Method Blank TICs- Batch: 460-258257

Cas Number	Analyte	RT	Est. Result (ug/K	Qual
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-84965-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 460-258257

Method: 8260C
Preparation: N/A

LCS Lab Sample ID:	LCS 460-258257/4	Analysis Batch:	460-258257	Instrument ID:	CVOAMS9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	K33327.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/25/2014 1038	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				5 mL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 460-258257/5	Analysis Batch:	460-258257	Instrument ID:	CVOAMS9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	K33328.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/25/2014 1122	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
1,1,1-Trichloroethane	94	98	82 - 129	3	30		
1,1,2,2-Tetrachloroethane	76	81	66 - 121	6	30		
1,1,2-Trichloro-1,2,2-trifluoroethane	100	93	73 - 134	7	30		
1,1,2-Trichloroethane	88	93	74 - 116	5	30		
1,1-Dichloroethane	84	86	78 - 125	1	30		
1,1-Dichloroethene	99	104	74 - 128	5	30		
1,2,3-Trichlorobenzene	96	97	81 - 123	1	30		
1,2,4-Trichlorobenzene	98	97	81 - 127	1	30		
1,2-Dichloropropane	90	94	72 - 123	5	30		
1,3-Dichlorobenzene	95	92	78 - 120	4	30		
1,4-Dichlorobenzene	92	91	77 - 120	1	30		
1,4-Dioxane	107	105	69 - 142	1	30		
2-Butanone (MEK)	75	69	58 - 140	8	30		
2-Hexanone	92	107	52 - 134	16	30		
4-Methyl-2-pentanone (MIBK)	93	107	55 - 133	13	30		
Acetone	103	100	58 - 139	3	30		
Benzene	96	97	75 - 123	1	30		
Bromoform	84	91	70 - 130	9	30		
Bromomethane	108	112	62 - 150	4	30		
Carbon disulfide	107	105	73 - 127	2	30		
Carbon tetrachloride	94	100	77 - 137	7	30		
Chlorobenzene	91	92	80 - 120	1	30		
Chlorobromomethane	90	89	82 - 127	1	30		
Chlorodibromomethane	90	95	74 - 124	5	30		
Chloroethane	109	112	60 - 140	2	30		
Chloroform	92	95	77 - 122	3	30		
Chloromethane	94	103	48 - 144	8	30		
cis-1,2-Dichloroethene	85	89	82 - 121	4	30		
cis-1,3-Dichloropropene	96	98	75 - 119	2	30		
Cyclohexane	90	92	66 - 128	1	30		
Dichlorobromomethane	91	94	77 - 122	4	30		
Dichlorodifluoromethane	104	108	52 - 145	3	30		
Ethylbenzene	92	93	80 - 120	1	30		
Ethylene Dibromide	89	98	78 - 117	9	30		
Isopropylbenzene	96	96	80 - 120	0	30		

Client: AKRF Inc

Job Number: 460-84965-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 460-258257

Method: 8260C
Preparation: N/A

LCS Lab Sample ID:	LCS 460-258257/4	Analysis Batch:	460-258257	Instrument ID:	CVOAMS9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	K33327.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/25/2014 1038	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				5 mL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 460-258257/5	Analysis Batch:	460-258257	Instrument ID:	CVOAMS9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	K33328.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/25/2014 1122	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				5 mL
Leach Date:	N/A				

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Methyl acetate	97	84	61 - 137	15	30		
Methyl tert-butyl ether	86	91	75 - 124	6	30		
Methylcyclohexane	97	98	80 - 125	1	30		
Methylene Chloride	84	84	75 - 124	0	30		
m-Xylene & p-Xylene	96	97	79 - 120	1	30		
o-Xylene	92	95	77 - 120	3	30		
Styrene	94	95	78 - 120	1	30		
Tetrachloroethene	95	94	80 - 127	0	30		
Toluene	95	96	82 - 117	1	30		
trans-1,2-Dichloroethene	87	86	83 - 124	0	30		
trans-1,3-Dichloropropene	88	94	74 - 119	7	30		
Trichloroethene	95	94	78 - 122	1	30		
Trichlorofluoromethane	109	116	63 - 147	6	30		
Vinyl chloride	103	111	62 - 132	8	30		
1,2-Dichloroethane	90	95	79 - 120	5	30		
1,2-Dichlorobenzene	95	94	77 - 120	1	30		
1,2-Dibromo-3-Chloropropane	95	107	61 - 125	11	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	95	100	70 - 130
4-Bromofluorobenzene	94	97	70 - 130
Dibromofluoromethane (Surr)	95	100	70 - 130
Toluene-d8 (Surr)	99	102	70 - 130

Client: AKRF Inc

Job Number: 460-84965-1

Method Blank - Batch: 460-257808

Method: 8270D
Preparation: 3546

Lab Sample ID:	MB 460-257808/1-A	Analysis Batch:	460-257956	Instrument ID:	CBNAMS5
Client Matrix:	Solid	Prep Batch:	460-257808	Lab File ID:	x6156.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0094 g
Analysis Date:	10/24/2014 0453	Units:	ug/Kg	Final Weight/Volume:	1 mL
Prep Date:	10/23/2014 1008			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Phenol	330	U	11	330
2-Chlorophenol	330	U	8.4	330
2-Methylphenol	330	U	14	330
4-Methylphenol	330	U	9.0	330
2-Nitrophenol	330	U	11	330
2,4-Dimethylphenol	330	U	73	330
2,4-Dichlorophenol	330	U	7.8	330
4-Chloro-3-methylphenol	330	U	14	330
2,4,6-Trichlorophenol	130	U	9.4	130
2,4,5-Trichlorophenol	330	U	33	330
2,4-Dinitrotoluene	67	U	13	67
4-Nitrophenol	670	U	160	670
4,6-Dinitro-2-methylphenol	270	U	88	270
Pentachlorophenol	270	U	40	270
Bis(2-chloroethyl)ether	33	U	7.8	33
N-Nitrosodi-n-propylamine	33	U	11	33
Hexachloroethane	33	U	12	33
Nitrobenzene	33	U	10	33
Isophorone	130	U	7.1	130
Naphthalene	330	U	8.4	330
4-Chloroaniline	330	U	8.5	330
Hexachlorobutadiene	67	U	9.3	67
2-Methylnaphthalene	330	U	7.3	330
Hexachlorocyclopentadiene	330	U	21	330
2-Chloronaphthalene	330	U	7.5	330
2-Nitroaniline	330	U	11	330
Dimethyl phthalate	330	U	9.6	330
Acenaphthylene	330	U	8.5	330
2,6-Dinitrotoluene	67	U	18	67
3-Nitroaniline	330	U	9.8	330
Acenaphthene	330	U	8.0	330
Dibenzofuran	330	U	10	330
2,4-Dinitrophenol	270	U	250	270
Diethyl phthalate	330	U	9.4	330
4-Chlorophenyl phenyl ether	330	U	9.9	330
Fluorene	330	U	7.2	330
4-Nitroaniline	330	U	12	330
N-Nitrosodiphenylamine	330	U	30	330
4-Bromophenyl phenyl ether	330	U	10	330
Hexachlorobenzene	33	U	13	33
Phenanthrene	330	U	8.8	330
Anthracene	330	U	31	330
Carbazole	330	U	8.2	330
Di-n-butyl phthalate	330	U	9.9	330
Fluoranthene	330	U	9.8	330

Client: AKRF Inc

Job Number: 460-84965-1

Method Blank - Batch: 460-257808

Method: 8270D
Preparation: 3546

Lab Sample ID:	MB 460-257808/1-A	Analysis Batch:	460-257956	Instrument ID:	CBNAMS5
Client Matrix:	Solid	Prep Batch:	460-257808	Lab File ID:	x6156.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0094 g
Analysis Date:	10/24/2014 0453	Units:	ug/Kg	Final Weight/Volume:	1 mL
Prep Date:	10/23/2014 1008			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Pyrene	330	U	15	330
Butyl benzyl phthalate	330	U	10	330
Benzo[a]anthracene	33	U	28	33
Chrysene	330	U	9.0	330
Bis(2-ethylhexyl) phthalate	330	U	13	330
Di-n-octyl phthalate	330	U	17	330
Benzo[b]fluoranthene	33	U	13	33
Benzo[k]fluoranthene	33	U	14	33
Benzo[a]pyrene	33	U	10	33
Indeno[1,2,3-cd]pyrene	33	U	22	33
Dibenz(a,h)anthracene	33	U	17	33
Benzo[g,h,i]perylene	330	U	19	330
1,1'-Biphenyl	330	U	28	330
Acetophenone	330	U	7.2	330
Benzaldehyde	330	U	25	330
Caprolactam	330	U	24	330
Atrazine	130	U	15	130
2,2'-oxybis[1-chloropropane]	330	U	14	330
1,2,4,5-Tetrachlorobenzene	330	U	25	330
2,3,4,6-Tetrachlorophenol	330	U	31	330
3,3'-Dichlorobenzidine	130	U	37	130
Bis(2-chloroethoxy)methane	330	U	10	330

Surrogate	% Rec	Acceptance Limits
Nitrobenzene-d5 (Surr)	76	38 - 105
Phenol-d5 (Surr)	80	41 - 118
Terphenyl-d14 (Surr)	91	16 - 151
2,4,6-Tribromophenol (Surr)	92	10 - 120
2-Fluorophenol (Surr)	76	37 - 125
2-Fluorobiphenyl	75	40 - 109

Method Blank TICs- Batch: 460-257808

Cas Number	Analyte	RT	Est. Result (ug/K	Qual
	Aldol condensation product	3.00	1470	J A
	Aldol condensation product	1.62	2700	J A

Client: AKRF Inc

Job Number: 460-84965-1

Lab Control Sample - Batch: 460-257808

Method: 8270D
Preparation: 3546

Lab Sample ID:	LCS 460-257808/2-A	Analysis Batch:	460-257956	Instrument ID:	CBNAMS5
Client Matrix:	Solid	Prep Batch:	460-257808	Lab File ID:	x6157.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0030 g
Analysis Date:	10/24/2014 0516	Units:	ug/Kg	Final Weight/Volume:	1 mL
Prep Date:	10/23/2014 1008			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Phenol	3330	2660	80	54 - 115	
2-Chlorophenol	3330	2680	80	56 - 110	
2-Methylphenol	3330	2770	83	54 - 117	
4-Methylphenol	3330	2800	84	47 - 103	
2-Nitrophenol	3330	2790	84	55 - 101	
2,4-Dimethylphenol	3330	2560	77	56 - 112	
2,4-Dichlorophenol	3330	2690	81	58 - 115	
4-Chloro-3-methylphenol	3330	2800	84	55 - 117	
2,4,6-Trichlorophenol	3330	2960	89	53 - 118	
2,4,5-Trichlorophenol	3330	2780	83	50 - 115	
2,4-Dinitrotoluene	3330	3010	90	53 - 110	
4-Nitrophenol	6670	4930	74	45 - 114	
4,6-Dinitro-2-methylphenol	6670	5880	88	10 - 110	
Pentachlorophenol	6670	5640	85	19 - 113	
Bis(2-chloroethyl)ether	3330	2810	84	44 - 101	
N-Nitrosodi-n-propylamine	3330	2940	88	42 - 107	
Hexachloroethane	3330	2700	81	45 - 90	
Nitrobenzene	3330	2610	78	42 - 106	
Isophorone	3330	2680	80	48 - 97	
Naphthalene	3330	2690	81	53 - 94	
4-Chloroaniline	3330	2120	64	10 - 96	
Hexachlorobutadiene	3330	2780	83	45 - 98	
2-Methylnaphthalene	3330	2800	84	51 - 98	
Hexachlorocyclopentadiene	3330	2730	82	24 - 98	
2-Chloronaphthalene	3330	2800	84	51 - 102	
2-Nitroaniline	3330	2700	81	51 - 109	
Dimethyl phthalate	3330	2900	87	52 - 112	
Acenaphthylene	3330	2790	84	51 - 103	
2,6-Dinitrotoluene	3330	2980	89	51 - 115	
3-Nitroaniline	3330	2100	63	32 - 104	
Acenaphthene	3330	2750	83	46 - 100	
Dibenzofuran	3330	2830	85	52 - 106	
2,4-Dinitrophenol	6670	5530	83	10 - 129	
Diethyl phthalate	3330	2590	78	52 - 114	
4-Chlorophenyl phenyl ether	3330	2930	88	50 - 106	
Fluorene	3330	3000	90	51 - 108	
4-Nitroaniline	3330	2700	81	45 - 106	
N-Nitrosodiphenylamine	3330	3190	96	49 - 106	
4-Bromophenyl phenyl ether	3330	3040	91	44 - 102	
Hexachlorobenzene	3330	3180	95	43 - 104	
Phenanthrene	3330	2910	87	48 - 108	

Client: AKRF Inc

Job Number: 460-84965-1

Lab Control Sample - Batch: 460-257808

Method: 8270D
Preparation: 3546

Lab Sample ID:	LCS 460-257808/2-A	Analysis Batch:	460-257956	Instrument ID:	CBNAMS5
Client Matrix:	Solid	Prep Batch:	460-257808	Lab File ID:	x6157.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0030 g
Analysis Date:	10/24/2014 0516	Units:	ug/Kg	Final Weight/Volume:	1 mL
Prep Date:	10/23/2014 1008			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Anthracene	3330	2910	87	50 - 107	
Carbazole	3330	2810	84	49 - 104	
Di-n-butyl phthalate	3330	2910	87	50 - 108	
Fluoranthene	3330	2890	87	49 - 108	
Pyrene	3330	2750	83	49 - 116	
Butyl benzyl phthalate	3330	2810	84	49 - 117	
Benzo[a]anthracene	3330	2800	84	46 - 112	
Chrysene	3330	2720	82	45 - 114	
Bis(2-ethylhexyl) phthalate	3330	2830	85	49 - 119	
Di-n-octyl phthalate	3330	2880	86	40 - 106	
Benzo[b]fluoranthene	3330	2980	89	33 - 96	
Benzo[k]fluoranthene	3330	3020	90	35 - 115	
Benzo[a]pyrene	3330	3010	90	36 - 89	*
Indeno[1,2,3-cd]pyrene	3330	2860	86	43 - 109	
Dibenz(a,h)anthracene	3330	2840	85	43 - 107	
Benzo[g,h,i]perylene	3330	2840	85	43 - 106	
1,1'-Biphenyl	3330	2830	85	50 - 105	
Acetophenone	3330	2900	87	40 - 95	
Caprolactam	3330	2410	72	10 - 127	
Atrazine	3330	2670	80	30 - 100	
2,2'-oxybis[1-chloropropane]	3330	2620	79	45 - 102	
1,2,4,5-Tetrachlorobenzene	3330	2840	85	70 - 130	
2,3,4,6-Tetrachlorophenol	3330	2980	89	70 - 130	
3,3'-Dichlorobenzidine	3330	2240	67	24 - 105	
Bis(2-chloroethoxy)methane	3330	2750	82	51 - 100	

Surrogate	% Rec	Acceptance Limits
Nitrobenzene-d5 (Surr)	78	38 - 105
Phenol-d5 (Surr)	79	41 - 118
Terphenyl-d14 (Surr)	84	16 - 151
2,4,6-Tribromophenol (Surr)	93	10 - 120
2-Fluorophenol (Surr)	76	37 - 125
2-Fluorobiphenyl	83	40 - 109

Client: AKRF Inc

Job Number: 460-84965-1

Lab Control Sample - Batch: 460-257808

Method: 8270D
Preparation: 3546

Lab Sample ID:	LCS 460-257808/20-A	Analysis Batch:	460-257956	Instrument ID:	CBNAMS5
Client Matrix:	Solid	Prep Batch:	460-257808	Lab File ID:	x6158.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0067 g
Analysis Date:	10/24/2014 0539	Units:	ug/Kg	Final Weight/Volume:	1 mL
Prep Date:	10/23/2014 1008			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Benzaldehyde	6660	5520	83	10 - 160	

Surrogate	% Rec	Acceptance Limits
Nitrobenzene-d5 (Surr)	75	38 - 105
Phenol-d5 (Surr)	77	41 - 118
Terphenyl-d14 (Surr)	84	16 - 151
2,4,6-Tribromophenol (Surr)	92	10 - 120
2-Fluorophenol (Surr)	74	37 - 125
2-Fluorobiphenyl	74	40 - 109

Client: AKRF Inc

Job Number: 460-84965-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 460-257808

Method: 8270D
Preparation: 3546

MS Lab Sample ID:	460-84965-3	Analysis Batch:	460-258093	Instrument ID:	CBNAMS5
Client Matrix:	Solid	Prep Batch:	460-257808	Lab File ID:	x6198.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0227 g
Analysis Date:	10/24/2014 2217			Final Weight/Volume:	1 mL
Prep Date:	10/23/2014 1008			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	460-84965-3	Analysis Batch:	460-258093	Instrument ID:	CBNAMS5
Client Matrix:	Solid	Prep Batch:	460-257808	Lab File ID:	x6199.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0511 g
Analysis Date:	10/24/2014 2240			Final Weight/Volume:	1 mL
Prep Date:	10/23/2014 1008			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Phenol	50	51	54 - 115	1	30	*	*
2-Chlorophenol	48	49	56 - 110	3	30	*	*
2-Methylphenol	53	54	54 - 117	1	30	*	
4-Methylphenol	54	56	47 - 103	3	30		
2-Nitrophenol	28	28	55 - 101	1	30	*	*
2,4-Dimethylphenol	49	50	56 - 112	0	30	*	*
2,4-Dichlorophenol	46	46	58 - 115	0	30	*	*
4-Chloro-3-methylphenol	54	55	55 - 117	2	30	*	
2,4,6-Trichlorophenol	39	39	53 - 118	2	30	*	*
2,4,5-Trichlorophenol	38	39	50 - 115	2	30	*	*
2,4-Dinitrotoluene	64	64	53 - 110	1	30		
4-Nitrophenol	32	34	45 - 114	6	30	*	*
4,6-Dinitro-2-methylphenol	5	5	10 - 110	2	30	*	*
Pentachlorophenol	10	10	19 - 113	2	30	*	*
Bis(2-chloroethyl)ether	61	89	44 - 101	37	30		*
N-Nitrosodi-n-propylamine	60	61	42 - 107	1	30		
Hexachloroethane	53	54	45 - 90	1	30		
Nitrobenzene	54	55	42 - 106	0	30		
Isophorone	62	62	48 - 97	0	30		
Naphthalene	58	58	53 - 94	0	30		
4-Chloroaniline	37	36	10 - 96	3	30		
Hexachlorobutadiene	58	58	45 - 98	0	30		
2-Methylnaphthalene	59	60	51 - 98	1	30		
Hexachlorocyclopentadiene	32	33	24 - 98	3	30		
2-Chloronaphthalene	60	61	51 - 102	2	30		
2-Nitroaniline	59	60	51 - 109	2	30		
Dimethyl phthalate	66	66	52 - 112	1	30		
Acenaphthylene	60	60	51 - 103	0	30		
2,6-Dinitrotoluene	65	67	51 - 115	2	30		
3-Nitroaniline	45	45	32 - 104	1	30		
Acenaphthene	58	59	46 - 100	1	30		
Dibenzofuran	62	63	52 - 106	1	30		

Client: AKRF Inc

Job Number: 460-84965-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 460-257808

Method: 8270D
Preparation: 3546

MS Lab Sample ID:	460-84965-3	Analysis Batch:	460-258093	Instrument ID:	CBNAMS5
Client Matrix:	Solid	Prep Batch:	460-257808	Lab File ID:	x6198.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0227 g
Analysis Date:	10/24/2014 2217			Final Weight/Volume:	1 mL
Prep Date:	10/23/2014 1008			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	460-84965-3	Analysis Batch:	460-258093	Instrument ID:	CBNAMS5
Client Matrix:	Solid	Prep Batch:	460-257808	Lab File ID:	x6199.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0511 g
Analysis Date:	10/24/2014 2240			Final Weight/Volume:	1 mL
Prep Date:	10/23/2014 1008			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
2,4-Dinitrophenol	0	0	10 - 129	NC	30	U *	U *
Diethyl phthalate	58	60	52 - 114	2	30		
4-Chlorophenyl phenyl ether	62	63	50 - 106	1	30		
Fluorene	63	65	51 - 108	2	30		
4-Nitroaniline	52	52	45 - 106	1	30		
N-Nitrosodiphenylamine	74	75	49 - 106	2	30		
4-Bromophenyl phenyl ether	67	68	44 - 102	1	30		
Hexachlorobenzene	68	68	43 - 104	0	30		
Phenanthrene	71	70	48 - 108	1	30		
Anthracene	63	63	50 - 107	0	30		
Carbazole	60	60	49 - 104	0	30		
Di-n-butyl phthalate	68	69	50 - 108	1	30		
Fluoranthene	63	62	49 - 108	2	30		
Pyrene	66	66	49 - 116	0	30		
Butyl benzyl phthalate	67	69	49 - 117	3	30		
Benzo[a]anthracene	62	63	46 - 112	1	30		
Chrysene	63	63	45 - 114	1	30		
Bis(2-ethylhexyl) phthalate	97	102	49 - 119	3	30		
Di-n-octyl phthalate	59	59	40 - 106	1	30		
Benzo[b]fluoranthene	60	61	33 - 96	1	30		
Benzo[k]fluoranthene	59	58	35 - 115	2	30		
Benzo[a]pyrene	63	64	36 - 89	1	30		
Indeno[1,2,3-cd]pyrene	77	80	43 - 109	2	30		
Dibenz(a,h)anthracene	73	77	43 - 107	4	30		
Benzo[g,h,i]perylene	84	88	43 - 106	4	30		
1,1'-Biphenyl	62	64	50 - 105	2	30		
Acetophenone	58	60	40 - 95	3	30		
Benzaldehyde	44	44	10 - 160	1	30		
Caprolactam	41	41	10 - 127	1	30		
Atrazine	61	60	30 - 100	2	30		
2,2'-oxybis[1-chloropropane]	49	50	45 - 102	1	30		
1,2,4,5-Tetrachlorobenzene	62	62	70 - 130	1	30	*	*

Client: AKRF Inc

Job Number: 460-84965-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 460-257808

Method: 8270D
Preparation: 3546

MS Lab Sample ID:	460-84965-3	Analysis Batch:	460-258093	Instrument ID:	CBNAMS5
Client Matrix:	Solid	Prep Batch:	460-257808	Lab File ID:	x6198.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0227 g
Analysis Date:	10/24/2014 2217			Final Weight/Volume:	1 mL
Prep Date:	10/23/2014 1008			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	460-84965-3	Analysis Batch:	460-258093	Instrument ID:	CBNAMS5
Client Matrix:	Solid	Prep Batch:	460-257808	Lab File ID:	x6199.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0511 g
Analysis Date:	10/24/2014 2240			Final Weight/Volume:	1 mL
Prep Date:	10/23/2014 1008			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
2,3,4,6-Tetrachlorophenol	22	22	70 - 130	1	30	*	*
3,3'-Dichlorobenzidine	58	59	24 - 105	1	30		
Bis(2-chloroethoxy)methane	57	58	51 - 100	0	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
Nitrobenzene-d5 (Surr)	54	55	38 - 105
Phenol-d5 (Surr)	50	51	41 - 118
Terphenyl-d14 (Surr)	64	63	16 - 151
2,4,6-Tribromophenol (Surr)	34	34	10 - 120
2-Fluorophenol (Surr)	43	44	37 - 125
2-Fluorobiphenyl	61	62	40 - 109

Client: AKRF Inc

Job Number: 460-84965-1

Method Blank - Batch: 460-257732

Method: 8081B
Preparation: 3546

Lab Sample ID:	MB 460-257732/1-A	Analysis Batch:	460-257777	Instrument ID:	CPESTGC9
Client Matrix:	Solid	Prep Batch:	460-257732	Lab File ID:	VR497141.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0000 g
Analysis Date:	10/23/2014 0823	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	10/23/2014 0211			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
4,4'-DDD	6.7	U	1.3	6.7
4,4'-DDE	6.7	U	1.3	6.7
4,4'-DDT	6.7	U	1.6	6.7
Aldrin	6.7	U	1.4	6.7
alpha-BHC	2.0	U	1.5	2.0
beta-BHC	2.0	U	1.6	2.0
Chlordane (technical)	67	U	19	67
delta-BHC	2.0	U	1.2	2.0
Dieldrin	2.0	U	1.2	2.0
Endosulfan I	6.7	U	1.5	6.7
Endosulfan II	6.7	U	1.3	6.7
Endosulfan sulfate	6.7	U	1.3	6.7
Endrin	6.7	U	1.6	6.7
Endrin aldehyde	6.7	U	1.0	6.7
Endrin ketone	6.7	U	1.3	6.7
gamma-BHC (Lindane)	2.0	U	1.2	2.0
Heptachlor	6.7	U	1.6	6.7
Heptachlor epoxide	6.7	U	1.5	6.7
Methoxychlor	6.7	U	1.6	6.7
Toxaphene	67	U	18	67

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	94	76 - 149
Tetrachloro-m-xylene	86	72 - 136

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	93	76 - 149
Tetrachloro-m-xylene	84	72 - 136

Client: AKRF Inc

Job Number: 460-84965-1

Lab Control Sample - Batch: 460-257732

Method: 8081B
Preparation: 3546

Lab Sample ID:	LCS 460-257732/2-A	Analysis Batch:	460-257777	Instrument ID:	CPESTGC9
Client Matrix:	Solid	Prep Batch:	460-257732	Lab File ID:	VR497142.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0000 g
Analysis Date:	10/23/2014 0834	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	10/23/2014 0211			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
4,4'-DDD	133	129	96	50 - 131	
4,4'-DDE	133	121	91	49 - 130	
4,4'-DDT	133	101	76	48 - 132	
Aldrin	133	119	89	53 - 126	
alpha-BHC	133	124	93	50 - 129	
beta-BHC	133	124	93	51 - 131	
delta-BHC	133	119	89	40 - 130	
Dieldrin	133	122	91	48 - 126	
Endosulfan I	133	116	87	53 - 127	
Endosulfan II	133	116	87	52 - 127	
Endosulfan sulfate	133	112	84	52 - 124	
Endrin	133	110	82	48 - 126	
Endrin aldehyde	133	120	90	57 - 124	
Endrin ketone	133	111	84	55 - 124	
gamma-BHC (Lindane)	133	123	93	52 - 129	
Heptachlor	133	111	83	52 - 128	
Heptachlor epoxide	133	114	85	53 - 122	
Methoxychlor	133	95.7	72	47 - 126	

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	95	76 - 149
Tetrachloro-m-xylene	94	72 - 136

Lab Control Sample - Batch: 460-257732

Method: 8081B
Preparation: 3546

Lab Sample ID:	LCS 460-257732/2-A	Analysis Batch:	460-257777	Instrument ID:	CPESTGC9
Client Matrix:	Solid	Prep Batch:	460-257732	Lab File ID:	VR497142.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0000 g
Analysis Date:	10/23/2014 0834	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	10/23/2014 0211			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	SECONDARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
4,4'-DDD	133	122	91	50 - 131	
4,4'-DDE	133	117	88	49 - 130	
4,4'-DDT	133	91.2	68	48 - 132	
Aldrin	133	114	86	53 - 126	
alpha-BHC	133	123	92	50 - 129	
beta-BHC	133	113	85	51 - 131	

Client: AKRF Inc

Job Number: 460-84965-1

Lab Control Sample - Batch: 460-257732

Method: 8081B
Preparation: 3546

Lab Sample ID:	LCS 460-257732/2-A	Analysis Batch:	460-257777	Instrument ID:	CPESTGC9
Client Matrix:	Solid	Prep Batch:	460-257732	Lab File ID:	VR497142.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0000 g
Analysis Date:	10/23/2014 0834	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	10/23/2014 0211			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	SECONDARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
delta-BHC	133	117	88	40 - 130	
Dieldrin	133	116	87	48 - 126	
Endosulfan I	133	112	84	53 - 127	
Endosulfan II	133	107	80	52 - 127	
Endosulfan sulfate	133	109	82	52 - 124	
Endrin	133	107	80	48 - 126	
Endrin aldehyde	133	114	86	57 - 124	
Endrin ketone	133	110	82	55 - 124	
gamma-BHC (Lindane)	133	116	87	52 - 129	
Heptachlor	133	110	83	52 - 128	
Heptachlor epoxide	133	113	85	53 - 122	
Methoxychlor	133	90.5	68	47 - 126	

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	93	76 - 149
Tetrachloro-m-xylene	85	72 - 136

Client: AKRF Inc

Job Number: 460-84965-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 460-257732

Method: 8081B
Preparation: 3546

MS Lab Sample ID:	460-84805-A-1-B MS	Analysis Batch:	460-257777	Instrument ID:	CPESTGC9
Client Matrix:	Solid	Prep Batch:	460-257732	Lab File ID:	VR497143.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0200 g
Analysis Date:	10/23/2014 0846			Final Weight/Volume:	10 mL
Prep Date:	10/23/2014 0211			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

MSD Lab Sample ID:	460-84805-A-1-C MSD	Analysis Batch:	460-257777	Instrument ID:	CPESTGC9
Client Matrix:	Solid	Prep Batch:	460-257732	Lab File ID:	VR497144.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0120 g
Analysis Date:	10/23/2014 0857			Final Weight/Volume:	10 mL
Prep Date:	10/23/2014 0211			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
4,4'-DDD	117	132	69 - 150	12	30		
4,4'-DDE	110	124	70 - 147	12	30		
4,4'-DDT	101	112	63 - 146	11	30		
Aldrin	112	123	69 - 138	10	30		
alpha-BHC	118	131	68 - 133	10	30		
beta-BHC	107	119	67 - 137	11	30		
delta-BHC	114	127	65 - 141	11	30		
Dieldrin	112	124	63 - 129	10	30		
Endosulfan I	106	117	69 - 140	10	30		
Endosulfan II	103	115	66 - 136	11	30		
Endosulfan sulfate	109	120	65 - 137	10	30		
Endrin	108	118	67 - 142	9	30		
Endrin aldehyde	107	119	67 - 134	11	30		
Endrin ketone	108	119	68 - 146	10	30		
gamma-BHC (Lindane)	115	128	68 - 134	10	30		
Heptachlor	105	116	67 - 136	10	30		
Heptachlor epoxide	106	118	68 - 136	10	30		
Methoxychlor	97	105	52 - 150	8	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
DCB Decachlorobiphenyl	118	127	76 - 149
Tetrachloro-m-xylene	112	122	72 - 136

Client: AKRF Inc

Job Number: 460-84965-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 460-257732

Method: 8081B
Preparation: 3546

MS Lab Sample ID:	460-84805-A-1-B MS	Analysis Batch:	460-257777	Instrument ID:	CPESTGC9
Client Matrix:	Solid	Prep Batch:	460-257732	Lab File ID:	VR497143.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0200 g
Analysis Date:	10/23/2014 0846			Final Weight/Volume:	10 mL
Prep Date:	10/23/2014 0211			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	SECONDARY

MSD Lab Sample ID:	460-84805-A-1-C MSD	Analysis Batch:	460-257777	Instrument ID:	CPESTGC9
Client Matrix:	Solid	Prep Batch:	460-257732	Lab File ID:	VR497144.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0120 g
Analysis Date:	10/23/2014 0857			Final Weight/Volume:	10 mL
Prep Date:	10/23/2014 0211			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	SECONDARY

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
4,4'-DDD	115	129	69 - 150	11	30		
4,4'-DDE	109	120	70 - 147	10	30		
4,4'-DDT	101	111	63 - 146	10	30		
Aldrin	106	118	69 - 138	11	30		
alpha-BHC	116	129	68 - 133	11	30		
beta-BHC	105	116	67 - 137	10	30		
delta-BHC	110	120	65 - 141	9	30		
Dieldrin	111	123	63 - 129	11	30		
Endosulfan I	103	115	69 - 140	11	30		
Endosulfan II	100	110	66 - 136	10	30		
Endosulfan sulfate	87	98	65 - 137	12	30		
Endrin	102	110	67 - 142	7	30		
Endrin aldehyde	101	118	67 - 134	16	30		
Endrin ketone	91	101	68 - 146	11	30		
gamma-BHC (Lindane)	109	120	68 - 134	10	30		
Heptachlor	102	110	67 - 136	8	30		
Heptachlor epoxide	105	114	68 - 136	9	30		
Methoxychlor	83	92	52 - 150	10	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
DCB Decachlorobiphenyl	98	104	76 - 149
Tetrachloro-m-xylene	102	112	72 - 136

Client: AKRF Inc

Job Number: 460-84965-1

Method Blank - Batch: 460-257735

Method: 8082A
Preparation: 3546

Lab Sample ID:	MB 460-257735/1-A	Analysis Batch:	460-257834	Instrument ID:	CPESTGC7
Client Matrix:	Solid	Prep Batch:	460-257735	Lab File ID:	OR223189.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0000 g
Analysis Date:	10/23/2014 1133	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	10/23/2014 0223			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
Aroclor 1016	67	U	15	67
Aroclor 1221	67	U	15	67
Aroclor 1232	67	U	15	67
Aroclor 1242	67	U	15	67
Aroclor 1248	67	U	15	67
Aroclor 1254	67	U	19	67
Aroclor 1260	67	U	19	67
Aroclor-1262	67	U	19	67
Aroclor 1268	67	U	19	67
Polychlorinated biphenyls, Total	67	U	19	67

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	117	53 - 150

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	107	53 - 150

Client: AKRF Inc

Job Number: 460-84965-1

Lab Control Sample - Batch: 460-257735

Method: 8082A
Preparation: 3546

Lab Sample ID:	LCS 460-257735/2-A	Analysis Batch:	460-257834	Instrument ID:	CPESTGC7
Client Matrix:	Solid	Prep Batch:	460-257735	Lab File ID:	OR223190.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0000 g
Analysis Date:	10/23/2014 1149	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	10/23/2014 0223			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aroclor 1016	333	382	114	64 - 145	
Aroclor 1260	333	365	110	59 - 150	

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	120	53 - 150

Lab Control Sample - Batch: 460-257735

Method: 8082A
Preparation: 3546

Lab Sample ID:	LCS 460-257735/2-A	Analysis Batch:	460-257834	Instrument ID:	CPESTGC7
Client Matrix:	Solid	Prep Batch:	460-257735	Lab File ID:	OR223190.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0000 g
Analysis Date:	10/23/2014 1149	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	10/23/2014 0223			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	SECONDARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aroclor 1016	333	349	105	64 - 145	
Aroclor 1260	333	353	106	59 - 150	

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	111	53 - 150

Client: AKRF Inc

Job Number: 460-84965-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 460-257735

Method: 8082A
Preparation: 3546

MS Lab Sample ID:	460-84873-A-11-C MS	Analysis Batch:	460-257834	Instrument ID:	CPESTGC7
Client Matrix:	Solid	Prep Batch:	460-257735	Lab File ID:	OR223192.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0201 g
Analysis Date:	10/23/2014 1222			Final Weight/Volume:	10 mL
Prep Date:	10/23/2014 0223			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

MSD Lab Sample ID:	460-84873-A-11-D MSD	Analysis Batch:	460-257834	Instrument ID:	CPESTGC7
Client Matrix:	Solid	Prep Batch:	460-257735	Lab File ID:	OR223193.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0015 g
Analysis Date:	10/23/2014 1239			Final Weight/Volume:	10 mL
Prep Date:	10/23/2014 0223			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aroclor 1016	123	130	64 - 145	6	30		
Aroclor 1260	120	122	59 - 150	2	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
DCB Decachlorobiphenyl	117	118	53 - 150

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 460-257735

Method: 8082A
Preparation: 3546

MS Lab Sample ID:	460-84873-A-11-C MS	Analysis Batch:	460-257834	Instrument ID:	CPESTGC7
Client Matrix:	Solid	Prep Batch:	460-257735	Lab File ID:	OR223192.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0201 g
Analysis Date:	10/23/2014 1222			Final Weight/Volume:	10 mL
Prep Date:	10/23/2014 0223			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	SECONDARY

MSD Lab Sample ID:	460-84873-A-11-D MSD	Analysis Batch:	460-257834	Instrument ID:	CPESTGC7
Client Matrix:	Solid	Prep Batch:	460-257735	Lab File ID:	OR223193.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0015 g
Analysis Date:	10/23/2014 1239			Final Weight/Volume:	10 mL
Prep Date:	10/23/2014 0223			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	SECONDARY

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aroclor 1016	121	125	64 - 145	4	30		
Aroclor 1260	110	111	59 - 150	1	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
DCB Decachlorobiphenyl	109	110	53 - 150

Client: AKRF Inc

Job Number: 460-84965-1

Method Blank - Batch: 460-258010

Method: 6010C
Preparation: 3050B

Lab Sample ID:	MB 460-258010/1-A ^2	Analysis Batch:	460-258098	Instrument ID:	ICP4
Client Matrix:	Solid	Prep Batch:	460-258010	Lab File ID:	257924.asc
Dilution:	2.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	10/24/2014 1630	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	10/24/2014 0717				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Silver	1.0	U	0.19	1.0
Aluminum	20.0	U	11.1	20.0
Arsenic	1.5	U	0.41	1.5
Barium	20.0	U	0.87	20.0
Beryllium	0.20	U	0.14	0.20
Calcium	500	U	38.3	500
Cadmium	0.40	U	0.14	0.40
Cobalt	5.0	U	0.45	5.0
Chromium	1.0	U	0.40	1.0
Copper	2.5	U	0.88	2.5
Iron	15.0	U	12.5	15.0
Potassium	500	U	13.8	500
Magnesium	500	U	33.2	500
Manganese	1.5	U	0.43	1.5
Sodium	500	U	37.8	500
Nickel	4.0	U	0.90	4.0
Lead	1.0	U	0.41	1.0
Antimony	2.0	U	0.76	2.0
Selenium	2.0	U	0.57	2.0
Thallium	2.0	U	0.98	2.0
Vanadium	5.0	U	0.41	5.0
Zinc	3.0	U	0.86	3.0

Client: AKRF Inc

Job Number: 460-84965-1

LCS-Certified Reference Material - Batch: 460-258010

Method: 6010C
Preparation: 3050B

Lab Sample ID:	LCSSRM 460-258010/2-A	Analysis Batch:	460-258098	Instrument ID:	ICP4
Client Matrix:	Solid	Prep Batch:	460-258010	Lab File ID:	257924.asc
Dilution:	4.0	Leach Batch:	N/A	Initial Weight/Volume:	1.02 g
Analysis Date:	10/24/2014 1634	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	10/24/2014 0717				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Silver	40.2	35.92	89.4	74.9 - 125.4	
Aluminum	7460	5580	74.8	47.1 - 152.8	
Arsenic	139	120.8	86.9	78.4 - 121.6	
Barium	203	186.9	92.1	82.8 - 117.7	
Beryllium	96.1	87.84	91.4	82.8 - 117.6	
Calcium	6040	5345	88.5	80.6 - 119.4	
Cadmium	96.0	100.4	104.6	81.7 - 117.7	
Cobalt	148	152.9	103.3	83.1 - 116.9	
Chromium	136	128.7	94.6	78.7 - 120.6	
Copper	168	151.4	90.1	81.5 - 118.5	
Iron	14100	13150	93.2	43.0 - 156.7	
Potassium	2540	2143	84.4	68.9 - 131.1	
Magnesium	2800	2325	83.1	75.4 - 125.0	
Manganese	297	279.2	94.0	80.5 - 119.2	
Sodium	761	711.8	93.5	70.3 - 129.6	J
Nickel	123	129.0	104.9	82.1 - 118.7	
Lead	133	127.4	95.8	82.0 - 118.8	
Antimony	88.8	154.8	174.3	0.0 - 209.5	
Selenium	177	159.8	90.3	77.4 - 122.6	
Thallium	138	155.0	112.3	78.3 - 121.7	
Vanadium	107	100.4	93.9	76.6 - 123.4	
Zinc	189	181.4	96.0	81.5 - 118.5	

Client: AKRF Inc

Job Number: 460-84965-1

Matrix Spike - Batch: 460-258010

Method: 6010C
Preparation: 3050B

Lab Sample ID:	460-84928-A-1-F MS ^4	Analysis Batch:	460-258098	Instrument ID:	ICP4
Client Matrix:	Solid	Prep Batch:	460-258010	Lab File ID:	257924.asc
Dilution:	4.0	Leach Batch:	N/A	Initial Weight/Volume:	1.05 g
Analysis Date:	10/24/2014 1648	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	10/24/2014 0717				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Silver	2.1	U	5.28	4.41	84	75 - 125	
Aluminum	9570		211	13450	1837	75 - 125	4
Arsenic	1.4	J	211	181.6	85	75 - 125	
Barium	80.1		211	293.6	101	75 - 125	
Beryllium	0.68		5.28	5.41	90	75 - 125	
Calcium	582	J	2110	2392	86	75 - 125	
Cadmium	0.71	J	5.28	5.62	93	75 - 125	
Cobalt	5.2	J	52.8	54.80	94	75 - 125	
Chromium	12.1		21.1	36.18	114	75 - 125	
Copper	2.4	J	26.4	24.98	86	75 - 125	
Iron	14400		106	14470	56	75 - 125	4
Potassium	1810		2110	3904	99	75 - 125	
Magnesium	2910		2110	5632	129	75 - 125	N
Manganese	251		52.8	361.8	210	75 - 125	4
Sodium	1060	U	2110	1900	90	75 - 125	
Nickel	9.7		52.8	61.57	98	75 - 125	
Lead	6.4		52.8	57.04	96	75 - 125	
Antimony	4.2	U	52.8	30.01	57	75 - 125	N
Selenium	4.2	U	211	178.1	84	75 - 125	
Thallium	4.2	U	211	197.8	94	75 - 125	
Vanadium	20.3		52.8	65.39	85	75 - 125	
Zinc	24.1		52.8	77.02	100	75 - 125	

Client: AKRF Inc

Job Number: 460-84965-1

Duplicate - Batch: 460-258010

Method: 6010C
Preparation: 3050B

Lab Sample ID:	460-84928-A-1-E DU ^4	Analysis Batch:	460-258098	Instrument ID:	ICP4
Client Matrix:	Solid	Prep Batch:	460-258010	Lab File ID:	257924.asc
Dilution:	4.0	Leach Batch:	N/A	Initial Weight/Volume:	1.03 g
Analysis Date:	10/24/2014 1637	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	10/24/2014 0717				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Silver	2.1	U	2.2	NC	20	U
Aluminum	9570		9497	0.7	20	
Arsenic	1.4	J	1.54	10	20	J
Barium	80.1		80.97	1	20	
Beryllium	0.68		0.679	0.03	20	
Calcium	582	J	578.3	0.7	20	J
Cadmium	0.71	J	0.737	4	20	J
Cobalt	5.2	J	5.26	1	20	J
Chromium	12.1		12.01	1	20	
Copper	2.4	J	2.35	0.9	20	J
Iron	14400		14270	1	20	
Potassium	1810		1804	0.3	20	
Magnesium	2910		2894	0.7	20	
Manganese	251		248.6	1	20	
Sodium	1060	U	1080	NC	20	U
Nickel	9.7		9.82	2	20	
Lead	6.4		6.49	1	20	
Antimony	4.2	U	4.3	NC	20	U
Selenium	4.2	U	4.3	NC	20	U
Thallium	4.2	U	4.3	NC	20	U
Vanadium	20.3		20.23	0.3	20	
Zinc	24.1		24.26	0.6	20	

Client: AKRF Inc

Job Number: 460-84965-1

Method Blank - Batch: 460-257746

Method: 7471B
Preparation: 7471B

Lab Sample ID:	MB 460-257746/10-A	Analysis Batch:	460-257840	Instrument ID:	LEEMAN5
Client Matrix:	Solid	Prep Batch:	460-257746	Lab File ID:	257745HG1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	10/23/2014 1020	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	10/23/2014 0521				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	0.017	U	0.012	0.017

LCS-Certified Reference Material - Batch: 460-257746

Method: 7471B
Preparation: 7471B

Lab Sample ID:	LCSSRM 460-257746/11-A	Analysis Batch:	460-257840	Instrument ID:	LEEMAN5
Client Matrix:	Solid	Prep Batch:	460-257746	Lab File ID:	257745HG1.PRN
Dilution:	20	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	10/23/2014 1021	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	10/23/2014 0521				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	12.9	13.12	101.7	72.9 - 127.1	

Matrix Spike - Batch: 460-257746

Method: 7471B
Preparation: 7471B

Lab Sample ID:	460-84570-D-1-S MS	Analysis Batch:	460-257840	Instrument ID:	LEEMAN5
Client Matrix:	Solid	Prep Batch:	460-257746	Lab File ID:	257745HG1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.64 g
Analysis Date:	10/23/2014 1027	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	10/23/2014 0521				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.017	J	0.0871	0.113	111	80 - 120	

Client: AKRF Inc

Job Number: 460-84965-1

Duplicate - Batch: 460-257746

Method: 7471B
Preparation: 7471B

Lab Sample ID:	460-84570-D-1-R DU	Analysis Batch:	460-257840	Instrument ID:	LEEMAN5
Client Matrix:	Solid	Prep Batch:	460-257746	Lab File ID:	257745HG1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.64 g
Analysis Date:	10/23/2014 1025	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	10/23/2014 0521				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Mercury	0.018	U	0.0141	NC	20	J

Client: AKRF Inc

Job Number: 460-84965-1

Method Blank - Batch: 460-257752

Method: 7471B
Preparation: 7471B

Lab Sample ID:	MB 460-257752/10-A	Analysis Batch:	460-257840	Instrument ID:	LEEMAN5
Client Matrix:	Solid	Prep Batch:	460-257752	Lab File ID:	257745HG1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	10/23/2014 1140	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	10/23/2014 0607				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	0.017	U	0.012	0.017

LCS-Certified Reference Material - Batch: 460-257752

Method: 7471B
Preparation: 7471B

Lab Sample ID:	LCSSRM 460-257752/11-A	Analysis Batch:	460-257840	Instrument ID:	LEEMAN5
Client Matrix:	Solid	Prep Batch:	460-257752	Lab File ID:	257745HG1.PRN
Dilution:	20	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	10/23/2014 1143	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	10/23/2014 0607				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	12.9	13.03	101.0	72.9 - 127.1	

Matrix Spike - Batch: 460-257752

Method: 7471B
Preparation: 7471B

Lab Sample ID:	460-84965-4	Analysis Batch:	460-257840	Instrument ID:	LEEMAN5
Client Matrix:	Solid	Prep Batch:	460-257752	Lab File ID:	257745HG1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.67 g
Analysis Date:	10/23/2014 1150	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	10/23/2014 0607				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.021	U	0.103	0.149	145	80 - 120	N

Client: AKRF Inc

Job Number: 460-84965-1

Duplicate - Batch: 460-257752

Method: 7471B
Preparation: 7471B

Lab Sample ID:	460-84965-4	Analysis Batch:	460-257840	Instrument ID:	LEEMAN5
Client Matrix:	Solid	Prep Batch:	460-257752	Lab File ID:	257745HG1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.67 g
Analysis Date:	10/23/2014 1147	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	10/23/2014 0607				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Mercury	0.021	U	0.021	NC	20	U

Client: AKRF Inc

Job Number: 460-84965-1

Duplicate - Batch: 460-257783

Method: Moisture
Preparation: N/A

Lab Sample ID:	460-84970-D-7 DU	Analysis Batch:	460-257783	Instrument ID:	No Equipment Assigned
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	10/23/2014 0902	Units:	%	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Moisture	5.2	4.5	15	20	
Percent Solids	94.8	95.5	0.8	20	

777 New Durham Road
Edison, New Jersey 08817
Phone: (732) 549-3900 Fax: (732) 549-3679

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

CHAIN OF CUSTODY / ANALYSIS REQUEST

10/29/2014

Name (for report and invoice): Stephen Malinowski
Company: AKRF, Inc.
Address: 440 Park Ave S., 7th Fl.
City: New York State: NY
Phone: 631-574-3724 Fax:

Samplers Name (Printed): Mark Jepsen
P. O. #: 12015
Analysis Turnaround Time: Standard [X] (7day)
Rush Charges Authorized For: 2 Week [ ] 1 Week [ ] Other [ ]

Site/Project Identification: 77 Commercial Street
State (Location of site): NJ: [ ] NY: [✓] Other:
Regulatory Program:

LAB USE ONLY
Project No:
Job No: 84965

ANALYSIS REQUESTED (ENTER "X" BELOW TO INDICATE REQUEST)

Sample Identification	Date	Time	Matrix	No. of. Cont.	8260 VOCs	8270 SVOCs	8081B Pest.	7471B Merc.	6010C TAL metals	8082A PCBs						Sample Numbers
SB-17 (1-2')	10/22/14	1040	Solid	5	X	X	X	X	X	X						1
SB-17 (11-12)		1055			X	X	X	X	X	X						2
SB-18 (1-2')		1225			X	X	X	X	X	X						3
SB-18 (12-13)		1230			X	X	X	X	X	X						4
SB-6 (1-2')		1145			X	X	X	X	X	X						5
SB-6 (10-11')		1150			X	X	X	X	X	X						6
SB-12 (1-2')		1440			X	X	X	X	X	X						7
SB-12 (11-12')		1445			X	X	X	X	X	X						8
TB	10/22/14	1500	Water	3	X											9

Preservation Used: 1 = ICE, 2 = HCl, 3 = H_2SO_4, 4 = HNO_3, 5 = NaOH
6 = Other _____, 7 = Other _____

	8260	8270	8081B	7471B	6010C	8082A
Soil:	1	1	1	1	1	1
Water:						

Special Instructions: Include Mark Jepsen (mjepsen@AKRF.com) on emails
Water Metals Filtered (Yes/No)?

Relinquished by	Company	Date / Time	Received by	Company
Mark Jepsen	AKRF, Inc.	10/22/14 15:30	1)	T.A
2)	T.A	10/22/14 16:10	2)	
3)			3)	10/22/14 16:10
4)			4)	

460-84965 Chain of Custody

Lab: , New York (11452), Pennsylvania (68-522), Connecticut (PH-0200), Rhode Island (132).

TAL - 0016 (0408)

Massachusetts (M-NJ312), North Carolina (No. 578) 1.2 (1.2 1 RH J N Co.

SHORT HOLD

TestAmerica Edison
Receipt Temperature and pH Log

Job Number: 8496

Number of Coolers: 1 IR Gun # 1

Cooler Temperatures

	RAW	CORRECTED		RAW	CORRECTED		RAW	CORRECTED
Cooler #1:	1.2 °C	1.2 °C	Cooler #4:	°C	°C	Cooler #7:	°C	°C
Cooler #2:	°C	°C	Cooler #5:	°C	°C	Cooler #8:	°C	°C
Cooler #3:	°C	°C	Cooler #6:	°C	°C	Cooler #9:	°C	°C

TALS Sample Number	Ammonia (pH<2)	COD (pH<2)	Nitrate Nitrite (pH<2)	Metals* (pH<2)	Hardness (pH<2)	Pest (pH 5-9)	EPH or QAM (pH<2)	Phenols (pH<2)	Sulfide (pH>9)	TKN (pH<2)	TOC (pH<2)	Total Cyanide (pH>12)	Total Phos (pH<2)	Other	Other

If pH adjustments are required record the information below:

Sample No(s). adjusted: _____

Preservative Name/Conc.: _____ Volume of Preservative used (ml): _____

Lot # of Preservative(s): _____ Expiration Date: _____

The appropriate Project Manager and Department Manager should be notified about the samples which were pH adjusted.

** Samples for Metal analysis which are out of compliance must be acidified at least 24 hours prior to analysis.*

Initials: [illegible] Date: 10/22/14

EDS-WI-038, Rev 4, 06/09/2014

Login Sample Receipt Checklist

Client: AKRF Inc

Job Number: 460-84965-1

Login Number: 84965

List Source: TestAmerica Edison

List Number: 1

Creator: Meyers, Gary

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.2 ° C IR #5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	No analysis requiring residual chlorine check assigned.

ANALYTICAL REPORT

Job Number: 460-85054-1

Job Description: 77 Commercial Street, Brooklyn, NY

For:
AKRF Inc
440 Park Avenue South
7th Floor
New York, NY 10016

Attention: Stephen Malinowski

Approved for release.
Janet Mosley
Manager of Project Management Assistants
10/31/2014 1:37 PM

Designee for
Melissa Haas, Project Manager I
777 New Durham Road, Edison, NJ, 08817
(203)944-1310
melissa.haas@testamericainc.com
10/31/2014

The test results in this report meet all NELAP requirements unless specified within the case narrative. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Edison Project Manager.

TestAmerica Edison Certifications and Approvals: Connecticut: CTDOH #PH-0200, New Jersey: NJDEP (NELAP) #12028, New York: NYDOH (NELAP) #11452, NYDOH (ELAP) #11452, Pennsylvania: PADEP (NELAP) 68-00522 and Rhode Island: RIDOH LAO00132

CASE NARRATIVE

Client: AKRF Inc

Project: 77 Commercial Street, Brooklyn, NY

Report Number: 460-85054-1

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

It should be noted that samples with elevated Reporting Limits (RLs) as a result of a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the RLs are unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes or interferences which exceed the calibration range of the instrument.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 10/23/2014 6:45 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.0º C.

Except:

The Chain-of-Custody (COC) was incomplete as received and/or improperly completed. The following issues were noted:

*The sample IDs listed on the COC were not consistent - some IDs did not have the foot markers. These were added to the IDs and the client was notified.
*A trip blank was listed on the COC but not received in the lab. The client notified the lab that the trip blank was omitted from the cooler.
*The following sample was marked for PCB and Pesticides analysis on the COC; however, the client notified the lab that these tests are not needed. SB-X (7-8') (460-85054-17)

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

VOLATILE ORGANICS

Samples SB-3 (1-2') (460-85054-1), SB-3 (8-9') (460-85054-2), SB-10 (1-2') (460-85054-3), SB-10 (7-8') (460-85054-4), SB-19 (1-2') (460-85054-5), SB-19 (7-8') (460-85054-6), SB-9 (1-2') (460-85054-7), SB-9 (8-9') (460-85054-8), SB-7 (1-2') (460-85054-9), SB-7 (7-8') (460-85054-10), SB-1 (1-2') (460-85054-11), SB-1 (8-9') (460-85054-12), SB-2 (1-2') (460-85054-13), SB-2 (6-7') (460-85054-14), SB-4 (1-2') (460-85054-15), SB-4 (7-8') (460-85054-16) and SB-X (7-8') (460-85054-17) were analyzed for Volatile organics in accordance with EPA SW-846 Methods 8260C. The samples were prepared on 10/24/2014 and analyzed on 10/27/2014 and 10/28/2014.

The continuing calibration verification (CCV) associated with batch 258540 recovered outside control limit for Acetone, 1,2,3-Trichlorobenzene, 1,1,2,2-Tetrachloroethane and 2-Butanone. The samples associated with this CCV were non-detects for the affected analytes, with the exception of Acetone which were detected. The following samples are impacted: (CCVIS 460-258540/3), SB-1 (8-9') (460-85054-12), SB-3 (8-9') (460-85054-2), SB-9 (1-2') (460-85054-7).

The laboratory control sample (LCS) for batch 258540 recovered outside control limits for 2-Butanone. The LCS/LCSD precision for Methyl acetate was also outside control limits. These analytes were not detected in the associated samples; therefore, the data have been reported.

Internal standard (ISTD) response and surrogate recovery for the following samples was outside control limits: SB-2 (1-2') (460-85054-13), SB-3 (1-2') (460-85054-1). The samples were re-analyzed with concurring results in batch 258887. The original set of data has been reported.

The continuing calibration verification (CCV) associated with batch 258803 recovered outside control limit for 1,1,2,2-Tetrachloroethane and 2-Butanone. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

The laboratory control sample / laboratory control sample duplicate (LCS/LCSD) %RPD for batch 258803 was outside control limits for

1,1,2,2-Tetrachloroethane. The LCSD recoveries was outside control limits for cis-1,2-Dichloroethene. These analytes were not detected in the associated samples; therefore, the data have been reported.

Internal standard (ISTD) response and surrogate for the following sample was outside control limits: SB-4 (7-8') (460-85054-16). The sample was re-analyzed with concurring results in batch 258803.

The continuing calibration verification (CCV) associated with batch 258661 recovered outside control limit for Carbon disulfide. Carbon didulfide was detected in the assoicated sample(s). The following samples are impacted: (CCVIS 460-258661/2).

The laboratory control sample duplicate (LCSD) for batch 258661 recovered outside control limits for the following analyte: cis-1,2-Dichloroethene. This analyte was not detected in the associated samples; therefore, the data have been reported.

4-Bromofluorobenzene failed the surrogate recovery criteria low for SB-3 (1-2') (460-85054-1). 4-Bromofluorobenzene failed the surrogate recovery criteria low for SB-2 (1-2') (460-85054-13). Dibromofluoromethane (Surr) failed the surrogate recovery criteria low for SB-X (7-8') (460-85054-17).

Refer to the QC report for details.

No other difficulties were encountered during the Volatile organics analysis.

All other quality control parameters were within the acceptance limits.

PESTICIDES

Samples SB-3 (1-2') (460-85054-1), SB-3 (8-9') (460-85054-2), SB-10 (1-2') (460-85054-3), SB-10 (7-8') (460-85054-4), SB-19 (1-2') (460-85054-5), SB-19 (7-8') (460-85054-6), SB-9 (1-2') (460-85054-7), SB-9 (8-9') (460-85054-8), SB-7 (1-2') (460-85054-9), SB-7 (7-8') (460-85054-10), SB-1 (1-2') (460-85054-11), SB-1 (8-9') (460-85054-12), SB-2 (1-2') (460-85054-13), SB-2 (6-7') (460-85054-14), SB-4 (1-2') (460-85054-15) and SB-4 (7-8') (460-85054-16) were analyzed for Pesticides in accordance with EPA SW-846 Methods 8081A. The samples were prepared on 10/26/2014 and 10/28/2014 and analyzed on 10/27/2014 and 10/29/2014.

The following sample required a mercury clean-up to reduce matrix interferences caused by sulfur: SB-1 (8-9') (460-85054-12).

The closing calibration verification (CCV) associated with batch 258534 recovered above the lower control limit for DDT, Eandrin aldehyde, Methoxychlor on the secondary column and is confirmed by re-analysis.The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: (CCV 460-258534/35).

The closing calibration verification (CCV) associated with batch 258534 recovered above the lower control limit for alpha-BHC, betta-BHC on the primary column and is confirmed by re-analysis.The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: (CCV 460-258534/35).

The closing calibration verification (CCV) associated with batch 258534 recovered above the lower control limit for surrogate TCMX on the primary column and is confirmed by re- analysis.The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: (CCV 460-258534/35).

The closing calibration verification (CCV) associated with batch 258534 recovered above the lower control limit for surrogate DCB on the secondary column and is confirmed by re- analysis.The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: (CCV 460-258534/35).

TCMX Surrogate recovery for the following sample was outside the upper control limit on the primary columnSB-4 (7-8') (460-85054-16). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

DCB Surrogate recoveries for MS and MSD associated with batch 258709 were outside the upper control limits on the secondary column. Associated samples did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed and data have been reported.LT-C-086-4-6 MS (460-85122-5 MS), LT-C-086-4-6 MSD (460-85122-5 MSD)

DCB Decachlorobiphenyl failed the surrogate recovery criteria high for 460-85122-A-5-K MSD.

Endrin aldehyde failed the recovery criteria low for the MSD of sample SB-3 (1-2')MSD (460-85054-1) in batch 460-258474. gamma-BHC (Lindane) exceeded the RPD limit.

gamma-BHC (Lindane) failed the recovery criteria high for the MSD of sample 460-85122-5 in batch 460-258929.

Refer to the QC report for details.

No other difficulties were encountered during the Pesticides analysis.

All other quality control parameters were within the acceptance limits.

POLYCHLORINATED BIPHENYLS

Samples SB-3 (1-2') (460-85054-1), SB-3 (8-9') (460-85054-2), SB-10 (1-2') (460-85054-3), SB-10 (7-8') (460-85054-4), SB-19 (1-2') (460-85054-5), SB-19 (7-8') (460-85054-6), SB-9 (1-2') (460-85054-7), SB-9 (8-9') (460-85054-8), SB-7 (1-2') (460-85054-9), SB-7 (7-8') (460-85054-10), SB-1 (1-2') (460-85054-11), SB-1 (8-9') (460-85054-12), SB-2 (1-2') (460-85054-13), SB-2 (6-7') (460-85054-14), SB-4 (1-2') (460-85054-15) and SB-4 (7-8') (460-85054-16) were analyzed for polychlorinated biphenyls in accordance with EPA SW-846 Method 8082. The samples were prepared on 10/26/2014 and analyzed on 10/27/2014.

No difficulties were encountered during the PCBs analysis.

All quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS

Samples SB-3 (1-2') (460-85054-1), SB-3 (8-9') (460-85054-2), SB-10 (1-2') (460-85054-3), SB-10 (7-8') (460-85054-4), SB-19 (1-2') (460-85054-5), SB-19 (7-8') (460-85054-6), SB-9 (1-2') (460-85054-7), SB-9 (8-9') (460-85054-8), SB-7 (1-2') (460-85054-9), SB-7 (7-8') (460-85054-10), SB-1 (1-2') (460-85054-11), SB-1 (8-9') (460-85054-12), SB-2 (1-2') (460-85054-13), SB-2 (6-7') (460-85054-14), SB-4 (1-2') (460-85054-15), SB-4 (7-8') (460-85054-16) and SB-X (7-8') (460-85054-17) were analyzed for Semivolatile organic compounds in accordance with EPA SW-846 Method 8270D. The samples were prepared on 10/26/2014 and analyzed on 10/28/2014, 10/29/2014 and 10/30/2014.

A full list spike was utilized for this method. Due to the large number of spiked analytes, there is a high probability that one or more analytes will recover outside acceptance limits. The laboratory's SOP allows for five analytes to recover outside criteria for this method when a full list spike is utilized. The LCS associated with batch 258363 had one analyte (Benzao(a)pyrene) outside control limits; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

Six surrogates are used for this analysis, three acid and three base neutrals. The laboratory's SOP allows one surrogate from each fraction to be outside acceptance criteria without performing re-extraction/re-analysis. The following sample(s) contained an allowable number of surrogate compounds outside limits: SB-19 (7-8') (460-85054-6). These results have been reported and qualified.

Phenol-d5 (Surr) failed the surrogate recovery criteria low for SB-19 (7-8') (460-85054-6).

Dibenz(a,h)anthracene and Indeno[1,2,3-cd]pyrene failed the recovery criteria high for the MS of sample 460-85115-1 in batch 460-258833.

Several analytes failed the recovery criteria high for the MSD of sample 460-85115-1 in batch 460-258833.

The presence of the '4' qualifier in the data indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount.

Refer to the QC report for details.

Samples SB-19 (7-8') (460-85054-6)[5X], SB-9 (8-9') (460-85054-8)[5X] and SB-7 (1-2') (460-85054-9)[2X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the Semivolatile organic compounds analysis.

All other quality control parameters were within the acceptance limits.

METALS

Samples SB-3 (1-2') (460-85054-1), SB-3 (8-9') (460-85054-2), SB-10 (1-2') (460-85054-3), SB-10 (7-8') (460-85054-4), SB-19 (1-2') (460-85054-5), SB-19 (7-8') (460-85054-6), SB-9 (1-2') (460-85054-7), SB-9 (8-9') (460-85054-8), SB-7 (1-2') (460-85054-9), SB-7 (7-8') (460-85054-10), SB-1 (1-2') (460-85054-11), SB-1 (8-9') (460-85054-12), SB-2 (1-2') (460-85054-13), SB-2 (6-7') (460-85054-14), SB-4 (1-2') (460-85054-15), SB-4 (7-8') (460-85054-16) and SB-X (7-8') (460-85054-17) were analyzed for Metals in accordance with EPA SW-846 6010C. The samples were prepared on 10/24/2014 and 10/25/2014 and analyzed on 10/26/2014, 10/27/2014 and 10/29/2014.

Antimony, Calcium, Iron and Magnesium failed the recovery criteria low for the MS of sample SB-9 (1-2')MS (460-85054-7) in batch 460-258732. Aluminum failed the recovery criteria high.

Antimony, Calcium, Magnesium and Manganese failed the recovery criteria low for the MS of sample 460-85054-12 in batch 460-258405. Aluminum and Iron failed the recovery criteria high.

Refer to the QC report for details.

Sodium exceeded the RPD limit for the duplicate of sample SB-1 (8-9')DU (460-85054-12). Selenium exceeded the RPD limit for the duplicate of sample SB-9 (1-2')DU (460-85054-7). Refer to the QC report for details.

Samples SB-3 (1-2') (460-85054-1)[20X], SB-3 (1-2') (460-85054-1)[4X], SB-3 (8-9') (460-85054-2)[4X], SB-10 (1-2') (460-85054-3)[4X], SB-10 (7-8') (460-85054-4)[4X], SB-19 (1-2') (460-85054-5)[4X], SB-19 (7-8') (460-85054-6)[4X], SB-9 (1-2') (460-85054-7)[4X], SB-9 (8-9') (460-85054-8)[20X], SB-9 (8-9') (460-85054-8)[4X], SB-7 (1-2') (460-85054-9)[4X], SB-7 (7-8') (460-85054-10)[4X], SB-1 (1-2') (460-85054-11)[4X], SB-1 (8-9') (460-85054-12)[4X], SB-2 (1-2') (460-85054-13)[4X], SB-2 (6-7') (460-85054-14)[4X], SB-4 (1-2') (460-85054-15)[10X], SB-4 (1-2') (460-85054-15)[4X], SB-4 (7-8') (460-85054-16)[4X] and SB-X (7-8') (460-85054-17)[4X] required

dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the Metals analysis.

All other quality control parameters were within the acceptance limits.

TOTAL MERCURY

Samples SB-3 (1-2') (460-85054-1), SB-3 (8-9') (460-85054-2), SB-10 (1-2') (460-85054-3), SB-10 (7-8') (460-85054-4), SB-19 (1-2') (460-85054-5), SB-19 (7-8') (460-85054-6), SB-9 (1-2') (460-85054-7), SB-9 (8-9') (460-85054-8), SB-7 (1-2') (460-85054-9), SB-7 (7-8') (460-85054-10), SB-1 (1-2') (460-85054-11), SB-1 (8-9') (460-85054-12), SB-2 (1-2') (460-85054-13), SB-2 (6-7') (460-85054-14), SB-4 (1-2') (460-85054-15), SB-4 (7-8') (460-85054-16) and SB-X (7-8') (460-85054-17) were analyzed for total mercury in accordance with EPA SW-846 Method 7471B. The samples were prepared and analyzed on 10/25/2014.

Samples SB-10 (1-2') (460-85054-3)[50X] and SB-2 (1-2') (460-85054-13)[50X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No difficulties were encountered during the Hg analysis.

All quality control parameters were within the acceptance limits.

PERCENT SOLIDS/PERCENT MOISTURE

Samples SB-3 (1-2') (460-85054-1), SB-3 (8-9') (460-85054-2), SB-10 (1-2') (460-85054-3), SB-10 (7-8') (460-85054-4), SB-19 (1-2') (460-85054-5), SB-19 (7-8') (460-85054-6), SB-9 (1-2') (460-85054-7), SB-9 (8-9') (460-85054-8), SB-7 (1-2') (460-85054-9), SB-7 (7-8') (460-85054-10), SB-1 (1-2') (460-85054-11), SB-1 (8-9') (460-85054-12), SB-2 (1-2') (460-85054-13), SB-2 (6-7') (460-85054-14), SB-4 (1-2') (460-85054-15), SB-4 (7-8') (460-85054-16) and SB-X (7-8') (460-85054-17) were analyzed for percent solids/percent moisture in accordance with EPA Method CLPISM01.2 (Exhibit D). The samples were analyzed on 10/24/2014.

No difficulties were encountered during the %solids/moisture analysis.

All quality control parameters were within the acceptance limits.

EXECUTIVE SUMMARY - Detections

Client: AKRF Inc

Job Number: 460-85054-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
460-85054-1	**SB-3 (1-2')**					
Carbon disulfide		0.31	J	1.2	ug/Kg	8260C
Naphthalene		91	J	370	ug/Kg	8270D
2-Methylnaphthalene		150	J	370	ug/Kg	8270D
Acenaphthylene		12	J	370	ug/Kg	8270D
Acenaphthene		220	J	370	ug/Kg	8270D
Dibenzofuran		500		370	ug/Kg	8270D
Fluorene		250	J	370	ug/Kg	8270D
Phenanthrene		4700		370	ug/Kg	8270D
Anthracene		570		370	ug/Kg	8270D
Carbazole		260	J	370	ug/Kg	8270D
Fluoranthene		2400		370	ug/Kg	8270D
Pyrene		1700		370	ug/Kg	8270D
Benzo[a]anthracene		420		37	ug/Kg	8270D
Chrysene		420		370	ug/Kg	8270D
Bis(2-ethylhexyl) phthalate		56	J	370	ug/Kg	8270D
Benzo[b]fluoranthene		300		37	ug/Kg	8270D
Benzo[k]fluoranthene		130		37	ug/Kg	8270D
Benzo[a]pyrene		190	*	37	ug/Kg	8270D
Indeno[1,2,3-cd]pyrene		140		37	ug/Kg	8270D
Dibenz(a,h)anthracene		36	J	37	ug/Kg	8270D
Benzo[g,h,i]perylene		130	J	370	ug/Kg	8270D
1,1'-Biphenyl		53	J	370	ug/Kg	8270D
Aluminum		9410		37.2	mg/Kg	6010C
Arsenic		17.0		2.8	mg/Kg	6010C
Barium		140		37.2	mg/Kg	6010C
Beryllium		0.75		0.37	mg/Kg	6010C
Calcium		145000		4640	mg/Kg	6010C
Cobalt		4.0	J	9.3	mg/Kg	6010C
Chromium		15.5		1.9	mg/Kg	6010C
Copper		22.1		4.6	mg/Kg	6010C
Iron		13300		27.9	mg/Kg	6010C
Potassium		1520		929	mg/Kg	6010C
Magnesium		34700		929	mg/Kg	6010C
Manganese		205		2.8	mg/Kg	6010C
Sodium		641	J	929	mg/Kg	6010C
Nickel		11.7		7.4	mg/Kg	6010C
Lead		32.3		1.9	mg/Kg	6010C
Selenium		2.0	J	3.7	mg/Kg	6010C
Vanadium		33.0		9.3	mg/Kg	6010C
Zinc		48.1		5.6	mg/Kg	6010C
Mercury		0.60		0.019	mg/Kg	7471B
Percent Moisture		10.3		1.0	%	Moisture
Percent Solids		89.7		1.0	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: AKRF Inc

Job Number: 460-85054-1

Lab Sample ID	Client Sample ID			Reporting		
Analyte		Result	Qualifier	Limit	Units	Method
460-85054-2	**SB-3 (8-9')**					
Acetone		30		6.8	ug/Kg	8260C
Isophorone		49	J	150	ug/Kg	8270D
Naphthalene		800		370	ug/Kg	8270D
2-Methylnaphthalene		68	J	370	ug/Kg	8270D
2-Chloronaphthalene		160	J	370	ug/Kg	8270D
Acenaphthylene		240	J	370	ug/Kg	8270D
Acenaphthene		48	J	370	ug/Kg	8270D
Dibenzofuran		59	J	370	ug/Kg	8270D
Fluorene		60	J	370	ug/Kg	8270D
Phenanthrene		860		370	ug/Kg	8270D
Anthracene		150	J	370	ug/Kg	8270D
Carbazole		9.9	J	370	ug/Kg	8270D
Fluoranthene		1300		370	ug/Kg	8270D
Pyrene		1300		370	ug/Kg	8270D
Benzo[a]anthracene		580		37	ug/Kg	8270D
Chrysene		890		370	ug/Kg	8270D
Benzo[b]fluoranthene		6200	*	37	ug/Kg	8270D
Benzo[k]fluoranthene		2600	*	37	ug/Kg	8270D
Indeno[1,2,3-cd]pyrene		1300	*	37	ug/Kg	8270D
Dibenz(a,h)anthracene		580	*	37	ug/Kg	8270D
Benzo[g,h,i]perylene		790	*	370	ug/Kg	8270D
1,1'-Biphenyl		90	J	370	ug/Kg	8270D
Aluminum		4400		34.5	mg/Kg	6010C
Arsenic		5.0		2.6	mg/Kg	6010C
Barium		80.0		34.5	mg/Kg	6010C
Beryllium		0.27	J	0.35	mg/Kg	6010C
Calcium		2760		864	mg/Kg	6010C
Cobalt		14.1		8.6	mg/Kg	6010C
Chromium		10.0		1.7	mg/Kg	6010C
Copper		21.0		4.3	mg/Kg	6010C
Iron		16200		25.9	mg/Kg	6010C
Potassium		656	J	864	mg/Kg	6010C
Magnesium		2200		864	mg/Kg	6010C
Manganese		388		2.6	mg/Kg	6010C
Sodium		156	J	864	mg/Kg	6010C
Nickel		21.2		6.9	mg/Kg	6010C
Lead		163		1.7	mg/Kg	6010C
Vanadium		16.5		8.6	mg/Kg	6010C
Zinc		96.5		5.2	mg/Kg	6010C
Mercury		0.17		0.019	mg/Kg	7471B
Percent Moisture		10.3		1.0	%	Moisture
Percent Solids		89.7		1.0	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: AKRF Inc

Job Number: 460-85054-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
460-85054-3	**SB-10 (1-2')**					
Isophorone		92	J	150	ug/Kg	8270D
Naphthalene		42	J	370	ug/Kg	8270D
2-Methylnaphthalene		24	J	370	ug/Kg	8270D
Acenaphthylene		13	J	370	ug/Kg	8270D
Acenaphthene		30	J	370	ug/Kg	8270D
Dibenzofuran		18	J	370	ug/Kg	8270D
Fluorene		28	J	370	ug/Kg	8270D
Phenanthrene		540		370	ug/Kg	8270D
Anthracene		78	J	370	ug/Kg	8270D
Carbazole		28	J	370	ug/Kg	8270D
Fluoranthene		730		370	ug/Kg	8270D
Pyrene		930		370	ug/Kg	8270D
Benzo[a]anthracene		390		37	ug/Kg	8270D
Chrysene		450		370	ug/Kg	8270D
Bis(2-ethylhexyl) phthalate		61	J	370	ug/Kg	8270D
Benzo[b]fluoranthene		500		37	ug/Kg	8270D
Benzo[k]fluoranthene		170		37	ug/Kg	8270D
Benzo[a]pyrene		330	*	37	ug/Kg	8270D
Indeno[1,2,3-cd]pyrene		270		37	ug/Kg	8270D
Dibenz(a,h)anthracene		91		37	ug/Kg	8270D
Benzo[g,h,i]perylene		280	J	370	ug/Kg	8270D
Acetophenone		9.8	J	370	ug/Kg	8270D
Aluminum		4740		36.5	mg/Kg	6010C
Arsenic		12.0		2.7	mg/Kg	6010C
Barium		74.8		36.5	mg/Kg	6010C
Beryllium		0.25	J	0.36	mg/Kg	6010C
Calcium		5940		911	mg/Kg	6010C
Cobalt		5.4	J	9.1	mg/Kg	6010C
Chromium		13.2		1.8	mg/Kg	6010C
Copper		37.3		4.6	mg/Kg	6010C
Iron		16800		27.3	mg/Kg	6010C
Potassium		748	J	911	mg/Kg	6010C
Magnesium		1900		911	mg/Kg	6010C
Manganese		272		2.7	mg/Kg	6010C
Sodium		151	J	911	mg/Kg	6010C
Nickel		14.8		7.3	mg/Kg	6010C
Lead		127		1.8	mg/Kg	6010C
Selenium		1.5	J	3.6	mg/Kg	6010C
Vanadium		22.4		9.1	mg/Kg	6010C
Zinc		104		5.5	mg/Kg	6010C
Mercury		10.5		0.91	mg/Kg	7471B
Percent Moisture		10.1		1.0	%	Moisture
Percent Solids		89.9		1.0	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: AKRF Inc

Job Number: 460-85054-1

Lab Sample ID Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
460-85054-4	**SB-10 (7-8')**					
Phenanthrene		69	J	400	ug/Kg	8270D
Fluoranthene		57	J	400	ug/Kg	8270D
Pyrene		72	J	400	ug/Kg	8270D
Chrysene		31	J	400	ug/Kg	8270D
Benzo[a]pyrene		19	J *	40	ug/Kg	8270D
Aluminum		7840		38.1	mg/Kg	6010C
Arsenic		8.2		2.9	mg/Kg	6010C
Barium		44.1		38.1	mg/Kg	6010C
Beryllium		0.37	J	0.38	mg/Kg	6010C
Calcium		3200		954	mg/Kg	6010C
Cobalt		7.4	J	9.5	mg/Kg	6010C
Chromium		17.4		1.9	mg/Kg	6010C
Copper		21.4		4.8	mg/Kg	6010C
Iron		21300		28.6	mg/Kg	6010C
Potassium		1020		954	mg/Kg	6010C
Magnesium		2570		954	mg/Kg	6010C
Manganese		291		2.9	mg/Kg	6010C
Sodium		113	J	954	mg/Kg	6010C
Nickel		13.7		7.6	mg/Kg	6010C
Lead		40.5		1.9	mg/Kg	6010C
Selenium		1.1	J	3.8	mg/Kg	6010C
Vanadium		25.0		9.5	mg/Kg	6010C
Zinc		52.5		5.7	mg/Kg	6010C
Mercury		0.044		0.019	mg/Kg	7471B
Percent Moisture		16.8		1.0	%	Moisture
Percent Solids		83.2		1.0	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: AKRF Inc

Job Number: 460-85054-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
460-85054-5	**SB-19 (1-2')**					
Naphthalene		96	J	350	ug/Kg	8270D
2-Methylnaphthalene		110	J	350	ug/Kg	8270D
Acenaphthylene		30	J	350	ug/Kg	8270D
Acenaphthene		88	J	350	ug/Kg	8270D
Dibenzofuran		67	J	350	ug/Kg	8270D
Fluorene		150	J	350	ug/Kg	8270D
Phenanthrene		1500		350	ug/Kg	8270D
Anthracene		330	J	350	ug/Kg	8270D
Carbazole		51	J	350	ug/Kg	8270D
Fluoranthene		1400		350	ug/Kg	8270D
Pyrene		1200		350	ug/Kg	8270D
Benzo[a]anthracene		670		35	ug/Kg	8270D
Chrysene		780		350	ug/Kg	8270D
Bis(2-ethylhexyl) phthalate		340	J	350	ug/Kg	8270D
Benzo[b]fluoranthene		620		35	ug/Kg	8270D
Benzo[k]fluoranthene		200		35	ug/Kg	8270D
Benzo[a]pyrene		590	*	35	ug/Kg	8270D
Indeno[1,2,3-cd]pyrene		500		35	ug/Kg	8270D
Dibenz(a,h)anthracene		120		35	ug/Kg	8270D
Benzo[g,h,i]perylene		460		350	ug/Kg	8270D
Acetophenone		12	J	350	ug/Kg	8270D
Aluminum		7280		36.9	mg/Kg	6010C
Arsenic		4.9		2.8	mg/Kg	6010C
Barium		77.0		36.9	mg/Kg	6010C
Beryllium		0.32	J	0.37	mg/Kg	6010C
Calcium		21700		924	mg/Kg	6010C
Cobalt		5.3	J	9.2	mg/Kg	6010C
Chromium		27.9		1.8	mg/Kg	6010C
Copper		28.9		4.6	mg/Kg	6010C
Iron		13800		27.7	mg/Kg	6010C
Potassium		876	J	924	mg/Kg	6010C
Magnesium		4420		924	mg/Kg	6010C
Manganese		243		2.8	mg/Kg	6010C
Sodium		346	J	924	mg/Kg	6010C
Nickel		17.6		7.4	mg/Kg	6010C
Lead		135		1.8	mg/Kg	6010C
Vanadium		28.1		9.2	mg/Kg	6010C
Zinc		68.5		5.5	mg/Kg	6010C
Mercury		0.16		0.018	mg/Kg	7471B
Percent Moisture		5.8		1.0	%	Moisture
Percent Solids		94.2		1.0	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: AKRF Inc

Job Number: 460-85054-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
460-85054-6	**SB-19 (7-8')**					
Isophorone		89	J	770	ug/Kg	8270D
Naphthalene		770	J	1900	ug/Kg	8270D
2-Methylnaphthalene		120	J	1900	ug/Kg	8270D
2-Chloronaphthalene		160	J	1900	ug/Kg	8270D
Acenaphthylene		180	J	1900	ug/Kg	8270D
Acenaphthene		110	J	1900	ug/Kg	8270D
Dibenzofuran		73	J	1900	ug/Kg	8270D
Fluorene		120	J	1900	ug/Kg	8270D
Phenanthrene		1200	J	1900	ug/Kg	8270D
Anthracene		190	J	1900	ug/Kg	8270D
Fluoranthene		1200	J	1900	ug/Kg	8270D
Pyrene		1000	J	1900	ug/Kg	8270D
Benzo[a]anthracene		520		190	ug/Kg	8270D
Chrysene		530	J	1900	ug/Kg	8270D
Benzo[b]fluoranthene		950		190	ug/Kg	8270D
Benzo[k]fluoranthene		340		190	ug/Kg	8270D
Benzo[a]pyrene		310	*	190	ug/Kg	8270D
Indeno[1,2,3-cd]pyrene		470		190	ug/Kg	8270D
Acetophenone		93	J	1900	ug/Kg	8270D
Aluminum		5060		36.2	mg/Kg	6010C
Arsenic		8.9		2.7	mg/Kg	6010C
Barium		55.6		36.2	mg/Kg	6010C
Beryllium		0.39		0.36	mg/Kg	6010C
Calcium		2310		904	mg/Kg	6010C
Cobalt		9.5		9.0	mg/Kg	6010C
Chromium		16.9		1.8	mg/Kg	6010C
Copper		42.7		4.5	mg/Kg	6010C
Iron		24500		27.1	mg/Kg	6010C
Potassium		819	J	904	mg/Kg	6010C
Magnesium		2170		904	mg/Kg	6010C
Manganese		313		2.7	mg/Kg	6010C
Sodium		599	J	904	mg/Kg	6010C
Nickel		15.3		7.2	mg/Kg	6010C
Lead		66.0		1.8	mg/Kg	6010C
Selenium		1.1	J	3.6	mg/Kg	6010C
Thallium		3.6		3.6	mg/Kg	6010C
Vanadium		26.0		9.0	mg/Kg	6010C
Zinc		116		5.4	mg/Kg	6010C
Mercury		0.020		0.019	mg/Kg	7471B
Percent Moisture		13.6		1.0	%	Moisture
Percent Solids		86.4		1.0	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: AKRF Inc

Job Number: 460-85054-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
460-85054-7	**SB-9 (1-2')**					
4-Methyl-2-pentanone (MIBK)		1.7	J	5.8	ug/Kg	8260C
Acetone		5.4	J	5.8	ug/Kg	8260C
o-Xylene		1.2		1.2	ug/Kg	8260C
Naphthalene		65	J	360	ug/Kg	8270D
2-Methylnaphthalene		41	J	360	ug/Kg	8270D
Acenaphthylene		15	J	360	ug/Kg	8270D
Acenaphthene		100	J	360	ug/Kg	8270D
Dibenzofuran		72	J	360	ug/Kg	8270D
Fluorene		88	J	360	ug/Kg	8270D
Phenanthrene		1300		360	ug/Kg	8270D
Anthracene		230	J	360	ug/Kg	8270D
Carbazole		72	J	360	ug/Kg	8270D
Fluoranthene		1200		360	ug/Kg	8270D
Pyrene		1300		360	ug/Kg	8270D
Benzo[a]anthracene		570		36	ug/Kg	8270D
Chrysene		650		360	ug/Kg	8270D
Bis(2-ethylhexyl) phthalate		160	J	360	ug/Kg	8270D
Benzo[b]fluoranthene		690		36	ug/Kg	8270D
Benzo[k]fluoranthene		230		36	ug/Kg	8270D
Benzo[a]pyrene		520	*	36	ug/Kg	8270D
Indeno[1,2,3-cd]pyrene		480		36	ug/Kg	8270D
Dibenz(a,h)anthracene		74		36	ug/Kg	8270D
Benzo[g,h,i]perylene		460		360	ug/Kg	8270D
Aroclor-1262		1000		72	ug/Kg	8082A
Polychlorinated biphenyls, Total		1000		72	ug/Kg	8082A
Aluminum		6970		39.1	mg/Kg	6010C
Arsenic		6.8		2.9	mg/Kg	6010C
Barium		96.3		39.1	mg/Kg	6010C
Beryllium		0.37	J	0.39	mg/Kg	6010C
Calcium		27600		977	mg/Kg	6010C
Cobalt		6.7	J	9.8	mg/Kg	6010C
Chromium		18.6		2.0	mg/Kg	6010C
Copper		52.3		4.9	mg/Kg	6010C
Iron		20000		29.3	mg/Kg	6010C
Potassium		1430		977	mg/Kg	6010C
Magnesium		4880		977	mg/Kg	6010C
Manganese		332		2.9	mg/Kg	6010C
Sodium		291	J	977	mg/Kg	6010C
Nickel		15.2		7.8	mg/Kg	6010C
Lead		131		2.0	mg/Kg	6010C
Selenium		1.4	J	3.9	mg/Kg	6010C
Vanadium		24.9		9.8	mg/Kg	6010C
Zinc		140		5.9	mg/Kg	6010C
Mercury		0.25		0.018	mg/Kg	7471B
Percent Moisture		7.8		1.0	%	Moisture
Percent Solids		92.2		1.0	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: AKRF Inc

Job Number: 460-85054-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
460-85054-8	**SB-9 (8-9')**					
Naphthalene		1500	J	2100	ug/Kg	8270D
2-Methylnaphthalene		850	J	2100	ug/Kg	8270D
Acenaphthylene		130	J	2100	ug/Kg	8270D
Acenaphthene		2300		2100	ug/Kg	8270D
Dibenzofuran		1800	J	2100	ug/Kg	8270D
Fluorene		3100		2100	ug/Kg	8270D
Phenanthrene		29000		2100	ug/Kg	8270D
Anthracene		6900		2100	ug/Kg	8270D
Carbazole		2400		2100	ug/Kg	8270D
Fluoranthene		22000		2100	ug/Kg	8270D
Pyrene		23000		2100	ug/Kg	8270D
Benzo[a]anthracene		11000		210	ug/Kg	8270D
Chrysene		12000		2100	ug/Kg	8270D
Benzo[b]fluoranthene		9900		210	ug/Kg	8270D
Benzo[k]fluoranthene		4100		210	ug/Kg	8270D
Benzo[a]pyrene		9000	*	210	ug/Kg	8270D
Indeno[1,2,3-cd]pyrene		7700		210	ug/Kg	8270D
Dibenz(a,h)anthracene		1900		210	ug/Kg	8270D
Benzo[g,h,i]perylene		7500		2100	ug/Kg	8270D
1,1'-Biphenyl		270	J	2100	ug/Kg	8270D
Aluminum		6270		39.5	mg/Kg	6010C
Arsenic		15.0		3.0	mg/Kg	6010C
Barium		110		39.5	mg/Kg	6010C
Beryllium		0.33	J	0.40	mg/Kg	6010C
Calcium		76700		4940	mg/Kg	6010C
Cobalt		7.8	J	9.9	mg/Kg	6010C
Chromium		18.5		2.0	mg/Kg	6010C
Copper		104		4.9	mg/Kg	6010C
Iron		12400		29.7	mg/Kg	6010C
Potassium		806	J	988	mg/Kg	6010C
Magnesium		10700		988	mg/Kg	6010C
Manganese		614		3.0	mg/Kg	6010C
Sodium		415	J	988	mg/Kg	6010C
Nickel		23.5		7.9	mg/Kg	6010C
Lead		613		2.0	mg/Kg	6010C
Selenium		2.2	J	4.0	mg/Kg	6010C
Vanadium		32.2		9.9	mg/Kg	6010C
Zinc		85.3		5.9	mg/Kg	6010C
Mercury		0.14		0.020	mg/Kg	7471B
Percent Moisture		19.7		1.0	%	Moisture
Percent Solids		80.3		1.0	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: AKRF Inc

Job Number: 460-85054-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
460-85054-9	**SB-7 (1-2')**					
Trichloroethene		0.99	J	1.0	ug/Kg	8260C
Naphthalene		28	J	730	ug/Kg	8270D
Acenaphthylene		30	J	730	ug/Kg	8270D
Acenaphthene		71	J	730	ug/Kg	8270D
Dibenzofuran		28	J	730	ug/Kg	8270D
Fluorene		61	J	730	ug/Kg	8270D
Phenanthrene		940		730	ug/Kg	8270D
Anthracene		200	J	730	ug/Kg	8270D
Carbazole		58	J	730	ug/Kg	8270D
Fluoranthene		1500		730	ug/Kg	8270D
Pyrene		1300		730	ug/Kg	8270D
Benzo[a]anthracene		690		73	ug/Kg	8270D
Chrysene		740		730	ug/Kg	8270D
Benzo[b]fluoranthene		980		73	ug/Kg	8270D
Benzo[k]fluoranthene		320		73	ug/Kg	8270D
Benzo[a]pyrene		670	*	73	ug/Kg	8270D
Indeno[1,2,3-cd]pyrene		310		73	ug/Kg	8270D
Dibenz(a,h)anthracene		78		73	ug/Kg	8270D
Benzo[g,h,i]perylene		270	J	730	ug/Kg	8270D
Aroclor-1262		69	J	74	ug/Kg	8082A
Polychlorinated biphenyls, Total		69	J	74	ug/Kg	8082A
Aluminum		7350		34.1	mg/Kg	6010C
Arsenic		11.2		2.6	mg/Kg	6010C
Barium		163		34.1	mg/Kg	6010C
Beryllium		0.46		0.34	mg/Kg	6010C
Calcium		16500		852	mg/Kg	6010C
Cobalt		7.3	J	8.5	mg/Kg	6010C
Chromium		18.0		1.7	mg/Kg	6010C
Copper		59.9		4.3	mg/Kg	6010C
Iron		23600		25.6	mg/Kg	6010C
Potassium		974		852	mg/Kg	6010C
Magnesium		3050		852	mg/Kg	6010C
Manganese		505		2.6	mg/Kg	6010C
Sodium		172	J	852	mg/Kg	6010C
Nickel		16.9		6.8	mg/Kg	6010C
Lead		335		1.7	mg/Kg	6010C
Selenium		1.0	J	3.4	mg/Kg	6010C
Thallium		1.7	J	3.4	mg/Kg	6010C
Vanadium		29.0		8.5	mg/Kg	6010C
Zinc		223		5.1	mg/Kg	6010C
Mercury		0.18		0.018	mg/Kg	7471B
Percent Moisture		9.7		1.0	%	Moisture
Percent Solids		90.3		1.0	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: AKRF Inc

Job Number: 460-85054-1

Lab Sample ID	Client Sample ID			Reporting		
Analyte		Result	Qualifier	Limit	Units	Method
460-85054-10	**SB-7 (7-8')**					
Naphthalene		87	J	380	ug/Kg	8270D
2-Methylnaphthalene		49	J	380	ug/Kg	8270D
Acenaphthene		140	J	380	ug/Kg	8270D
Dibenzofuran		90	J	380	ug/Kg	8270D
Fluorene		120	J	380	ug/Kg	8270D
Phenanthrene		1100		380	ug/Kg	8270D
Anthracene		250	J	380	ug/Kg	8270D
Carbazole		92	J	380	ug/Kg	8270D
Fluoranthene		910		380	ug/Kg	8270D
Pyrene		990		380	ug/Kg	8270D
Benzo[a]anthracene		390		38	ug/Kg	8270D
Chrysene		390		380	ug/Kg	8270D
Bis(2-ethylhexyl) phthalate		62	J	380	ug/Kg	8270D
Benzo[b]fluoranthene		420		38	ug/Kg	8270D
Benzo[k]fluoranthene		180		38	ug/Kg	8270D
Benzo[a]pyrene		370	*	38	ug/Kg	8270D
Indeno[1,2,3-cd]pyrene		280		38	ug/Kg	8270D
Dibenz(a,h)anthracene		64		38	ug/Kg	8270D
Benzo[g,h,i]perylene		290	J	380	ug/Kg	8270D
Aluminum		6720		37.3	mg/Kg	6010C
Arsenic		5.8		2.8	mg/Kg	6010C
Barium		44.3		37.3	mg/Kg	6010C
Beryllium		0.27	J	0.37	mg/Kg	6010C
Calcium		32200		933	mg/Kg	6010C
Cobalt		4.9	J	9.3	mg/Kg	6010C
Chromium		13.7		1.9	mg/Kg	6010C
Copper		17.2		4.7	mg/Kg	6010C
Iron		14000		28.0	mg/Kg	6010C
Potassium		1090		933	mg/Kg	6010C
Magnesium		4250		933	mg/Kg	6010C
Manganese		363		2.8	mg/Kg	6010C
Sodium		370	J	933	mg/Kg	6010C
Nickel		12.0		7.5	mg/Kg	6010C
Lead		42.4		1.9	mg/Kg	6010C
Vanadium		20.8		9.3	mg/Kg	6010C
Zinc		49.3		5.6	mg/Kg	6010C
Mercury		0.079		0.019	mg/Kg	7471B
Percent Moisture		14.2		1.0	%	Moisture
Percent Solids		85.8		1.0	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: AKRF Inc

Job Number: 460-85054-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
460-85054-11	**SB-1 (1-2')**					
Toluene		0.24	J	0.98	ug/Kg	8260C
Naphthalene		41	J	370	ug/Kg	8270D
2-Methylnaphthalene		22	J	370	ug/Kg	8270D
Acenaphthylene		21	J	370	ug/Kg	8270D
Acenaphthene		43	J	370	ug/Kg	8270D
Dibenzofuran		37	J	370	ug/Kg	8270D
Fluorene		46	J	370	ug/Kg	8270D
Phenanthrene		840		370	ug/Kg	8270D
Anthracene		140	J	370	ug/Kg	8270D
Carbazole		57	J	370	ug/Kg	8270D
Fluoranthene		1200		370	ug/Kg	8270D
Pyrene		1600		370	ug/Kg	8270D
Benzo[a]anthracene		750		37	ug/Kg	8270D
Chrysene		860		370	ug/Kg	8270D
Bis(2-ethylhexyl) phthalate		59	J	370	ug/Kg	8270D
Benzo[b]fluoranthene		880		37	ug/Kg	8270D
Benzo[k]fluoranthene		390		37	ug/Kg	8270D
Benzo[a]pyrene		810	*	37	ug/Kg	8270D
Indeno[1,2,3-cd]pyrene		680		37	ug/Kg	8270D
Dibenz(a,h)anthracene		170		37	ug/Kg	8270D
Benzo[g,h,i]perylene		660		370	ug/Kg	8270D
Aluminum		9020		38.8	mg/Kg	6010C
Arsenic		6.5		2.9	mg/Kg	6010C
Barium		103		38.8	mg/Kg	6010C
Beryllium		0.43		0.39	mg/Kg	6010C
Calcium		8680		970	mg/Kg	6010C
Cadmium		0.74	J	0.78	mg/Kg	6010C
Cobalt		5.6	J	9.7	mg/Kg	6010C
Chromium		23.3		1.9	mg/Kg	6010C
Copper		46.3		4.8	mg/Kg	6010C
Iron		29800		29.1	mg/Kg	6010C
Potassium		1260		970	mg/Kg	6010C
Magnesium		2660		970	mg/Kg	6010C
Manganese		230		2.9	mg/Kg	6010C
Nickel		16.8		7.8	mg/Kg	6010C
Lead		173		1.9	mg/Kg	6010C
Vanadium		31.2		9.7	mg/Kg	6010C
Zinc		423		5.8	mg/Kg	6010C
Mercury		0.20		0.018	mg/Kg	7471B
Percent Moisture		10.3		1.0	%	Moisture
Percent Solids		89.7		1.0	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: AKRF Inc

Job Number: 460-85054-1

Lab Sample ID Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
460-85054-12	**SB-1 (8-9')**					
Acetone		5.2		5.0	ug/Kg	8260C
Phenanthrene		37	J	400	ug/Kg	8270D
Fluoranthene		38	J	400	ug/Kg	8270D
Pyrene		43	J	400	ug/Kg	8270D
Chrysene		20	J	400	ug/Kg	8270D
Benzo[b]fluoranthene		15	J	40	ug/Kg	8270D
Benzo[a]pyrene		16	J *	40	ug/Kg	8270D
Aluminum		9790		43.9	mg/Kg	6010C
Arsenic		3.9		3.3	mg/Kg	6010C
Barium		89.6		43.9	mg/Kg	6010C
Calcium		42500		1100	mg/Kg	6010C
Cobalt		6.0	J	11.0	mg/Kg	6010C
Chromium		17.7		2.2	mg/Kg	6010C
Copper		20.6		5.5	mg/Kg	6010C
Iron		19200		32.9	mg/Kg	6010C
Potassium		1050	J	1100	mg/Kg	6010C
Magnesium		20400		1100	mg/Kg	6010C
Manganese		1100		3.3	mg/Kg	6010C
Sodium		344	J	1100	mg/Kg	6010C
Nickel		13.1		8.8	mg/Kg	6010C
Lead		31.3		2.2	mg/Kg	6010C
Vanadium		24.3		11.0	mg/Kg	6010C
Zinc		31.2		6.6	mg/Kg	6010C
Percent Moisture		16.4		1.0	%	Moisture
Percent Solids		83.6		1.0	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: AKRF Inc

Job Number: 460-85054-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
460-85054-13	**SB-2 (1-2')**					
Isophorone		610		160	ug/Kg	8270D
Naphthalene		65	J	390	ug/Kg	8270D
2-Methylnaphthalene		46	J	390	ug/Kg	8270D
Acenaphthylene		31	J	390	ug/Kg	8270D
Acenaphthene		72	J	390	ug/Kg	8270D
Dibenzofuran		59	J	390	ug/Kg	8270D
Fluorene		67	J	390	ug/Kg	8270D
Phenanthrene		1200		390	ug/Kg	8270D
Anthracene		210	J	390	ug/Kg	8270D
Carbazole		73	J	390	ug/Kg	8270D
Di-n-butyl phthalate		19	J	390	ug/Kg	8270D
Fluoranthene		1600		390	ug/Kg	8270D
Pyrene		1800		390	ug/Kg	8270D
Benzo[a]anthracene		870		39	ug/Kg	8270D
Chrysene		1000		390	ug/Kg	8270D
Bis(2-ethylhexyl) phthalate		62	J	390	ug/Kg	8270D
Benzo[b]fluoranthene		1100		39	ug/Kg	8270D
Benzo[k]fluoranthene		390		39	ug/Kg	8270D
Benzo[a]pyrene		820	*	39	ug/Kg	8270D
Indeno[1,2,3-cd]pyrene		670		39	ug/Kg	8270D
Dibenz(a,h)anthracene		160		39	ug/Kg	8270D
Benzo[g,h,i]perylene		700		390	ug/Kg	8270D
Aluminum		8200		41.7	mg/Kg	6010C
Arsenic		10.8		3.1	mg/Kg	6010C
Barium		189		41.7	mg/Kg	6010C
Calcium		10600		1040	mg/Kg	6010C
Cadmium		0.82	J	0.83	mg/Kg	6010C
Cobalt		8.6	J	10.4	mg/Kg	6010C
Chromium		18.0		2.1	mg/Kg	6010C
Copper		63.4		5.2	mg/Kg	6010C
Iron		20300		31.3	mg/Kg	6010C
Potassium		2590		1040	mg/Kg	6010C
Magnesium		3730		1040	mg/Kg	6010C
Manganese		236		3.1	mg/Kg	6010C
Sodium		220	J	1040	mg/Kg	6010C
Nickel		24.7		8.3	mg/Kg	6010C
Lead		192		2.1	mg/Kg	6010C
Vanadium		27.2		10.4	mg/Kg	6010C
Zinc		277		6.3	mg/Kg	6010C
Mercury		26.0		0.98	mg/Kg	7471B
Percent Moisture		15.9		1.0	%	Moisture
Percent Solids		84.1		1.0	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: AKRF Inc

Job Number: 460-85054-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
460-85054-14	**SB-2 (6-7')**					
Isophorone		13	J	150	ug/Kg	8270D
Naphthalene		20	J	370	ug/Kg	8270D
2-Methylnaphthalene		11	J	370	ug/Kg	8270D
Acenaphthene		24	J	370	ug/Kg	8270D
Dibenzofuran		18	J	370	ug/Kg	8270D
Fluorene		22	J	370	ug/Kg	8270D
Phenanthrene		270	J	370	ug/Kg	8270D
Anthracene		52	J	370	ug/Kg	8270D
Carbazole		20	J	370	ug/Kg	8270D
Fluoranthene		320	J	370	ug/Kg	8270D
Pyrene		380		370	ug/Kg	8270D
Benzo[a]anthracene		170		37	ug/Kg	8270D
Chrysene		180	J	370	ug/Kg	8270D
Bis(2-ethylhexyl) phthalate		500		370	ug/Kg	8270D
Benzo[b]fluoranthene		200		37	ug/Kg	8270D
Benzo[k]fluoranthene		87		37	ug/Kg	8270D
Benzo[a]pyrene		140	*	37	ug/Kg	8270D
Indeno[1,2,3-cd]pyrene		110		37	ug/Kg	8270D
Dibenz(a,h)anthracene		39		37	ug/Kg	8270D
Benzo[g,h,i]perylene		100	J	370	ug/Kg	8270D
Aluminum		7310		35.8	mg/Kg	6010C
Arsenic		15.1		2.7	mg/Kg	6010C
Barium		88.4		35.8	mg/Kg	6010C
Beryllium		0.27	J	0.36	mg/Kg	6010C
Calcium		15500		895	mg/Kg	6010C
Cadmium		0.59	J	0.72	mg/Kg	6010C
Cobalt		9.3		8.9	mg/Kg	6010C
Chromium		23.8		1.8	mg/Kg	6010C
Copper		46.7		4.5	mg/Kg	6010C
Iron		26900		26.8	mg/Kg	6010C
Potassium		1740		895	mg/Kg	6010C
Magnesium		3690		895	mg/Kg	6010C
Manganese		384		2.7	mg/Kg	6010C
Sodium		253	J	895	mg/Kg	6010C
Nickel		19.5		7.2	mg/Kg	6010C
Lead		123		1.8	mg/Kg	6010C
Vanadium		30.7		8.9	mg/Kg	6010C
Zinc		102		5.4	mg/Kg	6010C
Percent Moisture		10.6		1.0	%	Moisture
Percent Solids		89.4		1.0	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: AKRF Inc

Job Number: 460-85054-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
460-85054-15	**SB-4 (1-2')**					
Isophorone		170		170	ug/Kg	8270D
Naphthalene		110	J	410	ug/Kg	8270D
2-Methylnaphthalene		230	J	410	ug/Kg	8270D
Acenaphthylene		16	J	410	ug/Kg	8270D
Acenaphthene		67	J	410	ug/Kg	8270D
Dibenzofuran		87	J	410	ug/Kg	8270D
Fluorene		80	J	410	ug/Kg	8270D
Phenanthrene		760		410	ug/Kg	8270D
Anthracene		120	J	410	ug/Kg	8270D
Carbazole		56	J	410	ug/Kg	8270D
Fluoranthene		650		410	ug/Kg	8270D
Pyrene		740		410	ug/Kg	8270D
Benzo[a]anthracene		340		41	ug/Kg	8270D
Chrysene		390	J	410	ug/Kg	8270D
Bis(2-ethylhexyl) phthalate		48	J	410	ug/Kg	8270D
Benzo[b]fluoranthene		420		41	ug/Kg	8270D
Benzo[k]fluoranthene		180		41	ug/Kg	8270D
Benzo[a]pyrene		320	*	41	ug/Kg	8270D
Indeno[1,2,3-cd]pyrene		270		41	ug/Kg	8270D
Dibenz(a,h)anthracene		49		41	ug/Kg	8270D
Benzo[g,h,i]perylene		270	J	410	ug/Kg	8270D
Acetophenone		27	J	410	ug/Kg	8270D
Caprolactam		63	J	410	ug/Kg	8270D
Aluminum		4820		38.8	mg/Kg	6010C
Arsenic		10.5		2.9	mg/Kg	6010C
Barium		122		38.8	mg/Kg	6010C
Beryllium		0.42		0.39	mg/Kg	6010C
Calcium		56600		2420	mg/Kg	6010C
Cadmium		0.42	J	0.78	mg/Kg	6010C
Cobalt		4.6	J	9.7	mg/Kg	6010C
Chromium		18.2		1.9	mg/Kg	6010C
Copper		39.3		4.8	mg/Kg	6010C
Iron		16700		29.1	mg/Kg	6010C
Potassium		716	J	970	mg/Kg	6010C
Magnesium		4460		970	mg/Kg	6010C
Manganese		221		2.9	mg/Kg	6010C
Sodium		264	J	970	mg/Kg	6010C
Nickel		12.3		7.8	mg/Kg	6010C
Lead		110		1.9	mg/Kg	6010C
Vanadium		19.0		9.7	mg/Kg	6010C
Zinc		123		5.8	mg/Kg	6010C
Mercury		0.023		0.020	mg/Kg	7471B
Percent Moisture		19.5		1.0	%	Moisture
Percent Solids		80.5		1.0	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: AKRF Inc

Job Number: 460-85054-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
460-85054-16	**SB-4 (7-8')**					
Isophorone		1900		150	ug/Kg	8270D
Naphthalene		120	J	380	ug/Kg	8270D
2-Methylnaphthalene		130	J	380	ug/Kg	8270D
Acenaphthylene		10	J	380	ug/Kg	8270D
Acenaphthene		52	J	380	ug/Kg	8270D
Dibenzofuran		59	J	380	ug/Kg	8270D
Fluorene		80	J	380	ug/Kg	8270D
Phenanthrene		680		380	ug/Kg	8270D
Anthracene		110	J	380	ug/Kg	8270D
Carbazole		58	J	380	ug/Kg	8270D
Fluoranthene		600		380	ug/Kg	8270D
Pyrene		620		380	ug/Kg	8270D
Benzo[a]anthracene		300		38	ug/Kg	8270D
Chrysene		400		380	ug/Kg	8270D
Bis(2-ethylhexyl) phthalate		54	J	380	ug/Kg	8270D
Benzo[b]fluoranthene		360		38	ug/Kg	8270D
Benzo[k]fluoranthene		140		38	ug/Kg	8270D
Benzo[a]pyrene		280	*	38	ug/Kg	8270D
Indeno[1,2,3-cd]pyrene		230		38	ug/Kg	8270D
Dibenz(a,h)anthracene		76		38	ug/Kg	8270D
Benzo[g,h,i]perylene		260	J	380	ug/Kg	8270D
Aluminum		1940		32.9	mg/Kg	6010C
Barium		16.7	J	32.9	mg/Kg	6010C
Calcium		27000		822	mg/Kg	6010C
Cobalt		0.80	J	8.2	mg/Kg	6010C
Chromium		2.9		1.6	mg/Kg	6010C
Copper		10.1		4.1	mg/Kg	6010C
Iron		2370		24.7	mg/Kg	6010C
Potassium		245	J	822	mg/Kg	6010C
Magnesium		1680		822	mg/Kg	6010C
Manganese		65.1		2.5	mg/Kg	6010C
Nickel		2.7	J	6.6	mg/Kg	6010C
Lead		8.6		1.6	mg/Kg	6010C
Vanadium		2.6	J	8.2	mg/Kg	6010C
Zinc		53.8		4.9	mg/Kg	6010C
Mercury		0.33		0.019	mg/Kg	7471B
Percent Moisture		13.7		1.0	%	Moisture
Percent Solids		86.3		1.0	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: AKRF Inc

Job Number: 460-85054-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
460-85054-17	**SB-X (7-8')**					
Acetone		25		6.5	ug/Kg	8260C
Naphthalene		23	J	380	ug/Kg	8270D
2-Methylnaphthalene		9.7	J	380	ug/Kg	8270D
Acenaphthene		36	J	380	ug/Kg	8270D
Dibenzofuran		21	J	380	ug/Kg	8270D
Fluorene		37	J	380	ug/Kg	8270D
Phenanthrene		510		380	ug/Kg	8270D
Anthracene		79	J	380	ug/Kg	8270D
Carbazole		37	J	380	ug/Kg	8270D
Fluoranthene		550		380	ug/Kg	8270D
Pyrene		710		380	ug/Kg	8270D
Benzo[a]anthracene		250		38	ug/Kg	8270D
Chrysene		350	J	380	ug/Kg	8270D
Benzo[b]fluoranthene		350		38	ug/Kg	8270D
Benzo[k]fluoranthene		150		38	ug/Kg	8270D
Benzo[a]pyrene		240	*	38	ug/Kg	8270D
Indeno[1,2,3-cd]pyrene		260		38	ug/Kg	8270D
Dibenz(a,h)anthracene		43		38	ug/Kg	8270D
Benzo[g,h,i]perylene		240	J	380	ug/Kg	8270D
Aluminum		5780		32.9	mg/Kg	6010C
Arsenic		5.3		2.5	mg/Kg	6010C
Barium		2560		32.9	mg/Kg	6010C
Calcium		25400		823	mg/Kg	6010C
Cadmium		0.44	J	0.66	mg/Kg	6010C
Cobalt		4.9	J	8.2	mg/Kg	6010C
Chromium		19.8		1.6	mg/Kg	6010C
Copper		28.8		4.1	mg/Kg	6010C
Iron		12200		24.7	mg/Kg	6010C
Potassium		1000		823	mg/Kg	6010C
Magnesium		2760		823	mg/Kg	6010C
Manganese		194		2.5	mg/Kg	6010C
Sodium		105	J	823	mg/Kg	6010C
Nickel		33.9		6.6	mg/Kg	6010C
Lead		641		1.6	mg/Kg	6010C
Vanadium		17.2		8.2	mg/Kg	6010C
Zinc		504		4.9	mg/Kg	6010C
Mercury		0.36		0.018	mg/Kg	7471B
Percent Moisture		11.9		1.0	%	Moisture
Percent Solids		88.1		1.0	%	Moisture

METHOD SUMMARY

Client: AKRF Inc

Job Number: 460-85054-1

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Volatile Organic Compounds by GC/MS	TAL EDI	SW846 8260C	
Closed System Purge and Trap	TAL EDI		SW846 5035
Semivolatile Organic Compounds (GC/MS)	TAL EDI	SW846 8270D	
Microwave Extraction	TAL EDI		SW846 3546
Organochlorine Pesticides (GC)	TAL EDI	SW846 8081B	
Microwave Extraction	TAL EDI		SW846 3546
Polychlorinated Biphenyls (PCBs) by Gas Chromatography	TAL EDI	SW846 8082A	
Microwave Extraction	TAL EDI		SW846 3546
Metals (ICP)	TAL EDI	SW846 6010C	
Preparation, Metals	TAL EDI		SW846 3050B
Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)	TAL EDI	SW846 7471B	
Preparation, Mercury	TAL EDI		SW846 7471B
Percent Moisture	TAL EDI	EPA Moisture	

Lab References:

TAL EDI = TestAmerica Edison

Method References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: AKRF Inc

Job Number: 460-85054-1

Method	Analyst	Analyst ID
SW846 8260C	Tupayachi, Audberto	AAT
SW846 8270D	Crocco, Michael	MMC
SW846 8270D	Gillins, Lauren E	LEG
SW846 8270D	Manlangit, Ferdie	FAM
SW846 8270D	Szczech, Anna	AAS
SW846 8081B	Foleyson, Temitope S	TSF
SW846 8081B	Kapoor, Sita	SAK
SW846 8082A	Patel, Jignesh	JHP
SW846 6010C	Chang, Churn Der	CDC
SW846 6010C	Huang, Yixin	YZH
SW846 6010C	Patel, Purva H	PHP
SW846 7471B	Patel, Purva H	PHP
EPA Moisture	Armbruster, Chris	CJA

SAMPLE SUMMARY

Client: AKRF Inc

Job Number: 460-85054-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
460-85054-1	SB-3 (1-2')	Solid	10/23/2014 1155	10/23/2014 1845
460-85054-2	SB-3 (8-9')	Solid	10/23/2014 1200	10/23/2014 1845
460-85054-3	SB-10 (1-2')	Solid	10/23/2014 1225	10/23/2014 1845
460-85054-4	SB-10 (7-8')	Solid	10/23/2014 1230	10/23/2014 1845
460-85054-5	SB-19 (1-2')	Solid	10/23/2014 1245	10/23/2014 1845
460-85054-6	SB-19 (7-8')	Solid	10/23/2014 1250	10/23/2014 1845
460-85054-7	SB-9 (1-2')	Solid	10/23/2014 1355	10/23/2014 1845
460-85054-8	SB-9 (8-9')	Solid	10/23/2014 1400	10/23/2014 1845
460-85054-9	SB-7 (1-2')	Solid	10/23/2014 1450	10/23/2014 1845
460-85054-10	SB-7 (7-8')	Solid	10/23/2014 1455	10/23/2014 1845
460-85054-11	SB-1 (1-2')	Solid	10/23/2014 1535	10/23/2014 1845
460-85054-12	SB-1 (8-9')	Solid	10/23/2014 1540	10/23/2014 1845
460-85054-13	SB-2 (1-2')	Solid	10/23/2014 1555	10/23/2014 1845
460-85054-14	SB-2 (6-7')	Solid	10/23/2014 1600	10/23/2014 1845
460-85054-15	SB-4 (1-2')	Solid	10/23/2014 1610	10/23/2014 1845
460-85054-16	SB-4 (7-8')	Solid	10/23/2014 1615	10/23/2014 1845
460-85054-17	SB-X (7-8')	Solid	10/23/2014 1620	10/23/2014 1845

SAMPLE RESULTS

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-3 (1-2')**

Lab Sample ID: 460-85054-1

Client Matrix: Solid

% Moisture: 10.3

Date Sampled: 10/23/2014 1155

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258540	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258104	Lab File ID:	K33406.D
Dilution:	1.0			Initial Weight/Volume:	4.80 g
Analysis Date:	10/27/2014 2201			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1352				

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.2	U	0.15	1.2
1,1,2,2-Tetrachloroethane	1.2	U *	0.10	1.2
1,1,2-Trichloro-1,2,2-trifluoroethane	1.2	U	0.13	1.2
1,1,2-Trichloroethane	1.2	U	0.16	1.2
1,1-Dichloroethane	1.2	U	0.13	1.2
1,1-Dichloroethene	1.2	U	0.22	1.2
1,2,3-Trichlorobenzene	1.2	U *	0.19	1.2
1,2,4-Trichlorobenzene	1.2	U *	0.22	1.2
1,2-Dichloropropane	1.2	U	0.17	1.2
1,3-Dichlorobenzene	1.2	U *	0.19	1.2
1,4-Dichlorobenzene	1.2	U *	0.13	1.2
1,4-Dioxane	23	U	15	23
2-Butanone (MEK)	5.8	U *	0.73	5.8
2-Hexanone	5.8	U	0.15	5.8
4-Methyl-2-pentanone (MIBK)	5.8	U	0.23	5.8
Acetone	5.8	U	2.0	5.8
Benzene	1.2	U	0.17	1.2
Bromoform	1.2	U	0.20	1.2
Bromomethane	1.2	U	0.50	1.2
Carbon disulfide	0.31	J	0.17	1.2
Carbon tetrachloride	1.2	U	0.17	1.2
Chlorobenzene	1.2	U	0.21	1.2
Chlorobromomethane	1.2	U	0.13	1.2
Chlorodibromomethane	1.2	U	0.12	1.2
Chloroethane	1.2	U	0.38	1.2
Chloroform	1.2	U	0.28	1.2
Chloromethane	1.2	U	0.19	1.2
cis-1,2-Dichloroethene	1.2	U	0.13	1.2
cis-1,3-Dichloropropene	1.2	U	0.16	1.2
Cyclohexane	1.2	U	0.15	1.2
Dichlorobromomethane	1.2	U	0.37	1.2
Dichlorodifluoromethane	1.2	U	0.26	1.2
Ethylbenzene	1.2	U	0.20	1.2
Ethylene Dibromide	1.2	U	0.17	1.2
Isopropylbenzene	1.2	U	0.13	1.2
Methyl acetate	5.8	U *	0.37	5.8
Methyl tert-butyl ether	1.2	U	0.13	1.2
Methylcyclohexane	1.2	U	0.12	1.2
Methylene Chloride	1.2	U	0.17	1.2
m-Xylene & p-Xylene	1.2	U	0.69	1.2
o-Xylene	1.2	U	0.22	1.2
Styrene	1.2	U	0.33	1.2
Tetrachloroethene	1.2	U	0.14	1.2
Toluene	1.2	U	0.16	1.2
trans-1,2-Dichloroethene	1.2	U	0.15	1.2
trans-1,3-Dichloropropene	1.2	U	0.12	1.2

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-3 (1-2')**

Lab Sample ID: 460-85054-1

Client Matrix: Solid

% Moisture: 10.3

Date Sampled: 10/23/2014 1155

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258540	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258104	Lab File ID:	K33406.D
Dilution:	1.0			Initial Weight/Volume:	4.80 g
Analysis Date:	10/27/2014 2201			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1352				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Trichloroethene		1.2	U	0.14	1.2
Trichlorofluoromethane		1.2	U	0.19	1.2
Vinyl chloride		1.2	U	0.39	1.2
1,2-Dichloroethane		1.2	U	0.21	1.2
1,2-Dichlorobenzene		1.2	U *	0.12	1.2
1,2-Dibromo-3-Chloropropane		1.2	U *	0.51	1.2

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	97		70 - 130
4-Bromofluorobenzene	68	*	70 - 130
Dibromofluoromethane (Surr)	102		70 - 130
Toluene-d8 (Surr)	116		70 - 130

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-3 (1-2')**

Lab Sample ID: 460-85054-1

Client Matrix: Solid

% Moisture: 10.3

Date Sampled: 10/23/2014 1155

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258540	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258104	Lab File ID:	K33406.D
Dilution:	1.0			Initial Weight/Volume:	4.80 g
Analysis Date:	10/27/2014 2201			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1352				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-3 (8-9')**

Lab Sample ID: 460-85054-2

Client Matrix: Solid

% Moisture: 10.3

Date Sampled: 10/23/2014 1200

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258540	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258104	Lab File ID:	K33407.D
Dilution:	1.0			Initial Weight/Volume:	4.11 g
Analysis Date:	10/27/2014 2226			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1353				

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.4	U	0.18	1.4
1,1,2,2-Tetrachloroethane	1.4	U	0.12	1.4
1,1,2-Trichloro-1,2,2-trifluoroethane	1.4	U	0.15	1.4
1,1,2-Trichloroethane	1.4	U	0.19	1.4
1,1-Dichloroethane	1.4	U	0.15	1.4
1,1-Dichloroethene	1.4	U	0.26	1.4
1,2,3-Trichlorobenzene	1.4	U	0.22	1.4
1,2,4-Trichlorobenzene	1.4	U	0.26	1.4
1,2-Dichloropropane	1.4	U	0.20	1.4
1,3-Dichlorobenzene	1.4	U	0.22	1.4
1,4-Dichlorobenzene	1.4	U	0.15	1.4
1,4-Dioxane	27	U	17	27
2-Butanone (MEK)	6.8	U *	0.85	6.8
2-Hexanone	6.8	U	0.18	6.8
4-Methyl-2-pentanone (MIBK)	6.8	U	0.27	6.8
Acetone	30		2.3	6.8
Benzene	1.4	U	0.20	1.4
Bromoform	1.4	U	0.23	1.4
Bromomethane	1.4	U	0.58	1.4
Carbon disulfide	1.4	U	0.20	1.4
Carbon tetrachloride	1.4	U	0.20	1.4
Chlorobenzene	1.4	U	0.24	1.4
Chlorobromomethane	1.4	U	0.15	1.4
Chlorodibromomethane	1.4	U	0.14	1.4
Chloroethane	1.4	U	0.45	1.4
Chloroform	1.4	U	0.33	1.4
Chloromethane	1.4	U	0.22	1.4
cis-1,2-Dichloroethene	1.4	U	0.15	1.4
cis-1,3-Dichloropropene	1.4	U	0.19	1.4
Cyclohexane	1.4	U	0.18	1.4
Dichlorobromomethane	1.4	U	0.43	1.4
Dichlorodifluoromethane	1.4	U	0.30	1.4
Ethylbenzene	1.4	U	0.23	1.4
Ethylene Dibromide	1.4	U	0.20	1.4
Isopropylbenzene	1.4	U	0.15	1.4
Methyl acetate	6.8	U *	0.43	6.8
Methyl tert-butyl ether	1.4	U	0.15	1.4
Methylcyclohexane	1.4	U	0.14	1.4
Methylene Chloride	1.4	U	0.20	1.4
m-Xylene & p-Xylene	1.4	U	0.80	1.4
o-Xylene	1.4	U	0.26	1.4
Styrene	1.4	U	0.38	1.4
Tetrachloroethene	1.4	U	0.16	1.4
Toluene	1.4	U	0.19	1.4
trans-1,2-Dichloroethene	1.4	U	0.18	1.4
trans-1,3-Dichloropropene	1.4	U	0.14	1.4

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-3 (8-9')**

Lab Sample ID: 460-85054-2

Client Matrix: Solid

% Moisture: 10.3

Date Sampled: 10/23/2014 1200

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258540	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258104	Lab File ID:	K33407.D
Dilution:	1.0			Initial Weight/Volume:	4.11 g
Analysis Date:	10/27/2014 2226			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1353				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Trichloroethene		1.4	U	0.16	1.4
Trichlorofluoromethane		1.4	U	0.22	1.4
Vinyl chloride		1.4	U	0.46	1.4
1,2-Dichloroethane		1.4	U	0.24	1.4
1,2-Dichlorobenzene		1.4	U	0.14	1.4
1,2-Dibromo-3-Chloropropane		1.4	U	0.60	1.4

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	97		70 - 130
4-Bromofluorobenzene	99		70 - 130
Dibromofluoromethane (Surr)	100		70 - 130
Toluene-d8 (Surr)	98		70 - 130

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-3 (8-9')**

Lab Sample ID: 460-85054-2

Client Matrix: Solid

% Moisture: 10.3

Date Sampled: 10/23/2014 1200

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258540	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258104	Lab File ID:	K33407.D
Dilution:	1.0			Initial Weight/Volume:	4.11 g
Analysis Date:	10/27/2014 2226			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1353				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-10 (1-2')**

Lab Sample ID: 460-85054-3

Client Matrix: Solid

% Moisture: 10.1

Date Sampled: 10/23/2014 1225

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258540	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258104	Lab File ID:	K33408.D
Dilution:	1.0			Initial Weight/Volume:	4.72 g
Analysis Date:	10/27/2014 2250			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1354				

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.2	U	0.15	1.2
1,1,2,2-Tetrachloroethane	1.2	U	0.11	1.2
1,1,2-Trichloro-1,2,2-trifluoroethane	1.2	U	0.13	1.2
1,1,2-Trichloroethane	1.2	U	0.16	1.2
1,1-Dichloroethane	1.2	U	0.13	1.2
1,1-Dichloroethene	1.2	U	0.22	1.2
1,2,3-Trichlorobenzene	1.2	U	0.19	1.2
1,2,4-Trichlorobenzene	1.2	U	0.22	1.2
1,2-Dichloropropane	1.2	U	0.18	1.2
1,3-Dichlorobenzene	1.2	U	0.19	1.2
1,4-Dichlorobenzene	1.2	U	0.13	1.2
1,4-Dioxane	24	U	15	24
2-Butanone (MEK)	5.9	U *	0.74	5.9
2-Hexanone	5.9	U	0.15	5.9
4-Methyl-2-pentanone (MIBK)	5.9	U	0.24	5.9
Acetone	5.9	U	2.0	5.9
Benzene	1.2	U	0.18	1.2
Bromoform	1.2	U	0.20	1.2
Bromomethane	1.2	U	0.51	1.2
Carbon disulfide	1.2	U	0.18	1.2
Carbon tetrachloride	1.2	U	0.18	1.2
Chlorobenzene	1.2	U	0.21	1.2
Chlorobromomethane	1.2	U	0.13	1.2
Chlorodibromomethane	1.2	U	0.12	1.2
Chloroethane	1.2	U	0.39	1.2
Chloroform	1.2	U	0.28	1.2
Chloromethane	1.2	U	0.19	1.2
cis-1,2-Dichloroethene	1.2	U	0.13	1.2
cis-1,3-Dichloropropene	1.2	U	0.16	1.2
Cyclohexane	1.2	U	0.15	1.2
Dichlorobromomethane	1.2	U	0.38	1.2
Dichlorodifluoromethane	1.2	U	0.26	1.2
Ethylbenzene	1.2	U	0.20	1.2
Ethylene Dibromide	1.2	U	0.18	1.2
Isopropylbenzene	1.2	U	0.13	1.2
Methyl acetate	5.9	U *	0.38	5.9
Methyl tert-butyl ether	1.2	U	0.13	1.2
Methylcyclohexane	1.2	U	0.12	1.2
Methylene Chloride	1.2	U	0.18	1.2
m-Xylene & p-Xylene	1.2	U	0.69	1.2
o-Xylene	1.2	U	0.22	1.2
Styrene	1.2	U	0.33	1.2
Tetrachloroethene	1.2	U	0.14	1.2
Toluene	1.2	U	0.16	1.2
trans-1,2-Dichloroethene	1.2	U	0.15	1.2
trans-1,3-Dichloropropene	1.2	U	0.12	1.2

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-10 (1-2')**

Lab Sample ID: 460-85054-3

Client Matrix: Solid

% Moisture: 10.1

Date Sampled: 10/23/2014 1225

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258540	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258104	Lab File ID:	K33408.D
Dilution:	1.0			Initial Weight/Volume:	4.72 g
Analysis Date:	10/27/2014 2250			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1354				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Trichloroethene		1.2	U	0.14	1.2
Trichlorofluoromethane		1.2	U	0.19	1.2
Vinyl chloride		1.2	U	0.40	1.2
1,2-Dichloroethane		1.2	U	0.21	1.2
1,2-Dichlorobenzene		1.2	U	0.12	1.2
1,2-Dibromo-3-Chloropropane		1.2	U	0.52	1.2

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	97		70 - 130
4-Bromofluorobenzene	88		70 - 130
Dibromofluoromethane (Surr)	99		70 - 130
Toluene-d8 (Surr)	83		70 - 130

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-10 (1-2')**

Lab Sample ID: 460-85054-3

Client Matrix: Solid

% Moisture: 10.1

Date Sampled: 10/23/2014 1225

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258540	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258104	Lab File ID:	K33408.D
Dilution:	1.0			Initial Weight/Volume:	4.72 g
Analysis Date:	10/27/2014 2250			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1354				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-10 (7-8')**

Lab Sample ID: 460-85054-4

Client Matrix: Solid

% Moisture: 16.8

Date Sampled: 10/23/2014 1230

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258540	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258104	Lab File ID:	K33409.D
Dilution:	1.0			Initial Weight/Volume:	6.02 g
Analysis Date:	10/27/2014 2314			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1355				

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.13	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.090	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	0.11	1.0
1,1,2-Trichloroethane	1.0	U	0.14	1.0
1,1-Dichloroethane	1.0	U	0.11	1.0
1,1-Dichloroethene	1.0	U	0.19	1.0
1,2,3-Trichlorobenzene	1.0	U	0.16	1.0
1,2,4-Trichlorobenzene	1.0	U	0.19	1.0
1,2-Dichloropropane	1.0	U	0.15	1.0
1,3-Dichlorobenzene	1.0	U	0.16	1.0
1,4-Dichlorobenzene	1.0	U	0.11	1.0
1,4-Dioxane	20	U	13	20
2-Butanone (MEK)	5.0	U *	0.63	5.0
2-Hexanone	5.0	U	0.13	5.0
4-Methyl-2-pentanone (MIBK)	5.0	U	0.20	5.0
Acetone	5.0	U	1.7	5.0
Benzene	1.0	U	0.15	1.0
Bromoform	1.0	U	0.17	1.0
Bromomethane	1.0	U	0.43	1.0
Carbon disulfide	1.0	U	0.15	1.0
Carbon tetrachloride	1.0	U	0.15	1.0
Chlorobenzene	1.0	U	0.18	1.0
Chlorobromomethane	1.0	U	0.11	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	0.33	1.0
Chloroform	1.0	U	0.24	1.0
Chloromethane	1.0	U	0.16	1.0
cis-1,2-Dichloroethene	1.0	U	0.11	1.0
cis-1,3-Dichloropropene	1.0	U	0.14	1.0
Cyclohexane	1.0	U	0.13	1.0
Dichlorobromomethane	1.0	U	0.32	1.0
Dichlorodifluoromethane	1.0	U	0.22	1.0
Ethylbenzene	1.0	U	0.17	1.0
Ethylene Dibromide	1.0	U	0.15	1.0
Isopropylbenzene	1.0	U	0.11	1.0
Methyl acetate	5.0	U *	0.32	5.0
Methyl tert-butyl ether	1.0	U	0.11	1.0
Methylcyclohexane	1.0	U	0.10	1.0
Methylene Chloride	1.0	U	0.15	1.0
m-Xylene & p-Xylene	1.0	U	0.59	1.0
o-Xylene	1.0	U	0.19	1.0
Styrene	1.0	U	0.28	1.0
Tetrachloroethene	1.0	U	0.12	1.0
Toluene	1.0	U	0.14	1.0
trans-1,2-Dichloroethene	1.0	U	0.13	1.0
trans-1,3-Dichloropropene	1.0	U	0.10	1.0

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-10 (7-8')**

Lab Sample ID: 460-85054-4

Client Matrix: Solid

% Moisture: 16.8

Date Sampled: 10/23/2014 1230

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258540	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258104	Lab File ID:	K33409.D
Dilution:	1.0			Initial Weight/Volume:	6.02 g
Analysis Date:	10/27/2014 2314			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1355				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Trichloroethene		1.0	U	0.12	1.0
Trichlorofluoromethane		1.0	U	0.16	1.0
Vinyl chloride		1.0	U	0.34	1.0
1,2-Dichloroethane		1.0	U	0.18	1.0
1,2-Dichlorobenzene		1.0	U	0.10	1.0
1,2-Dibromo-3-Chloropropane		1.0	U	0.44	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	107		70 - 130
4-Bromofluorobenzene	111		70 - 130
Dibromofluoromethane (Surr)	105		70 - 130
Toluene-d8 (Surr)	102		70 - 130

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-10 (7-8')**

Lab Sample ID: 460-85054-4

Client Matrix: Solid

% Moisture: 16.8

Date Sampled: 10/23/2014 1230

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258540	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258104	Lab File ID:	K33409.D
Dilution:	1.0			Initial Weight/Volume:	6.02 g
Analysis Date:	10/27/2014 2314			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1355				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-19 (1-2')**

Lab Sample ID: 460-85054-5

Client Matrix: Solid

% Moisture: 5.8

Date Sampled: 10/23/2014 1245

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258540	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258104	Lab File ID:	K33410.D
Dilution:	1.0			Initial Weight/Volume:	5.11 g
Analysis Date:	10/27/2014 2338			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1356				

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.14	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.094	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	0.11	1.0
1,1,2-Trichloroethane	1.0	U	0.15	1.0
1,1-Dichloroethane	1.0	U	0.11	1.0
1,1-Dichloroethene	1.0	U	0.20	1.0
1,2,3-Trichlorobenzene	1.0	U	0.17	1.0
1,2,4-Trichlorobenzene	1.0	U	0.20	1.0
1,2-Dichloropropane	1.0	U	0.16	1.0
1,3-Dichlorobenzene	1.0	U	0.17	1.0
1,4-Dichlorobenzene	1.0	U	0.11	1.0
1,4-Dioxane	21	U	13	21
2-Butanone (MEK)	5.2	U *	0.65	5.2
2-Hexanone	5.2	U	0.14	5.2
4-Methyl-2-pentanone (MIBK)	5.2	U	0.21	5.2
Acetone	5.2	U	1.8	5.2
Benzene	1.0	U	0.16	1.0
Bromoform	1.0	U	0.18	1.0
Bromomethane	1.0	U	0.45	1.0
Carbon disulfide	1.0	U	0.16	1.0
Carbon tetrachloride	1.0	U	0.16	1.0
Chlorobenzene	1.0	U	0.19	1.0
Chlorobromomethane	1.0	U	0.11	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	0.34	1.0
Chloroform	1.0	U	0.25	1.0
Chloromethane	1.0	U	0.17	1.0
cis-1,2-Dichloroethene	1.0	U	0.11	1.0
cis-1,3-Dichloropropene	1.0	U	0.15	1.0
Cyclohexane	1.0	U	0.14	1.0
Dichlorobromomethane	1.0	U	0.33	1.0
Dichlorodifluoromethane	1.0	U	0.23	1.0
Ethylbenzene	1.0	U	0.18	1.0
Ethylene Dibromide	1.0	U	0.16	1.0
Isopropylbenzene	1.0	U	0.11	1.0
Methyl acetate	5.2	U *	0.33	5.2
Methyl tert-butyl ether	1.0	U	0.11	1.0
Methylcyclohexane	1.0	U	0.10	1.0
Methylene Chloride	1.0	U	0.16	1.0
m-Xylene & p-Xylene	1.0	U	0.61	1.0
o-Xylene	1.0	U	0.20	1.0
Styrene	1.0	U	0.29	1.0
Tetrachloroethene	1.0	U	0.12	1.0
Toluene	1.0	U	0.15	1.0
trans-1,2-Dichloroethene	1.0	U	0.14	1.0
trans-1,3-Dichloropropene	1.0	U	0.10	1.0

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-19 (1-2')**

Lab Sample ID: 460-85054-5

Client Matrix: Solid

% Moisture: 5.8

Date Sampled: 10/23/2014 1245

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258540	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258104	Lab File ID:	K33410.D
Dilution:	1.0			Initial Weight/Volume:	5.11 g
Analysis Date:	10/27/2014 2338			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1356				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Trichloroethene		1.0	U	0.12	1.0
Trichlorofluoromethane		1.0	U	0.17	1.0
Vinyl chloride		1.0	U	0.35	1.0
1,2-Dichloroethane		1.0	U	0.19	1.0
1,2-Dichlorobenzene		1.0	U	0.10	1.0
1,2-Dibromo-3-Chloropropane		1.0	U	0.46	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	106		70 - 130
4-Bromofluorobenzene	103		70 - 130
Dibromofluoromethane (Surr)	113		70 - 130
Toluene-d8 (Surr)	106		70 - 130

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-19 (1-2')**

Lab Sample ID: 460-85054-5

Client Matrix: Solid

% Moisture: 5.8

Date Sampled: 10/23/2014 1245

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258540	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258104	Lab File ID:	K33410.D
Dilution:	1.0			Initial Weight/Volume:	5.11 g
Analysis Date:	10/27/2014 2338			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1356				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-19 (7-8')**

Lab Sample ID: 460-85054-6

Client Matrix: Solid

% Moisture: 13.6

Date Sampled: 10/23/2014 1250

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258540	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258104	Lab File ID:	K33411.D
Dilution:	1.0			Initial Weight/Volume:	6.05 g
Analysis Date:	10/28/2014 0003			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1357				

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1-Trichloroethane	0.96	U	0.12	0.96
1,1,2,2-Tetrachloroethane	0.96	U	0.086	0.96
1,1,2-Trichloro-1,2,2-trifluoroethane	0.96	U	0.11	0.96
1,1,2-Trichloroethane	0.96	U	0.13	0.96
1,1-Dichloroethane	0.96	U	0.11	0.96
1,1-Dichloroethene	0.96	U	0.18	0.96
1,2,3-Trichlorobenzene	0.96	U	0.15	0.96
1,2,4-Trichlorobenzene	0.96	U	0.18	0.96
1,2-Dichloropropane	0.96	U	0.14	0.96
1,3-Dichlorobenzene	0.96	U	0.15	0.96
1,4-Dichlorobenzene	0.96	U	0.11	0.96
1,4-Dioxane	19	U	12	19
2-Butanone (MEK)	4.8	U *	0.60	4.8
2-Hexanone	4.8	U	0.12	4.8
4-Methyl-2-pentanone (MIBK)	4.8	U	0.19	4.8
Acetone	4.8	U	1.6	4.8
Benzene	0.96	U	0.14	0.96
Bromoform	0.96	U	0.16	0.96
Bromomethane	0.96	U	0.41	0.96
Carbon disulfide	0.96	U	0.14	0.96
Carbon tetrachloride	0.96	U	0.14	0.96
Chlorobenzene	0.96	U	0.17	0.96
Chlorobromomethane	0.96	U	0.11	0.96
Chlorodibromomethane	0.96	U	0.096	0.96
Chloroethane	0.96	U	0.32	0.96
Chloroform	0.96	U	0.23	0.96
Chloromethane	0.96	U	0.15	0.96
cis-1,2-Dichloroethene	0.96	U	0.11	0.96
cis-1,3-Dichloropropene	0.96	U	0.13	0.96
Cyclohexane	0.96	U	0.12	0.96
Dichlorobromomethane	0.96	U	0.31	0.96
Dichlorodifluoromethane	0.96	U	0.21	0.96
Ethylbenzene	0.96	U	0.16	0.96
Ethylene Dibromide	0.96	U	0.14	0.96
Isopropylbenzene	0.96	U	0.11	0.96
Methyl acetate	4.8	U *	0.31	4.8
Methyl tert-butyl ether	0.96	U	0.11	0.96
Methylcyclohexane	0.96	U	0.096	0.96
Methylene Chloride	0.96	U	0.14	0.96
m-Xylene & p-Xylene	0.96	U	0.56	0.96
o-Xylene	0.96	U	0.18	0.96
Styrene	0.96	U	0.27	0.96
Tetrachloroethene	0.96	U	0.11	0.96
Toluene	0.96	U	0.13	0.96
trans-1,2-Dichloroethene	0.96	U	0.12	0.96
trans-1,3-Dichloropropene	0.96	U	0.096	0.96

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-19 (7-8')**

Lab Sample ID: 460-85054-6

Client Matrix: Solid

% Moisture: 13.6

Date Sampled: 10/23/2014 1250

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258540	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258104	Lab File ID:	K33411.D
Dilution:	1.0			Initial Weight/Volume:	6.05 g
Analysis Date:	10/28/2014 0003			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1357				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Trichloroethene		0.96	U	0.11	0.96
Trichlorofluoromethane		0.96	U	0.15	0.96
Vinyl chloride		0.96	U	0.33	0.96
1,2-Dichloroethane		0.96	U	0.17	0.96
1,2-Dichlorobenzene		0.96	U	0.096	0.96
1,2-Dibromo-3-Chloropropane		0.96	U	0.42	0.96

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	101		70 - 130
4-Bromofluorobenzene	97		70 - 130
Dibromofluoromethane (Surr)	100		70 - 130
Toluene-d8 (Surr)	98		70 - 130

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-19 (7-8')**

Lab Sample ID: 460-85054-6

Client Matrix: Solid

% Moisture: 13.6

Date Sampled: 10/23/2014 1250

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258540	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258104	Lab File ID:	K33411.D
Dilution:	1.0			Initial Weight/Volume:	6.05 g
Analysis Date:	10/28/2014 0003			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1357				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-9 (1-2')**

Lab Sample ID: 460-85054-7

Client Matrix: Solid

% Moisture: 7.8

Date Sampled: 10/23/2014 1355

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258540	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258104	Lab File ID:	K33412.D
Dilution:	1.0			Initial Weight/Volume:	4.71 g
Analysis Date:	10/28/2014 0027			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1358				

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.2	U	0.15	1.2
1,1,2,2-Tetrachloroethane	1.2	U	0.10	1.2
1,1,2-Trichloro-1,2,2-trifluoroethane	1.2	U	0.13	1.2
1,1,2-Trichloroethane	1.2	U	0.16	1.2
1,1-Dichloroethane	1.2	U	0.13	1.2
1,1-Dichloroethene	1.2	U	0.22	1.2
1,2,3-Trichlorobenzene	1.2	U	0.18	1.2
1,2,4-Trichlorobenzene	1.2	U	0.22	1.2
1,2-Dichloropropane	1.2	U	0.17	1.2
1,3-Dichlorobenzene	1.2	U	0.18	1.2
1,4-Dichlorobenzene	1.2	U	0.13	1.2
1,4-Dioxane	23	U	15	23
2-Butanone (MEK)	5.8	U *	0.73	5.8
2-Hexanone	5.8	U	0.15	5.8
4-Methyl-2-pentanone (MIBK)	1.7	J	0.23	5.8
Acetone	5.4	J	1.9	5.8
Benzene	1.2	U	0.17	1.2
Bromoform	1.2	U	0.20	1.2
Bromomethane	1.2	U	0.50	1.2
Carbon disulfide	1.2	U	0.17	1.2
Carbon tetrachloride	1.2	U	0.17	1.2
Chlorobenzene	1.2	U	0.21	1.2
Chlorobromomethane	1.2	U	0.13	1.2
Chlorodibromomethane	1.2	U	0.12	1.2
Chloroethane	1.2	U	0.38	1.2
Chloroform	1.2	U	0.28	1.2
Chloromethane	1.2	U	0.18	1.2
cis-1,2-Dichloroethene	1.2	U	0.13	1.2
cis-1,3-Dichloropropene	1.2	U	0.16	1.2
Cyclohexane	1.2	U	0.15	1.2
Dichlorobromomethane	1.2	U	0.37	1.2
Dichlorodifluoromethane	1.2	U	0.25	1.2
Ethylbenzene	1.2	U	0.20	1.2
Ethylene Dibromide	1.2	U	0.17	1.2
Isopropylbenzene	1.2	U	0.13	1.2
Methyl acetate	5.8	U *	0.37	5.8
Methyl tert-butyl ether	1.2	U	0.13	1.2
Methylcyclohexane	1.2	U	0.12	1.2
Methylene Chloride	1.2	U	0.17	1.2
m-Xylene & p-Xylene	1.2	U	0.68	1.2
o-Xylene	1.2		0.22	1.2
Styrene	1.2	U	0.32	1.2
Tetrachloroethene	1.2	U	0.14	1.2
Toluene	1.2	U	0.16	1.2
trans-1,2-Dichloroethene	1.2	U	0.15	1.2
trans-1,3-Dichloropropene	1.2	U	0.12	1.2

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-9 (1-2')**

Lab Sample ID: 460-85054-7

Client Matrix: Solid

% Moisture: 7.8

Date Sampled: 10/23/2014 1355

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258540	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258104	Lab File ID:	K33412.D
Dilution:	1.0			Initial Weight/Volume:	4.71 g
Analysis Date:	10/28/2014 0027			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1358				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Trichloroethene		1.2	U	0.14	1.2
Trichlorofluoromethane		1.2	U	0.18	1.2
Vinyl chloride		1.2	U	0.39	1.2
1,2-Dichloroethane		1.2	U	0.21	1.2
1,2-Dichlorobenzene		1.2	U	0.12	1.2
1,2-Dibromo-3-Chloropropane		1.2	U	0.51	1.2

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	95		70 - 130
4-Bromofluorobenzene	85		70 - 130
Dibromofluoromethane (Surr)	95		70 - 130
Toluene-d8 (Surr)	74		70 - 130

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-9 (1-2')**

Lab Sample ID: 460-85054-7

Client Matrix: Solid

% Moisture: 7.8

Date Sampled: 10/23/2014 1355

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258540	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258104	Lab File ID:	K33412.D
Dilution:	1.0			Initial Weight/Volume:	4.71 g
Analysis Date:	10/28/2014 0027			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1358				

Tentatively Identified Compounds **Number TIC's Found:** **1**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
526-73-8	Benzene, 1,2,3-trimethyl-	10.76	6.3	J N

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-9 (8-9')**

Lab Sample ID: 460-85054-8

Client Matrix: Solid

% Moisture: 19.7

Date Sampled: 10/23/2014 1400

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258540	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258104	Lab File ID:	K33413.D
Dilution:	1.0			Initial Weight/Volume:	4.96 g
Analysis Date:	10/28/2014 0051			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1359				

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.3	U	0.16	1.3
1,1,2,2-Tetrachloroethane	1.3	U	0.11	1.3
1,1,2-Trichloro-1,2,2-trifluoroethane	1.3	U	0.14	1.3
1,1,2-Trichloroethane	1.3	U	0.18	1.3
1,1-Dichloroethane	1.3	U	0.14	1.3
1,1-Dichloroethene	1.3	U	0.24	1.3
1,2,3-Trichlorobenzene	1.3	U	0.20	1.3
1,2,4-Trichlorobenzene	1.3	U	0.24	1.3
1,2-Dichloropropane	1.3	U	0.19	1.3
1,3-Dichlorobenzene	1.3	U	0.20	1.3
1,4-Dichlorobenzene	1.3	U	0.14	1.3
1,4-Dioxane	25	U	16	25
2-Butanone (MEK)	6.3	U *	0.79	6.3
2-Hexanone	6.3	U	0.16	6.3
4-Methyl-2-pentanone (MIBK)	6.3	U	0.25	6.3
Acetone	6.3	U	2.1	6.3
Benzene	1.3	U	0.19	1.3
Bromoform	1.3	U	0.21	1.3
Bromomethane	1.3	U	0.54	1.3
Carbon disulfide	1.3	U	0.19	1.3
Carbon tetrachloride	1.3	U	0.19	1.3
Chlorobenzene	1.3	U	0.23	1.3
Chlorobromomethane	1.3	U	0.14	1.3
Chlorodibromomethane	1.3	U	0.13	1.3
Chloroethane	1.3	U	0.41	1.3
Chloroform	1.3	U	0.30	1.3
Chloromethane	1.3	U	0.20	1.3
cis-1,2-Dichloroethene	1.3	U	0.14	1.3
cis-1,3-Dichloropropene	1.3	U	0.18	1.3
Cyclohexane	1.3	U	0.16	1.3
Dichlorobromomethane	1.3	U	0.40	1.3
Dichlorodifluoromethane	1.3	U	0.28	1.3
Ethylbenzene	1.3	U	0.21	1.3
Ethylene Dibromide	1.3	U	0.19	1.3
Isopropylbenzene	1.3	U	0.14	1.3
Methyl acetate	6.3	U *	0.40	6.3
Methyl tert-butyl ether	1.3	U	0.14	1.3
Methylcyclohexane	1.3	U	0.13	1.3
Methylene Chloride	1.3	U	0.19	1.3
m-Xylene & p-Xylene	1.3	U	0.74	1.3
o-Xylene	1.3	U	0.24	1.3
Styrene	1.3	U	0.35	1.3
Tetrachloroethene	1.3	U	0.15	1.3
Toluene	1.3	U	0.18	1.3
trans-1,2-Dichloroethene	1.3	U	0.16	1.3
trans-1,3-Dichloropropene	1.3	U	0.13	1.3

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-9 (8-9')**

Lab Sample ID: 460-85054-8

Client Matrix: Solid

% Moisture: 19.7

Date Sampled: 10/23/2014 1400

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258540	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258104	Lab File ID:	K33413.D
Dilution:	1.0			Initial Weight/Volume:	4.96 g
Analysis Date:	10/28/2014 0051			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1359				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Trichloroethene		1.3	U	0.15	1.3
Trichlorofluoromethane		1.3	U	0.20	1.3
Vinyl chloride		1.3	U	0.43	1.3
1,2-Dichloroethane		1.3	U	0.23	1.3
1,2-Dichlorobenzene		1.3	U	0.13	1.3
1,2-Dibromo-3-Chloropropane		1.3	U	0.55	1.3

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	93		70 - 130
4-Bromofluorobenzene	89		70 - 130
Dibromofluoromethane (Surr)	97		70 - 130
Toluene-d8 (Surr)	94		70 - 130

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-9 (8-9')**

Lab Sample ID: 460-85054-8

Client Matrix: Solid

% Moisture: 19.7

Date Sampled: 10/23/2014 1400

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258540	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258104	Lab File ID:	K33413.D
Dilution:	1.0			Initial Weight/Volume:	4.96 g
Analysis Date:	10/28/2014 0051			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1359				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-7 (1-2')**

Lab Sample ID: 460-85054-9

Client Matrix: Solid

% Moisture: 9.7

Date Sampled: 10/23/2014 1450

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258540	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258104	Lab File ID:	K33414.D
Dilution:	1.0			Initial Weight/Volume:	5.40 g
Analysis Date:	10/28/2014 0115			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1400				

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.13	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.092	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	0.11	1.0
1,1,2-Trichloroethane	1.0	U	0.14	1.0
1,1-Dichloroethane	1.0	U	0.11	1.0
1,1-Dichloroethene	1.0	U	0.19	1.0
1,2,3-Trichlorobenzene	1.0	U	0.16	1.0
1,2,4-Trichlorobenzene	1.0	U	0.19	1.0
1,2-Dichloropropane	1.0	U	0.15	1.0
1,3-Dichlorobenzene	1.0	U	0.16	1.0
1,4-Dichlorobenzene	1.0	U	0.11	1.0
1,4-Dioxane	21	U	13	21
2-Butanone (MEK)	5.1	U *	0.65	5.1
2-Hexanone	5.1	U	0.13	5.1
4-Methyl-2-pentanone (MIBK)	5.1	U	0.21	5.1
Acetone	5.1	U	1.7	5.1
Benzene	1.0	U	0.15	1.0
Bromoform	1.0	U	0.17	1.0
Bromomethane	1.0	U	0.44	1.0
Carbon disulfide	1.0	U	0.15	1.0
Carbon tetrachloride	1.0	U	0.15	1.0
Chlorobenzene	1.0	U	0.18	1.0
Chlorobromomethane	1.0	U	0.11	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	0.34	1.0
Chloroform	1.0	U	0.25	1.0
Chloromethane	1.0	U	0.16	1.0
cis-1,2-Dichloroethene	1.0	U	0.11	1.0
cis-1,3-Dichloropropene	1.0	U	0.14	1.0
Cyclohexane	1.0	U	0.13	1.0
Dichlorobromomethane	1.0	U	0.33	1.0
Dichlorodifluoromethane	1.0	U	0.23	1.0
Ethylbenzene	1.0	U	0.17	1.0
Ethylene Dibromide	1.0	U	0.15	1.0
Isopropylbenzene	1.0	U	0.11	1.0
Methyl acetate	5.1	U *	0.33	5.1
Methyl tert-butyl ether	1.0	U	0.11	1.0
Methylcyclohexane	1.0	U	0.10	1.0
Methylene Chloride	1.0	U	0.15	1.0
m-Xylene & p-Xylene	1.0	U	0.61	1.0
o-Xylene	1.0	U	0.19	1.0
Styrene	1.0	U	0.29	1.0
Tetrachloroethene	1.0	U	0.12	1.0
Toluene	1.0	U	0.14	1.0
trans-1,2-Dichloroethene	1.0	U	0.13	1.0
trans-1,3-Dichloropropene	1.0	U	0.10	1.0

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-7 (1-2')**

Lab Sample ID: 460-85054-9

Client Matrix: Solid

% Moisture: 9.7

Date Sampled: 10/23/2014 1450

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258540	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258104	Lab File ID:	K33414.D
Dilution:	1.0			Initial Weight/Volume:	5.40 g
Analysis Date:	10/28/2014 0115			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1400				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Trichloroethene		0.99	J	0.12	1.0
Trichlorofluoromethane		1.0	U	0.16	1.0
Vinyl chloride		1.0	U	0.35	1.0
1,2-Dichloroethane		1.0	U	0.18	1.0
1,2-Dichlorobenzene		1.0	U	0.10	1.0
1,2-Dibromo-3-Chloropropane		1.0	U	0.45	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	101		70 - 130
4-Bromofluorobenzene	91		70 - 130
Dibromofluoromethane (Surr)	103		70 - 130
Toluene-d8 (Surr)	100		70 - 130

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-7 (1-2')**

Lab Sample ID: 460-85054-9

Client Matrix: Solid

% Moisture: 9.7

Date Sampled: 10/23/2014 1450

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258540	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258104	Lab File ID:	K33414.D
Dilution:	1.0			Initial Weight/Volume:	5.40 g
Analysis Date:	10/28/2014 0115			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1400				

Tentatively Identified Compounds **Number TIC's Found:** **1**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	1.69	5.3	J

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-7 (7-8')**

Lab Sample ID: 460-85054-10

Client Matrix: Solid

% Moisture: 14.2

Date Sampled: 10/23/2014 1455

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258540	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258104	Lab File ID:	K33415.D
Dilution:	1.0			Initial Weight/Volume:	5.17 g
Analysis Date:	10/28/2014 0139			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1401				

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.1	U	0.15	1.1
1,1,2,2-Tetrachloroethane	1.1	U	0.10	1.1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.1	U	0.12	1.1
1,1,2-Trichloroethane	1.1	U	0.16	1.1
1,1-Dichloroethane	1.1	U	0.12	1.1
1,1-Dichloroethene	1.1	U	0.21	1.1
1,2,3-Trichlorobenzene	1.1	U	0.18	1.1
1,2,4-Trichlorobenzene	1.1	U	0.21	1.1
1,2-Dichloropropane	1.1	U	0.17	1.1
1,3-Dichlorobenzene	1.1	U	0.18	1.1
1,4-Dichlorobenzene	1.1	U	0.12	1.1
1,4-Dioxane	23	U	14	23
2-Butanone (MEK)	5.6	U *	0.71	5.6
2-Hexanone	5.6	U	0.15	5.6
4-Methyl-2-pentanone (MIBK)	5.6	U	0.23	5.6
Acetone	5.6	U	1.9	5.6
Benzene	1.1	U	0.17	1.1
Bromoform	1.1	U	0.19	1.1
Bromomethane	1.1	U	0.48	1.1
Carbon disulfide	1.1	U	0.17	1.1
Carbon tetrachloride	1.1	U	0.17	1.1
Chlorobenzene	1.1	U	0.20	1.1
Chlorobromomethane	1.1	U	0.12	1.1
Chlorodibromomethane	1.1	U	0.11	1.1
Chloroethane	1.1	U	0.37	1.1
Chloroform	1.1	U	0.27	1.1
Chloromethane	1.1	U	0.18	1.1
cis-1,2-Dichloroethene	1.1	U	0.12	1.1
cis-1,3-Dichloropropene	1.1	U	0.16	1.1
Cyclohexane	1.1	U	0.15	1.1
Dichlorobromomethane	1.1	U	0.36	1.1
Dichlorodifluoromethane	1.1	U	0.25	1.1
Ethylbenzene	1.1	U	0.19	1.1
Ethylene Dibromide	1.1	U	0.17	1.1
Isopropylbenzene	1.1	U	0.12	1.1
Methyl acetate	5.6	U *	0.36	5.6
Methyl tert-butyl ether	1.1	U	0.12	1.1
Methylcyclohexane	1.1	U	0.11	1.1
Methylene Chloride	1.1	U	0.17	1.1
m-Xylene & p-Xylene	1.1	U	0.67	1.1
o-Xylene	1.1	U	0.21	1.1
Styrene	1.1	U	0.32	1.1
Tetrachloroethene	1.1	U	0.14	1.1
Toluene	1.1	U	0.16	1.1
trans-1,2-Dichloroethene	1.1	U	0.15	1.1
trans-1,3-Dichloropropene	1.1	U	0.11	1.1

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-7 (7-8')**

Lab Sample ID: 460-85054-10

Client Matrix: Solid

% Moisture: 14.2

Date Sampled: 10/23/2014 1455

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258540	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258104	Lab File ID:	K33415.D
Dilution:	1.0			Initial Weight/Volume:	5.17 g
Analysis Date:	10/28/2014 0139			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1401				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Trichloroethene		1.1	U	0.14	1.1
Trichlorofluoromethane		1.1	U	0.18	1.1
Vinyl chloride		1.1	U	0.38	1.1
1,2-Dichloroethane		1.1	U	0.20	1.1
1,2-Dichlorobenzene		1.1	U	0.11	1.1
1,2-Dibromo-3-Chloropropane		1.1	U	0.50	1.1

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	100		70 - 130
4-Bromofluorobenzene	92		70 - 130
Dibromofluoromethane (Surr)	107		70 - 130
Toluene-d8 (Surr)	100		70 - 130

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-7 (7-8')**

Lab Sample ID: 460-85054-10

Client Matrix: Solid

% Moisture: 14.2

Date Sampled: 10/23/2014 1455

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258540	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258104	Lab File ID:	K33415.D
Dilution:	1.0			Initial Weight/Volume:	5.17 g
Analysis Date:	10/28/2014 0139			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1401				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-1 (1-2')**

Lab Sample ID: 460-85054-11

Client Matrix: Solid

% Moisture: 10.3

Date Sampled: 10/23/2014 1535

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258540	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258104	Lab File ID:	K33416.D
Dilution:	1.0			Initial Weight/Volume:	5.71 g
Analysis Date:	10/28/2014 0203			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1402				

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1-Trichloroethane	0.98	U	0.13	0.98
1,1,2,2-Tetrachloroethane	0.98	U	0.088	0.98
1,1,2-Trichloro-1,2,2-trifluoroethane	0.98	U	0.11	0.98
1,1,2-Trichloroethane	0.98	U	0.14	0.98
1,1-Dichloroethane	0.98	U	0.11	0.98
1,1-Dichloroethene	0.98	U	0.19	0.98
1,2,3-Trichlorobenzene	0.98	U	0.16	0.98
1,2,4-Trichlorobenzene	0.98	U	0.19	0.98
1,2-Dichloropropane	0.98	U	0.15	0.98
1,3-Dichlorobenzene	0.98	U	0.16	0.98
1,4-Dichlorobenzene	0.98	U	0.11	0.98
1,4-Dioxane	20	U	12	20
2-Butanone (MEK)	4.9	U *	0.62	4.9
2-Hexanone	4.9	U	0.13	4.9
4-Methyl-2-pentanone (MIBK)	4.9	U	0.20	4.9
Acetone	4.9	U	1.7	4.9
Benzene	0.98	U	0.15	0.98
Bromoform	0.98	U	0.17	0.98
Bromomethane	0.98	U	0.42	0.98
Carbon disulfide	0.98	U	0.15	0.98
Carbon tetrachloride	0.98	U	0.15	0.98
Chlorobenzene	0.98	U	0.18	0.98
Chlorobromomethane	0.98	U	0.11	0.98
Chlorodibromomethane	0.98	U	0.098	0.98
Chloroethane	0.98	U	0.32	0.98
Chloroform	0.98	U	0.23	0.98
Chloromethane	0.98	U	0.16	0.98
cis-1,2-Dichloroethene	0.98	U	0.11	0.98
cis-1,3-Dichloropropene	0.98	U	0.14	0.98
Cyclohexane	0.98	U	0.13	0.98
Dichlorobromomethane	0.98	U	0.31	0.98
Dichlorodifluoromethane	0.98	U	0.21	0.98
Ethylbenzene	0.98	U	0.17	0.98
Ethylene Dibromide	0.98	U	0.15	0.98
Isopropylbenzene	0.98	U	0.11	0.98
Methyl acetate	4.9	U *	0.31	4.9
Methyl tert-butyl ether	0.98	U	0.11	0.98
Methylcyclohexane	0.98	U	0.098	0.98
Methylene Chloride	0.98	U	0.15	0.98
m-Xylene & p-Xylene	0.98	U	0.58	0.98
o-Xylene	0.98	U	0.19	0.98
Styrene	0.98	U	0.27	0.98
Tetrachloroethene	0.98	U	0.12	0.98
Toluene	0.24	J	0.14	0.98
trans-1,2-Dichloroethene	0.98	U	0.13	0.98
trans-1,3-Dichloropropene	0.98	U	0.098	0.98

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-1 (1-2')**

Lab Sample ID: 460-85054-11

Client Matrix: Solid

% Moisture: 10.3

Date Sampled: 10/23/2014 1535

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258540	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258104	Lab File ID:	K33416.D
Dilution:	1.0			Initial Weight/Volume:	5.71 g
Analysis Date:	10/28/2014 0203			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1402				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Trichloroethene		0.98	U	0.12	0.98
Trichlorofluoromethane		0.98	U	0.16	0.98
Vinyl chloride		0.98	U	0.33	0.98
1,2-Dichloroethane		0.98	U	0.18	0.98
1,2-Dichlorobenzene		0.98	U	0.098	0.98
1,2-Dibromo-3-Chloropropane		0.98	U	0.43	0.98

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	99		70 - 130
4-Bromofluorobenzene	98		70 - 130
Dibromofluoromethane (Surr)	93		70 - 130
Toluene-d8 (Surr)	112		70 - 130

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-1 (1-2')**

Lab Sample ID: 460-85054-11

Client Matrix: Solid

% Moisture: 10.3

Date Sampled: 10/23/2014 1535

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258540	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258104	Lab File ID:	K33416.D
Dilution:	1.0			Initial Weight/Volume:	5.71 g
Analysis Date:	10/28/2014 0203			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1402				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-1 (8-9')**

Lab Sample ID: 460-85054-12

Client Matrix: Solid

% Moisture: 16.4

Date Sampled: 10/23/2014 1540

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258540	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258104	Lab File ID:	K33417.D
Dilution:	1.0			Initial Weight/Volume:	6.03 g
Analysis Date:	10/28/2014 0227			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1403				

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1-Trichloroethane	0.99	U	0.13	0.99
1,1,2,2-Tetrachloroethane	0.99	U	0.089	0.99
1,1,2-Trichloro-1,2,2-trifluoroethane	0.99	U	0.11	0.99
1,1,2-Trichloroethane	0.99	U	0.14	0.99
1,1-Dichloroethane	0.99	U	0.11	0.99
1,1-Dichloroethene	0.99	U	0.19	0.99
1,2,3-Trichlorobenzene	0.99	U	0.16	0.99
1,2,4-Trichlorobenzene	0.99	U	0.19	0.99
1,2-Dichloropropane	0.99	U	0.15	0.99
1,3-Dichlorobenzene	0.99	U	0.16	0.99
1,4-Dichlorobenzene	0.99	U	0.11	0.99
1,4-Dioxane	20	U	13	20
2-Butanone (MEK)	5.0	U *	0.63	5.0
2-Hexanone	5.0	U	0.13	5.0
4-Methyl-2-pentanone (MIBK)	5.0	U	0.20	5.0
Acetone	5.2		1.7	5.0
Benzene	0.99	U	0.15	0.99
Bromoform	0.99	U	0.17	0.99
Bromomethane	0.99	U	0.43	0.99
Carbon disulfide	0.99	U	0.15	0.99
Carbon tetrachloride	0.99	U	0.15	0.99
Chlorobenzene	0.99	U	0.18	0.99
Chlorobromomethane	0.99	U	0.11	0.99
Chlorodibromomethane	0.99	U	0.099	0.99
Chloroethane	0.99	U	0.33	0.99
Chloroform	0.99	U	0.24	0.99
Chloromethane	0.99	U	0.16	0.99
cis-1,2-Dichloroethene	0.99	U	0.11	0.99
cis-1,3-Dichloropropene	0.99	U	0.14	0.99
Cyclohexane	0.99	U	0.13	0.99
Dichlorobromomethane	0.99	U	0.32	0.99
Dichlorodifluoromethane	0.99	U	0.22	0.99
Ethylbenzene	0.99	U	0.17	0.99
Ethylene Dibromide	0.99	U	0.15	0.99
Isopropylbenzene	0.99	U	0.11	0.99
Methyl acetate	5.0	U *	0.32	5.0
Methyl tert-butyl ether	0.99	U	0.11	0.99
Methylcyclohexane	0.99	U	0.099	0.99
Methylene Chloride	0.99	U	0.15	0.99
m-Xylene & p-Xylene	0.99	U	0.59	0.99
o-Xylene	0.99	U	0.19	0.99
Styrene	0.99	U	0.28	0.99
Tetrachloroethene	0.99	U	0.12	0.99
Toluene	0.99	U	0.14	0.99
trans-1,2-Dichloroethene	0.99	U	0.13	0.99
trans-1,3-Dichloropropene	0.99	U	0.099	0.99

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-1 (8-9')**

Lab Sample ID: 460-85054-12

Client Matrix: Solid

% Moisture: 16.4

Date Sampled: 10/23/2014 1540

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258540	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258104	Lab File ID:	K33417.D
Dilution:	1.0			Initial Weight/Volume:	6.03 g
Analysis Date:	10/28/2014 0227			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1403				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Trichloroethene		0.99	U	0.12	0.99
Trichlorofluoromethane		0.99	U	0.16	0.99
Vinyl chloride		0.99	U	0.34	0.99
1,2-Dichloroethane		0.99	U	0.18	0.99
1,2-Dichlorobenzene		0.99	U	0.099	0.99
1,2-Dibromo-3-Chloropropane		0.99	U	0.44	0.99

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	100		70 - 130
4-Bromofluorobenzene	83		70 - 130
Dibromofluoromethane (Surr)	102		70 - 130
Toluene-d8 (Surr)	106		70 - 130

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-1 (8-9')**

Lab Sample ID: 460-85054-12

Client Matrix: Solid

% Moisture: 16.4

Date Sampled: 10/23/2014 1540

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258540	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258104	Lab File ID:	K33417.D
Dilution:	1.0			Initial Weight/Volume:	6.03 g
Analysis Date:	10/28/2014 0227			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1403				

Tentatively Identified Compounds **Number TIC's Found:** **1**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	4.59	6.2	J

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-2 (1-2')**

Lab Sample ID: 460-85054-13

Client Matrix: Solid

% Moisture: 15.9

Date Sampled: 10/23/2014 1555

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258540	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258104	Lab File ID:	K33418.D
Dilution:	1.0			Initial Weight/Volume:	4.89 g
Analysis Date:	10/28/2014 0251			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1404				

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.2	U	0.16	1.2
1,1,2,2-Tetrachloroethane	1.2	U *	0.11	1.2
1,1,2-Trichloro-1,2,2-trifluoroethane	1.2	U	0.13	1.2
1,1,2-Trichloroethane	1.2	U	0.17	1.2
1,1-Dichloroethane	1.2	U	0.13	1.2
1,1-Dichloroethene	1.2	U	0.23	1.2
1,2,3-Trichlorobenzene	1.2	U *	0.19	1.2
1,2,4-Trichlorobenzene	1.2	U *	0.23	1.2
1,2-Dichloropropane	1.2	U	0.18	1.2
1,3-Dichlorobenzene	1.2	U *	0.19	1.2
1,4-Dichlorobenzene	1.2	U *	0.13	1.2
1,4-Dioxane	24	U	15	24
2-Butanone (MEK)	6.1	U *	0.77	6.1
2-Hexanone	6.1	U	0.16	6.1
4-Methyl-2-pentanone (MIBK)	6.1	U	0.24	6.1
Acetone	6.1	U	2.1	6.1
Benzene	1.2	U	0.18	1.2
Bromoform	1.2	U	0.21	1.2
Bromomethane	1.2	U	0.52	1.2
Carbon disulfide	1.2	U	0.18	1.2
Carbon tetrachloride	1.2	U	0.18	1.2
Chlorobenzene	1.2	U	0.22	1.2
Chlorobromomethane	1.2	U	0.13	1.2
Chlorodibromomethane	1.2	U	0.12	1.2
Chloroethane	1.2	U	0.40	1.2
Chloroform	1.2	U	0.29	1.2
Chloromethane	1.2	U	0.19	1.2
cis-1,2-Dichloroethene	1.2	U	0.13	1.2
cis-1,3-Dichloropropene	1.2	U	0.17	1.2
Cyclohexane	1.2	U	0.16	1.2
Dichlorobromomethane	1.2	U	0.39	1.2
Dichlorodifluoromethane	1.2	U	0.27	1.2
Ethylbenzene	1.2	U	0.21	1.2
Ethylene Dibromide	1.2	U	0.18	1.2
Isopropylbenzene	1.2	U	0.13	1.2
Methyl acetate	6.1	U *	0.39	6.1
Methyl tert-butyl ether	1.2	U	0.13	1.2
Methylcyclohexane	1.2	U	0.12	1.2
Methylene Chloride	1.2	U	0.18	1.2
m-Xylene & p-Xylene	1.2	U	0.72	1.2
o-Xylene	1.2	U	0.23	1.2
Styrene	1.2	U	0.34	1.2
Tetrachloroethene	1.2	U	0.15	1.2
Toluene	1.2	U	0.17	1.2
trans-1,2-Dichloroethene	1.2	U	0.16	1.2
trans-1,3-Dichloropropene	1.2	U	0.12	1.2

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-2 (1-2')**

Lab Sample ID: 460-85054-13

Client Matrix: Solid

% Moisture: 15.9

Date Sampled: 10/23/2014 1555

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258540	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258104	Lab File ID:	K33418.D
Dilution:	1.0			Initial Weight/Volume:	4.89 g
Analysis Date:	10/28/2014 0251			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1404				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Trichloroethene		1.2	U	0.15	1.2
Trichlorofluoromethane		1.2	U	0.19	1.2
Vinyl chloride		1.2	U	0.41	1.2
1,2-Dichloroethane		1.2	U	0.22	1.2
1,2-Dichlorobenzene		1.2	U *	0.12	1.2
1,2-Dibromo-3-Chloropropane		1.2	U *	0.53	1.2

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	108		70 - 130
4-Bromofluorobenzene	66	*	70 - 130
Dibromofluoromethane (Surr)	108		70 - 130
Toluene-d8 (Surr)	96		70 - 130

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-2 (1-2')**

Lab Sample ID: 460-85054-13

Client Matrix: Solid

% Moisture: 15.9

Date Sampled: 10/23/2014 1555

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258540	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258104	Lab File ID:	K33418.D
Dilution:	1.0			Initial Weight/Volume:	4.89 g
Analysis Date:	10/28/2014 0251			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1404				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-2 (6-7')**

Lab Sample ID: 460-85054-14

Client Matrix: Solid

% Moisture: 10.6

Date Sampled: 10/23/2014 1600

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258540	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258104	Lab File ID:	K33419.D
Dilution:	1.0			Initial Weight/Volume:	6.40 g
Analysis Date:	10/28/2014 0315			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1405				

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1-Trichloroethane	0.87	U	0.11	0.87
1,1,2,2-Tetrachloroethane	0.87	U	0.079	0.87
1,1,2-Trichloro-1,2,2-trifluoroethane	0.87	U	0.096	0.87
1,1,2-Trichloroethane	0.87	U	0.12	0.87
1,1-Dichloroethane	0.87	U	0.096	0.87
1,1-Dichloroethene	0.87	U	0.17	0.87
1,2,3-Trichlorobenzene	0.87	U	0.14	0.87
1,2,4-Trichlorobenzene	0.87	U	0.17	0.87
1,2-Dichloropropane	0.87	U	0.13	0.87
1,3-Dichlorobenzene	0.87	U	0.14	0.87
1,4-Dichlorobenzene	0.87	U	0.096	0.87
1,4-Dioxane	17	U	11	17
2-Butanone (MEK)	4.4	U *	0.55	4.4
2-Hexanone	4.4	U	0.11	4.4
4-Methyl-2-pentanone (MIBK)	4.4	U	0.17	4.4
Acetone	4.4	U	1.5	4.4
Benzene	0.87	U	0.13	0.87
Bromoform	0.87	U	0.15	0.87
Bromomethane	0.87	U	0.38	0.87
Carbon disulfide	0.87	U	0.13	0.87
Carbon tetrachloride	0.87	U	0.13	0.87
Chlorobenzene	0.87	U	0.16	0.87
Chlorobromomethane	0.87	U	0.096	0.87
Chlorodibromomethane	0.87	U	0.087	0.87
Chloroethane	0.87	U	0.29	0.87
Chloroform	0.87	U	0.21	0.87
Chloromethane	0.87	U	0.14	0.87
cis-1,2-Dichloroethene	0.87	U	0.096	0.87
cis-1,3-Dichloropropene	0.87	U	0.12	0.87
Cyclohexane	0.87	U	0.11	0.87
Dichlorobromomethane	0.87	U	0.28	0.87
Dichlorodifluoromethane	0.87	U	0.19	0.87
Ethylbenzene	0.87	U	0.15	0.87
Ethylene Dibromide	0.87	U	0.13	0.87
Isopropylbenzene	0.87	U	0.096	0.87
Methyl acetate	4.4	U *	0.28	4.4
Methyl tert-butyl ether	0.87	U	0.096	0.87
Methylcyclohexane	0.87	U	0.087	0.87
Methylene Chloride	0.87	U	0.13	0.87
m-Xylene & p-Xylene	0.87	U	0.52	0.87
o-Xylene	0.87	U	0.17	0.87
Styrene	0.87	U	0.24	0.87
Tetrachloroethene	0.87	U	0.10	0.87
Toluene	0.87	U	0.12	0.87
trans-1,2-Dichloroethene	0.87	U	0.11	0.87
trans-1,3-Dichloropropene	0.87	U	0.087	0.87

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-2 (6-7')**

Lab Sample ID: 460-85054-14

Client Matrix: Solid

% Moisture: 10.6

Date Sampled: 10/23/2014 1600

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258540	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258104	Lab File ID:	K33419.D
Dilution:	1.0			Initial Weight/Volume:	6.40 g
Analysis Date:	10/28/2014 0315			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1405				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Trichloroethene		0.87	U	0.10	0.87
Trichlorofluoromethane		0.87	U	0.14	0.87
Vinyl chloride		0.87	U	0.30	0.87
1,2-Dichloroethane		0.87	U	0.16	0.87
1,2-Dichlorobenzene		0.87	U	0.087	0.87
1,2-Dibromo-3-Chloropropane		0.87	U	0.38	0.87

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	97		70 - 130
4-Bromofluorobenzene	95		70 - 130
Dibromofluoromethane (Surr)	100		70 - 130
Toluene-d8 (Surr)	81		70 - 130

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-2 (6-7')**

Lab Sample ID: 460-85054-14

Client Matrix: Solid

% Moisture: 10.6

Date Sampled: 10/23/2014 1600

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258540	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258104	Lab File ID:	K33419.D
Dilution:	1.0			Initial Weight/Volume:	6.40 g
Analysis Date:	10/28/2014 0315			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1405				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-4 (1-2')**

Lab Sample ID: 460-85054-15

Client Matrix: Solid

% Moisture: 19.5

Date Sampled: 10/23/2014 1610

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258661	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258104	Lab File ID:	K33431.D
Dilution:	1.0			Initial Weight/Volume:	5.86 g
Analysis Date:	10/28/2014 0950			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1406				

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.1	U	0.14	1.1
1,1,2,2-Tetrachloroethane	1.1	U	0.095	1.1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.1	U	0.12	1.1
1,1,2-Trichloroethane	1.1	U	0.15	1.1
1,1-Dichloroethane	1.1	U	0.12	1.1
1,1-Dichloroethene	1.1	U	0.20	1.1
1,2,3-Trichlorobenzene	1.1	U	0.17	1.1
1,2,4-Trichlorobenzene	1.1	U	0.20	1.1
1,2-Dichloropropane	1.1	U	0.16	1.1
1,3-Dichlorobenzene	1.1	U	0.17	1.1
1,4-Dichlorobenzene	1.1	U	0.12	1.1
1,4-Dioxane	21	U	13	21
2-Butanone (MEK)	5.3	U	0.67	5.3
2-Hexanone	5.3	U	0.14	5.3
4-Methyl-2-pentanone (MIBK)	5.3	U	0.21	5.3
Acetone	5.3	U	1.8	5.3
Benzene	1.1	U	0.16	1.1
Bromoform	1.1	U	0.18	1.1
Bromomethane	1.1	U	0.46	1.1
Carbon disulfide	1.1	U	0.16	1.1
Carbon tetrachloride	1.1	U	0.16	1.1
Chlorobenzene	1.1	U	0.19	1.1
Chlorobromomethane	1.1	U	0.12	1.1
Chlorodibromomethane	1.1	U	0.11	1.1
Chloroethane	1.1	U	0.35	1.1
Chloroform	1.1	U	0.25	1.1
Chloromethane	1.1	U	0.17	1.1
cis-1,2-Dichloroethene	1.1	U *	0.12	1.1
cis-1,3-Dichloropropene	1.1	U	0.15	1.1
Cyclohexane	1.1	U	0.14	1.1
Dichlorobromomethane	1.1	U	0.34	1.1
Dichlorodifluoromethane	1.1	U	0.23	1.1
Ethylbenzene	1.1	U	0.18	1.1
Ethylene Dibromide	1.1	U	0.16	1.1
Isopropylbenzene	1.1	U	0.12	1.1
Methyl acetate	5.3	U	0.34	5.3
Methyl tert-butyl ether	1.1	U	0.12	1.1
Methylcyclohexane	1.1	U	0.11	1.1
Methylene Chloride	1.1	U	0.16	1.1
m-Xylene & p-Xylene	1.1	U	0.63	1.1
o-Xylene	1.1	U	0.20	1.1
Styrene	1.1	U	0.30	1.1
Tetrachloroethene	1.1	U	0.13	1.1
Toluene	1.1	U	0.15	1.1
trans-1,2-Dichloroethene	1.1	U	0.14	1.1
trans-1,3-Dichloropropene	1.1	U	0.11	1.1

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-4 (1-2')**

Lab Sample ID: 460-85054-15

Client Matrix: Solid

% Moisture: 19.5

Date Sampled: 10/23/2014 1610

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258661	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258104	Lab File ID:	K33431.D
Dilution:	1.0			Initial Weight/Volume:	5.86 g
Analysis Date:	10/28/2014 0950			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1406				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Trichloroethene		1.1	U	0.13	1.1
Trichlorofluoromethane		1.1	U	0.17	1.1
Vinyl chloride		1.1	U	0.36	1.1
1,2-Dichloroethane		1.1	U	0.19	1.1
1,2-Dichlorobenzene		1.1	U	0.11	1.1
1,2-Dibromo-3-Chloropropane		1.1	U	0.47	1.1

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	100		70 - 130
4-Bromofluorobenzene	91		70 - 130
Dibromofluoromethane (Surr)	99		70 - 130
Toluene-d8 (Surr)	93		70 - 130

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-4 (1-2')**

Lab Sample ID: 460-85054-15

Client Matrix: Solid

% Moisture: 19.5

Date Sampled: 10/23/2014 1610

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258661	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258104	Lab File ID:	K33431.D
Dilution:	1.0			Initial Weight/Volume:	5.86 g
Analysis Date:	10/28/2014 0950			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1406				

Tentatively Identified Compounds **Number TIC's Found:** **10**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
17301-23-4	Undecane, 2,6-dimethyl-	11.96	19	J N
62016-34-6	Octane, 2,3,7-trimethyl-	12.33	25	J N
6682-71-9	1H-Indene, 2,3-dihydro-4,7-dimethyl-	12.64	25	J N
1985-59-7	Naphthalene, 1,2,3,4-tetrahydro-1,1-dime	12.91	30	J N
3891-98-3	Dodecane, 2,6,10-trimethyl-	13.03	33	J N
18344-37-1	Heptadecane, 2,6,10,14-tetramethyl-	13.69	33	J N
582-16-1	Naphthalene, 2,7-dimethyl-	14.24	17	J N
581-40-8	Naphthalene, 2,3-dimethyl-	14.41	33	J N
581-40-8	Naphthalene, 2,3-dimethyl-	14.46	29	J N
544-76-3	Hexadecane	15.08	18	J N

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-4 (7-8')**

Lab Sample ID: 460-85054-16

Client Matrix: Solid

% Moisture: 13.7

Date Sampled: 10/23/2014 1615

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258661	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258104	Lab File ID:	K33432.D
Dilution:	1.0			Initial Weight/Volume:	4.26 g
Analysis Date:	10/28/2014 1015			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1407				

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.4	U	0.18	1.4
1,1,2,2-Tetrachloroethane	1.4	U *	0.12	1.4
1,1,2-Trichloro-1,2,2-trifluoroethane	1.4	U	0.15	1.4
1,1,2-Trichloroethane	1.4	U *	0.19	1.4
1,1-Dichloroethane	1.4	U	0.15	1.4
1,1-Dichloroethene	1.4	U	0.26	1.4
1,2,3-Trichlorobenzene	1.4	U *	0.22	1.4
1,2,4-Trichlorobenzene	1.4	U *	0.26	1.4
1,2-Dichloropropane	1.4	U	0.20	1.4
1,3-Dichlorobenzene	1.4	U *	0.22	1.4
1,4-Dichlorobenzene	1.4	U *	0.15	1.4
1,4-Dioxane	27	U	17	27
2-Butanone (MEK)	6.8	U	0.86	6.8
2-Hexanone	6.8	U *	0.18	6.8
4-Methyl-2-pentanone (MIBK)	6.8	U *	0.27	6.8
Acetone	6.8	U	2.3	6.8
Benzene	1.4	U *	0.20	1.4
Bromoform	1.4	U *	0.23	1.4
Bromomethane	1.4	U	0.58	1.4
Carbon disulfide	1.4	U	0.20	1.4
Carbon tetrachloride	1.4	U	0.20	1.4
Chlorobenzene	1.4	U *	0.24	1.4
Chlorobromomethane	1.4	U	0.15	1.4
Chlorodibromomethane	1.4	U *	0.14	1.4
Chloroethane	1.4	U	0.45	1.4
Chloroform	1.4	U	0.33	1.4
Chloromethane	1.4	U	0.22	1.4
cis-1,2-Dichloroethene	1.4	U *	0.15	1.4
cis-1,3-Dichloropropene	1.4	U *	0.19	1.4
Cyclohexane	1.4	U	0.18	1.4
Dichlorobromomethane	1.4	U	0.44	1.4
Dichlorodifluoromethane	1.4	U	0.30	1.4
Ethylbenzene	1.4	U *	0.23	1.4
Ethylene Dibromide	1.4	U *	0.20	1.4
Isopropylbenzene	1.4	U *	0.15	1.4
Methyl acetate	6.8	U	0.44	6.8
Methyl tert-butyl ether	1.4	U	0.15	1.4
Methylcyclohexane	1.4	U	0.14	1.4
Methylene Chloride	1.4	U	0.20	1.4
m-Xylene & p-Xylene	1.4	U *	0.80	1.4
o-Xylene	1.4	U *	0.26	1.4
Styrene	1.4	U *	0.38	1.4
Tetrachloroethene	1.4	U *	0.16	1.4
Toluene	1.4	U *	0.19	1.4
trans-1,2-Dichloroethene	1.4	U	0.18	1.4
trans-1,3-Dichloropropene	1.4	U *	0.14	1.4

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-4 (7-8')**

Lab Sample ID: 460-85054-16

Client Matrix: Solid

% Moisture: 13.7

Date Sampled: 10/23/2014 1615

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258661	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258104	Lab File ID:	K33432.D
Dilution:	1.0			Initial Weight/Volume:	4.26 g
Analysis Date:	10/28/2014 1015			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1407				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Trichloroethene		1.4	U	0.16	1.4
Trichlorofluoromethane		1.4	U	0.22	1.4
Vinyl chloride		1.4	U	0.46	1.4
1,2-Dichloroethane		1.4	U	0.24	1.4
1,2-Dichlorobenzene		1.4	U *	0.14	1.4
1,2-Dibromo-3-Chloropropane		1.4	U *	0.60	1.4

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	95		70 - 130
4-Bromofluorobenzene	75	*	70 - 130
Dibromofluoromethane (Surr)	100		70 - 130
Toluene-d8 (Surr)	120	*	70 - 130

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-4 (7-8')**

Lab Sample ID: 460-85054-16

Client Matrix: Solid

% Moisture: 13.7

Date Sampled: 10/23/2014 1615

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258661	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258104	Lab File ID:	K33432.D
Dilution:	1.0			Initial Weight/Volume:	4.26 g
Analysis Date:	10/28/2014 1015			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1407				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-X (7-8')**

Lab Sample ID: 460-85054-17

Client Matrix: Solid

% Moisture: 11.9

Date Sampled: 10/23/2014 1620

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258803	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258104	Lab File ID:	K33458.D
Dilution:	1.0			Initial Weight/Volume:	4.38 g
Analysis Date:	10/28/2014 2221			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1408				

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.3	U	0.17	1.3
1,1,2,2-Tetrachloroethane	1.3	U *	0.12	1.3
1,1,2-Trichloro-1,2,2-trifluoroethane	1.3	U	0.14	1.3
1,1,2-Trichloroethane	1.3	U	0.18	1.3
1,1-Dichloroethane	1.3	U	0.14	1.3
1,1-Dichloroethene	1.3	U	0.25	1.3
1,2,3-Trichlorobenzene	1.3	U	0.21	1.3
1,2,4-Trichlorobenzene	1.3	U	0.25	1.3
1,2-Dichloropropane	1.3	U	0.19	1.3
1,3-Dichlorobenzene	1.3	U	0.21	1.3
1,4-Dichlorobenzene	1.3	U	0.14	1.3
1,4-Dioxane	26	U	16	26
2-Butanone (MEK)	6.5	U	0.82	6.5
2-Hexanone	6.5	U	0.17	6.5
4-Methyl-2-pentanone (MIBK)	6.5	U	0.26	6.5
Acetone	25		2.2	6.5
Benzene	1.3	U	0.19	1.3
Bromoform	1.3	U	0.22	1.3
Bromomethane	1.3	U	0.56	1.3
Carbon disulfide	1.3	U	0.19	1.3
Carbon tetrachloride	1.3	U	0.19	1.3
Chlorobenzene	1.3	U	0.23	1.3
Chlorobromomethane	1.3	U	0.14	1.3
Chlorodibromomethane	1.3	U	0.13	1.3
Chloroethane	1.3	U	0.43	1.3
Chloroform	1.3	U	0.31	1.3
Chloromethane	1.3	U	0.21	1.3
cis-1,2-Dichloroethene	1.3	U *	0.14	1.3
cis-1,3-Dichloropropene	1.3	U	0.18	1.3
Cyclohexane	1.3	U	0.17	1.3
Dichlorobromomethane	1.3	U	0.41	1.3
Dichlorodifluoromethane	1.3	U	0.29	1.3
Ethylbenzene	1.3	U	0.22	1.3
Ethylene Dibromide	1.3	U	0.19	1.3
Isopropylbenzene	1.3	U	0.14	1.3
Methyl acetate	6.5	U	0.41	6.5
Methyl tert-butyl ether	1.3	U	0.14	1.3
Methylcyclohexane	1.3	U	0.13	1.3
Methylene Chloride	1.3	U	0.19	1.3
m-Xylene & p-Xylene	1.3	U	0.76	1.3
o-Xylene	1.3	U	0.25	1.3
Styrene	1.3	U	0.36	1.3
Tetrachloroethene	1.3	U	0.16	1.3
Toluene	1.3	U	0.18	1.3
trans-1,2-Dichloroethene	1.3	U	0.17	1.3
trans-1,3-Dichloropropene	1.3	U	0.13	1.3

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-X (7-8')**

Lab Sample ID: 460-85054-17

Client Matrix: Solid

% Moisture: 11.9

Date Sampled: 10/23/2014 1620

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258803	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258104	Lab File ID:	K33458.D
Dilution:	1.0			Initial Weight/Volume:	4.38 g
Analysis Date:	10/28/2014 2221			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1408				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Trichloroethene		1.3	U	0.16	1.3
Trichlorofluoromethane		1.3	U	0.21	1.3
Vinyl chloride		1.3	U	0.44	1.3
1,2-Dichloroethane		1.3	U	0.23	1.3
1,2-Dichlorobenzene		1.3	U	0.13	1.3
1,2-Dibromo-3-Chloropropane		1.3	U	0.57	1.3

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	98		70 - 130
4-Bromofluorobenzene	86		70 - 130
Dibromofluoromethane (Surr)	24	*	70 - 130
Toluene-d8 (Surr)	99		70 - 130

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-X (7-8')**

Lab Sample ID: 460-85054-17

Client Matrix: Solid

% Moisture: 11.9

Date Sampled: 10/23/2014 1620

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258803	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258104	Lab File ID:	K33458.D
Dilution:	1.0			Initial Weight/Volume:	4.38 g
Analysis Date:	10/28/2014 2221			Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1408				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-3 (1-2')**

Lab Sample ID: 460-85054-1

Client Matrix: Solid

% Moisture: 10.3

Date Sampled: 10/23/2014 1155

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258833	Instrument ID:	CBNAMS11
Prep Method:	3546	Prep Batch:	460-258363	Lab File ID:	z5553.D
Dilution:	1.0			Initial Weight/Volume:	15.0074 g
Analysis Date:	10/29/2014 0701			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Phenol		370	U	12	370
2-Chlorophenol		370	U	9.4	370
2-Methylphenol		370	U	16	370
4-Methylphenol		370	U	10	370
2-Nitrophenol		370	U	12	370
2,4-Dimethylphenol		370	U	81	370
2,4-Dichlorophenol		370	U	8.7	370
4-Chloro-3-methylphenol		370	U	16	370
2,4,6-Trichlorophenol		150	U	10	150
2,4,5-Trichlorophenol		370	U	37	370
2,4-Dinitrotoluene		75	U	15	75
4-Nitrophenol		750	U	180	750
4,6-Dinitro-2-methylphenol		300	U	98	300
Pentachlorophenol		300	U	45	300
Bis(2-chloroethyl)ether		37	U	8.7	37
N-Nitrosodi-n-propylamine		37	U	12	37
Hexachloroethane		37	U	13	37
Nitrobenzene		37	U	12	37
Isophorone		150	U	7.9	150
Naphthalene		91	J	9.4	370
4-Chloroaniline		370	U	9.5	370
Hexachlorobutadiene		75	U	10	75
2-Methylnaphthalene		150	J	8.1	370
Hexachlorocyclopentadiene		370	U	23	370
2-Chloronaphthalene		370	U	8.4	370
2-Nitroaniline		370	U	12	370
Dimethyl phthalate		370	U	11	370
Acenaphthylene		12	J	9.5	370
2,6-Dinitrotoluene		75	U	20	75
3-Nitroaniline		370	U	11	370
Acenaphthene		220	J	8.9	370
Dibenzofuran		500		11	370
2,4-Dinitrophenol		300	U	280	300
Diethyl phthalate		370	U	10	370
4-Chlorophenyl phenyl ether		370	U	11	370
Fluorene		250	J	8.0	370
4-Nitroaniline		370	U	14	370
N-Nitrosodiphenylamine		370	U	33	370
4-Bromophenyl phenyl ether		370	U	12	370
Hexachlorobenzene		37	U	15	37
Phenanthrene		4700		9.8	370
Anthracene		570		35	370
Carbazole		260	J	9.1	370
Di-n-butyl phthalate		370	U	11	370
Fluoranthene		2400		11	370
Pyrene		1700		17	370

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-3 (1-2')**

Lab Sample ID: 460-85054-1

Client Matrix: Solid

% Moisture: 10.3

Date Sampled: 10/23/2014 1155

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258833	Instrument ID:	CBNAMS11
Prep Method:	3546	Prep Batch:	460-258363	Lab File ID:	z5553.D
Dilution:	1.0			Initial Weight/Volume:	15.0074 g
Analysis Date:	10/29/2014 0701			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Butyl benzyl phthalate		370	U	11	370
Benzo[a]anthracene		420		31	37
Chrysene		420		10	370
Bis(2-ethylhexyl) phthalate		56	J	14	370
Di-n-octyl phthalate		370	U	19	370
Benzo[b]fluoranthene		300		14	37
Benzo[k]fluoranthene		130		16	37
Benzo[a]pyrene		190	*	11	37
Indeno[1,2,3-cd]pyrene		140		25	37
Dibenz(a,h)anthracene		36	J	19	37
Benzo[g,h,i]perylene		130	J	21	370
1,1'-Biphenyl		53	J	31	370
Acetophenone		370	U	8.0	370
Benzaldehyde		370	U	28	370
Caprolactam		370	U	27	370
Atrazine		150	U	16	150
2,2'-oxybis[1-chloropropane]		370	U	15	370
1,2,4,5-Tetrachlorobenzene		370	U	27	370
2,3,4,6-Tetrachlorophenol		370	U	35	370
3,3'-Dichlorobenzidine		150	U	41	150
Bis(2-chloroethoxy)methane		370	U	11	370

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5 (Surr)	83		38 - 105
Phenol-d5 (Surr)	73		41 - 118
Terphenyl-d14 (Surr)	83		16 - 151
2,4,6-Tribromophenol (Surr)	49		10 - 120
2-Fluorophenol (Surr)	69		37 - 125
2-Fluorobiphenyl	85		40 - 109

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-3 (1-2')**

Lab Sample ID: 460-85054-1

Client Matrix: Solid

% Moisture: 10.3

Date Sampled: 10/23/2014 1155

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258833	Instrument ID:	CBNAMS11
Prep Method:	3546	Prep Batch:	460-258363	Lab File ID:	z5553.D
Dilution:	1.0			Initial Weight/Volume:	15.0074 g
Analysis Date:	10/29/2014 0701			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL

Tentatively Identified Compounds **Number TIC's Found:** **14**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
629-59-4	Tetradecane	6.83	450	J N
629-62-9	Pentadecane	7.36	360	J N
544-76-3	Hexadecane	7.86	360	J N
629-78-7	Heptadecane	8.33	800	J N
1921-70-6	Pentadecane, 2,6,10,14-tetramethyl-	8.35	460	J N
486-25-9	9H-Fluoren-9-one	8.68	510	J N
132-65-0	Dibenzothiophene	8.78	850	J N
3892-00-0	Pentadecane, 2,6,10-trimethyl-	8.80	420	J N
629-92-5	Nonadecane	9.19	820	J N
949-41-7	1H-Cyclopropa[l]phenanthrene,1a,9b-dihyd	9.38	530	J N
832-69-9	Phenanthrene, 1-methyl-	9.40	500	J N
949-41-7	1H-Cyclopropa[l]phenanthrene,1a,9b-dihyd	9.49	450	J N
112-95-8	Eicosane	9.60	430	J N
6572-60-7	Tricyclo[8.2.2.2(4,7)]hexadeca-2,4,6,8,1	9.67	360	J N

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-3 (8-9')**

Lab Sample ID: 460-85054-2

Client Matrix: Solid

% Moisture: 10.3

Date Sampled: 10/23/2014 1200

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-259124	Instrument ID:	CBNAMS12
Prep Method:	3546	Prep Batch:	460-258363	Lab File ID:	L118192.D
Dilution:	1.0			Initial Weight/Volume:	14.9742 g
Analysis Date:	10/30/2014 1021			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Phenol		370	U	12	370
2-Chlorophenol		370	U	9.4	370
2-Methylphenol		370	U	16	370
4-Methylphenol		370	U	10	370
2-Nitrophenol		370	U	12	370
2,4-Dimethylphenol		370	U	81	370
2,4-Dichlorophenol		370	U	8.7	370
4-Chloro-3-methylphenol		370	U	16	370
2,4,6-Trichlorophenol		150	U	10	150
2,4,5-Trichlorophenol		370	U	37	370
2,4-Dinitrotoluene		75	U	15	75
4-Nitrophenol		750	U	180	750
4,6-Dinitro-2-methylphenol		300	U	98	300
Pentachlorophenol		300	U	45	300
Bis(2-chloroethyl)ether		37	U	8.7	37
N-Nitrosodi-n-propylamine		37	U	12	37
Hexachloroethane		37	U	14	37
Nitrobenzene		37	U	12	37
Isophorone		49	J	7.9	150
Naphthalene		800		9.4	370
4-Chloroaniline		370	U	9.5	370
Hexachlorobutadiene		75	U	10	75
2-Methylnaphthalene		68	J	8.1	370
Hexachlorocyclopentadiene		370	U	23	370
2-Chloronaphthalene		160	J	8.4	370
2-Nitroaniline		370	U	12	370
Dimethyl phthalate		370	U	11	370
Acenaphthylene		240	J	9.5	370
2,6-Dinitrotoluene		75	U	20	75
3-Nitroaniline		370	U	11	370
Acenaphthene		48	J	8.9	370
Dibenzofuran		59	J	11	370
2,4-Dinitrophenol		300	U	280	300
Diethyl phthalate		370	U	10	370
4-Chlorophenyl phenyl ether		370	U	11	370
Fluorene		60	J	8.0	370
4-Nitroaniline		370	U	14	370
N-Nitrosodiphenylamine		370	U	33	370
4-Bromophenyl phenyl ether		370	U	12	370
Hexachlorobenzene		37	U	15	37
Phenanthrene		860		9.8	370
Anthracene		150	J	35	370
Carbazole		9.9	J	9.2	370
Di-n-butyl phthalate		370	U	11	370
Fluoranthene		1300		11	370
Pyrene		1300		17	370

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-3 (8-9')**

Lab Sample ID: 460-85054-2

Client Matrix: Solid

% Moisture: 10.3

Date Sampled: 10/23/2014 1200

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-259124	Instrument ID:	CBNAMS12
Prep Method:	3546	Prep Batch:	460-258363	Lab File ID:	L118192.D
Dilution:	1.0			Initial Weight/Volume:	14.9742 g
Analysis Date:	10/30/2014 1021			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Butyl benzyl phthalate		370	U	11	370
Benzo[a]anthracene		580		31	37
Chrysene		890		10	370
Bis(2-ethylhexyl) phthalate		370	U	14	370
Di-n-octyl phthalate		370	U *	19	370
Benzo[b]fluoranthene		6200	*	14	37
Benzo[k]fluoranthene		2600	*	16	37
Benzo[a]pyrene		37	U *	11	37
Indeno[1,2,3-cd]pyrene		1300	*	25	37
Dibenz(a,h)anthracene		580	*	19	37
Benzo[g,h,i]perylene		790	*	21	370
1,1'-Biphenyl		90	J	31	370
Acetophenone		370	U	8.0	370
Benzaldehyde		370	U	28	370
Caprolactam		370	U	27	370
Atrazine		150	U	16	150
2,2'-oxybis[1-chloropropane]		370	U	15	370
1,2,4,5-Tetrachlorobenzene		370	U	27	370
2,3,4,6-Tetrachlorophenol		370	U	35	370
3,3'-Dichlorobenzidine		150	U	41	150
Bis(2-chloroethoxy)methane		370	U	11	370

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5 (Surr)	63		38 - 105
Phenol-d5 (Surr)	57		41 - 118
Terphenyl-d14 (Surr)	87		16 - 151
2,4,6-Tribromophenol (Surr)	68		10 - 120
2-Fluorophenol (Surr)	57		37 - 125
2-Fluorobiphenyl	66		40 - 109

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-3 (8-9')**

Lab Sample ID: 460-85054-2

Client Matrix: Solid

% Moisture: 10.3

Date Sampled: 10/23/2014 1200

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-259124	Instrument ID:	CBNAMS12
Prep Method:	3546	Prep Batch:	460-258363	Lab File ID:	L118192.D
Dilution:	1.0			Initial Weight/Volume:	14.9742 g
Analysis Date:	10/30/2014 1021			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL

Tentatively Identified Compounds **Number TIC's Found:** **9**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
79-01-6	Trichloroethylene	1.52	840	J N
79-00-5	Ethane, 1,1,2-trichloro-	2.11	2100	J N
	Unknown	2.36	12000	J
	Unknown	3.03	3600	J
629-20-9	1,3,5,7-Cyclooctatetraene	3.15	770	J N
79-34-5	Ethane, 1,1,2,2-tetrachloro-	3.41	2900	J N
110-13-4	2,5-Hexanedione	3.43	470	J N
	Unknown	3.49	410	J
504-20-1	2,5-Heptadien-4-one, 2,6-dimethyl-	4.93	1400	J N

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-10 (1-2')**

Lab Sample ID: 460-85054-3

Client Matrix: Solid

% Moisture: 10.1

Date Sampled: 10/23/2014 1225

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258658	Instrument ID:	CBNAMS11
Prep Method:	3546	Prep Batch:	460-258363	Lab File ID:	z5517.D
Dilution:	1.0			Initial Weight/Volume:	14.9750 g
Analysis Date:	10/28/2014 1122			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Phenol		370	U	12	370
2-Chlorophenol		370	U	9.4	370
2-Methylphenol		370	U	16	370
4-Methylphenol		370	U	10	370
2-Nitrophenol		370	U	12	370
2,4-Dimethylphenol		370	U	81	370
2,4-Dichlorophenol		370	U	8.7	370
4-Chloro-3-methylphenol		370	U	16	370
2,4,6-Trichlorophenol		150	U	10	150
2,4,5-Trichlorophenol		370	U	37	370
2,4-Dinitrotoluene		75	U	15	75
4-Nitrophenol		750	U	180	750
4,6-Dinitro-2-methylphenol		300	U	98	300
Pentachlorophenol		300	U	45	300
Bis(2-chloroethyl)ether		37	U	8.7	37
N-Nitrosodi-n-propylamine		37	U	12	37
Hexachloroethane		37	U	13	37
Nitrobenzene		37	U	12	37
Isophorone		92	J	7.9	150
Naphthalene		42	J	9.4	370
4-Chloroaniline		370	U	9.5	370
Hexachlorobutadiene		75	U	10	75
2-Methylnaphthalene		24	J	8.1	370
Hexachlorocyclopentadiene		370	U	23	370
2-Chloronaphthalene		370	U	8.4	370
2-Nitroaniline		370	U	12	370
Dimethyl phthalate		370	U	11	370
Acenaphthylene		13	J	9.5	370
2,6-Dinitrotoluene		75	U	20	75
3-Nitroaniline		370	U	11	370
Acenaphthene		30	J	8.9	370
Dibenzofuran		18	J	11	370
2,4-Dinitrophenol		300	U	280	300
Diethyl phthalate		370	U	10	370
4-Chlorophenyl phenyl ether		370	U	11	370
Fluorene		28	J	8.0	370
4-Nitroaniline		370	U	14	370
N-Nitrosodiphenylamine		370	U	33	370
4-Bromophenyl phenyl ether		370	U	12	370
Hexachlorobenzene		37	U	15	37
Phenanthrene		540		9.8	370
Anthracene		78	J	35	370
Carbazole		28	J	9.1	370
Di-n-butyl phthalate		370	U	11	370
Fluoranthene		730		11	370
Pyrene		930		17	370

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-10 (1-2')**

Lab Sample ID: 460-85054-3

Client Matrix: Solid

% Moisture: 10.1

Date Sampled: 10/23/2014 1225

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258658	Instrument ID:	CBNAMS11
Prep Method:	3546	Prep Batch:	460-258363	Lab File ID:	z5517.D
Dilution:	1.0			Initial Weight/Volume:	14.9750 g
Analysis Date:	10/28/2014 1122			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Butyl benzyl phthalate		370	U	11	370
Benzo[a]anthracene		390		31	37
Chrysene		450		10	370
Bis(2-ethylhexyl) phthalate		61	J	14	370
Di-n-octyl phthalate		370	U	19	370
Benzo[b]fluoranthene		500		14	37
Benzo[k]fluoranthene		170		16	37
Benzo[a]pyrene		330	*	11	37
Indeno[1,2,3-cd]pyrene		270		24	37
Dibenz(a,h)anthracene		91		19	37
Benzo[g,h,i]perylene		280	J	21	370
1,1'-Biphenyl		370	U	31	370
Acetophenone		9.8	J	8.0	370
Benzaldehyde		370	U	28	370
Caprolactam		370	U	27	370
Atrazine		150	U	16	150
2,2'-oxybis[1-chloropropane]		370	U	15	370
1,2,4,5-Tetrachlorobenzene		370	U	27	370
2,3,4,6-Tetrachlorophenol		370	U	35	370
3,3'-Dichlorobenzidine		150	U	41	150
Bis(2-chloroethoxy)methane		370	U	11	370

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5 (Surr)	67		38 - 105
Phenol-d5 (Surr)	62		41 - 118
Terphenyl-d14 (Surr)	84		16 - 151
2,4,6-Tribromophenol (Surr)	49		10 - 120
2-Fluorophenol (Surr)	56		37 - 125
2-Fluorobiphenyl	68		40 - 109

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-10 (1-2')**

Lab Sample ID: 460-85054-3

Client Matrix: Solid

% Moisture: 10.1

Date Sampled: 10/23/2014 1225

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258658	Instrument ID:	CBNAMS11
Prep Method:	3546	Prep Batch:	460-258363	Lab File ID:	z5517.D
Dilution:	1.0			Initial Weight/Volume:	14.9750 g
Analysis Date:	10/28/2014 1122			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL

Tentatively Identified Compounds **Number TIC's Found:** **1**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	5.60	330	J

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-10 (7-8')**

Lab Sample ID: 460-85054-4

Client Matrix: Solid

% Moisture: 16.8

Date Sampled: 10/23/2014 1230

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258658	Instrument ID:	CBNAMS11
Prep Method:	3546	Prep Batch:	460-258363	Lab File ID:	z5511.D
Dilution:	1.0			Initial Weight/Volume:	15.0008 g
Analysis Date:	10/28/2014 0854			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Phenol		400	U	13	400
2-Chlorophenol		400	U	10	400
2-Methylphenol		400	U	17	400
4-Methylphenol		400	U	11	400
2-Nitrophenol		400	U	13	400
2,4-Dimethylphenol		400	U	87	400
2,4-Dichlorophenol		400	U	9.4	400
4-Chloro-3-methylphenol		400	U	17	400
2,4,6-Trichlorophenol		160	U	11	160
2,4,5-Trichlorophenol		400	U	40	400
2,4-Dinitrotoluene		81	U	16	81
4-Nitrophenol		810	U	190	810
4,6-Dinitro-2-methylphenol		320	U	110	320
Pentachlorophenol		320	U	48	320
Bis(2-chloroethyl)ether		40	U	9.4	40
N-Nitrosodi-n-propylamine		40	U	13	40
Hexachloroethane		40	U	15	40
Nitrobenzene		40	U	12	40
Isophorone		160	U	8.5	160
Naphthalene		400	U	10	400
4-Chloroaniline		400	U	10	400
Hexachlorobutadiene		81	U	11	81
2-Methylnaphthalene		400	U	8.8	400
Hexachlorocyclopentadiene		400	U	25	400
2-Chloronaphthalene		400	U	9.0	400
2-Nitroaniline		400	U	13	400
Dimethyl phthalate		400	U	12	400
Acenaphthylene		400	U	10	400
2,6-Dinitrotoluene		81	U	21	81
3-Nitroaniline		400	U	12	400
Acenaphthene		400	U	9.6	400
Dibenzofuran		400	U	12	400
2,4-Dinitrophenol		320	U	300	320
Diethyl phthalate		400	U	11	400
4-Chlorophenyl phenyl ether		400	U	12	400
Fluorene		400	U	8.7	400
4-Nitroaniline		400	U	15	400
N-Nitrosodiphenylamine		400	U	36	400
4-Bromophenyl phenyl ether		400	U	12	400
Hexachlorobenzene		40	U	16	40
Phenanthrene		69	J	11	400
Anthracene		400	U	38	400
Carbazole		400	U	9.9	400
Di-n-butyl phthalate		400	U	12	400
Fluoranthene		57	J	12	400
Pyrene		72	J	18	400

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-10 (7-8')**

Lab Sample ID: 460-85054-4

Client Matrix: Solid

% Moisture: 16.8

Date Sampled: 10/23/2014 1230

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258658	Instrument ID:	CBNAMS11
Prep Method:	3546	Prep Batch:	460-258363	Lab File ID:	z5511.D
Dilution:	1.0			Initial Weight/Volume:	15.0008 g
Analysis Date:	10/28/2014 0854			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Butyl benzyl phthalate		400	U	12	400
Benzo[a]anthracene		40	U	33	40
Chrysene		31	J	11	400
Bis(2-ethylhexyl) phthalate		400	U	15	400
Di-n-octyl phthalate		400	U	20	400
Benzo[b]fluoranthene		40	U	15	40
Benzo[k]fluoranthene		40	U	17	40
Benzo[a]pyrene		19	J *	12	40
Indeno[1,2,3-cd]pyrene		40	U	26	40
Dibenz(a,h)anthracene		40	U	21	40
Benzo[g,h,i]perylene		400	U	23	400
1,1'-Biphenyl		400	U	34	400
Acetophenone		400	U	8.7	400
Benzaldehyde		400	U	30	400
Caprolactam		400	U	29	400
Atrazine		160	U	18	160
2,2'-oxybis[1-chloropropane]		400	U	16	400
1,2,4,5-Tetrachlorobenzene		400	U	30	400
2,3,4,6-Tetrachlorophenol		400	U	37	400
3,3'-Dichlorobenzidine		160	U	44	160
Bis(2-chloroethoxy)methane		400	U	12	400

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5 (Surr)	80		38 - 105
Phenol-d5 (Surr)	78		41 - 118
Terphenyl-d14 (Surr)	105		16 - 151
2,4,6-Tribromophenol (Surr)	79		10 - 120
2-Fluorophenol (Surr)	73		37 - 125
2-Fluorobiphenyl	78		40 - 109

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-10 (7-8')**

Lab Sample ID: 460-85054-4

Client Matrix: Solid

% Moisture: 16.8

Date Sampled: 10/23/2014 1230

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258658	Instrument ID:	CBNAMS11
Prep Method:	3546	Prep Batch:	460-258363	Lab File ID:	z5511.D
Dilution:	1.0			Initial Weight/Volume:	15.0008 g
Analysis Date:	10/28/2014 0854			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-19 (1-2')**

Lab Sample ID: 460-85054-5

Client Matrix: Solid

% Moisture: 5.8

Date Sampled: 10/23/2014 1245

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258918	Instrument ID:	CBNAMS5
Prep Method:	3546	Prep Batch:	460-258363	Lab File ID:	x6283.D
Dilution:	1.0			Initial Weight/Volume:	15.0001 g
Analysis Date:	10/29/2014 1459			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Phenol		350	U	11	350
2-Chlorophenol		350	U	8.9	350
2-Methylphenol		350	U	15	350
4-Methylphenol		350	U	9.6	350
2-Nitrophenol		350	U	12	350
2,4-Dimethylphenol		350	U	77	350
2,4-Dichlorophenol		350	U	8.3	350
4-Chloro-3-methylphenol		350	U	15	350
2,4,6-Trichlorophenol		140	U	10	140
2,4,5-Trichlorophenol		350	U	35	350
2,4-Dinitrotoluene		71	U	14	71
4-Nitrophenol		710	U	170	710
4,6-Dinitro-2-methylphenol		280	U	94	280
Pentachlorophenol		280	U	42	280
Bis(2-chloroethyl)ether		35	U	8.3	35
N-Nitrosodi-n-propylamine		35	U	12	35
Hexachloroethane		35	U	13	35
Nitrobenzene		35	U	11	35
Isophorone		140	U	7.5	140
Naphthalene		96	J	8.9	350
4-Chloroaniline		350	U	9.0	350
Hexachlorobutadiene		71	U	9.9	71
2-Methylnaphthalene		110	J	7.8	350
Hexachlorocyclopentadiene		350	U	22	350
2-Chloronaphthalene		350	U	8.0	350
2-Nitroaniline		350	U	12	350
Dimethyl phthalate		350	U	10	350
Acenaphthylene		30	J	9.0	350
2,6-Dinitrotoluene		71	U	19	71
3-Nitroaniline		350	U	10	350
Acenaphthene		88	J	8.5	350
Dibenzofuran		67	J	11	350
2,4-Dinitrophenol		280	U	270	280
Diethyl phthalate		350	U	10	350
4-Chlorophenyl phenyl ether		350	U	11	350
Fluorene		150	J	7.6	350
4-Nitroaniline		350	U	13	350
N-Nitrosodiphenylamine		350	U	32	350
4-Bromophenyl phenyl ether		350	U	11	350
Hexachlorobenzene		35	U	14	35
Phenanthrene		1500		9.3	350
Anthracene		330	J	33	350
Carbazole		51	J	8.7	350
Di-n-butyl phthalate		350	U	11	350
Fluoranthene		1400		10	350
Pyrene		1200		16	350

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-19 (1-2')**

Lab Sample ID: 460-85054-5

Client Matrix: Solid

% Moisture: 5.8

Date Sampled: 10/23/2014 1245

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258918	Instrument ID:	CBNAMS5
Prep Method:	3546	Prep Batch:	460-258363	Lab File ID:	x6283.D
Dilution:	1.0			Initial Weight/Volume:	15.0001 g
Analysis Date:	10/29/2014 1459			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Butyl benzyl phthalate		350	U	11	350
Benzo[a]anthracene		670		29	35
Chrysene		780		9.6	350
Bis(2-ethylhexyl) phthalate		340	J	14	350
Di-n-octyl phthalate		350	U	18	350
Benzo[b]fluoranthene		620		14	35
Benzo[k]fluoranthene		200		15	35
Benzo[a]pyrene		590	*	11	35
Indeno[1,2,3-cd]pyrene		500		23	35
Dibenz(a,h)anthracene		120		18	35
Benzo[g,h,i]perylene		460		20	350
1,1'-Biphenyl		350	U	30	350
Acetophenone		12	J	7.6	350
Benzaldehyde		350	U	27	350
Caprolactam		350	U	25	350
Atrazine		140	U	16	140
2,2'-oxybis[1-chloropropane]		350	U	14	350
1,2,4,5-Tetrachlorobenzene		350	U	26	350
2,3,4,6-Tetrachlorophenol		350	U	33	350
3,3'-Dichlorobenzidine		140	U	39	140
Bis(2-chloroethoxy)methane		350	U	11	350

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5 (Surr)	79		38 - 105
Phenol-d5 (Surr)	63		41 - 118
Terphenyl-d14 (Surr)	67		16 - 151
2,4,6-Tribromophenol (Surr)	52		10 - 120
2-Fluorophenol (Surr)	66		37 - 125
2-Fluorobiphenyl	92		40 - 109

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-19 (1-2')**

Lab Sample ID: 460-85054-5

Client Matrix: Solid

% Moisture: 5.8

Date Sampled: 10/23/2014 1245

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258918	Instrument ID:	CBNAMS5
Prep Method:	3546	Prep Batch:	460-258363	Lab File ID:	x6283.D
Dilution:	1.0			Initial Weight/Volume:	15.0001 g
Analysis Date:	10/29/2014 1459			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL

Tentatively Identified Compounds **Number TIC's Found:** **6**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
629-78-7	Heptadecane	8.44	630	J N
132-65-0	Dibenzothiophene	8.90	490	J N
613-12-7	Anthracene, 2-methyl-	9.52	560	J N
949-41-7	1H-Cyclopropa[l]phenanthrene,1a,9b-dihyd	9.60	580	J N
	Unknown	14.66	530	J
593-49-7	Heptacosane	15.15	790	J N

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-19 (7-8')**

Lab Sample ID: 460-85054-6

Client Matrix: Solid

% Moisture: 13.6

Date Sampled: 10/23/2014 1250

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258918	Instrument ID:	CBNAMS5
Prep Method:	3546	Prep Batch:	460-258363	Lab File ID:	x6281.D
Dilution:	5.0			Initial Weight/Volume:	14.9759 g
Analysis Date:	10/29/2014 1413			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Phenol		1900	U	63	1900
2-Chlorophenol		1900	U	49	1900
2-Methylphenol		1900	U	83	1900
4-Methylphenol		1900	U	52	1900
2-Nitrophenol		1900	U	64	1900
2,4-Dimethylphenol		1900	U	420	1900
2,4-Dichlorophenol		1900	U	45	1900
4-Chloro-3-methylphenol		1900	U	82	1900
2,4,6-Trichlorophenol		770	U	54	770
2,4,5-Trichlorophenol		1900	U	190	1900
2,4-Dinitrotoluene		390	U	76	390
4-Nitrophenol		3900	U	920	3900
4,6-Dinitro-2-methylphenol		1500	U	510	1500
Pentachlorophenol		1500	U	230	1500
Bis(2-chloroethyl)ether		190	U	45	190
N-Nitrosodi-n-propylamine		190	U	64	190
Hexachloroethane		190	U	70	190
Nitrobenzene		190	U	60	190
Isophorone		89	J	41	770
Naphthalene		770	J	49	1900
4-Chloroaniline		1900	U	49	1900
Hexachlorobutadiene		390	U	54	390
2-Methylnaphthalene		120	J	42	1900
Hexachlorocyclopentadiene		1900	U	120	1900
2-Chloronaphthalene		160	J	43	1900
2-Nitroaniline		1900	U	63	1900
Dimethyl phthalate		1900	U	56	1900
Acenaphthylene		180	J	49	1900
2,6-Dinitrotoluene		390	U	100	390
3-Nitroaniline		1900	U	57	1900
Acenaphthene		110	J	46	1900
Dibenzofuran		73	J	58	1900
2,4-Dinitrophenol		1500	U	1400	1500
Diethyl phthalate		1900	U	54	1900
4-Chlorophenyl phenyl ether		1900	U	57	1900
Fluorene		120	J	42	1900
4-Nitroaniline		1900	U	72	1900
N-Nitrosodiphenylamine		1900	U	170	1900
4-Bromophenyl phenyl ether		1900	U	60	1900
Hexachlorobenzene		190	U	78	190
Phenanthrene		1200	J	51	1900
Anthracene		190	J	180	1900
Carbazole		1900	U	48	1900
Di-n-butyl phthalate		1900	U	57	1900
Fluoranthene		1200	J	57	1900
Pyrene		1000	J	87	1900

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-19 (7-8')**

Lab Sample ID: 460-85054-6

Client Matrix: Solid

% Moisture: 13.6

Date Sampled: 10/23/2014 1250

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258918	Instrument ID:	CBNAMS5
Prep Method:	3546	Prep Batch:	460-258363	Lab File ID:	x6281.D
Dilution:	5.0			Initial Weight/Volume:	14.9759 g
Analysis Date:	10/29/2014 1413			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Butyl benzyl phthalate		1900	U	59	1900
Benzo[a]anthracene		520		160	190
Chrysene		530	J	52	1900
Bis(2-ethylhexyl) phthalate		1900	U	75	1900
Di-n-octyl phthalate		1900	U	97	1900
Benzo[b]fluoranthene		950		75	190
Benzo[k]fluoranthene		340		83	190
Benzo[a]pyrene		310	*	58	190
Indeno[1,2,3-cd]pyrene		470		130	190
Dibenz(a,h)anthracene		190	U	100	190
Benzo[g,h,i]perylene		1900	U	110	1900
1,1'-Biphenyl		1900	U	160	1900
Acetophenone		93	J	42	1900
Benzaldehyde		1900	U	150	1900
Caprolactam		1900	U	140	1900
Atrazine		770	U	85	770
2,2'-oxybis[1-chloropropane]		1900	U	79	1900
1,2,4,5-Tetrachlorobenzene		1900	U	140	1900
2,3,4,6-Tetrachlorophenol		1900	U	180	1900
3,3'-Dichlorobenzidine		770	U	210	770
Bis(2-chloroethoxy)methane		1900	U	60	1900

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5 (Surr)	54		38 - 105
Phenol-d5 (Surr)	39	*	41 - 118
Terphenyl-d14 (Surr)	61		16 - 151
2,4,6-Tribromophenol (Surr)	48		10 - 120
2-Fluorophenol (Surr)	51		37 - 125
2-Fluorobiphenyl	72		40 - 109

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-19 (7-8')**

Lab Sample ID: 460-85054-6

Client Matrix: Solid

% Moisture: 13.6

Date Sampled: 10/23/2014 1250

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258918	Instrument ID:	CBNAMS5
Prep Method:	3546	Prep Batch:	460-258363	Lab File ID:	x6281.D
Dilution:	5.0			Initial Weight/Volume:	14.9759 g
Analysis Date:	10/29/2014 1413			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL

Tentatively Identified Compounds **Number TIC's Found:** **9**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
79-00-5	Ethane, 1,1,2-trichloro-	2.39	1900	J N
141-79-7	3-Penten-2-one, 4-methyl-	2.59	270000	J N
	Unknown	2.94	39000	J
	Unknown	3.29	6000	J
107-70-0	2-Pentanone, 4-methoxy-4-methyl-	3.56	12000	J N
79-34-5	Ethane, 1,1,2,2-tetrachloro-	3.67	4100	J N
189-55-9	3,4:9,10-Dibenzopyrene	12.41	5300	J N
189-55-9	3,4:9,10-Dibenzopyrene	12.73	5700	J N
191-07-1	Coronene	14.08	14000	J N

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-9 (1-2')**

Lab Sample ID: 460-85054-7

Client Matrix: Solid

% Moisture: 7.8

Date Sampled: 10/23/2014 1355

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258658	Instrument ID:	CBNAMS11
Prep Method:	3546	Prep Batch:	460-258363	Lab File ID:	z5524.D
Dilution:	1.0			Initial Weight/Volume:	14.9632 g
Analysis Date:	10/28/2014 1415			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Phenol		360	U	12	360
2-Chlorophenol		360	U	9.1	360
2-Methylphenol		360	U	16	360
4-Methylphenol		360	U	9.8	360
2-Nitrophenol		360	U	12	360
2,4-Dimethylphenol		360	U	79	360
2,4-Dichlorophenol		360	U	8.5	360
4-Chloro-3-methylphenol		360	U	15	360
2,4,6-Trichlorophenol		140	U	10	140
2,4,5-Trichlorophenol		360	U	36	360
2,4-Dinitrotoluene		73	U	14	73
4-Nitrophenol		730	U	170	730
4,6-Dinitro-2-methylphenol		290	U	96	290
Pentachlorophenol		290	U	44	290
Bis(2-chloroethyl)ether		36	U	8.5	36
N-Nitrosodi-n-propylamine		36	U	12	36
Hexachloroethane		36	U	13	36
Nitrobenzene		36	U	11	36
Isophorone		140	U	7.7	140
Naphthalene		65	J	9.1	360
4-Chloroaniline		360	U	9.2	360
Hexachlorobutadiene		73	U	10	73
2-Methylnaphthalene		41	J	7.9	360
Hexachlorocyclopentadiene		360	U	22	360
2-Chloronaphthalene		360	U	8.2	360
2-Nitroaniline		360	U	12	360
Dimethyl phthalate		360	U	10	360
Acenaphthylene		15	J	9.2	360
2,6-Dinitrotoluene		73	U	19	73
3-Nitroaniline		360	U	11	360
Acenaphthene		100	J	8.7	360
Dibenzofuran		72	J	11	360
2,4-Dinitrophenol		290	U	270	290
Diethyl phthalate		360	U	10	360
4-Chlorophenyl phenyl ether		360	U	11	360
Fluorene		88	J	7.8	360
4-Nitroaniline		360	U	14	360
N-Nitrosodiphenylamine		360	U	33	360
4-Bromophenyl phenyl ether		360	U	11	360
Hexachlorobenzene		36	U	15	36
Phenanthrene		1300		9.6	360
Anthracene		230	J	34	360
Carbazole		72	J	8.9	360
Di-n-butyl phthalate		360	U	11	360
Fluoranthene		1200		11	360
Pyrene		1300		16	360

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-9 (1-2')**

Lab Sample ID: 460-85054-7

Client Matrix: Solid

% Moisture: 7.8

Date Sampled: 10/23/2014 1355

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258658	Instrument ID:	CBNAMS11
Prep Method:	3546	Prep Batch:	460-258363	Lab File ID:	z5524.D
Dilution:	1.0			Initial Weight/Volume:	14.9632 g
Analysis Date:	10/28/2014 1415			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Butyl benzyl phthalate		360	U	11	360
Benzo[a]anthracene		570		30	36
Chrysene		650		9.8	360
Bis(2-ethylhexyl) phthalate		160	J	14	360
Di-n-octyl phthalate		360	U	18	360
Benzo[b]fluoranthene		690		14	36
Benzo[k]fluoranthene		230		16	36
Benzo[a]pyrene		520	*	11	36
Indeno[1,2,3-cd]pyrene		480		24	36
Dibenz(a,h)anthracene		74		19	36
Benzo[g,h,i]perylene		460		21	360
1,1'-Biphenyl		360	U	31	360
Acetophenone		360	U	7.8	360
Benzaldehyde		360	U	27	360
Caprolactam		360	U	26	360
Atrazine		140	U	16	140
2,2'-oxybis[1-chloropropane]		360	U	15	360
1,2,4,5-Tetrachlorobenzene		360	U	27	360
2,3,4,6-Tetrachlorophenol		360	U	34	360
3,3'-Dichlorobenzidine		140	U	40	140
Bis(2-chloroethoxy)methane		360	U	11	360

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5 (Surr)	76		38 - 105
Phenol-d5 (Surr)	70		41 - 118
Terphenyl-d14 (Surr)	86		16 - 151
2,4,6-Tribromophenol (Surr)	66		10 - 120
2-Fluorophenol (Surr)	67		37 - 125
2-Fluorobiphenyl	79		40 - 109

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-9 (1-2')**

Lab Sample ID: 460-85054-7

Client Matrix: Solid

% Moisture: 7.8

Date Sampled: 10/23/2014 1355

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258658	Instrument ID:	CBNAMS11
Prep Method:	3546	Prep Batch:	460-258363	Lab File ID:	z5524.D
Dilution:	1.0			Initial Weight/Volume:	14.9632 g
Analysis Date:	10/28/2014 1415			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL

Tentatively Identified Compounds **Number TIC's Found:** **2**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
108-67-8	Benzene, 1,3,5-trimethyl-	4.20	730	J N
622-96-8	Benzene, 1-ethyl-4-methyl-	4.42	390	J N

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-9 (8-9')**

Lab Sample ID: 460-85054-8

Client Matrix: Solid

% Moisture: 19.7

Date Sampled: 10/23/2014 1400

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258658	Instrument ID:	CBNAMS11
Prep Method:	3546	Prep Batch:	460-258363	Lab File ID:	z5525.D
Dilution:	5.0			Initial Weight/Volume:	14.9660 g
Analysis Date:	10/28/2014 1440			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Phenol		2100	U	67	2100
2-Chlorophenol		2100	U	52	2100
2-Methylphenol		2100	U	90	2100
4-Methylphenol		2100	U	56	2100
2-Nitrophenol		2100	U	69	2100
2,4-Dimethylphenol		2100	U	450	2100
2,4-Dichlorophenol		2100	U	49	2100
4-Chloro-3-methylphenol		2100	U	89	2100
2,4,6-Trichlorophenol		830	U	59	830
2,4,5-Trichlorophenol		2100	U	210	2100
2,4-Dinitrotoluene		420	U	82	420
4-Nitrophenol		4200	U	990	4200
4,6-Dinitro-2-methylphenol		1700	U	550	1700
Pentachlorophenol		1700	U	250	1700
Bis(2-chloroethyl)ether		210	U	49	210
N-Nitrosodi-n-propylamine		210	U	69	210
Hexachloroethane		210	U	76	210
Nitrobenzene		210	U	65	210
Isophorone		830	U	44	830
Naphthalene		1500	J	52	2100
4-Chloroaniline		2100	U	53	2100
Hexachlorobutadiene		420	U	58	420
2-Methylnaphthalene		850	J	46	2100
Hexachlorocyclopentadiene		2100	U	130	2100
2-Chloronaphthalene		2100	U	47	2100
2-Nitroaniline		2100	U	68	2100
Dimethyl phthalate		2100	U	60	2100
Acenaphthylene		130	J	53	2100
2,6-Dinitrotoluene		420	U	110	420
3-Nitroaniline		2100	U	61	2100
Acenaphthene		2300		50	2100
Dibenzofuran		1800	J	62	2100
2,4-Dinitrophenol		1700	U	1600	1700
Diethyl phthalate		2100	U	59	2100
4-Chlorophenyl phenyl ether		2100	U	62	2100
Fluorene		3100		45	2100
4-Nitroaniline		2100	U	78	2100
N-Nitrosodiphenylamine		2100	U	190	2100
4-Bromophenyl phenyl ether		2100	U	65	2100
Hexachlorobenzene		210	U	84	210
Phenanthrene		29000		55	2100
Anthracene		6900		200	2100
Carbazole		2400		51	2100
Di-n-butyl phthalate		2100	U	62	2100
Fluoranthene		22000		61	2100
Pyrene		23000		94	2100

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-9 (8-9')**

Lab Sample ID: 460-85054-8

Client Matrix: Solid

% Moisture: 19.7

Date Sampled: 10/23/2014 1400

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258658	Instrument ID:	CBNAMS11
Prep Method:	3546	Prep Batch:	460-258363	Lab File ID:	z5525.D
Dilution:	5.0			Initial Weight/Volume:	14.9660 g
Analysis Date:	10/28/2014 1440			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Butyl benzyl phthalate		2100	U	64	2100
Benzo[a]anthracene		11000		170	210
Chrysene		12000		56	2100
Bis(2-ethylhexyl) phthalate		2100	U	81	2100
Di-n-octyl phthalate		2100	U	100	2100
Benzo[b]fluoranthene		9900		81	210
Benzo[k]fluoranthene		4100		90	210
Benzo[a]pyrene		9000	*	62	210
Indeno[1,2,3-cd]pyrene		7700		140	210
Dibenz(a,h)anthracene		1900		110	210
Benzo[g,h,i]perylene		7500		120	2100
1,1'-Biphenyl		270	J	180	2100
Acetophenone		2100	U	45	2100
Benzaldehyde		2100	U	160	2100
Caprolactam		2100	U	150	2100
Atrazine		830	U	92	830
2,2'-oxybis[1-chloropropane]		2100	U	85	2100
1,2,4,5-Tetrachlorobenzene		2100	U	150	2100
2,3,4,6-Tetrachlorophenol		2100	U	190	2100
3,3'-Dichlorobenzidine		830	U	230	830
Bis(2-chloroethoxy)methane		2100	U	64	2100

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5 (Surr)	57		38 - 105
Phenol-d5 (Surr)	53		41 - 118
Terphenyl-d14 (Surr)	66		16 - 151
2,4,6-Tribromophenol (Surr)	37		10 - 120
2-Fluorophenol (Surr)	54		37 - 125
2-Fluorobiphenyl	65		40 - 109

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-9 (8-9')**

Lab Sample ID: 460-85054-8

Client Matrix: Solid

% Moisture: 19.7

Date Sampled: 10/23/2014 1400

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258658	Instrument ID:	CBNAMS11
Prep Method:	3546	Prep Batch:	460-258363	Lab File ID:	z5525.D
Dilution:	5.0			Initial Weight/Volume:	14.9660 g
Analysis Date:	10/28/2014 1440			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL

Tentatively Identified Compounds **Number TIC's Found:** **20**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	8.19	2200	J
132-65-0	Dibenzothiophene	8.77	2200	J N
613-12-7	Anthracene, 2-methyl-	9.37	4000	J N
2531-84-2	Phenanthrene, 2-methyl-	9.40	5000	J N
2531-84-2	Phenanthrene, 2-methyl-	9.45	1900	J N
6109-24-6	1a,9b-Dihydro-1H-cyclopropa[a]anthracene	9.49	6600	J N
832-64-4	Phenanthrene, 4-methyl-	9.50	2900	J N
5672-97-9	5,16[1',2']:8,13[1",2"]-Dibenzenodiben	9.67	2700	J N
483-87-4	Phenanthrene, 1,7-dimethyl-	9.92	2700	J N
	Unknown	9.96	2000	J
	Unknown	10.00	1900	J
2381-21-7	Pyrene, 1-methyl-	10.53	2000	J N
238-84-6	11H-Benzo[a]fluorene	10.65	2900	J N
243-17-4	11H-Benzo[b]fluorene	10.72	2200	J N
2381-21-7	Pyrene, 1-methyl-	10.76	2300	J N
33543-31-6	Fluoranthene, 2-methyl-	10.90	2000	J N
82-05-3	7H-Benz[de]anthracen-7-one	11.22	2100	J N
239-35-0	Benzo[b]naphtho[2,1-d]thiophene	11.35	1900	J N
192-97-2	Benzo[e]pyrene	13.45	5700	J N
192-65-4	1,2:4,5-Dibenzopyrene	17.72	4600	J N

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-7 (1-2')**

Lab Sample ID: 460-85054-9

Client Matrix: Solid

% Moisture: 9.7

Date Sampled: 10/23/2014 1450

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-259124	Instrument ID:	CBNAMS12
Prep Method:	3546	Prep Batch:	460-258363	Lab File ID:	L118195.D
Dilution:	2.0			Initial Weight/Volume:	14.9744 g
Analysis Date:	10/30/2014 1136			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Phenol		730	U	24	730
2-Chlorophenol		730	U	19	730
2-Methylphenol		730	U	32	730
4-Methylphenol		730	U	20	730
2-Nitrophenol		730	U	25	730
2,4-Dimethylphenol		730	U	160	730
2,4-Dichlorophenol		730	U	17	730
4-Chloro-3-methylphenol		730	U	32	730
2,4,6-Trichlorophenol		300	U	21	300
2,4,5-Trichlorophenol		730	U	73	730
2,4-Dinitrotoluene		150	U	29	150
4-Nitrophenol		1500	U	350	1500
4,6-Dinitro-2-methylphenol		590	U	200	590
Pentachlorophenol		590	U	89	590
Bis(2-chloroethyl)ether		73	U	17	73
N-Nitrosodi-n-propylamine		73	U	25	73
Hexachloroethane		73	U	27	73
Nitrobenzene		73	U	23	73
Isophorone		300	U	16	300
Naphthalene		28	J	19	730
4-Chloroaniline		730	U	19	730
Hexachlorobutadiene		150	U	21	150
2-Methylnaphthalene		730	U	16	730
Hexachlorocyclopentadiene		730	U	46	730
2-Chloronaphthalene		730	U	17	730
2-Nitroaniline		730	U	24	730
Dimethyl phthalate		730	U	21	730
Acenaphthylene		30	J	19	730
2,6-Dinitrotoluene		150	U	39	150
3-Nitroaniline		730	U	22	730
Acenaphthene		71	J	18	730
Dibenzofuran		28	J	22	730
2,4-Dinitrophenol		590	U	550	590
Diethyl phthalate		730	U	21	730
4-Chlorophenyl phenyl ether		730	U	22	730
Fluorene		61	J	16	730
4-Nitroaniline		730	U	28	730
N-Nitrosodiphenylamine		730	U	67	730
4-Bromophenyl phenyl ether		730	U	23	730
Hexachlorobenzene		73	U	30	73
Phenanthrene		940		20	730
Anthracene		200	J	70	730
Carbazole		58	J	18	730
Di-n-butyl phthalate		730	U	22	730
Fluoranthene		1500		22	730
Pyrene		1300		33	730

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-7 (1-2')**

Lab Sample ID: 460-85054-9

Client Matrix: Solid

% Moisture: 9.7

Date Sampled: 10/23/2014 1450

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-259124	Instrument ID:	CBNAMS12
Prep Method:	3546	Prep Batch:	460-258363	Lab File ID:	L118195.D
Dilution:	2.0			Initial Weight/Volume:	14.9744 g
Analysis Date:	10/30/2014 1136			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Butyl benzyl phthalate		730	U	23	730
Benzo[a]anthracene		690		61	73
Chrysene		740		20	730
Bis(2-ethylhexyl) phthalate		730	U	29	730
Di-n-octyl phthalate		730	U	37	730
Benzo[b]fluoranthene		980		29	73
Benzo[k]fluoranthene		320		32	73
Benzo[a]pyrene		670	*	22	73
Indeno[1,2,3-cd]pyrene		310		49	73
Dibenz(a,h)anthracene		78		38	73
Benzo[g,h,i]perylene		270	J	42	730
1,1'-Biphenyl		730	U	63	730
Acetophenone		730	U	16	730
Benzaldehyde		730	U	56	730
Caprolactam		730	U	53	730
Atrazine		300	U	33	300
2,2'-oxybis[1-chloropropane]		730	U	30	730
1,2,4,5-Tetrachlorobenzene		730	U	55	730
2,3,4,6-Tetrachlorophenol		730	U	69	730
3,3'-Dichlorobenzidine		300	U	82	300
Bis(2-chloroethoxy)methane		730	U	23	730

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5 (Surr)	59		38 - 105
Phenol-d5 (Surr)	58		41 - 118
Terphenyl-d14 (Surr)	62		16 - 151
2,4,6-Tribromophenol (Surr)	72		10 - 120
2-Fluorophenol (Surr)	56		37 - 125
2-Fluorobiphenyl	66		40 - 109

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-7 (1-2')**

Lab Sample ID: 460-85054-9

Client Matrix: Solid

% Moisture: 9.7

Date Sampled: 10/23/2014 1450

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-259124	Instrument ID:	CBNAMS12
Prep Method:	3546	Prep Batch:	460-258363	Lab File ID:	L118195.D
Dilution:	2.0			Initial Weight/Volume:	14.9744 g
Analysis Date:	10/30/2014 1136			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL

Tentatively Identified Compounds **Number TIC's Found:** **3**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	2.63	29000	J
1000110-40-2	1-(2-Aminobenzylidene)-1,2,3,4-tetrahydr	11.73	600	J N
	Unknown	14.19	780	J

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-7 (7-8')**

Lab Sample ID: 460-85054-10

Client Matrix: Solid

% Moisture: 14.2

Date Sampled: 10/23/2014 1455

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258658	Instrument ID:	CBNAMS11
Prep Method:	3546	Prep Batch:	460-258363	Lab File ID:	z5521.D
Dilution:	1.0			Initial Weight/Volume:	15.0037 g
Analysis Date:	10/28/2014 1301			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Phenol		380	U	13	380
2-Chlorophenol		380	U	9.8	380
2-Methylphenol		380	U	17	380
4-Methylphenol		380	U	10	380
2-Nitrophenol		380	U	13	380
2,4-Dimethylphenol		380	U	85	380
2,4-Dichlorophenol		380	U	9.1	380
4-Chloro-3-methylphenol		380	U	17	380
2,4,6-Trichlorophenol		160	U	11	160
2,4,5-Trichlorophenol		380	U	38	380
2,4-Dinitrotoluene		78	U	15	78
4-Nitrophenol		780	U	190	780
4,6-Dinitro-2-methylphenol		310	U	100	310
Pentachlorophenol		310	U	47	310
Bis(2-chloroethyl)ether		38	U	9.1	38
N-Nitrosodi-n-propylamine		38	U	13	38
Hexachloroethane		38	U	14	38
Nitrobenzene		38	U	12	38
Isophorone		160	U	8.3	160
Naphthalene		87	J	9.8	380
4-Chloroaniline		380	U	9.9	380
Hexachlorobutadiene		78	U	11	78
2-Methylnaphthalene		49	J	8.5	380
Hexachlorocyclopentadiene		380	U	24	380
2-Chloronaphthalene		380	U	8.7	380
2-Nitroaniline		380	U	13	380
Dimethyl phthalate		380	U	11	380
Acenaphthylene		380	U	9.9	380
2,6-Dinitrotoluene		78	U	21	78
3-Nitroaniline		380	U	11	380
Acenaphthene		140	J	9.3	380
Dibenzofuran		90	J	12	380
2,4-Dinitrophenol		310	U	290	310
Diethyl phthalate		380	U	11	380
4-Chlorophenyl phenyl ether		380	U	12	380
Fluorene		120	J	8.4	380
4-Nitroaniline		380	U	15	380
N-Nitrosodiphenylamine		380	U	35	380
4-Bromophenyl phenyl ether		380	U	12	380
Hexachlorobenzene		38	U	16	38
Phenanthrene		1100		10	380
Anthracene		250	J	37	380
Carbazole		92	J	9.6	380
Di-n-butyl phthalate		380	U	12	380
Fluoranthene		910		11	380
Pyrene		990		17	380

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-7 (7-8')**

Lab Sample ID: 460-85054-10

Client Matrix: Solid

% Moisture: 14.2

Date Sampled: 10/23/2014 1455

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258658	Instrument ID:	CBNAMS11
Prep Method:	3546	Prep Batch:	460-258363	Lab File ID:	z5521.D
Dilution:	1.0			Initial Weight/Volume:	15.0037 g
Analysis Date:	10/28/2014 1301			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Butyl benzyl phthalate		380	U	12	380
Benzo[a]anthracene		390		32	38
Chrysene		390		10	380
Bis(2-ethylhexyl) phthalate		62	J	15	380
Di-n-octyl phthalate		380	U	20	380
Benzo[b]fluoranthene		420		15	38
Benzo[k]fluoranthene		180		17	38
Benzo[a]pyrene		370	*	12	38
Indeno[1,2,3-cd]pyrene		280		26	38
Dibenz(a,h)anthracene		64		20	38
Benzo[g,h,i]perylene		290	J	22	380
1,1'-Biphenyl		380	U	33	380
Acetophenone		380	U	8.4	380
Benzaldehyde		380	U	29	380
Caprolactam		380	U	28	380
Atrazine		160	U	17	160
2,2'-oxybis[1-chloropropane]		380	U	16	380
1,2,4,5-Tetrachlorobenzene		380	U	29	380
2,3,4,6-Tetrachlorophenol		380	U	36	380
3,3'-Dichlorobenzidine		160	U	43	160
Bis(2-chloroethoxy)methane		380	U	12	380

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5 (Surr)	80		38 - 105
Phenol-d5 (Surr)	74		41 - 118
Terphenyl-d14 (Surr)	99		16 - 151
2,4,6-Tribromophenol (Surr)	75		10 - 120
2-Fluorophenol (Surr)	71		37 - 125
2-Fluorobiphenyl	82		40 - 109

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-7 (7-8')**

Lab Sample ID: 460-85054-10

Client Matrix: Solid

% Moisture: 14.2

Date Sampled: 10/23/2014 1455

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258658	Instrument ID:	CBNAMS11
Prep Method:	3546	Prep Batch:	460-258363	Lab File ID:	z5521.D
Dilution:	1.0			Initial Weight/Volume:	15.0037 g
Analysis Date:	10/28/2014 1301			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-1 (1-2')**

Lab Sample ID: 460-85054-11

Client Matrix: Solid

% Moisture: 10.3

Date Sampled: 10/23/2014 1535

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258658	Instrument ID:	CBNAMS11
Prep Method:	3546	Prep Batch:	460-258363	Lab File ID:	z5522.D
Dilution:	1.0			Initial Weight/Volume:	14.9788 g
Analysis Date:	10/28/2014 1325			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Phenol		370	U	12	370
2-Chlorophenol		370	U	9.4	370
2-Methylphenol		370	U	16	370
4-Methylphenol		370	U	10	370
2-Nitrophenol		370	U	12	370
2,4-Dimethylphenol		370	U	81	370
2,4-Dichlorophenol		370	U	8.7	370
4-Chloro-3-methylphenol		370	U	16	370
2,4,6-Trichlorophenol		150	U	10	150
2,4,5-Trichlorophenol		370	U	37	370
2,4-Dinitrotoluene		75	U	15	75
4-Nitrophenol		750	U	180	750
4,6-Dinitro-2-methylphenol		300	U	98	300
Pentachlorophenol		300	U	45	300
Bis(2-chloroethyl)ether		37	U	8.7	37
N-Nitrosodi-n-propylamine		37	U	12	37
Hexachloroethane		37	U	14	37
Nitrobenzene		37	U	12	37
Isophorone		150	U	7.9	150
Naphthalene		41	J	9.4	370
4-Chloroaniline		370	U	9.5	370
Hexachlorobutadiene		75	U	10	75
2-Methylnaphthalene		22	J	8.2	370
Hexachlorocyclopentadiene		370	U	23	370
2-Chloronaphthalene		370	U	8.4	370
2-Nitroaniline		370	U	12	370
Dimethyl phthalate		370	U	11	370
Acenaphthylene		21	J	9.5	370
2,6-Dinitrotoluene		75	U	20	75
3-Nitroaniline		370	U	11	370
Acenaphthene		43	J	8.9	370
Dibenzofuran		37	J	11	370
2,4-Dinitrophenol		300	U	280	300
Diethyl phthalate		370	U	10	370
4-Chlorophenyl phenyl ether		370	U	11	370
Fluorene		46	J	8.0	370
4-Nitroaniline		370	U	14	370
N-Nitrosodiphenylamine		370	U	33	370
4-Bromophenyl phenyl ether		370	U	12	370
Hexachlorobenzene		37	U	15	37
Phenanthrene		840		9.8	370
Anthracene		140	J	35	370
Carbazole		57	J	9.2	370
Di-n-butyl phthalate		370	U	11	370
Fluoranthene		1200		11	370
Pyrene		1600		17	370

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-1 (1-2')**

Lab Sample ID: 460-85054-11

Client Matrix: Solid

% Moisture: 10.3

Date Sampled: 10/23/2014 1535

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258658	Instrument ID:	CBNAMS11
Prep Method:	3546	Prep Batch:	460-258363	Lab File ID:	z5522.D
Dilution:	1.0			Initial Weight/Volume:	14.9788 g
Analysis Date:	10/28/2014 1325			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Butyl benzyl phthalate		370	U	11	370
Benzo[a]anthracene		750		31	37
Chrysene		860		10	370
Bis(2-ethylhexyl) phthalate		59	J	14	370
Di-n-octyl phthalate		370	U	19	370
Benzo[b]fluoranthene		880		14	37
Benzo[k]fluoranthene		390		16	37
Benzo[a]pyrene		810	*	11	37
Indeno[1,2,3-cd]pyrene		680		25	37
Dibenz(a,h)anthracene		170		19	37
Benzo[g,h,i]perylene		660		21	370
1,1'-Biphenyl		370	U	31	370
Acetophenone		370	U	8.0	370
Benzaldehyde		370	U	28	370
Caprolactam		370	U	27	370
Atrazine		150	U	16	150
2,2'-oxybis[1-chloropropane]		370	U	15	370
1,2,4,5-Tetrachlorobenzene		370	U	27	370
2,3,4,6-Tetrachlorophenol		370	U	35	370
3,3'-Dichlorobenzidine		150	U	41	150
Bis(2-chloroethoxy)methane		370	U	12	370

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5 (Surr)	75		38 - 105
Phenol-d5 (Surr)	70		41 - 118
Terphenyl-d14 (Surr)	86		16 - 151
2,4,6-Tribromophenol (Surr)	64		10 - 120
2-Fluorophenol (Surr)	68		37 - 125
2-Fluorobiphenyl	78		40 - 109

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-1 (1-2')**

Lab Sample ID: 460-85054-11

Client Matrix: Solid

% Moisture: 10.3

Date Sampled: 10/23/2014 1535

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258658	Instrument ID:	CBNAMS11
Prep Method:	3546	Prep Batch:	460-258363	Lab File ID:	z5522.D
Dilution:	1.0			Initial Weight/Volume:	14.9788 g
Analysis Date:	10/28/2014 1325			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-1 (8-9')**

Lab Sample ID: 460-85054-12

Client Matrix: Solid

% Moisture: 16.4

Date Sampled: 10/23/2014 1540

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258658	Instrument ID:	CBNAMS11
Prep Method:	3546	Prep Batch:	460-258363	Lab File ID:	z5512.D
Dilution:	1.0			Initial Weight/Volume:	14.9852 g
Analysis Date:	10/28/2014 0918			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Phenol		400	U	13	400
2-Chlorophenol		400	U	10	400
2-Methylphenol		400	U	17	400
4-Methylphenol		400	U	11	400
2-Nitrophenol		400	U	13	400
2,4-Dimethylphenol		400	U	87	400
2,4-Dichlorophenol		400	U	9.3	400
4-Chloro-3-methylphenol		400	U	17	400
2,4,6-Trichlorophenol		160	U	11	160
2,4,5-Trichlorophenol		400	U	39	400
2,4-Dinitrotoluene		80	U	16	80
4-Nitrophenol		800	U	190	800
4,6-Dinitro-2-methylphenol		320	U	110	320
Pentachlorophenol		320	U	48	320
Bis(2-chloroethyl)ether		40	U	9.3	40
N-Nitrosodi-n-propylamine		40	U	13	40
Hexachloroethane		40	U	14	40
Nitrobenzene		40	U	12	40
Isophorone		160	U	8.5	160
Naphthalene		400	U	10	400
4-Chloroaniline		400	U	10	400
Hexachlorobutadiene		80	U	11	80
2-Methylnaphthalene		400	U	8.7	400
Hexachlorocyclopentadiene		400	U	25	400
2-Chloronaphthalene		400	U	9.0	400
2-Nitroaniline		400	U	13	400
Dimethyl phthalate		400	U	11	400
Acenaphthylene		400	U	10	400
2,6-Dinitrotoluene		80	U	21	80
3-Nitroaniline		400	U	12	400
Acenaphthene		400	U	9.6	400
Dibenzofuran		400	U	12	400
2,4-Dinitrophenol		320	U	300	320
Diethyl phthalate		400	U	11	400
4-Chlorophenyl phenyl ether		400	U	12	400
Fluorene		400	U	8.6	400
4-Nitroaniline		400	U	15	400
N-Nitrosodiphenylamine		400	U	36	400
4-Bromophenyl phenyl ether		400	U	12	400
Hexachlorobenzene		40	U	16	40
Phenanthrene		37	J	11	400
Anthracene		400	U	38	400
Carbazole		400	U	9.8	400
Di-n-butyl phthalate		400	U	12	400
Fluoranthene		38	J	12	400
Pyrene		43	J	18	400

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-1 (8-9')**

Lab Sample ID: 460-85054-12

Client Matrix: Solid

% Moisture: 16.4

Date Sampled: 10/23/2014 1540

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258658	Instrument ID:	CBNAMS11
Prep Method:	3546	Prep Batch:	460-258363	Lab File ID:	z5512.D
Dilution:	1.0			Initial Weight/Volume:	14.9852 g
Analysis Date:	10/28/2014 0918			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Butyl benzyl phthalate		400	U	12	400
Benzo[a]anthracene		40	U	33	40
Chrysene		20	J	11	400
Bis(2-ethylhexyl) phthalate		400	U	15	400
Di-n-octyl phthalate		400	U	20	400
Benzo[b]fluoranthene		15	J	15	40
Benzo[k]fluoranthene		40	U	17	40
Benzo[a]pyrene		16	J *	12	40
Indeno[1,2,3-cd]pyrene		40	U	26	40
Dibenz(a,h)anthracene		40	U	21	40
Benzo[g,h,i]perylene		400	U	23	400
1,1'-Biphenyl		400	U	34	400
Acetophenone		400	U	8.6	400
Benzaldehyde		400	U	30	400
Caprolactam		400	U	29	400
Atrazine		160	U	18	160
2,2'-oxybis[1-chloropropane]		400	U	16	400
1,2,4,5-Tetrachlorobenzene		400	U	29	400
2,3,4,6-Tetrachlorophenol		400	U	37	400
3,3'-Dichlorobenzidine		160	U	44	160
Bis(2-chloroethoxy)methane		400	U	12	400

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5 (Surr)	78		38 - 105
Phenol-d5 (Surr)	77		41 - 118
Terphenyl-d14 (Surr)	104		16 - 151
2,4,6-Tribromophenol (Surr)	83		10 - 120
2-Fluorophenol (Surr)	73		37 - 125
2-Fluorobiphenyl	77		40 - 109

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-1 (8-9')**

Lab Sample ID: 460-85054-12

Client Matrix: Solid

% Moisture: 16.4

Date Sampled: 10/23/2014 1540

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258658	Instrument ID:	CBNAMS11
Prep Method:	3546	Prep Batch:	460-258363	Lab File ID:	z5512.D
Dilution:	1.0			Initial Weight/Volume:	14.9852 g
Analysis Date:	10/28/2014 0918			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-2 (1-2')**

Lab Sample ID: 460-85054-13

Client Matrix: Solid

% Moisture: 15.9

Date Sampled: 10/23/2014 1555

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258658	Instrument ID:	CBNAMS11
Prep Method:	3546	Prep Batch:	460-258363	Lab File ID:	z5523.D
Dilution:	1.0			Initial Weight/Volume:	15.0010 g
Analysis Date:	10/28/2014 1350			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Phenol		390	U	13	390
2-Chlorophenol		390	U	10	390
2-Methylphenol		390	U	17	390
4-Methylphenol		390	U	11	390
2-Nitrophenol		390	U	13	390
2,4-Dimethylphenol		390	U	86	390
2,4-Dichlorophenol		390	U	9.3	390
4-Chloro-3-methylphenol		390	U	17	390
2,4,6-Trichlorophenol		160	U	11	160
2,4,5-Trichlorophenol		390	U	39	390
2,4-Dinitrotoluene		80	U	16	80
4-Nitrophenol		800	U	190	800
4,6-Dinitro-2-methylphenol		320	U	100	320
Pentachlorophenol		320	U	48	320
Bis(2-chloroethyl)ether		39	U	9.3	39
N-Nitrosodi-n-propylamine		39	U	13	39
Hexachloroethane		39	U	14	39
Nitrobenzene		39	U	12	39
Isophorone		610		8.4	160
Naphthalene		65	J	10	390
4-Chloroaniline		390	U	10	390
Hexachlorobutadiene		80	U	11	80
2-Methylnaphthalene		46	J	8.7	390
Hexachlorocyclopentadiene		390	U	24	390
2-Chloronaphthalene		390	U	8.9	390
2-Nitroaniline		390	U	13	390
Dimethyl phthalate		390	U	11	390
Acenaphthylene		31	J	10	390
2,6-Dinitrotoluene		80	U	21	80
3-Nitroaniline		390	U	12	390
Acenaphthene		72	J	9.5	390
Dibenzofuran		59	J	12	390
2,4-Dinitrophenol		320	U	300	320
Diethyl phthalate		390	U	11	390
4-Chlorophenyl phenyl ether		390	U	12	390
Fluorene		67	J	8.6	390
4-Nitroaniline		390	U	15	390
N-Nitrosodiphenylamine		390	U	36	390
4-Bromophenyl phenyl ether		390	U	12	390
Hexachlorobenzene		39	U	16	39
Phenanthrene		1200		10	390
Anthracene		210	J	37	390
Carbazole		73	J	9.7	390
Di-n-butyl phthalate		19	J	12	390
Fluoranthene		1600		12	390
Pyrene		1800		18	390

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-2 (1-2')**

Lab Sample ID: 460-85054-13

Client Matrix: Solid

% Moisture: 15.9

Date Sampled: 10/23/2014 1555

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258658	Instrument ID:	CBNAMS11
Prep Method:	3546	Prep Batch:	460-258363	Lab File ID:	z5523.D
Dilution:	1.0			Initial Weight/Volume:	15.0010 g
Analysis Date:	10/28/2014 1350			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Butyl benzyl phthalate		390	U	12	390
Benzo[a]anthracene		870		33	39
Chrysene		1000		11	390
Bis(2-ethylhexyl) phthalate		62	J	15	390
Di-n-octyl phthalate		390	U	20	390
Benzo[b]fluoranthene		1100		15	39
Benzo[k]fluoranthene		390		17	39
Benzo[a]pyrene		820	*	12	39
Indeno[1,2,3-cd]pyrene		670		26	39
Dibenz(a,h)anthracene		160		20	39
Benzo[g,h,i]perylene		700		23	390
1,1'-Biphenyl		390	U	34	390
Acetophenone		390	U	8.6	390
Benzaldehyde		390	U	30	390
Caprolactam		390	U	28	390
Atrazine		160	U	17	160
2,2'-oxybis[1-chloropropane]		390	U	16	390
1,2,4,5-Tetrachlorobenzene		390	U	29	390
2,3,4,6-Tetrachlorophenol		390	U	37	390
3,3'-Dichlorobenzidine		160	U	44	160
Bis(2-chloroethoxy)methane		390	U	12	390

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5 (Surr)	60		38 - 105
Phenol-d5 (Surr)	53		41 - 118
Terphenyl-d14 (Surr)	71		16 - 151
2,4,6-Tribromophenol (Surr)	41		10 - 120
2-Fluorophenol (Surr)	49		37 - 125
2-Fluorobiphenyl	64		40 - 109

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-2 (1-2')**

Lab Sample ID: 460-85054-13

Client Matrix: Solid

% Moisture: 15.9

Date Sampled: 10/23/2014 1555

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258658	Instrument ID:	CBNAMS11
Prep Method:	3546	Prep Batch:	460-258363	Lab File ID:	z5523.D
Dilution:	1.0			Initial Weight/Volume:	15.0010 g
Analysis Date:	10/28/2014 1350			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL

Tentatively Identified Compounds **Number TIC's Found:** **6**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
1193-18-6	2-Cyclohexen-1-one, 3-methyl-	4.68	430	J N
504-20-1	2,5-Heptadien-4-one, 2,6-dimethyl-	5.06	820	J N
	Unknown	5.29	990	J
	Unknown	5.60	530	J
	Unknown	9.48	320	J
192-97-2	Benzo[e]pyrene	13.45	710	J N

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-2 (6-7')**

Lab Sample ID: 460-85054-14

Client Matrix: Solid

% Moisture: 10.6

Date Sampled: 10/23/2014 1600

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258658	Instrument ID:	CBNAMS11
Prep Method:	3546	Prep Batch:	460-258363	Lab File ID:	z5514.D
Dilution:	1.0			Initial Weight/Volume:	15.0027 g
Analysis Date:	10/28/2014 1008			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Phenol		370	U	12	370
2-Chlorophenol		370	U	9.4	370
2-Methylphenol		370	U	16	370
4-Methylphenol		370	U	10	370
2-Nitrophenol		370	U	12	370
2,4-Dimethylphenol		370	U	81	370
2,4-Dichlorophenol		370	U	8.7	370
4-Chloro-3-methylphenol		370	U	16	370
2,4,6-Trichlorophenol		150	U	11	150
2,4,5-Trichlorophenol		370	U	37	370
2,4-Dinitrotoluene		75	U	15	75
4-Nitrophenol		750	U	180	750
4,6-Dinitro-2-methylphenol		300	U	99	300
Pentachlorophenol		300	U	45	300
Bis(2-chloroethyl)ether		37	U	8.7	37
N-Nitrosodi-n-propylamine		37	U	12	37
Hexachloroethane		37	U	14	37
Nitrobenzene		37	U	12	37
Isophorone		13	J	7.9	150
Naphthalene		20	J	9.4	370
4-Chloroaniline		370	U	9.5	370
Hexachlorobutadiene		75	U	10	75
2-Methylnaphthalene		11	J	8.2	370
Hexachlorocyclopentadiene		370	U	23	370
2-Chloronaphthalene		370	U	8.4	370
2-Nitroaniline		370	U	12	370
Dimethyl phthalate		370	U	11	370
Acenaphthylene		370	U	9.5	370
2,6-Dinitrotoluene		75	U	20	75
3-Nitroaniline		370	U	11	370
Acenaphthene		24	J	8.9	370
Dibenzofuran		18	J	11	370
2,4-Dinitrophenol		300	U	280	300
Diethyl phthalate		370	U	11	370
4-Chlorophenyl phenyl ether		370	U	11	370
Fluorene		22	J	8.1	370
4-Nitroaniline		370	U	14	370
N-Nitrosodiphenylamine		370	U	34	370
4-Bromophenyl phenyl ether		370	U	12	370
Hexachlorobenzene		37	U	15	37
Phenanthrene		270	J	9.8	370
Anthracene		52	J	35	370
Carbazole		20	J	9.2	370
Di-n-butyl phthalate		370	U	11	370
Fluoranthene		320	J	11	370
Pyrene		380		17	370

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-2 (6-7')**

Lab Sample ID: 460-85054-14

Client Matrix: Solid

% Moisture: 10.6

Date Sampled: 10/23/2014 1600

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258658	Instrument ID:	CBNAMS11
Prep Method:	3546	Prep Batch:	460-258363	Lab File ID:	z5514.D
Dilution:	1.0			Initial Weight/Volume:	15.0027 g
Analysis Date:	10/28/2014 1008			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Butyl benzyl phthalate		370	U	11	370
Benzo[a]anthracene		170		31	37
Chrysene		180	J	10	370
Bis(2-ethylhexyl) phthalate		500		14	370
Di-n-octyl phthalate		370	U	19	370
Benzo[b]fluoranthene		200		14	37
Benzo[k]fluoranthene		87		16	37
Benzo[a]pyrene		140	*	11	37
Indeno[1,2,3-cd]pyrene		110		25	37
Dibenz(a,h)anthracene		39		19	37
Benzo[g,h,i]perylene		100	J	21	370
1,1'-Biphenyl		370	U	32	370
Acetophenone		370	U	8.1	370
Benzaldehyde		370	U	28	370
Caprolactam		370	U	27	370
Atrazine		150	U	16	150
2,2'-oxybis[1-chloropropane]		370	U	15	370
1,2,4,5-Tetrachlorobenzene		370	U	28	370
2,3,4,6-Tetrachlorophenol		370	U	35	370
3,3'-Dichlorobenzidine		150	U	41	150
Bis(2-chloroethoxy)methane		370	U	12	370

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5 (Surr)	68		38 - 105
Phenol-d5 (Surr)	62		41 - 118
Terphenyl-d14 (Surr)	89		16 - 151
2,4,6-Tribromophenol (Surr)	43		10 - 120
2-Fluorophenol (Surr)	56		37 - 125
2-Fluorobiphenyl	67		40 - 109

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-2 (6-7')**

Lab Sample ID: 460-85054-14

Client Matrix: Solid

% Moisture: 10.6

Date Sampled: 10/23/2014 1600

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258658	Instrument ID:	CBNAMS11
Prep Method:	3546	Prep Batch:	460-258363	Lab File ID:	z5514.D
Dilution:	1.0			Initial Weight/Volume:	15.0027 g
Analysis Date:	10/28/2014 1008			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL

Tentatively Identified Compounds **Number TIC's Found:** **2**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	5.29	360	J
	Unknown	5.60	530	J

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-4 (1-2')**

Lab Sample ID: 460-85054-15

Client Matrix: Solid

% Moisture: 19.5

Date Sampled: 10/23/2014 1610

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258658	Instrument ID:	CBNAMS11
Prep Method:	3546	Prep Batch:	460-258363	Lab File ID:	z5518.D
Dilution:	1.0			Initial Weight/Volume:	14.9663 g
Analysis Date:	10/28/2014 1146			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Phenol		410	U	13	410
2-Chlorophenol		410	U	10	410
2-Methylphenol		410	U	18	410
4-Methylphenol		410	U	11	410
2-Nitrophenol		410	U	14	410
2,4-Dimethylphenol		410	U	90	410
2,4-Dichlorophenol		410	U	9.7	410
4-Chloro-3-methylphenol		410	U	18	410
2,4,6-Trichlorophenol		170	U	12	170
2,4,5-Trichlorophenol		410	U	41	410
2,4-Dinitrotoluene		83	U	16	83
4-Nitrophenol		830	U	200	830
4,6-Dinitro-2-methylphenol		330	U	110	330
Pentachlorophenol		330	U	50	330
Bis(2-chloroethyl)ether		41	U	9.7	41
N-Nitrosodi-n-propylamine		41	U	14	41
Hexachloroethane		41	U	15	41
Nitrobenzene		41	U	13	41
Isophorone		170		8.8	170
Naphthalene		110	J	10	410
4-Chloroaniline		410	U	11	410
Hexachlorobutadiene		83	U	12	83
2-Methylnaphthalene		230	J	9.1	410
Hexachlorocyclopentadiene		410	U	26	410
2-Chloronaphthalene		410	U	9.3	410
2-Nitroaniline		410	U	14	410
Dimethyl phthalate		410	U	12	410
Acenaphthylene		16	J	11	410
2,6-Dinitrotoluene		83	U	22	83
3-Nitroaniline		410	U	12	410
Acenaphthene		67	J	10	410
Dibenzofuran		87	J	12	410
2,4-Dinitrophenol		330	U	310	330
Diethyl phthalate		410	U	12	410
4-Chlorophenyl phenyl ether		410	U	12	410
Fluorene		80	J	9.0	410
4-Nitroaniline		410	U	16	410
N-Nitrosodiphenylamine		410	U	37	410
4-Bromophenyl phenyl ether		410	U	13	410
Hexachlorobenzene		41	U	17	41
Phenanthrene		760		11	410
Anthracene		120	J	39	410
Carbazole		56	J	10	410
Di-n-butyl phthalate		410	U	12	410
Fluoranthene		650		12	410
Pyrene		740		19	410

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-4 (1-2')**

Lab Sample ID: 460-85054-15

Client Matrix: Solid

% Moisture: 19.5

Date Sampled: 10/23/2014 1610

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258658	Instrument ID:	CBNAMS11
Prep Method:	3546	Prep Batch:	460-258363	Lab File ID:	z5518.D
Dilution:	1.0			Initial Weight/Volume:	14.9663 g
Analysis Date:	10/28/2014 1146			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Butyl benzyl phthalate		410	U	13	410
Benzo[a]anthracene		340		34	41
Chrysene		390	J	11	410
Bis(2-ethylhexyl) phthalate		48	J	16	410
Di-n-octyl phthalate		410	U	21	410
Benzo[b]fluoranthene		420		16	41
Benzo[k]fluoranthene		180		18	41
Benzo[a]pyrene		320	*	12	41
Indeno[1,2,3-cd]pyrene		270		27	41
Dibenz(a,h)anthracene		49		21	41
Benzo[g,h,i]perylene		270	J	24	410
1,1'-Biphenyl		410	U	35	410
Acetophenone		27	J	9.0	410
Benzaldehyde		410	U	31	410
Caprolactam		63	J	30	410
Atrazine		170	U	18	170
2,2'-oxybis[1-chloropropane]		410	U	17	410
1,2,4,5-Tetrachlorobenzene		410	U	31	410
2,3,4,6-Tetrachlorophenol		410	U	39	410
3,3'-Dichlorobenzidine		170	U	46	170
Bis(2-chloroethoxy)methane		410	U	13	410

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5 (Surr)	72		38 - 105
Phenol-d5 (Surr)	67		41 - 118
Terphenyl-d14 (Surr)	89		16 - 151
2,4,6-Tribromophenol (Surr)	60		10 - 120
2-Fluorophenol (Surr)	62		37 - 125
2-Fluorobiphenyl	74		40 - 109

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-4 (1-2')**

Lab Sample ID: 460-85054-15

Client Matrix: Solid

% Moisture: 19.5

Date Sampled: 10/23/2014 1610

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258658	Instrument ID:	CBNAMS11
Prep Method:	3546	Prep Batch:	460-258363	Lab File ID:	z5518.D
Dilution:	1.0			Initial Weight/Volume:	14.9663 g
Analysis Date:	10/28/2014 1146			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL

Tentatively Identified Compounds **Number TIC's Found:** **6**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	5.29	750	J
	Unknown	5.60	470	J
575-43-9	Naphthalene, 1,6-dimethyl-	6.99	370	J N
581-40-8	Naphthalene, 2,3-dimethyl-	7.07	350	J N
629-50-5	Tridecane	8.33	500	J N
2051-30-1	Octane, 2,6-dimethyl-	8.35	500	J N

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-4 (7-8')**

Lab Sample ID: 460-85054-16

Client Matrix: Solid

% Moisture: 13.7

Date Sampled: 10/23/2014 1615

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258658	Instrument ID:	CBNAMS11
Prep Method:	3546	Prep Batch:	460-258363	Lab File ID:	z5519.D
Dilution:	1.0			Initial Weight/Volume:	14.9875 g
Analysis Date:	10/28/2014 1211			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Phenol		380	U	13	380
2-Chlorophenol		380	U	9.7	380
2-Methylphenol		380	U	17	380
4-Methylphenol		380	U	10	380
2-Nitrophenol		380	U	13	380
2,4-Dimethylphenol		380	U	84	380
2,4-Dichlorophenol		380	U	9.0	380
4-Chloro-3-methylphenol		380	U	16	380
2,4,6-Trichlorophenol		150	U	11	150
2,4,5-Trichlorophenol		380	U	38	380
2,4-Dinitrotoluene		78	U	15	78
4-Nitrophenol		780	U	180	780
4,6-Dinitro-2-methylphenol		310	U	100	310
Pentachlorophenol		310	U	46	310
Bis(2-chloroethyl)ether		38	U	9.0	38
N-Nitrosodi-n-propylamine		38	U	13	38
Hexachloroethane		38	U	14	38
Nitrobenzene		38	U	12	38
Isophorone		1900		8.2	150
Naphthalene		120	J	9.7	380
4-Chloroaniline		380	U	9.9	380
Hexachlorobutadiene		78	U	11	78
2-Methylnaphthalene		130	J	8.5	380
Hexachlorocyclopentadiene		380	U	24	380
2-Chloronaphthalene		380	U	8.7	380
2-Nitroaniline		380	U	13	380
Dimethyl phthalate		380	U	11	380
Acenaphthylene		10	J	9.9	380
2,6-Dinitrotoluene		78	U	20	78
3-Nitroaniline		380	U	11	380
Acenaphthene		52	J	9.3	380
Dibenzofuran		59	J	12	380
2,4-Dinitrophenol		310	U	290	310
Diethyl phthalate		380	U	11	380
4-Chlorophenyl phenyl ether		380	U	11	380
Fluorene		80	J	8.3	380
4-Nitroaniline		380	U	14	380
N-Nitrosodiphenylamine		380	U	35	380
4-Bromophenyl phenyl ether		380	U	12	380
Hexachlorobenzene		38	U	16	38
Phenanthrene		680		10	380
Anthracene		110	J	36	380
Carbazole		58	J	9.5	380
Di-n-butyl phthalate		380	U	11	380
Fluoranthene		600		11	380
Pyrene		620		17	380

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-4 (7-8')**

Lab Sample ID: 460-85054-16

Client Matrix: Solid

% Moisture: 13.7

Date Sampled: 10/23/2014 1615

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258658	Instrument ID:	CBNAMS11
Prep Method:	3546	Prep Batch:	460-258363	Lab File ID:	z5519.D
Dilution:	1.0			Initial Weight/Volume:	14.9875 g
Analysis Date:	10/28/2014 1211			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Butyl benzyl phthalate		380	U	12	380
Benzo[a]anthracene		300		32	38
Chrysene		400		10	380
Bis(2-ethylhexyl) phthalate		54	J	15	380
Di-n-octyl phthalate		380	U	19	380
Benzo[b]fluoranthene		360		15	38
Benzo[k]fluoranthene		140		17	38
Benzo[a]pyrene		280	*	12	38
Indeno[1,2,3-cd]pyrene		230		26	38
Dibenz(a,h)anthracene		76		20	38
Benzo[g,h,i]perylene		260	J	22	380
1,1'-Biphenyl		380	U	33	380
Acetophenone		380	U	8.3	380
Benzaldehyde		380	U	29	380
Caprolactam		380	U	28	380
Atrazine		150	U	17	150
2,2'-oxybis[1-chloropropane]		380	U	16	380
1,2,4,5-Tetrachlorobenzene		380	U	29	380
2,3,4,6-Tetrachlorophenol		380	U	36	380
3,3'-Dichlorobenzidine		150	U	43	150
Bis(2-chloroethoxy)methane		380	U	12	380

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5 (Surr)	62		38 - 105
Phenol-d5 (Surr)	57		41 - 118
Terphenyl-d14 (Surr)	80		16 - 151
2,4,6-Tribromophenol (Surr)	36		10 - 120
2-Fluorophenol (Surr)	48		37 - 125
2-Fluorobiphenyl	66		40 - 109

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-4 (7-8')**

Lab Sample ID: 460-85054-16

Client Matrix: Solid

% Moisture: 13.7

Date Sampled: 10/23/2014 1615

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258658	Instrument ID:	CBNAMS11
Prep Method:	3546	Prep Batch:	460-258363	Lab File ID:	z5519.D
Dilution:	1.0			Initial Weight/Volume:	14.9875 g
Analysis Date:	10/28/2014 1211			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL

Tentatively Identified Compounds **Number TIC's Found:** **4**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
1193-18-6	2-Cyclohexen-1-one, 3-methyl-	4.69	800	J N
504-20-1	2,5-Heptadien-4-one, 2,6-dimethyl-	5.06	2100	J N
	Unknown	5.30	2800	J
	Unknown	5.61	1500	J

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-X (7-8')**

Lab Sample ID: 460-85054-17

Client Matrix: Solid

% Moisture: 11.9

Date Sampled: 10/23/2014 1620

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258658	Instrument ID:	CBNAMS11
Prep Method:	3546	Prep Batch:	460-258363	Lab File ID:	z5520.D
Dilution:	1.0			Initial Weight/Volume:	14.9832 g
Analysis Date:	10/28/2014 1236			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Phenol		380	U	12	380
2-Chlorophenol		380	U	9.6	380
2-Methylphenol		380	U	16	380
4-Methylphenol		380	U	10	380
2-Nitrophenol		380	U	13	380
2,4-Dimethylphenol		380	U	83	380
2,4-Dichlorophenol		380	U	8.9	380
4-Chloro-3-methylphenol		380	U	16	380
2,4,6-Trichlorophenol		150	U	11	150
2,4,5-Trichlorophenol		380	U	37	380
2,4-Dinitrotoluene		76	U	15	76
4-Nitrophenol		760	U	180	760
4,6-Dinitro-2-methylphenol		300	U	100	300
Pentachlorophenol		300	U	45	300
Bis(2-chloroethyl)ether		38	U	8.9	38
N-Nitrosodi-n-propylamine		38	U	13	38
Hexachloroethane		38	U	14	38
Nitrobenzene		38	U	12	38
Isophorone		150	U	8.1	150
Naphthalene		23	J	9.6	380
4-Chloroaniline		380	U	9.7	380
Hexachlorobutadiene		76	U	11	76
2-Methylnaphthalene		9.7	J	8.3	380
Hexachlorocyclopentadiene		380	U	23	380
2-Chloronaphthalene		380	U	8.5	380
2-Nitroaniline		380	U	12	380
Dimethyl phthalate		380	U	11	380
Acenaphthylene		380	U	9.7	380
2,6-Dinitrotoluene		76	U	20	76
3-Nitroaniline		380	U	11	380
Acenaphthene		36	J	9.1	380
Dibenzofuran		21	J	11	380
2,4-Dinitrophenol		300	U	280	300
Diethyl phthalate		380	U	11	380
4-Chlorophenyl phenyl ether		380	U	11	380
Fluorene		37	J	8.2	380
4-Nitroaniline		380	U	14	380
N-Nitrosodiphenylamine		380	U	34	380
4-Bromophenyl phenyl ether		380	U	12	380
Hexachlorobenzene		38	U	15	38
Phenanthrene		510		10	380
Anthracene		79	J	36	380
Carbazole		37	J	9.3	380
Di-n-butyl phthalate		380	U	11	380
Fluoranthene		550		11	380
Pyrene		710		17	380

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-X (7-8')**

Lab Sample ID: 460-85054-17

Client Matrix: Solid

% Moisture: 11.9

Date Sampled: 10/23/2014 1620

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258658	Instrument ID:	CBNAMS11
Prep Method:	3546	Prep Batch:	460-258363	Lab File ID:	z5520.D
Dilution:	1.0			Initial Weight/Volume:	14.9832 g
Analysis Date:	10/28/2014 1236			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Butyl benzyl phthalate		380	U	12	380
Benzo[a]anthracene		250		31	38
Chrysene		350	J	10	380
Bis(2-ethylhexyl) phthalate		380	U	15	380
Di-n-octyl phthalate		380	U	19	380
Benzo[b]fluoranthene		350		15	38
Benzo[k]fluoranthene		150		16	38
Benzo[a]pyrene		240	*	11	38
Indeno[1,2,3-cd]pyrene		260		25	38
Dibenz(a,h)anthracene		43		20	38
Benzo[g,h,i]perylene		240	J	22	380
1,1'-Biphenyl		380	U	32	380
Acetophenone		380	U	8.2	380
Benzaldehyde		380	U	29	380
Caprolactam		380	U	27	380
Atrazine		150	U	17	150
2,2'-oxybis[1-chloropropane]		380	U	15	380
1,2,4,5-Tetrachlorobenzene		380	U	28	380
2,3,4,6-Tetrachlorophenol		380	U	35	380
3,3'-Dichlorobenzidine		150	U	42	150
Bis(2-chloroethoxy)methane		380	U	12	380

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5 (Surr)	69		38 - 105
Phenol-d5 (Surr)	67		41 - 118
Terphenyl-d14 (Surr)	94		16 - 151
2,4,6-Tribromophenol (Surr)	66		10 - 120
2-Fluorophenol (Surr)	65		37 - 125
2-Fluorobiphenyl	71		40 - 109

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-X (7-8')**

Lab Sample ID: 460-85054-17

Client Matrix: Solid

% Moisture: 11.9

Date Sampled: 10/23/2014 1620

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258658	Instrument ID:	CBNAMS11
Prep Method:	3546	Prep Batch:	460-258363	Lab File ID:	z5520.D
Dilution:	1.0			Initial Weight/Volume:	14.9832 g
Analysis Date:	10/28/2014 1236			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-3 (1-2')**

Lab Sample ID: 460-85054-1

Client Matrix: Solid

% Moisture: 10.3

Date Sampled: 10/23/2014 1155

Date Received: 10/23/2014 1845

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-258474	Instrument ID:	CPESTGC9
Prep Method:	3546	Prep Batch:	460-258357	Initial Weight/Volume:	15.0159 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 0845			Injection Volume:	1 uL
Prep Date:	10/26/2014 0847			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		7.5	U	1.4	7.5
4,4'-DDE		7.5	U	1.4	7.5
4,4'-DDT		7.5	U	1.8	7.5
Aldrin		7.5	U	1.6	7.5
alpha-BHC		2.2	U	1.7	2.2
beta-BHC		2.2	U	1.8	2.2
Chlordane (technical)		75	U	21	75
delta-BHC		2.2	U	1.3	2.2
Dieldrin		2.2	U	1.3	2.2
Endosulfan I		7.5	U	1.7	7.5
Endosulfan II		7.5	U	1.4	7.5
Endosulfan sulfate		7.5	U	1.4	7.5
Endrin		7.5	U	1.8	7.5
Endrin aldehyde		7.5	U	1.1	7.5
Endrin ketone		7.5	U	1.4	7.5
gamma-BHC (Lindane)		2.2	U	1.3	2.2
Heptachlor		7.5	U	1.8	7.5
Heptachlor epoxide		7.5	U	1.7	7.5
Methoxychlor		7.5	U	1.8	7.5
Toxaphene		75	U	20	75

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	114		76 - 149
Tetrachloro-m-xylene	89		72 - 136

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-3 (1-2')**

Lab Sample ID: 460-85054-1

Client Matrix: Solid

% Moisture: 10.3

Date Sampled: 10/23/2014 1155

Date Received: 10/23/2014 1845

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-258474	Instrument ID:	CPESTGC9
Prep Method:	3546	Prep Batch:	460-258357	Initial Weight/Volume:	15.0159 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 0845			Injection Volume:	1 uL
Prep Date:	10/26/2014 0847			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	93		76 - 149
Tetrachloro-m-xylene	88		72 - 136

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-3 (8-9')**

Lab Sample ID: 460-85054-2

Client Matrix: Solid

% Moisture: 10.3

Date Sampled: 10/23/2014 1200

Date Received: 10/23/2014 1845

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-258474	Instrument ID:	CPESTGC9
Prep Method:	3546	Prep Batch:	460-258357	Initial Weight/Volume:	15.0362 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 0856			Injection Volume:	1 uL
Prep Date:	10/26/2014 0847			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		7.4	U	1.4	7.4
4,4'-DDE		7.4	U	1.4	7.4
4,4'-DDT		7.4	U	1.8	7.4
Aldrin		7.4	U	1.6	7.4
alpha-BHC		2.2	U	1.7	2.2
beta-BHC		2.2	U	1.8	2.2
Chlordane (technical)		74	U	21	74
delta-BHC		2.2	U	1.3	2.2
Dieldrin		2.2	U	1.3	2.2
Endosulfan I		7.4	U	1.7	7.4
Endosulfan II		7.4	U	1.4	7.4
Endosulfan sulfate		7.4	U	1.4	7.4
Endrin		7.4	U	1.8	7.4
Endrin aldehyde		7.4	U	1.1	7.4
Endrin ketone		7.4	U	1.4	7.4
gamma-BHC (Lindane)		2.2	U	1.3	2.2
Heptachlor		7.4	U	1.8	7.4
Heptachlor epoxide		7.4	U	1.7	7.4
Methoxychlor		7.4	U	1.8	7.4
Toxaphene		74	U	20	74

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	111		76 - 149
Tetrachloro-m-xylene	84		72 - 136

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-3 (8-9')**

Lab Sample ID: 460-85054-2

Client Matrix: Solid

% Moisture: 10.3

Date Sampled: 10/23/2014 1200

Date Received: 10/23/2014 1845

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-258474	Instrument ID:	CPESTGC9
Prep Method:	3546	Prep Batch:	460-258357	Initial Weight/Volume:	15.0362 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 0856			Injection Volume:	1 uL
Prep Date:	10/26/2014 0847			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	105		76 - 149
Tetrachloro-m-xylene	79		72 - 136

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-10 (1-2')**

Lab Sample ID: 460-85054-3

Client Matrix: Solid

% Moisture: 10.1

Date Sampled: 10/23/2014 1225

Date Received: 10/23/2014 1845

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-258474	Instrument ID:	CPESTGC9
Prep Method:	3546	Prep Batch:	460-258357	Initial Weight/Volume:	15.0333 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 0908			Injection Volume:	1 uL
Prep Date:	10/26/2014 0847			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		7.4	U	1.4	7.4
4,4'-DDE		7.4	U	1.4	7.4
4,4'-DDT		7.4	U	1.8	7.4
Aldrin		7.4	U	1.6	7.4
alpha-BHC		2.2	U	1.7	2.2
beta-BHC		2.2	U	1.8	2.2
Chlordane (technical)		74	U	21	74
delta-BHC		2.2	U	1.3	2.2
Dieldrin		2.2	U	1.3	2.2
Endosulfan I		7.4	U	1.7	7.4
Endosulfan II		7.4	U	1.4	7.4
Endosulfan sulfate		7.4	U	1.4	7.4
Endrin		7.4	U	1.8	7.4
Endrin aldehyde		7.4	U	1.1	7.4
Endrin ketone		7.4	U	1.4	7.4
gamma-BHC (Lindane)		2.2	U	1.3	2.2
Heptachlor		7.4	U	1.8	7.4
Heptachlor epoxide		7.4	U	1.7	7.4
Methoxychlor		7.4	U	1.8	7.4
Toxaphene		74	U	20	74

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	103		76 - 149
Tetrachloro-m-xylene	85		72 - 136

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-10 (1-2')**

Lab Sample ID: 460-85054-3

Client Matrix: Solid

% Moisture: 10.1

Date Sampled: 10/23/2014 1225

Date Received: 10/23/2014 1845

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-258474	Instrument ID:	CPESTGC9
Prep Method:	3546	Prep Batch:	460-258357	Initial Weight/Volume:	15.0333 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 0908			Injection Volume:	1 uL
Prep Date:	10/26/2014 0847			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	97		76 - 149
Tetrachloro-m-xylene	77		72 - 136

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-10 (7-8')**

Lab Sample ID: 460-85054-4

Client Matrix: Solid

% Moisture: 16.8

Date Sampled: 10/23/2014 1230

Date Received: 10/23/2014 1845

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-258474	Instrument ID:	CPESTGC9
Prep Method:	3546	Prep Batch:	460-258357	Initial Weight/Volume:	15.0248 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 0919			Injection Volume:	1 uL
Prep Date:	10/26/2014 0847			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		8.0	U	1.6	8.0
4,4'-DDE		8.0	U	1.6	8.0
4,4'-DDT		8.0	U	1.9	8.0
Aldrin		8.0	U	1.7	8.0
alpha-BHC		2.4	U	1.8	2.4
beta-BHC		2.4	U	1.9	2.4
Chlordane (technical)		80	U	23	80
delta-BHC		2.4	U	1.4	2.4
Dieldrin		2.4	U	1.4	2.4
Endosulfan I		8.0	U	1.8	8.0
Endosulfan II		8.0	U	1.6	8.0
Endosulfan sulfate		8.0	U	1.6	8.0
Endrin		8.0	U	1.9	8.0
Endrin aldehyde		8.0	U	1.2	8.0
Endrin ketone		8.0	U	1.6	8.0
gamma-BHC (Lindane)		2.4	U	1.4	2.4
Heptachlor		8.0	U	1.9	8.0
Heptachlor epoxide		8.0	U	1.8	8.0
Methoxychlor		8.0	U	1.9	8.0
Toxaphene		80	U	22	80

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	97		76 - 149
Tetrachloro-m-xylene	94		72 - 136

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-10 (7-8')**

Lab Sample ID: 460-85054-4

Client Matrix: Solid

% Moisture: 16.8

Date Sampled: 10/23/2014 1230

Date Received: 10/23/2014 1845

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-258474	Instrument ID:	CPESTGC9
Prep Method:	3546	Prep Batch:	460-258357	Initial Weight/Volume:	15.0248 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 0919			Injection Volume:	1 uL
Prep Date:	10/26/2014 0847			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	94		76 - 149
Tetrachloro-m-xylene	87		72 - 136

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-19 (1-2')**

Lab Sample ID: 460-85054-5

Client Matrix: Solid

% Moisture: 5.8

Date Sampled: 10/23/2014 1245

Date Received: 10/23/2014 1845

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-258929	Instrument ID:	CPESTGC9
Prep Method:	3546	Prep Batch:	460-258709	Initial Weight/Volume:	15.0199 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/29/2014 1057			Injection Volume:	1 uL
Prep Date:	10/28/2014 0841			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		7.1	U	1.4	7.1
4,4'-DDE		7.1	U	1.4	7.1
4,4'-DDT		7.1	U	1.7	7.1
Aldrin		7.1	U	1.5	7.1
alpha-BHC		2.1	U	1.6	2.1
beta-BHC		2.1	U	1.7	2.1
Chlordane (technical)		71	U	20	71
delta-BHC		2.1	U	1.3	2.1
Dieldrin		2.1	U	1.3	2.1
Endosulfan I		7.1	U	1.6	7.1
Endosulfan II		7.1	U	1.4	7.1
Endosulfan sulfate		7.1	U	1.4	7.1
Endrin		7.1	U	1.7	7.1
Endrin aldehyde		7.1	U	1.1	7.1
Endrin ketone		7.1	U	1.4	7.1
gamma-BHC (Lindane)		2.1	U	1.3	2.1
Heptachlor		7.1	U	1.7	7.1
Heptachlor epoxide		7.1	U	1.6	7.1
Methoxychlor		7.1	U	1.7	7.1
Toxaphene		71	U	19	71

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	92	p	76 - 149
Tetrachloro-m-xylene	111		72 - 136

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-19 (1-2')**

Lab Sample ID: 460-85054-5

Client Matrix: Solid

% Moisture: 5.8

Date Sampled: 10/23/2014 1245

Date Received: 10/23/2014 1845

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-258929	Instrument ID:	CPESTGC9
Prep Method:	3546	Prep Batch:	460-258709	Initial Weight/Volume:	15.0199 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/29/2014 1057			Injection Volume:	1 uL
Prep Date:	10/28/2014 0841			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	140		76 - 149
Tetrachloro-m-xylene	108		72 - 136

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-19 (7-8')**

Lab Sample ID: 460-85054-6

Client Matrix: Solid

% Moisture: 13.6

Date Sampled: 10/23/2014 1250

Date Received: 10/23/2014 1845

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-258474	Instrument ID:	CPESTGC9
Prep Method:	3546	Prep Batch:	460-258357	Initial Weight/Volume:	15.0298 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 0930			Injection Volume:	1 uL
Prep Date:	10/26/2014 0847			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		7.7	U	1.5	7.7
4,4'-DDE		7.7	U	1.5	7.7
4,4'-DDT		7.7	U	1.8	7.7
Aldrin		7.7	U	1.6	7.7
alpha-BHC		2.3	U	1.7	2.3
beta-BHC		2.3	U	1.8	2.3
Chlordane (technical)		77	U	22	77
delta-BHC		2.3	U	1.4	2.3
Dieldrin		2.3	U	1.4	2.3
Endosulfan I		7.7	U	1.7	7.7
Endosulfan II		7.7	U	1.5	7.7
Endosulfan sulfate		7.7	U	1.5	7.7
Endrin		7.7	U	1.8	7.7
Endrin aldehyde		7.7	U	1.2	7.7
Endrin ketone		7.7	U	1.5	7.7
gamma-BHC (Lindane)		2.3	U	1.4	2.3
Heptachlor		7.7	U	1.8	7.7
Heptachlor epoxide		7.7	U	1.7	7.7
Methoxychlor		7.7	U	1.8	7.7
Toxaphene		77	U	21	77

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	87		76 - 149
Tetrachloro-m-xylene	109		72 - 136

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-19 (7-8')**

Lab Sample ID: 460-85054-6

Client Matrix: Solid

% Moisture: 13.6

Date Sampled: 10/23/2014 1250

Date Received: 10/23/2014 1845

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-258474	Instrument ID:	CPESTGC9
Prep Method:	3546	Prep Batch:	460-258357	Initial Weight/Volume:	15.0298 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 0930			Injection Volume:	1 uL
Prep Date:	10/26/2014 0847			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	80		76 - 149
Tetrachloro-m-xylene	90		72 - 136

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-9 (1-2')**

Lab Sample ID: 460-85054-7

Client Matrix: Solid

% Moisture: 7.8

Date Sampled: 10/23/2014 1355

Date Received: 10/23/2014 1845

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-258534	Instrument ID:	CPESTGC5
Prep Method:	3546	Prep Batch:	460-258357	Initial Weight/Volume:	15.0449 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 1500			Injection Volume:	1 uL
Prep Date:	10/26/2014 0847			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		7.2	U	1.4	7.2
4,4'-DDE		7.2	U	1.4	7.2
4,4'-DDT		7.2	U	1.7	7.2
Aldrin		7.2	U	1.5	7.2
alpha-BHC		2.2	U	1.6	2.2
beta-BHC		2.2	U	1.7	2.2
Chlordane (technical)		72	U	21	72
delta-BHC		2.2	U	1.3	2.2
Dieldrin		2.2	U	1.3	2.2
Endosulfan I		7.2	U	1.6	7.2
Endosulfan II		7.2	U	1.4	7.2
Endosulfan sulfate		7.2	U	1.4	7.2
Endrin		7.2	U	1.7	7.2
Endrin aldehyde		7.2	U	1.1	7.2
Endrin ketone		7.2	U	1.4	7.2
gamma-BHC (Lindane)		2.2	U	1.3	2.2
Heptachlor		7.2	U	1.7	7.2
Heptachlor epoxide		7.2	U	1.6	7.2
Methoxychlor		7.2	U	1.7	7.2
Toxaphene		72	U	19	72

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	119		76 - 149
Tetrachloro-m-xylene	81		72 - 136

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-9 (1-2')**

Lab Sample ID: 460-85054-7

Client Matrix: Solid

% Moisture: 7.8

Date Sampled: 10/23/2014 1355

Date Received: 10/23/2014 1845

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-258534	Instrument ID:	CPESTGC5
Prep Method:	3546	Prep Batch:	460-258357	Initial Weight/Volume:	15.0449 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 1500			Injection Volume:	1 uL
Prep Date:	10/26/2014 0847			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	97		76 - 149
Tetrachloro-m-xylene	76		72 - 136

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-9 (8-9')**

Lab Sample ID: 460-85054-8

Client Matrix: Solid

% Moisture: 19.7

Date Sampled: 10/23/2014 1400

Date Received: 10/23/2014 1845

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-258534	Instrument ID:	CPESTGC5
Prep Method:	3546	Prep Batch:	460-258357	Initial Weight/Volume:	15.0092 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 1514			Injection Volume:	1 uL
Prep Date:	10/26/2014 0847			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		8.3	U	1.6	8.3
4,4'-DDE		8.3	U	1.6	8.3
4,4'-DDT		8.3	U	2.0	8.3
Aldrin		8.3	U	1.7	8.3
alpha-BHC		2.5	U	1.9	2.5
beta-BHC		2.5	U	2.0	2.5
Chlordane (technical)		83	U	24	83
delta-BHC		2.5	U	1.5	2.5
Dieldrin		2.5	U	1.5	2.5
Endosulfan I		8.3	U	1.9	8.3
Endosulfan II		8.3	U	1.6	8.3
Endosulfan sulfate		8.3	U	1.6	8.3
Endrin		8.3	U	2.0	8.3
Endrin aldehyde		8.3	U	1.2	8.3
Endrin ketone		8.3	U	1.6	8.3
gamma-BHC (Lindane)		2.5	U	1.5	2.5
Heptachlor		8.3	U	2.0	8.3
Heptachlor epoxide		8.3	U	1.9	8.3
Methoxychlor		8.3	U	2.0	8.3
Toxaphene		83	U	22	83

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	116		76 - 149
Tetrachloro-m-xylene	75		72 - 136

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-9 (8-9')**

Lab Sample ID: 460-85054-8

Client Matrix: Solid

% Moisture: 19.7

Date Sampled: 10/23/2014 1400

Date Received: 10/23/2014 1845

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-258534	Instrument ID:	CPESTGC5
Prep Method:	3546	Prep Batch:	460-258357	Initial Weight/Volume:	15.0092 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 1514			Injection Volume:	1 uL
Prep Date:	10/26/2014 0847			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	100		76 - 149
Tetrachloro-m-xylene	68	*	72 - 136

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-7 (1-2')**

Lab Sample ID: 460-85054-9

Client Matrix: Solid

% Moisture: 9.7

Date Sampled: 10/23/2014 1450

Date Received: 10/23/2014 1845

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-258534	Instrument ID:	CPESTGC5
Prep Method:	3546	Prep Batch:	460-258357	Initial Weight/Volume:	15.0218 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 1527			Injection Volume:	1 uL
Prep Date:	10/26/2014 0847			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		7.4	U	1.4	7.4
4,4'-DDE		7.4	U	1.4	7.4
4,4'-DDT		7.4	U	1.8	7.4
Aldrin		7.4	U	1.5	7.4
alpha-BHC		2.2	U	1.7	2.2
beta-BHC		2.2	U	1.8	2.2
Chlordane (technical)		74	U	21	74
delta-BHC		2.2	U	1.3	2.2
Dieldrin		2.2	U	1.3	2.2
Endosulfan I		7.4	U	1.7	7.4
Endosulfan II		7.4	U	1.4	7.4
Endosulfan sulfate		7.4	U	1.4	7.4
Endrin		7.4	U	1.8	7.4
Endrin aldehyde		7.4	U	1.1	7.4
Endrin ketone		7.4	U	1.4	7.4
gamma-BHC (Lindane)		2.2	U	1.3	2.2
Heptachlor		7.4	U	1.8	7.4
Heptachlor epoxide		7.4	U	1.7	7.4
Methoxychlor		7.4	U	1.8	7.4
Toxaphene		74	U	20	74

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	94		76 - 149
Tetrachloro-m-xylene	126		72 - 136

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-7 (1-2')**

Lab Sample ID: 460-85054-9

Client Matrix: Solid

% Moisture: 9.7

Date Sampled: 10/23/2014 1450

Date Received: 10/23/2014 1845

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-258534	Instrument ID:	CPESTGC5
Prep Method:	3546	Prep Batch:	460-258357	Initial Weight/Volume:	15.0218 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 1527			Injection Volume:	1 uL
Prep Date:	10/26/2014 0847			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	80		76 - 149
Tetrachloro-m-xylene	91		72 - 136

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-7 (7-8')**

Lab Sample ID: 460-85054-10

Client Matrix: Solid

% Moisture: 14.2

Date Sampled: 10/23/2014 1455

Date Received: 10/23/2014 1845

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-258929	Instrument ID:	CPESTGC9
Prep Method:	3546	Prep Batch:	460-258709	Initial Weight/Volume:	15.0381 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/29/2014 1108			Injection Volume:	1 uL
Prep Date:	10/28/2014 0841			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		7.8	U	1.5	7.8
4,4'-DDE		7.8	U	1.5	7.8
4,4'-DDT		7.8	U	1.9	7.8
Aldrin		7.8	U	1.6	7.8
alpha-BHC		2.3	U	1.7	2.3
beta-BHC		2.3	U	1.9	2.3
Chlordane (technical)		78	U	22	78
delta-BHC		2.3	U	1.4	2.3
Dieldrin		2.3	U	1.4	2.3
Endosulfan I		7.8	U	1.7	7.8
Endosulfan II		7.8	U	1.5	7.8
Endosulfan sulfate		7.8	U	1.5	7.8
Endrin		7.8	U	1.9	7.8
Endrin aldehyde		7.8	U	1.2	7.8
Endrin ketone		7.8	U	1.5	7.8
gamma-BHC (Lindane)		2.3	U	1.4	2.3
Heptachlor		7.8	U	1.9	7.8
Heptachlor epoxide		7.8	U	1.7	7.8
Methoxychlor		7.8	U	1.9	7.8
Toxaphene		78	U	21	78

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	138		76 - 149
Tetrachloro-m-xylene	94		72 - 136

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-7 (7-8')**

Lab Sample ID: 460-85054-10

Client Matrix: Solid

% Moisture: 14.2

Date Sampled: 10/23/2014 1455

Date Received: 10/23/2014 1845

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-258929	Instrument ID:	CPESTGC9
Prep Method:	3546	Prep Batch:	460-258709	Initial Weight/Volume:	15.0381 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/29/2014 1108			Injection Volume:	1 uL
Prep Date:	10/28/2014 0841			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	94		76 - 149
Tetrachloro-m-xylene	91		72 - 136

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-1 (1-2')**

Lab Sample ID: 460-85054-11

Client Matrix: Solid

% Moisture: 10.3

Date Sampled: 10/23/2014 1535

Date Received: 10/23/2014 1845

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-258534	Instrument ID:	CPESTGC5
Prep Method:	3546	Prep Batch:	460-258357	Initial Weight/Volume:	15.0247 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 1555			Injection Volume:	1 uL
Prep Date:	10/26/2014 0847			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		7.5	U	1.4	7.5
4,4'-DDE		7.5	U	1.4	7.5
4,4'-DDT		7.5	U	1.8	7.5
Aldrin		7.5	U	1.6	7.5
alpha-BHC		2.2	U	1.7	2.2
beta-BHC		2.2	U	1.8	2.2
Chlordane (technical)		75	U	21	75
delta-BHC		2.2	U	1.3	2.2
Dieldrin		2.2	U	1.3	2.2
Endosulfan I		7.5	U	1.7	7.5
Endosulfan II		7.5	U	1.4	7.5
Endosulfan sulfate		7.5	U	1.4	7.5
Endrin		7.5	U	1.8	7.5
Endrin aldehyde		7.5	U	1.1	7.5
Endrin ketone		7.5	U	1.4	7.5
gamma-BHC (Lindane)		2.2	U	1.3	2.2
Heptachlor		7.5	U	1.8	7.5
Heptachlor epoxide		7.5	U	1.7	7.5
Methoxychlor		7.5	U	1.8	7.5
Toxaphene		75	U	20	75

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	102		76 - 149
Tetrachloro-m-xylene	106	p	72 - 136

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-1 (1-2')**

Lab Sample ID: 460-85054-11

Client Matrix: Solid

% Moisture: 10.3

Date Sampled: 10/23/2014 1535

Date Received: 10/23/2014 1845

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-258534	Instrument ID:	CPESTGC5
Prep Method:	3546	Prep Batch:	460-258357	Initial Weight/Volume:	15.0247 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 1555			Injection Volume:	1 uL
Prep Date:	10/26/2014 0847			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	80		76 - 149
Tetrachloro-m-xylene	256	*	72 - 136

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-1 (8-9')**

Lab Sample ID: 460-85054-12

Client Matrix: Solid

% Moisture: 16.4

Date Sampled: 10/23/2014 1540

Date Received: 10/23/2014 1845

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-258474	Instrument ID:	CPESTGC9
Prep Method:	3546	Prep Batch:	460-258357	Initial Weight/Volume:	15.0489 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 0941	Run Type:	RA	Injection Volume:	1 uL
Prep Date:	10/26/2014 0847			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		8.0	U	1.6	8.0
4,4'-DDE		8.0	U	1.6	8.0
4,4'-DDT		8.0	U	1.9	8.0
Aldrin		8.0	U	1.7	8.0
alpha-BHC		2.4	U	1.8	2.4
beta-BHC		2.4	U	1.9	2.4
Chlordane (technical)		80	U	23	80
delta-BHC		2.4	U	1.4	2.4
Dieldrin		2.4	U	1.4	2.4
Endosulfan I		8.0	U	1.8	8.0
Endosulfan II		8.0	U	1.6	8.0
Endosulfan sulfate		8.0	U	1.6	8.0
Endrin		8.0	U	1.9	8.0
Endrin aldehyde		8.0	U	1.2	8.0
Endrin ketone		8.0	U	1.6	8.0
gamma-BHC (Lindane)		2.4	U	1.4	2.4
Heptachlor		8.0	U	1.9	8.0
Heptachlor epoxide		8.0	U	1.8	8.0
Methoxychlor		8.0	U	1.9	8.0
Toxaphene		80	U	21	80

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	115		76 - 149
Tetrachloro-m-xylene	87		72 - 136

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-1 (8-9')**

Lab Sample ID: 460-85054-12

Client Matrix: Solid

% Moisture: 16.4

Date Sampled: 10/23/2014 1540

Date Received: 10/23/2014 1845

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-258474	Instrument ID:	CPESTGC9
Prep Method:	3546	Prep Batch:	460-258357	Initial Weight/Volume:	15.0489 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 0941	Run Type:	RA	Injection Volume:	1 uL
Prep Date:	10/26/2014 0847			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	93		76 - 149
Tetrachloro-m-xylene	84		72 - 136

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-2 (1-2')**

Lab Sample ID: 460-85054-13

Client Matrix: Solid

% Moisture: 15.9

Date Sampled: 10/23/2014 1555

Date Received: 10/23/2014 1845

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-258534	Instrument ID:	CPESTGC5
Prep Method:	3546	Prep Batch:	460-258357	Initial Weight/Volume:	15.0150 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 1609			Injection Volume:	1 uL
Prep Date:	10/26/2014 0847			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		8.0	U	1.5	8.0
4,4'-DDE		8.0	U	1.5	8.0
4,4'-DDT		8.0	U	1.9	8.0
Aldrin		8.0	U	1.7	8.0
alpha-BHC		2.4	U	1.8	2.4
beta-BHC		2.4	U	1.9	2.4
Chlordane (technical)		80	U	23	80
delta-BHC		2.4	U	1.4	2.4
Dieldrin		2.4	U	1.4	2.4
Endosulfan I		8.0	U	1.8	8.0
Endosulfan II		8.0	U	1.5	8.0
Endosulfan sulfate		8.0	U	1.5	8.0
Endrin		8.0	U	1.9	8.0
Endrin aldehyde		8.0	U	1.2	8.0
Endrin ketone		8.0	U	1.5	8.0
gamma-BHC (Lindane)		2.4	U	1.4	2.4
Heptachlor		8.0	U	1.9	8.0
Heptachlor epoxide		8.0	U	1.8	8.0
Methoxychlor		8.0	U	1.9	8.0
Toxaphene		80	U	21	80

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	106		76 - 149
Tetrachloro-m-xylene	93		72 - 136

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-2 (1-2')**

Lab Sample ID: 460-85054-13

Client Matrix: Solid

% Moisture: 15.9

Date Sampled: 10/23/2014 1555

Date Received: 10/23/2014 1845

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-258534	Instrument ID:	CPESTGC5
Prep Method:	3546	Prep Batch:	460-258357	Initial Weight/Volume:	15.0150 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 1609			Injection Volume:	1 uL
Prep Date:	10/26/2014 0847			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	78		76 - 149
Tetrachloro-m-xylene	83		72 - 136

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-2 (6-7')**

Lab Sample ID: 460-85054-14

Client Matrix: Solid

% Moisture: 10.6

Date Sampled: 10/23/2014 1600

Date Received: 10/23/2014 1845

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-258474	Instrument ID:	CPESTGC9
Prep Method:	3546	Prep Batch:	460-258357	Initial Weight/Volume:	14.9756 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 0954			Injection Volume:	1 uL
Prep Date:	10/26/2014 0847			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		7.5	U	1.5	7.5
4,4'-DDE		7.5	U	1.5	7.5
4,4'-DDT		7.5	U	1.8	7.5
Aldrin		7.5	U	1.6	7.5
alpha-BHC		2.2	U	1.7	2.2
beta-BHC		2.2	U	1.8	2.2
Chlordane (technical)		75	U	21	75
delta-BHC		2.2	U	1.3	2.2
Dieldrin		2.2	U	1.3	2.2
Endosulfan I		7.5	U	1.7	7.5
Endosulfan II		7.5	U	1.5	7.5
Endosulfan sulfate		7.5	U	1.5	7.5
Endrin		7.5	U	1.8	7.5
Endrin aldehyde		7.5	U	1.1	7.5
Endrin ketone		7.5	U	1.5	7.5
gamma-BHC (Lindane)		2.2	U	1.3	2.2
Heptachlor		7.5	U	1.8	7.5
Heptachlor epoxide		7.5	U	1.7	7.5
Methoxychlor		7.5	U	1.8	7.5
Toxaphene		75	U	20	75

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	111		76 - 149
Tetrachloro-m-xylene	88		72 - 136

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-2 (6-7')**

Lab Sample ID: 460-85054-14

Client Matrix: Solid

% Moisture: 10.6

Date Sampled: 10/23/2014 1600

Date Received: 10/23/2014 1845

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-258474	Instrument ID:	CPESTGC9
Prep Method:	3546	Prep Batch:	460-258357	Initial Weight/Volume:	14.9756 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 0954			Injection Volume:	1 uL
Prep Date:	10/26/2014 0847			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	97		76 - 149
Tetrachloro-m-xylene	84		72 - 136

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-4 (1-2')**

Lab Sample ID: 460-85054-15

Client Matrix: Solid

% Moisture: 19.5

Date Sampled: 10/23/2014 1610

Date Received: 10/23/2014 1845

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-258534	Instrument ID:	CPESTGC5
Prep Method:	3546	Prep Batch:	460-258357	Initial Weight/Volume:	15.0394 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 1622			Injection Volume:	1 uL
Prep Date:	10/26/2014 0847			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		8.3	U	1.6	8.3
4,4'-DDE		8.3	U	1.6	8.3
4,4'-DDT		8.3	U	2.0	8.3
Aldrin		8.3	U	1.7	8.3
alpha-BHC		2.5	U	1.9	2.5
beta-BHC		2.5	U	2.0	2.5
Chlordane (technical)		83	U	24	83
delta-BHC		2.5	U	1.5	2.5
Dieldrin		2.5	U	1.5	2.5
Endosulfan I		8.3	U	1.9	8.3
Endosulfan II		8.3	U	1.6	8.3
Endosulfan sulfate		8.3	U	1.6	8.3
Endrin		8.3	U	2.0	8.3
Endrin aldehyde		8.3	U	1.2	8.3
Endrin ketone		8.3	U	1.6	8.3
gamma-BHC (Lindane)		2.5	U	1.5	2.5
Heptachlor		8.3	U	2.0	8.3
Heptachlor epoxide		8.3	U	1.9	8.3
Methoxychlor		8.3	U	2.0	8.3
Toxaphene		83	U	22	83

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	77		76 - 149
Tetrachloro-m-xylene	84		72 - 136

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-4 (1-2')**

Lab Sample ID: 460-85054-15

Client Matrix: Solid

% Moisture: 19.5

Date Sampled: 10/23/2014 1610

Date Received: 10/23/2014 1845

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-258534	Instrument ID:	CPESTGC5
Prep Method:	3546	Prep Batch:	460-258357	Initial Weight/Volume:	15.0394 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 1622			Injection Volume:	1 uL
Prep Date:	10/26/2014 0847			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	71	*	76 - 149
Tetrachloro-m-xylene	76		72 - 136

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-4 (7-8')**

Lab Sample ID: 460-85054-16

Client Matrix: Solid

% Moisture: 13.7

Date Sampled: 10/23/2014 1615

Date Received: 10/23/2014 1845

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-258929	Instrument ID:	CPESTGC9
Prep Method:	3546	Prep Batch:	460-258709	Initial Weight/Volume:	15.0346 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/29/2014 1120			Injection Volume:	1 uL
Prep Date:	10/28/2014 0841			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		7.7	U	1.5	7.7
4,4'-DDE		7.7	U	1.5	7.7
4,4'-DDT		7.7	U	1.8	7.7
Aldrin		7.7	U	1.6	7.7
alpha-BHC		2.3	U	1.7	2.3
beta-BHC		2.3	U	1.8	2.3
Chlordane (technical)		77	U	22	77
delta-BHC		2.3	U	1.4	2.3
Dieldrin		2.3	U	1.4	2.3
Endosulfan I		7.7	U	1.7	7.7
Endosulfan II		7.7	U	1.5	7.7
Endosulfan sulfate		7.7	U	1.5	7.7
Endrin		7.7	U	1.8	7.7
Endrin aldehyde		7.7	U	1.2	7.7
Endrin ketone		7.7	U	1.5	7.7
gamma-BHC (Lindane)		2.3	U	1.4	2.3
Heptachlor		7.7	U	1.8	7.7
Heptachlor epoxide		7.7	U	1.7	7.7
Methoxychlor		7.7	U	1.8	7.7
Toxaphene		77	U	21	77

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	129		76 - 149
Tetrachloro-m-xylene	114	p	72 - 136

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-4 (7-8')**

Lab Sample ID: 460-85054-16

Client Matrix: Solid

% Moisture: 13.7

Date Sampled: 10/23/2014 1615

Date Received: 10/23/2014 1845

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-258929	Instrument ID:	CPESTGC9
Prep Method:	3546	Prep Batch:	460-258709	Initial Weight/Volume:	15.0346 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/29/2014 1120			Injection Volume:	1 uL
Prep Date:	10/28/2014 0841			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	120		76 - 149
Tetrachloro-m-xylene	757	*	72 - 136

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-3 (1-2')**

Lab Sample ID: 460-85054-1

Client Matrix: Solid

% Moisture: 10.3

Date Sampled: 10/23/2014 1155

Date Received: 10/23/2014 1845

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258516	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-258361	Initial Weight/Volume:	15.0159 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 1233			Injection Volume:	1 uL
Prep Date:	10/26/2014 0851			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		75	U	17	75
Aroclor 1221		75	U	17	75
Aroclor 1232		75	U	17	75
Aroclor 1242		75	U	17	75
Aroclor 1248		75	U	17	75
Aroclor 1254		75	U	21	75
Aroclor 1260		75	U	21	75
Aroclor-1262		75	U	21	75
Aroclor 1268		75	U	21	75
Polychlorinated biphenyls, Total		75	U	21	75

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	101		53 - 150

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-3 (1-2')**

Lab Sample ID: 460-85054-1

Client Matrix: Solid

% Moisture: 10.3

Date Sampled: 10/23/2014 1155

Date Received: 10/23/2014 1845

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258516	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-258361	Initial Weight/Volume:	15.0159 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 1233			Injection Volume:	1 uL
Prep Date:	10/26/2014 0851			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	97		53 - 150

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-3 (8-9')**

Lab Sample ID: 460-85054-2

Client Matrix: Solid

% Moisture: 10.3

Date Sampled: 10/23/2014 1200

Date Received: 10/23/2014 1845

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258516	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-258361	Initial Weight/Volume:	15.0362 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 1250			Injection Volume:	1 uL
Prep Date:	10/26/2014 0851			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		74	U	17	74
Aroclor 1221		74	U	17	74
Aroclor 1232		74	U	17	74
Aroclor 1242		74	U	17	74
Aroclor 1248		74	U	17	74
Aroclor 1254		74	U	21	74
Aroclor 1260		74	U	21	74
Aroclor-1262		74	U	21	74
Aroclor 1268		74	U	21	74
Polychlorinated biphenyls, Total		74	U	21	74

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	100		53 - 150

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-3 (8-9')**

Lab Sample ID: 460-85054-2

Client Matrix: Solid

% Moisture: 10.3

Date Sampled: 10/23/2014 1200

Date Received: 10/23/2014 1845

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258516	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-258361	Initial Weight/Volume:	15.0362 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 1250			Injection Volume:	1 uL
Prep Date:	10/26/2014 0851			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	94		53 - 150

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-10 (1-2')**

Lab Sample ID: 460-85054-3

Client Matrix: Solid

% Moisture: 10.1

Date Sampled: 10/23/2014 1225

Date Received: 10/23/2014 1845

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258516	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-258361	Initial Weight/Volume:	15.0333 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 1306			Injection Volume:	1 uL
Prep Date:	10/26/2014 0851			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		74	U	17	74
Aroclor 1221		74	U	17	74
Aroclor 1232		74	U	17	74
Aroclor 1242		74	U	17	74
Aroclor 1248		74	U	17	74
Aroclor 1254		74	U	21	74
Aroclor 1260		74	U	21	74
Aroclor-1262		74	U	21	74
Aroclor 1268		74	U	21	74
Polychlorinated biphenyls, Total		74	U	21	74

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	101		53 - 150

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-10 (1-2')**

Lab Sample ID: 460-85054-3

Client Matrix: Solid

% Moisture: 10.1

Date Sampled: 10/23/2014 1225

Date Received: 10/23/2014 1845

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258516	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-258361	Initial Weight/Volume:	15.0333 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 1306			Injection Volume:	1 uL
Prep Date:	10/26/2014 0851			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	96		53 - 150

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-10 (7-8')**

Lab Sample ID: 460-85054-4

Client Matrix: Solid

% Moisture: 16.8

Date Sampled: 10/23/2014 1230

Date Received: 10/23/2014 1845

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258516	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-258361	Initial Weight/Volume:	15.0248 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 1323			Injection Volume:	1 uL
Prep Date:	10/26/2014 0851			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		80	U	18	80
Aroclor 1221		80	U	18	80
Aroclor 1232		80	U	18	80
Aroclor 1242		80	U	18	80
Aroclor 1248		80	U	18	80
Aroclor 1254		80	U	23	80
Aroclor 1260		80	U	23	80
Aroclor-1262		80	U	23	80
Aroclor 1268		80	U	23	80
Polychlorinated biphenyls, Total		80	U	23	80

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	99		53 - 150

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-10 (7-8')**

Lab Sample ID: 460-85054-4

Client Matrix: Solid

% Moisture: 16.8

Date Sampled: 10/23/2014 1230

Date Received: 10/23/2014 1845

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258516	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-258361	Initial Weight/Volume:	15.0248 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 1323			Injection Volume:	1 uL
Prep Date:	10/26/2014 0851			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	92		53 - 150

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-19 (1-2')**

Lab Sample ID: 460-85054-5

Client Matrix: Solid

% Moisture: 5.8

Date Sampled: 10/23/2014 1245

Date Received: 10/23/2014 1845

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258516	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-258361	Initial Weight/Volume:	15.0459 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 1339			Injection Volume:	1 uL
Prep Date:	10/26/2014 0851			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		71	U	16	71
Aroclor 1221		71	U	16	71
Aroclor 1232		71	U	16	71
Aroclor 1242		71	U	16	71
Aroclor 1248		71	U	16	71
Aroclor 1254		71	U	20	71
Aroclor 1260		71	U	20	71
Aroclor-1262		71	U	20	71
Aroclor 1268		71	U	20	71
Polychlorinated biphenyls, Total		71	U	20	71

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	78		53 - 150

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-19 (1-2')**

Lab Sample ID: 460-85054-5

Client Matrix: Solid

% Moisture: 5.8

Date Sampled: 10/23/2014 1245

Date Received: 10/23/2014 1845

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258516	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-258361	Initial Weight/Volume:	15.0459 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 1339			Injection Volume:	1 uL
Prep Date:	10/26/2014 0851			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	73		53 - 150

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-19 (7-8')**

Lab Sample ID: 460-85054-6

Client Matrix: Solid

% Moisture: 13.6

Date Sampled: 10/23/2014 1250

Date Received: 10/23/2014 1845

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258516	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-258361	Initial Weight/Volume:	15.0298 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 1356			Injection Volume:	1 uL
Prep Date:	10/26/2014 0851			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		77	U	17	77
Aroclor 1221		77	U	17	77
Aroclor 1232		77	U	17	77
Aroclor 1242		77	U	17	77
Aroclor 1248		77	U	17	77
Aroclor 1254		77	U	22	77
Aroclor 1260		77	U	22	77
Aroclor-1262		77	U	22	77
Aroclor 1268		77	U	22	77
Polychlorinated biphenyls, Total		77	U	22	77

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	80		53 - 150

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-19 (7-8')**

Lab Sample ID: 460-85054-6

Client Matrix: Solid

% Moisture: 13.6

Date Sampled: 10/23/2014 1250

Date Received: 10/23/2014 1845

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258516	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-258361	Initial Weight/Volume:	15.0298 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 1356			Injection Volume:	1 uL
Prep Date:	10/26/2014 0851			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	73		53 - 150

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-9 (1-2')**

Lab Sample ID: 460-85054-7

Client Matrix: Solid

% Moisture: 7.8

Date Sampled: 10/23/2014 1355

Date Received: 10/23/2014 1845

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258516	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-258361	Initial Weight/Volume:	15.0449 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 1412			Injection Volume:	1 uL
Prep Date:	10/26/2014 0851			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		72	U	16	72
Aroclor 1221		72	U	16	72
Aroclor 1232		72	U	16	72
Aroclor 1242		72	U	16	72
Aroclor 1248		72	U	16	72
Aroclor 1254		72	U	21	72
Aroclor 1260		72	U	21	72
Aroclor-1262		1000		21	72
Aroclor 1268		72	U	21	72
Polychlorinated biphenyls, Total		1000		21	72

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	109		53 - 150

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-9 (1-2')**

Lab Sample ID: 460-85054-7

Client Matrix: Solid

% Moisture: 7.8

Date Sampled: 10/23/2014 1355

Date Received: 10/23/2014 1845

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258516	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-258361	Initial Weight/Volume:	15.0449 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 1412			Injection Volume:	1 uL
Prep Date:	10/26/2014 0851			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	102		53 - 150

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-9 (8-9')**

Lab Sample ID: 460-85054-8

Client Matrix: Solid

% Moisture: 19.7

Date Sampled: 10/23/2014 1400

Date Received: 10/23/2014 1845

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258516	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-258361	Initial Weight/Volume:	15.0092 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 1429			Injection Volume:	1 uL
Prep Date:	10/26/2014 0851			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		83	U	19	83
Aroclor 1221		83	U	19	83
Aroclor 1232		83	U	19	83
Aroclor 1242		83	U	19	83
Aroclor 1248		83	U	19	83
Aroclor 1254		83	U	24	83
Aroclor 1260		83	U	24	83
Aroclor-1262		83	U	24	83
Aroclor 1268		83	U	24	83
Polychlorinated biphenyls, Total		83	U	24	83

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	104		53 - 150

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-9 (8-9')**

Lab Sample ID: 460-85054-8

Client Matrix: Solid

% Moisture: 19.7

Date Sampled: 10/23/2014 1400

Date Received: 10/23/2014 1845

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258516	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-258361	Initial Weight/Volume:	15.0092 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 1429			Injection Volume:	1 uL
Prep Date:	10/26/2014 0851			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	101		53 - 150

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-7 (1-2')**

Lab Sample ID: 460-85054-9

Client Matrix: Solid

% Moisture: 9.7

Date Sampled: 10/23/2014 1450

Date Received: 10/23/2014 1845

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258484	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-258361	Initial Weight/Volume:	15.0218 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 0927			Injection Volume:	1 uL
Prep Date:	10/26/2014 0851			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		74	U	17	74
Aroclor 1221		74	U	17	74
Aroclor 1232		74	U	17	74
Aroclor 1242		74	U	17	74
Aroclor 1248		74	U	17	74
Aroclor 1254		74	U	21	74
Aroclor 1260		74	U	21	74
Aroclor-1262		69	J	21	74
Aroclor 1268		74	U	21	74
Polychlorinated biphenyls, Total		69	J	21	74

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	100		53 - 150

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-7 (1-2')**

Lab Sample ID: 460-85054-9

Client Matrix: Solid

% Moisture: 9.7

Date Sampled: 10/23/2014 1450

Date Received: 10/23/2014 1845

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258484	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-258361	Initial Weight/Volume:	15.0218 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 0927			Injection Volume:	1 uL
Prep Date:	10/26/2014 0851			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	91		53 - 150

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-7 (7-8')**

Lab Sample ID: 460-85054-10

Client Matrix: Solid

% Moisture: 14.2

Date Sampled: 10/23/2014 1455

Date Received: 10/23/2014 1845

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258516	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-258361	Initial Weight/Volume:	15.0321 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 1445			Injection Volume:	1 uL
Prep Date:	10/26/2014 0851			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		78	U	17	78
Aroclor 1221		78	U	17	78
Aroclor 1232		78	U	17	78
Aroclor 1242		78	U	17	78
Aroclor 1248		78	U	17	78
Aroclor 1254		78	U	22	78
Aroclor 1260		78	U	22	78
Aroclor-1262		78	U	22	78
Aroclor 1268		78	U	22	78
Polychlorinated biphenyls, Total		78	U	22	78

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	106		53 - 150

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-7 (7-8')**

Lab Sample ID: 460-85054-10

Client Matrix: Solid

% Moisture: 14.2

Date Sampled: 10/23/2014 1455

Date Received: 10/23/2014 1845

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258516	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-258361	Initial Weight/Volume:	15.0321 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 1445			Injection Volume:	1 uL
Prep Date:	10/26/2014 0851			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	92		53 - 150

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-1 (1-2')**

Lab Sample ID: 460-85054-11

Client Matrix: Solid

% Moisture: 10.3

Date Sampled: 10/23/2014 1535

Date Received: 10/23/2014 1845

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258516	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-258361	Initial Weight/Volume:	15.0247 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 1502			Injection Volume:	1 uL
Prep Date:	10/26/2014 0851			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		75	U	17	75
Aroclor 1221		75	U	17	75
Aroclor 1232		75	U	17	75
Aroclor 1242		75	U	17	75
Aroclor 1248		75	U	17	75
Aroclor 1254		75	U	21	75
Aroclor 1260		75	U	21	75
Aroclor-1262		75	U	21	75
Aroclor 1268		75	U	21	75
Polychlorinated biphenyls, Total		75	U	21	75

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	84		53 - 150

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-1 (1-2')**

Lab Sample ID: 460-85054-11

Client Matrix: Solid

% Moisture: 10.3

Date Sampled: 10/23/2014 1535

Date Received: 10/23/2014 1845

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258516	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-258361	Initial Weight/Volume:	15.0247 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 1502			Injection Volume:	1 uL
Prep Date:	10/26/2014 0851			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	78		53 - 150

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-1 (8-9')**

Lab Sample ID: 460-85054-12

Client Matrix: Solid

% Moisture: 16.4

Date Sampled: 10/23/2014 1540

Date Received: 10/23/2014 1845

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258516	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-258361	Initial Weight/Volume:	15.0489 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 1518			Injection Volume:	1 uL
Prep Date:	10/26/2014 0851			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		80	U	18	80
Aroclor 1221		80	U	18	80
Aroclor 1232		80	U	18	80
Aroclor 1242		80	U	18	80
Aroclor 1248		80	U	18	80
Aroclor 1254		80	U	23	80
Aroclor 1260		80	U	23	80
Aroclor-1262		80	U	23	80
Aroclor 1268		80	U	23	80
Polychlorinated biphenyls, Total		80	U	23	80

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	100		53 - 150

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-1 (8-9')**

Lab Sample ID: 460-85054-12

Client Matrix: Solid

% Moisture: 16.4

Date Sampled: 10/23/2014 1540

Date Received: 10/23/2014 1845

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258516	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-258361	Initial Weight/Volume:	15.0489 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 1518			Injection Volume:	1 uL
Prep Date:	10/26/2014 0851			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	91		53 - 150

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-2 (1-2')**

Lab Sample ID: 460-85054-13

Client Matrix: Solid

% Moisture: 15.9

Date Sampled: 10/23/2014 1555

Date Received: 10/23/2014 1845

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258516	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-258361	Initial Weight/Volume:	15.0150 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 1534			Injection Volume:	1 uL
Prep Date:	10/26/2014 0851			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		80	U	18	80
Aroclor 1221		80	U	18	80
Aroclor 1232		80	U	18	80
Aroclor 1242		80	U	18	80
Aroclor 1248		80	U	18	80
Aroclor 1254		80	U	23	80
Aroclor 1260		80	U	23	80
Aroclor-1262		80	U	23	80
Aroclor 1268		80	U	23	80
Polychlorinated biphenyls, Total		80	U	23	80

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	95		53 - 150

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-2 (1-2')**

Lab Sample ID: 460-85054-13

Client Matrix: Solid

% Moisture: 15.9

Date Sampled: 10/23/2014 1555

Date Received: 10/23/2014 1845

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258516	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-258361	Initial Weight/Volume:	15.0150 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 1534			Injection Volume:	1 uL
Prep Date:	10/26/2014 0851			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	91		53 - 150

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-2 (6-7')**

Lab Sample ID: 460-85054-14

Client Matrix: Solid

% Moisture: 10.6

Date Sampled: 10/23/2014 1600

Date Received: 10/23/2014 1845

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258516	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-258361	Initial Weight/Volume:	14.9756 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 1551			Injection Volume:	1 uL
Prep Date:	10/26/2014 0851			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		75	U	17	75
Aroclor 1221		75	U	17	75
Aroclor 1232		75	U	17	75
Aroclor 1242		75	U	17	75
Aroclor 1248		75	U	17	75
Aroclor 1254		75	U	21	75
Aroclor 1260		75	U	21	75
Aroclor-1262		75	U	21	75
Aroclor 1268		75	U	21	75
Polychlorinated biphenyls, Total		75	U	21	75

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	87		53 - 150

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-2 (6-7')**

Lab Sample ID: 460-85054-14

Client Matrix: Solid

% Moisture: 10.6

Date Sampled: 10/23/2014 1600

Date Received: 10/23/2014 1845

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258516	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-258361	Initial Weight/Volume:	14.9756 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 1551			Injection Volume:	1 uL
Prep Date:	10/26/2014 0851			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	82		53 - 150

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-4 (1-2')**

Lab Sample ID: 460-85054-15

Client Matrix: Solid

% Moisture: 19.5

Date Sampled: 10/23/2014 1610

Date Received: 10/23/2014 1845

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258516	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-258361	Initial Weight/Volume:	15.0394 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 1607			Injection Volume:	1 uL
Prep Date:	10/26/2014 0851			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		83	U	19	83
Aroclor 1221		83	U	19	83
Aroclor 1232		83	U	19	83
Aroclor 1242		83	U	19	83
Aroclor 1248		83	U	19	83
Aroclor 1254		83	U	24	83
Aroclor 1260		83	U	24	83
Aroclor-1262		83	U	24	83
Aroclor 1268		83	U	24	83
Polychlorinated biphenyls, Total		83	U	24	83

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	102		53 - 150

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-4 (1-2')**

Lab Sample ID: 460-85054-15

Client Matrix: Solid

% Moisture: 19.5

Date Sampled: 10/23/2014 1610

Date Received: 10/23/2014 1845

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258516	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-258361	Initial Weight/Volume:	15.0394 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 1607			Injection Volume:	1 uL
Prep Date:	10/26/2014 0851			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	98		53 - 150

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-4 (7-8')**

Lab Sample ID: 460-85054-16

Client Matrix: Solid

% Moisture: 13.7

Date Sampled: 10/23/2014 1615

Date Received: 10/23/2014 1845

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258516	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-258361	Initial Weight/Volume:	15.0035 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 1624			Injection Volume:	1 uL
Prep Date:	10/26/2014 0851			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		78	U	17	78
Aroclor 1221		78	U	17	78
Aroclor 1232		78	U	17	78
Aroclor 1242		78	U	17	78
Aroclor 1248		78	U	17	78
Aroclor 1254		78	U	22	78
Aroclor 1260		78	U	22	78
Aroclor-1262		78	U	22	78
Aroclor 1268		78	U	22	78
Polychlorinated biphenyls, Total		78	U	22	78

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	109		53 - 150

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-4 (7-8')**

Lab Sample ID: 460-85054-16

Client Matrix: Solid

% Moisture: 13.7

Date Sampled: 10/23/2014 1615

Date Received: 10/23/2014 1845

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258516	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-258361	Initial Weight/Volume:	15.0035 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/27/2014 1624			Injection Volume:	1 uL
Prep Date:	10/26/2014 0851			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	100		53 - 150

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-3 (1-2')**

Lab Sample ID: 460-85054-1

Client Matrix: Solid

% Moisture: 10.3

Date Sampled: 10/23/2014 1155

Date Received: 10/23/2014 1845

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-258582	Instrument ID:	ICP5
Prep Method:	3050B	Prep Batch:	460-258201	Lab File ID:	10272014.asc
Dilution:	4.0			Initial Weight/Volume:	1.20 g
Analysis Date:	10/27/2014 1644			Final Weight/Volume:	50 mL
Prep Date:	10/24/2014 1717				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Silver		1.9	U	0.36	1.9
Arsenic		17.0		0.76	2.8
Barium		140		1.6	37.2
Cadmium		0.74	U	0.26	0.74
Cobalt		4.0	J	0.84	9.3
Chromium		15.5		0.74	1.9
Copper		22.1		1.6	4.6
Iron		13300		23.1	27.9
Potassium		1520		25.6	929
Magnesium		34700		61.7	929
Manganese		205		0.80	2.8
Sodium		641	J	70.2	929
Nickel		11.7		1.7	7.4
Lead		32.3		0.76	1.9
Antimony		3.7	U	1.4	3.7
Selenium		2.0	J	1.1	3.7
Thallium		3.7	U	1.8	3.7
Vanadium		33.0		0.77	9.3
Zinc		48.1		1.6	5.6

Analysis Method:	6010C	Analysis Batch:	460-258732	Instrument ID:	ICP4
Prep Method:	3050B	Prep Batch:	460-258201	Lab File ID:	258201.asc
Dilution:	4.0			Initial Weight/Volume:	1.20 g
Analysis Date:	10/27/2014 2252			Final Weight/Volume:	50 mL
Prep Date:	10/24/2014 1717				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		9410		20.5	37.2
Beryllium		0.75		0.25	0.37

Analysis Method:	6010C	Analysis Batch:	460-258732	Instrument ID:	ICP4
Prep Method:	3050B	Prep Batch:	460-258201	Lab File ID:	258201.asc
Dilution:	20			Initial Weight/Volume:	1.20 g
Analysis Date:	10/27/2014 2256			Final Weight/Volume:	50 mL
Prep Date:	10/24/2014 1717				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Calcium		145000		355	4640

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-3 (1-2')**

Lab Sample ID: 460-85054-1

Client Matrix: Solid

% Moisture: 10.3

Date Sampled: 10/23/2014 1155

Date Received: 10/23/2014 1845

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	460-258332	Instrument ID:	LEEMAN5
Prep Method:	7471B	Prep Batch:	460-258289	Lab File ID:	258285.PRN
Dilution:	1.0			Initial Weight/Volume:	0.60 g
Analysis Date:	10/25/2014 1745			Final Weight/Volume:	50 mL
Prep Date:	10/25/2014 1222				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.60		0.013	0.019

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-3 (8-9')**

Lab Sample ID: 460-85054-2

Client Matrix: Solid

% Moisture: 10.3

Date Sampled: 10/23/2014 1200

Date Received: 10/23/2014 1845

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-258582	Instrument ID:	ICP5
Prep Method:	3050B	Prep Batch:	460-258201	Lab File ID:	10272014.asc
Dilution:	4.0			Initial Weight/Volume:	1.29 g
Analysis Date:	10/27/2014 1659			Final Weight/Volume:	50 mL
Prep Date:	10/24/2014 1717				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Silver		1.7	U	0.34	1.7
Arsenic		5.0		0.71	2.6
Barium		80.0		1.5	34.5
Calcium		2760		66.1	864
Cadmium		0.69	U	0.24	0.69
Cobalt		14.1		0.78	8.6
Chromium		10.0		0.69	1.7
Copper		21.0		1.5	4.3
Iron		16200		21.5	25.9
Potassium		656	J	23.8	864
Magnesium		2200		57.4	864
Manganese		388		0.74	2.6
Sodium		156	J	65.3	864
Nickel		21.2		1.5	6.9
Lead		163		0.71	1.7
Antimony		3.5	U	1.3	3.5
Selenium		3.5	U	0.98	3.5
Thallium		3.5	U	1.7	3.5
Vanadium		16.5		0.71	8.6
Zinc		96.5		1.5	5.2

Analysis Method:	6010C	Analysis Batch:	460-258732	Instrument ID:	ICP4
Prep Method:	3050B	Prep Batch:	460-258201	Lab File ID:	258201.asc
Dilution:	4.0			Initial Weight/Volume:	1.29 g
Analysis Date:	10/27/2014 2259			Final Weight/Volume:	50 mL
Prep Date:	10/24/2014 1717				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		4400		19.1	34.5
Beryllium		0.27	J	0.23	0.35

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	460-258332	Instrument ID:	LEEMAN5
Prep Method:	7471B	Prep Batch:	460-258289	Lab File ID:	258285.PRN
Dilution:	1.0			Initial Weight/Volume:	0.61 g
Analysis Date:	10/25/2014 1748			Final Weight/Volume:	50 mL
Prep Date:	10/25/2014 1222				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.17		0.013	0.019

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-10 (1-2')**

Lab Sample ID: 460-85054-3

Client Matrix: Solid

% Moisture: 10.1

Date Sampled: 10/23/2014 1225

Date Received: 10/23/2014 1845

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-258582	Instrument ID:	ICP5
Prep Method:	3050B	Prep Batch:	460-258201	Lab File ID:	10272014.asc
Dilution:	4.0			Initial Weight/Volume:	1.22 g
Analysis Date:	10/27/2014 1703			Final Weight/Volume:	50 mL
Prep Date:	10/24/2014 1717				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Silver		1.8	U	0.35	1.8
Arsenic		12.0		0.75	2.7
Barium		74.8		1.6	36.5
Calcium		5940		69.7	911
Cadmium		0.73	U	0.26	0.73
Cobalt		5.4	J	0.82	9.1
Chromium		13.2		0.73	1.8
Copper		37.3		1.6	4.6
Iron		16800		22.7	27.3
Potassium		748	J	25.2	911
Magnesium		1900		60.5	911
Manganese		272		0.79	2.7
Sodium		151	J	68.9	911
Nickel		14.8		1.6	7.3
Lead		127		0.75	1.8
Antimony		3.6	U	1.4	3.6
Selenium		1.5	J	1.0	3.6
Thallium		3.6	U	1.8	3.6
Vanadium		22.4		0.75	9.1
Zinc		104		1.6	5.5

Analysis Method:	6010C	Analysis Batch:	460-258732	Instrument ID:	ICP4
Prep Method:	3050B	Prep Batch:	460-258201	Lab File ID:	258201.asc
Dilution:	4.0			Initial Weight/Volume:	1.22 g
Analysis Date:	10/27/2014 2303			Final Weight/Volume:	50 mL
Prep Date:	10/24/2014 1717				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		4740		20.1	36.5
Beryllium		0.25	J	0.25	0.36

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	460-258332	Instrument ID:	LEEMAN5
Prep Method:	7471B	Prep Batch:	460-258289	Lab File ID:	258285.PRN
Dilution:	50			Initial Weight/Volume:	0.62 g
Analysis Date:	10/25/2014 1855			Final Weight/Volume:	50 mL
Prep Date:	10/25/2014 1222				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		10.5		0.65	0.91

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-10 (7-8')**

Lab Sample ID: 460-85054-4

Client Matrix: Solid

% Moisture: 16.8

Date Sampled: 10/23/2014 1230

Date Received: 10/23/2014 1845

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-258582	Instrument ID:	ICP5
Prep Method:	3050B	Prep Batch:	460-258201	Lab File ID:	10272014.asc
Dilution:	4.0			Initial Weight/Volume:	1.26 g
Analysis Date:	10/27/2014 1706			Final Weight/Volume:	50 mL
Prep Date:	10/24/2014 1717				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Silver		1.9	U	0.37	1.9
Arsenic		8.2		0.78	2.9
Barium		44.1		1.6	38.1
Calcium		3200		73.0	954
Cadmium		0.76	U	0.27	0.76
Cobalt		7.4	J	0.86	9.5
Chromium		17.4		0.76	1.9
Copper		21.4		1.7	4.8
Iron		21300		23.7	28.6
Potassium		1020		26.3	954
Magnesium		2570		63.3	954
Manganese		291		0.82	2.9
Sodium		113	J	72.1	954
Nickel		13.7		1.7	7.6
Lead		40.5		0.78	1.9
Antimony		3.8	U	1.4	3.8
Selenium		1.1	J	1.1	3.8
Thallium		3.8	U	1.9	3.8
Vanadium		25.0		0.79	9.5
Zinc		52.5		1.6	5.7

Analysis Method:	6010C	Analysis Batch:	460-258732	Instrument ID:	ICP4
Prep Method:	3050B	Prep Batch:	460-258201	Lab File ID:	258201.asc
Dilution:	4.0			Initial Weight/Volume:	1.26 g
Analysis Date:	10/27/2014 2306			Final Weight/Volume:	50 mL
Prep Date:	10/24/2014 1717				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		7840		21.1	38.1
Beryllium		0.37	J	0.26	0.38

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	460-258332	Instrument ID:	LEEMAN5
Prep Method:	7471B	Prep Batch:	460-258289	Lab File ID:	258285.PRN
Dilution:	1.0			Initial Weight/Volume:	0.63 g
Analysis Date:	10/25/2014 1800			Final Weight/Volume:	50 mL
Prep Date:	10/25/2014 1222				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.044		0.014	0.019

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-19 (1-2')**

Lab Sample ID: 460-85054-5

Client Matrix: Solid

% Moisture: 5.8

Date Sampled: 10/23/2014 1245

Date Received: 10/23/2014 1845

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-258582	Instrument ID:	ICP5
Prep Method:	3050B	Prep Batch:	460-258201	Lab File ID:	10272014.asc
Dilution:	4.0			Initial Weight/Volume:	1.15 g
Analysis Date:	10/27/2014 1710			Final Weight/Volume:	50 mL
Prep Date:	10/24/2014 1717				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Silver		1.8	U	0.36	1.8
Arsenic		4.9		0.76	2.8
Barium		77.0		1.6	36.9
Calcium		21700		70.6	924
Cadmium		0.74	U	0.26	0.74
Cobalt		5.3	J	0.83	9.2
Chromium		27.9		0.74	1.8
Copper		28.9		1.6	4.6
Iron		13800		23.0	27.7
Potassium		876	J	25.5	924
Magnesium		4420		61.3	924
Manganese		243		0.80	2.8
Sodium		346	J	69.8	924
Nickel		17.6		1.7	7.4
Lead		135		0.76	1.8
Antimony		3.7	U	1.4	3.7
Selenium		3.7	U	1.1	3.7
Thallium		3.7	U	1.8	3.7
Vanadium		28.1		0.76	9.2
Zinc		68.5		1.6	5.5

Analysis Method:	6010C	Analysis Batch:	460-258732	Instrument ID:	ICP4
Prep Method:	3050B	Prep Batch:	460-258201	Lab File ID:	258201.asc
Dilution:	4.0			Initial Weight/Volume:	1.15 g
Analysis Date:	10/27/2014 2310			Final Weight/Volume:	50 mL
Prep Date:	10/24/2014 1717				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		7280		20.4	36.9
Beryllium		0.32	J	0.25	0.37

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	460-258332	Instrument ID:	LEEMAN5
Prep Method:	7471B	Prep Batch:	460-258289	Lab File ID:	258285.PRN
Dilution:	1.0			Initial Weight/Volume:	0.61 g
Analysis Date:	10/25/2014 1806			Final Weight/Volume:	50 mL
Prep Date:	10/25/2014 1222				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.16		0.013	0.018

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-19 (7-8')**

Lab Sample ID: 460-85054-6

Client Matrix: Solid

% Moisture: 13.6

Date Sampled: 10/23/2014 1250

Date Received: 10/23/2014 1845

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-258582	Instrument ID:	ICP5
Prep Method:	3050B	Prep Batch:	460-258201	Lab File ID:	10272014.asc
Dilution:	4.0			Initial Weight/Volume:	1.28 g
Analysis Date:	10/27/2014 1714			Final Weight/Volume:	50 mL
Prep Date:	10/24/2014 1717				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Silver		1.8	U	0.35	1.8
Arsenic		8.9		0.74	2.7
Barium		55.6		1.6	36.2
Calcium		2310		69.1	904
Cadmium		0.72	U	0.26	0.72
Cobalt		9.5		0.82	9.0
Chromium		16.9		0.72	1.8
Copper		42.7		1.6	4.5
Iron		24500		22.5	27.1
Potassium		819	J	24.9	904
Magnesium		2170		60.0	904
Manganese		313		0.78	2.7
Sodium		599	J	68.3	904
Nickel		15.3		1.6	7.2
Lead		66.0		0.74	1.8
Antimony		3.6	U	1.4	3.6
Selenium		1.1	J	1.0	3.6
Thallium		3.6		1.8	3.6
Vanadium		26.0		0.75	9.0
Zinc		116		1.5	5.4

Analysis Method:	6010C	Analysis Batch:	460-258732	Instrument ID:	ICP4
Prep Method:	3050B	Prep Batch:	460-258201	Lab File ID:	258201.asc
Dilution:	4.0			Initial Weight/Volume:	1.28 g
Analysis Date:	10/27/2014 2325			Final Weight/Volume:	50 mL
Prep Date:	10/24/2014 1717				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		5060		20.0	36.2
Beryllium		0.39		0.25	0.36

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	460-258332	Instrument ID:	LEEMAN5
Prep Method:	7471B	Prep Batch:	460-258289	Lab File ID:	258285.PRN
Dilution:	1.0			Initial Weight/Volume:	0.62 g
Analysis Date:	10/25/2014 1808			Final Weight/Volume:	50 mL
Prep Date:	10/25/2014 1222				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.020		0.013	0.019

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-9 (1-2')**

Lab Sample ID: 460-85054-7

Client Matrix: Solid

% Moisture: 7.8

Date Sampled: 10/23/2014 1355

Date Received: 10/23/2014 1845

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-258582	Instrument ID:	ICP5
Prep Method:	3050B	Prep Batch:	460-258201	Lab File ID:	10272014.asc
Dilution:	4.0			Initial Weight/Volume:	1.11 g
Analysis Date:	10/27/2014 1622			Final Weight/Volume:	50 mL
Prep Date:	10/24/2014 1717				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Silver		2.0	U	0.38	2.0
Arsenic		6.8		0.80	2.9
Barium		96.3		1.7	39.1
Calcium		27600		74.8	977
Cadmium		0.78	U	0.28	0.78
Cobalt		6.7	J	0.88	9.8
Chromium		18.6		0.78	2.0
Copper		52.3		1.7	4.9
Iron		20000		24.3	29.3
Potassium		1430		27.0	977
Magnesium		4880		64.9	977
Manganese		332		0.84	2.9
Sodium		291	J	73.9	977
Nickel		15.2		1.7	7.8
Lead		131		0.80	2.0
Antimony		3.9	U	1.5	3.9
Selenium		1.4	J	1.1	3.9
Thallium		3.9	U	1.9	3.9
Vanadium		24.9		0.81	9.8
Zinc		140		1.7	5.9

Analysis Method:	6010C	Analysis Batch:	460-258732	Instrument ID:	ICP4
Prep Method:	3050B	Prep Batch:	460-258201	Lab File ID:	258201.asc
Dilution:	4.0			Initial Weight/Volume:	1.11 g
Analysis Date:	10/27/2014 2219			Final Weight/Volume:	50 mL
Prep Date:	10/24/2014 1717				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		6970		21.6	39.1
Beryllium		0.37	J	0.27	0.39

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	460-258332	Instrument ID:	LEEMAN5
Prep Method:	7471B	Prep Batch:	460-258289	Lab File ID:	258285.PRN
Dilution:	1.0			Initial Weight/Volume:	0.62 g
Analysis Date:	10/25/2014 1809			Final Weight/Volume:	50 mL
Prep Date:	10/25/2014 1222				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.25		0.013	0.018

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-9 (8-9')**

Lab Sample ID: 460-85054-8

Client Matrix: Solid

% Moisture: 19.7

Date Sampled: 10/23/2014 1400

Date Received: 10/23/2014 1845

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-258582	Instrument ID:	ICP5
Prep Method:	3050B	Prep Batch:	460-258201	Lab File ID:	10272014.asc
Dilution:	4.0			Initial Weight/Volume:	1.26 g
Analysis Date:	10/27/2014 1717			Final Weight/Volume:	50 mL
Prep Date:	10/24/2014 1717				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Silver		2.0	U	0.38	2.0
Arsenic		15.0		0.81	3.0
Barium		110		1.7	39.5
Cadmium		0.79	U	0.28	0.79
Cobalt		7.8	J	0.89	9.9
Chromium		18.5		0.79	2.0
Copper		104		1.7	4.9
Iron		12400		24.6	29.7
Potassium		806	J	27.3	988
Magnesium		10700		65.6	988
Manganese		614		0.85	3.0
Sodium		415	J	74.7	988
Nickel		23.5		1.8	7.9
Lead		613		0.81	2.0
Antimony		4.0	U	1.5	4.0
Selenium		2.2	J	1.1	4.0
Thallium		4.0	U	1.9	4.0
Vanadium		32.2		0.82	9.9
Zinc		85.3		1.7	5.9

Analysis Method:	6010C	Analysis Batch:	460-258732	Instrument ID:	ICP4
Prep Method:	3050B	Prep Batch:	460-258201	Lab File ID:	258201.asc
Dilution:	4.0			Initial Weight/Volume:	1.26 g
Analysis Date:	10/27/2014 2328			Final Weight/Volume:	50 mL
Prep Date:	10/24/2014 1717				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		6270		21.8	39.5
Beryllium		0.33	J	0.27	0.40

Analysis Method:	6010C	Analysis Batch:	460-259038	Instrument ID:	ICP4
Prep Method:	3050B	Prep Batch:	460-258201	Lab File ID:	10292014.asc
Dilution:	20			Initial Weight/Volume:	1.26 g
Analysis Date:	10/29/2014 1221			Final Weight/Volume:	50 mL
Prep Date:	10/24/2014 1717				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Calcium		76700		378	4940

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-9 (8-9')**

Lab Sample ID: 460-85054-8

Client Matrix: Solid

% Moisture: 19.7

Date Sampled: 10/23/2014 1400

Date Received: 10/23/2014 1845

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	460-258332	Instrument ID:	LEEMAN5
Prep Method:	7471B	Prep Batch:	460-258289	Lab File ID:	258285.PRN
Dilution:	1.0			Initial Weight/Volume:	0.64 g
Analysis Date:	10/25/2014 1811			Final Weight/Volume:	50 mL
Prep Date:	10/25/2014 1222				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.14		0.014	0.020

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-7 (1-2')**

Lab Sample ID: 460-85054-9

Client Matrix: Solid

% Moisture: 9.7

Date Sampled: 10/23/2014 1450

Date Received: 10/23/2014 1845

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-258582	Instrument ID:	ICP5
Prep Method:	3050B	Prep Batch:	460-258201	Lab File ID:	10272014.asc
Dilution:	4.0			Initial Weight/Volume:	1.30 g
Analysis Date:	10/27/2014 1721			Final Weight/Volume:	50 mL
Prep Date:	10/24/2014 1717				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Silver		1.7	U	0.33	1.7
Arsenic		11.2		0.70	2.6
Barium		163		1.5	34.1
Calcium		16500		65.2	852
Cadmium		0.68	U	0.24	0.68
Cobalt		7.3	J	0.77	8.5
Chromium		18.0		0.68	1.7
Copper		59.9		1.5	4.3
Iron		23600		21.2	25.6
Potassium		974		23.5	852
Magnesium		3050		56.6	852
Manganese		505		0.73	2.6
Sodium		172	J	64.4	852
Nickel		16.9		1.5	6.8
Lead		335		0.70	1.7
Antimony		3.4	U	1.3	3.4
Selenium		1.0	J	0.97	3.4
Thallium		1.7	J	1.7	3.4
Vanadium		29.0		0.70	8.5
Zinc		223		1.5	5.1

Analysis Method:	6010C	Analysis Batch:	460-258732	Instrument ID:	ICP4
Prep Method:	3050B	Prep Batch:	460-258201	Lab File ID:	258201.asc
Dilution:	4.0			Initial Weight/Volume:	1.30 g
Analysis Date:	10/27/2014 2332			Final Weight/Volume:	50 mL
Prep Date:	10/24/2014 1717				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		7350		18.8	34.1
Beryllium		0.46		0.23	0.34

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	460-258332	Instrument ID:	LEEMAN5
Prep Method:	7471B	Prep Batch:	460-258289	Lab File ID:	258285.PRN
Dilution:	1.0			Initial Weight/Volume:	0.62 g
Analysis Date:	10/25/2014 1814			Final Weight/Volume:	50 mL
Prep Date:	10/25/2014 1222				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.18		0.013	0.018

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-7 (7-8')**

Lab Sample ID: 460-85054-10

Client Matrix: Solid

% Moisture: 14.2

Date Sampled: 10/23/2014 1455

Date Received: 10/23/2014 1845

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-258582	Instrument ID:	ICP5
Prep Method:	3050B	Prep Batch:	460-258201	Lab File ID:	10272014.asc
Dilution:	4.0			Initial Weight/Volume:	1.25 g
Analysis Date:	10/27/2014 1724			Final Weight/Volume:	50 mL
Prep Date:	10/24/2014 1717				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Silver		1.9	U	0.36	1.9
Arsenic		5.8		0.76	2.8
Barium		44.3		1.6	37.3
Calcium		32200		71.4	933
Cadmium		0.75	U	0.26	0.75
Cobalt		4.9	J	0.84	9.3
Chromium		13.7		0.75	1.9
Copper		17.2		1.6	4.7
Iron		14000		23.2	28.0
Potassium		1090		25.7	933
Magnesium		4250		61.9	933
Manganese		363		0.80	2.8
Sodium		370	J	70.5	933
Nickel		12.0		1.7	7.5
Lead		42.4		0.77	1.9
Antimony		3.7	U	1.4	3.7
Selenium		3.7	U	1.1	3.7
Thallium		3.7	U	1.8	3.7
Vanadium		20.8		0.77	9.3
Zinc		49.3		1.6	5.6

Analysis Method:	6010C	Analysis Batch:	460-258732	Instrument ID:	ICP4
Prep Method:	3050B	Prep Batch:	460-258201	Lab File ID:	258201.asc
Dilution:	4.0			Initial Weight/Volume:	1.25 g
Analysis Date:	10/27/2014 2336			Final Weight/Volume:	50 mL
Prep Date:	10/24/2014 1717				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		6720		20.6	37.3
Beryllium		0.27	J	0.25	0.37

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	460-258332	Instrument ID:	LEEMAN5
Prep Method:	7471B	Prep Batch:	460-258289	Lab File ID:	258285.PRN
Dilution:	1.0			Initial Weight/Volume:	0.61 g
Analysis Date:	10/25/2014 1816			Final Weight/Volume:	50 mL
Prep Date:	10/25/2014 1222				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.079		0.014	0.019

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-1 (1-2')**

Lab Sample ID: 460-85054-11

Client Matrix: Solid

% Moisture: 10.3

Date Sampled: 10/23/2014 1535

Date Received: 10/23/2014 1845

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-258405	Instrument ID:	ICP5
Prep Method:	3050B	Prep Batch:	460-258322	Lab File ID:	10262014A.asc
Dilution:	4.0			Initial Weight/Volume:	1.15 g
Analysis Date:	10/26/2014 1904			Final Weight/Volume:	50 mL
Prep Date:	10/25/2014 1647				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Silver		1.9	U	0.38	1.9
Aluminum		9020		21.4	38.8
Arsenic		6.5		0.79	2.9
Barium		103		1.7	38.8
Beryllium		0.43		0.26	0.39
Calcium		8680		74.2	970
Cadmium		0.74	J	0.27	0.78
Cobalt		5.6	J	0.87	9.7
Chromium		23.3		0.78	1.9
Copper		46.3		1.7	4.8
Iron		29800		24.1	29.1
Potassium		1260		26.8	970
Magnesium		2660		64.4	970
Manganese		230		0.84	2.9
Sodium		970	U	73.3	970
Nickel		16.8		1.7	7.8
Lead		173		0.80	1.9
Antimony		3.9	U	1.5	3.9
Selenium		3.9	U	1.1	3.9
Thallium		3.9	U	1.9	3.9
Vanadium		31.2		0.80	9.7
Zinc		423		1.7	5.8

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	460-258332	Instrument ID:	LEEMAN5
Prep Method:	7471B	Prep Batch:	460-258289	Lab File ID:	258285.PRN
Dilution:	1.0			Initial Weight/Volume:	0.62 g
Analysis Date:	10/25/2014 1822			Final Weight/Volume:	50 mL
Prep Date:	10/25/2014 1222				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.20		0.013	0.018

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-1 (8-9')**

Lab Sample ID: 460-85054-12

Client Matrix: Solid

% Moisture: 16.4

Date Sampled: 10/23/2014 1540

Date Received: 10/23/2014 1845

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-258405	Instrument ID:	ICP5
Prep Method:	3050B	Prep Batch:	460-258322	Lab File ID:	10262014A.asc
Dilution:	4.0			Initial Weight/Volume:	1.09 g
Analysis Date:	10/26/2014 1947			Final Weight/Volume:	50 mL
Prep Date:	10/25/2014 1647				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Silver		2.2	U	0.43	2.2
Aluminum		9790		24.3	43.9
Arsenic		3.9		0.90	3.3
Barium		89.6		1.9	43.9
Beryllium		0.44	U	0.30	0.44
Calcium		42500		84.0	1100
Cadmium		0.88	U	0.31	0.88
Cobalt		6.0	J	0.99	11.0
Chromium		17.7		0.88	2.2
Copper		20.6		1.9	5.5
Iron		19200		27.3	32.9
Potassium		1050	J	30.3	1100
Magnesium		20400		72.9	1100
Manganese		1100		0.95	3.3
Sodium		344	J	83.0	1100
Nickel		13.1		2.0	8.8
Lead		31.3		0.90	2.2
Antimony		4.4	U	1.7	4.4
Selenium		4.4	U	1.3	4.4
Thallium		4.4	U	2.2	4.4
Vanadium		24.3		0.91	11.0
Zinc		31.2		1.9	6.6

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	460-258332	Instrument ID:	LEEMAN5
Prep Method:	7471B	Prep Batch:	460-258289	Lab File ID:	258285.PRN
Dilution:	1.0			Initial Weight/Volume:	0.63 g
Analysis Date:	10/25/2014 1824			Final Weight/Volume:	50 mL
Prep Date:	10/25/2014 1222				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.019	U	0.014	0.019

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-2 (1-2')**

Lab Sample ID: 460-85054-13

Client Matrix: Solid

% Moisture: 15.9

Date Sampled: 10/23/2014 1555

Date Received: 10/23/2014 1845

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-258405	Instrument ID:	ICP5
Prep Method:	3050B	Prep Batch:	460-258322	Lab File ID:	10262014A.asc
Dilution:	4.0			Initial Weight/Volume:	1.14 g
Analysis Date:	10/26/2014 1908			Final Weight/Volume:	50 mL
Prep Date:	10/25/2014 1647				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Silver		2.1	U	0.40	2.1
Aluminum		8200		23.0	41.7
Arsenic		10.8		0.85	3.1
Barium		189		1.8	41.7
Beryllium		0.42	U	0.28	0.42
Calcium		10600		79.8	1040
Cadmium		0.82	J	0.30	0.83
Cobalt		8.6	J	0.94	10.4
Chromium		18.0		0.84	2.1
Copper		63.4		1.8	5.2
Iron		20300		26.0	31.3
Potassium		2590		28.8	1040
Magnesium		3730		69.2	1040
Manganese		236		0.90	3.1
Sodium		220	J	78.8	1040
Nickel		24.7		1.9	8.3
Lead		192		0.86	2.1
Antimony		4.2	U	1.6	4.2
Selenium		4.2	U	1.2	4.2
Thallium		4.2	U	2.0	4.2
Vanadium		27.2		0.86	10.4
Zinc		277		1.8	6.3

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	460-258332	Instrument ID:	LEEMAN5
Prep Method:	7471B	Prep Batch:	460-258289	Lab File ID:	258285.PRN
Dilution:	50			Initial Weight/Volume:	0.62 g
Analysis Date:	10/25/2014 1916			Final Weight/Volume:	50 mL
Prep Date:	10/25/2014 1222				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		26.0		0.69	0.98

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-2 (6-7')**

Lab Sample ID: 460-85054-14

Client Matrix: Solid

% Moisture: 10.6

Date Sampled: 10/23/2014 1600

Date Received: 10/23/2014 1845

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-258405	Instrument ID:	ICP5
Prep Method:	3050B	Prep Batch:	460-258322	Lab File ID:	10262014A.asc
Dilution:	4.0			Initial Weight/Volume:	1.25 g
Analysis Date:	10/26/2014 1911			Final Weight/Volume:	50 mL
Prep Date:	10/25/2014 1647				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Silver		1.8	U	0.35	1.8
Aluminum		7310		19.8	35.8
Arsenic		15.1		0.73	2.7
Barium		88.4		1.5	35.8
Beryllium		0.27	J	0.24	0.36
Calcium		15500		68.5	895
Cadmium		0.59	J	0.25	0.72
Cobalt		9.3		0.81	8.9
Chromium		23.8		0.72	1.8
Copper		46.7		1.6	4.5
Iron		26900		22.3	26.8
Potassium		1740		24.7	895
Magnesium		3690		59.4	895
Manganese		384		0.77	2.7
Sodium		253	J	67.6	895
Nickel		19.5		1.6	7.2
Lead		123		0.73	1.8
Antimony		3.6	U	1.4	3.6
Selenium		3.6	U	1.0	3.6
Thallium		3.6	U	1.8	3.6
Vanadium		30.7		0.74	8.9
Zinc		102		1.5	5.4

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	460-258332	Instrument ID:	LEEMAN5
Prep Method:	7471B	Prep Batch:	460-258289	Lab File ID:	258285.PRN
Dilution:	1.0			Initial Weight/Volume:	0.60 g
Analysis Date:	10/25/2014 1736			Final Weight/Volume:	50 mL
Prep Date:	10/25/2014 1222				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.019	U	0.013	0.019

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-4 (1-2')**

Lab Sample ID: 460-85054-15

Client Matrix: Solid

% Moisture: 19.5

Date Sampled: 10/23/2014 1610

Date Received: 10/23/2014 1845

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-258405	Instrument ID:	ICP5
Prep Method:	3050B	Prep Batch:	460-258322	Lab File ID:	10262014A.asc
Dilution:	4.0			Initial Weight/Volume:	1.28 g
Analysis Date:	10/26/2014 1915			Final Weight/Volume:	50 mL
Prep Date:	10/25/2014 1647				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Silver		1.9	U	0.38	1.9
Aluminum		4820		21.4	38.8
Arsenic		10.5		0.79	2.9
Barium		122		1.7	38.8
Beryllium		0.42		0.26	0.39
Cadmium		0.42	J	0.27	0.78
Cobalt		4.6	J	0.87	9.7
Chromium		18.2		0.78	1.9
Copper		39.3		1.7	4.8
Iron		16700		24.2	29.1
Potassium		716	J	26.8	970
Magnesium		4460		64.4	970
Manganese		221		0.84	2.9
Sodium		264	J	73.3	970
Nickel		12.3		1.7	7.8
Lead		110		0.80	1.9
Antimony		3.9	U	1.5	3.9
Selenium		3.9	U	1.1	3.9
Thallium		3.9	U	1.9	3.9
Vanadium		19.0		0.80	9.7
Zinc		123		1.7	5.8

Analysis Method:	6010C	Analysis Batch:	460-258405	Instrument ID:	ICP5
Prep Method:	3050B	Prep Batch:	460-258322	Lab File ID:	10262014A.asc
Dilution:	10			Initial Weight/Volume:	1.28 g
Analysis Date:	10/26/2014 2001			Final Weight/Volume:	50 mL
Prep Date:	10/25/2014 1647				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Calcium		56600		186	2420

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	460-258332	Instrument ID:	LEEMAN5
Prep Method:	7471B	Prep Batch:	460-258289	Lab File ID:	258285.PRN
Dilution:	1.0			Initial Weight/Volume:	0.62 g
Analysis Date:	10/25/2014 1828			Final Weight/Volume:	50 mL
Prep Date:	10/25/2014 1222				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.023		0.014	0.020

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-4 (7-8')**

Lab Sample ID: 460-85054-16

Client Matrix: Solid

% Moisture: 13.7

Date Sampled: 10/23/2014 1615

Date Received: 10/23/2014 1845

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-258405	Instrument ID:	ICP5
Prep Method:	3050B	Prep Batch:	460-258322	Lab File ID:	10262014A.asc
Dilution:	4.0			Initial Weight/Volume:	1.41 g
Analysis Date:	10/26/2014 1919			Final Weight/Volume:	50 mL
Prep Date:	10/25/2014 1647				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Silver		1.6	U	0.32	1.6
Aluminum		1940		18.2	32.9
Arsenic		2.5	U	0.67	2.5
Barium		16.7	J	1.4	32.9
Beryllium		0.33	U	0.22	0.33
Calcium		27000		62.9	822
Cadmium		0.66	U	0.23	0.66
Cobalt		0.80	J	0.74	8.2
Chromium		2.9		0.66	1.6
Copper		10.1		1.4	4.1
Iron		2370		20.5	24.7
Potassium		245	J	22.7	822
Magnesium		1680		54.6	822
Manganese		65.1		0.71	2.5
Sodium		822	U	62.1	822
Nickel		2.7	J	1.5	6.6
Lead		8.6		0.67	1.6
Antimony		3.3	U	1.2	3.3
Selenium		3.3	U	0.94	3.3
Thallium		3.3	U	1.6	3.3
Vanadium		2.6	J	0.68	8.2
Zinc		53.8		1.4	4.9

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	460-258332	Instrument ID:	LEEMAN5
Prep Method:	7471B	Prep Batch:	460-258289	Lab File ID:	258285.PRN
Dilution:	1.0			Initial Weight/Volume:	0.61 g
Analysis Date:	10/25/2014 1831			Final Weight/Volume:	50 mL
Prep Date:	10/25/2014 1222				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.33		0.014	0.019

Client: AKRF Inc

Job Number: 460-85054-1

Client Sample ID: **SB-X (7-8')**

Lab Sample ID: 460-85054-17

Client Matrix: Solid

% Moisture: 11.9

Date Sampled: 10/23/2014 1620

Date Received: 10/23/2014 1845

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-258405	Instrument ID:	ICP5
Prep Method:	3050B	Prep Batch:	460-258322	Lab File ID:	10262014A.asc
Dilution:	4.0			Initial Weight/Volume:	1.38 g
Analysis Date:	10/26/2014 1922			Final Weight/Volume:	50 mL
Prep Date:	10/25/2014 1647				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Silver		1.6	U	0.32	1.6
Aluminum		5780		18.2	32.9
Arsenic		5.3		0.67	2.5
Barium		2560		1.4	32.9
Beryllium		0.33	U	0.22	0.33
Calcium		25400		63.0	823
Cadmium		0.44	J	0.23	0.66
Cobalt		4.9	J	0.74	8.2
Chromium		19.8		0.66	1.6
Copper		28.8		1.4	4.1
Iron		12200		20.5	24.7
Potassium		1000		22.7	823
Magnesium		2760		54.6	823
Manganese		194		0.71	2.5
Sodium		105	J	62.2	823
Nickel		33.9		1.5	6.6
Lead		641		0.68	1.6
Antimony		3.3	U	1.2	3.3
Selenium		3.3	U	0.94	3.3
Thallium		3.3	U	1.6	3.3
Vanadium		17.2		0.68	8.2
Zinc		504		1.4	4.9

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	460-258332	Instrument ID:	LEEMAN5
Prep Method:	7471B	Prep Batch:	460-258289	Lab File ID:	258285.PRN
Dilution:	1.0			Initial Weight/Volume:	0.63 g
Analysis Date:	10/25/2014 1833			Final Weight/Volume:	50 mL
Prep Date:	10/25/2014 1222				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.36		0.013	0.018

General Chemistry

Client Sample ID: **SB-3 (1-2')**

Lab Sample ID: 460-85054-1

Client Matrix: Solid

Date Sampled: 10/23/2014 1155

Date Received: 10/23/2014 1845

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	10.3		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258102		Analysis Date: 10/24/2014 1346				DryWt Corrected: N
Percent Solids	89.7		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258102		Analysis Date: 10/24/2014 1346				DryWt Corrected: N

General Chemistry

Client Sample ID: **SB-3 (8-9')**

Lab Sample ID: 460-85054-2

Client Matrix: Solid

Date Sampled: 10/23/2014 1200

Date Received: 10/23/2014 1845

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	10.3		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258102		Analysis Date: 10/24/2014 1346				DryWt Corrected: N
Percent Solids	89.7		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258102		Analysis Date: 10/24/2014 1346				DryWt Corrected: N

General Chemistry

Client Sample ID: **SB-10 (1-2')**

Lab Sample ID: 460-85054-3

Client Matrix: Solid

Date Sampled: 10/23/2014 1225

Date Received: 10/23/2014 1845

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	10.1		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258102		Analysis Date: 10/24/2014 1346				DryWt Corrected: N
Percent Solids	89.9		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258102		Analysis Date: 10/24/2014 1346				DryWt Corrected: N

General Chemistry

Client Sample ID: **SB-10 (7-8')**

Lab Sample ID: 460-85054-4

Client Matrix: Solid

Date Sampled: 10/23/2014 1230

Date Received: 10/23/2014 1845

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	16.8		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258102		Analysis Date: 10/24/2014 1346				DryWt Corrected: N
Percent Solids	83.2		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258102		Analysis Date: 10/24/2014 1346				DryWt Corrected: N

General Chemistry

Client Sample ID: **SB-19 (1-2')**

Lab Sample ID: 460-85054-5

Client Matrix: Solid

Date Sampled: 10/23/2014 1245

Date Received: 10/23/2014 1845

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	5.8		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258102		Analysis Date: 10/24/2014 1346				DryWt Corrected: N
Percent Solids	94.2		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258102		Analysis Date: 10/24/2014 1346				DryWt Corrected: N

General Chemistry

Client Sample ID: **SB-19 (7-8')**

Lab Sample ID: 460-85054-6

Client Matrix: Solid

Date Sampled: 10/23/2014 1250

Date Received: 10/23/2014 1845

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	13.6		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258102		Analysis Date: 10/24/2014 1346				DryWt Corrected: N
Percent Solids	86.4		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258102		Analysis Date: 10/24/2014 1346				DryWt Corrected: N

General Chemistry

Client Sample ID: **SB-9 (1-2')**

Lab Sample ID: 460-85054-7

Client Matrix: Solid

Date Sampled: 10/23/2014 1355

Date Received: 10/23/2014 1845

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	7.8		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258102		Analysis Date: 10/24/2014 1346				DryWt Corrected: N
Percent Solids	92.2		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258102		Analysis Date: 10/24/2014 1346				DryWt Corrected: N

General Chemistry

Client Sample ID: **SB-9 (8-9')**

Lab Sample ID: 460-85054-8

Client Matrix: Solid

Date Sampled: 10/23/2014 1400

Date Received: 10/23/2014 1845

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	19.7		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258110		Analysis Date: 10/24/2014 1410				DryWt Corrected: N
Percent Solids	80.3		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258110		Analysis Date: 10/24/2014 1410				DryWt Corrected: N

General Chemistry

Client Sample ID: **SB-7 (1-2')**

Lab Sample ID: 460-85054-9

Client Matrix: Solid

Date Sampled: 10/23/2014 1450

Date Received: 10/23/2014 1845

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	9.7		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258110		Analysis Date: 10/24/2014 1410				DryWt Corrected: N
Percent Solids	90.3		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258110		Analysis Date: 10/24/2014 1410				DryWt Corrected: N

General Chemistry

Client Sample ID: **SB-7 (7-8')**

Lab Sample ID: 460-85054-10

Client Matrix: Solid

Date Sampled: 10/23/2014 1455

Date Received: 10/23/2014 1845

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	14.2		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258110		Analysis Date: 10/24/2014 1410				DryWt Corrected: N
Percent Solids	85.8		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258110		Analysis Date: 10/24/2014 1410				DryWt Corrected: N

General Chemistry

Client Sample ID: **SB-1 (1-2')**

Lab Sample ID: 460-85054-11

Client Matrix: Solid

Date Sampled: 10/23/2014 1535

Date Received: 10/23/2014 1845

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	10.3		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258110		Analysis Date: 10/24/2014 1410				DryWt Corrected: N
Percent Solids	89.7		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258110		Analysis Date: 10/24/2014 1410				DryWt Corrected: N

General Chemistry

Client Sample ID: **SB-1 (8-9')**

Lab Sample ID: 460-85054-12

Client Matrix: Solid

Date Sampled: 10/23/2014 1540

Date Received: 10/23/2014 1845

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	16.4		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258110		Analysis Date: 10/24/2014 1410				DryWt Corrected: N
Percent Solids	83.6		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258110		Analysis Date: 10/24/2014 1410				DryWt Corrected: N

General Chemistry

Client Sample ID: **SB-2 (1-2')**

Lab Sample ID: 460-85054-13

Client Matrix: Solid

Date Sampled: 10/23/2014 1555

Date Received: 10/23/2014 1845

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	15.9		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258110		Analysis Date: 10/24/2014 1410				DryWt Corrected: N
Percent Solids	84.1		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258110		Analysis Date: 10/24/2014 1410				DryWt Corrected: N

General Chemistry

Client Sample ID: **SB-2 (6-7')**

Lab Sample ID: 460-85054-14

Client Matrix: Solid

Date Sampled: 10/23/2014 1600

Date Received: 10/23/2014 1845

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	10.6		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258110		Analysis Date: 10/24/2014 1410				DryWt Corrected: N
Percent Solids	89.4		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258110		Analysis Date: 10/24/2014 1410				DryWt Corrected: N

General Chemistry

Client Sample ID: **SB-4 (1-2')**

Lab Sample ID: 460-85054-15

Client Matrix: Solid

Date Sampled: 10/23/2014 1610

Date Received: 10/23/2014 1845

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	19.5		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258110		Analysis Date: 10/24/2014 1410				DryWt Corrected: N
Percent Solids	80.5		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258110		Analysis Date: 10/24/2014 1410				DryWt Corrected: N

General Chemistry

Client Sample ID: **SB-4 (7-8')**

Lab Sample ID: 460-85054-16

Client Matrix: Solid

Date Sampled: 10/23/2014 1615

Date Received: 10/23/2014 1845

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	13.7		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258110		Analysis Date: 10/24/2014 1410				DryWt Corrected: N
Percent Solids	86.3		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258110		Analysis Date: 10/24/2014 1410				DryWt Corrected: N

General Chemistry

Client Sample ID: **SB-X (7-8')**

Lab Sample ID: 460-85054-17

Client Matrix: Solid

Date Sampled: 10/23/2014 1620

Date Received: 10/23/2014 1845

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	11.9		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258110		Analysis Date: 10/24/2014 1410				DryWt Corrected: N
Percent Solids	88.1		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258110		Analysis Date: 10/24/2014 1410				DryWt Corrected: N

DATA REPORTING QUALIFIERS

Client: AKRF Inc

Job Number: 460-85054-1

Lab Section	Qualifier	Description
GC/MS VOA		
	U	Analyzed for but not detected.
	J	Indicates an estimated value.
	*	ISTD response or retention time outside acceptable limits
	*	LCS or LCSD exceeds the control limits
	*	RPD of the LCS and LCSD exceeds the control limits
	*	Surrogate exceeds the control limit
	N	This flag indicates the presumptive evidence of a compound.
GC/MS Semi VOA		
	U	Analyzed for but not detected.
	J	Indicates an estimated value.
	*	ISTD response or retention time outside acceptable limits
	*	LCS or LCSD exceeds the control limits
	*	MS or MSD exceeds the control limits
	*	Surrogate exceeds the control limit
	A	The tentatively identified compound is a suspected aldol-condensation product.
	N	This flag indicates the presumptive evidence of a compound.
GC Semi VOA		
	U	Analyzed for but not detected.
	*	Duplicate RPD exceeds control limits
	J	Indicates an estimated value.
	*	MS or MSD exceeds the control limits
	*	Surrogate exceeds the control limit
	p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.

DATA REPORTING QUALIFIERS

Client: AKRF Inc

Job Number: 460-85054-1

Lab Section	Qualifier	Description
Metals		
	U	Indicates analyzed for but not detected.
	4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
	J	Sample result is greater than the MDL but below the CRDL
	N	Spiked sample recovery is not within control limits.

QUALITY CONTROL RESULTS

Client: AKRF Inc

Job Number: 460-85054-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Prep Batch: 460-258104					
LB3 460-258104/1-A	Neutral Leach or MeOH Extraction Blank	T	Solid	5035	
460-85054-1	SB-3 (1-2')	T	Solid	5035	
460-85054-2	SB-3 (8-9')	T	Solid	5035	
460-85054-3	SB-10 (1-2')	T	Solid	5035	
460-85054-4	SB-10 (7-8')	T	Solid	5035	
460-85054-5	SB-19 (1-2')	T	Solid	5035	
460-85054-6	SB-19 (7-8')	T	Solid	5035	
460-85054-7	SB-9 (1-2')	T	Solid	5035	
460-85054-8	SB-9 (8-9')	T	Solid	5035	
460-85054-9	SB-7 (1-2')	T	Solid	5035	
460-85054-10	SB-7 (7-8')	T	Solid	5035	
460-85054-11	SB-1 (1-2')	T	Solid	5035	
460-85054-12	SB-1 (8-9')	T	Solid	5035	
460-85054-13	SB-2 (1-2')	T	Solid	5035	
460-85054-14	SB-2 (6-7')	T	Solid	5035	
460-85054-15	SB-4 (1-2')	T	Solid	5035	
460-85054-16	SB-4 (7-8')	T	Solid	5035	
460-85054-17	SB-X (7-8')	T	Solid	5035	
Analysis Batch:460-258540					
LCS 460-258540/4	Lab Control Sample	T	Solid	8260C	
LCSD 460-258540/5	Lab Control Sample Duplicate	T	Solid	8260C	
MB 460-258540/7	Method Blank	T	Solid	8260C	
LB3 460-258104/1-A	Neutral Leach or MeOH Extraction Blank	T	Solid	8260C	460-258104
460-85054-1	SB-3 (1-2')	T	Solid	8260C	460-258104
460-85054-2	SB-3 (8-9')	T	Solid	8260C	460-258104
460-85054-3	SB-10 (1-2')	T	Solid	8260C	460-258104
460-85054-4	SB-10 (7-8')	T	Solid	8260C	460-258104
460-85054-5	SB-19 (1-2')	T	Solid	8260C	460-258104
460-85054-6	SB-19 (7-8')	T	Solid	8260C	460-258104
460-85054-7	SB-9 (1-2')	T	Solid	8260C	460-258104
460-85054-8	SB-9 (8-9')	T	Solid	8260C	460-258104
460-85054-9	SB-7 (1-2')	T	Solid	8260C	460-258104
460-85054-10	SB-7 (7-8')	T	Solid	8260C	460-258104
460-85054-11	SB-1 (1-2')	T	Solid	8260C	460-258104
460-85054-12	SB-1 (8-9')	T	Solid	8260C	460-258104
460-85054-13	SB-2 (1-2')	T	Solid	8260C	460-258104
460-85054-14	SB-2 (6-7')	T	Solid	8260C	460-258104

Client: AKRF Inc

Job Number: 460-85054-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:460-258661					
LCS 460-258661/3	Lab Control Sample	T	Solid	8260C	
LCSD 460-258661/4	Lab Control Sample Duplicate	T	Solid	8260C	
MB 460-258661/6	Method Blank	T	Solid	8260C	
460-85054-15	SB-4 (1-2')	T	Solid	8260C	460-258104
460-85054-16	SB-4 (7-8')	T	Solid	8260C	460-258104
Analysis Batch:460-258803					
LCS 460-258803/3	Lab Control Sample	T	Solid	8260C	
LCSD 460-258803/4	Lab Control Sample Duplicate	T	Solid	8260C	
MB 460-258803/6	Method Blank	T	Solid	8260C	
460-85054-17	SB-X (7-8')	T	Solid	8260C	460-258104

Report Basis

T = Total

Client: AKRF Inc

Job Number: 460-85054-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 460-258363					
LCS 460-258363/2-A	Lab Control Sample	T	Solid	3546	
LCS 460-258363/3-A	Lab Control Sample	T	Solid	3546	
MB 460-258363/1-A	Method Blank	T	Solid	3546	
460-85054-1	SB-3 (1-2')	T	Solid	3546	
460-85054-2	SB-3 (8-9')	T	Solid	3546	
460-85054-3	SB-10 (1-2')	T	Solid	3546	
460-85054-4	SB-10 (7-8')	T	Solid	3546	
460-85054-5	SB-19 (1-2')	T	Solid	3546	
460-85054-6	SB-19 (7-8')	T	Solid	3546	
460-85054-7	SB-9 (1-2')	T	Solid	3546	
460-85054-8	SB-9 (8-9')	T	Solid	3546	
460-85054-9	SB-7 (1-2')	T	Solid	3546	
460-85054-10	SB-7 (7-8')	T	Solid	3546	
460-85054-11	SB-1 (1-2')	T	Solid	3546	
460-85054-12	SB-1 (8-9')	T	Solid	3546	
460-85054-13	SB-2 (1-2')	T	Solid	3546	
460-85054-14	SB-2 (6-7')	T	Solid	3546	
460-85054-15	SB-4 (1-2')	T	Solid	3546	
460-85054-16	SB-4 (7-8')	T	Solid	3546	
460-85054-17	SB-X (7-8')	T	Solid	3546	
460-85115-E-1-A MS	Matrix Spike	T	Solid	3546	
460-85115-E-1-B MSD	Matrix Spike Duplicate	T	Solid	3546	
Analysis Batch:460-258658					
LCS 460-258363/2-A	Lab Control Sample	T	Solid	8270D	460-258363
LCS 460-258363/3-A	Lab Control Sample	T	Solid	8270D	460-258363
MB 460-258363/1-A	Method Blank	T	Solid	8270D	460-258363
460-85054-3	SB-10 (1-2')	T	Solid	8270D	460-258363
460-85054-4	SB-10 (7-8')	T	Solid	8270D	460-258363
460-85054-7	SB-9 (1-2')	T	Solid	8270D	460-258363
460-85054-8	SB-9 (8-9')	T	Solid	8270D	460-258363
460-85054-10	SB-7 (7-8')	T	Solid	8270D	460-258363
460-85054-11	SB-1 (1-2')	T	Solid	8270D	460-258363
460-85054-12	SB-1 (8-9')	T	Solid	8270D	460-258363
460-85054-13	SB-2 (1-2')	T	Solid	8270D	460-258363
460-85054-14	SB-2 (6-7')	T	Solid	8270D	460-258363
460-85054-15	SB-4 (1-2')	T	Solid	8270D	460-258363
460-85054-16	SB-4 (7-8')	T	Solid	8270D	460-258363
460-85054-17	SB-X (7-8')	T	Solid	8270D	460-258363
Analysis Batch:460-258833					
460-85054-1	SB-3 (1-2')	T	Solid	8270D	460-258363
460-85115-E-1-A MS	Matrix Spike	T	Solid	8270D	460-258363
460-85115-E-1-B MSD	Matrix Spike Duplicate	T	Solid	8270D	460-258363

Client: AKRF Inc

Job Number: 460-85054-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Analysis Batch:460-258918					
460-85054-5	SB-19 (1-2')	T	Solid	8270D	460-258363
460-85054-6	SB-19 (7-8')	T	Solid	8270D	460-258363
Analysis Batch:460-259124					
460-85054-2	SB-3 (8-9')	T	Solid	8270D	460-258363
460-85054-9	SB-7 (1-2')	T	Solid	8270D	460-258363

Report Basis

T = Total

Client: AKRF Inc

Job Number: 460-85054-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 460-257968					
LCS 460-257968/2-ARA	Lab Control Sample	T	Solid	3546	
MB 460-257968/1-ARA	Method Blank	T	Solid	3546	
Prep Batch: 460-258357					
LCS 460-258357/2-A	Lab Control Sample	T	Solid	3546	
MB 460-258357/1-A	Method Blank	T	Solid	3546	
460-85054-1	SB-3 (1-2')	T	Solid	3546	
460-85054-1MS	Matrix Spike	T	Solid	3546	
460-85054-1MSD	Matrix Spike Duplicate	T	Solid	3546	
460-85054-2	SB-3 (8-9')	T	Solid	3546	
460-85054-3	SB-10 (1-2')	T	Solid	3546	
460-85054-4	SB-10 (7-8')	T	Solid	3546	
460-85054-6	SB-19 (7-8')	T	Solid	3546	
460-85054-7	SB-9 (1-2')	T	Solid	3546	
460-85054-8	SB-9 (8-9')	T	Solid	3546	
460-85054-9	SB-7 (1-2')	T	Solid	3546	
460-85054-11	SB-1 (1-2')	T	Solid	3546	
460-85054-12RA	SB-1 (8-9')	T	Solid	3546	
460-85054-13	SB-2 (1-2')	T	Solid	3546	
460-85054-14	SB-2 (6-7')	T	Solid	3546	
460-85054-15	SB-4 (1-2')	T	Solid	3546	
Prep Batch: 460-258361					
LCS 460-258361/2-A	Lab Control Sample	T	Solid	3546	
MB 460-258361/1-A	Method Blank	T	Solid	3546	
460-85054-1	SB-3 (1-2')	T	Solid	3546	
460-85054-2	SB-3 (8-9')	T	Solid	3546	
460-85054-3	SB-10 (1-2')	T	Solid	3546	
460-85054-4	SB-10 (7-8')	T	Solid	3546	
460-85054-5	SB-19 (1-2')	T	Solid	3546	
460-85054-6	SB-19 (7-8')	T	Solid	3546	
460-85054-7	SB-9 (1-2')	T	Solid	3546	
460-85054-8	SB-9 (8-9')	T	Solid	3546	
460-85054-9	SB-7 (1-2')	T	Solid	3546	
460-85054-9MS	Matrix Spike	T	Solid	3546	
460-85054-9MSD	Matrix Spike Duplicate	T	Solid	3546	
460-85054-10	SB-7 (7-8')	T	Solid	3546	
460-85054-11	SB-1 (1-2')	T	Solid	3546	
460-85054-12	SB-1 (8-9')	T	Solid	3546	
460-85054-13	SB-2 (1-2')	T	Solid	3546	
460-85054-14	SB-2 (6-7')	T	Solid	3546	
460-85054-15	SB-4 (1-2')	T	Solid	3546	
460-85054-16	SB-4 (7-8')	T	Solid	3546	

Client: AKRF Inc

Job Number: 460-85054-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Analysis Batch:460-258474					
LCS 460-257968/2-ARA	Lab Control Sample	T	Solid	8081B	460-257968
MB 460-257968/1-ARA	Method Blank	T	Solid	8081B	460-257968
LCS 460-258357/2-A	Lab Control Sample	T	Solid	8081B	460-258357
MB 460-258357/1-A	Method Blank	T	Solid	8081B	460-258357
460-85054-1	SB-3 (1-2')	T	Solid	8081B	460-258357
460-85054-1MS	Matrix Spike	T	Solid	8081B	460-258357
460-85054-1MSD	Matrix Spike Duplicate	T	Solid	8081B	460-258357
460-85054-2	SB-3 (8-9')	T	Solid	8081B	460-258357
460-85054-3	SB-10 (1-2')	T	Solid	8081B	460-258357
460-85054-4	SB-10 (7-8')	T	Solid	8081B	460-258357
460-85054-6	SB-19 (7-8')	T	Solid	8081B	460-258357
460-85054-12RA	SB-1 (8-9')	T	Solid	8081B	460-258357
460-85054-14	SB-2 (6-7')	T	Solid	8081B	460-258357
Analysis Batch:460-258484					
LCS 460-258361/2-A	Lab Control Sample	T	Solid	8082A	460-258361
MB 460-258361/1-A	Method Blank	T	Solid	8082A	460-258361
460-85054-9	SB-7 (1-2')	T	Solid	8082A	460-258361
460-85054-9MS	Matrix Spike	T	Solid	8082A	460-258361
460-85054-9MSD	Matrix Spike Duplicate	T	Solid	8082A	460-258361
Analysis Batch:460-258516					
460-85054-1	SB-3 (1-2')	T	Solid	8082A	460-258361
460-85054-2	SB-3 (8-9')	T	Solid	8082A	460-258361
460-85054-3	SB-10 (1-2')	T	Solid	8082A	460-258361
460-85054-4	SB-10 (7-8')	T	Solid	8082A	460-258361
460-85054-5	SB-19 (1-2')	T	Solid	8082A	460-258361
460-85054-6	SB-19 (7-8')	T	Solid	8082A	460-258361
460-85054-7	SB-9 (1-2')	T	Solid	8082A	460-258361
460-85054-8	SB-9 (8-9')	T	Solid	8082A	460-258361
460-85054-10	SB-7 (7-8')	T	Solid	8082A	460-258361
460-85054-11	SB-1 (1-2')	T	Solid	8082A	460-258361
460-85054-12	SB-1 (8-9')	T	Solid	8082A	460-258361
460-85054-13	SB-2 (1-2')	T	Solid	8082A	460-258361
460-85054-14	SB-2 (6-7')	T	Solid	8082A	460-258361
460-85054-15	SB-4 (1-2')	T	Solid	8082A	460-258361
460-85054-16	SB-4 (7-8')	T	Solid	8082A	460-258361
Analysis Batch:460-258534					
460-85054-7	SB-9 (1-2')	T	Solid	8081B	460-258357
460-85054-8	SB-9 (8-9')	T	Solid	8081B	460-258357
460-85054-9	SB-7 (1-2')	T	Solid	8081B	460-258357
460-85054-11	SB-1 (1-2')	T	Solid	8081B	460-258357
460-85054-13	SB-2 (1-2')	T	Solid	8081B	460-258357
460-85054-15	SB-4 (1-2')	T	Solid	8081B	460-258357

Client: AKRF Inc

Job Number: 460-85054-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 460-258709					
LCS 460-258709/2-A	Lab Control Sample	T	Solid	3546	
MB 460-258709/1-A	Method Blank	T	Solid	3546	
460-85054-5	SB-19 (1-2')	T	Solid	3546	
460-85054-10	SB-7 (7-8')	T	Solid	3546	
460-85054-16	SB-4 (7-8')	T	Solid	3546	
460-85122-A-5-J MS	Matrix Spike	T	Solid	3546	
460-85122-A-5-K MSD	Matrix Spike Duplicate	T	Solid	3546	
Analysis Batch:460-258929					
460-85054-5	SB-19 (1-2')	T	Solid	8081B	460-258709
460-85054-10	SB-7 (7-8')	T	Solid	8081B	460-258709
460-85054-16	SB-4 (7-8')	T	Solid	8081B	460-258709
460-85122-A-5-J MS	Matrix Spike	T	Solid	8081B	460-258709
460-85122-A-5-K MSD	Matrix Spike Duplicate	T	Solid	8081B	460-258709
Analysis Batch:460-258933					
LCS 460-258709/2-A	Lab Control Sample	T	Solid	8081B	460-258709
MB 460-258709/1-A	Method Blank	T	Solid	8081B	460-258709

Report Basis

T = Total

Client: AKRF Inc

Job Number: 460-85054-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 460-258201					
LCSSRM 460-258201/2-A	LCS-Certified Reference Material	T	Solid	3050B	
LCSSRM 460-258201/2-A ^4	LCS-Certified Reference Material	T	Solid	3050B	
MB 460-258201/1-A ^2	Method Blank	T	Solid	3050B	
460-85054-1	SB-3 (1-2')	T	Solid	3050B	
460-85054-2	SB-3 (8-9')	T	Solid	3050B	
460-85054-3	SB-10 (1-2')	T	Solid	3050B	
460-85054-4	SB-10 (7-8')	T	Solid	3050B	
460-85054-5	SB-19 (1-2')	T	Solid	3050B	
460-85054-6	SB-19 (7-8')	T	Solid	3050B	
460-85054-7	SB-9 (1-2')	T	Solid	3050B	
460-85054-7DU	Duplicate	T	Solid	3050B	
460-85054-7MS	Matrix Spike	T	Solid	3050B	
460-85054-8	SB-9 (8-9')	T	Solid	3050B	
460-85054-9	SB-7 (1-2')	T	Solid	3050B	
460-85054-10	SB-7 (7-8')	T	Solid	3050B	
Prep Batch: 460-258289					
LCSSRM 460-258289/2-A ^50	LCS-Certified Reference Material	T	Solid	7471B	
MB 460-258289/1-A	Method Blank	T	Solid	7471B	
460-85054-1	SB-3 (1-2')	T	Solid	7471B	
460-85054-2	SB-3 (8-9')	T	Solid	7471B	
460-85054-3	SB-10 (1-2')	T	Solid	7471B	
460-85054-4	SB-10 (7-8')	T	Solid	7471B	
460-85054-5	SB-19 (1-2')	T	Solid	7471B	
460-85054-6	SB-19 (7-8')	T	Solid	7471B	
460-85054-7	SB-9 (1-2')	T	Solid	7471B	
460-85054-8	SB-9 (8-9')	T	Solid	7471B	
460-85054-9	SB-7 (1-2')	T	Solid	7471B	
460-85054-10	SB-7 (7-8')	T	Solid	7471B	
460-85054-11	SB-1 (1-2')	T	Solid	7471B	
460-85054-12	SB-1 (8-9')	T	Solid	7471B	
460-85054-13	SB-2 (1-2')	T	Solid	7471B	
460-85054-14	SB-2 (6-7')	T	Solid	7471B	
460-85054-14DU	Duplicate	T	Solid	7471B	
460-85054-14MS	Matrix Spike	T	Solid	7471B	
460-85054-15	SB-4 (1-2')	T	Solid	7471B	
460-85054-16	SB-4 (7-8')	T	Solid	7471B	
460-85054-17	SB-X (7-8')	T	Solid	7471B	

Client: AKRF Inc

Job Number: 460-85054-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 460-258322					
LCSSRM 460-258322/2-A ^4	LCS-Certified Reference Material	T	Solid	3050B	
MB 460-258322/1-A ^2	Method Blank	T	Solid	3050B	
460-85054-11	SB-1 (1-2')	T	Solid	3050B	
460-85054-E-12-C MS ^4MS	Matrix Spike	T	Solid	3050B	
460-85054-12	SB-1 (8-9')	T	Solid	3050B	
460-85054-12DU	Duplicate	T	Solid	3050B	
460-85054-13	SB-2 (1-2')	T	Solid	3050B	
460-85054-14	SB-2 (6-7')	T	Solid	3050B	
460-85054-15	SB-4 (1-2')	T	Solid	3050B	
460-85054-16	SB-4 (7-8')	T	Solid	3050B	
460-85054-17	SB-X (7-8')	T	Solid	3050B	
Analysis Batch:460-258332					
LCSSRM 460-258289/2-A ^50	LCS-Certified Reference Material	T	Solid	7471B	460-258289
MB 460-258289/1-A	Method Blank	T	Solid	7471B	460-258289
460-85054-1	SB-3 (1-2')	T	Solid	7471B	460-258289
460-85054-2	SB-3 (8-9')	T	Solid	7471B	460-258289
460-85054-3	SB-10 (1-2')	T	Solid	7471B	460-258289
460-85054-4	SB-10 (7-8')	T	Solid	7471B	460-258289
460-85054-5	SB-19 (1-2')	T	Solid	7471B	460-258289
460-85054-6	SB-19 (7-8')	T	Solid	7471B	460-258289
460-85054-7	SB-9 (1-2')	T	Solid	7471B	460-258289
460-85054-8	SB-9 (8-9')	T	Solid	7471B	460-258289
460-85054-9	SB-7 (1-2')	T	Solid	7471B	460-258289
460-85054-10	SB-7 (7-8')	T	Solid	7471B	460-258289
460-85054-11	SB-1 (1-2')	T	Solid	7471B	460-258289
460-85054-12	SB-1 (8-9')	T	Solid	7471B	460-258289
460-85054-13	SB-2 (1-2')	T	Solid	7471B	460-258289
460-85054-14	SB-2 (6-7')	T	Solid	7471B	460-258289
460-85054-14DU	Duplicate	T	Solid	7471B	460-258289
460-85054-14MS	Matrix Spike	T	Solid	7471B	460-258289
460-85054-15	SB-4 (1-2')	T	Solid	7471B	460-258289
460-85054-16	SB-4 (7-8')	T	Solid	7471B	460-258289
460-85054-17	SB-X (7-8')	T	Solid	7471B	460-258289

Client: AKRF Inc

Job Number: 460-85054-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:460-258405					
LCSSRM 460-258322/2-A ^4	LCS-Certified Reference Material	T	Solid	6010C	460-258322
MB 460-258322/1-A ^2	Method Blank	T	Solid	6010C	460-258322
460-85054-11	SB-1 (1-2')	T	Solid	6010C	460-258322
460-85054-E-12-C MS ^4MS	Matrix Spike	T	Solid	6010C	460-258322
460-85054-12	SB-1 (8-9')	T	Solid	6010C	460-258322
460-85054-12DU	Duplicate	T	Solid	6010C	460-258322
460-85054-13	SB-2 (1-2')	T	Solid	6010C	460-258322
460-85054-14	SB-2 (6-7')	T	Solid	6010C	460-258322
460-85054-15	SB-4 (1-2')	T	Solid	6010C	460-258322
460-85054-16	SB-4 (7-8')	T	Solid	6010C	460-258322
460-85054-17	SB-X (7-8')	T	Solid	6010C	460-258322
Analysis Batch:460-258582					
LCSSRM 460-258201/2-A ^4	LCS-Certified Reference Material	T	Solid	6010C	460-258201
MB 460-258201/1-A ^2	Method Blank	T	Solid	6010C	460-258201
460-85054-1	SB-3 (1-2')	T	Solid	6010C	460-258201
460-85054-2	SB-3 (8-9')	T	Solid	6010C	460-258201
460-85054-3	SB-10 (1-2')	T	Solid	6010C	460-258201
460-85054-4	SB-10 (7-8')	T	Solid	6010C	460-258201
460-85054-5	SB-19 (1-2')	T	Solid	6010C	460-258201
460-85054-6	SB-19 (7-8')	T	Solid	6010C	460-258201
460-85054-7	SB-9 (1-2')	T	Solid	6010C	460-258201
460-85054-7DU	Duplicate	T	Solid	6010C	460-258201
460-85054-7MS	Matrix Spike	T	Solid	6010C	460-258201
460-85054-8	SB-9 (8-9')	T	Solid	6010C	460-258201
460-85054-9	SB-7 (1-2')	T	Solid	6010C	460-258201
460-85054-10	SB-7 (7-8')	T	Solid	6010C	460-258201
Analysis Batch:460-258732					
LCSSRM 460-258201/2-A	LCS-Certified Reference Material	T	Solid	6010C	460-258201
MB 460-258201/1-A ^2	Method Blank	T	Solid	6010C	460-258201
460-85054-1	SB-3 (1-2')	T	Solid	6010C	460-258201
460-85054-2	SB-3 (8-9')	T	Solid	6010C	460-258201
460-85054-3	SB-10 (1-2')	T	Solid	6010C	460-258201
460-85054-4	SB-10 (7-8')	T	Solid	6010C	460-258201
460-85054-5	SB-19 (1-2')	T	Solid	6010C	460-258201
460-85054-6	SB-19 (7-8')	T	Solid	6010C	460-258201
460-85054-7	SB-9 (1-2')	T	Solid	6010C	460-258201
460-85054-7DU	Duplicate	T	Solid	6010C	460-258201
460-85054-7MS	Matrix Spike	T	Solid	6010C	460-258201
460-85054-8	SB-9 (8-9')	T	Solid	6010C	460-258201
460-85054-9	SB-7 (1-2')	T	Solid	6010C	460-258201
460-85054-10	SB-7 (7-8')	T	Solid	6010C	460-258201

Client: AKRF Inc

Job Number: 460-85054-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:460-259038					
460-85054-8	SB-9 (8-9')	T	Solid	6010C	460-258201

Report Basis
T = Total

General Chemistry					
Analysis Batch:460-258102					
460-85054-1	SB-3 (1-2')	T	Solid	Moisture	
460-85054-2	SB-3 (8-9')	T	Solid	Moisture	
460-85054-3	SB-10 (1-2')	T	Solid	Moisture	
460-85054-4	SB-10 (7-8')	T	Solid	Moisture	
460-85054-5	SB-19 (1-2')	T	Solid	Moisture	
460-85054-6	SB-19 (7-8')	T	Solid	Moisture	
460-85054-7	SB-9 (1-2')	T	Solid	Moisture	
460-85054-7DU	Duplicate	T	Solid	Moisture	
Analysis Batch:460-258110					
460-85016-C-1 DU	Duplicate	T	Solid	Moisture	
460-85054-8	SB-9 (8-9')	T	Solid	Moisture	
460-85054-9	SB-7 (1-2')	T	Solid	Moisture	
460-85054-10	SB-7 (7-8')	T	Solid	Moisture	
460-85054-11	SB-1 (1-2')	T	Solid	Moisture	
460-85054-12	SB-1 (8-9')	T	Solid	Moisture	
460-85054-13	SB-2 (1-2')	T	Solid	Moisture	
460-85054-14	SB-2 (6-7')	T	Solid	Moisture	
460-85054-15	SB-4 (1-2')	T	Solid	Moisture	
460-85054-16	SB-4 (7-8')	T	Solid	Moisture	
460-85054-17	SB-X (7-8')	T	Solid	Moisture	

Report Basis
T = Total

Client: AKRF Inc

Job Number: 460-85054-1

Surrogate Recovery Report

8260C Volatile Organic Compounds by GC/MS

Client Matrix: Solid

Lab Sample ID	Client Sample ID	DCA %Rec	BFB %Rec	DBFM %Rec	TOL %Rec
460-85054-1	SB-3 (1-2')	97	68*	102	116
460-85054-2	SB-3 (8-9')	97	99	100	98
460-85054-3	SB-10 (1-2')	97	88	99	83
460-85054-4	SB-10 (7-8')	107	111	105	102
460-85054-5	SB-19 (1-2')	106	103	113	106
460-85054-6	SB-19 (7-8')	101	97	100	98
460-85054-7	SB-9 (1-2')	95	85	95	74
460-85054-8	SB-9 (8-9')	93	89	97	94
460-85054-9	SB-7 (1-2')	101	91	103	100
460-85054-10	SB-7 (7-8')	100	92	107	100
460-85054-11	SB-1 (1-2')	99	98	93	112
460-85054-12	SB-1 (8-9')	100	83	102	106
460-85054-13	SB-2 (1-2')	108	66*	108	96
460-85054-14	SB-2 (6-7')	97	95	100	81
460-85054-15	SB-4 (1-2')	100	91	99	93
460-85054-16	SB-4 (7-8')	95	75*	100	120*
460-85054-17	SB-X (7-8')	98	86	24*	99
MB 460-258540/7		94	100	96	96
MB 460-258661/6		102	98	105	105
MB 460-258803/6		90	89	96	112
LB3 460-258104/1-A		97	100	99	98
LCS 460-258540/4		98	96	98	99
LCS 460-258661/3		91	95	99	99
LCS 460-258803/3		96	97	95	100
LCSD 460-258540/5		98	110	100	103
LCSD 460-258661/4		102	93	100	97
LCSD 460-258803/4		92	100	92	91

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	70-130
BFB = 4-Bromofluorobenzene	70-130
DBFM = Dibromofluoromethane (Surr)	70-130
TOL = Toluene-d8 (Surr)	70-130

Client: AKRF Inc

Job Number: 460-85054-1

Surrogate Recovery Report

8270D Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	NBZ %Rec	PHL %Rec	TPH %Rec	TBP %Rec	2FP %Rec	FBP %Rec
460-85054-1	SB-3 (1-2')	83	73	83	49	69	85
460-85054-2	SB-3 (8-9')	63	57	87	68	57	66
460-85054-3	SB-10 (1-2')	67	62	84	49	56	68
460-85054-4	SB-10 (7-8')	80	78	105	79	73	78
460-85054-5	SB-19 (1-2')	79	63	67	52	66	92
460-85054-6	SB-19 (7-8')	54	39*	61	48	51	72
460-85054-7	SB-9 (1-2')	76	70	86	66	67	79
460-85054-8	SB-9 (8-9')	57	53	66	37	54	65
460-85054-9	SB-7 (1-2')	59	58	62	72	56	66
460-85054-10	SB-7 (7-8')	80	74	99	75	71	82
460-85054-11	SB-1 (1-2')	75	70	86	64	68	78
460-85054-12	SB-1 (8-9')	78	77	104	83	73	77
460-85054-13	SB-2 (1-2')	60	53	71	41	49	64
460-85054-14	SB-2 (6-7')	68	62	89	43	56	67
460-85054-15	SB-4 (1-2')	72	67	89	60	62	74
460-85054-16	SB-4 (7-8')	62	57	80	36	48	66
460-85054-17	SB-X (7-8')	69	67	94	66	65	71
MB 460-258363/1-A		77	77	91	74	73	72
LCS 460-258363/2-A		84	79	96	91	76	84
LCS 460-258363/3-A		84	83	102	103	80	79
460-85115-E-1-A MS		78	72	83	83	70	83
460-85115-E-1-B MSD		81	73	89	86	72	86

Surrogate	Acceptance Limits
NBZ = Nitrobenzene-d5 (Surr)	38-105
PHL = Phenol-d5 (Surr)	41-118
TPH = Terphenyl-d14 (Surr)	16-151
TBP = 2,4,6-Tribromophenol (Surr)	10-120
2FP = 2-Fluorophenol (Surr)	37-125
FBP = 2-Fluorobiphenyl	40-109

Client: AKRF Inc

Job Number: 460-85054-1

Surrogate Recovery Report

8081B Organochlorine Pesticides (GC)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	DCB1 %Rec	DCB2 %Rec	TCX1 %Rec	TCX2 %Rec
460-85054-1	SB-3 (1-2')	114	93	89	88
460-85054-2	SB-3 (8-9')	111	105	84	79
460-85054-3	SB-10 (1-2')	97	103	85	77
460-85054-4	SB-10 (7-8')	97	94	94	87
460-85054-5	SB-19 (1-2')	92p	140	108	111
460-85054-6	SB-19 (7-8')	80	87	90	109
460-85054-7	SB-9 (1-2')	119	97	76	81
460-85054-8	SB-9 (8-9')	116	100	68*	75
460-85054-9	SB-7 (1-2')	94	80	126	91
460-85054-10	SB-7 (7-8')	94	138	94	91
460-85054-11	SB-1 (1-2')	102	80	256*	106p
460-85054-12 RA	SB-1 (8-9') RA	93	115	84	87
460-85054-13	SB-2 (1-2')	106	78	83	93
460-85054-14	SB-2 (6-7')	97	111	88	84
460-85054-15	SB-4 (1-2')	77	71*	76	84
460-85054-16	SB-4 (7-8')	120	129	757*	114p
MB 460-257968/1-A RA		124	123	120	114
MB 460-258357/1-A		116	120	112	107
MB 460-258709/1-A		106	99	95	93
LCS 460-257968/2-A RA		111	119	106	101
LCS 460-258357/2-A		111	108	110	98
LCS 460-258709/2-A		106	100	102	106
460-85054-1 MS	SB-3 (1-2') MS	77	94	83	82
460-85122-A-5-J MS		87p	183*	97	94
460-85054-1 MSD	SB-3 (1-2') MSD	101	99	72	72
460-85122-A-5-K MSD		108	162*	113	115

Surrogate	Acceptance Limits
DCB = DCB Decachlorobiphenyl	76-149
TCX = Tetrachloro-m-xylene	72-136

Client: AKRF Inc

Job Number: 460-85054-1

Surrogate Recovery Report

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Matrix: Solid

Lab Sample ID	Client Sample ID	DCB1 %Rec	DCB2 %Rec
460-85054-1	SB-3 (1-2')	101	97
460-85054-2	SB-3 (8-9')	100	94
460-85054-3	SB-10 (1-2')	101	96
460-85054-4	SB-10 (7-8')	99	92
460-85054-5	SB-19 (1-2')	73	78
460-85054-6	SB-19 (7-8')	73	80
460-85054-7	SB-9 (1-2')	109	102
460-85054-8	SB-9 (8-9')	104	101
460-85054-9	SB-7 (1-2')	91	100
460-85054-10	SB-7 (7-8')	106	92
460-85054-11	SB-1 (1-2')	84	78
460-85054-12	SB-1 (8-9')	100	91
460-85054-13	SB-2 (1-2')	95	91
460-85054-14	SB-2 (6-7')	87	82
460-85054-15	SB-4 (1-2')	102	98
460-85054-16	SB-4 (7-8')	109	100
MB 460-258361/1-A		114	108
LCS 460-258361/2-A		96	99
460-85054-9 MS	SB-7 (1-2') MS	92	101
460-85054-9 MSD	SB-7 (1-2') MSD	74	80

Surrogate	Acceptance Limits
DCB = DCB Decachlorobiphenyl	53-150

Client: AKRF Inc

Job Number: 460-85054-1

Neutral Leach or MeOH Extraction Blank - Batch: 460-258104

Method: 8260C
Preparation: 5035

Lab Sample ID:	LB3 460-258104/1-A	Analysis Batch:	460-258540	Instrument ID:	CVOAMS9
Client Matrix:	Solid	Prep Batch:	460-258104	Lab File ID:	K33402.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	10/27/2014 2025	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1351				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.13	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.090	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	0.11	1.0
1,1,2-Trichloroethane	1.0	U	0.14	1.0
1,1-Dichloroethane	1.0	U	0.11	1.0
1,1-Dichloroethene	1.0	U	0.19	1.0
1,2,3-Trichlorobenzene	1.0	U	0.16	1.0
1,2,4-Trichlorobenzene	1.0	U	0.19	1.0
1,2-Dichloropropane	1.0	U	0.15	1.0
1,3-Dichlorobenzene	1.0	U	0.16	1.0
1,4-Dichlorobenzene	1.0	U	0.11	1.0
1,4-Dioxane	20	U	13	20
2-Butanone (MEK)	5.0	U	0.63	5.0
2-Hexanone	5.0	U	0.13	5.0
4-Methyl-2-pentanone (MIBK)	5.0	U	0.20	5.0
Acetone	5.0	U	1.7	5.0
Benzene	1.0	U	0.15	1.0
Bromoform	1.0	U	0.17	1.0
Bromomethane	1.0	U	0.43	1.0
Carbon disulfide	1.0	U	0.15	1.0
Carbon tetrachloride	1.0	U	0.15	1.0
Chlorobenzene	1.0	U	0.18	1.0
Chlorobromomethane	1.0	U	0.11	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	0.33	1.0
Chloroform	1.0	U	0.24	1.0
Chloromethane	1.0	U	0.16	1.0
cis-1,2-Dichloroethene	1.0	U	0.11	1.0
cis-1,3-Dichloropropene	1.0	U	0.14	1.0
Cyclohexane	1.0	U	0.13	1.0
Dichlorobromomethane	1.0	U	0.32	1.0
Dichlorodifluoromethane	1.0	U	0.22	1.0
Ethylbenzene	1.0	U	0.17	1.0
Ethylene Dibromide	1.0	U	0.15	1.0
Isopropylbenzene	1.0	U	0.11	1.0
Methyl acetate	5.0	U	0.32	5.0
Methyl tert-butyl ether	1.0	U	0.11	1.0
Methylcyclohexane	1.0	U	0.10	1.0
Methylene Chloride	1.0	U	0.15	1.0
m-Xylene & p-Xylene	1.0	U	0.59	1.0
o-Xylene	1.0	U	0.19	1.0
Styrene	1.0	U	0.28	1.0
Tetrachloroethene	1.0	U	0.12	1.0
Toluene	1.0	U	0.14	1.0
trans-1,2-Dichloroethene	1.0	U	0.13	1.0

Client: AKRF Inc

Job Number: 460-85054-1

Neutral Leach or MeOH Extraction Blank - Batch: 460-258104

Method: 8260C
Preparation: 5035

Lab Sample ID:	LB3 460-258104/1-A	Analysis Batch:	460-258540	Instrument ID:	CVOAMS9
Client Matrix:	Solid	Prep Batch:	460-258104	Lab File ID:	K33402.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	10/27/2014 2025	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	10/24/2014 1351				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
trans-1,3-Dichloropropene	1.0	U	0.10	1.0
Trichloroethene	1.0	U	0.12	1.0
Trichlorofluoromethane	1.0	U	0.16	1.0
Vinyl chloride	1.0	U	0.34	1.0
1,2-Dichloroethane	1.0	U	0.18	1.0
1,2-Dichlorobenzene	1.0	U	0.10	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	97	70 - 130
4-Bromofluorobenzene	100	70 - 130
Dibromofluoromethane (Surr)	99	70 - 130
Toluene-d8 (Surr)	98	70 - 130

Method Blank TICs- Batch: 460-258104

Cas Number	Analyte	RT	Est. Result (ug/K	Qual
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85054-1

Method Blank - Batch: 460-258540

Method: 8260C
Preparation: N/A

Lab Sample ID:	MB 460-258540/7	Analysis Batch:	460-258540	Instrument ID:	CVOAMS9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	K33401.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/27/2014 2001	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.13	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.090	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	0.11	1.0
1,1,2-Trichloroethane	1.0	U	0.14	1.0
1,1-Dichloroethane	1.0	U	0.11	1.0
1,1-Dichloroethene	1.0	U	0.19	1.0
1,2,3-Trichlorobenzene	1.0	U	0.16	1.0
1,2,4-Trichlorobenzene	1.0	U	0.19	1.0
1,2-Dichloropropane	1.0	U	0.15	1.0
1,3-Dichlorobenzene	1.0	U	0.16	1.0
1,4-Dichlorobenzene	1.0	U	0.11	1.0
1,4-Dioxane	20	U	13	20
2-Butanone (MEK)	5.0	U	0.63	5.0
2-Hexanone	5.0	U	0.13	5.0
4-Methyl-2-pentanone (MIBK)	5.0	U	0.20	5.0
Acetone	5.0	U	1.7	5.0
Benzene	1.0	U	0.15	1.0
Bromoform	1.0	U	0.17	1.0
Bromomethane	1.0	U	0.43	1.0
Carbon disulfide	1.0	U	0.15	1.0
Carbon tetrachloride	1.0	U	0.15	1.0
Chlorobenzene	1.0	U	0.18	1.0
Chlorobromomethane	1.0	U	0.11	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	0.33	1.0
Chloroform	1.0	U	0.24	1.0
Chloromethane	1.0	U	0.16	1.0
cis-1,2-Dichloroethene	1.0	U	0.11	1.0
cis-1,3-Dichloropropene	1.0	U	0.14	1.0
Cyclohexane	1.0	U	0.13	1.0
Dichlorobromomethane	1.0	U	0.32	1.0
Dichlorodifluoromethane	1.0	U	0.22	1.0
Ethylbenzene	1.0	U	0.17	1.0
Ethylene Dibromide	1.0	U	0.15	1.0
Isopropylbenzene	1.0	U	0.11	1.0
Methyl acetate	5.0	U	0.32	5.0
Methyl tert-butyl ether	1.0	U	0.11	1.0
Methylcyclohexane	1.0	U	0.10	1.0
Methylene Chloride	1.0	U	0.15	1.0
m-Xylene & p-Xylene	1.0	U	0.59	1.0
o-Xylene	1.0	U	0.19	1.0
Styrene	1.0	U	0.28	1.0
Tetrachloroethene	1.0	U	0.12	1.0
Toluene	1.0	U	0.14	1.0
trans-1,2-Dichloroethene	1.0	U	0.13	1.0

Client: AKRF Inc

Job Number: 460-85054-1

Method Blank - Batch: 460-258540

Method: 8260C
Preparation: N/A

Lab Sample ID:	MB 460-258540/7	Analysis Batch:	460-258540	Instrument ID:	CVOAMS9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	K33401.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/27/2014 2001	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
trans-1,3-Dichloropropene	1.0	U	0.10	1.0
Trichloroethene	1.0	U	0.12	1.0
Trichlorofluoromethane	1.0	U	0.16	1.0
Vinyl chloride	1.0	U	0.34	1.0
1,2-Dichloroethane	1.0	U	0.18	1.0
1,2-Dichlorobenzene	1.0	U	0.10	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	94	70 - 130
4-Bromofluorobenzene	100	70 - 130
Dibromofluoromethane (Surr)	96	70 - 130
Toluene-d8 (Surr)	96	70 - 130

Method Blank TICs- Batch: 460-258540

Cas Number	Analyte	RT	Est. Result (ug/K	Qual
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85054-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 460-258540

Method: 8260C
Preparation: N/A

LCS Lab Sample ID:	LCS 460-258540/4	Analysis Batch:	460-258540	Instrument ID:	CVOAMS9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	K33398.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/27/2014 1715	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				5 mL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 460-258540/5	Analysis Batch:	460-258540	Instrument ID:	CVOAMS9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	K33399.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/27/2014 1903	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
1,1,1-Trichloroethane	95	99	82 - 129	5	30		
1,1,2,2-Tetrachloroethane	82	85	66 - 121	3	30		
1,1,2-Trichloro-1,2,2-trifluoroethane	104	97	73 - 134	7	30		
1,1,2-Trichloroethane	90	92	74 - 116	2	30		
1,1-Dichloroethane	107	89	78 - 125	19	30		
1,1-Dichloroethene	101	93	74 - 128	9	30		
1,2,3-Trichlorobenzene	101	100	81 - 123	1	30		
1,2,4-Trichlorobenzene	99	106	81 - 127	6	30		
1,2-Dichloropropane	96	96	72 - 123	0	30		
1,3-Dichlorobenzene	94	99	78 - 120	5	30		
1,4-Dichlorobenzene	92	94	77 - 120	2	30		
1,4-Dioxane	119	97	69 - 142	20	30		
2-Butanone (MEK)	55	61	58 - 140	9	30	*	
2-Hexanone	100	100	52 - 134	0	30		
4-Methyl-2-pentanone (MIBK)	102	102	55 - 133	0	30		
Acetone	81	82	58 - 139	1	30		
Benzene	94	103	75 - 123	9	30		
Bromoform	87	101	70 - 130	14	30		
Bromomethane	100	105	62 - 150	5	30		
Carbon disulfide	106	112	73 - 127	6	30		
Carbon tetrachloride	95	103	77 - 137	7	30		
Chlorobenzene	90	95	80 - 120	5	30		
Chlorobromomethane	92	91	82 - 127	0	30		
Chlorodibromomethane	90	96	74 - 124	6	30		
Chloroethane	101	100	60 - 140	1	30		
Chloroform	94	95	77 - 122	1	30		
Chloromethane	105	116	48 - 144	10	30		
cis-1,2-Dichloroethene	85	86	82 - 121	1	30		
cis-1,3-Dichloropropene	95	99	75 - 119	4	30		
Cyclohexane	95	109	66 - 128	14	30		
Dichlorobromomethane	92	93	77 - 122	1	30		
Dichlorodifluoromethane	91	118	52 - 145	26	30		
Ethylbenzene	92	98	80 - 120	6	30		
Ethylene Dibromide	90	93	78 - 117	3	30		
Isopropylbenzene	93	115	80 - 120	21	30		

Client: AKRF Inc

Job Number: 460-85054-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 460-258540

Method: 8260C
Preparation: N/A

LCS Lab Sample ID:	LCS 460-258540/4	Analysis Batch:	460-258540	Instrument ID:	CVOAMS9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	K33398.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/27/2014 1715	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				5 mL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 460-258540/5	Analysis Batch:	460-258540	Instrument ID:	CVOAMS9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	K33399.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/27/2014 1903	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				5 mL
Leach Date:	N/A				

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Methyl acetate	133	97	61 - 137	31	30		*
Methyl tert-butyl ether	113	88	75 - 124	25	30		
Methylcyclohexane	95	100	80 - 125	4	30		
Methylene Chloride	109	101	75 - 124	8	30		
m-Xylene & p-Xylene	93	99	79 - 120	6	30		
o-Xylene	94	112	77 - 120	18	30		
Styrene	92	112	78 - 120	19	30		
Tetrachloroethene	96	103	80 - 127	8	30		
Toluene	94	99	82 - 117	5	30		
trans-1,2-Dichloroethene	111	89	83 - 124	21	30		
trans-1,3-Dichloropropene	91	92	74 - 119	2	30		
Trichloroethene	91	98	78 - 122	8	30		
Trichlorofluoromethane	102	107	63 - 147	4	30		
Vinyl chloride	101	105	62 - 132	4	30		
1,2-Dichloroethane	95	97	79 - 120	1	30		
1,2-Dichlorobenzene	96	113	77 - 120	16	30		
1,2-Dibromo-3-Chloropropane	106	118	61 - 125	11	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	98	98	70 - 130
4-Bromofluorobenzene	96	110	70 - 130
Dibromofluoromethane (Surr)	98	100	70 - 130
Toluene-d8 (Surr)	99	103	70 - 130

Client: AKRF Inc

Job Number: 460-85054-1

Method Blank - Batch: 460-258661

Method: 8260C
Preparation: N/A

Lab Sample ID:	MB 460-258661/6	Analysis Batch:	460-258661	Instrument ID:	CVOAMS9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	K33426.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/28/2014 0749	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.13	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.090	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	0.11	1.0
1,1,2-Trichloroethane	1.0	U	0.14	1.0
1,1-Dichloroethane	1.0	U	0.11	1.0
1,1-Dichloroethene	1.0	U	0.19	1.0
1,2,3-Trichlorobenzene	1.0	U	0.16	1.0
1,2,4-Trichlorobenzene	1.0	U	0.19	1.0
1,2-Dichloropropane	1.0	U	0.15	1.0
1,3-Dichlorobenzene	1.0	U	0.16	1.0
1,4-Dichlorobenzene	1.0	U	0.11	1.0
1,4-Dioxane	20	U	13	20
2-Butanone (MEK)	5.0	U	0.63	5.0
2-Hexanone	5.0	U	0.13	5.0
4-Methyl-2-pentanone (MIBK)	5.0	U	0.20	5.0
Acetone	5.0	U	1.7	5.0
Benzene	1.0	U	0.15	1.0
Bromoform	1.0	U	0.17	1.0
Bromomethane	1.0	U	0.43	1.0
Carbon disulfide	1.0	U	0.15	1.0
Carbon tetrachloride	1.0	U	0.15	1.0
Chlorobenzene	1.0	U	0.18	1.0
Chlorobromomethane	1.0	U	0.11	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	0.33	1.0
Chloroform	1.0	U	0.24	1.0
Chloromethane	1.0	U	0.16	1.0
cis-1,2-Dichloroethene	1.0	U	0.11	1.0
cis-1,3-Dichloropropene	1.0	U	0.14	1.0
Cyclohexane	1.0	U	0.13	1.0
Dichlorobromomethane	1.0	U	0.32	1.0
Dichlorodifluoromethane	1.0	U	0.22	1.0
Ethylbenzene	1.0	U	0.17	1.0
Ethylene Dibromide	1.0	U	0.15	1.0
Isopropylbenzene	1.0	U	0.11	1.0
Methyl acetate	5.0	U	0.32	5.0
Methyl tert-butyl ether	1.0	U	0.11	1.0
Methylcyclohexane	1.0	U	0.10	1.0
Methylene Chloride	1.0	U	0.15	1.0
m-Xylene & p-Xylene	1.0	U	0.59	1.0
o-Xylene	1.0	U	0.19	1.0
Styrene	1.0	U	0.28	1.0
Tetrachloroethene	1.0	U	0.12	1.0
Toluene	1.0	U	0.14	1.0
trans-1,2-Dichloroethene	1.0	U	0.13	1.0

Client: AKRF Inc

Job Number: 460-85054-1

Method Blank - Batch: 460-258661

Method: 8260C
Preparation: N/A

Lab Sample ID:	MB 460-258661/6	Analysis Batch:	460-258661	Instrument ID:	CVOAMS9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	K33426.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/28/2014 0749	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
trans-1,3-Dichloropropene	1.0	U	0.10	1.0
Trichloroethene	1.0	U	0.12	1.0
Trichlorofluoromethane	1.0	U	0.16	1.0
Vinyl chloride	1.0	U	0.34	1.0
1,2-Dichloroethane	1.0	U	0.18	1.0
1,2-Dichlorobenzene	1.0	U	0.10	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	102	70 - 130
4-Bromofluorobenzene	98	70 - 130
Dibromofluoromethane (Surr)	105	70 - 130
Toluene-d8 (Surr)	105	70 - 130

Method Blank TICs- Batch: 460-258661

Cas Number	Analyte	RT	Est. Result (ug/K	Qual
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85054-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 460-258661

Method: 8260C
Preparation: N/A

LCS Lab Sample ID:	LCS 460-258661/3	Analysis Batch:	460-258661	Instrument ID:	CVOAMS9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	K33423.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/28/2014 0622	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				5 mL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 460-258661/4	Analysis Batch:	460-258661	Instrument ID:	CVOAMS9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	K33424.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/28/2014 0647	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
1,1,1-Trichloroethane	95	98	82 - 129	3	30		
1,1,2,2-Tetrachloroethane	77	80	66 - 121	4	30		
1,1,2-Trichloro-1,2,2-trifluoroethane	86	87	73 - 134	1	30		
1,1,2-Trichloroethane	95	90	74 - 116	5	30		
1,1-Dichloroethane	92	80	78 - 125	14	30		
1,1-Dichloroethene	88	93	74 - 128	5	30		
1,2,3-Trichlorobenzene	98	90	81 - 123	9	30		
1,2,4-Trichlorobenzene	99	92	81 - 127	6	30		
1,2-Dichloropropane	91	91	72 - 123	1	30		
1,3-Dichlorobenzene	91	92	78 - 120	2	30		
1,4-Dichlorobenzene	87	88	77 - 120	1	30		
1,4-Dioxane	108	134	69 - 142	22	30		
2-Butanone (MEK)	73	73	58 - 140	0	30		
2-Hexanone	102	93	52 - 134	10	30		
4-Methyl-2-pentanone (MIBK)	110	95	55 - 133	15	30		
Acetone	75	90	58 - 139	18	30		
Benzene	104	107	75 - 123	2	30		
Bromoform	88	84	70 - 130	5	30		
Bromomethane	97	105	62 - 150	8	30		
Carbon disulfide	83	94	73 - 127	12	30		
Carbon tetrachloride	93	98	77 - 137	5	30		
Chlorobenzene	91	89	80 - 120	1	30		
Chlorobromomethane	93	92	82 - 127	1	30		
Chlorodibromomethane	93	90	74 - 124	3	30		
Chloroethane	95	100	60 - 140	6	30		
Chloroform	95	98	77 - 122	2	30		
Chloromethane	105	115	48 - 144	10	30		
cis-1,2-Dichloroethene	91	81	82 - 121	11	30		*
cis-1,3-Dichloropropene	103	93	75 - 119	11	30		
Cyclohexane	95	97	66 - 128	3	30		
Dichlorobromomethane	88	91	77 - 122	3	30		
Dichlorodifluoromethane	105	99	52 - 145	5	30		
Ethylbenzene	89	90	80 - 120	1	30		
Ethylene Dibromide	91	86	78 - 117	5	30		
Isopropylbenzene	92	93	80 - 120	0	30		

Client: AKRF Inc

Job Number: 460-85054-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 460-258661

Method: 8260C
Preparation: N/A

LCS Lab Sample ID:	LCS 460-258661/3	Analysis Batch:	460-258661	Instrument ID:	CVOAMS9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	K33423.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/28/2014 0622	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				5 mL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 460-258661/4	Analysis Batch:	460-258661	Instrument ID:	CVOAMS9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	K33424.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/28/2014 0647	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				5 mL
Leach Date:	N/A				

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Methyl acetate	110	96	61 - 137	14	30		
Methyl tert-butyl ether	95	88	75 - 124	8	30		
Methylcyclohexane	88	89	80 - 125	0	30		
Methylene Chloride	94	86	75 - 124	9	30		
m-Xylene & p-Xylene	91	92	79 - 120	1	30		
o-Xylene	93	94	77 - 120	0	30		
Styrene	92	93	78 - 120	1	30		
Tetrachloroethene	92	95	80 - 127	3	30		
Toluene	92	93	82 - 117	1	30		
trans-1,2-Dichloroethene	90	90	83 - 124	1	30		
trans-1,3-Dichloropropene	89	90	74 - 119	2	30		
Trichloroethene	91	92	78 - 122	1	30		
Trichlorofluoromethane	104	110	63 - 147	5	30		
Vinyl chloride	97	109	62 - 132	12	30		
1,2-Dichloroethane	91	99	79 - 120	9	30		
1,2-Dichlorobenzene	91	92	77 - 120	2	30		
1,2-Dibromo-3-Chloropropane	109	110	61 - 125	1	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	91	102	70 - 130
4-Bromofluorobenzene	95	93	70 - 130
Dibromofluoromethane (Surr)	99	100	70 - 130
Toluene-d8 (Surr)	99	97	70 - 130

Client: AKRF Inc

Job Number: 460-85054-1

Method Blank - Batch: 460-258803

Method: 8260C
Preparation: N/A

Lab Sample ID:	MB 460-258803/6	Analysis Batch:	460-258803	Instrument ID:	CVOAMS9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	K33451.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/28/2014 1921	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.13	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.090	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	0.11	1.0
1,1,2-Trichloroethane	1.0	U	0.14	1.0
1,1-Dichloroethane	1.0	U	0.11	1.0
1,1-Dichloroethene	1.0	U	0.19	1.0
1,2,3-Trichlorobenzene	1.0	U	0.16	1.0
1,2,4-Trichlorobenzene	1.0	U	0.19	1.0
1,2-Dichloropropane	1.0	U	0.15	1.0
1,3-Dichlorobenzene	1.0	U	0.16	1.0
1,4-Dichlorobenzene	1.0	U	0.11	1.0
1,4-Dioxane	20	U	13	20
2-Butanone (MEK)	5.0	U	0.63	5.0
2-Hexanone	5.0	U	0.13	5.0
4-Methyl-2-pentanone (MIBK)	5.0	U	0.20	5.0
Acetone	5.0	U	1.7	5.0
Benzene	1.0	U	0.15	1.0
Bromoform	1.0	U	0.17	1.0
Bromomethane	1.0	U	0.43	1.0
Carbon disulfide	1.0	U	0.15	1.0
Carbon tetrachloride	1.0	U	0.15	1.0
Chlorobenzene	1.0	U	0.18	1.0
Chlorobromomethane	1.0	U	0.11	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	0.33	1.0
Chloroform	1.0	U	0.24	1.0
Chloromethane	1.0	U	0.16	1.0
cis-1,2-Dichloroethene	1.0	U	0.11	1.0
cis-1,3-Dichloropropene	1.0	U	0.14	1.0
Cyclohexane	1.0	U	0.13	1.0
Dichlorobromomethane	1.0	U	0.32	1.0
Dichlorodifluoromethane	1.0	U	0.22	1.0
Ethylbenzene	1.0	U	0.17	1.0
Ethylene Dibromide	1.0	U	0.15	1.0
Isopropylbenzene	1.0	U	0.11	1.0
Methyl acetate	5.0	U	0.32	5.0
Methyl tert-butyl ether	1.0	U	0.11	1.0
Methylcyclohexane	1.0	U	0.10	1.0
Methylene Chloride	1.0	U	0.15	1.0
m-Xylene & p-Xylene	1.0	U	0.59	1.0
o-Xylene	1.0	U	0.19	1.0
Styrene	1.0	U	0.28	1.0
Tetrachloroethene	1.0	U	0.12	1.0
Toluene	1.0	U	0.14	1.0
trans-1,2-Dichloroethene	1.0	U	0.13	1.0

Client: AKRF Inc

Job Number: 460-85054-1

Method Blank - Batch: 460-258803

Method: 8260C
Preparation: N/A

Lab Sample ID:	MB 460-258803/6	Analysis Batch:	460-258803	Instrument ID:	CVOAMS9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	K33451.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/28/2014 1921	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
trans-1,3-Dichloropropene	1.0	U	0.10	1.0
Trichloroethene	1.0	U	0.12	1.0
Trichlorofluoromethane	1.0	U	0.16	1.0
Vinyl chloride	1.0	U	0.34	1.0
1,2-Dichloroethane	1.0	U	0.18	1.0
1,2-Dichlorobenzene	1.0	U	0.10	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	90	70 - 130
4-Bromofluorobenzene	89	70 - 130
Dibromofluoromethane (Surr)	96	70 - 130
Toluene-d8 (Surr)	112	70 - 130

Method Blank TICs- Batch: 460-258803

Cas Number	Analyte	RT	Est. Result (ug/K	Qual
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85054-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 460-258803

Method: 8260C
Preparation: N/A

LCS Lab Sample ID:	LCS 460-258803/3	Analysis Batch:	460-258803	Instrument ID:	CVOAMS9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	K33448.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/28/2014 1715	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				5 mL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 460-258803/4	Analysis Batch:	460-258803	Instrument ID:	CVOAMS9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	K33449.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/28/2014 1820	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
1,1,1-Trichloroethane	94	91	82 - 129	3	30		
1,1,2,2-Tetrachloroethane	69	94	66 - 121	31	30		*
1,1,2-Trichloro-1,2,2-trifluoroethane	98	96	73 - 134	2	30		
1,1,2-Trichloroethane	96	85	74 - 116	12	30		
1,1-Dichloroethane	86	80	78 - 125	7	30		
1,1-Dichloroethene	106	98	74 - 128	8	30		
1,2,3-Trichlorobenzene	81	95	81 - 123	15	30		
1,2,4-Trichlorobenzene	86	96	81 - 127	10	30		
1,2-Dichloropropane	96	88	72 - 123	8	30		
1,3-Dichlorobenzene	93	92	78 - 120	2	30		
1,4-Dichlorobenzene	91	89	77 - 120	3	30		
1,4-Dioxane	135	110	69 - 142	21	30		
2-Butanone (MEK)	76	58	58 - 140	27	30		
2-Hexanone	101	93	52 - 134	7	30		
4-Methyl-2-pentanone (MIBK)	100	95	55 - 133	6	30		
Acetone	103	76	58 - 139	30	30		
Benzene	95	88	75 - 123	7	30		
Bromoform	92	102	70 - 130	10	30		
Bromomethane	111	106	62 - 150	4	30		
Carbon disulfide	106	97	73 - 127	9	30		
Carbon tetrachloride	97	92	77 - 137	6	30		
Chlorobenzene	93	94	80 - 120	2	30		
Chlorobromomethane	90	87	82 - 127	3	30		
Chlorodibromomethane	96	83	74 - 124	14	30		
Chloroethane	111	105	60 - 140	6	30		
Chloroform	93	88	77 - 122	6	30		
Chloromethane	112	106	48 - 144	5	30		
cis-1,2-Dichloroethene	86	80	82 - 121	8	30		*
cis-1,3-Dichloropropene	94	86	75 - 119	9	30		
Cyclohexane	85	81	66 - 128	4	30		
Dichlorobromomethane	96	91	77 - 122	5	30		
Dichlorodifluoromethane	98	92	52 - 145	6	30		
Ethylbenzene	95	97	80 - 120	2	30		
Ethylene Dibromide	91	84	78 - 117	7	30		
Isopropylbenzene	96	109	80 - 120	12	30		

Client: AKRF Inc

Job Number: 460-85054-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 460-258803

Method: 8260C
Preparation: N/A

LCS Lab Sample ID:	LCS 460-258803/3	Analysis Batch:	460-258803	Instrument ID:	CVOAMS9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	K33448.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/28/2014 1715	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				5 mL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 460-258803/4	Analysis Batch:	460-258803	Instrument ID:	CVOAMS9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	K33449.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/28/2014 1820	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				5 mL
Leach Date:	N/A				

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Methyl acetate	127	122	61 - 137	4	30		
Methyl tert-butyl ether	84	99	75 - 124	16	30		
Methylcyclohexane	93	86	80 - 125	8	30		
Methylene Chloride	91	104	75 - 124	14	30		
m-Xylene & p-Xylene	96	98	79 - 120	2	30		
o-Xylene	94	102	77 - 120	8	30		
Styrene	97	94	78 - 120	3	30		
Tetrachloroethene	97	90	80 - 127	8	30		
Toluene	95	86	82 - 117	10	30		
trans-1,2-Dichloroethene	84	91	83 - 124	8	30		
trans-1,3-Dichloropropene	92	83	74 - 119	11	30		
Trichloroethene	95	92	78 - 122	3	30		
Trichlorofluoromethane	116	107	63 - 147	8	30		
Vinyl chloride	108	101	62 - 132	7	30		
1,2-Dichloroethane	95	92	79 - 120	3	30		
1,2-Dichlorobenzene	109	94	77 - 120	15	30		
1,2-Dibromo-3-Chloropropane	103	108	61 - 125	4	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	96	92	70 - 130
4-Bromofluorobenzene	97	100	70 - 130
Dibromofluoromethane (Surr)	95	92	70 - 130
Toluene-d8 (Surr)	100	91	70 - 130

Client: AKRF Inc

Job Number: 460-85054-1

Method Blank - Batch: 460-258363

Method: 8270D
Preparation: 3546

Lab Sample ID:	MB 460-258363/1-A	Analysis Batch:	460-258658	Instrument ID:	CBNAMS11
Client Matrix:	Solid	Prep Batch:	460-258363	Lab File ID:	z5508.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0328 g
Analysis Date:	10/28/2014 0740	Units:	ug/Kg	Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Phenol	330	U	11	330
2-Chlorophenol	330	U	8.4	330
2-Methylphenol	330	U	14	330
4-Methylphenol	330	U	9.0	330
2-Nitrophenol	330	U	11	330
2,4-Dimethylphenol	330	U	73	330
2,4-Dichlorophenol	330	U	7.8	330
4-Chloro-3-methylphenol	330	U	14	330
2,4,6-Trichlorophenol	130	U	9.4	130
2,4,5-Trichlorophenol	330	U	33	330
2,4-Dinitrotoluene	67	U	13	67
4-Nitrophenol	670	U	160	670
4,6-Dinitro-2-methylphenol	270	U	88	270
Pentachlorophenol	270	U	40	270
Bis(2-chloroethyl)ether	33	U	7.8	33
N-Nitrosodi-n-propylamine	33	U	11	33
Hexachloroethane	33	U	12	33
Nitrobenzene	33	U	10	33
Isophorone	130	U	7.1	130
Naphthalene	330	U	8.4	330
4-Chloroaniline	330	U	8.5	330
Hexachlorobutadiene	67	U	9.3	67
2-Methylnaphthalene	330	U	7.3	330
Hexachlorocyclopentadiene	330	U	21	330
2-Chloronaphthalene	330	U	7.5	330
2-Nitroaniline	330	U	11	330
Dimethyl phthalate	330	U	9.6	330
Acenaphthylene	330	U	8.5	330
2,6-Dinitrotoluene	67	U	18	67
3-Nitroaniline	330	U	9.8	330
Acenaphthene	330	U	8.0	330
Dibenzofuran	330	U	10	330
2,4-Dinitrophenol	270	U	250	270
Diethyl phthalate	330	U	9.4	330
4-Chlorophenyl phenyl ether	330	U	9.9	330
Fluorene	330	U	7.2	330
4-Nitroaniline	330	U	12	330
N-Nitrosodiphenylamine	330	U	30	330
4-Bromophenyl phenyl ether	330	U	10	330
Hexachlorobenzene	33	U	13	33
Phenanthrene	330	U	8.8	330
Anthracene	330	U	31	330
Carbazole	330	U	8.2	330
Di-n-butyl phthalate	330	U	9.9	330
Fluoranthene	330	U	9.8	330

Client: AKRF Inc

Job Number: 460-85054-1

Method Blank - Batch: 460-258363

Method: 8270D
Preparation: 3546

Lab Sample ID:	MB 460-258363/1-A	Analysis Batch:	460-258658	Instrument ID:	CBNAMS11
Client Matrix:	Solid	Prep Batch:	460-258363	Lab File ID:	z5508.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0328 g
Analysis Date:	10/28/2014 0740	Units:	ug/Kg	Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Pyrene	330	U	15	330
Butyl benzyl phthalate	330	U	10	330
Benzo[a]anthracene	33	U	28	33
Chrysene	330	U	9.0	330
Bis(2-ethylhexyl) phthalate	330	U	13	330
Di-n-octyl phthalate	330	U	17	330
Benzo[b]fluoranthene	33	U	13	33
Benzo[k]fluoranthene	33	U	14	33
Benzo[a]pyrene	33	U	10	33
Indeno[1,2,3-cd]pyrene	33	U	22	33
Dibenz(a,h)anthracene	33	U	17	33
Benzo[g,h,i]perylene	330	U	19	330
1,1'-Biphenyl	330	U	28	330
Acetophenone	330	U	7.2	330
Benzaldehyde	330	U	25	330
Caprolactam	330	U	24	330
Atrazine	130	U	15	130
2,2'-oxybis[1-chloropropane]	330	U	14	330
1,2,4,5-Tetrachlorobenzene	330	U	25	330
2,3,4,6-Tetrachlorophenol	330	U	31	330
3,3'-Dichlorobenzidine	130	U	37	130
Bis(2-chloroethoxy)methane	330	U	10	330

Surrogate	% Rec	Acceptance Limits
Nitrobenzene-d5 (Surr)	77	38 - 105
Phenol-d5 (Surr)	77	41 - 118
Terphenyl-d14 (Surr)	91	16 - 151
2,4,6-Tribromophenol (Surr)	74	10 - 120
2-Fluorophenol (Surr)	73	37 - 125
2-Fluorobiphenyl	72	40 - 109

Method Blank TICs- Batch: 460-258363

Cas Number	Analyte	RT	Est. Result (ug/K	Qual
	Aldol condensation product	3.49	290	A J
	Aldol condensation product	2.65	978	A J
	Unknown	2.89	29800	J

Client: AKRF Inc

Job Number: 460-85054-1

Lab Control Sample - Batch: 460-258363

Method: 8270D
Preparation: 3546

Lab Sample ID:	LCS 460-258363/2-A	Analysis Batch:	460-258658	Instrument ID:	CBNAMS11
Client Matrix:	Solid	Prep Batch:	460-258363	Lab File ID:	z5506.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	14.9765 g
Analysis Date:	10/28/2014 0650	Units:	ug/Kg	Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Phenol	3340	2910	87	54 - 115	
2-Chlorophenol	3340	2840	85	56 - 110	
2-Methylphenol	3340	2820	84	54 - 117	
4-Methylphenol	3340	2910	87	47 - 103	
2-Nitrophenol	3340	2980	89	55 - 101	
2,4-Dimethylphenol	3340	2840	85	56 - 112	
2,4-Dichlorophenol	3340	2920	87	58 - 115	
4-Chloro-3-methylphenol	3340	3340	100	55 - 117	
2,4,6-Trichlorophenol	3340	3030	91	53 - 118	
2,4,5-Trichlorophenol	3340	2930	88	50 - 115	
2,4-Dinitrotoluene	3340	3240	97	53 - 110	
4-Nitrophenol	6680	7060	106	45 - 114	
4,6-Dinitro-2-methylphenol	6680	6270	94	10 - 110	
Pentachlorophenol	6680	5770	86	19 - 113	
Bis(2-chloroethyl)ether	3340	2960	89	44 - 101	
N-Nitrosodi-n-propylamine	3340	3140	94	42 - 107	
Hexachloroethane	3340	2810	84	45 - 90	
Nitrobenzene	3340	2950	88	42 - 106	
Isophorone	3340	2930	88	48 - 97	
Naphthalene	3340	2850	85	53 - 94	
4-Chloroaniline	3340	1080	32	10 - 96	
Hexachlorobutadiene	3340	2970	89	45 - 98	
2-Methylnaphthalene	3340	3010	90	51 - 98	
Hexachlorocyclopentadiene	3340	3040	91	24 - 98	
2-Chloronaphthalene	3340	2890	86	51 - 102	
2-Nitroaniline	3340	2710	81	51 - 109	
Dimethyl phthalate	3340	3110	93	52 - 112	
Acenaphthylene	3340	2980	89	51 - 103	
2,6-Dinitrotoluene	3340	3220	97	51 - 115	
3-Nitroaniline	3340	1650	49	32 - 104	
Acenaphthene	3340	2780	83	46 - 100	
Dibenzofuran	3340	2950	89	52 - 106	
2,4-Dinitrophenol	6680	5700	85	10 - 129	
Diethyl phthalate	3340	3140	94	52 - 114	
4-Chlorophenyl phenyl ether	3340	3060	92	50 - 106	
Fluorene	3340	3120	93	51 - 108	
4-Nitroaniline	3340	2710	81	45 - 106	
N-Nitrosodiphenylamine	3340	3410	102	49 - 106	
4-Bromophenyl phenyl ether	3340	3210	96	44 - 102	
Hexachlorobenzene	3340	3170	95	43 - 104	
Phenanthrene	3340	2970	89	48 - 108	

Client: AKRF Inc

Job Number: 460-85054-1

Lab Control Sample - Batch: 460-258363

Method: 8270D
Preparation: 3546

Lab Sample ID:	LCS 460-258363/2-A	Analysis Batch:	460-258658	Instrument ID:	CBNAMS11
Client Matrix:	Solid	Prep Batch:	460-258363	Lab File ID:	z5506.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	14.9765 g
Analysis Date:	10/28/2014 0650	Units:	ug/Kg	Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Anthracene	3340	2970	89	50 - 107	
Carbazole	3340	2900	87	49 - 104	
Di-n-butyl phthalate	3340	3030	91	50 - 108	
Fluoranthene	3340	2840	85	49 - 108	
Pyrene	3340	3230	97	49 - 116	
Butyl benzyl phthalate	3340	3200	96	49 - 117	
Benzo[a]anthracene	3340	2860	86	46 - 112	
Chrysene	3340	2880	86	45 - 114	
Bis(2-ethylhexyl) phthalate	3340	3230	97	49 - 119	
Di-n-octyl phthalate	3340	3140	94	40 - 106	
Benzo[b]fluoranthene	3340	3080	92	33 - 96	
Benzo[k]fluoranthene	3340	2900	87	35 - 115	
Benzo[a]pyrene	3340	3040	91	36 - 89	*
Indeno[1,2,3-cd]pyrene	3340	3540	106	43 - 109	
Dibenz(a,h)anthracene	3340	3540	106	43 - 107	
Benzo[g,h,i]perylene	3340	3360	101	43 - 106	
1,1'-Biphenyl	3340	2890	87	50 - 105	
Acetophenone	3340	3020	90	40 - 95	
Caprolactam	3340	3070	92	10 - 127	
Atrazine	3340	2610	78	30 - 100	
2,2'-oxybis[1-chloropropane]	3340	3360	101	45 - 102	
1,2,4,5-Tetrachlorobenzene	3340	2890	87	70 - 130	
2,3,4,6-Tetrachlorophenol	3340	3050	91	70 - 130	
3,3'-Dichlorobenzidine	3340	1430	43	24 - 105	
Bis(2-chloroethoxy)methane	3340	2990	90	51 - 100	

Surrogate	% Rec	Acceptance Limits
Nitrobenzene-d5 (Surr)	84	38 - 105
Phenol-d5 (Surr)	79	41 - 118
Terphenyl-d14 (Surr)	96	16 - 151
2,4,6-Tribromophenol (Surr)	91	10 - 120
2-Fluorophenol (Surr)	76	37 - 125
2-Fluorobiphenyl	84	40 - 109

Client: AKRF Inc

Job Number: 460-85054-1

Lab Control Sample - Batch: 460-258363

Method: 8270D
Preparation: 3546

Lab Sample ID:	LCS 460-258363/3-A	Analysis Batch:	460-258658	Instrument ID:	CBNAMS11
Client Matrix:	Solid	Prep Batch:	460-258363	Lab File ID:	z5507.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	14.9522 g
Analysis Date:	10/28/2014 0715	Units:	ug/Kg	Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Benzaldehyde	6690	5930	89	10 - 160	

Surrogate	% Rec	Acceptance Limits
Nitrobenzene-d5 (Surr)	84	38 - 105
Phenol-d5 (Surr)	83	41 - 118
Terphenyl-d14 (Surr)	102	16 - 151
2,4,6-Tribromophenol (Surr)	103	10 - 120
2-Fluorophenol (Surr)	80	37 - 125
2-Fluorobiphenyl	79	40 - 109

Client: AKRF Inc

Job Number: 460-85054-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 460-258363

Method: 8270D
Preparation: 3546

MS Lab Sample ID:	460-85115-E-1-A MS	Analysis Batch:	460-258833	Instrument ID:	CBNAMS11
Client Matrix:	Solid	Prep Batch:	460-258363	Lab File ID:	z5550.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	14.9898 g
Analysis Date:	10/29/2014 0548			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	460-85115-E-1-B MSD	Analysis Batch:	460-258833	Instrument ID:	CBNAMS11
Client Matrix:	Solid	Prep Batch:	460-258363	Lab File ID:	z5551.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0322 g
Analysis Date:	10/29/2014 0612			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Phenol	79	80	54 - 115	1	30		
2-Chlorophenol	76	78	56 - 110	2	30		
2-Methylphenol	76	78	54 - 117	2	30		
4-Methylphenol	79	79	47 - 103	1	30		
2-Nitrophenol	81	84	55 - 101	3	30		
2,4-Dimethylphenol	79	82	56 - 112	4	30		
2,4-Dichlorophenol	79	82	58 - 115	3	30		
4-Chloro-3-methylphenol	89	90	55 - 117	1	30		
2,4,6-Trichlorophenol	86	90	53 - 118	4	30		
2,4,5-Trichlorophenol	82	87	50 - 115	6	30		
2,4-Dinitrotoluene	89	95	53 - 110	5	30		
4-Nitrophenol	91	95	45 - 114	4	30		
4,6-Dinitro-2-methylphenol	90	92	10 - 110	2	30		
Pentachlorophenol	73	80	19 - 113	9	30		
Bis(2-chloroethyl)ether	79	81	44 - 101	2	30		
N-Nitrosodi-n-propylamine	85	84	42 - 107	1	30		
Hexachloroethane	77	77	45 - 90	0	30		
Nitrobenzene	84	85	42 - 106	2	30		
Isophorone	82	82	48 - 97	0	30		
Naphthalene	80	82	53 - 94	2	30		
4-Chloroaniline	35	43	10 - 96	21	30		
Hexachlorobutadiene	83	86	45 - 98	3	30		
2-Methylnaphthalene	82	83	51 - 98	1	30		
Hexachlorocyclopentadiene	74	81	24 - 98	8	30		
2-Chloronaphthalene	84	88	51 - 102	4	30		
2-Nitroaniline	70	81	51 - 109	15	30		
Dimethyl phthalate	89	94	52 - 112	6	30		
Acenaphthylene	85	87	51 - 103	2	30		
2,6-Dinitrotoluene	89	99	51 - 115	11	30		
3-Nitroaniline	48	53	32 - 104	10	30		
Acenaphthene	79	82	46 - 100	4	30		
Dibenzofuran	83	89	52 - 106	6	30		

Client: AKRF Inc

Job Number: 460-85054-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 460-258363

Method: 8270D
Preparation: 3546

MS Lab Sample ID:	460-85115-E-1-A MS	Analysis Batch:	460-258833	Instrument ID:	CBNAMS11
Client Matrix:	Solid	Prep Batch:	460-258363	Lab File ID:	z5550.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	14.9898 g
Analysis Date:	10/29/2014 0548			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	460-85115-E-1-B MSD	Analysis Batch:	460-258833	Instrument ID:	CBNAMS11
Client Matrix:	Solid	Prep Batch:	460-258363	Lab File ID:	z5551.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0322 g
Analysis Date:	10/29/2014 0612			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
2,4-Dinitrophenol	68	70	10 - 129	2	30		
Diethyl phthalate	89	94	52 - 114	5	30		
4-Chlorophenyl phenyl ether	85	91	50 - 106	6	30		
Fluorene	86	91	51 - 108	5	30		
4-Nitroaniline	75	80	45 - 106	6	30		
N-Nitrosodiphenylamine	104	111	49 - 106	6	30		*
4-Bromophenyl phenyl ether	96	101	44 - 102	5	30		
Hexachlorobenzene	95	100	43 - 104	4	30		
Phenanthrene	87	92	48 - 108	6	30		
Anthracene	88	94	50 - 107	6	30		
Carbazole	86	91	49 - 104	6	30		
Di-n-butyl phthalate	91	100	50 - 108	9	30		
Fluoranthene	83	90	49 - 108	7	30		
Pyrene	84	88	49 - 116	5	30		
Butyl benzyl phthalate	88	99	49 - 117	11	30		
Benzo[a]anthracene	81	90	46 - 112	9	30		
Chrysene	82	92	45 - 114	11	30		
Bis(2-ethylhexyl) phthalate	92	101	49 - 119	9	30		
Di-n-octyl phthalate	84	92	40 - 106	9	30		
Benzo[b]fluoranthene	86	92	33 - 96	7	30		
Benzo[k]fluoranthene	86	91	35 - 115	6	30		
Benzo[a]pyrene	88	95	36 - 89	7	30		*
Indeno[1,2,3-cd]pyrene	111	116	43 - 109	4	30	*	*
Dibenz(a,h)anthracene	109	114	43 - 107	5	30	*	*
Benzo[g,h,i]perylene	103	107	43 - 106	4	30		*
1,1'-Biphenyl	84	88	50 - 105	4	30		
Acetophenone	81	82	40 - 95	1	30		
Benzaldehyde	74	72	10 - 160	2	30		
Caprolactam	73	73	10 - 127	1	30		
Atrazine	78	85	30 - 100	8	30		
2,2'-oxybis[1-chloropropane]	86	88	45 - 102	3	30		
1,2,4,5-Tetrachlorobenzene	85	90	70 - 130	5	30		

Client: AKRF Inc

Job Number: 460-85054-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 460-258363

Method: 8270D
Preparation: 3546

MS Lab Sample ID:	460-85115-E-1-A MS	Analysis Batch:	460-258833	Instrument ID:	CBNAMS11
Client Matrix:	Solid	Prep Batch:	460-258363	Lab File ID:	z5550.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	14.9898 g
Analysis Date:	10/29/2014 0548			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	460-85115-E-1-B MSD	Analysis Batch:	460-258833	Instrument ID:	CBNAMS11
Client Matrix:	Solid	Prep Batch:	460-258363	Lab File ID:	z5551.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0322 g
Analysis Date:	10/29/2014 0612			Final Weight/Volume:	1 mL
Prep Date:	10/26/2014 0942			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
2,3,4,6-Tetrachlorophenol	77	84	70 - 130	9	30		
3,3'-Dichlorobenzidine	60	69	24 - 105	14	30		
Bis(2-chloroethoxy)methane	83	85	51 - 100	3	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
Nitrobenzene-d5 (Surr)	78	81	38 - 105
Phenol-d5 (Surr)	72	73	41 - 118
Terphenyl-d14 (Surr)	83	89	16 - 151
2,4,6-Tribromophenol (Surr)	83	86	10 - 120
2-Fluorophenol (Surr)	70	72	37 - 125
2-Fluorobiphenyl	83	86	40 - 109

Client: AKRF Inc

Job Number: 460-85054-1

Method Blank - Batch: 460-257968

Method: 8081B
Preparation: 3546

Lab Sample ID:	MB 460-257968/1-ARA	Analysis Batch:	460-258474	Instrument ID:	CPESTGC9
Client Matrix:	Solid	Prep Batch:	460-257968	Lab File ID:	VR497235.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0000 g
Analysis Date:	10/27/2014 1026	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	10/24/2014 0230	Run Type:	RA	Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
4,4'-DDD	6.7	U	1.3	6.7
4,4'-DDE	6.7	U	1.3	6.7
4,4'-DDT	6.7	U	1.6	6.7
Aldrin	6.7	U	1.4	6.7
alpha-BHC	2.0	U	1.5	2.0
beta-BHC	2.0	U	1.6	2.0
Chlordane (technical)	67	U	19	67
delta-BHC	2.0	U	1.2	2.0
Dieldrin	2.0	U	1.2	2.0
Endosulfan I	6.7	U	1.5	6.7
Endosulfan II	6.7	U	1.3	6.7
Endosulfan sulfate	6.7	U	1.3	6.7
Endrin	6.7	U	1.6	6.7
Endrin aldehyde	6.7	U	1.0	6.7
Endrin ketone	6.7	U	1.3	6.7
gamma-BHC (Lindane)	2.0	U	1.2	2.0
Heptachlor	6.7	U	1.6	6.7
Heptachlor epoxide	6.7	U	1.5	6.7
Methoxychlor	6.7	U	1.6	6.7
Toxaphene	67	U	18	67

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	124	76 - 149
Tetrachloro-m-xylene	120	72 - 136

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	123	76 - 149
Tetrachloro-m-xylene	114	72 - 136

Client: AKRF Inc

Job Number: 460-85054-1

Lab Control Sample - Batch: 460-257968

Method: 8081B
Preparation: 3546

Lab Sample ID:	LCS 460-257968/2-ARA	Analysis Batch:	460-258474	Instrument ID:	CPESTGC9
Client Matrix:	Solid	Prep Batch:	460-257968	Lab File ID:	VR497234.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0000 g
Analysis Date:	10/27/2014 1015	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	10/24/2014 0230	Run Type:	RA	Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
4,4'-DDD	133	167	125	50 - 131	
4,4'-DDE	133	157	118	49 - 130	
4,4'-DDT	133	151	113	48 - 132	
Aldrin	133	149	112	53 - 126	
alpha-BHC	133	155	116	50 - 129	
beta-BHC	133	152	114	51 - 131	
delta-BHC	133	161	121	40 - 130	
Dieldrin	133	156	117	48 - 126	
Endosulfan I	133	147	110	53 - 127	
Endosulfan II	133	149	112	52 - 127	
Endosulfan sulfate	133	148	111	52 - 124	
Endrin	133	150	112	48 - 126	
Endrin aldehyde	133	141	105	57 - 124	
Endrin ketone	133	153	115	55 - 124	
gamma-BHC (Lindane)	133	158	119	52 - 129	
Heptachlor	133	149	112	52 - 128	
Heptachlor epoxide	133	147	110	53 - 122	
Methoxychlor	133	151	113	47 - 126	

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	119	76 - 149
Tetrachloro-m-xylene	106	72 - 136

Lab Control Sample - Batch: 460-257968

Method: 8081B
Preparation: 3546

Lab Sample ID:	LCS 460-257968/2-ARA	Analysis Batch:	460-258474	Instrument ID:	CPESTGC9
Client Matrix:	Solid	Prep Batch:	460-257968	Lab File ID:	VR497234.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0000 g
Analysis Date:	10/27/2014 1015	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	10/24/2014 0230	Run Type:	RA	Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	SECONDARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
4,4'-DDD	133	165	124	50 - 131	
4,4'-DDE	133	156	117	49 - 130	
4,4'-DDT	133	146	110	48 - 132	
Aldrin	133	146	109	53 - 126	
alpha-BHC	133	148	111	50 - 129	
beta-BHC	133	148	111	51 - 131	

Client: AKRF Inc

Job Number: 460-85054-1

Lab Control Sample - Batch: 460-257968

Method: 8081B
Preparation: 3546

Lab Sample ID:	LCS 460-257968/2-ARA	Analysis Batch:	460-258474	Instrument ID:	CPESTGC9
Client Matrix:	Solid	Prep Batch:	460-257968	Lab File ID:	VR497234.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0000 g
Analysis Date:	10/27/2014 1015	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	10/24/2014 0230	Run Type:	RA	Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	SECONDARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
delta-BHC	133	152	114	40 - 130	
Dieldrin	133	155	116	48 - 126	
Endosulfan I	133	146	109	53 - 127	
Endosulfan II	133	144	108	52 - 127	
Endosulfan sulfate	133	148	111	52 - 124	
Endrin	133	144	108	48 - 126	
Endrin aldehyde	133	140	105	57 - 124	
Endrin ketone	133	142	106	55 - 124	
gamma-BHC (Lindane)	133	139	104	52 - 129	
Heptachlor	133	138	104	52 - 128	
Heptachlor epoxide	133	144	108	53 - 122	
Methoxychlor	133	135	101	47 - 126	

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	111	76 - 149
Tetrachloro-m-xylene	101	72 - 136

Client: AKRF Inc

Job Number: 460-85054-1

Method Blank - Batch: 460-258357

Method: 8081B
Preparation: 3546

Lab Sample ID:	MB 460-258357/1-A	Analysis Batch:	460-258474	Instrument ID:	CPESTGC9
Client Matrix:	Solid	Prep Batch:	460-258357	Lab File ID:	VR497223.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0086 g
Analysis Date:	10/27/2014 0759	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	10/26/2014 0847			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
4,4'-DDD	6.7	U	1.3	6.7
4,4'-DDE	6.7	U	1.3	6.7
4,4'-DDT	6.7	U	1.6	6.7
Aldrin	6.7	U	1.4	6.7
alpha-BHC	2.0	U	1.5	2.0
beta-BHC	2.0	U	1.6	2.0
Chlordane (technical)	67	U	19	67
delta-BHC	2.0	U	1.2	2.0
Dieldrin	2.0	U	1.2	2.0
Endosulfan I	6.7	U	1.5	6.7
Endosulfan II	6.7	U	1.3	6.7
Endosulfan sulfate	6.7	U	1.3	6.7
Endrin	6.7	U	1.6	6.7
Endrin aldehyde	6.7	U	1.0	6.7
Endrin ketone	6.7	U	1.3	6.7
gamma-BHC (Lindane)	2.0	U	1.2	2.0
Heptachlor	6.7	U	1.6	6.7
Heptachlor epoxide	6.7	U	1.5	6.7
Methoxychlor	6.7	U	1.6	6.7
Toxaphene	67	U	18	67

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	120	76 - 149
Tetrachloro-m-xylene	112	72 - 136

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	116	76 - 149
Tetrachloro-m-xylene	107	72 - 136

Client: AKRF Inc

Job Number: 460-85054-1

Lab Control Sample - Batch: 460-258357

Method: 8081B
Preparation: 3546

Lab Sample ID:	LCS 460-258357/2-A	Analysis Batch:	460-258474	Instrument ID:	CPESTGC9
Client Matrix:	Solid	Prep Batch:	460-258357	Lab File ID:	VR497224.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0052 g
Analysis Date:	10/27/2014 0810	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	10/26/2014 0847			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
4,4'-DDD	133	161	121	50 - 131	
4,4'-DDE	133	155	116	49 - 130	
4,4'-DDT	133	138	103	48 - 132	
Aldrin	133	150	112	53 - 126	
alpha-BHC	133	156	117	50 - 129	
beta-BHC	133	157	118	51 - 131	
delta-BHC	133	156	117	40 - 130	
Dieldrin	133	153	115	48 - 126	
Endosulfan I	133	144	108	53 - 127	
Endosulfan II	133	145	109	52 - 127	
Endosulfan sulfate	133	142	107	52 - 124	
Endrin	133	146	110	48 - 126	
Endrin aldehyde	133	133	100	57 - 124	
Endrin ketone	133	139	104	55 - 124	
gamma-BHC (Lindane)	133	151	113	52 - 129	
Heptachlor	133	140	105	52 - 128	
Heptachlor epoxide	133	142	107	53 - 122	
Methoxychlor	133	141	105	47 - 126	

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	111	76 - 149
Tetrachloro-m-xylene	110	72 - 136

Lab Control Sample - Batch: 460-258357

Method: 8081B
Preparation: 3546

Lab Sample ID:	LCS 460-258357/2-A	Analysis Batch:	460-258474	Instrument ID:	CPESTGC9
Client Matrix:	Solid	Prep Batch:	460-258357	Lab File ID:	VR497224.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0052 g
Analysis Date:	10/27/2014 0810	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	10/26/2014 0847			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	SECONDARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
4,4'-DDD	133	153	115	50 - 131	
4,4'-DDE	133	148	111	49 - 130	
4,4'-DDT	133	137	103	48 - 132	
Aldrin	133	139	104	53 - 126	
alpha-BHC	133	146	110	50 - 129	
beta-BHC	133	142	107	51 - 131	

Client: AKRF Inc

Job Number: 460-85054-1

Lab Control Sample - Batch: 460-258357

Method: 8081B
Preparation: 3546

Lab Sample ID:	LCS 460-258357/2-A	Analysis Batch:	460-258474	Instrument ID:	CPESTGC9
Client Matrix:	Solid	Prep Batch:	460-258357	Lab File ID:	VR497224.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0052 g
Analysis Date:	10/27/2014 0810	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	10/26/2014 0847			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	SECONDARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
delta-BHC	133	150	113	40 - 130	
Dieldrin	133	145	108	48 - 126	
Endosulfan I	133	136	102	53 - 127	
Endosulfan II	133	133	100	52 - 127	
Endosulfan sulfate	133	137	103	52 - 124	
Endrin	133	142	106	48 - 126	
Endrin aldehyde	133	128	96	57 - 124	
Endrin ketone	133	133	100	55 - 124	
gamma-BHC (Lindane)	133	147	110	52 - 129	
Heptachlor	133	137	103	52 - 128	
Heptachlor epoxide	133	138	104	53 - 122	
Methoxychlor	133	124	93	47 - 126	

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	108	76 - 149
Tetrachloro-m-xylene	98	72 - 136

Client: AKRF Inc

Job Number: 460-85054-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 460-258357

Method: 8081B
Preparation: 3546

MS Lab Sample ID:	460-85054-1	Analysis Batch:	460-258474	Instrument ID:	CPESTGC9
Client Matrix:	Solid	Prep Batch:	460-258357	Lab File ID:	VR497225.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0351 g
Analysis Date:	10/27/2014 0822			Final Weight/Volume:	10 mL
Prep Date:	10/26/2014 0847			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

MSD Lab Sample ID:	460-85054-1	Analysis Batch:	460-258474	Instrument ID:	CPESTGC9
Client Matrix:	Solid	Prep Batch:	460-258357	Lab File ID:	VR497226.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0116 g
Analysis Date:	10/27/2014 0833			Final Weight/Volume:	10 mL
Prep Date:	10/26/2014 0847			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
4,4'-DDD	98	85	69 - 150	15	30		
4,4'-DDE	93	81	70 - 147	14	30		
4,4'-DDT	92	81	63 - 146	13	30		
Aldrin	87	77	69 - 138	12	30		
alpha-BHC	104	88	68 - 133	17	30		
beta-BHC	111	114	67 - 137	3	30		
delta-BHC	93	78	65 - 141	18	30		
Dieldrin	91	78	63 - 129	15	30		
Endosulfan I	85	73	69 - 140	15	30		
Endosulfan II	87	76	66 - 136	13	30		
Endosulfan sulfate	89	84	65 - 137	6	30		
Endrin	93	81	67 - 142	14	30		
Endrin aldehyde	78	65	67 - 134	19	30		*
Endrin ketone	90	83	68 - 146	8	30		
gamma-BHC (Lindane)	117	73	68 - 134	47	30		p *
Heptachlor	88	76	67 - 136	15	30		
Heptachlor epoxide	87	72	68 - 136	19	30		
Methoxychlor	120	139	52 - 150	15	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
DCB Decachlorobiphenyl	94	101	76 - 149
Tetrachloro-m-xylene	83	72	72 - 136

Client: AKRF Inc

Job Number: 460-85054-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 460-258357

Method: 8081B
Preparation: 3546

MS Lab Sample ID:	460-85054-1	Analysis Batch:	460-258474	Instrument ID:	CPESTGC9
Client Matrix:	Solid	Prep Batch:	460-258357	Lab File ID:	VR497225.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0351 g
Analysis Date:	10/27/2014 0822			Final Weight/Volume:	10 mL
Prep Date:	10/26/2014 0847			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	SECONDARY

MSD Lab Sample ID:	460-85054-1	Analysis Batch:	460-258474	Instrument ID:	CPESTGC9
Client Matrix:	Solid	Prep Batch:	460-258357	Lab File ID:	VR497226.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0116 g
Analysis Date:	10/27/2014 0833			Final Weight/Volume:	10 mL
Prep Date:	10/26/2014 0847			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	SECONDARY

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
4,4'-DDD	92	76	69 - 150	19	30		
4,4'-DDE	87	73	70 - 147	18	30		
4,4'-DDT	82	76	63 - 146	8	30		
Aldrin	87	76	69 - 138	13	30		
alpha-BHC	98	83	68 - 133	16	30		
beta-BHC	89	79	67 - 137	12	30		
delta-BHC	88	74	65 - 141	18	30		
Dieldrin	88	71	63 - 129	20	30		
Endosulfan I	81	65	69 - 140	21	30		*
Endosulfan II	80	66	66 - 136	19	30		
Endosulfan sulfate	80	81	65 - 137	1	30		
Endrin	92	75	67 - 142	19	30		
Endrin aldehyde	69	57	67 - 134	18	30		*
Endrin ketone	74	74	68 - 146	1	30		
gamma-BHC (Lindane)	86	128	68 - 134	39	30		*
Heptachlor	83	71	67 - 136	15	30		
Heptachlor epoxide	84	71	68 - 136	16	30		
Methoxychlor	90	104	52 - 150	14	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
DCB Decachlorobiphenyl	77	99	76 - 149
Tetrachloro-m-xylene	82	72	72 - 136

Client: AKRF Inc

Job Number: 460-85054-1

Method Blank - Batch: 460-258709

Method: 8081B
Preparation: 3546

Lab Sample ID:	MB 460-258709/1-A	Analysis Batch:	460-258933	Instrument ID:	CPESTGC5
Client Matrix:	Solid	Prep Batch:	460-258709	Lab File ID:	PR016602.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0000 g
Analysis Date:	10/29/2014 1620	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	10/28/2014 0841			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
4,4'-DDD	6.7	U	1.3	6.7
4,4'-DDE	6.7	U	1.3	6.7
4,4'-DDT	6.7	U	1.6	6.7
Aldrin	6.7	U	1.4	6.7
alpha-BHC	2.0	U	1.5	2.0
beta-BHC	2.0	U	1.6	2.0
Chlordane (technical)	67	U	19	67
delta-BHC	2.0	U	1.2	2.0
Dieldrin	2.0	U	1.2	2.0
Endosulfan I	6.7	U	1.5	6.7
Endosulfan II	6.7	U	1.3	6.7
Endosulfan sulfate	6.7	U	1.3	6.7
Endrin	6.7	U	1.6	6.7
Endrin aldehyde	6.7	U	1.0	6.7
Endrin ketone	6.7	U	1.3	6.7
gamma-BHC (Lindane)	2.0	U	1.2	2.0
Heptachlor	6.7	U	1.6	6.7
Heptachlor epoxide	6.7	U	1.5	6.7
Methoxychlor	6.7	U	1.6	6.7
Toxaphene	67	U	18	67

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	106	76 - 149
Tetrachloro-m-xylene	95	72 - 136

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	99	76 - 149
Tetrachloro-m-xylene	93	72 - 136

Client: AKRF Inc

Job Number: 460-85054-1

Lab Control Sample - Batch: 460-258709

Method: 8081B
Preparation: 3546

Lab Sample ID:	LCS 460-258709/2-A	Analysis Batch:	460-258933	Instrument ID:	CPESTGC5
Client Matrix:	Solid	Prep Batch:	460-258709	Lab File ID:	PR016601.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0000 g
Analysis Date:	10/29/2014 1606	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	10/28/2014 0841			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
4,4'-DDD	133	152	114	50 - 131	
4,4'-DDE	133	146	110	49 - 130	
4,4'-DDT	133	150	112	48 - 132	
Aldrin	133	133	99	53 - 126	
alpha-BHC	133	142	107	50 - 129	
beta-BHC	133	134	100	51 - 131	
delta-BHC	133	138	103	40 - 130	
Dieldrin	133	142	106	48 - 126	
Endosulfan I	133	147	110	53 - 127	
Endosulfan II	133	144	108	52 - 127	
Endosulfan sulfate	133	144	108	52 - 124	
Endrin	133	144	108	48 - 126	
Endrin aldehyde	133	138	103	57 - 124	
Endrin ketone	133	134	100	55 - 124	
gamma-BHC (Lindane)	133	140	105	52 - 129	
Heptachlor	133	134	101	52 - 128	
Heptachlor epoxide	133	134	101	53 - 122	
Methoxychlor	133	146	109	47 - 126	

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	106	76 - 149
Tetrachloro-m-xylene	106	72 - 136

Lab Control Sample - Batch: 460-258709

Method: 8081B
Preparation: 3546

Lab Sample ID:	LCS 460-258709/2-A	Analysis Batch:	460-258933	Instrument ID:	CPESTGC5
Client Matrix:	Solid	Prep Batch:	460-258709	Lab File ID:	PR016601.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0000 g
Analysis Date:	10/29/2014 1606	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	10/28/2014 0841			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	SECONDARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
4,4'-DDD	133	146	110	50 - 131	
4,4'-DDE	133	136	102	49 - 130	
4,4'-DDT	133	149	112	48 - 132	
Aldrin	133	131	98	53 - 126	
alpha-BHC	133	128	96	50 - 129	
beta-BHC	133	130	98	51 - 131	

Client: AKRF Inc

Job Number: 460-85054-1

Lab Control Sample - Batch: 460-258709

Method: 8081B
Preparation: 3546

Lab Sample ID:	LCS 460-258709/2-A	Analysis Batch:	460-258933	Instrument ID:	CPESTGC5
Client Matrix:	Solid	Prep Batch:	460-258709	Lab File ID:	PR016601.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0000 g
Analysis Date:	10/29/2014 1606	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	10/28/2014 0841			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	SECONDARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
delta-BHC	133	135	101	40 - 130	
Dieldrin	133	140	105	48 - 126	
Endosulfan I	133	138	103	53 - 127	
Endosulfan II	133	140	105	52 - 127	
Endosulfan sulfate	133	138	104	52 - 124	
Endrin	133	140	105	48 - 126	
Endrin aldehyde	133	136	102	57 - 124	
Endrin ketone	133	124	93	55 - 124	
gamma-BHC (Lindane)	133	132	99	52 - 129	
Heptachlor	133	129	97	52 - 128	
Heptachlor epoxide	133	132	99	53 - 122	
Methoxychlor	133	141	106	47 - 126	

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	100	76 - 149
Tetrachloro-m-xylene	102	72 - 136

Client: AKRF Inc

Job Number: 460-85054-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 460-258709

Method: 8081B
Preparation: 3546

MS Lab Sample ID:	460-85122-A-5-J MS	Analysis Batch:	460-258929	Instrument ID:	CPESTGC9
Client Matrix:	Solid	Prep Batch:	460-258709	Lab File ID:	VR497289.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0326 g
Analysis Date:	10/29/2014 1142			Final Weight/Volume:	10 mL
Prep Date:	10/28/2014 0841			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

MSD Lab Sample ID:	460-85122-A-5-K MSD	Analysis Batch:	460-258929	Instrument ID:	CPESTGC9
Client Matrix:	Solid	Prep Batch:	460-258709	Lab File ID:	VR497290.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0284 g
Analysis Date:	10/29/2014 1154			Final Weight/Volume:	10 mL
Prep Date:	10/28/2014 0841			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
4,4'-DDD	110	130	69 - 150	17	30		
4,4'-DDE	108	129	70 - 147	17	30		
4,4'-DDT	98	116	63 - 146	18	30		
Aldrin	100	119	69 - 138	18	30		
alpha-BHC	111	132	68 - 133	17	30		
beta-BHC	105	122	67 - 137	15	30		
delta-BHC	113	133	65 - 141	17	30		
Dieldrin	105	125	63 - 129	17	30		
Endosulfan I	100	117	69 - 140	16	30		
Endosulfan II	95	112	66 - 136	16	30		
Endosulfan sulfate	94	112	65 - 137	17	30		
Endrin	104	123	67 - 142	17	30		
Endrin aldehyde	86	101	67 - 134	16	30		
Endrin ketone	96	117	68 - 146	20	30		
gamma-BHC (Lindane)	116	136	68 - 134	16	30		*
Heptachlor	103	121	67 - 136	17	30		
Heptachlor epoxide	101	119	68 - 136	16	30		
Methoxychlor	100	119	52 - 150	18	30		

Surrogate	MS % Rec		MSD % Rec		Acceptance Limits
DCB Decachlorobiphenyl	87	p	162	*	76 - 149
Tetrachloro-m-xylene	97		115		72 - 136

Client: AKRF Inc

Job Number: 460-85054-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 460-258709

Method: 8081B
Preparation: 3546

MS Lab Sample ID:	460-85122-A-5-J MS	Analysis Batch:	460-258929	Instrument ID:	CPESTGC9
Client Matrix:	Solid	Prep Batch:	460-258709	Lab File ID:	VR497289.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0326 g
Analysis Date:	10/29/2014 1142			Final Weight/Volume:	10 mL
Prep Date:	10/28/2014 0841			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	SECONDARY

MSD Lab Sample ID:	460-85122-A-5-K MSD	Analysis Batch:	460-258929	Instrument ID:	CPESTGC9
Client Matrix:	Solid	Prep Batch:	460-258709	Lab File ID:	VR497290.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0284 g
Analysis Date:	10/29/2014 1154			Final Weight/Volume:	10 mL
Prep Date:	10/28/2014 0841			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	SECONDARY

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
4,4'-DDD	106	128	69 - 150	19	30		
4,4'-DDE	100	124	70 - 147	21	30		
4,4'-DDT	97	115	63 - 146	17	30		
Aldrin	92	112	69 - 138	20	30		
alpha-BHC	105	118	68 - 133	11	30		
beta-BHC	82	97	67 - 137	17	30		
delta-BHC	99	116	65 - 141	16	30		
Dieldrin	99	121	63 - 129	20	30		
Endosulfan I	96	117	69 - 140	20	30		
Endosulfan II	95	112	66 - 136	16	30		
Endosulfan sulfate	89	103	65 - 137	15	30		
Endrin	99	117	67 - 142	17	30		
Endrin aldehyde	86	96	67 - 134	11	30		
Endrin ketone	90	100	68 - 146	11	30		
gamma-BHC (Lindane)	112	126	68 - 134	12	30		
Heptachlor	92	109	67 - 136	17	30		
Heptachlor epoxide	95	115	68 - 136	19	30		
Methoxychlor	95	104	52 - 150	9	30		

Surrogate	MS % Rec		MSD % Rec	Acceptance Limits
DCB Decachlorobiphenyl	183	*	108	76 - 149
Tetrachloro-m-xylene	94		113	72 - 136

Client: AKRF Inc

Job Number: 460-85054-1

Method Blank - Batch: 460-258361

Method: 8082A
Preparation: 3546

Lab Sample ID:	MB 460-258361/1-A	Analysis Batch:	460-258484	Instrument ID:	CPESTGC7
Client Matrix:	Solid	Prep Batch:	460-258361	Lab File ID:	OR223279.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0054 g
Analysis Date:	10/27/2014 1033	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	10/26/2014 0851			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
Aroclor 1016	67	U	15	67
Aroclor 1221	67	U	15	67
Aroclor 1232	67	U	15	67
Aroclor 1242	67	U	15	67
Aroclor 1248	67	U	15	67
Aroclor 1254	67	U	19	67
Aroclor 1260	67	U	19	67
Aroclor-1262	67	U	19	67
Aroclor 1268	67	U	19	67
Polychlorinated biphenyls, Total	67	U	19	67

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	114	53 - 150

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	108	53 - 150

Client: AKRF Inc

Job Number: 460-85054-1

Lab Control Sample - Batch: 460-258361

Method: 8082A
Preparation: 3546

Lab Sample ID:	LCS 460-258361/2-A	Analysis Batch:	460-258484	Instrument ID:	CPESTGC7
Client Matrix:	Solid	Prep Batch:	460-258361	Lab File ID:	OR223278.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0029 g
Analysis Date:	10/27/2014 1017	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	10/26/2014 0851			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aroclor 1016	333	388	116	64 - 145	
Aroclor 1260	333	349	105	59 - 150	

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	99	53 - 150

Lab Control Sample - Batch: 460-258361

Method: 8082A
Preparation: 3546

Lab Sample ID:	LCS 460-258361/2-A	Analysis Batch:	460-258484	Instrument ID:	CPESTGC7
Client Matrix:	Solid	Prep Batch:	460-258361	Lab File ID:	OR223278.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0029 g
Analysis Date:	10/27/2014 1017	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	10/26/2014 0851			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	SECONDARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aroclor 1016	333	337	101	64 - 145	
Aroclor 1260	333	342	102	59 - 150	

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	96	53 - 150

Client: AKRF Inc

Job Number: 460-85054-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 460-258361

Method: 8082A
Preparation: 3546

MS Lab Sample ID:	460-85054-9	Analysis Batch:	460-258484	Instrument ID:	CPESTGC7
Client Matrix:	Solid	Prep Batch:	460-258361	Lab File ID:	OR223277.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0511 g
Analysis Date:	10/27/2014 1001			Final Weight/Volume:	10 mL
Prep Date:	10/26/2014 0851			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

MSD Lab Sample ID:	460-85054-9	Analysis Batch:	460-258484	Instrument ID:	CPESTGC7
Client Matrix:	Solid	Prep Batch:	460-258361	Lab File ID:	OR223276.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0324 g
Analysis Date:	10/27/2014 0944			Final Weight/Volume:	10 mL
Prep Date:	10/26/2014 0851			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aroclor 1016	113	93	64 - 145	19	30		
Aroclor 1260	104	86	59 - 150	19	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
DCB Decachlorobiphenyl	101	80	53 - 150

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 460-258361

Method: 8082A
Preparation: 3546

MS Lab Sample ID:	460-85054-9	Analysis Batch:	460-258484	Instrument ID:	CPESTGC7
Client Matrix:	Solid	Prep Batch:	460-258361	Lab File ID:	OR223277.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0511 g
Analysis Date:	10/27/2014 1001			Final Weight/Volume:	10 mL
Prep Date:	10/26/2014 0851			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	SECONDARY

MSD Lab Sample ID:	460-85054-9	Analysis Batch:	460-258484	Instrument ID:	CPESTGC7
Client Matrix:	Solid	Prep Batch:	460-258361	Lab File ID:	OR223276.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0324 g
Analysis Date:	10/27/2014 0944			Final Weight/Volume:	10 mL
Prep Date:	10/26/2014 0851			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	SECONDARY

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aroclor 1016	104	87	64 - 145	18	30		
Aroclor 1260	94	74	59 - 150	23	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
DCB Decachlorobiphenyl	92	74	53 - 150

Client: AKRF Inc

Job Number: 460-85054-1

Method Blank - Batch: 460-258201

Method: 6010C
Preparation: 3050B

Lab Sample ID:	MB 460-258201/1-A ^2	Analysis Batch:	460-258582	Instrument ID:	ICP5
Client Matrix:	Solid	Prep Batch:	460-258201	Lab File ID:	10272014.asc
Dilution:	2.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	10/27/2014 1629	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	10/24/2014 1717				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Silver	1.0	U	0.19	1.0
Arsenic	1.5	U	0.41	1.5
Barium	20.0	U	0.87	20.0
Calcium	500	U	38.3	500
Cadmium	0.40	U	0.14	0.40
Cobalt	5.0	U	0.45	5.0
Chromium	1.0	U	0.40	1.0
Copper	2.5	U	0.88	2.5
Iron	15.0	U	12.5	15.0
Potassium	500	U	13.8	500
Magnesium	500	U	33.2	500
Manganese	1.5	U	0.43	1.5
Sodium	500	U	37.8	500
Nickel	4.0	U	0.90	4.0
Lead	1.0	U	0.41	1.0
Antimony	2.0	U	0.76	2.0
Selenium	2.0	U	0.57	2.0
Thallium	2.0	U	0.98	2.0
Vanadium	5.0	U	0.41	5.0
Zinc	3.0	U	0.86	3.0

Method Blank - Batch: 460-258201

Method: 6010C
Preparation: 3050B

Lab Sample ID:	MB 460-258201/1-A ^2	Analysis Batch:	460-258732	Instrument ID:	ICP4
Client Matrix:	Solid	Prep Batch:	460-258201	Lab File ID:	258201.asc
Dilution:	2.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	10/27/2014 2209	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	10/24/2014 1717				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	20.0	U	11.1	20.0
Beryllium	0.20	U	0.14	0.20

Client: AKRF Inc

Job Number: 460-85054-1

LCS-Certified Reference Material - Batch: 460-258201

Method: 6010C
Preparation: 3050B

Lab Sample ID:	LCSSRM 460-258201/2-A ^4	Analysis Batch:	460-258582	Instrument ID:	ICP5
Client Matrix:	Solid	Prep Batch:	460-258201	Lab File ID:	10272014.asc
Dilution:	4.0	Leach Batch:	N/A	Initial Weight/Volume:	1.01 g
Analysis Date:	10/27/2014 1633	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	10/24/2014 1717				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Silver	40.2	38.30	95.3	74.9 - 125.4	
Arsenic	139	134.8	96.9	78.4 - 121.6	
Barium	203	217.8	107.3	82.8 - 117.7	
Calcium	6040	6184	102.4	80.6 - 119.4	
Cadmium	96.0	102.7	106.9	81.7 - 117.7	
Cobalt	148	161.0	108.8	83.1 - 116.9	
Chromium	136	144.8	106.5	78.7 - 120.6	
Copper	168	164.8	98.1	81.5 - 118.5	
Iron	14100	14450	102.5	43.0 - 156.7	
Potassium	2540	2408	94.8	68.9 - 131.1	
Magnesium	2800	2792	99.7	75.4 - 125.0	
Manganese	297	314.1	105.7	80.5 - 119.2	
Sodium	761	738.8	97.1	70.3 - 129.6	J
Nickel	123	134.3	109.2	82.1 - 118.7	
Lead	133	137.2	103.2	82.0 - 118.8	
Antimony	88.8	44.87	50.5	0.0 - 209.5	
Selenium	177	170.4	96.2	77.4 - 122.6	
Thallium	138	154.7	112.1	78.3 - 121.7	
Vanadium	107	110.5	103.2	76.6 - 123.4	
Zinc	189	202.0	106.9	81.5 - 118.5	

LCS-Certified Reference Material - Batch: 460-258201

Method: 6010C
Preparation: 3050B

Lab Sample ID:	LCSSRM 460-258201/2-A	Analysis Batch:	460-258732	Instrument ID:	ICP4
Client Matrix:	Solid	Prep Batch:	460-258201	Lab File ID:	258201.asc
Dilution:	4.0	Leach Batch:	N/A	Initial Weight/Volume:	1.01 g
Analysis Date:	10/27/2014 2212	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	10/24/2014 1717				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	7460	7347	98.5	47.1 - 152.8	
Beryllium	96.1	96.79	100.7	82.8 - 117.6	

Client: AKRF Inc

Job Number: 460-85054-1

Matrix Spike - Batch: 460-258201

Method: 6010C
Preparation: 3050B

Lab Sample ID:	460-85054-7	Analysis Batch:	460-258582	Instrument ID:	ICP5
Client Matrix:	Solid	Prep Batch:	460-258201	Lab File ID:	10272014.asc
Dilution:	4.0	Leach Batch:	N/A	Initial Weight/Volume:	1.22 g
Analysis Date:	10/27/2014 1615	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	10/24/2014 1717				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Silver	2.0	U	4.45	4.14	93	75 - 125	
Arsenic	6.8		178	171.7	93	75 - 125	
Barium	96.3		178	278.3	102	75 - 125	
Calcium	27600		1780	25670	-108	75 - 125	4
Cadmium	0.78	U	4.45	4.28	96	75 - 125	
Cobalt	6.7	J	44.5	49.82	97	75 - 125	
Chromium	18.6		17.8	36.94	103	75 - 125	
Copper	52.3		22.2	70.29	81	75 - 125	
Iron	20000		88.9	17130	-3180	75 - 125	4
Potassium	1430		1780	3184	98	75 - 125	
Magnesium	4880		1780	5683	45	75 - 125	N
Manganese	332		44.5	374.0	96	75 - 125	4
Sodium	291	J	1780	2029	98	75 - 125	
Nickel	15.2		44.5	59.12	99	75 - 125	
Lead	131		44.5	171.0	90	75 - 125	
Antimony	3.9	U	44.5	16.73	38	75 - 125	N
Selenium	1.4	J	178	164.0	91	75 - 125	
Thallium	3.9	U	178	175.5	99	75 - 125	
Vanadium	24.9		44.5	70.73	103	75 - 125	
Zinc	140		44.5	180.9	92	75 - 125	

Matrix Spike - Batch: 460-258201

Method: 6010C
Preparation: 3050B

Lab Sample ID:	460-85054-7	Analysis Batch:	460-258732	Instrument ID:	ICP4
Client Matrix:	Solid	Prep Batch:	460-258201	Lab File ID:	258201.asc
Dilution:	4.0	Leach Batch:	N/A	Initial Weight/Volume:	1.22 g
Analysis Date:	10/27/2014 2238	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	10/24/2014 1717				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	6970		178	7883	515	75 - 125	4
Beryllium	0.37	J	4.45	4.62	96	75 - 125	

Client: AKRF Inc

Job Number: 460-85054-1

Duplicate - Batch: 460-258201

Method: 6010C
Preparation: 3050B

Lab Sample ID:	460-85054-7	Analysis Batch:	460-258582	Instrument ID:	ICP5
Client Matrix:	Solid	Prep Batch:	460-258201	Lab File ID:	10272014.asc
Dilution:	4.0	Leach Batch:	N/A	Initial Weight/Volume:	1.28 g
Analysis Date:	10/27/2014 1618	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	10/24/2014 1717				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Silver	2.0	U	1.7	NC	20	U
Arsenic	6.8		6.54	4	20	
Barium	96.3		92.53	4	20	
Calcium	27600		28040	2	20	
Cadmium	0.78	U	0.68	NC	20	U
Cobalt	6.7	J	6.73	0.1	20	J
Chromium	18.6		19.82	6	20	
Copper	52.3		49.45	6	20	
Iron	20000		18410	8	20	
Potassium	1430		1450	1	20	
Magnesium	4880		4619	6	20	
Manganese	332		320.2	3	20	
Sodium	291	J	302.9	4	20	J
Nickel	15.2		15.35	1	20	
Lead	131		142.9	9	20	
Antimony	3.9	U	3.4	NC	20	U
Selenium	1.4	J	1.01	29	20	J
Thallium	3.9	U	3.4	NC	20	U
Vanadium	24.9		26.75	7	20	
Zinc	140		142.5	2	20	

Duplicate - Batch: 460-258201

Method: 6010C
Preparation: 3050B

Lab Sample ID:	460-85054-7	Analysis Batch:	460-258732	Instrument ID:	ICP4
Client Matrix:	Solid	Prep Batch:	460-258201	Lab File ID:	258201.asc
Dilution:	4.0	Leach Batch:	N/A	Initial Weight/Volume:	1.28 g
Analysis Date:	10/27/2014 2216	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	10/24/2014 1717				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Aluminum	6970		6325	10	20	
Beryllium	0.37	J	0.328	11	20	J

Client: AKRF Inc

Job Number: 460-85054-1

Method Blank - Batch: 460-258322

Method: 6010C
Preparation: 3050B

Lab Sample ID:	MB 460-258322/1-A ^2	Analysis Batch:	460-258405	Instrument ID:	ICP5
Client Matrix:	Solid	Prep Batch:	460-258322	Lab File ID:	10262014A.asc
Dilution:	2.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	10/26/2014 1940	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	10/25/2014 1647				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Silver	1.0	U	0.19	1.0
Aluminum	20.0	U	11.1	20.0
Arsenic	1.5	U	0.41	1.5
Barium	20.0	U	0.87	20.0
Beryllium	0.20	U	0.14	0.20
Calcium	500	U	38.3	500
Cadmium	0.40	U	0.14	0.40
Cobalt	5.0	U	0.45	5.0
Chromium	1.0	U	0.40	1.0
Copper	2.5	U	0.88	2.5
Iron	15.0	U	12.5	15.0
Potassium	500	U	13.8	500
Magnesium	500	U	33.2	500
Manganese	1.5	U	0.43	1.5
Sodium	500	U	37.8	500
Nickel	4.0	U	0.90	4.0
Lead	1.0	U	0.41	1.0
Antimony	2.0	U	0.76	2.0
Selenium	2.0	U	0.57	2.0
Thallium	2.0	U	0.98	2.0
Vanadium	5.0	U	0.41	5.0
Zinc	3.0	U	0.86	3.0

Client: AKRF Inc

Job Number: 460-85054-1

LCS-Certified Reference Material - Batch: 460-258322

Method: 6010C
Preparation: 3050B

Lab Sample ID:	LCSSRM 460-258322/2-A ^4	Analysis Batch:	460-258405	Instrument ID:	ICP5
Client Matrix:	Solid	Prep Batch:	460-258322	Lab File ID:	10262014A.asc
Dilution:	4.0	Leach Batch:	N/A	Initial Weight/Volume:	1.03 g
Analysis Date:	10/26/2014 1943	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	10/25/2014 1647				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Silver	40.2	37.05	92.2	74.9 - 125.4	
Aluminum	7460	6835	91.6	47.1 - 152.8	
Arsenic	139	131.8	94.8	78.4 - 121.6	
Barium	203	197.3	97.2	82.8 - 117.7	
Beryllium	96.1	93.77	97.6	82.8 - 117.6	
Calcium	6040	5967	98.8	80.6 - 119.4	
Cadmium	96.0	99.17	103.3	81.7 - 117.7	
Cobalt	148	153.3	103.6	83.1 - 116.9	
Chromium	136	136.8	100.6	78.7 - 120.6	
Copper	168	159.1	94.7	81.5 - 118.5	
Iron	14100	13970	99.1	43.0 - 156.7	
Potassium	2540	2221	87.5	68.9 - 131.1	
Magnesium	2800	2590	92.5	75.4 - 125.0	
Manganese	297	293.2	98.7	80.5 - 119.2	
Sodium	761	618.3	81.2	70.3 - 129.6	J
Nickel	123	129.7	105.4	82.1 - 118.7	
Lead	133	136.4	102.6	82.0 - 118.8	
Antimony	88.8	47.86	53.9	0.0 - 209.5	
Selenium	177	168.8	95.4	77.4 - 122.6	
Thallium	138	153.1	110.9	78.3 - 121.7	
Vanadium	107	103.6	96.8	76.6 - 123.4	
Zinc	189	193.0	102.1	81.5 - 118.5	

Client: AKRF Inc

Job Number: 460-85054-1

Matrix Spike - Batch: 460-258322

Method: 6010C
Preparation: 3050B

Lab Sample ID:	460-85054-E-12-C MS ^4	Analysis Batch:	460-258405	Instrument ID:	ICP5
Client Matrix:	Solid	Prep Batch:	460-258322	Lab File ID:	10262014A.asc
Dilution:	4.0	Leach Batch:	N/A	Initial Weight/Volume:	1.11 g
Analysis Date:	10/26/2014 1954	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	10/25/2014 1647				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Silver	2.2	U	5.39	4.66	86	75 - 125	
Aluminum	9790		216	12080	1063	75 - 125	4
Arsenic	3.9		216	194.9	89	75 - 125	
Barium	89.6		216	290.6	93	75 - 125	
Beryllium	0.44	U	5.39	5.28	98	75 - 125	
Calcium	42500		2160	31220	-526	75 - 125	4
Cadmium	0.88	U	5.39	5.08	94	75 - 125	
Cobalt	6.0	J	53.9	57.37	95	75 - 125	
Chromium	17.7		21.6	42.32	114	75 - 125	
Copper	20.6		26.9	49.82	108	75 - 125	
Iron	19200		108	20860	1517	75 - 125	4
Potassium	1050	J	2160	3197	99	75 - 125	
Magnesium	20400		2160	17010	-155	75 - 125	4
Manganese	1100		53.9	874.0	-412	75 - 125	4
Sodium	344	J	2160	2326	92	75 - 125	
Nickel	13.1		53.9	65.21	97	75 - 125	
Lead	31.3		53.9	73.82	79	75 - 125	
Antimony	4.4	U	53.9	23.91	44	75 - 125	N
Selenium	4.4	U	216	187.6	87	75 - 125	
Thallium	4.4	U	216	205.3	95	75 - 125	
Vanadium	24.3		53.9	82.22	108	75 - 125	
Zinc	31.2		53.9	86.77	103	75 - 125	

Client: AKRF Inc

Job Number: 460-85054-1

Duplicate - Batch: 460-258322

Method: 6010C
Preparation: 3050B

Lab Sample ID:	460-85054-12	Analysis Batch:	460-258405	Instrument ID:	ICP5
Client Matrix:	Solid	Prep Batch:	460-258322	Lab File ID:	10262014A.asc
Dilution:	4.0	Leach Batch:	N/A	Initial Weight/Volume:	1.13 g
Analysis Date:	10/26/2014 1926	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	10/25/2014 1647				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Silver	2.2	U	2.1	NC	20	U
Aluminum	9790		9214	6	20	
Arsenic	3.9		3.98	1	20	
Barium	89.6		83.76	7	20	
Beryllium	0.44	U	0.290	NC	20	J
Calcium	42500		35600	18	20	
Cadmium	0.88	U	0.85	NC	20	U
Cobalt	6.0	J	7.29	20	20	J
Copper	20.6		22.45	9	20	
Potassium	1050	J	1162	10	20	
Manganese	1100		1000	9	20	
Sodium	344	J	274.9	22	20	J
Nickel	13.1		16.50	23	20	
Lead	31.3		29.01	7	20	
Antimony	4.4	U	4.2	NC	20	U
Selenium	4.4	U	4.2	NC	20	U
Thallium	4.4	U	4.2	NC	20	U
Vanadium	24.3		34.33	34	20	
Zinc	31.2		37.21	18	20	

Client: AKRF Inc

Job Number: 460-85054-1

Method Blank - Batch: 460-258289

Method: 7471B
Preparation: 7471B

Lab Sample ID:	MB 460-258289/1-A	Analysis Batch:	460-258332	Instrument ID:	LEEMAN5
Client Matrix:	Solid	Prep Batch:	460-258289	Lab File ID:	258285.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	10/25/2014 1731	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	10/25/2014 1222				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	0.017	U	0.012	0.017

LCS-Certified Reference Material - Batch: 460-258289

Method: 7471B
Preparation: 7471B

Lab Sample ID:	LCSSRM 460-258289/2-A ^5	Analysis Batch:	460-258332	Instrument ID:	LEEMAN5
Client Matrix:	Solid	Prep Batch:	460-258289	Lab File ID:	258285.PRN
Dilution:	50	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	10/25/2014 1734	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	10/25/2014 1222				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	12.9	11.88	92.1	72.9 - 127.1	

Matrix Spike - Batch: 460-258289

Method: 7471B
Preparation: 7471B

Lab Sample ID:	460-85054-14	Analysis Batch:	460-258332	Instrument ID:	LEEMAN5
Client Matrix:	Solid	Prep Batch:	460-258289	Lab File ID:	258285.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	10/25/2014 1739	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	10/25/2014 1222				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.019	U	0.0932	0.0979	105	80 - 120	

Client: AKRF Inc

Job Number: 460-85054-1

Duplicate - Batch: 460-258289

Method: 7471B
Preparation: 7471B

Lab Sample ID:	460-85054-14	Analysis Batch:	460-258332	Instrument ID:	LEEMAN5
Client Matrix:	Solid	Prep Batch:	460-258289	Lab File ID:	258285.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	10/25/2014 1738	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	10/25/2014 1222				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Mercury	0.019	U	0.019	NC	20	U

Client: AKRF Inc

Job Number: 460-85054-1

Duplicate - Batch: 460-258102

Method: Moisture
Preparation: N/A

Lab Sample ID:	460-85054-7	Analysis Batch:	460-258102	Instrument ID:	No Equipment Assigned
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	10/24/2014 1346	Units:	%	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Moisture	7.8	8.0	2	20	
Percent Solids	92.2	92.0	0.2	20	

Client: AKRF Inc

Job Number: 460-85054-1

Duplicate - Batch: 460-258110

Method: Moisture
Preparation: N/A

Lab Sample ID:	460-85016-C-1 DU	Analysis Batch:	460-258110	Instrument ID:	No Equipment Assigned
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	10/24/2014 1410	Units:	%	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Moisture	9.1	8.9	2	20	
Percent Solids	90.9	91.1	0.2	20	

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CHAIN OF CUSTODY / ANALYSIS REQUEST

10/31/2014

Name (for report and invoice): ~~Mark Jep~~ Stephen Malinowski
Company: AKRF Inc.
Address: 440 Park Ave S, 7th Fl
City: New York State: NY
Phone: 631-574-3724 Fax:

Samplers Name (Printed): Mark Jepsen
P. O. #: 12015

Site/Project Identification: 77 Commercial St.
State (Location of site): NJ: ☐ NY: ☒ Other:
Regulatory Program:

Analysis Turnaround Time
Standard ☒ (7 day)
Rush Chrages Authorized For:
2 Week ☐
1 Week ☐
Other ☐

LAB USE ONLY
Project No:
Job No: 85054

Sample Identification	Date	Time	Matrix	No. of. Cont.	8082A	6010C (w/Hg)	7471B	8081B	8270D	8260C	Sample Numbers
SB-3 (1-2')	10/23/14	1155	Soil	5	X	X	X	X	X	X	1
SB-3 (8-9)		1200			X	X	X	X	X	X	2
SB-10 (1-2)		1225			X	X	X	X	X	X	3
SB-10 (7-8)		1230			X	X	X	X	X	X	4
SB-19 (1-2)		1245			X	X	X	X	X	X	5
SB-19 (7-8)		1250			X	X	X	X	X	X	6
SB-9 (1-2)		1355			X	X	X	X	X	X	7
SB-9 (8-9)		1400			X	X	X	X	X	X	8
SB-7 (1-2)		1450			X	X	X	X	X	X	9
SB-7 (7-8)		1455			X	X	X	X	X	X	10

460-85054 Chain of Custody

SHORT HOLD

Preservation Used: 1 = ICE, 2 = HCl, 3 = H_2SO_4, 4 = HNO_3, 5 = NaOH
6 = Other _____, 7 = Other _____

	1	2	3	4	5	6
Soil:	1	1	1	1	1	1
Water:						

Special Instructions: See Quote For TAT pricing

Water Metals Filtered (Yes/No)?

Relinquished by	Company	Date / Time	Received by	Company
Mark Jepsen	AKRF	10/23/14 17:00	1)	T.A
2)	T.A	10/23/14 18:45	2) Van Thurere	TA 6d 10/23/14 1845
3)			3)	
4)			4)	

SDG: RUSH

Laboratory Certifications: New Jersey (12028), New York (11452), Pennsylvania (68-522), Connecticut (PH-0200), Rhode Island (132).
Massachusetts (M-NJ312), North Carolina (No. 578) 2.01.0 JK MT NCJ

TAL - 0016 (0408)

777 New Durham Road
Edison, New Jersey 08817
Phone: (732) 549-3900 Fax: (732) 549-3679

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

CHAIN OF CUSTODY / ANALYSIS REQUEST

Name (for report and invoice): Stephen Malinowski
Company: AKRF, Inc
Address: 440 Park Ave S, 7th Fl
City: New York State: NY
Phone: 631-574-3224 Fax:

Samplers Name (Printed): Mark Jepsen
P. O. #: 12015

Site/Project Identification: 77 Commercial St.
State (Location of site): NJ: ☐ NY: ☒ Other:
Regulatory Program:

Analysis Turnaround Time
Standard ☒ (7 days)
Rush Charges Authorized For:
2 Week ☐
1 Week ☐
Other ☐

LAB USE ONLY
Project No:
Job No: 85654

Sample Identification	Date	Time	Matrix	No. of Cont.	8082A	6010C (4/14)	7471B	8081B	8270D	8260C						Sample Numbers
SB-1 (1-2)	10/23/14	1535	Soil	5	X	X	X	X	X	X						11
SB-1 (8-9)		1540			X	X	X	X	X	X						12
SB-2 (1-2)		1555			X	X	X	X	X	X						13
SB-2 (6-7)		1600			X	X	X	X	X	X						14
SB-4 (1-2')		1610			X	X	X	X	X	X						15
SB-4 (7-8')		1615			X	X	X	X	X	X						16
SB-X (7-8		1620			X	X	X	X	X	X						17
TB		1630	Water	3	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	X						18
																—
																—

Preservation Used: 1 = ICE, 2 = HCl, 3 = H_2SO_4, 4 = HNO_3, 5 = NaOH
6 = Other _____, 7 = Other _____

Soil:	1	1	1	1	1	1						
Water:												

Special Instructions

Water Metals Filtered (Yes/No)? _____

Relinquished by	Company	Date / Time	Received by	Company
Mark Jepsen	AKRF, Inc	10/23/14 1710	1)	T.A
2)	T.A	10/23/14 18:05	2) Kim Rivera	TA Ed 10/23/14 1845
3)			3)	
4)			4)	

Laboratory Certifications: New Jersey (12028), New York (11452), Pennsylvania (68-522), Connecticut (PH-0200), Rhode Island (132).
Massachusetts (M-NJ312), North Carolina (No. 578)

TAL - 0016 (0408)

TestAmerica Edison
Receipt Temperature and pH Log

Job Number: 86674

Number of Coolers: 1 IR Gun # 5

Cooler Temperatures

	RAW	CORRECTED		RAW	CORRECTED		RAW	CORRECTED
Cooler #1:	2 °C	4 °C	Cooler #4:	°C	°C	Cooler #7:	°C	°C
Cooler #2:	°C	°C	Cooler #5:	°C	°C	Cooler #8:	°C	°C
Cooler #3:	°C	°C	Cooler #6:	°C	°C	Cooler #9:	°C	°C

TALS Sample Number	Ammonia (pH<2)	COD (pH<2)	Nitrate Nitrite (pH<2)	Metals* (pH<2)	Hardness (pH<2)	Pest (pH 5-9)	EPH or QAM (pH<2)	Phenols (pH<2)	Sulfide (pH>9)	TKN (pH<2)	TOC (pH<2)	Total Cyanide (pH>12)	Total Phos (pH<2)	Other	Other

If pH adjustments are required record the information below:

Sample No(s). adjusted: _____

Preservative Name/Conc.: _____ Volume of Preservative used (ml): _____

Lot # of Preservative(s): _____ Expiration Date: _____

The appropriate Project Manager and Department Manager should be notified about the samples which were pH adjusted.

** Samples for Metal analysis which are out of compliance must be acidified at least 24 hours prior to analysis.*

Initials: _____ Date: 10/27/14

Login Sample Receipt Checklist

Client: AKRF Inc

Job Number: 460-85054-1

Login Number: 85054

List Source: TestAmerica Edison

List Number: 1

Creator: Meyers, Gary

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.0 ° C IR #5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	No analysis requiring residual chlorine check assigned.

ANALYTICAL REPORT

Job Number: 460-85074-1

Job Description: 77 Commercial Street, Brooklyn, NY

For:
AKRF Inc
440 Park Avenue South
7th Floor
New York, NY 10016

Attention: Stephen Malinowski

Approved for release.
Shalini Isaac
Project Management Assistant II
11/4/2014 10:53 AM

Designee for
Melissa Haas, Project Manager I
777 New Durham Road, Edison, NJ, 08817
(203)944-1310
melissa.haas@testamericainc.com
11/04/2014

The test results in this report meet all NELAP requirements unless specified within the case narrative. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Edison Project Manager.

TestAmerica Edison Certifications and Approvals: Connecticut: CTDOH #PH-0200, New Jersey: NJDEP (NELAP) #12028, New York: NYDOH (NELAP) #11452, NYDOH (ELAP) #11452, Pennsylvania: PADEP (NELAP) 68-00522 and Rhode Island: RIDOH LAO00132

CASE NARRATIVE

Client: AKRF Inc

Project: 77 Commercial Street, Brooklyn, NY

Report Number: 460-85074-1

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

It should be noted that samples with elevated Reporting Limits (RLs) as a result of a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the RLs are unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes or interferences which exceed the calibration range of the instrument.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 10/23/2014 6:45 PM, 10/24/2014 6:20 PM, 10/27/2014 2:40 PM and 10/28/2014 3:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 3.2º C, 3.6º C, 3.8º C, 3.9º C and 4.0º C.

Except:

The Chain-of-Custody (COC) was incomplete as received and/or improperly completed. TW-1, TW-5 - Quantity is 11 on COC, but received 3, and checked for all tests but only received containers for VOC. The sampler made a note on the COC that only VOCs were collected for these samples.

In addition, no sample times were recorded; therefore, the system defaults to 12:00am.

The Chain-of-Custody (COC) was incomplete as received and/or improperly completed. TB quantity is 3, but received 2

Limtied sample volume was provided for the following sample(s) for the Total and Dissolved Metals, Pesticides and PCB analysis: TW-1 (460-85239-1). Pesticides and PCBs were extracted using the one 125 mL container provided. Metals volume was split and a portion preserved in the lab for Total Metals.

The Chain-of-Custody (COC) was incomplete as received and/or improperly completed. Method 8082A was not indicated on the COC; however, this analysis is required per the client.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

VOLATILE ORGANICS

Samples TW-6 (460-85074-1), TW-4 (460-85134-1), TW-3 (460-85074-2), TW-2 (460-85134-2), TW-1 (460-85134-3), TW-5 (460-85134-4) and TB3 (460-85134-5) were analyzed for Volatile organics in accordance with EPA SW-846 Methods 8260C. The samples were analyzed on 10/27/2014, 10/30/2014 and 10/31/2014.

The continuing calibration verification (CCV) associated with batch 258558 recovered outide control limit for 2-Hexanonoe, 4-Methyl-2-pentanone and Methyl acetate. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

The continuing calibration verification (CCV) associated with batch 259156 recovered outside control limit for Methyl acetate, Bromoform and Methylcyclohexane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

The continuing calibration verification (CCV) associated with batch 259463 recovered outside control limit for Acetone, Chlorobromomethane and Bromomethane.The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. % D for surrogate compounds Dibromofluoromethane was>20%, Surrogate recoveries for all associated samples were within limits.

The laboratory control sample (LCS) for batch 259463 recovered outside control limits for the following analyte: Bromomethane. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

1,1,2-Trichloro-1,2,2-trifluoroethane, Methylcyclohexane and Trichlorofluoromethane failed the recovery criteria low for the MS of sample TW-1MS (460-85134-3) in batch 460-259463. Bromomethane failed the recovery criteria high. Bromomethane and Methyl acetate failed the recovery criteria high for the MSD of sample TW-1MSD (460-85134-3) in batch 460-259463. Vinyl chloride exceeded the RPD limit. The presence of the '4' qualifier in the data indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount.

Refer to the QC report for details.

No other difficulties were encountered during the Volatile organics analysis.

All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC/MS)

Samples TW-6 (460-85074-1), TW-4 (460-85134-1), TW-5 (460-85171-1), TW-1 (460-85239-1), TW-3 (460-85074-2) and TW-2 (460-85134-2) were analyzed for semivolatile organic compounds (GC/MS) in accordance with EPA SW-846 Method 8270D. The samples were prepared on 10/25/2014, 10/28/2014 and 10/29/2014 and analyzed on 10/28/2014, 11/01/2014 and 11/02/2014.

The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 258263 recovered outside control limits for the following analytes: Hexachlorobutadiene.

A full list spike was utilized for this method. Due to the large number of spiked analytes, there is a high probability that one or more analytes will recover outside acceptance limits. The laboratory's SOP allows for five analytes to recover outside criteria for this method when a full list spike is utilized. The LCSD associated with batch 258263 had one analyte (Di-n-octyl phthalate) outside control limits; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

A full list spike was utilized for this method. Due to the large number of spiked analytes, there is a high probability that one or more analytes will recover outside acceptance limits. The laboratory's SOP allows for five analytes to recover outside criteria for this method when a full list spike is utilized. The LCS/LCSD associated with batch 259043 had two analytes (2,2'-oxybis[1-chloropropane] and Benzo[a]pyrene) outside control limits; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

A full list spike was utilized for this method. Due to the large number of spiked analytes, there is a high probability that one or more analytes will recover outside acceptance limits. The laboratory's SOP allows for five analytes to recover outside criteria for this method when a full list spike is utilized. The LCS associated with batch 258769 had one analyte (2,2'-oxybis[1-chloropropane]) outside control limits; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

The continuing calibration verification (CCV) analyzed in batch 258638 was outside the method criteria for the following analyte(s): Bis(2-chloroethyl)ether. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

The continuing calibration verification (CCV) analyzed in batch 258776 was outside the method criteria for the following analyte(s): Bis(2-chloroethyl)ether. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

The continuing calibration verification (CCV) analyzed in batch 259705 was outside the method criteria for the following analyte(s): Di-n-octyl phthalate, 2,2'-oxybis[1-chloropropane], Pyrene, N-Nitrosodi-n-propylamine, Fluoranthene, 2-Nitroaniline, 4-Nitroaniline, Carbazole and Terphenyl-d14. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

The continuing calibration verification (CCV) analyzed in batch 259810 was outside the method criteria for the following analyte(s): 4-Nitrophenol, 2,2'-oxybis[1-chloropropane] and N-Nitrosodi-n-propylamine. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

The continuing calibration verification (CCV) analyzed in batch 260033 was outside the method criteria for the following analyte(s): 2,2'-oxybis[1-chloropropane]. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

2,2'-oxybis[1-chloropropane] failed the recovery criteria low for LCS 460-258769/2-A. 2,2'-oxybis[1-chloropropane] failed the recovery criteria low for LCS 460-259043/2-A. Benzo[a]pyrene failed the recovery criteria high. Di-n-octyl phthalate failed the recovery criteria high for LCSD 460-258263/3-A. Hexachlorobutadiene exceeded the RPD limit. 2,2'-oxybis[1-chloropropane] failed the recovery criteria low for

LCSD 460-259043/3-A. Benzo[a]pyrene failed the recovery criteria high.

2,2'-oxybis[1-chloropropane] failed the recovery criteria low for the MS/MSD of sample 460-85129-3 in batch 460-259705. Several analytes failed the recovery criteria high.

Refer to the QC report for details.

No other difficulties were encountered during the semivolatiles analysis.

All other quality control parameters were within the acceptance limits.

PESTICIDES

Samples TW-6 (460-85074-1), TW-4 (460-85134-1), TW-5 (460-85171-1), TW-1 (460-85239-1), TW-3 (460-85074-2) and TW-2 (460-85134-2) were analyzed for Pesticides in accordance with EPA SW-846 Methods 1311/ 8081A. The samples were prepared on 10/27/2014, 10/28/2014 and 10/29/2014 and analyzed on 10/28/2014 and 10/30/2014.

The closing calibration verification (CCV) associated with batch 259208 recovered above the upper control limit for multiple analytes on the secondary column. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: (CCV 460-259208/21).

The closing calibration verification (CCV) associated with batch 258699 recovered above the upper control limit for multiple analytes. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. (CCV 460-258699/15).

The laboratory control sample duplicate (LCSD) for batch258478 recovered outside control limits for the following analytes: Dieldrin on the primary column. This analyte was biased high in the LCSD and were not detected in the associated samples; therefore, the data have been reported.

The laboratory control sample (LCS) for batch 258728 recovered outside control limits for the DDD on the primary column: This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

The laboratory control sample (LCS) for batch 258945 recovered outside control limits for multiple analytes on both columns analytes. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

4,4'-DDD failed the recovery criteria high for LCS 460-258728/2-A. 4,4'-DDD, 4,4'-DDE, alpha-BHC, beta-BHC, Dieldrin, Endrin aldehyde and gamma-BHC (Lindane) failed the recovery criteria high for LCS 460-258945/2-A. Dieldrin failed the recovery criteria high for LCSD 460-258478/3-A.

Refer to the QC report for details.

No other difficulties were encountered during the Pesticides analysis.

All other quality control parameters were within the acceptance limits.

POLYCHLORINATED BIPHENYLS (PCBS)

Samples TW-6 (460-85074-1), TW-4 (460-85134-1), TW-5 (460-85171-1), TW-1 (460-85239-1), TW-3 (460-85074-2) and TW-2 (460-85134-2) were analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA SW-846 Method 8082A. The samples were prepared on 10/27/2014, 10/28/2014 and 10/29/2014 and analyzed on 10/28/2014 and 10/30/2014.

The following sample required a copper/Mercury clean-up to reduce matrix interferences caused by sulfur: TW-3 (460-85074-2).

No other difficulties were encountered during the PCBs analysis.

All quality control parameters were within the acceptance limits.

METALS

Samples TW-6 (460-85074-1), TW-4 (460-85134-1), TW-5 (460-85171-1), TW-1 (460-85239-1), TW-3 (460-85074-2) and TW-2 (460-85134-2) were analyzed for Metals in accordance with EPA SW-846 6010C. The samples were prepared on 10/28/2014 and 11/01/2014 and analyzed on 10/28/2014, 10/29/2014 and 11/02/2014.

Samples TW-6 (460-85074-1)[10X], TW-4 (460-85074-1)[10X] and TW-3 (460-85074-2)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The following sample(s) was diluted due to the nature of the sample matrix: TW-5 (460-85171-1).high yttrium. Elevated reporting limits (RLs) are provided.

No other difficulties were encountered during the Metals analysis.

All other quality control parameters were within the acceptance limits.

METALS
Samples TW-6 (460-85074-1), TW-4 (460-85134-1), TW-5 (460-85171-1), TW-1 (460-85239-1), TW-3 (460-85074-2) and TW-2 (460-85134-2) were analyzed for Metals in accordance with EPA SW-846 6010C. The samples were prepared on 10/26/2014, 10/30/2014 and 11/01/2014 and analyzed on 10/27/2014, 10/28/2014, 10/30/2014 and 11/02/2014.

Sodium, Iron and Manganese failed the recovery criteria low for the MS of sample 460-85093-1 in batch 460-258732.

Refer to the QC report for details.

Samples TW-6 (460-85074-1)[10X], TW-4 (460-85074-1)[2X], TW-1 (460-85074-1)[2X], TW-5 (460-85074-1)[20X], TW-6 (460-85074-1)[5X] and TW-3 (460-85074-2)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the Metals analysis.

All other quality control parameters were within the acceptance limits.

DISSOLVED MERCURY
Samples TW-6 (460-85074-1), TW-4 (460-85134-1), TW-5 (460-85171-1), TW-1 (460-85239-1), TW-3 (460-85074-2) and TW-2 (460-85134-2) were analyzed for dissolved mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 10/27/2014, 10/28/2014 and 10/30/2014.

No difficulties were encountered during the dissolved mercury analysis.

All quality control parameters were within the acceptance limits.

TOTAL MERCURY
Samples TW-6 (460-85074-1), TW-4 (460-85134-1), TW-5 (460-85171-1), TW-1 (460-85239-1), TW-3 (460-85074-2) and TW-2 (460-85134-2) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 10/26/2014, 10/29/2014 and 10/31/2014.

No difficulties were encountered during the Hg analysis.

All quality control parameters were within the acceptance limits.

EXECUTIVE SUMMARY - Detections

Client: AKRF Inc

Job Number: 460-85074-1

Lab Sample ID Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
460-85074-1	**TW-6**					
Aluminum		952		200	ug/L	6010C
Barium		108	J	200	ug/L	6010C
Calcium		194000		5000	ug/L	6010C
Iron		15700		150	ug/L	6010C
Magnesium		126000		5000	ug/L	6010C
Manganese		2670		15.0	ug/L	6010C
Potassium		56600		5000	ug/L	6010C
Sodium		595000		25000	ug/L	6010C
Dissolved						
Aluminum		145	J	200	ug/L	6010C
Barium		79.3	J	200	ug/L	6010C
Calcium		188000		5000	ug/L	6010C
Potassium		56400		5000	ug/L	6010C
Magnesium		125000		5000	ug/L	6010C
Manganese		2660		15.0	ug/L	6010C
Sodium		597000		50000	ug/L	6010C
460-85074-2	**TW-3**					
Aluminum		1960		200	ug/L	6010C
Barium		210		200	ug/L	6010C
Calcium		364000		25000	ug/L	6010C
Cobalt		4.1	J	50.0	ug/L	6010C
Iron		27800		150	ug/L	6010C
Magnesium		22200		5000	ug/L	6010C
Manganese		1130		15.0	ug/L	6010C
Potassium		57100		5000	ug/L	6010C
Sodium		490000		25000	ug/L	6010C
Vanadium		5.3	J	50.0	ug/L	6010C
Zinc		44.9		30.0	ug/L	6010C
Dissolved						
Aluminum		208		200	ug/L	6010C
Barium		130	J	200	ug/L	6010C
Calcium		280000		50000	ug/L	6010C
Iron		294		150	ug/L	6010C
Potassium		55600		5000	ug/L	6010C
Magnesium		21900		5000	ug/L	6010C
Manganese		698		15.0	ug/L	6010C
Sodium		484000		50000	ug/L	6010C

EXECUTIVE SUMMARY - Detections

Client: AKRF Inc

Job Number: 460-85074-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
460-85134-1	**TW-4**					
Bis(2-ethylhexyl) phthalate		3.5	J	11	ug/L	8270D
Aluminum		17900		200	ug/L	6010C
Arsenic		7.6	J	15.0	ug/L	6010C
Barium		332		200	ug/L	6010C
Calcium		122000		5000	ug/L	6010C
Chromium		34.5		10.0	ug/L	6010C
Cobalt		14.3	J	50.0	ug/L	6010C
Copper		66.6		25.0	ug/L	6010C
Iron		35900		150	ug/L	6010C
Lead		813		10.0	ug/L	6010C
Magnesium		78300		5000	ug/L	6010C
Manganese		1030		15.0	ug/L	6010C
Nickel		31.6	J	40.0	ug/L	6010C
Potassium		40700		5000	ug/L	6010C
Sodium		325000		10000	ug/L	6010C
Vanadium		53.3		50.0	ug/L	6010C
Zinc		162		30.0	ug/L	6010C
Mercury		0.20		0.20	ug/L	7470A
Dissolved						
Aluminum		118	J	200	ug/L	6010C
Barium		200		200	ug/L	6010C
Calcium		128000		5000	ug/L	6010C
Potassium		43100		5000	ug/L	6010C
Magnesium		85100		5000	ug/L	6010C
Manganese		769		15.0	ug/L	6010C
Sodium		359000		50000	ug/L	6010C

EXECUTIVE SUMMARY - Detections

Client: AKRF Inc

Job Number: 460-85074-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
460-85134-2	**TW-2**					
1,4-Dioxane		2200		50	ug/L	8260C
Bis(2-ethylhexyl) phthalate		3.5	J	11	ug/L	8270D
Aluminum		3560		200	ug/L	6010C
Barium		76.5	J	200	ug/L	6010C
Calcium		138000		5000	ug/L	6010C
Chromium		8.5	J	10.0	ug/L	6010C
Cobalt		9.2	J	50.0	ug/L	6010C
Copper		14.2	J	25.0	ug/L	6010C
Iron		9190		150	ug/L	6010C
Lead		6.6	J	10.0	ug/L	6010C
Magnesium		48000		5000	ug/L	6010C
Manganese		2920		15.0	ug/L	6010C
Nickel		23.3	J	40.0	ug/L	6010C
Potassium		6560		5000	ug/L	6010C
Sodium		204000		5000	ug/L	6010C
Vanadium		13.7	J	50.0	ug/L	6010C
Zinc		17.9	J	30.0	ug/L	6010C
Dissolved						
Aluminum		106	J	200	ug/L	6010C
Barium		34.9	J	200	ug/L	6010C
Calcium		142000		5000	ug/L	6010C
Cobalt		5.7	J	50.0	ug/L	6010C
Potassium		5670		5000	ug/L	6010C
Magnesium		47400		5000	ug/L	6010C
Manganese		2650		15.0	ug/L	6010C
Sodium		221000		5000	ug/L	6010C
Nickel		16.3	J	40.0	ug/L	6010C
460-85134-3	**TW-1**					
4-Methyl-2-pentanone (MIBK)		2.0	J	5.0	ug/L	8260C
o-Xylene		0.22	J	1.0	ug/L	8260C

EXECUTIVE SUMMARY - Detections

Client: AKRF Inc

Job Number: 460-85074-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
460-85171-1	**TW-5**					
Benzo[a]pyrene		0.52	J	1.2	ug/L	8270D
Benzo[b]fluoranthene		0.55	J	1.2	ug/L	8270D
Benzo[k]fluoranthene		0.24	J	1.2	ug/L	8270D
Bis(2-ethylhexyl) phthalate		4.1	J	12	ug/L	8270D
Fluoranthene		1.3	J	12	ug/L	8270D
Phenanthrene		1.5	J	12	ug/L	8270D
Aluminum		1240000		4000	ug/L	6010C
Arsenic		1440		300	ug/L	6010C
Barium		11500		4000	ug/L	6010C
Beryllium		76.3		40.0	ug/L	6010C
Calcium		867000		100000	ug/L	6010C
Chromium		2940		200	ug/L	6010C
Cobalt		1500		1000	ug/L	6010C
Copper		8260		500	ug/L	6010C
Iron		3050000		3000	ug/L	6010C
Lead		44600		200	ug/L	6010C
Magnesium		388000		100000	ug/L	6010C
Manganese		47300		300	ug/L	6010C
Nickel		3460		800	ug/L	6010C
Potassium		113000		100000	ug/L	6010C
Silver		38.7	J	200	ug/L	6010C
Sodium		232000		100000	ug/L	6010C
Vanadium		3190		1000	ug/L	6010C
Zinc		21700		600	ug/L	6010C
Mercury		7.3		0.20	ug/L	7470A
Dissolved						
Aluminum		87.4	J	200	ug/L	6010C
Arsenic		7.0	J	15.0	ug/L	6010C
Barium		102	J	200	ug/L	6010C
Calcium		78200		5000	ug/L	6010C
Potassium		23700		5000	ug/L	6010C
Magnesium		27000		5000	ug/L	6010C
Manganese		376		15.0	ug/L	6010C
Sodium		196000		5000	ug/L	6010C

EXECUTIVE SUMMARY - Detections

Client: AKRF Inc

Job Number: 460-85074-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
460-85239-1	**TW-1**					
Bis(2-ethylhexyl) phthalate		4.1	J	12	ug/L	8270D
Di-n-butyl phthalate		1.2	J	12	ug/L	8270D
Aluminum		10200		200	ug/L	6010C
Barium		96.7	J	200	ug/L	6010C
Calcium		426000		10000	ug/L	6010C
Chromium		28.7		10.0	ug/L	6010C
Cobalt		13.3	J	50.0	ug/L	6010C
Copper		40.7		25.0	ug/L	6010C
Iron		25300		150	ug/L	6010C
Lead		36.0		10.0	ug/L	6010C
Magnesium		77000		5000	ug/L	6010C
Manganese		2580		15.0	ug/L	6010C
Nickel		23.3	J	40.0	ug/L	6010C
Potassium		31700		5000	ug/L	6010C
Sodium		96100		5000	ug/L	6010C
Vanadium		35.3	J	50.0	ug/L	6010C
Zinc		224		30.0	ug/L	6010C
Mercury		0.58		0.20	ug/L	7470A
Dissolved						
Barium		26.5	J	200	ug/L	6010C
Calcium		454000		10000	ug/L	6010C
Cobalt		4.2	J	50.0	ug/L	6010C
Iron		974		150	ug/L	6010C
Potassium		30900		5000	ug/L	6010C
Magnesium		78500		5000	ug/L	6010C
Manganese		2280		15.0	ug/L	6010C
Sodium		101000		5000	ug/L	6010C
Zinc		8.9	J	30.0	ug/L	6010C

METHOD SUMMARY

Client: AKRF Inc

Job Number: 460-85074-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Volatile Organic Compounds by GC/MS	TAL EDI	SW846 8260C	
Purge and Trap	TAL EDI		SW846 5030C
Semivolatile Organic Compounds (GC/MS)	TAL EDI	SW846 8270D	
Liquid-Liquid Extraction (Separatory Funnel)	TAL EDI		SW846 3510C
Organochlorine Pesticides (GC)	TAL EDI	SW846 8081B	
Liquid-Liquid Extraction (Separatory Funnel)	TAL EDI		SW846 3510C
Polychlorinated Biphenyls (PCBs) by Gas Chromatography	TAL EDI	SW846 8082A	
Liquid-Liquid Extraction (Separatory Funnel)	TAL EDI		SW846 3510C
Metals (ICP)	TAL EDI	SW846 6010C	
Preparation, Total Metals	TAL EDI		SW846 3010A
Metals (ICP)	TAL EDI	SW846 6010C	
Preparation, Total Metals	TAL EDI		SW846 3010A
Sample Filtration	TAL EDI		FILTRATION
Mercury (CVAA)	TAL EDI	SW846 7470A	
Preparation, Mercury	TAL EDI		SW846 7470A
Mercury (CVAA)	TAL EDI	SW846 7470A	
Preparation, Mercury	TAL EDI		SW846 7470A
Sample Filtration	TAL EDI		FILTRATION

Lab References:

TAL EDI = TestAmerica Edison

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: AKRF Inc

Job Number: 460-85074-1

Method	Analyst	Analyst ID
SW846 8260C	Desai, Saurab	SZD
SW846 8260C	Moroney, Christopher J	CJM
SW846 8270D	Bayoumi, Wahied	BAW
SW846 8270D	Crocco, Michael	MMC
SW846 8081B	Kapoor, Sita	SAK
SW846 8082A	Patel, Jignesh	JHP
SW846 6010C	Chang, Churn Der	CDC
SW846 6010C	Huang, Yixin	YZH
SW846 6010C	Patel, Purva H	PHP
SW846 7470A	Patel, Purva H	PHP
SW846 7470A	Sheikh, Razia B	RBS

SAMPLE SUMMARY

Client: AKRF Inc

Job Number: 460-85074-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
460-85074-1	TW-6	Water	10/23/2014 1200	10/23/2014 1845
460-85074-2	TW-3	Water	10/23/2014 1500	10/23/2014 1845
460-85134-1	TW-4	Water	10/24/2014 1045	10/24/2014 1820
460-85134-2	TW-2	Water	10/24/2014 1300	10/24/2014 1820
460-85134-3	TW-1	Water	10/24/2014 0000	10/24/2014 1820
460-85134-4	TW-5	Water	10/24/2014 0000	10/24/2014 1820
460-85134-5	TB3	Water	10/24/2014 0000	10/24/2014 1820
460-85171-1	TW-5	Water	10/24/2014 1710	10/27/2014 1440
460-85239-1	TW-1	Water	10/28/2014 1245	10/28/2014 1500

SAMPLE RESULTS

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-6**

Lab Sample ID: 460-85074-1

Client Matrix: Water

Date Sampled: 10/23/2014 1200

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258558	Instrument ID:	CVOAMS2
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	B75224.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/27/2014 2017			Final Weight/Volume:	5 mL
Prep Date:	10/27/2014 2017				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.060	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.16	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	0.080	1.0
1,1,2-Trichloroethane	1.0	U	0.19	1.0
1,1-Dichloroethane	1.0	U	0.13	1.0
1,1-Dichloroethene	1.0	U	0.090	1.0
1,2,3-Trichlorobenzene	1.0	U	0.51	1.0
1,2,4-Trichlorobenzene	1.0	U	0.34	1.0
1,2-Dichloropropane	1.0	U	0.090	1.0
1,3-Dichlorobenzene	1.0	U	0.14	1.0
1,4-Dichlorobenzene	1.0	U	0.23	1.0
1,4-Dioxane	50	U	36	50
2-Butanone (MEK)	5.0	U	2.3	5.0
2-Hexanone	5.0	U	0.50	5.0
4-Methyl-2-pentanone (MIBK)	5.0	U	0.99	5.0
Acetone	5.0	U	2.7	5.0
Benzene	1.0	U	0.080	1.0
Bromoform	1.0	U	0.19	1.0
Bromomethane	1.0	U	0.18	1.0
Carbon disulfide	1.0	U	0.13	1.0
Carbon tetrachloride	1.0	U	0.060	1.0
Chlorobenzene	1.0	U	0.11	1.0
Chlorobromomethane	1.0	U	0.27	1.0
Chlorodibromomethane	1.0	U	0.20	1.0
Chloroethane	1.0	U	0.17	1.0
Chloroform	1.0	U	0.080	1.0
Chloromethane	1.0	U	0.10	1.0
cis-1,2-Dichloroethene	1.0	U	0.18	1.0
cis-1,3-Dichloropropene	1.0	U	0.18	1.0
Cyclohexane	1.0	U	0.16	1.0
Dichlorobromomethane	1.0	U	0.12	1.0
Dichlorodifluoromethane	1.0	U	0.22	1.0
Ethylbenzene	1.0	U	0.10	1.0
Ethylene Dibromide	1.0	U	0.28	1.0
Isopropylbenzene	1.0	U	0.080	1.0
Methyl acetate	5.0	U	0.34	5.0
Methyl tert-butyl ether	1.0	U	0.14	1.0
Methylcyclohexane	1.0	U	0.14	1.0
Methylene Chloride	1.0	U	0.18	1.0
m-Xylene & p-Xylene	1.0	U	0.25	1.0
o-Xylene	1.0	U	0.13	1.0
Styrene	1.0	U	0.12	1.0
Tetrachloroethene	1.0	U	0.10	1.0
Toluene	1.0	U	0.15	1.0
trans-1,2-Dichloroethene	1.0	U	0.13	1.0
trans-1,3-Dichloropropene	1.0	U	0.24	1.0

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-6**

Lab Sample ID: 460-85074-1

Client Matrix: Water

Date Sampled: 10/23/2014 1200

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258558	Instrument ID:	CVOAMS2
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	B75224.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/27/2014 2017			Final Weight/Volume:	5 mL
Prep Date:	10/27/2014 2017				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Trichloroethene	1.0	U	0.090	1.0
Trichlorofluoromethane	1.0	U	0.15	1.0
Vinyl chloride	1.0	U	0.14	1.0
1,2-Dichloroethane	1.0	U	0.19	1.0
1,2-Dichlorobenzene	1.0	U	0.21	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.40	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	111		70 - 130
4-Bromofluorobenzene	118		64 - 135
Dibromofluoromethane (Surr)	114		72 - 137
Toluene-d8 (Surr)	107		70 - 130

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-6**

Lab Sample ID: 460-85074-1

Client Matrix: Water

Date Sampled: 10/23/2014 1200

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258558	Instrument ID:	CVOAMS2
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	B75224.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/27/2014 2017			Final Weight/Volume:	5 mL
Prep Date:	10/27/2014 2017				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/L)	Qualifier
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-3**

Lab Sample ID: 460-85074-2

Client Matrix: Water

Date Sampled: 10/23/2014 1500

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258558	Instrument ID:	CVOAMS2
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	B75225.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/27/2014 2041			Final Weight/Volume:	5 mL
Prep Date:	10/27/2014 2041				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.060	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.16	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	0.080	1.0
1,1,2-Trichloroethane	1.0	U	0.19	1.0
1,1-Dichloroethane	1.0	U	0.13	1.0
1,1-Dichloroethene	1.0	U	0.090	1.0
1,2,3-Trichlorobenzene	1.0	U	0.51	1.0
1,2,4-Trichlorobenzene	1.0	U	0.34	1.0
1,2-Dichloropropane	1.0	U	0.090	1.0
1,3-Dichlorobenzene	1.0	U	0.14	1.0
1,4-Dichlorobenzene	1.0	U	0.23	1.0
1,4-Dioxane	50	U	36	50
2-Butanone (MEK)	5.0	U	2.3	5.0
2-Hexanone	5.0	U	0.50	5.0
4-Methyl-2-pentanone (MIBK)	5.0	U	0.99	5.0
Acetone	5.0	U	2.7	5.0
Benzene	1.0	U	0.080	1.0
Bromoform	1.0	U	0.19	1.0
Bromomethane	1.0	U	0.18	1.0
Carbon disulfide	1.0	U	0.13	1.0
Carbon tetrachloride	1.0	U	0.060	1.0
Chlorobenzene	1.0	U	0.11	1.0
Chlorobromomethane	1.0	U	0.27	1.0
Chlorodibromomethane	1.0	U	0.20	1.0
Chloroethane	1.0	U	0.17	1.0
Chloroform	1.0	U	0.080	1.0
Chloromethane	1.0	U	0.10	1.0
cis-1,2-Dichloroethene	1.0	U	0.18	1.0
cis-1,3-Dichloropropene	1.0	U	0.18	1.0
Cyclohexane	1.0	U	0.16	1.0
Dichlorobromomethane	1.0	U	0.12	1.0
Dichlorodifluoromethane	1.0	U	0.22	1.0
Ethylbenzene	1.0	U	0.10	1.0
Ethylene Dibromide	1.0	U	0.28	1.0
Isopropylbenzene	1.0	U	0.080	1.0
Methyl acetate	5.0	U	0.34	5.0
Methyl tert-butyl ether	1.0	U	0.14	1.0
Methylcyclohexane	1.0	U	0.14	1.0
Methylene Chloride	1.0	U	0.18	1.0
m-Xylene & p-Xylene	1.0	U	0.25	1.0
o-Xylene	1.0	U	0.13	1.0
Styrene	1.0	U	0.12	1.0
Tetrachloroethene	1.0	U	0.10	1.0
Toluene	1.0	U	0.15	1.0
trans-1,2-Dichloroethene	1.0	U	0.13	1.0
trans-1,3-Dichloropropene	1.0	U	0.24	1.0

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-3**

Lab Sample ID: 460-85074-2

Client Matrix: Water

Date Sampled: 10/23/2014 1500

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258558	Instrument ID:	CVOAMS2
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	B75225.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/27/2014 2041			Final Weight/Volume:	5 mL
Prep Date:	10/27/2014 2041				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Trichloroethene	1.0	U	0.090	1.0
Trichlorofluoromethane	1.0	U	0.15	1.0
Vinyl chloride	1.0	U	0.14	1.0
1,2-Dichloroethane	1.0	U	0.19	1.0
1,2-Dichlorobenzene	1.0	U	0.21	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.40	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	98		70 - 130
4-Bromofluorobenzene	106		64 - 135
Dibromofluoromethane (Surr)	104		72 - 137
Toluene-d8 (Surr)	97		70 - 130

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-3**

Lab Sample ID: 460-85074-2

Client Matrix: Water

Date Sampled: 10/23/2014 1500

Date Received: 10/23/2014 1845

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258558	Instrument ID:	CVOAMS2
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	B75225.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/27/2014 2041			Final Weight/Volume:	5 mL
Prep Date:	10/27/2014 2041				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/L)	Qualifier
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-4**

Lab Sample ID: 460-85134-1

Client Matrix: Water

Date Sampled: 10/24/2014 1045

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-259156	Instrument ID:	CVOAMS3
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C1541.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/30/2014 1750			Final Weight/Volume:	5 mL
Prep Date:	10/30/2014 1750				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.060	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.16	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	0.080	1.0
1,1,2-Trichloroethane	1.0	U	0.19	1.0
1,1-Dichloroethane	1.0	U	0.13	1.0
1,1-Dichloroethene	1.0	U	0.090	1.0
1,2,3-Trichlorobenzene	1.0	U	0.51	1.0
1,2,4-Trichlorobenzene	1.0	U	0.34	1.0
1,2-Dichloropropane	1.0	U	0.090	1.0
1,3-Dichlorobenzene	1.0	U	0.14	1.0
1,4-Dichlorobenzene	1.0	U	0.23	1.0
1,4-Dioxane	50	U	36	50
2-Butanone (MEK)	5.0	U	2.3	5.0
2-Hexanone	5.0	U	0.50	5.0
4-Methyl-2-pentanone (MIBK)	5.0	U	0.99	5.0
Acetone	5.0	U	2.7	5.0
Benzene	1.0	U	0.080	1.0
Bromoform	1.0	U	0.19	1.0
Bromomethane	1.0	U	0.18	1.0
Carbon disulfide	1.0	U	0.13	1.0
Carbon tetrachloride	1.0	U	0.060	1.0
Chlorobenzene	1.0	U	0.11	1.0
Chlorobromomethane	1.0	U	0.27	1.0
Chlorodibromomethane	1.0	U	0.20	1.0
Chloroethane	1.0	U	0.17	1.0
Chloroform	1.0	U	0.080	1.0
Chloromethane	1.0	U	0.10	1.0
cis-1,2-Dichloroethene	1.0	U	0.18	1.0
cis-1,3-Dichloropropene	1.0	U	0.18	1.0
Cyclohexane	1.0	U	0.16	1.0
Dichlorobromomethane	1.0	U	0.12	1.0
Dichlorodifluoromethane	1.0	U	0.22	1.0
Ethylbenzene	1.0	U	0.10	1.0
Ethylene Dibromide	1.0	U	0.28	1.0
Isopropylbenzene	1.0	U	0.080	1.0
Methyl acetate	5.0	U	0.34	5.0
Methyl tert-butyl ether	1.0	U	0.14	1.0
Methylcyclohexane	1.0	U	0.14	1.0
Methylene Chloride	1.0	U	0.18	1.0
m-Xylene & p-Xylene	1.0	U	0.25	1.0
o-Xylene	1.0	U	0.13	1.0
Styrene	1.0	U	0.12	1.0
Tetrachloroethene	1.0	U	0.10	1.0
Toluene	1.0	U	0.15	1.0
trans-1,2-Dichloroethene	1.0	U	0.13	1.0
trans-1,3-Dichloropropene	1.0	U	0.24	1.0

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-4**

Lab Sample ID: 460-85134-1

Client Matrix: Water

Date Sampled: 10/24/2014 1045

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-259156	Instrument ID:	CVOAMS3
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C1541.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/30/2014 1750			Final Weight/Volume:	5 mL
Prep Date:	10/30/2014 1750				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Trichloroethene	1.0	U	0.090	1.0
Trichlorofluoromethane	1.0	U	0.15	1.0
Vinyl chloride	1.0	U	0.14	1.0
1,2-Dichloroethane	1.0	U	0.19	1.0
1,2-Dichlorobenzene	1.0	U	0.21	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.40	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	114		70 - 130
4-Bromofluorobenzene	114		64 - 135
Dibromofluoromethane (Surr)	113		72 - 137
Toluene-d8 (Surr)	112		70 - 130

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-4**

Lab Sample ID: 460-85134-1

Client Matrix: Water

Date Sampled: 10/24/2014 1045

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-259156	Instrument ID:	CVOAMS3
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C1541.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/30/2014 1750			Final Weight/Volume:	5 mL
Prep Date:	10/30/2014 1750				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/L)	Qualifier
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-2**

Lab Sample ID: 460-85134-2

Client Matrix: Water

Date Sampled: 10/24/2014 1300

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-259156	Instrument ID:	CVOAMS3
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C1542.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/30/2014 1816			Final Weight/Volume:	5 mL
Prep Date:	10/30/2014 1816				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.060	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.16	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	0.080	1.0
1,1,2-Trichloroethane	1.0	U	0.19	1.0
1,1-Dichloroethane	1.0	U	0.13	1.0
1,1-Dichloroethene	1.0	U	0.090	1.0
1,2,3-Trichlorobenzene	1.0	U	0.51	1.0
1,2,4-Trichlorobenzene	1.0	U	0.34	1.0
1,2-Dichloropropane	1.0	U	0.090	1.0
1,3-Dichlorobenzene	1.0	U	0.14	1.0
1,4-Dichlorobenzene	1.0	U	0.23	1.0
1,4-Dioxane	2200		36	50
2-Butanone (MEK)	5.0	U	2.3	5.0
2-Hexanone	5.0	U	0.50	5.0
4-Methyl-2-pentanone (MIBK)	5.0	U	0.99	5.0
Acetone	5.0	U	2.7	5.0
Benzene	1.0	U	0.080	1.0
Bromoform	1.0	U	0.19	1.0
Bromomethane	1.0	U	0.18	1.0
Carbon disulfide	1.0	U	0.13	1.0
Carbon tetrachloride	1.0	U	0.060	1.0
Chlorobenzene	1.0	U	0.11	1.0
Chlorobromomethane	1.0	U	0.27	1.0
Chlorodibromomethane	1.0	U	0.20	1.0
Chloroethane	1.0	U	0.17	1.0
Chloroform	1.0	U	0.080	1.0
Chloromethane	1.0	U	0.10	1.0
cis-1,2-Dichloroethene	1.0	U	0.18	1.0
cis-1,3-Dichloropropene	1.0	U	0.18	1.0
Cyclohexane	1.0	U	0.16	1.0
Dichlorobromomethane	1.0	U	0.12	1.0
Dichlorodifluoromethane	1.0	U	0.22	1.0
Ethylbenzene	1.0	U	0.10	1.0
Ethylene Dibromide	1.0	U	0.28	1.0
Isopropylbenzene	1.0	U	0.080	1.0
Methyl acetate	5.0	U	0.34	5.0
Methyl tert-butyl ether	1.0	U	0.14	1.0
Methylcyclohexane	1.0	U	0.14	1.0
Methylene Chloride	1.0	U	0.18	1.0
m-Xylene & p-Xylene	1.0	U	0.25	1.0
o-Xylene	1.0	U	0.13	1.0
Styrene	1.0	U	0.12	1.0
Tetrachloroethene	1.0	U	0.10	1.0
Toluene	1.0	U	0.15	1.0
trans-1,2-Dichloroethene	1.0	U	0.13	1.0
trans-1,3-Dichloropropene	1.0	U	0.24	1.0

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-2**

Lab Sample ID: 460-85134-2

Client Matrix: Water

Date Sampled: 10/24/2014 1300

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-259156	Instrument ID:	CVOAMS3
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C1542.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/30/2014 1816			Final Weight/Volume:	5 mL
Prep Date:	10/30/2014 1816				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Trichloroethene	1.0	U	0.090	1.0
Trichlorofluoromethane	1.0	U	0.15	1.0
Vinyl chloride	1.0	U	0.14	1.0
1,2-Dichloroethane	1.0	U	0.19	1.0
1,2-Dichlorobenzene	1.0	U	0.21	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.40	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	114		70 - 130
4-Bromofluorobenzene	115		64 - 135
Dibromofluoromethane (Surr)	115		72 - 137
Toluene-d8 (Surr)	114		70 - 130

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-2**

Lab Sample ID: 460-85134-2

Client Matrix: Water

Date Sampled: 10/24/2014 1300

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-259156	Instrument ID:	CVOAMS3
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C1542.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/30/2014 1816			Final Weight/Volume:	5 mL
Prep Date:	10/30/2014 1816				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/L)	Qualifier
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-1**

Lab Sample ID: 460-85134-3

Client Matrix: Water

Date Sampled: 10/24/2014 0000

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-259463	Instrument ID:	CVOAMS3
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C1577.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/31/2014 1146			Final Weight/Volume:	5 mL
Prep Date:	10/31/2014 1146				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.060	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.16	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	0.080	1.0
1,1,2-Trichloroethane	1.0	U	0.19	1.0
1,1-Dichloroethane	1.0	U	0.13	1.0
1,1-Dichloroethene	1.0	U	0.090	1.0
1,2,3-Trichlorobenzene	1.0	U	0.51	1.0
1,2,4-Trichlorobenzene	1.0	U	0.34	1.0
1,2-Dichloropropane	1.0	U	0.090	1.0
1,3-Dichlorobenzene	1.0	U	0.14	1.0
1,4-Dichlorobenzene	1.0	U	0.23	1.0
1,4-Dioxane	50	U	36	50
2-Butanone (MEK)	5.0	U	2.3	5.0
2-Hexanone	5.0	U	0.50	5.0
4-Methyl-2-pentanone (MIBK)	2.0	J	0.99	5.0
Acetone	5.0	U	2.7	5.0
Benzene	1.0	U	0.080	1.0
Bromoform	1.0	U	0.19	1.0
Bromomethane	1.0	U *	0.18	1.0
Carbon disulfide	1.0	U	0.13	1.0
Carbon tetrachloride	1.0	U	0.060	1.0
Chlorobenzene	1.0	U	0.11	1.0
Chlorobromomethane	1.0	U	0.27	1.0
Chlorodibromomethane	1.0	U	0.20	1.0
Chloroethane	1.0	U	0.17	1.0
Chloroform	1.0	U	0.080	1.0
Chloromethane	1.0	U	0.10	1.0
cis-1,2-Dichloroethene	1.0	U	0.18	1.0
cis-1,3-Dichloropropene	1.0	U	0.18	1.0
Cyclohexane	1.0	U	0.16	1.0
Dichlorobromomethane	1.0	U	0.12	1.0
Dichlorodifluoromethane	1.0	U	0.22	1.0
Ethylbenzene	1.0	U	0.10	1.0
Ethylene Dibromide	1.0	U	0.28	1.0
Isopropylbenzene	1.0	U	0.080	1.0
Methyl acetate	5.0	U	0.34	5.0
Methyl tert-butyl ether	1.0	U	0.14	1.0
Methylcyclohexane	1.0	U	0.14	1.0
Methylene Chloride	1.0	U	0.18	1.0
m-Xylene & p-Xylene	1.0	U	0.25	1.0
o-Xylene	0.22	J	0.13	1.0
Styrene	1.0	U	0.12	1.0
Tetrachloroethene	1.0	U	0.10	1.0
Toluene	1.0	U	0.15	1.0
trans-1,2-Dichloroethene	1.0	U	0.13	1.0
trans-1,3-Dichloropropene	1.0	U	0.24	1.0

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-1**

Lab Sample ID: 460-85134-3

Client Matrix: Water

Date Sampled: 10/24/2014 0000

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-259463	Instrument ID:	CVOAMS3
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C1577.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/31/2014 1146			Final Weight/Volume:	5 mL
Prep Date:	10/31/2014 1146				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Trichloroethene	1.0	U	0.090	1.0
Trichlorofluoromethane	1.0	U	0.15	1.0
Vinyl chloride	1.0	U	0.14	1.0
1,2-Dichloroethane	1.0	U	0.19	1.0
1,2-Dichlorobenzene	1.0	U	0.21	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.40	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	114		70 - 130
4-Bromofluorobenzene	116		64 - 135
Dibromofluoromethane (Surr)	117		72 - 137
Toluene-d8 (Surr)	113		70 - 130

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-1**

Lab Sample ID: 460-85134-3

Client Matrix: Water

Date Sampled: 10/24/2014 0000

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-259463	Instrument ID:	CVOAMS3
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C1577.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/31/2014 1146			Final Weight/Volume:	5 mL
Prep Date:	10/31/2014 1146				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/L)	Qualifier
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-5**

Lab Sample ID: 460-85134-4

Client Matrix: Water

Date Sampled: 10/24/2014 0000

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-259156	Instrument ID:	CVOAMS3
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C1544.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/30/2014 1908			Final Weight/Volume:	5 mL
Prep Date:	10/30/2014 1908				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.060	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.16	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	0.080	1.0
1,1,2-Trichloroethane	1.0	U	0.19	1.0
1,1-Dichloroethane	1.0	U	0.13	1.0
1,1-Dichloroethene	1.0	U	0.090	1.0
1,2,3-Trichlorobenzene	1.0	U	0.51	1.0
1,2,4-Trichlorobenzene	1.0	U	0.34	1.0
1,2-Dichloropropane	1.0	U	0.090	1.0
1,3-Dichlorobenzene	1.0	U	0.14	1.0
1,4-Dichlorobenzene	1.0	U	0.23	1.0
1,4-Dioxane	50	U	36	50
2-Butanone (MEK)	5.0	U	2.3	5.0
2-Hexanone	5.0	U	0.50	5.0
4-Methyl-2-pentanone (MIBK)	5.0	U	0.99	5.0
Acetone	5.0	U	2.7	5.0
Benzene	1.0	U	0.080	1.0
Bromoform	1.0	U	0.19	1.0
Bromomethane	1.0	U	0.18	1.0
Carbon disulfide	1.0	U	0.13	1.0
Carbon tetrachloride	1.0	U	0.060	1.0
Chlorobenzene	1.0	U	0.11	1.0
Chlorobromomethane	1.0	U	0.27	1.0
Chlorodibromomethane	1.0	U	0.20	1.0
Chloroethane	1.0	U	0.17	1.0
Chloroform	1.0	U	0.080	1.0
Chloromethane	1.0	U	0.10	1.0
cis-1,2-Dichloroethene	1.0	U	0.18	1.0
cis-1,3-Dichloropropene	1.0	U	0.18	1.0
Cyclohexane	1.0	U	0.16	1.0
Dichlorobromomethane	1.0	U	0.12	1.0
Dichlorodifluoromethane	1.0	U	0.22	1.0
Ethylbenzene	1.0	U	0.10	1.0
Ethylene Dibromide	1.0	U	0.28	1.0
Isopropylbenzene	1.0	U	0.080	1.0
Methyl acetate	5.0	U	0.34	5.0
Methyl tert-butyl ether	1.0	U	0.14	1.0
Methylcyclohexane	1.0	U	0.14	1.0
Methylene Chloride	1.0	U	0.18	1.0
m-Xylene & p-Xylene	1.0	U	0.25	1.0
o-Xylene	1.0	U	0.13	1.0
Styrene	1.0	U	0.12	1.0
Tetrachloroethene	1.0	U	0.10	1.0
Toluene	1.0	U	0.15	1.0
trans-1,2-Dichloroethene	1.0	U	0.13	1.0
trans-1,3-Dichloropropene	1.0	U	0.24	1.0

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-5**

Lab Sample ID: 460-85134-4

Client Matrix: Water

Date Sampled: 10/24/2014 0000

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-259156	Instrument ID:	CVOAMS3
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C1544.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/30/2014 1908			Final Weight/Volume:	5 mL
Prep Date:	10/30/2014 1908				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Trichloroethene	1.0	U	0.090	1.0
Trichlorofluoromethane	1.0	U	0.15	1.0
Vinyl chloride	1.0	U	0.14	1.0
1,2-Dichloroethane	1.0	U	0.19	1.0
1,2-Dichlorobenzene	1.0	U	0.21	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.40	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	113		70 - 130
4-Bromofluorobenzene	113		64 - 135
Dibromofluoromethane (Surr)	114		72 - 137
Toluene-d8 (Surr)	114		70 - 130

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-5**

Lab Sample ID: 460-85134-4

Client Matrix: Water

Date Sampled: 10/24/2014 0000

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-259156	Instrument ID:	CVOAMS3
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C1544.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/30/2014 1908			Final Weight/Volume:	5 mL
Prep Date:	10/30/2014 1908				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/L)	Qualifier
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TB3**

Lab Sample ID: 460-85134-5

Client Matrix: Water

Date Sampled: 10/24/2014 0000

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-259156	Instrument ID:	CVOAMS3
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C1538.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/30/2014 1632			Final Weight/Volume:	5 mL
Prep Date:	10/30/2014 1632				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.060	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.16	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	0.080	1.0
1,1,2-Trichloroethane	1.0	U	0.19	1.0
1,1-Dichloroethane	1.0	U	0.13	1.0
1,1-Dichloroethene	1.0	U	0.090	1.0
1,2,3-Trichlorobenzene	1.0	U	0.51	1.0
1,2,4-Trichlorobenzene	1.0	U	0.34	1.0
1,2-Dichloropropane	1.0	U	0.090	1.0
1,3-Dichlorobenzene	1.0	U	0.14	1.0
1,4-Dichlorobenzene	1.0	U	0.23	1.0
1,4-Dioxane	50	U	36	50
2-Butanone (MEK)	5.0	U	2.3	5.0
2-Hexanone	5.0	U	0.50	5.0
4-Methyl-2-pentanone (MIBK)	5.0	U	0.99	5.0
Acetone	5.0	U	2.7	5.0
Benzene	1.0	U	0.080	1.0
Bromoform	1.0	U	0.19	1.0
Bromomethane	1.0	U	0.18	1.0
Carbon disulfide	1.0	U	0.13	1.0
Carbon tetrachloride	1.0	U	0.060	1.0
Chlorobenzene	1.0	U	0.11	1.0
Chlorobromomethane	1.0	U	0.27	1.0
Chlorodibromomethane	1.0	U	0.20	1.0
Chloroethane	1.0	U	0.17	1.0
Chloroform	1.0	U	0.080	1.0
Chloromethane	1.0	U	0.10	1.0
cis-1,2-Dichloroethene	1.0	U	0.18	1.0
cis-1,3-Dichloropropene	1.0	U	0.18	1.0
Cyclohexane	1.0	U	0.16	1.0
Dichlorobromomethane	1.0	U	0.12	1.0
Dichlorodifluoromethane	1.0	U	0.22	1.0
Ethylbenzene	1.0	U	0.10	1.0
Ethylene Dibromide	1.0	U	0.28	1.0
Isopropylbenzene	1.0	U	0.080	1.0
Methyl acetate	5.0	U	0.34	5.0
Methyl tert-butyl ether	1.0	U	0.14	1.0
Methylcyclohexane	1.0	U	0.14	1.0
Methylene Chloride	1.0	U	0.18	1.0
m-Xylene & p-Xylene	1.0	U	0.25	1.0
o-Xylene	1.0	U	0.13	1.0
Styrene	1.0	U	0.12	1.0
Tetrachloroethene	1.0	U	0.10	1.0
Toluene	1.0	U	0.15	1.0
trans-1,2-Dichloroethene	1.0	U	0.13	1.0
trans-1,3-Dichloropropene	1.0	U	0.24	1.0

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TB3**

Lab Sample ID: 460-85134-5

Client Matrix: Water

Date Sampled: 10/24/2014 0000

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-259156	Instrument ID:	CVOAMS3
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C1538.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/30/2014 1632			Final Weight/Volume:	5 mL
Prep Date:	10/30/2014 1632				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Trichloroethene	1.0	U	0.090	1.0
Trichlorofluoromethane	1.0	U	0.15	1.0
Vinyl chloride	1.0	U	0.14	1.0
1,2-Dichloroethane	1.0	U	0.19	1.0
1,2-Dichlorobenzene	1.0	U	0.21	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.40	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	115		70 - 130
4-Bromofluorobenzene	116		64 - 135
Dibromofluoromethane (Surr)	115		72 - 137
Toluene-d8 (Surr)	113		70 - 130

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TB3**

Lab Sample ID: 460-85134-5

Client Matrix: Water

Date Sampled: 10/24/2014 0000

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-259156	Instrument ID:	CVOAMS3
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C1538.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/30/2014 1632			Final Weight/Volume:	5 mL
Prep Date:	10/30/2014 1632				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/L)	Qualifier
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-6**

Lab Sample ID: 460-85074-1

Client Matrix: Water

Date Sampled: 10/23/2014 1200

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258776	Instrument ID:	CBNAMS6
Prep Method:	3510C	Prep Batch:	460-258263	Lab File ID:	M86131.D
Dilution:	1.0			Initial Weight/Volume:	210 mL
Analysis Date:	10/28/2014 2210			Final Weight/Volume:	2 mL
Prep Date:	10/25/2014 0948			Injection Volume:	5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1'-Biphenyl	12	U	2.1	12
1,2,4,5-Tetrachlorobenzene	12	U	2.1	12
2,2'-oxybis[1-chloropropane]	12	U	1.5	12
2,3,4,6-Tetrachlorophenol	12	U	1.1	12
2,4,5-Trichlorophenol	12	U	2.6	12
2,4,6-Trichlorophenol	12	U	1.7	12
2,4-Dichlorophenol	12	U	1.3	12
2,4-Dimethylphenol	12	U	1.4	12
2,4-Dinitrophenol	36	U	2.4	36
2,4-Dinitrotoluene	2.4	U	0.33	2.4
2,6-Dinitrotoluene	2.4	U	0.32	2.4
2-Chloronaphthalene	12	U	1.5	12
2-Chlorophenol	12	U	1.1	12
2-Methylnaphthalene	12	U	1.8	12
2-Methylphenol	12	U	1.7	12
2-Nitroaniline	24	U	2.4	24
2-Nitrophenol	12	U	0.81	12
3,3'-Dichlorobenzidine	24	U	3.8	24
3-Nitroaniline	24	U	3.5	24
4,6-Dinitro-2-methylphenol	36	U	3.6	36
4-Bromophenyl phenyl ether	12	U	1.3	12
4-Chloro-3-methylphenol	12	U	1.3	12
4-Chloroaniline	1.2	U	0.38	1.2
4-Chlorophenyl phenyl ether	12	U	1.8	12
4-Methylphenol	12	U	1.2	12
4-Nitroaniline	24	U	3.5	24
4-Nitrophenol	36	U	2.4	36
Acenaphthene	12	U	1.3	12
Acenaphthylene	12	U	2.1	12
Acetophenone	12	U	1.1	12
Anthracene	12	U	1.0	12
Atrazine	12	U	1.2	12
Benzaldehyde	12	U	2.5	12
Benzo[a]anthracene	1.2	U	0.21	1.2
Benzo[a]pyrene	1.2	U	0.17	1.2
Benzo[b]fluoranthene	1.2	U	0.25	1.2
Benzo[g,h,i]perylene	12	U	1.1	12
Benzo[k]fluoranthene	1.2	U	0.17	1.2
Bis(2-chloroethoxy)methane	12	U	1.2	12
Bis(2-chloroethyl)ether	1.2	U	0.36	1.2
Bis(2-ethylhexyl) phthalate	12	U	0.96	12
Butyl benzyl phthalate	12	U	1.7	12
Caprolactam	12	U	1.1	12
Carbazole	12	U	1.4	12
Chrysene	12	U	1.7	12
Dibenz(a,h)anthracene	1.2	U	0.19	1.2

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-6**

Lab Sample ID: 460-85074-1

Client Matrix: Water

Date Sampled: 10/23/2014 1200

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258776	Instrument ID:	CBNAMS6
Prep Method:	3510C	Prep Batch:	460-258263	Lab File ID:	M86131.D
Dilution:	1.0			Initial Weight/Volume:	210 mL
Analysis Date:	10/28/2014 2210			Final Weight/Volume:	2 mL
Prep Date:	10/25/2014 0948			Injection Volume:	5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Dibenzofuran	12	U	1.8	12
Diethyl phthalate	12	U	1.7	12
Dimethyl phthalate	12	U	1.3	12
Di-n-butyl phthalate	12	U	1.2	12
Di-n-octyl phthalate	12	U *	1.0	12
Fluoranthene	12	U	1.3	12
Fluorene	12	U	2.0	12
Hexachlorobenzene	1.2	U	0.24	1.2
Hexachlorobutadiene	2.4	U *	0.81	2.4
Hexachlorocyclopentadiene	12	U	1.8	12
Hexachloroethane	1.2	U	0.18	1.2
Indeno[1,2,3-cd]pyrene	1.2	U	0.13	1.2
Isophorone	12	U	1.5	12
Naphthalene	12	U	2.4	12
Nitrobenzene	1.2	U	0.40	1.2
N-Nitrosodi-n-propylamine	1.2	U	0.32	1.2
N-Nitrosodiphenylamine	12	U	1.2	12
Pentachlorophenol	36	U	3.2	36
Phenanthrene	12	U	1.4	12
Phenol	12	U	0.71	12
Pyrene	12	U	1.3	12

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol (Surr)	68		51 - 126
2-Fluorobiphenyl	82		50 - 120
2-Fluorophenol (Surr)	52		15 - 96
Nitrobenzene-d5 (Surr)	89		60 - 114
Phenol-d5 (Surr)	38		4 - 86
Terphenyl-d14 (Surr)	100		72 - 130

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-6**

Lab Sample ID: 460-85074-1

Client Matrix: Water

Date Sampled: 10/23/2014 1200

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258776	Instrument ID:	CBNAMS6
Prep Method:	3510C	Prep Batch:	460-258263	Lab File ID:	M86131.D
Dilution:	1.0			Initial Weight/Volume:	210 mL
Analysis Date:	10/28/2014 2210			Final Weight/Volume:	2 mL
Prep Date:	10/25/2014 0948			Injection Volume:	5 uL

Tentatively Identified Compounds **Number TIC's Found:** **6**

Cas Number	Analyte	RT	Est. Result (ug/L)	Qualifier
1195-79-5	Bicyclo[2.2.1]heptan-2-one, 1,3,3-trimet	5.09	12	J N
1632-73-1	Bicyclo[2.2.1]heptan-2-ol, 1,3,3-trimeth	5.30	13	J N
464-48-2	Bicyclo[2.2.1]heptan-2-one, 1,7,7-trimet	5.52	13	J N
464-45-9	Bicyclo[2.2.1]heptan-2-ol, 1,7,7-trimeth	5.69	17	J N
	Unknown	5.81	10	J
80-53-5	Cyclohexanemethanol, 4-hydroxy-.alpha.,.	6.54	17	J N

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-3**

Lab Sample ID: 460-85074-2

Client Matrix: Water

Date Sampled: 10/23/2014 1500

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258776	Instrument ID:	CBNAMS6
Prep Method:	3510C	Prep Batch:	460-258263	Lab File ID:	M86132.D
Dilution:	1.0			Initial Weight/Volume:	210 mL
Analysis Date:	10/28/2014 2230			Final Weight/Volume:	2 mL
Prep Date:	10/25/2014 0948			Injection Volume:	5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1'-Biphenyl	12	U	2.1	12
1,2,4,5-Tetrachlorobenzene	12	U	2.1	12
2,2'-oxybis[1-chloropropane]	12	U	1.5	12
2,3,4,6-Tetrachlorophenol	12	U	1.1	12
2,4,5-Trichlorophenol	12	U	2.6	12
2,4,6-Trichlorophenol	12	U	1.7	12
2,4-Dichlorophenol	12	U	1.3	12
2,4-Dimethylphenol	12	U	1.4	12
2,4-Dinitrophenol	36	U	2.4	36
2,4-Dinitrotoluene	2.4	U	0.33	2.4
2,6-Dinitrotoluene	2.4	U	0.32	2.4
2-Chloronaphthalene	12	U	1.5	12
2-Chlorophenol	12	U	1.1	12
2-Methylnaphthalene	12	U	1.8	12
2-Methylphenol	12	U	1.7	12
2-Nitroaniline	24	U	2.4	24
2-Nitrophenol	12	U	0.81	12
3,3'-Dichlorobenzidine	24	U	3.8	24
3-Nitroaniline	24	U	3.5	24
4,6-Dinitro-2-methylphenol	36	U	3.6	36
4-Bromophenyl phenyl ether	12	U	1.3	12
4-Chloro-3-methylphenol	12	U	1.3	12
4-Chloroaniline	1.2	U	0.38	1.2
4-Chlorophenyl phenyl ether	12	U	1.8	12
4-Methylphenol	12	U	1.2	12
4-Nitroaniline	24	U	3.5	24
4-Nitrophenol	36	U	2.4	36
Acenaphthene	12	U	1.3	12
Acenaphthylene	12	U	2.1	12
Acetophenone	12	U	1.1	12
Anthracene	12	U	1.0	12
Atrazine	12	U	1.2	12
Benzaldehyde	12	U	2.5	12
Benzo[a]anthracene	1.2	U	0.21	1.2
Benzo[a]pyrene	1.2	U	0.17	1.2
Benzo[b]fluoranthene	1.2	U	0.25	1.2
Benzo[g,h,i]perylene	12	U	1.1	12
Benzo[k]fluoranthene	1.2	U	0.17	1.2
Bis(2-chloroethoxy)methane	12	U	1.2	12
Bis(2-chloroethyl)ether	1.2	U	0.36	1.2
Bis(2-ethylhexyl) phthalate	12	U	0.96	12
Butyl benzyl phthalate	12	U	1.7	12
Caprolactam	12	U	1.1	12
Carbazole	12	U	1.4	12
Chrysene	12	U	1.7	12
Dibenz(a,h)anthracene	1.2	U	0.19	1.2

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-3**

Lab Sample ID: 460-85074-2

Client Matrix: Water

Date Sampled: 10/23/2014 1500

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258776	Instrument ID:	CBNAMS6
Prep Method:	3510C	Prep Batch:	460-258263	Lab File ID:	M86132.D
Dilution:	1.0			Initial Weight/Volume:	210 mL
Analysis Date:	10/28/2014 2230			Final Weight/Volume:	2 mL
Prep Date:	10/25/2014 0948			Injection Volume:	5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Dibenzofuran	12	U	1.8	12
Diethyl phthalate	12	U	1.7	12
Dimethyl phthalate	12	U	1.3	12
Di-n-butyl phthalate	12	U	1.2	12
Di-n-octyl phthalate	12	U *	1.0	12
Fluoranthene	12	U	1.3	12
Fluorene	12	U	2.0	12
Hexachlorobenzene	1.2	U	0.24	1.2
Hexachlorobutadiene	2.4	U *	0.81	2.4
Hexachlorocyclopentadiene	12	U	1.8	12
Hexachloroethane	1.2	U	0.18	1.2
Indeno[1,2,3-cd]pyrene	1.2	U	0.13	1.2
Isophorone	12	U	1.5	12
Naphthalene	12	U	2.4	12
Nitrobenzene	1.2	U	0.40	1.2
N-Nitrosodi-n-propylamine	1.2	U	0.32	1.2
N-Nitrosodiphenylamine	12	U	1.2	12
Pentachlorophenol	36	U	3.2	36
Phenanthrene	12	U	1.4	12
Phenol	12	U	0.71	12
Pyrene	12	U	1.3	12

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol (Surr)	67		51 - 126
2-Fluorobiphenyl	91		50 - 120
2-Fluorophenol (Surr)	63		15 - 96
Nitrobenzene-d5 (Surr)	97		60 - 114
Phenol-d5 (Surr)	44		4 - 86
Terphenyl-d14 (Surr)	110		72 - 130

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-3**

Lab Sample ID: 460-85074-2

Client Matrix: Water

Date Sampled: 10/23/2014 1500

Date Received: 10/23/2014 1845

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258776	Instrument ID:	CBNAMS6
Prep Method:	3510C	Prep Batch:	460-258263	Lab File ID:	M86132.D
Dilution:	1.0			Initial Weight/Volume:	210 mL
Analysis Date:	10/28/2014 2230			Final Weight/Volume:	2 mL
Prep Date:	10/25/2014 0948			Injection Volume:	5 uL

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/L)	Qualifier
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-4**

Lab Sample ID: 460-85134-1

Client Matrix: Water

Date Sampled: 10/24/2014 1045

Date Received: 10/24/2014 1820

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-259705	Instrument ID:	CBNAMS13
Prep Method:	3510C	Prep Batch:	460-258769	Lab File ID:	C10875.D
Dilution:	1.0			Initial Weight/Volume:	220 mL
Analysis Date:	11/01/2014 1226			Final Weight/Volume:	2 mL
Prep Date:	10/28/2014 1313			Injection Volume:	5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1'-Biphenyl	11	U	2.0	11
1,2,4,5-Tetrachlorobenzene	11	U	2.0	11
2,2'-oxybis[1-chloropropane]	11	U *	1.5	11
2,3,4,6-Tetrachlorophenol	11	U	1.0	11
2,4,5-Trichlorophenol	11	U	2.5	11
2,4,6-Trichlorophenol	11	U	1.6	11
2,4-Dichlorophenol	11	U	1.3	11
2,4-Dimethylphenol	11	U	1.4	11
2,4-Dinitrophenol	34	U	2.3	34
2,4-Dinitrotoluene	2.3	U	0.32	2.3
2,6-Dinitrotoluene	2.3	U	0.31	2.3
2-Chloronaphthalene	11	U	1.5	11
2-Chlorophenol	11	U	1.1	11
2-Methylnaphthalene	11	U	1.7	11
2-Methylphenol	11	U	1.6	11
2-Nitroaniline	23	U	2.3	23
2-Nitrophenol	11	U	0.77	11
3,3'-Dichlorobenzidine	23	U	3.6	23
3-Nitroaniline	23	U	3.3	23
4,6-Dinitro-2-methylphenol	34	U	3.4	34
4-Bromophenyl phenyl ether	11	U	1.3	11
4-Chloro-3-methylphenol	11	U	1.3	11
4-Chloroaniline	1.1	U	0.36	1.1
4-Chlorophenyl phenyl ether	11	U	1.7	11
4-Methylphenol	11	U	1.1	11
4-Nitroaniline	23	U	3.3	23
4-Nitrophenol	34	U	2.3	34
Acenaphthene	11	U	1.3	11
Acenaphthylene	11	U	2.0	11
Acetophenone	11	U	1.0	11
Anthracene	11	U	0.97	11
Atrazine	11	U	1.1	11
Benzaldehyde	11	U	2.4	11
Benzo[a]anthracene	1.1	U	0.20	1.1
Benzo[a]pyrene	1.1	U	0.16	1.1
Benzo[b]fluoranthene	1.1	U	0.24	1.1
Benzo[g,h,i]perylene	11	U	1.1	11
Benzo[k]fluoranthene	1.1	U	0.16	1.1
Bis(2-chloroethoxy)methane	11	U	1.1	11
Bis(2-chloroethyl)ether	1.1	U	0.34	1.1
Bis(2-ethylhexyl) phthalate	3.5	J	0.92	11
Butyl benzyl phthalate	11	U	1.6	11
Caprolactam	11	U	1.0	11
Carbazole	11	U	1.4	11
Chrysene	11	U	1.6	11
Dibenz(a,h)anthracene	1.1	U	0.18	1.1

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-4**

Lab Sample ID: 460-85134-1

Client Matrix: Water

Date Sampled: 10/24/2014 1045

Date Received: 10/24/2014 1820

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-259705	Instrument ID:	CBNAMS13
Prep Method:	3510C	Prep Batch:	460-258769	Lab File ID:	C10875.D
Dilution:	1.0			Initial Weight/Volume:	220 mL
Analysis Date:	11/01/2014 1226			Final Weight/Volume:	2 mL
Prep Date:	10/28/2014 1313			Injection Volume:	5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Dibenzofuran	11	U	1.7	11
Diethyl phthalate	11	U	1.6	11
Dimethyl phthalate	11	U	1.3	11
Di-n-butyl phthalate	11	U	1.1	11
Di-n-octyl phthalate	11	U	1.0	11
Fluoranthene	11	U	1.3	11
Fluorene	11	U	1.9	11
Hexachlorobenzene	1.1	U	0.23	1.1
Hexachlorobutadiene	2.3	U	0.77	2.3
Hexachlorocyclopentadiene	11	U	1.7	11
Hexachloroethane	1.1	U	0.17	1.1
Indeno[1,2,3-cd]pyrene	1.1	U	0.13	1.1
Isophorone	11	U	1.5	11
Naphthalene	11	U	2.3	11
Nitrobenzene	1.1	U	0.39	1.1
N-Nitrosodi-n-propylamine	1.1	U	0.31	1.1
N-Nitrosodiphenylamine	11	U	1.1	11
Pentachlorophenol	34	U	3.1	34
Phenanthrene	11	U	1.4	11
Phenol	11	U	0.68	11
Pyrene	11	U	1.3	11

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol (Surr)	107		51 - 126
2-Fluorobiphenyl	95		50 - 120
2-Fluorophenol (Surr)	61		15 - 96
Nitrobenzene-d5 (Surr)	88		60 - 114
Phenol-d5 (Surr)	36		4 - 86
Terphenyl-d14 (Surr)	77		72 - 130

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-4**

Lab Sample ID: 460-85134-1

Client Matrix: Water

Date Sampled: 10/24/2014 1045

Date Received: 10/24/2014 1820

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-259705	Instrument ID:	CBNAMS13
Prep Method:	3510C	Prep Batch:	460-258769	Lab File ID:	C10875.D
Dilution:	1.0			Initial Weight/Volume:	220 mL
Analysis Date:	11/01/2014 1226			Final Weight/Volume:	2 mL
Prep Date:	10/28/2014 1313			Injection Volume:	5 uL

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/L)	Qualifier
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-2**

Lab Sample ID: 460-85134-2

Client Matrix: Water

Date Sampled: 10/24/2014 1300

Date Received: 10/24/2014 1820

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-259705	Instrument ID:	CBNAMS13
Prep Method:	3510C	Prep Batch:	460-258769	Lab File ID:	C10876.D
Dilution:	1.0			Initial Weight/Volume:	220 mL
Analysis Date:	11/01/2014 1250			Final Weight/Volume:	2 mL
Prep Date:	10/28/2014 1313			Injection Volume:	5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1'-Biphenyl	11	U	2.0	11
1,2,4,5-Tetrachlorobenzene	11	U	2.0	11
2,2'-oxybis[1-chloropropane]	11	U *	1.5	11
2,3,4,6-Tetrachlorophenol	11	U	1.0	11
2,4,5-Trichlorophenol	11	U	2.5	11
2,4,6-Trichlorophenol	11	U	1.6	11
2,4-Dichlorophenol	11	U	1.3	11
2,4-Dimethylphenol	11	U	1.4	11
2,4-Dinitrophenol	34	U	2.3	34
2,4-Dinitrotoluene	2.3	U	0.32	2.3
2,6-Dinitrotoluene	2.3	U	0.31	2.3
2-Chloronaphthalene	11	U	1.5	11
2-Chlorophenol	11	U	1.1	11
2-Methylnaphthalene	11	U	1.7	11
2-Methylphenol	11	U	1.6	11
2-Nitroaniline	23	U	2.3	23
2-Nitrophenol	11	U	0.77	11
3,3'-Dichlorobenzidine	23	U	3.6	23
3-Nitroaniline	23	U	3.3	23
4,6-Dinitro-2-methylphenol	34	U	3.4	34
4-Bromophenyl phenyl ether	11	U	1.3	11
4-Chloro-3-methylphenol	11	U	1.3	11
4-Chloroaniline	1.1	U	0.36	1.1
4-Chlorophenyl phenyl ether	11	U	1.7	11
4-Methylphenol	11	U	1.1	11
4-Nitroaniline	23	U	3.3	23
4-Nitrophenol	34	U	2.3	34
Acenaphthene	11	U	1.3	11
Acenaphthylene	11	U	2.0	11
Acetophenone	11	U	1.0	11
Anthracene	11	U	0.97	11
Atrazine	11	U	1.1	11
Benzaldehyde	11	U	2.4	11
Benzo[a]anthracene	1.1	U	0.20	1.1
Benzo[a]pyrene	1.1	U	0.16	1.1
Benzo[b]fluoranthene	1.1	U	0.24	1.1
Benzo[g,h,i]perylene	11	U	1.1	11
Benzo[k]fluoranthene	1.1	U	0.16	1.1
Bis(2-chloroethoxy)methane	11	U	1.1	11
Bis(2-chloroethyl)ether	1.1	U	0.34	1.1
Bis(2-ethylhexyl) phthalate	3.5	J	0.92	11
Butyl benzyl phthalate	11	U	1.6	11
Caprolactam	11	U	1.0	11
Carbazole	11	U	1.4	11
Chrysene	11	U	1.6	11
Dibenz(a,h)anthracene	1.1	U	0.18	1.1

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-2**

Lab Sample ID: 460-85134-2

Client Matrix: Water

Date Sampled: 10/24/2014 1300

Date Received: 10/24/2014 1820

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-259705	Instrument ID:	CBNAMS13
Prep Method:	3510C	Prep Batch:	460-258769	Lab File ID:	C10876.D
Dilution:	1.0			Initial Weight/Volume:	220 mL
Analysis Date:	11/01/2014 1250			Final Weight/Volume:	2 mL
Prep Date:	10/28/2014 1313			Injection Volume:	5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Dibenzofuran	11	U	1.7	11
Diethyl phthalate	11	U	1.6	11
Dimethyl phthalate	11	U	1.3	11
Di-n-butyl phthalate	11	U	1.1	11
Di-n-octyl phthalate	11	U	1.0	11
Fluoranthene	11	U	1.3	11
Fluorene	11	U	1.9	11
Hexachlorobenzene	1.1	U	0.23	1.1
Hexachlorobutadiene	2.3	U	0.77	2.3
Hexachlorocyclopentadiene	11	U	1.7	11
Hexachloroethane	1.1	U	0.17	1.1
Indeno[1,2,3-cd]pyrene	1.1	U	0.13	1.1
Isophorone	11	U	1.5	11
Naphthalene	11	U	2.3	11
Nitrobenzene	1.1	U	0.39	1.1
N-Nitrosodi-n-propylamine	1.1	U	0.31	1.1
N-Nitrosodiphenylamine	11	U	1.1	11
Pentachlorophenol	34	U	3.1	34
Phenanthrene	11	U	1.4	11
Phenol	11	U	0.68	11
Pyrene	11	U	1.3	11

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol (Surr)	107		51 - 126
2-Fluorobiphenyl	96		50 - 120
2-Fluorophenol (Surr)	59		15 - 96
Nitrobenzene-d5 (Surr)	89		60 - 114
Phenol-d5 (Surr)	35		4 - 86
Terphenyl-d14 (Surr)	77		72 - 130

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-2**

Lab Sample ID: 460-85134-2

Client Matrix: Water

Date Sampled: 10/24/2014 1300

Date Received: 10/24/2014 1820

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-259705	Instrument ID:	CBNAMS13
Prep Method:	3510C	Prep Batch:	460-258769	Lab File ID:	C10876.D
Dilution:	1.0			Initial Weight/Volume:	220 mL
Analysis Date:	11/01/2014 1250			Final Weight/Volume:	2 mL
Prep Date:	10/28/2014 1313			Injection Volume:	5 uL

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/L)	Qualifier
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-5**

Lab Sample ID: 460-85171-1

Client Matrix: Water

Date Sampled: 10/24/2014 1710

Date Received: 10/27/2014 1440

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-259705	Instrument ID:	CBNAMS13
Prep Method:	3510C	Prep Batch:	460-258769	Lab File ID:	C10877.D
Dilution:	1.0			Initial Weight/Volume:	210 mL
Analysis Date:	11/01/2014 1313			Final Weight/Volume:	2 mL
Prep Date:	10/28/2014 1313			Injection Volume:	5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1'-Biphenyl	12	U	2.1	12
1,2,4,5-Tetrachlorobenzene	12	U	2.1	12
2,2'-oxybis[1-chloropropane]	12	U *	1.5	12
2,3,4,6-Tetrachlorophenol	12	U	1.1	12
2,4,5-Trichlorophenol	12	U	2.6	12
2,4,6-Trichlorophenol	12	U	1.7	12
2,4-Dichlorophenol	12	U	1.3	12
2,4-Dimethylphenol	12	U	1.4	12
2,4-Dinitrophenol	36	U	2.4	36
2,4-Dinitrotoluene	2.4	U	0.33	2.4
2,6-Dinitrotoluene	2.4	U	0.32	2.4
2-Chloronaphthalene	12	U	1.5	12
2-Chlorophenol	12	U	1.1	12
2-Methylnaphthalene	12	U	1.8	12
2-Methylphenol	12	U	1.7	12
2-Nitroaniline	24	U	2.4	24
2-Nitrophenol	12	U	0.81	12
3,3'-Dichlorobenzidine	24	U	3.8	24
3-Nitroaniline	24	U	3.5	24
4,6-Dinitro-2-methylphenol	36	U	3.6	36
4-Bromophenyl phenyl ether	12	U	1.3	12
4-Chloro-3-methylphenol	12	U	1.3	12
4-Chloroaniline	1.2	U	0.38	1.2
4-Chlorophenyl phenyl ether	12	U	1.8	12
4-Methylphenol	12	U	1.2	12
4-Nitroaniline	24	U	3.5	24
4-Nitrophenol	36	U	2.4	36
Acenaphthene	12	U	1.3	12
Acenaphthylene	12	U	2.1	12
Acetophenone	12	U	1.1	12
Anthracene	12	U	1.0	12
Atrazine	12	U	1.2	12
Benzaldehyde	12	U	2.5	12
Benzo[a]anthracene	1.2	U	0.21	1.2
Benzo[a]pyrene	0.52	J	0.17	1.2
Benzo[b]fluoranthene	0.55	J	0.25	1.2
Benzo[g,h,i]perylene	12	U	1.1	12
Benzo[k]fluoranthene	0.24	J	0.17	1.2
Bis(2-chloroethoxy)methane	12	U	1.2	12
Bis(2-chloroethyl)ether	1.2	U	0.36	1.2
Bis(2-ethylhexyl) phthalate	4.1	J	0.96	12
Butyl benzyl phthalate	12	U	1.7	12
Caprolactam	12	U	1.1	12
Carbazole	12	U	1.4	12
Chrysene	12	U	1.7	12
Dibenz(a,h)anthracene	1.2	U	0.19	1.2

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-5**

Lab Sample ID: 460-85171-1

Client Matrix: Water

Date Sampled: 10/24/2014 1710

Date Received: 10/27/2014 1440

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-259705	Instrument ID:	CBNAMS13
Prep Method:	3510C	Prep Batch:	460-258769	Lab File ID:	C10877.D
Dilution:	1.0			Initial Weight/Volume:	210 mL
Analysis Date:	11/01/2014 1313			Final Weight/Volume:	2 mL
Prep Date:	10/28/2014 1313			Injection Volume:	5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Dibenzofuran	12	U	1.8	12
Diethyl phthalate	12	U	1.7	12
Dimethyl phthalate	12	U	1.3	12
Di-n-butyl phthalate	12	U	1.2	12
Di-n-octyl phthalate	12	U	1.0	12
Fluoranthene	1.3	J	1.3	12
Fluorene	12	U	2.0	12
Hexachlorobenzene	1.2	U	0.24	1.2
Hexachlorobutadiene	2.4	U	0.81	2.4
Hexachlorocyclopentadiene	12	U	1.8	12
Hexachloroethane	1.2	U	0.18	1.2
Indeno[1,2,3-cd]pyrene	1.2	U	0.13	1.2
Isophorone	12	U	1.5	12
Naphthalene	12	U	2.4	12
Nitrobenzene	1.2	U	0.40	1.2
N-Nitrosodi-n-propylamine	1.2	U	0.32	1.2
N-Nitrosodiphenylamine	12	U	1.2	12
Pentachlorophenol	36	U	3.2	36
Phenanthrene	1.5	J	1.4	12
Phenol	12	U	0.71	12
Pyrene	12	U	1.3	12

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol (Surr)	113		51 - 126
2-Fluorobiphenyl	102		50 - 120
2-Fluorophenol (Surr)	64		15 - 96
Nitrobenzene-d5 (Surr)	96		60 - 114
Phenol-d5 (Surr)	39		4 - 86
Terphenyl-d14 (Surr)	80		72 - 130

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-5**

Lab Sample ID: 460-85171-1

Client Matrix: Water

Date Sampled: 10/24/2014 1710

Date Received: 10/27/2014 1440

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-259705	Instrument ID:	CBNAMS13
Prep Method:	3510C	Prep Batch:	460-258769	Lab File ID:	C10877.D
Dilution:	1.0			Initial Weight/Volume:	210 mL
Analysis Date:	11/01/2014 1313			Final Weight/Volume:	2 mL
Prep Date:	10/28/2014 1313			Injection Volume:	5 uL

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/L)	Qualifier
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-1**

Lab Sample ID: 460-85239-1

Client Matrix: Water

Date Sampled: 10/28/2014 1245

Date Received: 10/28/2014 1500

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-259810	Instrument ID:	CBNAMS13
Prep Method:	3510C	Prep Batch:	460-259043	Lab File ID:	C10916.D
Dilution:	1.0			Initial Weight/Volume:	210 mL
Analysis Date:	11/02/2014 1657			Final Weight/Volume:	2 mL
Prep Date:	10/29/2014 1636			Injection Volume:	5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1'-Biphenyl	12	U	2.1	12
1,2,4,5-Tetrachlorobenzene	12	U	2.1	12
2,2'-oxybis[1-chloropropane]	12	U *	1.5	12
2,3,4,6-Tetrachlorophenol	12	U	1.1	12
2,4,5-Trichlorophenol	12	U	2.6	12
2,4,6-Trichlorophenol	12	U	1.7	12
2,4-Dichlorophenol	12	U	1.3	12
2,4-Dimethylphenol	12	U	1.4	12
2,4-Dinitrophenol	36	U	2.4	36
2,4-Dinitrotoluene	2.4	U	0.33	2.4
2,6-Dinitrotoluene	2.4	U	0.32	2.4
2-Chloronaphthalene	12	U	1.5	12
2-Chlorophenol	12	U	1.1	12
2-Methylnaphthalene	12	U	1.8	12
2-Methylphenol	12	U	1.7	12
2-Nitroaniline	24	U	2.4	24
2-Nitrophenol	12	U	0.81	12
3,3'-Dichlorobenzidine	24	U	3.8	24
3-Nitroaniline	24	U	3.5	24
4,6-Dinitro-2-methylphenol	36	U	3.6	36
4-Bromophenyl phenyl ether	12	U	1.3	12
4-Chloro-3-methylphenol	12	U	1.3	12
4-Chloroaniline	1.2	U	0.38	1.2
4-Chlorophenyl phenyl ether	12	U	1.8	12
4-Methylphenol	12	U	1.2	12
4-Nitroaniline	24	U	3.5	24
4-Nitrophenol	36	U	2.4	36
Acenaphthene	12	U	1.3	12
Acenaphthylene	12	U	2.1	12
Acetophenone	12	U	1.1	12
Anthracene	12	U	1.0	12
Atrazine	12	U	1.2	12
Benzaldehyde	12	U	2.5	12
Benzo[a]anthracene	1.2	U	0.21	1.2
Benzo[a]pyrene	1.2	U *	0.17	1.2
Benzo[b]fluoranthene	1.2	U	0.25	1.2
Benzo[g,h,i]perylene	12	U	1.1	12
Benzo[k]fluoranthene	1.2	U	0.17	1.2
Bis(2-chloroethoxy)methane	12	U	1.2	12
Bis(2-chloroethyl)ether	1.2	U	0.36	1.2
Bis(2-ethylhexyl) phthalate	4.1	J	0.96	12
Butyl benzyl phthalate	12	U	1.7	12
Caprolactam	12	U	1.1	12
Carbazole	12	U	1.4	12
Chrysene	12	U	1.7	12
Dibenz(a,h)anthracene	1.2	U	0.19	1.2

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-1**

Lab Sample ID: 460-85239-1

Client Matrix: Water

Date Sampled: 10/28/2014 1245

Date Received: 10/28/2014 1500

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-259810	Instrument ID:	CBNAMS13
Prep Method:	3510C	Prep Batch:	460-259043	Lab File ID:	C10916.D
Dilution:	1.0			Initial Weight/Volume:	210 mL
Analysis Date:	11/02/2014 1657			Final Weight/Volume:	2 mL
Prep Date:	10/29/2014 1636			Injection Volume:	5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Dibenzofuran	12	U	1.8	12
Diethyl phthalate	12	U	1.7	12
Dimethyl phthalate	12	U	1.3	12
Di-n-butyl phthalate	1.2	J	1.2	12
Di-n-octyl phthalate	12	U	1.0	12
Fluoranthene	12	U	1.3	12
Fluorene	12	U	2.0	12
Hexachlorobenzene	1.2	U	0.24	1.2
Hexachlorobutadiene	2.4	U	0.81	2.4
Hexachlorocyclopentadiene	12	U	1.8	12
Hexachloroethane	1.2	U	0.18	1.2
Indeno[1,2,3-cd]pyrene	1.2	U	0.13	1.2
Isophorone	12	U	1.5	12
Naphthalene	12	U	2.4	12
Nitrobenzene	1.2	U	0.40	1.2
N-Nitrosodi-n-propylamine	1.2	U	0.32	1.2
N-Nitrosodiphenylamine	12	U	1.2	12
Pentachlorophenol	36	U	3.2	36
Phenanthrene	12	U	1.4	12
Phenol	12	U	0.71	12
Pyrene	12	U	1.3	12

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol (Surr)	108		51 - 126
2-Fluorobiphenyl	97		50 - 120
2-Fluorophenol (Surr)	58		15 - 96
Nitrobenzene-d5 (Surr)	90		60 - 114
Phenol-d5 (Surr)	37		4 - 86
Terphenyl-d14 (Surr)	101		72 - 130

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-1**

Lab Sample ID: 460-85239-1

Client Matrix: Water

Date Sampled: 10/28/2014 1245

Date Received: 10/28/2014 1500

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-259810	Instrument ID:	CBNAMS13
Prep Method:	3510C	Prep Batch:	460-259043	Lab File ID:	C10916.D
Dilution:	1.0			Initial Weight/Volume:	210 mL
Analysis Date:	11/02/2014 1657			Final Weight/Volume:	2 mL
Prep Date:	10/29/2014 1636			Injection Volume:	5 uL

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/L)	Qualifier
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-6**

Lab Sample ID: 460-85074-1

Client Matrix: Water

Date Sampled: 10/23/2014 1200

Date Received: 10/23/2014 1845

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-258699	Instrument ID:	CPESTGC9
Prep Method:	3510C	Prep Batch:	460-258478	Initial Weight/Volume:	125 mL
Dilution:	1.0			Final Weight/Volume:	1 mL
Analysis Date:	10/28/2014 0850			Injection Volume:	1 uL
Prep Date:	10/27/2014 0839			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
4,4'-DDD	0.020	U	0.019	0.020
4,4'-DDE	0.020	U	0.016	0.020
4,4'-DDT	0.020	U	0.017	0.020
Aldrin	0.020	U	0.017	0.020
alpha-BHC	0.020	U	0.0090	0.020
beta-BHC	0.020	U	0.013	0.020
Chlordane (technical)	0.50	U	0.21	0.50
delta-BHC	0.020	U	0.012	0.020
Dieldrin	0.020	U *	0.022	0.020
Endosulfan I	0.020	U	0.016	0.020
Endosulfan II	0.020	U	0.016	0.020
Endosulfan sulfate	0.020	U	0.016	0.020
Endrin	0.020	U	0.017	0.020
Endrin aldehyde	0.020	U	0.016	0.020
Endrin ketone	0.020	U	0.016	0.020
gamma-BHC (Lindane)	0.020	U	0.014	0.020
Heptachlor	0.020	U	0.014	0.020
Heptachlor epoxide	0.020	U	0.016	0.020
Methoxychlor	0.020	U	0.015	0.020
Toxaphene	0.50	U	0.34	0.50

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	97		26 - 150
Tetrachloro-m-xylene	121		50 - 147

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-6**

Lab Sample ID: 460-85074-1

Client Matrix: Water

Date Sampled: 10/23/2014 1200

Date Received: 10/23/2014 1845

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-258699	Instrument ID:	CPESTGC9
Prep Method:	3510C	Prep Batch:	460-258478	Initial Weight/Volume:	125 mL
Dilution:	1.0			Final Weight/Volume:	1 mL
Analysis Date:	10/28/2014 0850			Injection Volume:	1 uL
Prep Date:	10/27/2014 0839			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	92		26 - 150
Tetrachloro-m-xylene	112		50 - 147

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-3**

Lab Sample ID: 460-85074-2

Client Matrix: Water

Date Sampled: 10/23/2014 1500

Date Received: 10/23/2014 1845

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-258699	Instrument ID:	CPESTGC9
Prep Method:	3510C	Prep Batch:	460-258478	Initial Weight/Volume:	125 mL
Dilution:	1.0			Final Weight/Volume:	1 mL
Analysis Date:	10/28/2014 0901			Injection Volume:	1 uL
Prep Date:	10/27/2014 0839			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
4,4'-DDD	0.020	U	0.019	0.020
4,4'-DDE	0.020	U	0.016	0.020
4,4'-DDT	0.020	U	0.017	0.020
Aldrin	0.020	U	0.017	0.020
alpha-BHC	0.020	U	0.0090	0.020
beta-BHC	0.020	U	0.013	0.020
Chlordane (technical)	0.50	U	0.21	0.50
delta-BHC	0.020	U	0.012	0.020
Dieldrin	0.020	U *	0.022	0.020
Endosulfan I	0.020	U	0.016	0.020
Endosulfan II	0.020	U	0.016	0.020
Endosulfan sulfate	0.020	U	0.016	0.020
Endrin	0.020	U	0.017	0.020
Endrin aldehyde	0.020	U	0.016	0.020
Endrin ketone	0.020	U	0.016	0.020
gamma-BHC (Lindane)	0.020	U	0.014	0.020
Heptachlor	0.020	U	0.014	0.020
Heptachlor epoxide	0.020	U	0.016	0.020
Methoxychlor	0.020	U	0.015	0.020
Toxaphene	0.50	U	0.34	0.50

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	93		26 - 150
Tetrachloro-m-xylene	114		50 - 147

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-3**

Lab Sample ID: 460-85074-2

Client Matrix: Water

Date Sampled: 10/23/2014 1500

Date Received: 10/23/2014 1845

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-258699	Instrument ID:	CPESTGC9
Prep Method:	3510C	Prep Batch:	460-258478	Initial Weight/Volume:	125 mL
Dilution:	1.0			Final Weight/Volume:	1 mL
Analysis Date:	10/28/2014 0901			Injection Volume:	1 uL
Prep Date:	10/27/2014 0839			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	91		26 - 150
Tetrachloro-m-xylene	105		50 - 147

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-4**

Lab Sample ID: 460-85134-1

Client Matrix: Water

Date Sampled: 10/24/2014 1045

Date Received: 10/24/2014 1820

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-258699	Instrument ID:	CPESTGC9
Prep Method:	3510C	Prep Batch:	460-258478	Initial Weight/Volume:	125 mL
Dilution:	1.0			Final Weight/Volume:	1 mL
Analysis Date:	10/28/2014 0913			Injection Volume:	1 uL
Prep Date:	10/27/2014 0839			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
4,4'-DDD	0.020	U	0.019	0.020
4,4'-DDE	0.020	U	0.016	0.020
4,4'-DDT	0.020	U	0.017	0.020
Aldrin	0.020	U	0.017	0.020
alpha-BHC	0.020	U	0.0090	0.020
beta-BHC	0.020	U	0.013	0.020
Chlordane (technical)	0.50	U	0.21	0.50
delta-BHC	0.020	U	0.012	0.020
Dieldrin	0.020	U *	0.022	0.020
Endosulfan I	0.020	U	0.016	0.020
Endosulfan II	0.020	U	0.016	0.020
Endosulfan sulfate	0.020	U	0.016	0.020
Endrin	0.020	U	0.017	0.020
Endrin aldehyde	0.020	U	0.016	0.020
Endrin ketone	0.020	U	0.016	0.020
gamma-BHC (Lindane)	0.020	U	0.014	0.020
Heptachlor	0.020	U	0.014	0.020
Heptachlor epoxide	0.020	U	0.016	0.020
Methoxychlor	0.020	U	0.015	0.020
Toxaphene	0.50	U	0.34	0.50

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	97		26 - 150
Tetrachloro-m-xylene	126		50 - 147

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-4**

Lab Sample ID: 460-85134-1

Client Matrix: Water

Date Sampled: 10/24/2014 1045

Date Received: 10/24/2014 1820

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-258699	Instrument ID:	CPESTGC9
Prep Method:	3510C	Prep Batch:	460-258478	Initial Weight/Volume:	125 mL
Dilution:	1.0			Final Weight/Volume:	1 mL
Analysis Date:	10/28/2014 0913			Injection Volume:	1 uL
Prep Date:	10/27/2014 0839			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	88		26 - 150
Tetrachloro-m-xylene	120		50 - 147

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-2**

Lab Sample ID: 460-85134-2

Client Matrix: Water

Date Sampled: 10/24/2014 1300

Date Received: 10/24/2014 1820

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-258699	Instrument ID:	CPESTGC9
Prep Method:	3510C	Prep Batch:	460-258478	Initial Weight/Volume:	125 mL
Dilution:	1.0			Final Weight/Volume:	1 mL
Analysis Date:	10/28/2014 0924			Injection Volume:	1 uL
Prep Date:	10/27/2014 0839			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
4,4'-DDD	0.020	U	0.019	0.020
4,4'-DDE	0.020	U	0.016	0.020
4,4'-DDT	0.020	U	0.017	0.020
Aldrin	0.020	U	0.017	0.020
alpha-BHC	0.020	U	0.0090	0.020
beta-BHC	0.020	U	0.013	0.020
Chlordane (technical)	0.50	U	0.21	0.50
delta-BHC	0.020	U	0.012	0.020
Dieldrin	0.020	U *	0.022	0.020
Endosulfan I	0.020	U	0.016	0.020
Endosulfan II	0.020	U	0.016	0.020
Endosulfan sulfate	0.020	U	0.016	0.020
Endrin	0.020	U	0.017	0.020
Endrin aldehyde	0.020	U	0.016	0.020
Endrin ketone	0.020	U	0.016	0.020
gamma-BHC (Lindane)	0.020	U	0.014	0.020
Heptachlor	0.020	U	0.014	0.020
Heptachlor epoxide	0.020	U	0.016	0.020
Methoxychlor	0.020	U	0.015	0.020
Toxaphene	0.50	U	0.34	0.50

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	127		26 - 150
Tetrachloro-m-xylene	122		50 - 147

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-2**

Lab Sample ID: 460-85134-2

Client Matrix: Water

Date Sampled: 10/24/2014 1300

Date Received: 10/24/2014 1820

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-258699	Instrument ID:	CPESTGC9
Prep Method:	3510C	Prep Batch:	460-258478	Initial Weight/Volume:	125 mL
Dilution:	1.0			Final Weight/Volume:	1 mL
Analysis Date:	10/28/2014 0924			Injection Volume:	1 uL
Prep Date:	10/27/2014 0839			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	115		26 - 150
Tetrachloro-m-xylene	119		50 - 147

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-5**

Lab Sample ID: 460-85171-1

Client Matrix: Water

Date Sampled: 10/24/2014 1710

Date Received: 10/27/2014 1440

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-258858	Instrument ID:	CPESTGC9
Prep Method:	3510C	Prep Batch:	460-258728	Initial Weight/Volume:	125 mL
Dilution:	1.0			Final Weight/Volume:	1 mL
Analysis Date:	10/28/2014 2351			Injection Volume:	1 uL
Prep Date:	10/28/2014 0955			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
4,4'-DDD	0.020	U *	0.019	0.020
4,4'-DDE	0.020	U	0.016	0.020
4,4'-DDT	0.020	U	0.017	0.020
Aldrin	0.020	U	0.017	0.020
alpha-BHC	0.020	U	0.0090	0.020
beta-BHC	0.020	U	0.013	0.020
Chlordane (technical)	0.50	U	0.21	0.50
delta-BHC	0.020	U	0.012	0.020
Dieldrin	0.020	U	0.022	0.020
Endosulfan I	0.020	U	0.016	0.020
Endosulfan II	0.020	U	0.016	0.020
Endosulfan sulfate	0.020	U	0.016	0.020
Endrin	0.020	U	0.017	0.020
Endrin aldehyde	0.020	U	0.016	0.020
Endrin ketone	0.020	U	0.016	0.020
gamma-BHC (Lindane)	0.020	U	0.014	0.020
Heptachlor	0.020	U	0.014	0.020
Heptachlor epoxide	0.020	U	0.016	0.020
Methoxychlor	0.020	U	0.015	0.020
Toxaphene	0.50	U	0.34	0.50

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	73		26 - 150
Tetrachloro-m-xylene	114		50 - 147

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-5**

Lab Sample ID: 460-85171-1

Client Matrix: Water

Date Sampled: 10/24/2014 1710

Date Received: 10/27/2014 1440

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-258858	Instrument ID:	CPESTGC9
Prep Method:	3510C	Prep Batch:	460-258728	Initial Weight/Volume:	125 mL
Dilution:	1.0			Final Weight/Volume:	1 mL
Analysis Date:	10/28/2014 2351			Injection Volume:	1 uL
Prep Date:	10/28/2014 0955			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	72		26 - 150
Tetrachloro-m-xylene	112		50 - 147

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-1**

Lab Sample ID: 460-85239-1

Client Matrix: Water

Date Sampled: 10/28/2014 1245

Date Received: 10/28/2014 1500

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-259208	Instrument ID:	CPESTGC9
Prep Method:	3510C	Prep Batch:	460-258945	Initial Weight/Volume:	125 mL
Dilution:	1.0			Final Weight/Volume:	1 mL
Analysis Date:	10/30/2014 1132			Injection Volume:	1 uL
Prep Date:	10/29/2014 0852			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
4,4'-DDD	0.020	U *	0.019	0.020
4,4'-DDE	0.020	U	0.016	0.020
4,4'-DDT	0.020	U	0.017	0.020
Aldrin	0.020	U	0.017	0.020
alpha-BHC	0.020	U *	0.0090	0.020
beta-BHC	0.020	U *	0.013	0.020
Chlordane (technical)	0.50	U	0.21	0.50
delta-BHC	0.020	U	0.012	0.020
Dieldrin	0.020	U *	0.022	0.020
Endosulfan I	0.020	U	0.016	0.020
Endosulfan II	0.020	U	0.016	0.020
Endosulfan sulfate	0.020	U	0.016	0.020
Endrin	0.020	U	0.017	0.020
Endrin aldehyde	0.020	U	0.016	0.020
Endrin ketone	0.020	U	0.016	0.020
gamma-BHC (Lindane)	0.020	U	0.014	0.020
Heptachlor	0.020	U	0.014	0.020
Heptachlor epoxide	0.020	U	0.016	0.020
Methoxychlor	0.020	U	0.015	0.020
Toxaphene	0.50	U	0.34	0.50

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	66		26 - 150
Tetrachloro-m-xylene	118		50 - 147

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-1**

Lab Sample ID: 460-85239-1

Client Matrix: Water

Date Sampled: 10/28/2014 1245

Date Received: 10/28/2014 1500

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-259208	Instrument ID:	CPESTGC9
Prep Method:	3510C	Prep Batch:	460-258945	Initial Weight/Volume:	125 mL
Dilution:	1.0			Final Weight/Volume:	1 mL
Analysis Date:	10/30/2014 1132			Injection Volume:	1 uL
Prep Date:	10/29/2014 0852			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	46		26 - 150
Tetrachloro-m-xylene	107		50 - 147

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-6**

Lab Sample ID: 460-85074-1

Client Matrix: Water

Date Sampled: 10/23/2014 1200

Date Received: 10/23/2014 1845

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258651	Instrument ID:	CPESTGC8
Prep Method:	3510C	Prep Batch:	460-258480	Initial Weight/Volume:	125 mL
Dilution:	1.0			Final Weight/Volume:	1 mL
Analysis Date:	10/28/2014 0130			Injection Volume:	1 uL
Prep Date:	10/27/2014 0841			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aroclor 1016	0.40	U	0.27	0.40
Aroclor 1221	0.40	U	0.27	0.40
Aroclor 1232	0.40	U	0.27	0.40
Aroclor 1242	0.40	U	0.27	0.40
Aroclor 1248	0.40	U	0.27	0.40
Aroclor 1254	0.40	U	0.21	0.40
Aroclor 1260	0.40	U	0.21	0.40
Aroclor-1262	0.40	U	0.21	0.40
Aroclor 1268	0.40	U	0.21	0.40
Polychlorinated biphenyls, Total	0.40	U	0.27	0.40

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	103		13 - 150

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-6**

Lab Sample ID: 460-85074-1

Client Matrix: Water

Date Sampled: 10/23/2014 1200

Date Received: 10/23/2014 1845

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258651	Instrument ID:	CPESTGC8
Prep Method:	3510C	Prep Batch:	460-258480	Initial Weight/Volume:	125 mL
Dilution:	1.0			Final Weight/Volume:	1 mL
Analysis Date:	10/28/2014 0130			Injection Volume:	1 uL
Prep Date:	10/27/2014 0841			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	102		13 - 150

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-3**

Lab Sample ID: 460-85074-2

Client Matrix: Water

Date Sampled: 10/23/2014 1500

Date Received: 10/23/2014 1845

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258706	Instrument ID:	CPESTGC8
Prep Method:	3510C	Prep Batch:	460-258480	Initial Weight/Volume:	125 mL
Dilution:	1.0			Final Weight/Volume:	1 mL
Analysis Date:	10/28/2014 0903	Run Type:	RA	Injection Volume:	1 uL
Prep Date:	10/27/2014 0841			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aroclor 1016	0.40	U	0.27	0.40
Aroclor 1221	0.40	U	0.27	0.40
Aroclor 1232	0.40	U	0.27	0.40
Aroclor 1242	0.40	U	0.27	0.40
Aroclor 1248	0.40	U	0.27	0.40
Aroclor 1254	0.40	U	0.21	0.40
Aroclor 1260	0.40	U	0.21	0.40
Aroclor-1262	0.40	U	0.21	0.40
Aroclor 1268	0.40	U	0.21	0.40
Polychlorinated biphenyls, Total	0.40	U	0.27	0.40

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	101		13 - 150

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-3**

Lab Sample ID: 460-85074-2

Client Matrix: Water

Date Sampled: 10/23/2014 1500

Date Received: 10/23/2014 1845

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258706	Instrument ID:	CPESTGC8
Prep Method:	3510C	Prep Batch:	460-258480	Initial Weight/Volume:	125 mL
Dilution:	1.0			Final Weight/Volume:	1 mL
Analysis Date:	10/28/2014 0903	Run Type:	RA	Injection Volume:	1 uL
Prep Date:	10/27/2014 0841			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	98		13 - 150

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-4**

Lab Sample ID: 460-85134-1

Client Matrix: Water

Date Sampled: 10/24/2014 1045

Date Received: 10/24/2014 1820

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258651	Instrument ID:	CPESTGC8
Prep Method:	3510C	Prep Batch:	460-258480	Initial Weight/Volume:	125 mL
Dilution:	1.0			Final Weight/Volume:	1 mL
Analysis Date:	10/28/2014 0201			Injection Volume:	1 uL
Prep Date:	10/27/2014 0841			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aroclor 1016	0.40	U	0.27	0.40
Aroclor 1221	0.40	U	0.27	0.40
Aroclor 1232	0.40	U	0.27	0.40
Aroclor 1242	0.40	U	0.27	0.40
Aroclor 1248	0.40	U	0.27	0.40
Aroclor 1254	0.40	U	0.21	0.40
Aroclor 1260	0.40	U	0.21	0.40
Aroclor-1262	0.40	U	0.21	0.40
Aroclor 1268	0.40	U	0.21	0.40
Polychlorinated biphenyls, Total	0.40	U	0.27	0.40

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	101		13 - 150

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-4**

Lab Sample ID: 460-85134-1

Client Matrix: Water

Date Sampled: 10/24/2014 1045

Date Received: 10/24/2014 1820

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258651	Instrument ID:	CPESTGC8
Prep Method:	3510C	Prep Batch:	460-258480	Initial Weight/Volume:	125 mL
Dilution:	1.0			Final Weight/Volume:	1 mL
Analysis Date:	10/28/2014 0201			Injection Volume:	1 uL
Prep Date:	10/27/2014 0841			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	101		13 - 150

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-2**

Lab Sample ID: 460-85134-2

Client Matrix: Water

Date Sampled: 10/24/2014 1300

Date Received: 10/24/2014 1820

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258651	Instrument ID:	CPESTGC8
Prep Method:	3510C	Prep Batch:	460-258480	Initial Weight/Volume:	125 mL
Dilution:	1.0			Final Weight/Volume:	1 mL
Analysis Date:	10/28/2014 0231			Injection Volume:	1 uL
Prep Date:	10/27/2014 0841			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aroclor 1016	0.40	U	0.27	0.40
Aroclor 1221	0.40	U	0.27	0.40
Aroclor 1232	0.40	U	0.27	0.40
Aroclor 1242	0.40	U	0.27	0.40
Aroclor 1248	0.40	U	0.27	0.40
Aroclor 1254	0.40	U	0.21	0.40
Aroclor 1260	0.40	U	0.21	0.40
Aroclor-1262	0.40	U	0.21	0.40
Aroclor 1268	0.40	U	0.21	0.40
Polychlorinated biphenyls, Total	0.40	U	0.27	0.40

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	113		13 - 150

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-2**

Lab Sample ID: 460-85134-2

Client Matrix: Water

Date Sampled: 10/24/2014 1300

Date Received: 10/24/2014 1820

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258651	Instrument ID:	CPESTGC8
Prep Method:	3510C	Prep Batch:	460-258480	Initial Weight/Volume:	125 mL
Dilution:	1.0			Final Weight/Volume:	1 mL
Analysis Date:	10/28/2014 0231			Injection Volume:	1 uL
Prep Date:	10/27/2014 0841			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	110		13 - 150

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-5**

Lab Sample ID: 460-85171-1

Client Matrix: Water

Date Sampled: 10/24/2014 1710

Date Received: 10/27/2014 1440

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258856	Instrument ID:	CPESTGC8
Prep Method:	3510C	Prep Batch:	460-258731	Initial Weight/Volume:	125 mL
Dilution:	1.0			Final Weight/Volume:	1 mL
Analysis Date:	10/28/2014 2358			Injection Volume:	1 uL
Prep Date:	10/28/2014 0957			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aroclor 1016	0.40	U	0.27	0.40
Aroclor 1221	0.40	U	0.27	0.40
Aroclor 1232	0.40	U	0.27	0.40
Aroclor 1242	0.40	U	0.27	0.40
Aroclor 1248	0.40	U	0.27	0.40
Aroclor 1254	0.40	U	0.21	0.40
Aroclor 1260	0.40	U	0.21	0.40
Aroclor-1262	0.40	U	0.21	0.40
Aroclor 1268	0.40	U	0.21	0.40
Polychlorinated biphenyls, Total	0.40	U	0.27	0.40

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	84		13 - 150

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-5**

Lab Sample ID: 460-85171-1

Client Matrix: Water

Date Sampled: 10/24/2014 1710

Date Received: 10/27/2014 1440

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258856	Instrument ID:	CPESTGC8
Prep Method:	3510C	Prep Batch:	460-258731	Initial Weight/Volume:	125 mL
Dilution:	1.0			Final Weight/Volume:	1 mL
Analysis Date:	10/28/2014 2358			Injection Volume:	1 uL
Prep Date:	10/28/2014 0957			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	81		13 - 150

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-1**

Lab Sample ID: 460-85239-1

Client Matrix: Water

Date Sampled: 10/28/2014 1245

Date Received: 10/28/2014 1500

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-259138	Instrument ID:	CPESTGC8
Prep Method:	3510C	Prep Batch:	460-258950	Initial Weight/Volume:	125 mL
Dilution:	1.0			Final Weight/Volume:	1 mL
Analysis Date:	10/30/2014 0826			Injection Volume:	1 uL
Prep Date:	10/29/2014 0902			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aroclor 1016	0.40	U	0.27	0.40
Aroclor 1221	0.40	U	0.27	0.40
Aroclor 1232	0.40	U	0.27	0.40
Aroclor 1242	0.40	U	0.27	0.40
Aroclor 1248	0.40	U	0.27	0.40
Aroclor 1254	0.40	U	0.21	0.40
Aroclor 1260	0.40	U	0.21	0.40
Aroclor-1262	0.40	U	0.21	0.40
Aroclor 1268	0.40	U	0.21	0.40
Polychlorinated biphenyls, Total	0.40	U	0.27	0.40

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	57		13 - 150

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-1**

Lab Sample ID: 460-85239-1

Client Matrix: Water

Date Sampled: 10/28/2014 1245

Date Received: 10/28/2014 1500

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-259138	Instrument ID:	CPESTGC8
Prep Method:	3510C	Prep Batch:	460-258950	Initial Weight/Volume:	125 mL
Dilution:	1.0			Final Weight/Volume:	1 mL
Analysis Date:	10/30/2014 0826			Injection Volume:	1 uL
Prep Date:	10/29/2014 0902			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	53		13 - 150

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-6**

Lab Sample ID: 460-85074-1

Client Matrix: Water

Date Sampled: 10/23/2014 1200

Date Received: 10/23/2014 1845

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-258582	Instrument ID:	ICP5
Prep Method:	3010A	Prep Batch:	460-258397	Lab File ID:	10272014.asc
Dilution:	1.0			Initial Weight/Volume:	100 mL
Analysis Date:	10/27/2014 1806			Final Weight/Volume:	100 mL
Prep Date:	10/26/2014 1707				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aluminum	952		73.6	200
Antimony	20.0	U	5.4	20.0
Arsenic	15.0	U	4.3	15.0
Barium	108	J	6.5	200
Beryllium	2.0	U	1.1	2.0
Cadmium	4.0	U	1.2	4.0
Calcium	194000		416	5000
Chromium	10.0	U	4.6	10.0
Cobalt	50.0	U	3.8	50.0
Copper	25.0	U	6.2	25.0
Magnesium	126000		355	5000
Nickel	40.0	U	7.8	40.0
Potassium	56600		281	5000
Selenium	20.0	U	6.7	20.0
Silver	10.0	U	1.9	10.0
Thallium	20.0	U	9.2	20.0
Vanadium	50.0	U	4.2	50.0
Zinc	30.0	U	5.9	30.0

Analysis Method:	6010C	Analysis Batch:	460-258732	Instrument ID:	ICP4
Prep Method:	3010A	Prep Batch:	460-258397	Lab File ID:	258201.asc
Dilution:	1.0			Initial Weight/Volume:	100 mL
Analysis Date:	10/28/2014 0216			Final Weight/Volume:	100 mL
Prep Date:	10/26/2014 1707				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Iron	15700		51.4	150
Manganese	2670		4.3	15.0

Analysis Method:	6010C	Analysis Batch:	460-258582	Instrument ID:	ICP5
Prep Method:	3010A	Prep Batch:	460-258397	Lab File ID:	10272014.asc
Dilution:	5.0			Initial Weight/Volume:	100 mL
Analysis Date:	10/27/2014 2023			Final Weight/Volume:	100 mL
Prep Date:	10/26/2014 1707				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Sodium	595000		2570	25000

Analysis Method:	6010C	Analysis Batch:	460-258732	Instrument ID:	ICP4
Prep Method:	3010A	Prep Batch:	460-258397	Lab File ID:	258201.asc
Dilution:	10			Initial Weight/Volume:	100 mL
Analysis Date:	10/28/2014 0220			Final Weight/Volume:	100 mL
Prep Date:	10/26/2014 1707				

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-6**

Lab Sample ID: 460-85074-1

Client Matrix: Water

Date Sampled: 10/23/2014 1200

Date Received: 10/23/2014 1845

6010C Metals (ICP)

Analyte	Result (ug/L)	Qualifier	MDL	RL
Lead	100	U	46.4	100

6010C Metals (ICP)-Dissolved

Analysis Method:	6010C	Analysis Batch:	460-258821	Instrument ID:	ICP4
Prep Method:	3010A	Prep Batch:	460-258720	Lab File ID:	258455.asc
Dilution:	1.0			Initial Weight/Volume:	100 mL
Analysis Date:	10/28/2014 2003			Final Weight/Volume:	100 mL
Prep Date:	10/28/2014 0929				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Silver	10.0	U	1.9	10.0
Aluminum	145	J	73.6	200
Arsenic	15.0	U	4.3	15.0
Barium	79.3	J	6.5	200
Beryllium	2.0	U	1.1	2.0
Calcium	188000		416	5000
Cadmium	4.0	U	1.2	4.0
Cobalt	50.0	U	3.8	50.0
Chromium	10.0	U	4.6	10.0
Copper	25.0	U	6.2	25.0
Iron	150	U	51.4	150
Potassium	56400		281	5000
Magnesium	125000		355	5000
Manganese	2660		4.3	15.0
Nickel	40.0	U	7.8	40.0
Lead	10.0	U	4.6	10.0
Antimony	20.0	U	5.4	20.0
Selenium	20.0	U	6.7	20.0
Thallium	20.0	U	9.2	20.0
Vanadium	50.0	U	4.2	50.0
Zinc	30.0	U	5.9	30.0

Analysis Method:	6010C	Analysis Batch:	460-259038	Instrument ID:	ICP4
Prep Method:	3010A	Prep Batch:	460-258720	Lab File ID:	10292014.asc
Dilution:	10			Initial Weight/Volume:	100 mL
Analysis Date:	10/29/2014 1225			Final Weight/Volume:	100 mL
Prep Date:	10/28/2014 0929				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Sodium	597000		5140	50000

7470A Mercury (CVAA)

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-6**

Lab Sample ID: 460-85074-1

Client Matrix: Water

Date Sampled: 10/23/2014 1200

Date Received: 10/23/2014 1845

7470A Mercury (CVAA)

Analysis Method:	7470A	Analysis Batch:	460-258398	Instrument ID:	LEEMAN5
Prep Method:	7470A	Prep Batch:	460-258367	Lab File ID:	258366.PRN
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	10/26/2014 1809			Final Weight/Volume:	30 mL
Prep Date:	10/26/2014 1101				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.16	0.20

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	460-258538	Instrument ID:	LEEMAN6
Prep Method:	7470A	Prep Batch:	460-258517	Lab File ID:	258517hg1.CSV
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	10/27/2014 1433			Final Weight/Volume:	30 mL
Prep Date:	10/27/2014 1207				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.16	0.20

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-3**

Lab Sample ID: 460-85074-2

Client Matrix: Water

Date Sampled: 10/23/2014 1500

Date Received: 10/23/2014 1845

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-258582	Instrument ID:	ICP5
Prep Method:	3010A	Prep Batch:	460-258397	Lab File ID:	10272014.asc
Dilution:	1.0			Initial Weight/Volume:	100 mL
Analysis Date:	10/27/2014 1810			Final Weight/Volume:	100 mL
Prep Date:	10/26/2014 1707				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aluminum	1960		73.6	200
Antimony	20.0	U	5.4	20.0
Arsenic	15.0	U	4.3	15.0
Barium	210		6.5	200
Beryllium	2.0	U	1.1	2.0
Cadmium	4.0	U	1.2	4.0
Chromium	10.0	U	4.6	10.0
Cobalt	4.1	J	3.8	50.0
Copper	25.0	U	6.2	25.0
Magnesium	22200		355	5000
Nickel	40.0	U	7.8	40.0
Potassium	57100		281	5000
Selenium	20.0	U	6.7	20.0
Silver	10.0	U	1.9	10.0
Thallium	20.0	U	9.2	20.0
Vanadium	5.3	J	4.2	50.0
Zinc	44.9		5.9	30.0

Analysis Method:	6010C	Analysis Batch:	460-258732	Instrument ID:	ICP4
Prep Method:	3010A	Prep Batch:	460-258397	Lab File ID:	258201.asc
Dilution:	1.0			Initial Weight/Volume:	100 mL
Analysis Date:	10/28/2014 0234			Final Weight/Volume:	100 mL
Prep Date:	10/26/2014 1707				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Iron	27800		51.4	150
Lead	10.0	U	4.6	10.0
Manganese	1130		4.3	15.0

Analysis Method:	6010C	Analysis Batch:	460-258582	Instrument ID:	ICP5
Prep Method:	3010A	Prep Batch:	460-258397	Lab File ID:	10272014.asc
Dilution:	5.0			Initial Weight/Volume:	100 mL
Analysis Date:	10/27/2014 2027			Final Weight/Volume:	100 mL
Prep Date:	10/26/2014 1707				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Calcium	364000		2080	25000
Sodium	490000		2570	25000

6010C Metals (ICP)-Dissolved

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-3**

Lab Sample ID: 460-85074-2

Client Matrix: Water

Date Sampled: 10/23/2014 1500

Date Received: 10/23/2014 1845

6010C Metals (ICP)-Dissolved

Analysis Method:	6010C	Analysis Batch:	460-258821	Instrument ID:	ICP4
Prep Method:	3010A	Prep Batch:	460-258720	Lab File ID:	258455.asc
Dilution:	1.0			Initial Weight/Volume:	100 mL
Analysis Date:	10/28/2014 2007			Final Weight/Volume:	100 mL
Prep Date:	10/28/2014 0929				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Silver	10.0	U	1.9	10.0
Aluminum	208		73.6	200
Arsenic	15.0	U	4.3	15.0
Barium	130	J	6.5	200
Beryllium	2.0	U	1.1	2.0
Cadmium	4.0	U	1.2	4.0
Cobalt	50.0	U	3.8	50.0
Chromium	10.0	U	4.6	10.0
Copper	25.0	U	6.2	25.0
Iron	294		51.4	150
Potassium	55600		281	5000
Magnesium	21900		355	5000
Manganese	698		4.3	15.0
Nickel	40.0	U	7.8	40.0
Lead	10.0	U	4.6	10.0
Antimony	20.0	U	5.4	20.0
Selenium	20.0	U	6.7	20.0
Thallium	20.0	U	9.2	20.0
Vanadium	50.0	U	4.2	50.0
Zinc	30.0	U	5.9	30.0

Analysis Method:	6010C	Analysis Batch:	460-259038	Instrument ID:	ICP4
Prep Method:	3010A	Prep Batch:	460-258720	Lab File ID:	10292014.asc
Dilution:	10			Initial Weight/Volume:	100 mL
Analysis Date:	10/29/2014 1229			Final Weight/Volume:	100 mL
Prep Date:	10/28/2014 0929				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Calcium	280000		4160	50000
Sodium	484000		5140	50000

7470A Mercury (CVAA)

Analysis Method:	7470A	Analysis Batch:	460-258398	Instrument ID:	LEEMAN5
Prep Method:	7470A	Prep Batch:	460-258367	Lab File ID:	258366.PRN
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	10/26/2014 1811			Final Weight/Volume:	30 mL
Prep Date:	10/26/2014 1101				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.16	0.20

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-3**

Lab Sample ID: 460-85074-2

Client Matrix: Water

Date Sampled: 10/23/2014 1500

Date Received: 10/23/2014 1845

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	460-258538	Instrument ID:	LEEMAN6
Prep Method:	7470A	Prep Batch:	460-258517	Lab File ID:	258517hg1.CSV
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	10/27/2014 1439			Final Weight/Volume:	30 mL
Prep Date:	10/27/2014 1207				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.16	0.20

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-4**

Lab Sample ID: 460-85134-1

Client Matrix: Water

Date Sampled: 10/24/2014 1045

Date Received: 10/24/2014 1820

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-258582	Instrument ID:	ICP5
Prep Method:	3010A	Prep Batch:	460-258397	Lab File ID:	10272014.asc
Dilution:	1.0			Initial Weight/Volume:	100 mL
Analysis Date:	10/27/2014 1855			Final Weight/Volume:	100 mL
Prep Date:	10/26/2014 1707				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aluminum	17900		73.6	200
Antimony	20.0	U	5.4	20.0
Arsenic	7.6	J	4.3	15.0
Barium	332		6.5	200
Beryllium	2.0	U	1.1	2.0
Cadmium	4.0	U	1.2	4.0
Calcium	122000		416	5000
Chromium	34.5		4.6	10.0
Cobalt	14.3	J	3.8	50.0
Copper	66.6		6.2	25.0
Lead	813		4.6	10.0
Magnesium	78300		355	5000
Manganese	1030		4.3	15.0
Nickel	31.6	J	7.8	40.0
Potassium	40700		281	5000
Selenium	20.0	U	6.7	20.0
Silver	10.0	U	1.9	10.0
Thallium	20.0	U	9.2	20.0
Vanadium	53.3		4.2	50.0
Zinc	162		5.9	30.0

Analysis Method:	6010C	Analysis Batch:	460-258732	Instrument ID:	ICP4
Prep Method:	3010A	Prep Batch:	460-258397	Lab File ID:	258201.asc
Dilution:	1.0			Initial Weight/Volume:	100 mL
Analysis Date:	10/28/2014 0323			Final Weight/Volume:	100 mL
Prep Date:	10/26/2014 1707				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Iron	35900		51.4	150

Analysis Method:	6010C	Analysis Batch:	460-258582	Instrument ID:	ICP5
Prep Method:	3010A	Prep Batch:	460-258397	Lab File ID:	10272014.asc
Dilution:	2.0			Initial Weight/Volume:	100 mL
Analysis Date:	10/27/2014 2030			Final Weight/Volume:	100 mL
Prep Date:	10/26/2014 1707				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Sodium	325000		1030	10000

6010C Metals (ICP)-Dissolved

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-4**

Lab Sample ID: 460-85134-1

Client Matrix: Water

Date Sampled: 10/24/2014 1045

Date Received: 10/24/2014 1820

6010C Metals (ICP)-Dissolved

Analysis Method:	6010C	Analysis Batch:	460-258821	Instrument ID:	ICP4
Prep Method:	3010A	Prep Batch:	460-258720	Lab File ID:	258455.asc
Dilution:	1.0			Initial Weight/Volume:	100 mL
Analysis Date:	10/28/2014 2015			Final Weight/Volume:	100 mL
Prep Date:	10/28/2014 0929				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Silver	10.0	U	1.9	10.0
Aluminum	118	J	73.6	200
Arsenic	15.0	U	4.3	15.0
Barium	200		6.5	200
Beryllium	2.0	U	1.1	2.0
Calcium	128000		416	5000
Cadmium	4.0	U	1.2	4.0
Cobalt	50.0	U	3.8	50.0
Chromium	10.0	U	4.6	10.0
Copper	25.0	U	6.2	25.0
Iron	150	U	51.4	150
Potassium	43100		281	5000
Magnesium	85100		355	5000
Manganese	769		4.3	15.0
Nickel	40.0	U	7.8	40.0
Lead	10.0	U	4.6	10.0
Antimony	20.0	U	5.4	20.0
Selenium	20.0	U	6.7	20.0
Thallium	20.0	U	9.2	20.0
Vanadium	50.0	U	4.2	50.0
Zinc	30.0	U	5.9	30.0

Analysis Method:	6010C	Analysis Batch:	460-259038	Instrument ID:	ICP4
Prep Method:	3010A	Prep Batch:	460-258720	Lab File ID:	10292014.asc
Dilution:	10			Initial Weight/Volume:	100 mL
Analysis Date:	10/29/2014 1232			Final Weight/Volume:	100 mL
Prep Date:	10/28/2014 0929				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Sodium	359000		5140	50000

7470A Mercury (CVAA)

Analysis Method:	7470A	Analysis Batch:	460-258398	Instrument ID:	LEEMAN5
Prep Method:	7470A	Prep Batch:	460-258367	Lab File ID:	258366.PRN
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	10/26/2014 1816			Final Weight/Volume:	30 mL
Prep Date:	10/26/2014 1101				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20		0.16	0.20

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-4**

Lab Sample ID: 460-85134-1

Client Matrix: Water

Date Sampled: 10/24/2014 1045

Date Received: 10/24/2014 1820

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	460-258801	Instrument ID:	LEEMAN6
Prep Method:	7470A	Prep Batch:	460-258745	Lab File ID:	258745hg1.CSV
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	10/28/2014 1412			Final Weight/Volume:	30 mL
Prep Date:	10/28/2014 1122				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.16	0.20

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-2**

Lab Sample ID: 460-85134-2

Client Matrix: Water

Date Sampled: 10/24/2014 1300

Date Received: 10/24/2014 1820

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-258582	Instrument ID:	ICP5
Prep Method:	3010A	Prep Batch:	460-258397	Lab File ID:	10272014.asc
Dilution:	1.0			Initial Weight/Volume:	100 mL
Analysis Date:	10/27/2014 1859			Final Weight/Volume:	100 mL
Prep Date:	10/26/2014 1707				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aluminum	3560		73.6	200
Antimony	20.0	U	5.4	20.0
Arsenic	15.0	U	4.3	15.0
Barium	76.5	J	6.5	200
Beryllium	2.0	U	1.1	2.0
Cadmium	4.0	U	1.2	4.0
Calcium	138000		416	5000
Chromium	8.5	J	4.6	10.0
Cobalt	9.2	J	3.8	50.0
Copper	14.2	J	6.2	25.0
Lead	6.6	J	4.6	10.0
Magnesium	48000		355	5000
Manganese	2920		4.3	15.0
Nickel	23.3	J	7.8	40.0
Potassium	6560		281	5000
Selenium	20.0	U	6.7	20.0
Silver	10.0	U	1.9	10.0
Sodium	204000		514	5000
Thallium	20.0	U	9.2	20.0
Vanadium	13.7	J	4.2	50.0
Zinc	17.9	J	5.9	30.0

Analysis Method:	6010C	Analysis Batch:	460-258732	Instrument ID:	ICP4
Prep Method:	3010A	Prep Batch:	460-258397	Lab File ID:	258201.asc
Dilution:	1.0			Initial Weight/Volume:	100 mL
Analysis Date:	10/28/2014 0330			Final Weight/Volume:	100 mL
Prep Date:	10/26/2014 1707				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Iron	9190		51.4	150

6010C Metals (ICP)-Dissolved

Analysis Method:	6010C	Analysis Batch:	460-258821	Instrument ID:	ICP4
Prep Method:	3010A	Prep Batch:	460-258720	Lab File ID:	258455.asc
Dilution:	1.0			Initial Weight/Volume:	100 mL
Analysis Date:	10/28/2014 2029			Final Weight/Volume:	100 mL
Prep Date:	10/28/2014 0929				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Silver	10.0	U	1.9	10.0
Aluminum	106	J	73.6	200
Arsenic	15.0	U	4.3	15.0
Barium	34.9	J	6.5	200

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-2**

Lab Sample ID: 460-85134-2

Client Matrix: Water

Date Sampled: 10/24/2014 1300

Date Received: 10/24/2014 1820

6010C Metals (ICP)-Dissolved

Analyte	Result (ug/L)	Qualifier	MDL	RL
Beryllium	2.0	U	1.1	2.0
Calcium	142000		416	5000
Cadmium	4.0	U	1.2	4.0
Cobalt	5.7	J	3.8	50.0
Chromium	10.0	U	4.6	10.0
Copper	25.0	U	6.2	25.0
Iron	150	U	51.4	150
Potassium	5670		281	5000
Magnesium	47400		355	5000
Manganese	2650		4.3	15.0
Sodium	221000		514	5000
Nickel	16.3	J	7.8	40.0
Lead	10.0	U	4.6	10.0
Antimony	20.0	U	5.4	20.0
Selenium	20.0	U	6.7	20.0
Thallium	20.0	U	9.2	20.0
Vanadium	50.0	U	4.2	50.0
Zinc	30.0	U	5.9	30.0

7470A Mercury (CVAA)

Analysis Method:	7470A	Analysis Batch:	460-258398	Instrument ID:	LEEMAN5
Prep Method:	7470A	Prep Batch:	460-258367	Lab File ID:	258366.PRN
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	10/26/2014 1821			Final Weight/Volume:	30 mL
Prep Date:	10/26/2014 1101				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.16	0.20

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	460-258801	Instrument ID:	LEEMAN6
Prep Method:	7470A	Prep Batch:	460-258745	Lab File ID:	258745hg1.CSV
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	10/28/2014 1414			Final Weight/Volume:	30 mL
Prep Date:	10/28/2014 1122				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.16	0.20

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-5**

Lab Sample ID: 460-85171-1

Client Matrix: Water

Date Sampled: 10/24/2014 1710

Date Received: 10/27/2014 1440

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-259338	Instrument ID:	ICP4
Prep Method:	3010A	Prep Batch:	460-259210	Lab File ID:	10302014.asc
Dilution:	20			Initial Weight/Volume:	100 mL
Analysis Date:	10/30/2014 1807			Final Weight/Volume:	100 mL
Prep Date:	10/30/2014 0947				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aluminum	1240000		1470	4000
Antimony	400	U	108	400
Arsenic	1440		86.6	300
Barium	11500		129	4000
Beryllium	76.3		21.2	40.0
Cadmium	80.0	U	23.2	80.0
Calcium	867000		8320	100000
Chromium	2940		91.0	200
Cobalt	1500		76.4	1000
Copper	8260		125	500
Iron	3050000		1030	3000
Lead	44600		92.8	200
Magnesium	388000		7100	100000
Manganese	47300		86.0	300
Nickel	3460		156	800
Potassium	113000		5620	100000
Selenium	400	U	135	400
Silver	38.7	J	37.2	200
Sodium	232000		10300	100000
Thallium	400	U	183	400
Vanadium	3190		83.6	1000
Zinc	21700		118	600

6010C Metals (ICP)-Dissolved

Analysis Method:	6010C	Analysis Batch:	460-258821	Instrument ID:	ICP4
Prep Method:	3010A	Prep Batch:	460-258720	Lab File ID:	258455.asc
Dilution:	1.0			Initial Weight/Volume:	100 mL
Analysis Date:	10/28/2014 2033			Final Weight/Volume:	100 mL
Prep Date:	10/28/2014 0929				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Silver	10.0	U	1.9	10.0
Aluminum	87.4	J	73.6	200
Arsenic	7.0	J	4.3	15.0
Barium	102	J	6.5	200
Beryllium	2.0	U	1.1	2.0
Calcium	78200		416	5000
Cadmium	4.0	U	1.2	4.0
Cobalt	50.0	U	3.8	50.0
Chromium	10.0	U	4.6	10.0
Copper	25.0	U	6.2	25.0
Iron	150	U	51.4	150
Potassium	23700		281	5000
Magnesium	27000		355	5000

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-5**

Lab Sample ID: 460-85171-1

Client Matrix: Water

Date Sampled: 10/24/2014 1710

Date Received: 10/27/2014 1440

6010C Metals (ICP)-Dissolved

Analyte	Result (ug/L)	Qualifier	MDL	RL
Manganese	376		4.3	15.0
Sodium	196000		514	5000
Nickel	40.0	U	7.8	40.0
Lead	10.0	U	4.6	10.0
Antimony	20.0	U	5.4	20.0
Selenium	20.0	U	6.7	20.0
Thallium	20.0	U	9.2	20.0
Vanadium	50.0	U	4.2	50.0
Zinc	30.0	U	5.9	30.0

7470A Mercury (CVAA)

Analysis Method:	7470A	Analysis Batch:	460-259049	Instrument ID:	LEEMAN6
Prep Method:	7470A	Prep Batch:	460-258975	Lab File ID:	258975hg1.CSV
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	10/29/2014 1405			Final Weight/Volume:	30 mL
Prep Date:	10/29/2014 1110				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	7.3		0.16	0.20

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	460-258801	Instrument ID:	LEEMAN6
Prep Method:	7470A	Prep Batch:	460-258745	Lab File ID:	258745hg1.CSV
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	10/28/2014 1416			Final Weight/Volume:	30 mL
Prep Date:	10/28/2014 1122				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.16	0.20

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-1**

Lab Sample ID: 460-85239-1

Client Matrix: Water

Date Sampled: 10/28/2014 1245

Date Received: 10/28/2014 1500

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-259851	Instrument ID:	ICP5
Prep Method:	3010A	Prep Batch:	460-259788	Lab File ID:	11022014.asc
Dilution:	1.0			Initial Weight/Volume:	100 mL
Analysis Date:	11/02/2014 1410			Final Weight/Volume:	100 mL
Prep Date:	11/01/2014 1847				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aluminum	10200		73.6	200
Antimony	20.0	U	5.4	20.0
Arsenic	15.0	U	4.3	15.0
Barium	96.7	J	6.5	200
Beryllium	2.0	U	1.1	2.0
Cadmium	4.0	U	1.2	4.0
Chromium	28.7		4.6	10.0
Cobalt	13.3	J	3.8	50.0
Copper	40.7		6.2	25.0
Iron	25300		51.4	150
Lead	36.0		4.6	10.0
Magnesium	77000		355	5000
Manganese	2580		4.3	15.0
Nickel	23.3	J	7.8	40.0
Potassium	31700		281	5000
Selenium	20.0	U	6.7	20.0
Silver	10.0	U	1.9	10.0
Sodium	96100		514	5000
Thallium	20.0	U	9.2	20.0
Vanadium	35.3	J	4.2	50.0
Zinc	224		5.9	30.0

Analysis Method:	6010C	Analysis Batch:	460-259851	Instrument ID:	ICP5
Prep Method:	3010A	Prep Batch:	460-259788	Lab File ID:	11022014.asc
Dilution:	2.0			Initial Weight/Volume:	100 mL
Analysis Date:	11/02/2014 1514			Final Weight/Volume:	100 mL
Prep Date:	11/01/2014 1847				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Calcium	426000		832	10000

6010C Metals (ICP)-Dissolved

Analysis Method:	6010C	Analysis Batch:	460-259851	Instrument ID:	ICP5
Prep Method:	3010A	Prep Batch:	460-259789	Lab File ID:	11022014.asc
Dilution:	1.0			Initial Weight/Volume:	100 mL
Analysis Date:	11/02/2014 1855			Final Weight/Volume:	100 mL
Prep Date:	11/01/2014 1857				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Silver	10.0	U	1.9	10.0
Aluminum	200	U	73.6	200
Arsenic	15.0	U	4.3	15.0
Barium	26.5	J	6.5	200

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-1**

Lab Sample ID: 460-85239-1

Client Matrix: Water

Date Sampled: 10/28/2014 1245

Date Received: 10/28/2014 1500

6010C Metals (ICP)-Dissolved

Analyte	Result (ug/L)	Qualifier	MDL	RL
Beryllium	2.0	U	1.1	2.0
Cadmium	4.0	U	1.2	4.0
Cobalt	4.2	J	3.8	50.0
Chromium	10.0	U	4.6	10.0
Copper	25.0	U	6.2	25.0
Iron	974		51.4	150
Potassium	30900		281	5000
Magnesium	78500		355	5000
Manganese	2280		4.3	15.0
Sodium	101000		514	5000
Nickel	40.0	U	7.8	40.0
Lead	10.0	U	4.6	10.0
Antimony	20.0	U	5.4	20.0
Selenium	20.0	U	6.7	20.0
Thallium	20.0	U	9.2	20.0
Vanadium	50.0	U	4.2	50.0
Zinc	8.9	J	5.9	30.0

Analysis Method:	6010C	Analysis Batch:	460-259851	Instrument ID:	ICP5
Prep Method:	3010A	Prep Batch:	460-259789	Lab File ID:	11022014.asc
Dilution:	2.0			Initial Weight/Volume:	100 mL
Analysis Date:	11/02/2014 1548			Final Weight/Volume:	100 mL
Prep Date:	11/01/2014 1857				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Calcium	454000		832	10000

7470A Mercury (CVAA)

Analysis Method:	7470A	Analysis Batch:	460-259597	Instrument ID:	LEEMAN6
Prep Method:	7470A	Prep Batch:	460-259533	Lab File ID:	259533hg1.CSV
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	10/31/2014 1400			Final Weight/Volume:	30 mL
Prep Date:	10/31/2014 1118				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.58		0.16	0.20

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	460-259323	Instrument ID:	LEEMAN6
Prep Method:	7470A	Prep Batch:	460-259257	Lab File ID:	259243.CSV
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	10/30/2014 1513			Final Weight/Volume:	30 mL
Prep Date:	10/30/2014 1236				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.16	0.20

Client: AKRF Inc

Job Number: 460-85074-1

Client Sample ID: **TW-1**

Lab Sample ID: 460-85239-1

Client Matrix: Water

Date Sampled: 10/28/2014 1245

Date Received: 10/28/2014 1500

7470A Mercury (CVAA)-Dissolved

DATA REPORTING QUALIFIERS

Client: AKRF Inc

Job Number: 460-85074-1

Lab Section	Qualifier	Description
GC/MS VOA		
	U	Analyzed for but not detected.
	*	Duplicate RPD exceeds control limits
	J	Indicates an estimated value.
	*	LCS or LCSD exceeds the control limits
	*	MS or MSD exceeds the control limits
GC/MS Semi VOA		
	U	Analyzed for but not detected.
	J	Indicates an estimated value.
	*	LCS or LCSD exceeds the control limits
	*	MS or MSD exceeds the control limits
	*	RPD of the LCS and LCSD exceeds the control limits
	N	This flag indicates the presumptive evidence of a compound.
GC Semi VOA		
	U	Analyzed for but not detected.
	*	Duplicate RPD exceeds control limits
	*	LCS or LCSD exceeds the control limits
	*	MS or MSD exceeds the control limits
	p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
Metals		
	U	Indicates analyzed for but not detected.
	4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
	J	Sample result is greater than the MDL but below the CRDL

QUALITY CONTROL RESULTS

Client: AKRF Inc

Job Number: 460-85074-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:460-258558					
LCS 460-258558/3	Lab Control Sample	T	Water	8260C	
MB 460-258558/6	Method Blank	T	Water	8260C	
460-84752-A-4 MS	Matrix Spike	T	Water	8260C	
460-84752-A-4 MSD	Matrix Spike Duplicate	T	Water	8260C	
460-85074-1	TW-6	T	Water	8260C	
460-85074-2	TW-3	T	Water	8260C	
Analysis Batch:460-259156					
LCS 460-259156/4	Lab Control Sample	T	Water	8260C	
LCSD 460-259156/5	Lab Control Sample Duplicate	T	Water	8260C	
MB 460-259156/7	Method Blank	T	Water	8260C	
460-85134-1	TW-4	T	Water	8260C	
460-85134-2	TW-2	T	Water	8260C	
460-85134-4	TW-5	T	Water	8260C	
460-85134-5	TB3	T	Water	8260C	
Analysis Batch:460-259463					
LCS 460-259463/4	Lab Control Sample	T	Water	8260C	
MB 460-259463/6	Method Blank	T	Water	8260C	
460-85134-3	TW-1	T	Water	8260C	
460-85134-3MS	Matrix Spike	T	Water	8260C	
460-85134-3MSD	Matrix Spike Duplicate	T	Water	8260C	

Report Basis

T = Total

Client: AKRF Inc

Job Number: 460-85074-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 460-258263					
LCS 460-258263/2-A	Lab Control Sample	T	Water	3510C	
LCS 460-258263/4-A	Lab Control Sample	T	Water	3510C	
LCSD 460-258263/3-A	Lab Control Sample Duplicate	T	Water	3510C	
LCSD 460-258263/5-A	Lab Control Sample Duplicate	T	Water	3510C	
MB 460-258263/1-A	Method Blank	T	Water	3510C	
460-85074-1	TW-6	T	Water	3510C	
460-85074-2	TW-3	T	Water	3510C	
Analysis Batch:460-258638					
LCS 460-258263/4-A	Lab Control Sample	T	Water	8270D	460-258263
LCSD 460-258263/5-A	Lab Control Sample Duplicate	T	Water	8270D	460-258263
MB 460-258263/1-A	Method Blank	T	Water	8270D	460-258263
Prep Batch: 460-258769					
LCS 460-258769/2-A	Lab Control Sample	T	Water	3510C	
LCS 460-258769/3-A	Lab Control Sample	T	Water	3510C	
MB 460-258769/1-A	Method Blank	T	Water	3510C	
460-85129-D-3-A MS	Matrix Spike	T	Water	3510C	
460-85129-D-3-B MSD	Matrix Spike Duplicate	T	Water	3510C	
460-85134-1	TW-4	T	Water	3510C	
460-85134-2	TW-2	T	Water	3510C	
460-85171-1	TW-5	T	Water	3510C	
Analysis Batch:460-258776					
LCS 460-258263/2-A	Lab Control Sample	T	Water	8270D	460-258263
460-85074-1	TW-6	T	Water	8270D	460-258263
460-85074-2	TW-3	T	Water	8270D	460-258263
Analysis Batch:460-258986					
LCSD 460-258263/3-A	Lab Control Sample Duplicate	T	Water	8270D	460-258263
Prep Batch: 460-259043					
LCS 460-259043/2-A	Lab Control Sample	T	Water	3510C	
LCS 460-259043/4-A	Lab Control Sample	T	Water	3510C	
LCSD 460-259043/3-A	Lab Control Sample Duplicate	T	Water	3510C	
LCSD 460-259043/5-A	Lab Control Sample Duplicate	T	Water	3510C	
MB 460-259043/1-A	Method Blank	T	Water	3510C	
460-85239-1	TW-1	T	Water	3510C	

Client: AKRF Inc

Job Number: 460-85074-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Analysis Batch:460-259705					
LCS 460-258769/3-A	Lab Control Sample	T	Water	8270D	460-258769
MB 460-258769/1-A	Method Blank	T	Water	8270D	460-258769
460-85129-D-3-A MS	Matrix Spike	T	Water	8270D	460-258769
460-85129-D-3-B MSD	Matrix Spike Duplicate	T	Water	8270D	460-258769
460-85134-1	TW-4	T	Water	8270D	460-258769
460-85134-2	TW-2	T	Water	8270D	460-258769
460-85171-1	TW-5	T	Water	8270D	460-258769
Analysis Batch:460-259810					
LCS 460-259043/4-A	Lab Control Sample	T	Water	8270D	460-259043
LCSD 460-259043/5-A	Lab Control Sample Duplicate	T	Water	8270D	460-259043
MB 460-259043/1-A	Method Blank	T	Water	8270D	460-259043
460-85239-1	TW-1	T	Water	8270D	460-259043
Analysis Batch:460-260033					
LCS 460-258769/2-A	Lab Control Sample	T	Water	8270D	460-258769
LCS 460-259043/2-A	Lab Control Sample	T	Water	8270D	460-259043
LCSD 460-259043/3-A	Lab Control Sample Duplicate	T	Water	8270D	460-259043

Report Basis

T = Total

Client: AKRF Inc

Job Number: 460-85074-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 460-258478					
LCS 460-258478/2-A	Lab Control Sample	T	Water	3510C	
LCSD 460-258478/3-A	Lab Control Sample Duplicate	T	Water	3510C	
MB 460-258478/1-A	Method Blank	T	Water	3510C	
460-85074-1	TW-6	T	Water	3510C	
460-85074-2	TW-3	T	Water	3510C	
460-85134-1	TW-4	T	Water	3510C	
460-85134-2	TW-2	T	Water	3510C	
Prep Batch: 460-258480					
LCS 460-258480/2-A	Lab Control Sample	T	Water	3510C	
LCS 460-258480/2-ARA	Lab Control Sample	T	Water	3510C	
LCSD 460-258480/3-A	Lab Control Sample Duplicate	T	Water	3510C	
LCSD 460-258480/3-ARA	Lab Control Sample Duplicate	T	Water	3510C	
MB 460-258480/1-A	Method Blank	T	Water	3510C	
MB 460-258480/1-ARA	Method Blank	T	Water	3510C	
460-85074-1	TW-6	T	Water	3510C	
460-85074-2RA	TW-3	T	Water	3510C	
460-85134-1	TW-4	T	Water	3510C	
460-85134-2	TW-2	T	Water	3510C	
Analysis Batch:460-258651					
LCS 460-258480/2-A	Lab Control Sample	T	Water	8082A	460-258480
LCSD 460-258480/3-A	Lab Control Sample Duplicate	T	Water	8082A	460-258480
MB 460-258480/1-A	Method Blank	T	Water	8082A	460-258480
460-85074-1	TW-6	T	Water	8082A	460-258480
460-85134-1	TW-4	T	Water	8082A	460-258480
460-85134-2	TW-2	T	Water	8082A	460-258480
Analysis Batch:460-258699					
LCS 460-258478/2-A	Lab Control Sample	T	Water	8081B	460-258478
LCSD 460-258478/3-A	Lab Control Sample Duplicate	T	Water	8081B	460-258478
MB 460-258478/1-A	Method Blank	T	Water	8081B	460-258478
460-85074-1	TW-6	T	Water	8081B	460-258478
460-85074-2	TW-3	T	Water	8081B	460-258478
460-85134-1	TW-4	T	Water	8081B	460-258478
460-85134-2	TW-2	T	Water	8081B	460-258478
Analysis Batch:460-258706					
LCS 460-258480/2-ARA	Lab Control Sample	T	Water	8082A	460-258480
LCSD 460-258480/3-ARA	Lab Control Sample Duplicate	T	Water	8082A	460-258480
MB 460-258480/1-ARA	Method Blank	T	Water	8082A	460-258480
460-85074-2RA	TW-3	T	Water	8082A	460-258480

Client: AKRF Inc

Job Number: 460-85074-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 460-258728					
LCS 460-258728/2-A	Lab Control Sample	T	Water	3510C	
LCSD 460-258728/3-A	Lab Control Sample Duplicate	T	Water	3510C	
MB 460-258728/1-A	Method Blank	T	Water	3510C	
460-85171-1	TW-5	T	Water	3510C	
Prep Batch: 460-258731					
LCS 460-258731/2-A	Lab Control Sample	T	Water	3510C	
LCSD 460-258731/3-A	Lab Control Sample Duplicate	T	Water	3510C	
MB 460-258731/1-A	Method Blank	T	Water	3510C	
460-85171-1	TW-5	T	Water	3510C	
Prep Batch: 460-258836					
LB 460-258836/1-B	TCLP SPLPE Leachate Blank	T	Water		
460-85169-A-21-E MS	Matrix Spike	P	Water		
460-85169-A-21-F MSD	Matrix Spike Duplicate	P	Water		
Analysis Batch:460-258856					
LCS 460-258731/2-A	Lab Control Sample	T	Water	8082A	460-258731
LCSD 460-258731/3-A	Lab Control Sample Duplicate	T	Water	8082A	460-258731
MB 460-258731/1-A	Method Blank	T	Water	8082A	460-258731
460-85171-1	TW-5	T	Water	8082A	460-258731
Analysis Batch:460-258858					
LCS 460-258728/2-A	Lab Control Sample	T	Water	8081B	460-258728
LCSD 460-258728/3-A	Lab Control Sample Duplicate	T	Water	8081B	460-258728
MB 460-258728/1-A	Method Blank	T	Water	8081B	460-258728
460-85171-1	TW-5	T	Water	8081B	460-258728
Prep Batch: 460-258945					
LCS 460-258945/2-A	Lab Control Sample	T	Water	3510C	
MB 460-258945/1-A	Method Blank	T	Water	3510C	
LB 460-258836/1-B	TCLP SPLPE Leachate Blank	T	Water	3510C	460-258836
460-85169-A-21-E MS	Matrix Spike	P	Water	3510C	460-258836
460-85169-A-21-F MSD	Matrix Spike Duplicate	P	Water	3510C	460-258836
460-85239-1	TW-1	T	Water	3510C	
Prep Batch: 460-258950					
LCS 460-258950/2-A	Lab Control Sample	T	Water	3510C	
LCSD 460-258950/3-A	Lab Control Sample Duplicate	T	Water	3510C	
MB 460-258950/1-A	Method Blank	T	Water	3510C	
460-85239-1	TW-1	T	Water	3510C	

Client: AKRF Inc

Job Number: 460-85074-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Analysis Batch:460-259138					
LCS 460-258950/2-A	Lab Control Sample	T	Water	8082A	460-258950
LCSD 460-258950/3-A	Lab Control Sample Duplicate	T	Water	8082A	460-258950
MB 460-258950/1-A	Method Blank	T	Water	8082A	460-258950
460-85239-1	TW-1	T	Water	8082A	460-258950
Analysis Batch:460-259208					
LCS 460-258945/2-A	Lab Control Sample	T	Water	8081B	460-258945
MB 460-258945/1-A	Method Blank	T	Water	8081B	460-258945
LB 460-258836/1-B	TCLP SPLPE Leachate Blank	T	Water	8081B	460-258945
460-85169-A-21-E MS	Matrix Spike	P	Water	8081B	460-258945
460-85169-A-21-F MSD	Matrix Spike Duplicate	P	Water	8081B	460-258945
460-85239-1	TW-1	T	Water	8081B	460-258945

Report Basis

P = TCLP

T = Total

Client: AKRF Inc

Job Number: 460-85074-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 460-258367					
LCS 460-258367/2-A	Lab Control Sample	T	Water	7470A	
MB 460-258367/1-A	Method Blank	T	Water	7470A	
460-84748-H-10-C DU	Duplicate	T	Water	7470A	
460-84748-H-10-D MS	Matrix Spike	T	Water	7470A	
460-85074-1	TW-6	T	Water	7470A	
460-85074-2	TW-3	T	Water	7470A	
460-85134-1	TW-4	T	Water	7470A	
460-85134-2	TW-2	T	Water	7470A	
Prep Batch: 460-258397					
LCS 460-258397/2-A	Lab Control Sample	T	Water	3010A	
MB 460-258397/1-A	Method Blank	T	Water	3010A	
460-85074-1	TW-6	T	Water	3010A	
460-85074-2	TW-3	T	Water	3010A	
460-85093-L-1-B DU	Duplicate	T	Water	3010A	
460-85093-L-1-C MS	Matrix Spike	T	Water	3010A	
460-85134-1	TW-4	T	Water	3010A	
460-85134-2	TW-2	T	Water	3010A	
Analysis Batch:460-258398					
LCS 460-258367/2-A	Lab Control Sample	T	Water	7470A	460-258367
MB 460-258367/1-A	Method Blank	T	Water	7470A	460-258367
460-84748-H-10-C DU	Duplicate	T	Water	7470A	460-258367
460-84748-H-10-D MS	Matrix Spike	T	Water	7470A	460-258367
460-85074-1	TW-6	T	Water	7470A	460-258367
460-85074-2	TW-3	T	Water	7470A	460-258367
460-85134-1	TW-4	T	Water	7470A	460-258367
460-85134-2	TW-2	T	Water	7470A	460-258367
Prep Batch: 460-258517					
LCS 460-258517/2-A	Lab Control Sample	T	Water	7470A	
MB 460-258515/1-B	Method Blank	D	Water	7470A	
460-85074-1	TW-6	D	Water	7470A	
460-85074-2	TW-3	D	Water	7470A	
460-85098-C-12-B DU	Duplicate	D	Water	7470A	
460-85098-C-12-C MS	Matrix Spike	D	Water	7470A	
Analysis Batch:460-258538					
LCS 460-258517/2-A	Lab Control Sample	T	Water	7470A	460-258517
MB 460-258515/1-B	Method Blank	D	Water	7470A	460-258517
460-85074-1	TW-6	D	Water	7470A	460-258517
460-85074-2	TW-3	D	Water	7470A	460-258517
460-85098-C-12-B DU	Duplicate	D	Water	7470A	460-258517
460-85098-C-12-C MS	Matrix Spike	D	Water	7470A	460-258517

Client: AKRF Inc

Job Number: 460-85074-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:460-258582					
LCS 460-258397/2-A	Lab Control Sample	T	Water	6010C	460-258397
MB 460-258397/1-A	Method Blank	T	Water	6010C	460-258397
460-85074-1	TW-6	T	Water	6010C	460-258397
460-85074-2	TW-3	T	Water	6010C	460-258397
460-85093-L-1-B DU	Duplicate	T	Water	6010C	460-258397
460-85093-L-1-C MS	Matrix Spike	T	Water	6010C	460-258397
460-85134-1	TW-4	T	Water	6010C	460-258397
460-85134-2	TW-2	T	Water	6010C	460-258397
Prep Batch: 460-258720					
LCS 460-258720/2-A	Lab Control Sample	T	Water	3010A	
MB 460-258718/1-B	Method Blank	D	Water	3010A	
460-85074-1	TW-6	D	Water	3010A	
460-85074-2	TW-3	D	Water	3010A	
460-85134-1	TW-4	D	Water	3010A	
460-85134-2	TW-2	D	Water	3010A	
460-85171-1	TW-5	D	Water	3010A	
460-85173-B-1-C DU	Duplicate	D	Water	3010A	
460-85173-B-1-D MS	Matrix Spike	D	Water	3010A	
Analysis Batch:460-258732					
LCS 460-258397/2-A	Lab Control Sample	T	Water	6010C	460-258397
MB 460-258397/1-A	Method Blank	T	Water	6010C	460-258397
460-85074-1	TW-6	T	Water	6010C	460-258397
460-85074-2	TW-3	T	Water	6010C	460-258397
460-85093-L-1-B DU	Duplicate	T	Water	6010C	460-258397
460-85093-L-1-C MS	Matrix Spike	T	Water	6010C	460-258397
460-85134-1	TW-4	T	Water	6010C	460-258397
460-85134-2	TW-2	T	Water	6010C	460-258397
Prep Batch: 460-258745					
LCS 460-258745/2-A	Lab Control Sample	T	Water	7470A	
MB 460-258744/1-B	Method Blank	D	Water	7470A	
460-85128-A-3-A DU	Duplicate	D	Water	7470A	
460-85128-G-3-B MS	Matrix Spike	D	Water	7470A	
460-85134-1	TW-4	D	Water	7470A	
460-85134-2	TW-2	D	Water	7470A	
460-85171-1	TW-5	D	Water	7470A	

Client: AKRF Inc

Job Number: 460-85074-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:460-258801					
LCS 460-258745/2-A	Lab Control Sample	T	Water	7470A	460-258745
MB 460-258744/1-B	Method Blank	D	Water	7470A	460-258745
460-85128-A-3-A DU	Duplicate	D	Water	7470A	460-258745
460-85128-G-3-B MS	Matrix Spike	D	Water	7470A	460-258745
460-85134-1	TW-4	D	Water	7470A	460-258745
460-85134-2	TW-2	D	Water	7470A	460-258745
460-85171-1	TW-5	D	Water	7470A	460-258745
Analysis Batch:460-258821					
LCS 460-258720/2-A	Lab Control Sample	T	Water	6010C	460-258720
MB 460-258718/1-B	Method Blank	D	Water	6010C	460-258720
460-85074-1	TW-6	D	Water	6010C	460-258720
460-85074-2	TW-3	D	Water	6010C	460-258720
460-85134-1	TW-4	D	Water	6010C	460-258720
460-85134-2	TW-2	D	Water	6010C	460-258720
460-85171-1	TW-5	D	Water	6010C	460-258720
460-85173-B-1-C DU	Duplicate	D	Water	6010C	460-258720
460-85173-B-1-D MS	Matrix Spike	D	Water	6010C	460-258720
Prep Batch: 460-258975					
LCS 460-258975/2-A	Lab Control Sample	T	Water	7470A	
MB 460-258975/1-A	Method Blank	T	Water	7470A	
460-85128-H-3-B DU	Duplicate	T	Water	7470A	
460-85128-H-3-C MS	Matrix Spike	T	Water	7470A	
460-85171-1	TW-5	T	Water	7470A	
Analysis Batch:460-259038					
460-85074-1	TW-6	D	Water	6010C	460-258720
460-85074-2	TW-3	D	Water	6010C	460-258720
460-85134-1	TW-4	D	Water	6010C	460-258720
Analysis Batch:460-259049					
LCS 460-258975/2-A	Lab Control Sample	T	Water	7470A	460-258975
MB 460-258975/1-A	Method Blank	T	Water	7470A	460-258975
460-85128-H-3-B DU	Duplicate	T	Water	7470A	460-258975
460-85128-H-3-C MS	Matrix Spike	T	Water	7470A	460-258975
460-85171-1	TW-5	T	Water	7470A	460-258975
Prep Batch: 460-259210					
LCS 460-259210/2-A	Lab Control Sample	T	Water	3010A	
MB 460-259210/1-A	Method Blank	T	Water	3010A	
460-85171-1	TW-5	T	Water	3010A	
460-85173-A-1-C DU	Duplicate	T	Water	3010A	
460-85173-A-1-D MS	Matrix Spike	T	Water	3010A	

Client: AKRF Inc

Job Number: 460-85074-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 460-259257					
460-85239-1	TW-1	D	Water	7470A	
Analysis Batch:460-259323					
460-85239-1	TW-1	D	Water	7470A	460-259257
Analysis Batch:460-259338					
LCS 460-259210/2-A	Lab Control Sample	T	Water	6010C	460-259210
MB 460-259210/1-A	Method Blank	T	Water	6010C	460-259210
460-85171-1	TW-5	T	Water	6010C	460-259210
460-85173-A-1-C DU	Duplicate	T	Water	6010C	460-259210
460-85173-A-1-D MS	Matrix Spike	T	Water	6010C	460-259210
Prep Batch: 460-259533					
LCS 460-259533/2-A	Lab Control Sample	T	Water	7470A	
MB 460-259533/1-A	Method Blank	T	Water	7470A	
460-85239-1	TW-1	T	Water	7470A	
460-85341-F-1-C DU	Duplicate	T	Water	7470A	
460-85341-F-1-D MS	Matrix Spike	T	Water	7470A	
Analysis Batch:460-259597					
LCS 460-259533/2-A	Lab Control Sample	T	Water	7470A	460-259533
MB 460-259533/1-A	Method Blank	T	Water	7470A	460-259533
460-85239-1	TW-1	T	Water	7470A	460-259533
460-85341-F-1-C DU	Duplicate	T	Water	7470A	460-259533
460-85341-F-1-D MS	Matrix Spike	T	Water	7470A	460-259533
Prep Batch: 460-259788					
LCS 460-259788/2-A	Lab Control Sample	T	Water	3010A	
MB 460-259788/1-A	Method Blank	T	Water	3010A	
460-85239-1	TW-1	T	Water	3010A	
460-85481-E-1-B DU	Duplicate	T	Water	3010A	
460-85481-E-1-C MS	Matrix Spike	T	Water	3010A	
Prep Batch: 460-259789					
LCS 460-259789/2-A	Lab Control Sample	T	Water	3010A	
MB 460-259789/1-A	Method Blank	T	Water	3010A	
460-85239-1	TW-1	D	Water	3010A	
460-85427-C-6-B DU	Duplicate	D	Water	3010A	
460-85427-C-6-C MS	Matrix Spike	D	Water	3010A	

Client: AKRF Inc

Job Number: 460-85074-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:460-259851					
LCS 460-259788/2-A	Lab Control Sample	T	Water	6010C	460-259788
MB 460-259788/1-A	Method Blank	T	Water	6010C	460-259788
LCS 460-259789/2-A	Lab Control Sample	T	Water	6010C	460-259789
MB 460-259789/1-A	Method Blank	T	Water	6010C	460-259789
460-85239-1	TW-1	T	Water	6010C	460-259788
460-85239-1	TW-1	D	Water	6010C	460-259789
460-85427-C-6-B DU	Duplicate	D	Water	6010C	460-259789
460-85427-C-6-C MS	Matrix Spike	D	Water	6010C	460-259789
460-85481-E-1-B DU	Duplicate	T	Water	6010C	460-259788
460-85481-E-1-C MS	Matrix Spike	T	Water	6010C	460-259788

Report Basis

D = Dissolved

T = Total

Client: AKRF Inc

Job Number: 460-85074-1

Surrogate Recovery Report

8260C Volatile Organic Compounds by GC/MS

Client Matrix: Water

Lab Sample ID	Client Sample ID	DCA %Rec	BFB %Rec	DBFM %Rec	TOL %Rec
460-85074-1	TW-6	111	118	114	107
460-85074-2	TW-3	98	106	104	97
460-85134-1	TW-4	114	114	113	112
460-85134-2	TW-2	114	115	115	114
460-85134-3	TW-1	114	116	117	113
460-85134-4	TW-5	113	113	114	114
460-85134-5	TB3	115	116	115	113
MB 460-258558/6		97	104	102	95
MB 460-259156/7		112	114	114	115
MB 460-259463/6		109	115	116	114
LCS 460-258558/3		97	106	102	97
LCS 460-259156/4		117	114	120	113
LCS 460-259463/4		111	118	120	114
LCSD 460-259156/5		115	115	121	113
460-85134-3 MS	TW-1 MS	114	117	120	113
460-84752-A-4 MS		96	108	105	98
460-85134-3 MSD	TW-1 MSD	112	117	119	114
460-84752-A-4 MSD		98	108	104	97

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	70-130
BFB = 4-Bromofluorobenzene	64-135
DBFM = Dibromofluoromethane (Surr)	72-137
TOL = Toluene-d8 (Surr)	70-130

Client: AKRF Inc

Job Number: 460-85074-1

Surrogate Recovery Report

8270D Semivolatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	TBP %Rec	FBP %Rec	2FP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec
460-85074-1	TW-6	68	82	52	89	38	100
460-85074-2	TW-3	67	91	63	97	44	110
460-85134-1	TW-4	107	95	61	88	36	77
460-85134-2	TW-2	107	96	59	89	35	77
460-85171-1	TW-5	113	102	64	96	39	80
460-85239-1	TW-1	108	97	58	90	37	101
MB 460-258263/1-A		75	74	42	87	26	87
MB 460-258769/1-A		100	100	59	95	36	88
MB 460-259043/1-A		97	100	53	93	33	103
LCS 460-258263/2-A		103	78	44	85	28	86
LCS 460-258263/4-A		88	96	50	105	31	114
LCS 460-258769/2-A		94	82	43	74	27	88
LCS 460-258769/3-A		94	91	48	85	28	79
LCS 460-259043/2-A		98	88	45	79	29	84
LCS 460-259043/4-A		101	96	52	92	33	114
LCSD 460-258263/3-A		77	79	48	83	31	91
LCSD 460-258263/5-A		88	91	51	104	31	104
LCSD 460-259043/3-A		98	86	43	78	26	93
LCSD 460-259043/5-A		99	97	52	92	34	113
460-85129-D-3-A MS		120	94	52	88	29	77
460-85129-D-3-B MSD		125	100	54	90	32	79

Surrogate	Acceptance Limits
TBP = 2,4,6-Tribromophenol (Surr)	51-126
FBP = 2-Fluorobiphenyl	50-120
2FP = 2-Fluorophenol (Surr)	15-96
NBZ = Nitrobenzene-d5 (Surr)	60-114
PHL = Phenol-d5 (Surr)	4-86
TPH = Terphenyl-d14 (Surr)	72-130

Client: AKRF Inc

Job Number: 460-85074-1

Surrogate Recovery Report

8081B Organochlorine Pesticides (GC)

Client Matrix: Water

Lab Sample ID	Client Sample ID	DCB1 %Rec	DCB2 %Rec	TCX1 %Rec	TCX2 %Rec
460-85074-1	TW-6	92	97	121	112
460-85074-2	TW-3	91	93	114	105
460-85134-1	TW-4	88	97	126	120
460-85134-2	TW-2	115	127	122	119
460-85171-1	TW-5	72	73	114	112
460-85239-1	TW-1	46	66	118	107
MB 460-258478/1-A		93	90	118	113
MB 460-258728/1-A		86	93	117	113
MB 460-258945/1-A		100	97	105	100
LB 460-258836/1-B		115	116	125	121
LCS 460-258478/2-A		89	87	126	111
LCS 460-258728/2-A		87	85	120	112
LCS 460-258945/2-A		94	93	108	102
LCSD 460-258478/3-A		95	94	139	122
LCSD 460-258728/3-A		79	77	107	101

Surrogate	Acceptance Limits
DCB = DCB Decachlorobiphenyl	26-150
TCX = Tetrachloro-m-xylene	50-147

Client: AKRF Inc

Job Number: 460-85074-1

Surrogate Recovery Report

8081B Organochlorine Pesticides (GC)

Client Matrix: Water TCLP

Lab Sample ID	Client Sample ID	DCB1 %Rec	DCB2 %Rec	TCX1 %Rec	TCX2 %Rec
460-85169-A-21-E MS		99	109	101	110
460-85169-A-21-F MSD		116	139	51	64

Surrogate	Acceptance Limits
DCB = DCB Decachlorobiphenyl	26-150
TCX = Tetrachloro-m-xylene	50-147

Client: AKRF Inc

Job Number: 460-85074-1

Surrogate Recovery Report

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Matrix: Water

Lab Sample ID	Client Sample ID	DCB1 %Rec	DCB2 %Rec
460-85074-1	TW-6	102	103
460-85074-2 RA	TW-3 RA	98	101
460-85134-1	TW-4	101	101
460-85134-2	TW-2	110	113
460-85171-1	TW-5	81	84
460-85239-1	TW-1	53	57
MB 460-258480/1-A		95	95
MB 460-258480/1-A RA		99	102
MB 460-258731/1-A		93	97
MB 460-258950/1-A		113	120
LCS 460-258480/2-A		98	94
LCS 460-258480/2-A RA		101	95
LCS 460-258731/2-A		96	98
LCS 460-258950/2-A		79	83
LCSD 460-258480/3-A		94	94
LCSD 460-258480/3-A RA		96	95
LCSD 460-258731/3-A		96	93
LCSD 460-258950/3-A		79	86

Surrogate	Acceptance Limits
DCB = DCB Decachlorobiphenyl	13-150

Client: AKRF Inc

Job Number: 460-85074-1

Method Blank - Batch: 460-258558

Method: 8260C
Preparation: 5030C

Lab Sample ID:	MB 460-258558/6	Analysis Batch:	460-258558	Instrument ID:	CVOAMS2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	B75222.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/27/2014 1928	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	10/27/2014 1928				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.060	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.16	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	0.080	1.0
1,1,2-Trichloroethane	1.0	U	0.19	1.0
1,1-Dichloroethane	1.0	U	0.13	1.0
1,1-Dichloroethene	1.0	U	0.090	1.0
1,2,3-Trichlorobenzene	1.0	U	0.51	1.0
1,2,4-Trichlorobenzene	1.0	U	0.34	1.0
1,2-Dichloropropane	1.0	U	0.090	1.0
1,3-Dichlorobenzene	1.0	U	0.14	1.0
1,4-Dichlorobenzene	1.0	U	0.23	1.0
1,4-Dioxane	50	U	36	50
2-Butanone (MEK)	5.0	U	2.3	5.0
2-Hexanone	5.0	U	0.50	5.0
4-Methyl-2-pentanone (MIBK)	5.0	U	0.99	5.0
Acetone	5.0	U	2.7	5.0
Benzene	1.0	U	0.080	1.0
Bromoform	1.0	U	0.19	1.0
Bromomethane	1.0	U	0.18	1.0
Carbon disulfide	1.0	U	0.13	1.0
Carbon tetrachloride	1.0	U	0.060	1.0
Chlorobenzene	1.0	U	0.11	1.0
Chlorobromomethane	1.0	U	0.27	1.0
Chlorodibromomethane	1.0	U	0.20	1.0
Chloroethane	1.0	U	0.17	1.0
Chloroform	1.0	U	0.080	1.0
Chloromethane	1.0	U	0.10	1.0
cis-1,2-Dichloroethene	1.0	U	0.18	1.0
cis-1,3-Dichloropropene	1.0	U	0.18	1.0
Cyclohexane	1.0	U	0.16	1.0
Dichlorobromomethane	1.0	U	0.12	1.0
Dichlorodifluoromethane	1.0	U	0.22	1.0
Ethylbenzene	1.0	U	0.10	1.0
Ethylene Dibromide	1.0	U	0.28	1.0
Isopropylbenzene	1.0	U	0.080	1.0
Methyl acetate	5.0	U	0.34	5.0
Methyl tert-butyl ether	1.0	U	0.14	1.0
Methylcyclohexane	1.0	U	0.14	1.0
Methylene Chloride	1.0	U	0.18	1.0
m-Xylene & p-Xylene	1.0	U	0.25	1.0
o-Xylene	1.0	U	0.13	1.0
Styrene	1.0	U	0.12	1.0
Tetrachloroethene	1.0	U	0.10	1.0
Toluene	1.0	U	0.15	1.0
trans-1,2-Dichloroethene	1.0	U	0.13	1.0

Client: AKRF Inc

Job Number: 460-85074-1

Method Blank - Batch: 460-258558

Method: 8260C
Preparation: 5030C

Lab Sample ID:	MB 460-258558/6	Analysis Batch:	460-258558	Instrument ID:	CVOAMS2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	B75222.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/27/2014 1928	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	10/27/2014 1928				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
trans-1,3-Dichloropropene	1.0	U	0.24	1.0
Trichloroethene	1.0	U	0.090	1.0
Trichlorofluoromethane	1.0	U	0.15	1.0
Vinyl chloride	1.0	U	0.14	1.0
1,2-Dichloroethane	1.0	U	0.19	1.0
1,2-Dichlorobenzene	1.0	U	0.21	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.40	1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	97	70 - 130
4-Bromofluorobenzene	104	64 - 135
Dibromofluoromethane (Surr)	102	72 - 137
Toluene-d8 (Surr)	95	70 - 130

Method Blank TICs- Batch: 460-258558

Cas Number	Analyte	RT	Est. Result (ug/L	Qual
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85074-1

Lab Control Sample - Batch: 460-258558

Method: 8260C
Preparation: 5030C

Lab Sample ID:	LCS 460-258558/3	Analysis Batch:	460-258558	Instrument ID:	CVOAMS2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	B75219.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/27/2014 1814	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	10/27/2014 1814				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1,1-Trichloroethane	20.0	17.7	89	73 - 134	
1,1,2,2-Tetrachloroethane	20.0	15.8	79	55 - 133	
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	16.9	84	60 - 144	
1,1,2-Trichloroethane	20.0	16.8	84	68 - 121	
1,1-Dichloroethane	20.0	17.6	88	75 - 126	
1,1-Dichloroethene	20.0	17.8	89	71 - 123	
1,2,3-Trichlorobenzene	20.0	17.7	89	72 - 135	
1,2,4-Trichlorobenzene	20.0	17.7	88	76 - 129	
1,2-Dichloropropane	20.0	17.3	86	70 - 120	
1,3-Dichlorobenzene	20.0	17.7	88	75 - 120	
1,4-Dichlorobenzene	20.0	16.7	84	75 - 120	
1,4-Dioxane	400	429	107	46 - 150	
2-Butanone (MEK)	100	85.8	86	52 - 140	
2-Hexanone	100	81.1	81	49 - 131	
4-Methyl-2-pentanone (MIBK)	100	70.7	71	56 - 132	
Acetone	100	89.7	90	26 - 150	
Benzene	20.0	16.8	84	69 - 125	
Bromoform	20.0	17.5	87	50 - 134	
Bromomethane	20.0	18.7	94	27 - 150	
Carbon disulfide	20.0	16.3	82	61 - 126	
Carbon tetrachloride	20.0	18.0	90	58 - 150	
Chlorobenzene	20.0	16.9	85	77 - 120	
Chlorobromomethane	20.0	18.2	91	70 - 134	
Chlorodibromomethane	20.0	17.9	90	63 - 131	
Chloroethane	20.0	20.5	102	58 - 145	
Chloroform	20.0	17.7	89	81 - 122	
Chloromethane	20.0	16.2	81	43 - 145	
cis-1,2-Dichloroethene	20.0	17.5	88	78 - 121	
cis-1,3-Dichloropropene	20.0	17.1	85	71 - 120	
Cyclohexane	20.0	16.6	83	62 - 135	
Dichlorobromomethane	20.0	17.7	88	72 - 123	
Dichlorodifluoromethane	20.0	15.8	79	40 - 150	
Ethylbenzene	20.0	17.8	89	74 - 120	
Ethylene Dibromide	20.0	17.3	87	77 - 117	
Isopropylbenzene	20.0	18.3	91	74 - 127	
Methyl acetate	100	86.9	87	62 - 140	
Methyl tert-butyl ether	20.0	18.2	91	73 - 125	
Methylcyclohexane	20.0	16.9	85	64 - 136	
Methylene Chloride	20.0	16.9	84	76 - 123	
m-Xylene & p-Xylene	20.0	17.6	88	78 - 119	
o-Xylene	20.0	17.9	89	79 - 120	

Client: AKRF Inc

Job Number: 460-85074-1

Lab Control Sample - Batch: 460-258558

Method: 8260C
Preparation: 5030C

Lab Sample ID:	LCS 460-258558/3	Analysis Batch:	460-258558	Instrument ID:	CVOAMS2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	B75219.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/27/2014 1814	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	10/27/2014 1814				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Styrene	20.0	18.6	93	76 - 120	
Tetrachloroethene	20.0	17.6	88	70 - 136	
Toluene	20.0	16.6	83	78 - 120	
trans-1,2-Dichloroethene	20.0	18.0	90	79 - 120	
trans-1,3-Dichloropropene	20.0	16.4	82	71 - 123	
Trichloroethene	20.0	18.0	90	74 - 120	
Trichlorofluoromethane	20.0	19.5	98	65 - 142	
Vinyl chloride	20.0	18.4	92	56 - 137	
1,2-Dichloroethane	20.0	17.8	89	75 - 127	
1,2-Dichlorobenzene	20.0	17.8	89	81 - 120	
1,2-Dibromo-3-Chloropropane	20.0	14.1	70	53 - 136	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	97	70 - 130
4-Bromofluorobenzene	106	64 - 135
Dibromofluoromethane (Surr)	102	72 - 137
Toluene-d8 (Surr)	97	70 - 130

Client: AKRF Inc

Job Number: 460-85074-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 460-258558

Method: 8260C
Preparation: 5030C

MS Lab Sample ID:	460-84752-A-4 MS	Analysis Batch:	460-258558	Instrument ID:	CVOAMS2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	B75229.D
Dilution:	10	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/27/2014 2219			Final Weight/Volume:	5 mL
Prep Date:	10/27/2014 2219				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	460-84752-A-4 MSD	Analysis Batch:	460-258558	Instrument ID:	CVOAMS2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	B75230.D
Dilution:	10	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/27/2014 2243			Final Weight/Volume:	5 mL
Prep Date:	10/27/2014 2243				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,1,1-Trichloroethane	95	99	73 - 134	3	30		
1,1,2,2-Tetrachloroethane	90	85	55 - 133	6	30		
1,1,2-Trichloro-1,2,2-trifluoroethane	91	96	60 - 144	5	30		
1,1,2-Trichloroethane	88	87	68 - 121	1	30		
1,1-Dichloroethane	93	92	75 - 126	1	30		
1,1-Dichloroethene	92	91	71 - 123	1	30		
1,2,3-Trichlorobenzene	92	93	72 - 135	1	30		
1,2,4-Trichlorobenzene	95	94	76 - 129	1	30		
1,2-Dichloropropane	88	89	70 - 120	2	30		
1,3-Dichlorobenzene	94	94	75 - 120	0	30		
1,4-Dichlorobenzene	91	90	75 - 120	1	30		
1,4-Dioxane	134	136	46 - 150	1	30		
2-Butanone (MEK)	91	86	52 - 140	6	30		
2-Hexanone	84	83	49 - 131	2	30		
4-Methyl-2-pentanone (MIBK)	73	75	56 - 132	3	30		
Acetone	85	81	26 - 150	5	30		
Benzene	87	85	69 - 125	2	30		
Bromoform	90	91	50 - 134	1	30		
Bromomethane	90	92	27 - 150	3	30		
Carbon disulfide	85	87	61 - 126	3	30		
Carbon tetrachloride	98	98	58 - 150	0	30		
Chlorobenzene	90	87	77 - 120	3	30		
Chlorobromomethane	101	99	70 - 134	2	30		
Chlorodibromomethane	99	92	63 - 131	7	30		
Chloroethane	102	98	58 - 145	4	30		
Chloroform	93	94	81 - 122	1	30		
Chloromethane	78	81	43 - 145	3	30		
cis-1,2-Dichloroethene	95	95	78 - 121	1	30		
cis-1,3-Dichloropropene	83	79	71 - 120	5	30		
Cyclohexane	85	88	62 - 135	3	30		
Dichlorobromomethane	92	93	72 - 123	1	30		
Dichlorodifluoromethane	85	90	40 - 150	5	30		

Client: AKRF Inc

Job Number: 460-85074-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 460-258558

Method: 8260C
Preparation: 5030C

MS Lab Sample ID:	460-84752-A-4 MS	Analysis Batch:	460-258558	Instrument ID:	CVOAMS2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	B75229.D
Dilution:	10	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/27/2014 2219			Final Weight/Volume:	5 mL
Prep Date:	10/27/2014 2219				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	460-84752-A-4 MSD	Analysis Batch:	460-258558	Instrument ID:	CVOAMS2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	B75230.D
Dilution:	10	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/27/2014 2243			Final Weight/Volume:	5 mL
Prep Date:	10/27/2014 2243				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Ethylbenzene	91	95	74 - 120	4	30		
Ethylene Dibromide	94	91	77 - 117	3	30		
Isopropylbenzene	96	96	74 - 127	0	30		
Methyl acetate	99	99	62 - 140	1	30		
Methyl tert-butyl ether	95	96	73 - 125	2	30		
Methylcyclohexane	89	91	64 - 136	3	30		
Methylene Chloride	90	91	76 - 123	1	30		
m-Xylene & p-Xylene	93	92	78 - 119	1	30		
o-Xylene	92	92	79 - 120	1	30		
Styrene	93	93	76 - 120	1	30		
Tetrachloroethene	95	95	70 - 136	0	30		
Toluene	87	87	78 - 120	0	30		
trans-1,2-Dichloroethene	95	96	79 - 120	1	30		
trans-1,3-Dichloropropene	85	83	71 - 123	3	30		
Trichloroethene	98	95	74 - 120	3	30		
Trichlorofluoromethane	97	99	65 - 142	2	30		
Vinyl chloride	92	91	56 - 137	1	30		
1,2-Dichloroethane	97	92	75 - 127	5	30		
1,2-Dichlorobenzene	93	94	81 - 120	0	30		
1,2-Dibromo-3-Chloropropane	81	85	53 - 136	5	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	96	98	70 - 130
4-Bromofluorobenzene	108	108	64 - 135
Dibromofluoromethane (Surr)	105	104	72 - 137
Toluene-d8 (Surr)	98	97	70 - 130

Client: AKRF Inc

Job Number: 460-85074-1

Method Blank - Batch: 460-259156

Method: 8260C
Preparation: 5030C

Lab Sample ID:	MB 460-259156/7	Analysis Batch:	460-259156	Instrument ID:	CVOAMS3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C1526.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/30/2014 1118	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	10/30/2014 1118				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.060	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.16	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	0.080	1.0
1,1,2-Trichloroethane	1.0	U	0.19	1.0
1,1-Dichloroethane	1.0	U	0.13	1.0
1,1-Dichloroethene	1.0	U	0.090	1.0
1,2,3-Trichlorobenzene	1.0	U	0.51	1.0
1,2,4-Trichlorobenzene	1.0	U	0.34	1.0
1,2-Dichloropropane	1.0	U	0.090	1.0
1,3-Dichlorobenzene	1.0	U	0.14	1.0
1,4-Dichlorobenzene	1.0	U	0.23	1.0
1,4-Dioxane	50	U	36	50
2-Butanone (MEK)	5.0	U	2.3	5.0
2-Hexanone	5.0	U	0.50	5.0
4-Methyl-2-pentanone (MIBK)	5.0	U	0.99	5.0
Acetone	5.0	U	2.7	5.0
Benzene	1.0	U	0.080	1.0
Bromoform	1.0	U	0.19	1.0
Bromomethane	1.0	U	0.18	1.0
Carbon disulfide	1.0	U	0.13	1.0
Carbon tetrachloride	1.0	U	0.060	1.0
Chlorobenzene	1.0	U	0.11	1.0
Chlorobromomethane	1.0	U	0.27	1.0
Chlorodibromomethane	1.0	U	0.20	1.0
Chloroethane	1.0	U	0.17	1.0
Chloroform	1.0	U	0.080	1.0
Chloromethane	1.0	U	0.10	1.0
cis-1,2-Dichloroethene	1.0	U	0.18	1.0
cis-1,3-Dichloropropene	1.0	U	0.18	1.0
Cyclohexane	1.0	U	0.16	1.0
Dichlorobromomethane	1.0	U	0.12	1.0
Dichlorodifluoromethane	1.0	U	0.22	1.0
Ethylbenzene	1.0	U	0.10	1.0
Ethylene Dibromide	1.0	U	0.28	1.0
Isopropylbenzene	1.0	U	0.080	1.0
Methyl acetate	5.0	U	0.34	5.0
Methyl tert-butyl ether	1.0	U	0.14	1.0
Methylcyclohexane	1.0	U	0.14	1.0
Methylene Chloride	1.0	U	0.18	1.0
m-Xylene & p-Xylene	1.0	U	0.25	1.0
o-Xylene	1.0	U	0.13	1.0
Styrene	1.0	U	0.12	1.0
Tetrachloroethene	1.0	U	0.10	1.0
Toluene	1.0	U	0.15	1.0
trans-1,2-Dichloroethene	1.0	U	0.13	1.0

Client: AKRF Inc

Job Number: 460-85074-1

Method Blank - Batch: 460-259156

Method: 8260C
Preparation: 5030C

Lab Sample ID:	MB 460-259156/7	Analysis Batch:	460-259156	Instrument ID:	CVOAMS3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C1526.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/30/2014 1118	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	10/30/2014 1118				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
trans-1,3-Dichloropropene	1.0	U	0.24	1.0
Trichloroethene	1.0	U	0.090	1.0
Trichlorofluoromethane	1.0	U	0.15	1.0
Vinyl chloride	1.0	U	0.14	1.0
1,2-Dichloroethane	1.0	U	0.19	1.0
1,2-Dichlorobenzene	1.0	U	0.21	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.40	1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	112	70 - 130
4-Bromofluorobenzene	114	64 - 135
Dibromofluoromethane (Surr)	114	72 - 137
Toluene-d8 (Surr)	115	70 - 130

Method Blank TICs- Batch: 460-259156

Cas Number	Analyte	RT	Est. Result (ug/L	Qual
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85074-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 460-259156

Method: 8260C
Preparation: 5030C

LCS Lab Sample ID:	LCS 460-259156/4	Analysis Batch:	460-259156	Instrument ID:	CVOAMS3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C1523.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/30/2014 0946	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	10/30/2014 0946				5 mL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 460-259156/5	Analysis Batch:	460-259156	Instrument ID:	CVOAMS3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C1524.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/30/2014 1025	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	10/30/2014 1025				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
1,1,1-Trichloroethane	100	105	73 - 134	5	30		
1,1,2,2-Tetrachloroethane	95	104	55 - 133	9	30		
1,1,2-Trichloro-1,2,2-trifluoroethane	82	76	60 - 144	7	30		
1,1,2-Trichloroethane	100	108	68 - 121	8	30		
1,1-Dichloroethane	104	110	75 - 126	6	30		
1,1-Dichloroethene	98	94	71 - 123	4	30		
1,2,3-Trichlorobenzene	101	108	72 - 135	6	30		
1,2,4-Trichlorobenzene	101	107	76 - 129	6	30		
1,2-Dichloropropane	103	110	70 - 120	7	30		
1,3-Dichlorobenzene	101	107	75 - 120	7	30		
1,4-Dichlorobenzene	100	107	75 - 120	7	30		
1,4-Dioxane	107	111	46 - 150	4	30		
2-Butanone (MEK)	101	103	52 - 140	2	30		
2-Hexanone	98	107	49 - 131	9	30		
4-Methyl-2-pentanone (MIBK)	105	114	56 - 132	8	30		
Acetone	83	86	26 - 150	4	30		
Benzene	99	107	69 - 125	8	30		
Bromoform	72	78	50 - 134	8	30		
Bromomethane	118	116	27 - 150	1	30		
Carbon disulfide	90	93	61 - 126	3	30		
Carbon tetrachloride	103	104	58 - 150	1	30		
Chlorobenzene	100	107	77 - 120	6	30		
Chlorobromomethane	107	106	70 - 134	1	30		
Chlorodibromomethane	96	105	63 - 131	9	30		
Chloroethane	113	117	58 - 145	3	30		
Chloroform	104	113	81 - 122	8	30		
Chloromethane	100	103	43 - 145	4	30		
cis-1,2-Dichloroethene	105	112	78 - 121	6	30		
cis-1,3-Dichloropropene	103	111	71 - 120	7	30		
Cyclohexane	83	77	62 - 135	7	30		
Dichlorobromomethane	101	110	72 - 123	9	30		
Dichlorodifluoromethane	64	71	40 - 150	9	30		
Ethylbenzene	101	109	74 - 120	7	30		
Ethylene Dibromide	101	106	77 - 117	4	30		
Isopropylbenzene	110	116	74 - 127	6	30		

Client: AKRF Inc

Job Number: 460-85074-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 460-259156

Method: 8260C
Preparation: 5030C

LCS Lab Sample ID:	LCS 460-259156/4	Analysis Batch:	460-259156	Instrument ID:	CVOAMS3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C1523.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/30/2014 0946	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	10/30/2014 0946				5 mL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 460-259156/5	Analysis Batch:	460-259156	Instrument ID:	CVOAMS3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C1524.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/30/2014 1025	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	10/30/2014 1025				5 mL
Leach Date:	N/A				

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Methyl acetate	118	124	62 - 140	4	30		
Methyl tert-butyl ether	103	106	73 - 125	3	30		
Methylcyclohexane	85	78	64 - 136	10	30		
Methylene Chloride	103	111	76 - 123	8	30		
m-Xylene & p-Xylene	101	107	78 - 119	5	30		
o-Xylene	100	109	79 - 120	8	30		
Styrene	99	106	76 - 120	7	30		
Tetrachloroethene	101	105	70 - 136	4	30		
Toluene	92	99	78 - 120	7	30		
trans-1,2-Dichloroethene	103	108	79 - 120	5	30		
trans-1,3-Dichloropropene	107	115	71 - 123	7	30		
Trichloroethene	107	109	74 - 120	2	30		
Trichlorofluoromethane	80	85	65 - 142	6	30		
Vinyl chloride	96	98	56 - 137	2	30		
1,2-Dichloroethane	105	110	75 - 127	4	30		
1,2-Dichlorobenzene	98	104	81 - 120	6	30		
1,2-Dibromo-3-Chloropropane	90	99	53 - 136	10	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	117	115	70 - 130
4-Bromofluorobenzene	114	115	64 - 135
Dibromofluoromethane (Surr)	120	121	72 - 137
Toluene-d8 (Surr)	113	113	70 - 130

Client: AKRF Inc

Job Number: 460-85074-1

Method Blank - Batch: 460-259463

Method: 8260C
Preparation: 5030C

Lab Sample ID:	MB 460-259463/6	Analysis Batch:	460-259463	Instrument ID:	CVOAMS3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C1574.D
Dilution:	10	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/31/2014 1028	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	10/31/2014 1028				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1,1-Trichloroethane	10	U	0.60	10
1,1,2,2-Tetrachloroethane	10	U	1.6	10
1,1,2-Trichloro-1,2,2-trifluoroethane	10	U	0.80	10
1,1,2-Trichloroethane	10	U	1.9	10
1,1-Dichloroethane	10	U	1.3	10
1,1-Dichloroethene	10	U	0.90	10
1,2,3-Trichlorobenzene	10	U	5.1	10
1,2,4-Trichlorobenzene	10	U	3.4	10
1,2-Dichloropropane	10	U	0.90	10
1,3-Dichlorobenzene	10	U	1.4	10
1,4-Dichlorobenzene	10	U	2.3	10
1,4-Dioxane	500	U	360	500
2-Butanone (MEK)	50	U	23	50
2-Hexanone	50	U	5.0	50
4-Methyl-2-pentanone (MIBK)	50	U	9.9	50
Acetone	50	U	27	50
Benzene	10	U	0.80	10
Bromoform	10	U	1.9	10
Bromomethane	10	U	1.8	10
Carbon disulfide	10	U	1.3	10
Carbon tetrachloride	10	U	0.60	10
Chlorobenzene	10	U	1.1	10
Chlorobromomethane	10	U	2.7	10
Chlorodibromomethane	10	U	2.0	10
Chloroethane	10	U	1.7	10
Chloroform	10	U	0.80	10
Chloromethane	10	U	1.0	10
cis-1,2-Dichloroethene	10	U	1.8	10
cis-1,3-Dichloropropene	10	U	1.8	10
Cyclohexane	10	U	1.6	10
Dichlorobromomethane	10	U	1.2	10
Dichlorodifluoromethane	10	U	2.2	10
Ethylbenzene	10	U	1.0	10
Ethylene Dibromide	10	U	2.8	10
Isopropylbenzene	10	U	0.80	10
Methyl acetate	50	U	3.4	50
Methyl tert-butyl ether	10	U	1.4	10
Methylcyclohexane	10	U	1.4	10
Methylene Chloride	10	U	1.8	10
m-Xylene & p-Xylene	10	U	2.5	10
o-Xylene	10	U	1.3	10
Styrene	10	U	1.2	10
Tetrachloroethene	10	U	1.0	10
Toluene	10	U	1.5	10
trans-1,2-Dichloroethene	10	U	1.3	10

Client: AKRF Inc

Job Number: 460-85074-1

Method Blank - Batch: 460-259463

Method: 8260C
Preparation: 5030C

Lab Sample ID:	MB 460-259463/6	Analysis Batch:	460-259463	Instrument ID:	CVOAMS3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C1574.D
Dilution:	10	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/31/2014 1028	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	10/31/2014 1028				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
trans-1,3-Dichloropropene	10	U	2.4	10
Trichloroethene	10	U	0.90	10
Trichlorofluoromethane	10	U	1.5	10
Vinyl chloride	10	U	1.4	10
1,2-Dichloroethane	10	U	1.9	10
1,2-Dichlorobenzene	10	U	2.1	10
1,2-Dibromo-3-Chloropropane	10	U	4.0	10

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	109	70 - 130
4-Bromofluorobenzene	115	64 - 135
Dibromofluoromethane (Surr)	116	72 - 137
Toluene-d8 (Surr)	114	70 - 130

Method Blank TICs- Batch: 460-259463

Cas Number	Analyte	RT	Est. Result (ug/L	Qual
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85074-1

Lab Control Sample - Batch: 460-259463

Method: 8260C
Preparation: 5030C

Lab Sample ID:	LCS 460-259463/4	Analysis Batch:	460-259463	Instrument ID:	CVOAMS3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C1572.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/31/2014 0927	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	10/31/2014 0927				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1,1-Trichloroethane	20.0	20.3	101	73 - 134	
1,1,2,2-Tetrachloroethane	20.0	19.8	99	55 - 133	
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	15.6	78	60 - 144	
1,1,2-Trichloroethane	20.0	20.1	100	68 - 121	
1,1-Dichloroethane	20.0	21.3	107	75 - 126	
1,1-Dichloroethene	20.0	18.1	91	71 - 123	
1,2,3-Trichlorobenzene	20.0	21.0	105	72 - 135	
1,2,4-Trichlorobenzene	20.0	20.7	103	76 - 129	
1,2-Dichloropropane	20.0	21.7	108	70 - 120	
1,3-Dichlorobenzene	20.0	20.3	101	75 - 120	
1,4-Dichlorobenzene	20.0	20.3	102	75 - 120	
1,4-Dioxane	400	426	106	46 - 150	
2-Butanone (MEK)	100	103	103	52 - 140	
2-Hexanone	100	97.3	97	49 - 131	
4-Methyl-2-pentanone (MIBK)	100	104	104	56 - 132	
Acetone	100	73.6	74	26 - 150	
Benzene	20.0	20.5	103	69 - 125	
Bromoform	20.0	15.5	77	50 - 134	
Bromomethane	20.0	54.1	270	27 - 150	*
Carbon disulfide	20.0	19.9	99	61 - 126	
Carbon tetrachloride	20.0	20.0	100	58 - 150	
Chlorobenzene	20.0	20.2	101	77 - 120	
Chlorobromomethane	20.0	23.7	118	70 - 134	
Chlorodibromomethane	20.0	20.2	101	63 - 131	
Chloroethane	20.0	17.8	89	58 - 145	
Chloroform	20.0	21.5	108	81 - 122	
Chloromethane	20.0	21.6	108	43 - 145	
cis-1,2-Dichloroethene	20.0	21.5	107	78 - 121	
cis-1,3-Dichloropropene	20.0	20.7	104	71 - 120	
Cyclohexane	20.0	16.7	83	62 - 135	
Dichlorobromomethane	20.0	21.1	105	72 - 123	
Dichlorodifluoromethane	20.0	14.3	72	40 - 150	
Ethylbenzene	20.0	20.6	103	74 - 120	
Ethylene Dibromide	20.0	19.7	99	77 - 117	
Isopropylbenzene	20.0	22.3	112	74 - 127	
Methyl acetate	100	126	126	62 - 140	
Methyl tert-butyl ether	20.0	20.2	101	73 - 125	
Methylcyclohexane	20.0	16.7	84	64 - 136	
Methylene Chloride	20.0	20.8	104	76 - 123	
m-Xylene & p-Xylene	20.0	20.9	104	78 - 119	
o-Xylene	20.0	20.6	103	79 - 120	

Client: AKRF Inc

Job Number: 460-85074-1

Lab Control Sample - Batch: 460-259463

Method: 8260C
Preparation: 5030C

Lab Sample ID:	LCS 460-259463/4	Analysis Batch:	460-259463	Instrument ID:	CVOAMS3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C1572.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/31/2014 0927	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	10/31/2014 0927				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Styrene	20.0	20.2	101	76 - 120	
Tetrachloroethene	20.0	21.0	105	70 - 136	
Toluene	20.0	18.9	94	78 - 120	
trans-1,2-Dichloroethene	20.0	21.3	106	79 - 120	
trans-1,3-Dichloropropene	20.0	21.8	109	71 - 123	
Trichloroethene	20.0	21.2	106	74 - 120	
Trichlorofluoromethane	20.0	17.1	86	65 - 142	
Vinyl chloride	20.0	20.0	100	56 - 137	
1,2-Dichloroethane	20.0	19.8	99	75 - 127	
1,2-Dichlorobenzene	20.0	19.9	100	81 - 120	
1,2-Dibromo-3-Chloropropane	20.0	18.8	94	53 - 136	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	111	70 - 130
4-Bromofluorobenzene	118	64 - 135
Dibromofluoromethane (Surr)	120	72 - 137
Toluene-d8 (Surr)	114	70 - 130

Client: AKRF Inc

Job Number: 460-85074-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 460-259463

Method: 8260C
Preparation: 5030C

MS Lab Sample ID:	460-85134-3	Analysis Batch:	460-259463	Instrument ID:	CVOAMS3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C1594.D
Dilution:	10	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/31/2014 1909			Final Weight/Volume:	5 mL
Prep Date:	10/31/2014 1909				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	460-85134-3	Analysis Batch:	460-259463	Instrument ID:	CVOAMS3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C1595.D
Dilution:	10	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/31/2014 1935			Final Weight/Volume:	5 mL
Prep Date:	10/31/2014 1935				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,1,1-Trichloroethane	93	111	73 - 134	18	30		
1,1,2,2-Tetrachloroethane	97	116	55 - 133	18	30		
1,1,2-Trichloro-1,2,2-trifluoroethane	56	67	60 - 144	18	30	*	
1,1,2-Trichloroethane	96	114	68 - 121	17	30		
1,1-Dichloroethane	100	118	75 - 126	17	30		
1,1-Dichloroethene	83	100	71 - 123	19	30		
1,2,3-Trichlorobenzene	92	112	72 - 135	20	30		
1,2,4-Trichlorobenzene	91	114	76 - 129	22	30		
1,2-Dichloropropane	102	120	70 - 120	16	30		
1,3-Dichlorobenzene	92	112	75 - 120	19	30		
1,4-Dichlorobenzene	92	112	75 - 120	20	30		
1,4-Dioxane	95	119	46 - 150	22	30		
2-Butanone (MEK)	91	109	52 - 140	18	30		
2-Hexanone	99	120	49 - 131	19	30		
4-Methyl-2-pentanone (MIBK)	106	127	56 - 132	18	30		
Acetone	77	92	26 - 150	18	30		
Benzene	95	112	69 - 125	16	30		
Bromoform	70	88	50 - 134	23	30		
Bromomethane	198	249	27 - 150	23	30	*	*
Carbon disulfide	81	101	61 - 126	23	30		
Carbon tetrachloride	88	106	58 - 150	18	30		
Chlorobenzene	94	114	77 - 120	19	30		
Chlorobromomethane	111	128	70 - 134	14	30		
Chlorodibromomethane	91	112	63 - 131	21	30		
Chloroethane	86	103	58 - 145	18	30		
Chloroform	100	118	81 - 122	16	30		
Chloromethane	77	99	43 - 145	25	30		
cis-1,2-Dichloroethene	100	116	78 - 121	15	30		
cis-1,3-Dichloropropene	95	113	71 - 120	17	30		
Cyclohexane	64	75	62 - 135	15	30		
Dichlorobromomethane	95	117	72 - 123	21	30		
Dichlorodifluoromethane	46	54	40 - 150	16	30		

Client: AKRF Inc

Job Number: 460-85074-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 460-259463

Method: 8260C
Preparation: 5030C

MS Lab Sample ID:	460-85134-3	Analysis Batch:	460-259463	Instrument ID:	CVOAMS3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C1594.D
Dilution:	10	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/31/2014 1909			Final Weight/Volume:	5 mL
Prep Date:	10/31/2014 1909				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	460-85134-3	Analysis Batch:	460-259463	Instrument ID:	CVOAMS3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C1595.D
Dilution:	10	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/31/2014 1935			Final Weight/Volume:	5 mL
Prep Date:	10/31/2014 1935				5 mL
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Ethylbenzene	98	116	74 - 120	16	30		
Ethylene Dibromide	95	116	77 - 117	20	30		
Isopropylbenzene	105	124	74 - 127	17	30		
Methyl acetate	124	149	62 - 140	18	30		*
Methyl tert-butyl ether	100	120	73 - 125	18	30		
Methylcyclohexane	61	71	64 - 136	15	30	*	
Methylene Chloride	97	116	76 - 123	18	30		
m-Xylene & p-Xylene	104	117	78 - 119	11	30		
o-Xylene	97	114	79 - 120	17	30		
Styrene	93	113	76 - 120	19	30		
Tetrachloroethene	96	112	70 - 136	16	30		
Toluene	87	103	78 - 120	17	30		
trans-1,2-Dichloroethene	97	114	79 - 120	17	30		
trans-1,3-Dichloropropene	101	122	71 - 123	19	30		
Trichloroethene	98	115	74 - 120	16	30		
Trichlorofluoromethane	63	75	65 - 142	18	30	*	
Vinyl chloride	65	96	56 - 137	38	30		*
1,2-Dichloroethane	96	116	75 - 127	19	30		
1,2-Dichlorobenzene	92	110	81 - 120	18	30		
1,2-Dibromo-3-Chloropropane	84	110	53 - 136	27	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	114	112	70 - 130
4-Bromofluorobenzene	117	117	64 - 135
Dibromofluoromethane (Surr)	120	119	72 - 137
Toluene-d8 (Surr)	113	114	70 - 130

Client: AKRF Inc

Job Number: 460-85074-1

Method Blank - Batch: 460-258263

Method: 8270D
Preparation: 3510C

Lab Sample ID:	MB 460-258263/1-A	Analysis Batch:	460-258638	Instrument ID:	CBNAMS6
Client Matrix:	Water	Prep Batch:	460-258263	Lab File ID:	M86106.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	10/28/2014 1231	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	10/25/2014 0948			Injection Volume:	5 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1'-Biphenyl	10	U	1.8	10
1,2,4,5-Tetrachlorobenzene	10	U	1.8	10
2,2'-oxybis[1-chloropropane]	10	U	1.3	10
2,3,4,6-Tetrachlorophenol	10	U	0.89	10
2,4,5-Trichlorophenol	10	U	2.2	10
2,4,6-Trichlorophenol	10	U	1.4	10
2,4-Dichlorophenol	10	U	1.1	10
2,4-Dimethylphenol	10	U	1.2	10
2,4-Dinitrophenol	30	U	2.0	30
2,4-Dinitrotoluene	2.0	U	0.28	2.0
2,6-Dinitrotoluene	2.0	U	0.27	2.0
2-Chloronaphthalene	10	U	1.3	10
2-Chlorophenol	10	U	0.93	10
2-Methylnaphthalene	10	U	1.5	10
2-Methylphenol	10	U	1.4	10
2-Nitroaniline	20	U	2.0	20
2-Nitrophenol	10	U	0.68	10
3,3'-Dichlorobenzidine	20	U	3.2	20
3-Nitroaniline	20	U	2.9	20
4,6-Dinitro-2-methylphenol	30	U	3.0	30
4-Bromophenyl phenyl ether	10	U	1.1	10
4-Chloro-3-methylphenol	10	U	1.1	10
4-Chloroaniline	1.0	U	0.32	1.0
4-Chlorophenyl phenyl ether	10	U	1.5	10
4-Methylphenol	10	U	1.0	10
4-Nitroaniline	20	U	2.9	20
4-Nitrophenol	30	U	2.0	30
Acenaphthene	10	U	1.1	10
Acenaphthylene	10	U	1.8	10
Acetophenone	10	U	0.89	10
Anthracene	10	U	0.85	10
Atrazine	10	U	1.0	10
Benzaldehyde	10	U	2.1	10
Benzo[a]anthracene	1.0	U	0.18	1.0
Benzo[a]pyrene	1.0	U	0.14	1.0
Benzo[b]fluoranthene	1.0	U	0.21	1.0
Benzo[g,h,i]perylene	10	U	0.93	10
Benzo[k]fluoranthene	1.0	U	0.14	1.0
Bis(2-chloroethoxy)methane	10	U	1.0	10
Bis(2-chloroethyl)ether	1.0	U	0.30	1.0
Bis(2-ethylhexyl) phthalate	10	U	0.81	10
Butyl benzyl phthalate	10	U	1.4	10
Caprolactam	10	U	0.91	10
Carbazole	10	U	1.2	10
Chrysene	10	U	1.4	10

Client: AKRF Inc

Job Number: 460-85074-1

Method Blank - Batch: 460-258263

Method: 8270D
Preparation: 3510C

Lab Sample ID:	MB 460-258263/1-A	Analysis Batch:	460-258638	Instrument ID:	CBNAMS6
Client Matrix:	Water	Prep Batch:	460-258263	Lab File ID:	M86106.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	10/28/2014 1231	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	10/25/2014 0948			Injection Volume:	5 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dibenz(a,h)anthracene	1.0	U	0.16	1.0
Dibenzofuran	10	U	1.5	10
Diethyl phthalate	10	U	1.4	10
Dimethyl phthalate	10	U	1.1	10
Di-n-butyl phthalate	10	U	1.0	10
Di-n-octyl phthalate	10	U	0.88	10
Fluoranthene	10	U	1.1	10
Fluorene	10	U	1.7	10
Hexachlorobenzene	1.0	U	0.20	1.0
Hexachlorobutadiene	2.0	U	0.68	2.0
Hexachlorocyclopentadiene	10	U	1.5	10
Hexachloroethane	1.0	U	0.15	1.0
Indeno[1,2,3-cd]pyrene	1.0	U	0.11	1.0
Isophorone	10	U	1.3	10
Naphthalene	10	U	2.0	10
Nitrobenzene	1.0	U	0.34	1.0
N-Nitrosodi-n-propylamine	1.0	U	0.27	1.0
N-Nitrosodiphenylamine	10	U	1.0	10
Pentachlorophenol	30	U	2.7	30
Phenanthrene	10	U	1.2	10
Phenol	10	U	0.60	10
Pyrene	10	U	1.1	10

Surrogate	% Rec	Acceptance Limits
2,4,6-Tribromophenol (Surr)	75	51 - 126
2-Fluorobiphenyl	74	50 - 120
2-Fluorophenol (Surr)	42	15 - 96
Nitrobenzene-d5 (Surr)	87	60 - 114
Phenol-d5 (Surr)	26	4 - 86
Terphenyl-d14 (Surr)	87	72 - 130

Method Blank TICs- Batch: 460-258263

Cas Number	Analyte	RT	Est. Result (ug/L	Qual
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85074-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 460-258263

Method: 8270D
Preparation: 3510C

LCS Lab Sample ID:	LCS 460-258263/4-A	Analysis Batch:	460-258638	Instrument ID:	CBNAMS6
Client Matrix:	Water	Prep Batch:	460-258263	Lab File ID:	M86088.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	10/28/2014 0616	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	10/25/2014 0948			Injection Volume:	5 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 460-258263/5-A	Analysis Batch:	460-258638	Instrument ID:	CBNAMS6
Client Matrix:	Water	Prep Batch:	460-258263	Lab File ID:	M86089.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	10/28/2014 0638	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	10/25/2014 0948			Injection Volume:	5 uL
Leach Date:	N/A				

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Benzaldehyde	109	108	52 - 150	1	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
2,4,6-Tribromophenol (Surr)	88	88	51 - 126
2-Fluorobiphenyl	96	91	50 - 120
2-Fluorophenol (Surr)	50	51	15 - 96
Nitrobenzene-d5 (Surr)	105	104	60 - 114
Phenol-d5 (Surr)	31	31	4 - 86
Terphenyl-d14 (Surr)	114	104	72 - 130

Client: AKRF Inc

Job Number: 460-85074-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 460-258263

Method: 8270D
Preparation: 3510C

LCS Lab Sample ID:	LCS 460-258263/2-A	Analysis Batch:	460-258776	Instrument ID:	CBNAMS6
Client Matrix:	Water	Prep Batch:	460-258263	Lab File ID:	M86113.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	10/28/2014 1558	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	10/25/2014 0948			Injection Volume:	5 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 460-258263/3-A	Analysis Batch:	460-258986	Instrument ID:	CBNAMS6
Client Matrix:	Water	Prep Batch:	460-258263	Lab File ID:	M86162.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	10/29/2014 2035	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	10/25/2014 0948			Injection Volume:	5 uL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
1,1'-Biphenyl	82	90	66 - 112	10	30		
1,2,4,5-Tetrachlorobenzene	86	77	70 - 130	11	30		
2,2'-oxybis[1-chloropropane]	72	89	68 - 107	21	30		
2,3,4,6-Tetrachlorophenol	96	90	70 - 130	7	30		
2,4,5-Trichlorophenol	93	88	67 - 114	6	30		
2,4,6-Trichlorophenol	89	88	67 - 111	1	30		
2,4-Dichlorophenol	78	78	64 - 107	0	30		
2,4-Dimethylphenol	77	81	55 - 100	4	30		
2,4-Dinitrophenol	84	97	19 - 113	14	30		
2,4-Dinitrotoluene	97	91	65 - 113	7	30		
2,6-Dinitrotoluene	93	98	68 - 114	5	30		
2-Chloronaphthalene	80	89	65 - 107	11	30		
2-Chlorophenol	71	73	53 - 101	2	30		
2-Methylnaphthalene	76	76	66 - 102	0	30		
2-Methylphenol	56	69	40 - 90	20	30		
2-Nitroaniline	76	90	73 - 116	17	30		
2-Nitrophenol	86	83	65 - 107	3	30		
3,3'-Dichlorobenzidine	93	89	69 - 129	5	30		
3-Nitroaniline	91	96	59 - 108	6	30		
4,6-Dinitro-2-methylphenol	101	103	58 - 115	3	30		
4-Bromophenyl phenyl ether	98	82	66 - 110	18	30		
4-Chloro-3-methylphenol	73	75	57 - 106	3	30		
4-Chloroaniline	79	80	58 - 105	1	30		
4-Chlorophenyl phenyl ether	96	84	68 - 105	13	30		
4-Methylphenol	48	62	30 - 75	25	30		
4-Nitroaniline	100	107	49 - 119	7	30		
4-Nitrophenol	37	35	10 - 44	5	30		
Acenaphthene	87	92	66 - 108	5	30		
Acenaphthylene	79	89	67 - 107	12	30		
Acetophenone	72	82	68 - 109	13	30		
Anthracene	94	98	68 - 108	4	30		
Atrazine	100	89	56 - 116	12	30		
Benzo[a]anthracene	89	90	65 - 106	2	30		
Benzo[a]pyrene	99	101	58 - 101	2	30		
Benzo[b]fluoranthene	95	103	65 - 111	8	30		

Client: AKRF Inc

Job Number: 460-85074-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 460-258263

Method: 8270D
Preparation: 3510C

LCS Lab Sample ID:	LCS 460-258263/2-A	Analysis Batch:	460-258776	Instrument ID:	CBNAMS6
Client Matrix:	Water	Prep Batch:	460-258263	Lab File ID:	M86113.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	10/28/2014 1558	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	10/25/2014 0948			Injection Volume:	5 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 460-258263/3-A	Analysis Batch:	460-258986	Instrument ID:	CBNAMS6
Client Matrix:	Water	Prep Batch:	460-258263	Lab File ID:	M86162.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	10/29/2014 2035	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	10/25/2014 0948			Injection Volume:	5 uL
Leach Date:	N/A				

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Benzo[g,h,i]perylene	109	113	65 - 134	3	30		
Benzo[k]fluoranthene	101	99	66 - 114	2	30		
Bis(2-chloroethoxy)methane	77	87	69 - 108	12	30		
Bis(2-chloroethyl)ether	67	81	62 - 108	19	30		
Bis(2-ethylhexyl) phthalate	95	111	66 - 114	15	30		
Butyl benzyl phthalate	95	109	66 - 115	13	30		
Caprolactam	23	22	10 - 30	4	30		
Carbazole	98	101	67 - 110	3	30		
Chrysene	90	91	68 - 112	1	30		
Dibenz(a,h)anthracene	115	121	67 - 124	5	30		
Dibenzofuran	89	92	68 - 105	3	30		
Diethyl phthalate	107	93	66 - 109	14	30		
Dimethyl phthalate	92	95	69 - 111	3	30		
Di-n-butyl phthalate	106	108	68 - 111	2	30		
Di-n-octyl phthalate	98	119	51 - 115	19	30		*
Fluoranthene	106	96	68 - 108	10	30		
Fluorene	95	96	68 - 105	1	30		
Hexachlorobenzene	96	79	65 - 107	19	30		
Hexachlorobutadiene	75	53	52 - 99	35	30		*
Hexachlorocyclopentadiene	61	51	40 - 105	17	30		
Hexachloroethane	63	66	50 - 99	5	30		
Indeno[1,2,3-cd]pyrene	119	118	68 - 121	1	30		
Isophorone	76	82	68 - 108	8	30		
Naphthalene	73	73	63 - 101	0	30		
Nitrobenzene	80	75	66 - 106	7	30		
N-Nitrosodi-n-propylamine	70	82	70 - 109	15	30		
N-Nitrosodiphenylamine	93	96	71 - 121	3	30		
Pentachlorophenol	105	85	55 - 116	21	30		
Phenanthrene	97	100	68 - 110	3	30		
Phenol	26	33	12 - 44	23	30		
Pyrene	88	94	61 - 110	7	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
2,4,6-Tribromophenol (Surr)	103	77	51 - 126
2-Fluorobiphenyl	78	79	50 - 120
2-Fluorophenol (Surr)	44	48	15 - 96

Client: AKRF Inc

Job Number: 460-85074-1

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Nitrobenzene-d5 (Surr)	85	83	60 - 114
Phenol-d5 (Surr)	28	31	4 - 86
Terphenyl-d14 (Surr)	86	91	72 - 130

Client: AKRF Inc

Job Number: 460-85074-1

Method Blank - Batch: 460-258769

Method: 8270D
Preparation: 3510C

Lab Sample ID:	MB 460-258769/1-A	Analysis Batch:	460-259705	Instrument ID:	CBNAMS13
Client Matrix:	Water	Prep Batch:	460-258769	Lab File ID:	C10868.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	11/01/2014 0937	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	10/28/2014 1313			Injection Volume:	5 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1'-Biphenyl	10	U	1.8	10
1,2,4,5-Tetrachlorobenzene	10	U	1.8	10
2,2'-oxybis[1-chloropropane]	10	U	1.3	10
2,3,4,6-Tetrachlorophenol	10	U	0.89	10
2,4,5-Trichlorophenol	10	U	2.2	10
2,4,6-Trichlorophenol	10	U	1.4	10
2,4-Dichlorophenol	10	U	1.1	10
2,4-Dimethylphenol	10	U	1.2	10
2,4-Dinitrophenol	30	U	2.0	30
2,4-Dinitrotoluene	2.0	U	0.28	2.0
2,6-Dinitrotoluene	2.0	U	0.27	2.0
2-Chloronaphthalene	10	U	1.3	10
2-Chlorophenol	10	U	0.93	10
2-Methylnaphthalene	10	U	1.5	10
2-Methylphenol	10	U	1.4	10
2-Nitroaniline	20	U	2.0	20
2-Nitrophenol	10	U	0.68	10
3,3'-Dichlorobenzidine	20	U	3.2	20
3-Nitroaniline	20	U	2.9	20
4,6-Dinitro-2-methylphenol	30	U	3.0	30
4-Bromophenyl phenyl ether	10	U	1.1	10
4-Chloro-3-methylphenol	10	U	1.1	10
4-Chloroaniline	1.0	U	0.32	1.0
4-Chlorophenyl phenyl ether	10	U	1.5	10
4-Methylphenol	10	U	1.0	10
4-Nitroaniline	20	U	2.9	20
4-Nitrophenol	30	U	2.0	30
Acenaphthene	10	U	1.1	10
Acenaphthylene	10	U	1.8	10
Acetophenone	10	U	0.89	10
Anthracene	10	U	0.85	10
Atrazine	10	U	1.0	10
Benzaldehyde	10	U	2.1	10
Benzo[a]anthracene	1.0	U	0.18	1.0
Benzo[a]pyrene	1.0	U	0.14	1.0
Benzo[b]fluoranthene	1.0	U	0.21	1.0
Benzo[g,h,i]perylene	10	U	0.93	10
Benzo[k]fluoranthene	1.0	U	0.14	1.0
Bis(2-chloroethoxy)methane	10	U	1.0	10
Bis(2-chloroethyl)ether	1.0	U	0.30	1.0
Bis(2-ethylhexyl) phthalate	10	U	0.81	10
Butyl benzyl phthalate	10	U	1.4	10
Caprolactam	10	U	0.91	10
Carbazole	10	U	1.2	10
Chrysene	10	U	1.4	10

Client: AKRF Inc

Job Number: 460-85074-1

Method Blank - Batch: 460-258769

Method: 8270D
Preparation: 3510C

Lab Sample ID:	MB 460-258769/1-A	Analysis Batch:	460-259705	Instrument ID:	CBNAMS13
Client Matrix:	Water	Prep Batch:	460-258769	Lab File ID:	C10868.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	11/01/2014 0937	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	10/28/2014 1313			Injection Volume:	5 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dibenz(a,h)anthracene	1.0	U	0.16	1.0
Dibenzofuran	10	U	1.5	10
Diethyl phthalate	10	U	1.4	10
Dimethyl phthalate	10	U	1.1	10
Di-n-butyl phthalate	10	U	1.0	10
Di-n-octyl phthalate	10	U	0.88	10
Fluoranthene	10	U	1.1	10
Fluorene	10	U	1.7	10
Hexachlorobenzene	1.0	U	0.20	1.0
Hexachlorobutadiene	2.0	U	0.68	2.0
Hexachlorocyclopentadiene	10	U	1.5	10
Hexachloroethane	1.0	U	0.15	1.0
Indeno[1,2,3-cd]pyrene	1.0	U	0.11	1.0
Isophorone	10	U	1.3	10
Naphthalene	10	U	2.0	10
Nitrobenzene	1.0	U	0.34	1.0
N-Nitrosodi-n-propylamine	1.0	U	0.27	1.0
N-Nitrosodiphenylamine	10	U	1.0	10
Pentachlorophenol	30	U	2.7	30
Phenanthrene	10	U	1.2	10
Phenol	10	U	0.60	10
Pyrene	10	U	1.1	10

Surrogate	% Rec	Acceptance Limits
2,4,6-Tribromophenol (Surr)	100	51 - 126
2-Fluorobiphenyl	100	50 - 120
2-Fluorophenol (Surr)	59	15 - 96
Nitrobenzene-d5 (Surr)	95	60 - 114
Phenol-d5 (Surr)	36	4 - 86
Terphenyl-d14 (Surr)	88	72 - 130

Method Blank TICs- Batch: 460-258769

Cas Number	Analyte	RT	Est. Result (ug/L	Qual
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85074-1

Lab Control Sample - Batch: 460-258769

Method: 8270D
Preparation: 3510C

Lab Sample ID:	LCS 460-258769/3-A	Analysis Batch:	460-259705	Instrument ID:	CBNAMS13
Client Matrix:	Water	Prep Batch:	460-258769	Lab File ID:	C10871.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	11/01/2014 1053	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	10/28/2014 1313			Injection Volume:	5 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Benzaldehyde	160	134	84	52 - 150	

Surrogate	% Rec	Acceptance Limits
2,4,6-Tribromophenol (Surr)	94	51 - 126
2-Fluorobiphenyl	91	50 - 120
2-Fluorophenol (Surr)	48	15 - 96
Nitrobenzene-d5 (Surr)	85	60 - 114
Phenol-d5 (Surr)	28	4 - 86
Terphenyl-d14 (Surr)	79	72 - 130

Lab Control Sample - Batch: 460-258769

Method: 8270D
Preparation: 3510C

Lab Sample ID:	LCS 460-258769/2-A	Analysis Batch:	460-260033	Instrument ID:	CBNAMS13
Client Matrix:	Water	Prep Batch:	460-258769	Lab File ID:	C10966.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	11/03/2014 1658	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	10/28/2014 1313			Injection Volume:	5 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1'-Biphenyl	80.0	67.4	84	66 - 112	
1,2,4,5-Tetrachlorobenzene	80.0	61.3	77	70 - 130	
2,2'-oxybis[1-chloropropane]	80.0	43.1	54	68 - 107	*
2,3,4,6-Tetrachlorophenol	80.0	75.5	94	70 - 130	
2,4,5-Trichlorophenol	80.0	69.7	87	67 - 114	
2,4,6-Trichlorophenol	80.0	73.8	92	67 - 111	
2,4-Dichlorophenol	80.0	62.7	78	64 - 107	
2,4-Dimethylphenol	80.0	62.8	78	55 - 100	
2,4-Dinitrophenol	160	128	80	19 - 113	
2,4-Dinitrotoluene	80.0	74.0	92	65 - 113	
2,6-Dinitrotoluene	80.0	72.7	91	68 - 114	
2-Chloronaphthalene	80.0	65.9	82	65 - 107	
2-Chlorophenol	80.0	58.4	73	53 - 101	
2-Methylnaphthalene	80.0	60.3	75	66 - 102	
2-Methylphenol	80.0	48.3	60	40 - 90	
2-Nitroaniline	80.0	80.5	101	73 - 116	
2-Nitrophenol	80.0	65.7	82	65 - 107	
3,3'-Dichlorobenzidine	80.0	77.1	96	69 - 129	
3-Nitroaniline	80.0	71.0	89	59 - 108	

Client: AKRF Inc

Job Number: 460-85074-1

Lab Control Sample - Batch: 460-258769

Method: 8270D
Preparation: 3510C

Lab Sample ID:	LCS 460-258769/2-A	Analysis Batch:	460-260033	Instrument ID:	CBNAMS13
Client Matrix:	Water	Prep Batch:	460-258769	Lab File ID:	C10966.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	11/03/2014 1658	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	10/28/2014 1313			Injection Volume:	5 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
4,6-Dinitro-2-methylphenol	160	144	90	58 - 115	
4-Bromophenyl phenyl ether	80.0	72.9	91	66 - 110	
4-Chloro-3-methylphenol	80.0	62.4	78	57 - 106	
4-Chloroaniline	80.0	62.6	78	58 - 105	
4-Chlorophenyl phenyl ether	80.0	67.7	85	68 - 105	
4-Methylphenol	80.0	43.2	54	30 - 75	
4-Nitroaniline	80.0	74.1	93	49 - 119	
4-Nitrophenol	160	53.9	34	10 - 44	
Acenaphthene	80.0	68.3	85	66 - 108	
Acenaphthylene	80.0	65.7	82	67 - 107	
Acetophenone	80.0	68.4	86	68 - 109	
Anthracene	80.0	71.7	90	68 - 108	
Atrazine	80.0	63.3	79	56 - 116	
Benzo[a]anthracene	80.0	72.8	91	65 - 106	
Benzo[a]pyrene	80.0	81.1	101	58 - 101	
Benzo[b]fluoranthene	80.0	78.9	99	65 - 111	
Benzo[g,h,i]perylene	80.0	83.1	104	65 - 134	
Benzo[k]fluoranthene	80.0	78.2	98	66 - 114	
Bis(2-chloroethoxy)methane	80.0	62.4	78	69 - 108	
Bis(2-chloroethyl)ether	80.0	61.4	77	62 - 108	
Bis(2-ethylhexyl) phthalate	80.0	68.2	85	66 - 114	
Butyl benzyl phthalate	80.0	72.9	91	66 - 115	
Caprolactam	80.0	18.5	23	10 - 30	
Carbazole	80.0	76.7	96	67 - 110	
Chrysene	80.0	71.5	89	68 - 112	
Dibenz(a,h)anthracene	80.0	87.5	109	67 - 124	
Dibenzofuran	80.0	66.5	83	68 - 105	
Diethyl phthalate	80.0	72.3	90	66 - 109	
Dimethyl phthalate	80.0	70.3	88	69 - 111	
Di-n-butyl phthalate	80.0	78.5	98	68 - 111	
Di-n-octyl phthalate	80.0	67.2	84	51 - 115	
Fluoranthene	80.0	73.5	92	68 - 108	
Fluorene	80.0	69.4	87	68 - 105	
Hexachlorobenzene	80.0	75.3	94	65 - 107	
Hexachlorobutadiene	80.0	51.1	64	52 - 99	
Hexachlorocyclopentadiene	80.0	43.2	54	40 - 105	
Hexachloroethane	80.0	49.3	62	50 - 99	
Indeno[1,2,3-cd]pyrene	80.0	87.8	110	68 - 121	
Isophorone	80.0	57.0	71	68 - 108	
Naphthalene	80.0	62.6	78	63 - 101	
Nitrobenzene	80.0	60.7	76	66 - 106	

Client: AKRF Inc

Job Number: 460-85074-1

Lab Control Sample - Batch: 460-258769

Method: 8270D
Preparation: 3510C

Lab Sample ID:	LCS 460-258769/2-A	Analysis Batch:	460-260033	Instrument ID:	CBNAMS13
Client Matrix:	Water	Prep Batch:	460-258769	Lab File ID:	C10966.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	11/03/2014 1658	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	10/28/2014 1313			Injection Volume:	5 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
N-Nitrosodi-n-propylamine	80.0	59.6	74	70 - 109	
N-Nitrosodiphenylamine	80.0	82.6	103	71 - 121	
Pentachlorophenol	160	151	94	55 - 116	
Phenanthrene	80.0	70.8	88	68 - 110	
Phenol	80.0	24.6	31	12 - 44	
Pyrene	80.0	70.9	89	61 - 110	

Surrogate	% Rec	Acceptance Limits
2,4,6-Tribromophenol (Surr)	94	51 - 126
2-Fluorobiphenyl	82	50 - 120
2-Fluorophenol (Surr)	43	15 - 96
Nitrobenzene-d5 (Surr)	74	60 - 114
Phenol-d5 (Surr)	27	4 - 86
Terphenyl-d14 (Surr)	88	72 - 130

Client: AKRF Inc

Job Number: 460-85074-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 460-258769

Method: 8270D
Preparation: 3510C

MS Lab Sample ID:	460-85129-D-3-A MS	Analysis Batch:	460-259705	Instrument ID:	CBNAMS13
Client Matrix:	Water	Prep Batch:	460-258769	Lab File ID:	C10872.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	11/01/2014 1116			Final Weight/Volume:	2 mL
Prep Date:	10/28/2014 1313			Injection Volume:	5 uL
Leach Date:	N/A				

MSD Lab Sample ID:	460-85129-D-3-B MSD	Analysis Batch:	460-259705	Instrument ID:	CBNAMS13
Client Matrix:	Water	Prep Batch:	460-258769	Lab File ID:	C10873.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	240 mL
Analysis Date:	11/01/2014 1140			Final Weight/Volume:	2 mL
Prep Date:	10/28/2014 1313			Injection Volume:	5 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,1'-Biphenyl	93	99	66 - 112	11	30		
1,2,4,5-Tetrachlorobenzene	86	93	70 - 130	11	30		
2,2'-oxybis[1-chloropropane]	57	57	68 - 107	4	30	*	*
2,3,4,6-Tetrachlorophenol	112	115	70 - 130	7	30		
2,4,5-Trichlorophenol	103	113	67 - 114	13	30		
2,4,6-Trichlorophenol	100	104	67 - 111	8	30		
2,4-Dichlorophenol	90	91	64 - 107	6	30		
2,4-Dimethylphenol	89	90	55 - 100	5	30		
2,4-Dinitrophenol	113	115	19 - 113	6	30		*
2,4-Dinitrotoluene	121	124	65 - 113	7	30	*	*
2,6-Dinitrotoluene	114	115	68 - 114	5	30		*
2-Chloronaphthalene	92	100	65 - 107	12	30		
2-Chlorophenol	80	81	53 - 101	6	30		
2-Methylnaphthalene	83	82	66 - 102	3	30		
2-Methylphenol	63	63	40 - 90	4	30		
2-Nitroaniline	118	126	73 - 116	10	30	*	*
2-Nitrophenol	92	95	65 - 107	7	30		
3,3'-Dichlorobenzidine	87	90	69 - 129	8	30		
3-Nitroaniline	106	109	59 - 108	8	30		*
4,6-Dinitro-2-methylphenol	120	118	58 - 115	2	30	*	*
4-Bromophenyl phenyl ether	98	97	66 - 110	3	30		
4-Chloro-3-methylphenol	87	85	57 - 106	2	30		
4-Chloroaniline	86	86	58 - 105	4	30		
4-Chlorophenyl phenyl ether	97	99	68 - 105	6	30		
4-Methylphenol	54	56	30 - 75	7	30		
4-Nitroaniline	126	134	49 - 119	10	30	*	*
4-Nitrophenol	38	44	10 - 44	18	30		
Acenaphthene	96	103	66 - 108	11	30		
Acenaphthylene	93	99	67 - 107	10	30		
Acetophenone	87	85	68 - 109	2	30		
Anthracene	102	103	68 - 108	5	30		
Atrazine	92	97	56 - 116	9	30		

Client: AKRF Inc

Job Number: 460-85074-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 460-258769

Method: 8270D
Preparation: 3510C

MS Lab Sample ID:	460-85129-D-3-A MS	Analysis Batch:	460-259705	Instrument ID:	CBNAMS13
Client Matrix:	Water	Prep Batch:	460-258769	Lab File ID:	C10872.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	11/01/2014 1116			Final Weight/Volume:	2 mL
Prep Date:	10/28/2014 1313			Injection Volume:	5 uL
Leach Date:	N/A				

MSD Lab Sample ID:	460-85129-D-3-B MSD	Analysis Batch:	460-259705	Instrument ID:	CBNAMS13
Client Matrix:	Water	Prep Batch:	460-258769	Lab File ID:	C10873.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	240 mL
Analysis Date:	11/01/2014 1140			Final Weight/Volume:	2 mL
Prep Date:	10/28/2014 1313			Injection Volume:	5 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Benzaldehyde	79	78	52 - 150	3	30		
Benzo[a]anthracene	103	103	65 - 106	5	30		
Benzo[a]pyrene	116	117	58 - 101	5	30	*	*
Benzo[b]fluoranthene	111	112	65 - 111	5	30		*
Benzo[g,h,i]perylene	117	120	65 - 134	6	30		
Benzo[k]fluoranthene	111	111	66 - 114	4	30		
Bis(2-chloroethoxy)methane	87	87	69 - 108	5	30		
Bis(2-chloroethyl)ether	83	82	62 - 108	3	30		
Bis(2-ethylhexyl) phthalate	103	105	66 - 114	6	30		
Butyl benzyl phthalate	98	101	66 - 115	7	30		
Caprolactam	30	32	10 - 30	9	30		*
Carbazole	121	129	67 - 110	11	30	*	*
Chrysene	105	107	68 - 112	5	30		
Dibenz(a,h)anthracene	124	127	67 - 124	6	30		*
Dibenzofuran	96	100	68 - 105	8	30		
Diethyl phthalate	110	114	66 - 109	7	30	*	*
Dimethyl phthalate	106	110	69 - 111	7	30		
Di-n-butyl phthalate	116	128	68 - 111	14	30	*	*
Di-n-octyl phthalate	104	104	51 - 115	4	30		
Fluoranthene	120	131	68 - 108	13	30	*	*
Fluorene	100	106	68 - 105	10	30		*
Hexachlorobenzene	104	102	65 - 107	3	30		
Hexachlorobutadiene	69	71	52 - 99	7	30		
Hexachlorocyclopentadiene	63	68	40 - 105	13	30		
Hexachloroethane	67	68	50 - 99	5	30		
Indeno[1,2,3-cd]pyrene	120	123	68 - 121	6	30		*
Isophorone	79	79	68 - 108	4	30		
Naphthalene	86	88	63 - 101	7	30		
Nitrobenzene	86	88	66 - 106	6	30		
N-Nitrosodi-n-propylamine	74	73	70 - 109	2	30		
N-Nitrosodiphenylamine	116	111	71 - 121	0	30		
Pentachlorophenol	117	121	55 - 116	7	30	*	*

Client: AKRF Inc

Job Number: 460-85074-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 460-258769

Method: 8270D
Preparation: 3510C

MS Lab Sample ID:	460-85129-D-3-A MS	Analysis Batch:	460-259705	Instrument ID:	CBNAMS13
Client Matrix:	Water	Prep Batch:	460-258769	Lab File ID:	C10872.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	11/01/2014 1116			Final Weight/Volume:	2 mL
Prep Date:	10/28/2014 1313			Injection Volume:	5 uL
Leach Date:	N/A				

MSD Lab Sample ID:	460-85129-D-3-B MSD	Analysis Batch:	460-259705	Instrument ID:	CBNAMS13
Client Matrix:	Water	Prep Batch:	460-258769	Lab File ID:	C10873.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	240 mL
Analysis Date:	11/01/2014 1140			Final Weight/Volume:	2 mL
Prep Date:	10/28/2014 1313			Injection Volume:	5 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Phenanthrene	103	104	68 - 110	5	30		
Phenol	32	34	12 - 44	9	30		
Pyrene	73	73	61 - 110	4	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
2,4,6-Tribromophenol (Surr)	120	125	51 - 126
2-Fluorobiphenyl	94	100	50 - 120
2-Fluorophenol (Surr)	52	54	15 - 96
Nitrobenzene-d5 (Surr)	88	90	60 - 114
Phenol-d5 (Surr)	29	32	4 - 86
Terphenyl-d14 (Surr)	77	79	72 - 130

Client: AKRF Inc

Job Number: 460-85074-1

Method Blank - Batch: 460-259043

Method: 8270D
Preparation: 3510C

Lab Sample ID:	MB 460-259043/1-A	Analysis Batch:	460-259810	Instrument ID:	CBNAMS13
Client Matrix:	Water	Prep Batch:	460-259043	Lab File ID:	C10899.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	11/02/2014 1025	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	10/29/2014 1636			Injection Volume:	5 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1'-Biphenyl	10	U	1.8	10
1,2,4,5-Tetrachlorobenzene	10	U	1.8	10
2,2'-oxybis[1-chloropropane]	10	U	1.3	10
2,3,4,6-Tetrachlorophenol	10	U	0.89	10
2,4,5-Trichlorophenol	10	U	2.2	10
2,4,6-Trichlorophenol	10	U	1.4	10
2,4-Dichlorophenol	10	U	1.1	10
2,4-Dimethylphenol	10	U	1.2	10
2,4-Dinitrophenol	30	U	2.0	30
2,4-Dinitrotoluene	2.0	U	0.28	2.0
2,6-Dinitrotoluene	2.0	U	0.27	2.0
2-Chloronaphthalene	10	U	1.3	10
2-Chlorophenol	10	U	0.93	10
2-Methylnaphthalene	10	U	1.5	10
2-Methylphenol	10	U	1.4	10
2-Nitroaniline	20	U	2.0	20
2-Nitrophenol	10	U	0.68	10
3,3'-Dichlorobenzidine	20	U	3.2	20
3-Nitroaniline	20	U	2.9	20
4,6-Dinitro-2-methylphenol	30	U	3.0	30
4-Bromophenyl phenyl ether	10	U	1.1	10
4-Chloro-3-methylphenol	10	U	1.1	10
4-Chloroaniline	1.0	U	0.32	1.0
4-Chlorophenyl phenyl ether	10	U	1.5	10
4-Methylphenol	10	U	1.0	10
4-Nitroaniline	20	U	2.9	20
4-Nitrophenol	30	U	2.0	30
Acenaphthene	10	U	1.1	10
Acenaphthylene	10	U	1.8	10
Acetophenone	10	U	0.89	10
Anthracene	10	U	0.85	10
Atrazine	10	U	1.0	10
Benzaldehyde	10	U	2.1	10
Benzo[a]anthracene	1.0	U	0.18	1.0
Benzo[a]pyrene	1.0	U	0.14	1.0
Benzo[b]fluoranthene	1.0	U	0.21	1.0
Benzo[g,h,i]perylene	10	U	0.93	10
Benzo[k]fluoranthene	1.0	U	0.14	1.0
Bis(2-chloroethoxy)methane	10	U	1.0	10
Bis(2-chloroethyl)ether	1.0	U	0.30	1.0
Bis(2-ethylhexyl) phthalate	10	U	0.81	10
Butyl benzyl phthalate	10	U	1.4	10
Caprolactam	10	U	0.91	10
Carbazole	10	U	1.2	10
Chrysene	10	U	1.4	10

Client: AKRF Inc

Job Number: 460-85074-1

Method Blank - Batch: 460-259043

Method: 8270D
Preparation: 3510C

Lab Sample ID:	MB 460-259043/1-A	Analysis Batch:	460-259810	Instrument ID:	CBNAMS13
Client Matrix:	Water	Prep Batch:	460-259043	Lab File ID:	C10899.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	11/02/2014 1025	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	10/29/2014 1636			Injection Volume:	5 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dibenz(a,h)anthracene	1.0	U	0.16	1.0
Dibenzofuran	10	U	1.5	10
Diethyl phthalate	10	U	1.4	10
Dimethyl phthalate	10	U	1.1	10
Di-n-butyl phthalate	10	U	1.0	10
Di-n-octyl phthalate	10	U	0.88	10
Fluoranthene	10	U	1.1	10
Fluorene	10	U	1.7	10
Hexachlorobenzene	1.0	U	0.20	1.0
Hexachlorobutadiene	2.0	U	0.68	2.0
Hexachlorocyclopentadiene	10	U	1.5	10
Hexachloroethane	1.0	U	0.15	1.0
Indeno[1,2,3-cd]pyrene	1.0	U	0.11	1.0
Isophorone	10	U	1.3	10
Naphthalene	10	U	2.0	10
Nitrobenzene	1.0	U	0.34	1.0
N-Nitrosodi-n-propylamine	1.0	U	0.27	1.0
N-Nitrosodiphenylamine	10	U	1.0	10
Pentachlorophenol	30	U	2.7	30
Phenanthrene	10	U	1.2	10
Phenol	10	U	0.60	10
Pyrene	10	U	1.1	10

Surrogate	% Rec	Acceptance Limits
2,4,6-Tribromophenol (Surr)	97	51 - 126
2-Fluorobiphenyl	100	50 - 120
2-Fluorophenol (Surr)	53	15 - 96
Nitrobenzene-d5 (Surr)	93	60 - 114
Phenol-d5 (Surr)	33	4 - 86
Terphenyl-d14 (Surr)	103	72 - 130

Method Blank TICs- Batch: 460-259043

Cas Number	Analyte	RT	Est. Result (ug/L	Qual
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85074-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 460-259043

Method: 8270D
Preparation: 3510C

LCS Lab Sample ID:	LCS 460-259043/4-A	Analysis Batch:	460-259810	Instrument ID:	CBNAMS13
Client Matrix:	Water	Prep Batch:	460-259043	Lab File ID:	C10902.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	11/02/2014 1134	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	10/29/2014 1636			Injection Volume:	5 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 460-259043/5-A	Analysis Batch:	460-259810	Instrument ID:	CBNAMS13
Client Matrix:	Water	Prep Batch:	460-259043	Lab File ID:	C10903.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	11/02/2014 1157	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	10/29/2014 1636			Injection Volume:	5 uL
Leach Date:	N/A				

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Benzaldehyde	99	100	52 - 150	1	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
2,4,6-Tribromophenol (Surr)	101	99	51 - 126
2-Fluorobiphenyl	96	97	50 - 120
2-Fluorophenol (Surr)	52	52	15 - 96
Nitrobenzene-d5 (Surr)	92	92	60 - 114
Phenol-d5 (Surr)	33	34	4 - 86
Terphenyl-d14 (Surr)	114	113	72 - 130

Client: AKRF Inc

Job Number: 460-85074-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 460-259043

Method: 8270D
Preparation: 3510C

LCS Lab Sample ID:	LCS 460-259043/2-A	Analysis Batch:	460-260033	Instrument ID:	CBNAMS13
Client Matrix:	Water	Prep Batch:	460-259043	Lab File ID:	C10964.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	11/03/2014 1611	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	10/29/2014 1636			Injection Volume:	5 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 460-259043/3-A	Analysis Batch:	460-260033	Instrument ID:	CBNAMS13
Client Matrix:	Water	Prep Batch:	460-259043	Lab File ID:	C10965.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	11/03/2014 1635	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	10/29/2014 1636			Injection Volume:	5 uL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
1,1'-Biphenyl	94	88	66 - 112	7	30		
1,2,4,5-Tetrachlorobenzene	87	81	70 - 130	7	30		
2,2'-oxybis[1-chloropropane]	57	55	68 - 107	3	30	*	*
2,3,4,6-Tetrachlorophenol	95	93	70 - 130	2	30		
2,4,5-Trichlorophenol	97	89	67 - 114	8	30		
2,4,6-Trichlorophenol	95	94	67 - 111	1	30		
2,4-Dichlorophenol	84	80	64 - 107	4	30		
2,4-Dimethylphenol	84	80	55 - 100	5	30		
2,4-Dinitrophenol	77	78	19 - 113	0	30		
2,4-Dinitrotoluene	91	92	65 - 113	2	30		
2,6-Dinitrotoluene	94	94	68 - 114	0	30		
2-Chloronaphthalene	92	86	65 - 107	6	30		
2-Chlorophenol	76	73	53 - 101	5	30		
2-Methylnaphthalene	83	80	66 - 102	4	30		
2-Methylphenol	64	60	40 - 90	6	30		
2-Nitroaniline	106	104	73 - 116	2	30		
2-Nitrophenol	88	84	65 - 107	4	30		
3,3'-Dichlorobenzidine	101	96	69 - 129	5	30		
3-Nitroaniline	87	90	59 - 108	3	30		
4,6-Dinitro-2-methylphenol	91	90	58 - 115	1	30		
4-Bromophenyl phenyl ether	99	94	66 - 110	5	30		
4-Chloro-3-methylphenol	82	78	57 - 106	4	30		
4-Chloroaniline	82	81	58 - 105	1	30		
4-Chlorophenyl phenyl ether	90	87	68 - 105	3	30		
4-Methylphenol	62	52	30 - 75	16	30		
4-Nitroaniline	89	94	49 - 119	6	30		
4-Nitrophenol	33	32	10 - 44	3	30		
Acenaphthene	94	89	66 - 108	6	30		
Acenaphthylene	90	86	67 - 107	4	30		
Acetophenone	89	86	68 - 109	3	30		
Anthracene	93	92	68 - 108	2	30		
Atrazine	75	74	56 - 116	1	30		
Benzo[a]anthracene	94	91	65 - 106	3	30		
Benzo[a]pyrene	105	102	58 - 101	2	30	*	*
Benzo[b]fluoranthene	102	98	65 - 111	4	30		

Client: AKRF Inc

Job Number: 460-85074-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 460-259043

Method: 8270D
Preparation: 3510C

LCS Lab Sample ID:	LCS 460-259043/2-A	Analysis Batch:	460-260033	Instrument ID:	CBNAMS13
Client Matrix:	Water	Prep Batch:	460-259043	Lab File ID:	C10964.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	11/03/2014 1611	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	10/29/2014 1636			Injection Volume:	5 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 460-259043/3-A	Analysis Batch:	460-260033	Instrument ID:	CBNAMS13
Client Matrix:	Water	Prep Batch:	460-259043	Lab File ID:	C10965.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	11/03/2014 1635	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	10/29/2014 1636			Injection Volume:	5 uL
Leach Date:	N/A				

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Benzo[g,h,i]perylene	108	104	65 - 134	4	30		
Benzo[k]fluoranthene	99	97	66 - 114	2	30		
Bis(2-chloroethoxy)methane	82	80	69 - 108	3	30		
Bis(2-chloroethyl)ether	80	78	62 - 108	3	30		
Bis(2-ethylhexyl) phthalate	89	86	66 - 114	3	30		
Butyl benzyl phthalate	93	91	66 - 115	2	30		
Caprolactam	20	22	10 - 30	9	30		
Carbazole	95	95	67 - 110	1	30		
Chrysene	94	90	68 - 112	5	30		
Dibenz(a,h)anthracene	113	109	67 - 124	4	30		
Dibenzofuran	90	87	68 - 105	4	30		
Diethyl phthalate	89	88	66 - 109	1	30		
Dimethyl phthalate	89	88	69 - 111	1	30		
Di-n-butyl phthalate	96	97	68 - 111	1	30		
Di-n-octyl phthalate	86	83	51 - 115	3	30		
Fluoranthene	92	91	68 - 108	1	30		
Fluorene	92	90	68 - 105	2	30		
Hexachlorobenzene	101	96	65 - 107	5	30		
Hexachlorobutadiene	72	69	52 - 99	4	30		
Hexachlorocyclopentadiene	66	63	40 - 105	5	30		
Hexachloroethane	68	65	50 - 99	4	30		
Indeno[1,2,3-cd]pyrene	110	108	68 - 121	2	30		
Isophorone	76	73	68 - 108	4	30		
Naphthalene	86	82	63 - 101	5	30		
Nitrobenzene	80	78	66 - 106	3	30		
N-Nitrosodi-n-propylamine	78	76	70 - 109	2	30		
N-Nitrosodiphenylamine	111	106	71 - 121	4	30		
Pentachlorophenol	95	93	55 - 116	2	30		
Phenanthrene	93	90	68 - 110	4	30		
Phenol	32	29	12 - 44	9	30		
Pyrene	83	90	61 - 110	8	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
2,4,6-Tribromophenol (Surr)	98	98	51 - 126
2-Fluorobiphenyl	88	86	50 - 120
2-Fluorophenol (Surr)	45	43	15 - 96

Client: AKRF Inc

Job Number: 460-85074-1

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Nitrobenzene-d5 (Surr)	79	78	60 - 114
Phenol-d5 (Surr)	29	26	4 - 86
Terphenyl-d14 (Surr)	84	93	72 - 130

Client: AKRF Inc

Job Number: 460-85074-1

Method Blank - Batch: 460-258478

Method: 8081B
Preparation: 3510C

Lab Sample ID:	MB 460-258478/1-A	Analysis Batch:	460-258699	Instrument ID:	CPESTGC9
Client Matrix:	Water	Prep Batch:	460-258478	Lab File ID:	VR497242.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	125 mL
Analysis Date:	10/28/2014 0815	Units:	ug/L	Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0839			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
4,4'-DDD	0.020	U	0.019	0.020
4,4'-DDE	0.020	U	0.016	0.020
4,4'-DDT	0.020	U	0.017	0.020
Aldrin	0.020	U	0.017	0.020
alpha-BHC	0.020	U	0.0090	0.020
beta-BHC	0.020	U	0.013	0.020
Chlordane (technical)	0.50	U	0.21	0.50
delta-BHC	0.020	U	0.012	0.020
Dieldrin	0.020	U	0.022	0.020
Endosulfan I	0.020	U	0.016	0.020
Endosulfan II	0.020	U	0.016	0.020
Endosulfan sulfate	0.020	U	0.016	0.020
Endrin	0.020	U	0.017	0.020
Endrin aldehyde	0.020	U	0.016	0.020
Endrin ketone	0.020	U	0.016	0.020
gamma-BHC (Lindane)	0.020	U	0.014	0.020
Heptachlor	0.020	U	0.014	0.020
Heptachlor epoxide	0.020	U	0.016	0.020
Methoxychlor	0.020	U	0.015	0.020
Toxaphene	0.50	U	0.34	0.50

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	93	26 - 150
Tetrachloro-m-xylene	118	50 - 147

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	90	26 - 150
Tetrachloro-m-xylene	113	50 - 147

Client: AKRF Inc

Job Number: 460-85074-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 460-258478

Method: 8081B
Preparation: 3510C

LCS Lab Sample ID:	LCS 460-258478/2-A	Analysis Batch:	460-258699	Instrument ID:	CPESTGC9
Client Matrix:	Water	Prep Batch:	460-258478	Lab File ID:	VR497243.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	125 mL
Analysis Date:	10/28/2014 0827	Units:	ug/L	Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0839			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

LCSD Lab Sample ID:	LCSD 460-258478/3-A	Analysis Batch:	460-258699	Instrument ID:	CPESTGC9
Client Matrix:	Water	Prep Batch:	460-258478	Lab File ID:	VR497244.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	125 mL
Analysis Date:	10/28/2014 0838	Units:	ug/L	Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0839			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
4,4'-DDD	133	147	67 - 150	10	30		
4,4'-DDE	126	140	67 - 145	10	30		
4,4'-DDT	109	121	62 - 138	11	30		
Aldrin	122	134	65 - 147	10	30		
alpha-BHC	131	145	69 - 147	10	30		
beta-BHC	127	141	65 - 142	10	30		
delta-BHC	104	116	66 - 142	10	30		
Dieldrin	128	141	69 - 140	10	30		*
Endosulfan I	121	133	69 - 145	9	30		
Endosulfan II	121	132	74 - 143	9	30		
Endosulfan sulfate	115	125	75 - 141	8	30		
Endrin	119	129	62 - 150	8	30		
Endrin aldehyde	123	133	76 - 136	8	30		
Endrin ketone	114	127	78 - 149	11	30		
gamma-BHC (Lindane)	126	139	70 - 148	10	30		
Heptachlor	115	128	66 - 146	11	30		
Heptachlor epoxide	118	129	68 - 147	9	30		
Methoxychlor	107	118	67 - 136	10	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
DCB Decachlorobiphenyl	89	95	26 - 150
Tetrachloro-m-xylene	126	139	50 - 147

Client: AKRF Inc

Job Number: 460-85074-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 460-258478

Method: 8081B
Preparation: 3510C

LCS Lab Sample ID:	LCS 460-258478/2-A	Analysis Batch:	460-258699	Instrument ID:	CPESTGC9
Client Matrix:	Water	Prep Batch:	460-258478	Lab File ID:	VR497243.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	125 mL
Analysis Date:	10/28/2014 0827	Units:	ug/L	Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0839			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	SECONDARY

LCSD Lab Sample ID:	LCSD 460-258478/3-A	Analysis Batch:	460-258699	Instrument ID:	CPESTGC9
Client Matrix:	Water	Prep Batch:	460-258478	Lab File ID:	VR497244.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	125 mL
Analysis Date:	10/28/2014 0838	Units:	ug/L	Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0839			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	SECONDARY

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
4,4'-DDD	124	139	67 - 150	11	30		
4,4'-DDE	121	134	67 - 145	10	30		
4,4'-DDT	107	120	62 - 138	11	30		
Aldrin	115	128	65 - 147	10	30		
alpha-BHC	124	138	69 - 147	11	30		
beta-BHC	115	128	65 - 142	11	30		
delta-BHC	103	113	66 - 142	10	30		
Dieldrin	121	134	69 - 140	10	30		
Endosulfan I	115	127	69 - 145	10	30		
Endosulfan II	110	122	74 - 143	10	30		
Endosulfan sulfate	110	121	75 - 141	10	30		
Endrin	115	127	62 - 150	10	30		
Endrin aldehyde	117	129	76 - 136	10	30		
Endrin ketone	110	120	78 - 149	9	30		
gamma-BHC (Lindane)	118	130	70 - 148	9	30		
Heptachlor	110	122	66 - 146	10	30		
Heptachlor epoxide	115	128	68 - 147	10	30		
Methoxychlor	100	112	67 - 136	11	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
DCB Decachlorobiphenyl	87	94	26 - 150
Tetrachloro-m-xylene	111	122	50 - 147

Client: AKRF Inc

Job Number: 460-85074-1

Method Blank - Batch: 460-258728

Method: 8081B
Preparation: 3510C

Lab Sample ID:	MB 460-258728/1-A	Analysis Batch:	460-258858	Instrument ID:	CPESTGC9
Client Matrix:	Water	Prep Batch:	460-258728	Lab File ID:	VR497266.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	125 mL
Analysis Date:	10/28/2014 2254	Units:	ug/L	Final Weight/Volume:	1 mL
Prep Date:	10/28/2014 0955			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
4,4'-DDD	0.020	U	0.019	0.020
4,4'-DDE	0.020	U	0.016	0.020
4,4'-DDT	0.020	U	0.017	0.020
Aldrin	0.020	U	0.017	0.020
alpha-BHC	0.020	U	0.0090	0.020
beta-BHC	0.020	U	0.013	0.020
Chlordane (technical)	0.50	U	0.21	0.50
delta-BHC	0.020	U	0.012	0.020
Dieldrin	0.020	U	0.022	0.020
Endosulfan I	0.020	U	0.016	0.020
Endosulfan II	0.020	U	0.016	0.020
Endosulfan sulfate	0.020	U	0.016	0.020
Endrin	0.020	U	0.017	0.020
Endrin aldehyde	0.020	U	0.016	0.020
Endrin ketone	0.020	U	0.016	0.020
gamma-BHC (Lindane)	0.020	U	0.014	0.020
Heptachlor	0.020	U	0.014	0.020
Heptachlor epoxide	0.020	U	0.016	0.020
Methoxychlor	0.020	U	0.015	0.020
Toxaphene	0.50	U	0.34	0.50

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	93	26 - 150
Tetrachloro-m-xylene	117	50 - 147

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	86	26 - 150
Tetrachloro-m-xylene	113	50 - 147

Client: AKRF Inc

Job Number: 460-85074-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 460-258728

Method: 8081B
Preparation: 3510C

LCS Lab Sample ID:	LCS 460-258728/2-A	Analysis Batch:	460-258858	Instrument ID:	CPESTGC9
Client Matrix:	Water	Prep Batch:	460-258728	Lab File ID:	VR497267.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	125 mL
Analysis Date:	10/28/2014 2305	Units:	ug/L	Final Weight/Volume:	1 mL
Prep Date:	10/28/2014 0955			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

LCSD Lab Sample ID:	LCSD 460-258728/3-A	Analysis Batch:	460-258858	Instrument ID:	CPESTGC9
Client Matrix:	Water	Prep Batch:	460-258728	Lab File ID:	VR497268.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	125 mL
Analysis Date:	10/28/2014 2316	Units:	ug/L	Final Weight/Volume:	1 mL
Prep Date:	10/28/2014 0955			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
4,4'-DDD	151	132	67 - 150	13	30	*	
4,4'-DDE	139	129	67 - 145	8	30		
4,4'-DDT	126	111	62 - 138	12	30		
Aldrin	139	122	65 - 147	13	30		
alpha-BHC	132	129	69 - 147	3	30		
beta-BHC	114	108	65 - 142	5	30		
delta-BHC	113	99	66 - 142	13	30		
Dieldrin	139	126	69 - 140	10	30		
Endosulfan I	128	124	69 - 145	4	30		
Endosulfan II	134	119	74 - 143	12	30		
Endosulfan sulfate	127	113	75 - 141	12	30		
Endrin	135	118	62 - 150	13	30		
Endrin aldehyde	132	117	76 - 136	13	30		
Endrin ketone	121	107	78 - 149	12	30		
gamma-BHC (Lindane)	144	128	70 - 148	11	30		
Heptachlor	121	108	66 - 146	12	30		
Heptachlor epoxide	134	119	68 - 147	12	30		
Methoxychlor	115	104	67 - 136	11	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
DCB Decachlorobiphenyl	87	79	26 - 150
Tetrachloro-m-xylene	120	107	50 - 147

Client: AKRF Inc

Job Number: 460-85074-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 460-258728

Method: 8081B
Preparation: 3510C

LCS Lab Sample ID:	LCS 460-258728/2-A	Analysis Batch:	460-258858	Instrument ID:	CPESTGC9
Client Matrix:	Water	Prep Batch:	460-258728	Lab File ID:	VR497267.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	125 mL
Analysis Date:	10/28/2014 2305	Units:	ug/L	Final Weight/Volume:	1 mL
Prep Date:	10/28/2014 0955			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	SECONDARY

LCSD Lab Sample ID:	LCSD 460-258728/3-A	Analysis Batch:	460-258858	Instrument ID:	CPESTGC9
Client Matrix:	Water	Prep Batch:	460-258728	Lab File ID:	VR497268.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	125 mL
Analysis Date:	10/28/2014 2316	Units:	ug/L	Final Weight/Volume:	1 mL
Prep Date:	10/28/2014 0955			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	SECONDARY

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
4,4'-DDD	111	103	67 - 150	7	30		
4,4'-DDE	134	121	67 - 145	10	30		
4,4'-DDT	95	86	62 - 138	10	30		
Aldrin	112	104	65 - 147	7	30		
alpha-BHC	123	115	69 - 147	7	30		
beta-BHC	108	101	65 - 142	6	30		
delta-BHC	101	95	66 - 142	7	30		
Dieldrin	113	105	69 - 140	7	30		
Endosulfan I	108	101	69 - 145	7	30		
Endosulfan II	98	91	74 - 143	7	30		
Endosulfan sulfate	97	90	75 - 141	8	30		
Endrin	109	100	62 - 150	9	30		
Endrin aldehyde	105	98	76 - 136	7	30		
Endrin ketone	96	88	78 - 149	9	30		
gamma-BHC (Lindane)	124	117	70 - 148	6	30		
Heptachlor	96	89	66 - 146	7	30		
Heptachlor epoxide	111	103	68 - 147	7	30		
Methoxychlor	96	87	67 - 136	10	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
DCB Decachlorobiphenyl	85	77	26 - 150
Tetrachloro-m-xylene	112	101	50 - 147

Client: AKRF Inc

Job Number: 460-85074-1

Method Blank - Batch: 460-258945

Method: 8081B
Preparation: 3510C

Lab Sample ID:	MB 460-258945/1-A	Analysis Batch:	460-259208	Instrument ID:	CPESTGC9
Client Matrix:	Water	Prep Batch:	460-258945	Lab File ID:	VR497231.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	125 mL
Analysis Date:	10/30/2014 1000	Units:	ug/L	Final Weight/Volume:	1 mL
Prep Date:	10/29/2014 0852			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
4,4'-DDD	0.020	U	0.019	0.020
4,4'-DDE	0.020	U	0.016	0.020
4,4'-DDT	0.020	U	0.017	0.020
Aldrin	0.020	U	0.017	0.020
alpha-BHC	0.020	U	0.0090	0.020
beta-BHC	0.020	U	0.013	0.020
Chlordane (technical)	0.50	U	0.21	0.50
delta-BHC	0.020	U	0.012	0.020
Dieldrin	0.020	U	0.022	0.020
Endosulfan I	0.020	U	0.016	0.020
Endosulfan II	0.020	U	0.016	0.020
Endosulfan sulfate	0.020	U	0.016	0.020
Endrin	0.020	U	0.017	0.020
Endrin aldehyde	0.020	U	0.016	0.020
Endrin ketone	0.020	U	0.016	0.020
gamma-BHC (Lindane)	0.020	U	0.014	0.020
Heptachlor	0.020	U	0.014	0.020
Heptachlor epoxide	0.020	U	0.016	0.020
Methoxychlor	0.020	U	0.015	0.020
Toxaphene	0.50	U	0.34	0.50

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	100	26 - 150
Tetrachloro-m-xylene	105	50 - 147

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	97	26 - 150
Tetrachloro-m-xylene	100	50 - 147

Client: AKRF Inc

Job Number: 460-85074-1

TCLP SPLPE Leachate Blank - Batch: 460-258945

Method: 8081B
Preparation: 3510C

Lab Sample ID:	LB 460-258836/1-B	Analysis Batch:	460-259208	Instrument ID:	CPESTGC9
Client Matrix:	Water	Prep Batch:	460-258945	Lab File ID:	VR497240.D
Dilution:	1.0	Leach Batch:	460-258836	Initial Weight/Volume:	125 mL
Analysis Date:	10/30/2014 1143	Units:	ug/L	Final Weight/Volume:	1 mL
Prep Date:	10/29/2014 0852			Injection Volume:	1 uL
Leach Date:	10/28/2014 1730			Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
4,4'-DDD	0.020	U	0.019	0.020
4,4'-DDE	0.020	U	0.016	0.020
4,4'-DDT	0.020	U	0.017	0.020
Aldrin	0.020	U	0.017	0.020
alpha-BHC	0.020	U	0.0090	0.020
beta-BHC	0.020	U	0.013	0.020
Chlordane (technical)	0.50	U	0.21	0.50
delta-BHC	0.020	U	0.012	0.020
Dieldrin	0.020	U	0.022	0.020
Endosulfan I	0.020	U	0.016	0.020
Endosulfan II	0.020	U	0.016	0.020
Endosulfan sulfate	0.020	U	0.016	0.020
Endrin	0.020	U	0.017	0.020
Endrin aldehyde	0.020	U	0.016	0.020
Endrin ketone	0.020	U	0.016	0.020
gamma-BHC (Lindane)	0.020	U	0.014	0.020
Heptachlor	0.020	U	0.014	0.020
Heptachlor epoxide	0.020	U	0.016	0.020
Methoxychlor	0.020	U	0.015	0.020
Toxaphene	0.50	U	0.34	0.50

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	116	26 - 150
Tetrachloro-m-xylene	125	50 - 147

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	115	26 - 150
Tetrachloro-m-xylene	121	50 - 147

Client: AKRF Inc

Job Number: 460-85074-1

Lab Control Sample - Batch: 460-258945

Method: 8081B
Preparation: 3510C

Lab Sample ID:	LCS 460-258945/2-A	Analysis Batch:	460-259208	Instrument ID:	CPESTGC9
Client Matrix:	Water	Prep Batch:	460-258945	Lab File ID:	VR497232.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	125 mL
Analysis Date:	10/30/2014 1011	Units:	ug/L	Final Weight/Volume:	1 mL
Prep Date:	10/29/2014 0852			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
4,4'-DDD	1.60	2.49	155	67 - 150	*
4,4'-DDE	1.60	2.36	148	67 - 145	*
4,4'-DDT	1.60	2.15	135	62 - 138	
Aldrin	1.60	2.21	138	65 - 147	
alpha-BHC	1.60	2.50	156	69 - 147	*
beta-BHC	1.60	2.46	154	65 - 142	*
delta-BHC	1.60	2.10	131	66 - 142	
Dieldrin	1.60	2.37	148	69 - 140	*
Endosulfan I	1.60	2.26	142	69 - 145	
Endosulfan II	1.60	2.20	137	74 - 143	
Endosulfan sulfate	1.60	2.16	135	75 - 141	
Endrin	1.60	2.29	143	62 - 150	
Endrin aldehyde	1.60	2.24	140	76 - 136	*
Endrin ketone	1.60	2.26	141	78 - 149	
gamma-BHC (Lindane)	1.60	2.47	155	70 - 148	*
Heptachlor	1.60	2.15	135	66 - 146	
Heptachlor epoxide	1.60	2.29	143	68 - 147	
Methoxychlor	1.60	2.08	130	67 - 136	

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	94	26 - 150
Tetrachloro-m-xylene	108	50 - 147

Lab Control Sample - Batch: 460-258945

Method: 8081B
Preparation: 3510C

Lab Sample ID:	LCS 460-258945/2-A	Analysis Batch:	460-259208	Instrument ID:	CPESTGC9
Client Matrix:	Water	Prep Batch:	460-258945	Lab File ID:	VR497232.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	125 mL
Analysis Date:	10/30/2014 1011	Units:	ug/L	Final Weight/Volume:	1 mL
Prep Date:	10/29/2014 0852			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	SECONDARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
4,4'-DDD	1.60	2.47	154	67 - 150	*
4,4'-DDE	1.60	2.29	143	67 - 145	
4,4'-DDT	1.60	2.07	130	62 - 138	
Aldrin	1.60	2.20	137	65 - 147	
alpha-BHC	1.60	2.47	155	69 - 147	*
beta-BHC	1.60	2.38	149	65 - 142	*

Client: AKRF Inc

Job Number: 460-85074-1

Lab Control Sample - Batch: 460-258945

Method: 8081B
Preparation: 3510C

Lab Sample ID:	LCS 460-258945/2-A	Analysis Batch:	460-259208	Instrument ID:	CPESTGC9
Client Matrix:	Water	Prep Batch:	460-258945	Lab File ID:	VR497232.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	125 mL
Analysis Date:	10/30/2014 1011	Units:	ug/L	Final Weight/Volume:	1 mL
Prep Date:	10/29/2014 0852			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	SECONDARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
delta-BHC	1.60	1.90	119	66 - 142	
Dieldrin	1.60	2.32	145	69 - 140	*
Endosulfan I	1.60	2.25	141	69 - 145	
Endosulfan II	1.60	2.16	135	74 - 143	
Endosulfan sulfate	1.60	2.11	132	75 - 141	
Endrin	1.60	2.15	135	62 - 150	
Endrin aldehyde	1.60	2.18	136	76 - 136	
Endrin ketone	1.60	2.10	131	78 - 149	
gamma-BHC (Lindane)	1.60	2.05	128	70 - 148	
Heptachlor	1.60	2.08	130	66 - 146	
Heptachlor epoxide	1.60	2.16	135	68 - 147	
Methoxychlor	1.60	2.01	125	67 - 136	

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	93	26 - 150
Tetrachloro-m-xylene	102	50 - 147

Client: AKRF Inc

Job Number: 460-85074-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 460-258945

Method: 8081B
Preparation: 3510C
TCLP

MS Lab Sample ID:	460-85169-A-21-E MS	Analysis Batch:	460-259208	Instrument ID:	CPESTGC9
Client Matrix:	Water	Prep Batch:	460-258945	Lab File ID:	VR497233.D
Dilution:	1.0	Leach Batch:	460-258836	Initial Weight/Volume:	125 mL
Analysis Date:	10/30/2014 1023			Final Weight/Volume:	1 mL
Prep Date:	10/29/2014 0852			Injection Volume:	1 uL
Leach Date:	10/28/2014 1730			Column ID:	PRIMARY

MSD Lab Sample ID:	460-85169-A-21-F MSD	Analysis Batch:	460-259208	Instrument ID:	CPESTGC9
Client Matrix:	Water	Prep Batch:	460-258945	Lab File ID:	VR497234.D
Dilution:	1.0	Leach Batch:	460-258836	Initial Weight/Volume:	125 mL
Analysis Date:	10/30/2014 1034			Final Weight/Volume:	1 mL
Prep Date:	10/29/2014 0852			Injection Volume:	1 uL
Leach Date:	10/28/2014 1730			Column ID:	PRIMARY

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
4,4'-DDD	152	190	67 - 150	23	30	*	*
4,4'-DDE	150	186	67 - 145	21	30	*	*
4,4'-DDT	124	160	62 - 138	25	30		*
Aldrin	135	23	65 - 147	142	30		p *
alpha-BHC	154	51	69 - 147	100	30	*	p *
beta-BHC	144	182	65 - 142	23	30	*	*
delta-BHC	125	161	66 - 142	25	30		*
Dieldrin	145	179	69 - 140	21	30	*	*
Endosulfan I	135	167	69 - 145	21	30		*
Endosulfan II	130	161	74 - 143	21	30		*
Endosulfan sulfate	130	162	75 - 141	22	30		*
Endrin	139	172	62 - 150	22	30		*
Endrin aldehyde	135	167	76 - 136	21	30		*
Endrin ketone	138	172	78 - 149	22	30		*
gamma-BHC (Lindane)	87	53	70 - 148	49	30	p	p *
Heptachlor	130	169	66 - 146	27	30		*
Heptachlor epoxide	138	171	68 - 147	21	30		*
Methoxychlor	125	157	67 - 136	23	30		*

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
DCB Decachlorobiphenyl	109	139	26 - 150
Tetrachloro-m-xylene	110	64	50 - 147

Client: AKRF Inc

Job Number: 460-85074-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 460-258945

Method: 8081B
Preparation: 3510C
TCLP

MS Lab Sample ID:	460-85169-A-21-E MS	Analysis Batch:	460-259208	Instrument ID:	CPESTGC9
Client Matrix:	Water	Prep Batch:	460-258945	Lab File ID:	VR497233.D
Dilution:	1.0	Leach Batch:	460-258836	Initial Weight/Volume:	125 mL
Analysis Date:	10/30/2014 1023			Final Weight/Volume:	1 mL
Prep Date:	10/29/2014 0852			Injection Volume:	1 uL
Leach Date:	10/28/2014 1730			Column ID:	SECONDARY

MSD Lab Sample ID:	460-85169-A-21-F MSD	Analysis Batch:	460-259208	Instrument ID:	CPESTGC9
Client Matrix:	Water	Prep Batch:	460-258945	Lab File ID:	VR497234.D
Dilution:	1.0	Leach Batch:	460-258836	Initial Weight/Volume:	125 mL
Analysis Date:	10/30/2014 1034			Final Weight/Volume:	1 mL
Prep Date:	10/29/2014 0852			Injection Volume:	1 uL
Leach Date:	10/28/2014 1730			Column ID:	SECONDARY

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
4,4'-DDD	143	175	67 - 150	20	30		*
4,4'-DDE	131	161	67 - 145	21	30		*
4,4'-DDT	121	150	62 - 138	21	30		*
Aldrin	121	168	65 - 147	33	30		*
alpha-BHC	124	81	69 - 147	42	30		*
beta-BHC	123	163	65 - 142	28	30		*
delta-BHC	101	120	66 - 142	17	30		
Dieldrin	130	156	69 - 140	18	30		*
Endosulfan I	125	150	69 - 145	18	30		*
Endosulfan II	123	147	74 - 143	18	30		*
Endosulfan sulfate	124	155	75 - 141	22	30		*
Endrin	122	143	62 - 150	16	30		
Endrin aldehyde	125	151	76 - 136	19	30		*
Endrin ketone	123	150	78 - 149	20	30		*
gamma-BHC (Lindane)	150	194	70 - 148	26	30	*	*
Heptachlor	113	136	66 - 146	18	30		
Heptachlor epoxide	119	141	68 - 147	17	30		
Methoxychlor	113	142	67 - 136	23	30		*

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
DCB Decachlorobiphenyl	99	116	26 - 150
Tetrachloro-m-xylene	101	51	50 - 147

Client: AKRF Inc

Job Number: 460-85074-1

Method Blank - Batch: 460-258480

Method: 8082A
Preparation: 3510C

Lab Sample ID:	MB 460-258480/1-A	Analysis Batch:	460-258651	Instrument ID:	CPESTGC8
Client Matrix:	Water	Prep Batch:	460-258480	Lab File ID:	QR106632.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	125 mL
Analysis Date:	10/28/2014 0041	Units:	ug/L	Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0841			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
Aroclor 1016	0.40	U	0.27	0.40
Aroclor 1221	0.40	U	0.27	0.40
Aroclor 1232	0.40	U	0.27	0.40
Aroclor 1242	0.40	U	0.27	0.40
Aroclor 1248	0.40	U	0.27	0.40
Aroclor 1254	0.40	U	0.21	0.40
Aroclor 1260	0.40	U	0.21	0.40
Aroclor-1262	0.40	U	0.21	0.40
Aroclor 1268	0.40	U	0.21	0.40
Polychlorinated biphenyls, Total	0.40	U	0.27	0.40

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	95	13 - 150

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	95	13 - 150

Method Blank - Batch: 460-258480

Method: 8082A
Preparation: 3510C

Lab Sample ID:	MB 460-258480/1-ARA	Analysis Batch:	460-258706	Instrument ID:	CPESTGC8
Client Matrix:	Water	Prep Batch:	460-258480	Lab File ID:	QR106649.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	125 mL
Analysis Date:	10/28/2014 0953	Units:	ug/L	Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0841	Run Type:	RA	Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
Aroclor 1016	0.40	U	0.27	0.40
Aroclor 1221	0.40	U	0.27	0.40
Aroclor 1232	0.40	U	0.27	0.40
Aroclor 1242	0.40	U	0.27	0.40
Aroclor 1248	0.40	U	0.27	0.40
Aroclor 1254	0.40	U	0.21	0.40
Aroclor 1260	0.40	U	0.21	0.40
Aroclor-1262	0.40	U	0.21	0.40
Aroclor 1268	0.40	U	0.21	0.40
Polychlorinated biphenyls, Total	0.40	U	0.27	0.40

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	102	13 - 150

Client: AKRF Inc

Job Number: 460-85074-1

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	99	13 - 150

Client: AKRF Inc

Job Number: 460-85074-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 460-258480

Method: 8082A
Preparation: 3510C

LCS Lab Sample ID:	LCS 460-258480/2-A	Analysis Batch:	460-258651	Instrument ID:	CPESTGC8
Client Matrix:	Water	Prep Batch:	460-258480	Lab File ID:	QR106633.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	125 mL
Analysis Date:	10/28/2014 0058	Units:	ug/L	Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0841			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

LCSD Lab Sample ID:	LCSD 460-258480/3-A	Analysis Batch:	460-258651	Instrument ID:	CPESTGC8
Client Matrix:	Water	Prep Batch:	460-258480	Lab File ID:	QR106634.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	125 mL
Analysis Date:	10/28/2014 0113	Units:	ug/L	Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0841			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Aroclor 1016	113	115	68 - 146	2	30		
Aroclor 1260	132	129	65 - 150	2	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
DCB Decachlorobiphenyl	98	94	13 - 150

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 460-258480

Method: 8082A
Preparation: 3510C

LCS Lab Sample ID:	LCS 460-258480/2-A	Analysis Batch:	460-258651	Instrument ID:	CPESTGC8
Client Matrix:	Water	Prep Batch:	460-258480	Lab File ID:	QR106633.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	125 mL
Analysis Date:	10/28/2014 0058	Units:	ug/L	Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0841			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	SECONDARY

LCSD Lab Sample ID:	LCSD 460-258480/3-A	Analysis Batch:	460-258651	Instrument ID:	CPESTGC8
Client Matrix:	Water	Prep Batch:	460-258480	Lab File ID:	QR106634.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	125 mL
Analysis Date:	10/28/2014 0113	Units:	ug/L	Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0841			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	SECONDARY

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Aroclor 1016	110	114	68 - 146	4	30		
Aroclor 1260	125	124	65 - 150	1	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
DCB Decachlorobiphenyl	94	94	13 - 150

Client: AKRF Inc

Job Number: 460-85074-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 460-258480

Method: 8082A
Preparation: 3510C

LCS Lab Sample ID:	LCS 460-258480/2-ARA	Analysis Batch:	460-258706	Instrument ID:	CPESTGC8
Client Matrix:	Water	Prep Batch:	460-258480	Lab File ID:	QR106648.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	125 mL
Analysis Date:	10/28/2014 0936	Units:	ug/L	Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0841	Run Type:	RA	Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

LCSD Lab Sample ID:	LCSD 460-258480/3-ARA	Analysis Batch:	460-258706	Instrument ID:	CPESTGC8
Client Matrix:	Water	Prep Batch:	460-258480	Lab File ID:	QR106647.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	125 mL
Analysis Date:	10/28/2014 0920	Units:	ug/L	Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0841	Run Type:	RA	Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Aroclor 1016	119	116	68 - 146	2	30		
Aroclor 1260	135	128	65 - 150	5	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
DCB Decachlorobiphenyl	101	96	13 - 150

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 460-258480

Method: 8082A
Preparation: 3510C

LCS Lab Sample ID:	LCS 460-258480/2-ARA	Analysis Batch:	460-258706	Instrument ID:	CPESTGC8
Client Matrix:	Water	Prep Batch:	460-258480	Lab File ID:	QR106648.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	125 mL
Analysis Date:	10/28/2014 0936	Units:	ug/L	Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0841	Run Type:	RA	Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	SECONDARY

LCSD Lab Sample ID:	LCSD 460-258480/3-ARA	Analysis Batch:	460-258706	Instrument ID:	CPESTGC8
Client Matrix:	Water	Prep Batch:	460-258480	Lab File ID:	QR106647.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	125 mL
Analysis Date:	10/28/2014 0920	Units:	ug/L	Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0841	Run Type:	RA	Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	SECONDARY

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Aroclor 1016	117	114	68 - 146	2	30		
Aroclor 1260	130	125	65 - 150	3	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
DCB Decachlorobiphenyl	95	95	13 - 150

Client: AKRF Inc

Job Number: 460-85074-1

Method Blank - Batch: 460-258731

Method: 8082A
Preparation: 3510C

Lab Sample ID:	MB 460-258731/1-A	Analysis Batch:	460-258856	Instrument ID:	CPESTGC8
Client Matrix:	Water	Prep Batch:	460-258731	Lab File ID:	QR106678.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	125 mL
Analysis Date:	10/28/2014 2252	Units:	ug/L	Final Weight/Volume:	1 mL
Prep Date:	10/28/2014 0957			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
Aroclor 1016	0.40	U	0.27	0.40
Aroclor 1221	0.40	U	0.27	0.40
Aroclor 1232	0.40	U	0.27	0.40
Aroclor 1242	0.40	U	0.27	0.40
Aroclor 1248	0.40	U	0.27	0.40
Aroclor 1254	0.40	U	0.21	0.40
Aroclor 1260	0.40	U	0.21	0.40
Aroclor-1262	0.40	U	0.21	0.40
Aroclor 1268	0.40	U	0.21	0.40
Polychlorinated biphenyls, Total	0.40	U	0.27	0.40

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	97	13 - 150

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	93	13 - 150

Client: AKRF Inc

Job Number: 460-85074-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 460-258731

Method: 8082A
Preparation: 3510C

LCS Lab Sample ID:	LCS 460-258731/2-A	Analysis Batch:	460-258856	Instrument ID:	CPESTGC8
Client Matrix:	Water	Prep Batch:	460-258731	Lab File ID:	QR106679.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	125 mL
Analysis Date:	10/28/2014 2309	Units:	ug/L	Final Weight/Volume:	1 mL
Prep Date:	10/28/2014 0957			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

LCSD Lab Sample ID:	LCSD 460-258731/3-A	Analysis Batch:	460-258856	Instrument ID:	CPESTGC8
Client Matrix:	Water	Prep Batch:	460-258731	Lab File ID:	QR106680.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	125 mL
Analysis Date:	10/28/2014 2325	Units:	ug/L	Final Weight/Volume:	1 mL
Prep Date:	10/28/2014 0957			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Aroclor 1016	130	122	68 - 146	7	30		
Aroclor 1260	138	136	65 - 150	2	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
DCB Decachlorobiphenyl	98	96	13 - 150

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 460-258731

Method: 8082A
Preparation: 3510C

LCS Lab Sample ID:	LCS 460-258731/2-A	Analysis Batch:	460-258856	Instrument ID:	CPESTGC8
Client Matrix:	Water	Prep Batch:	460-258731	Lab File ID:	QR106679.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	125 mL
Analysis Date:	10/28/2014 2309	Units:	ug/L	Final Weight/Volume:	1 mL
Prep Date:	10/28/2014 0957			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	SECONDARY

LCSD Lab Sample ID:	LCSD 460-258731/3-A	Analysis Batch:	460-258856	Instrument ID:	CPESTGC8
Client Matrix:	Water	Prep Batch:	460-258731	Lab File ID:	QR106680.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	125 mL
Analysis Date:	10/28/2014 2325	Units:	ug/L	Final Weight/Volume:	1 mL
Prep Date:	10/28/2014 0957			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	SECONDARY

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Aroclor 1016	127	118	68 - 146	7	30		
Aroclor 1260	138	135	65 - 150	2	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
DCB Decachlorobiphenyl	96	93	13 - 150

Client: AKRF Inc

Job Number: 460-85074-1

Method Blank - Batch: 460-258950

Method: 8082A
Preparation: 3510C

Lab Sample ID:	MB 460-258950/1-A	Analysis Batch:	460-259138	Instrument ID:	CPESTGC8
Client Matrix:	Water	Prep Batch:	460-258950	Lab File ID:	QR106755.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	125 mL
Analysis Date:	10/30/2014 0542	Units:	ug/L	Final Weight/Volume:	1 mL
Prep Date:	10/29/2014 0902			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
Aroclor 1016	0.40	U	0.27	0.40
Aroclor 1221	0.40	U	0.27	0.40
Aroclor 1232	0.40	U	0.27	0.40
Aroclor 1242	0.40	U	0.27	0.40
Aroclor 1248	0.40	U	0.27	0.40
Aroclor 1254	0.40	U	0.21	0.40
Aroclor 1260	0.40	U	0.21	0.40
Aroclor-1262	0.40	U	0.21	0.40
Aroclor 1268	0.40	U	0.21	0.40
Polychlorinated biphenyls, Total	0.40	U	0.27	0.40

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	120	13 - 150

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	113	13 - 150

Client: AKRF Inc

Job Number: 460-85074-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 460-258950

Method: 8082A
Preparation: 3510C

LCS Lab Sample ID:	LCS 460-258950/2-A	Analysis Batch:	460-259138	Instrument ID:	CPESTGC8
Client Matrix:	Water	Prep Batch:	460-258950	Lab File ID:	QR106756.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	125 mL
Analysis Date:	10/30/2014 0559	Units:	ug/L	Final Weight/Volume:	1 mL
Prep Date:	10/29/2014 0902			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

LCSD Lab Sample ID:	LCSD 460-258950/3-A	Analysis Batch:	460-259138	Instrument ID:	CPESTGC8
Client Matrix:	Water	Prep Batch:	460-258950	Lab File ID:	QR106757.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	125 mL
Analysis Date:	10/30/2014 0615	Units:	ug/L	Final Weight/Volume:	1 mL
Prep Date:	10/29/2014 0902			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Aroclor 1016	104	106	68 - 146	2	30		
Aroclor 1260	115	119	65 - 150	4	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
DCB Decachlorobiphenyl	83	86	13 - 150

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 460-258950

Method: 8082A
Preparation: 3510C

LCS Lab Sample ID:	LCS 460-258950/2-A	Analysis Batch:	460-259138	Instrument ID:	CPESTGC8
Client Matrix:	Water	Prep Batch:	460-258950	Lab File ID:	QR106756.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	125 mL
Analysis Date:	10/30/2014 0559	Units:	ug/L	Final Weight/Volume:	1 mL
Prep Date:	10/29/2014 0902			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	SECONDARY

LCSD Lab Sample ID:	LCSD 460-258950/3-A	Analysis Batch:	460-259138	Instrument ID:	CPESTGC8
Client Matrix:	Water	Prep Batch:	460-258950	Lab File ID:	QR106757.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	125 mL
Analysis Date:	10/30/2014 0615	Units:	ug/L	Final Weight/Volume:	1 mL
Prep Date:	10/29/2014 0902			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	SECONDARY

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Aroclor 1016	95	96	68 - 146	1	30		
Aroclor 1260	108	109	65 - 150	1	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
DCB Decachlorobiphenyl	79	79	13 - 150

Client: AKRF Inc

Job Number: 460-85074-1

Method Blank - Batch: 460-258397

Method: 6010C
Preparation: 3010A

Lab Sample ID:	MB 460-258397/1-A	Analysis Batch:	460-258582	Instrument ID:	ICP5
Client Matrix:	Water	Prep Batch:	460-258397	Lab File ID:	10272014.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	10/27/2014 1758	Units:	ug/L	Final Weight/Volume:	100 mL
Prep Date:	10/26/2014 1707				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	200	U	73.6	200
Arsenic	15.0	U	4.3	15.0
Barium	200	U	6.5	200
Beryllium	2.0	U	1.1	2.0
Cadmium	4.0	U	1.2	4.0
Calcium	5000	U	416	5000
Chromium	10.0	U	4.6	10.0
Cobalt	50.0	U	3.8	50.0
Copper	25.0	U	6.2	25.0
Magnesium	5000	U	355	5000
Nickel	40.0	U	7.8	40.0
Potassium	5000	U	281	5000
Antimony	20.0	U	5.4	20.0
Silver	10.0	U	1.9	10.0
Selenium	20.0	U	6.7	20.0
Sodium	5000	U	514	5000
Thallium	20.0	U	9.2	20.0
Vanadium	50.0	U	4.2	50.0
Zinc	30.0	U	5.9	30.0

Method Blank - Batch: 460-258397

Method: 6010C
Preparation: 3010A

Lab Sample ID:	MB 460-258397/1-A	Analysis Batch:	460-258732	Instrument ID:	ICP4
Client Matrix:	Water	Prep Batch:	460-258397	Lab File ID:	258201.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	10/28/2014 0150	Units:	ug/L	Final Weight/Volume:	100 mL
Prep Date:	10/26/2014 1707				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Iron	150	U	51.4	150
Manganese	15.0	U	4.3	15.0
Lead	10.0	U	4.6	10.0

Client: AKRF Inc

Job Number: 460-85074-1

Lab Control Sample - Batch: 460-258397

Method: 6010C
Preparation: 3010A

Lab Sample ID:	LCS 460-258397/2-A	Analysis Batch:	460-258582	Instrument ID:	ICP5
Client Matrix:	Water	Prep Batch:	460-258397	Lab File ID:	10272014.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	10/27/2014 1802	Units:	ug/L	Final Weight/Volume:	100 mL
Prep Date:	10/26/2014 1707				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	2000	1972	99	80 - 120	
Arsenic	2000	1917	96	80 - 120	
Barium	2000	2087	104	80 - 120	
Beryllium	50.0	51.41	103	80 - 120	
Cadmium	50.0	51.42	103	80 - 120	
Calcium	20000	19780	99	80 - 120	
Chromium	200	207.4	104	80 - 120	
Cobalt	500	514.5	103	80 - 120	
Copper	250	248.4	99	80 - 120	
Magnesium	20000	20410	102	80 - 120	
Nickel	500	529.0	106	80 - 120	
Potassium	20000	18970	95	80 - 120	
Antimony	500	451.6	90	80 - 120	
Silver	50.0	48.13	96	80 - 120	
Selenium	2000	1903	95	80 - 120	
Sodium	20000	19680	98	80 - 120	
Thallium	2000	2143	107	80 - 120	
Vanadium	500	516.8	103	80 - 120	
Zinc	500	517.6	104	80 - 120	

Lab Control Sample - Batch: 460-258397

Method: 6010C
Preparation: 3010A

Lab Sample ID:	LCS 460-258397/2-A	Analysis Batch:	460-258732	Instrument ID:	ICP4
Client Matrix:	Water	Prep Batch:	460-258397	Lab File ID:	258201.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	10/28/2014 0154	Units:	ug/L	Final Weight/Volume:	100 mL
Prep Date:	10/26/2014 1707				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Iron	1000	900.3	90	80 - 120	
Manganese	500	503.9	101	80 - 120	
Lead	500	532.6	107	80 - 120	

Client: AKRF Inc

Job Number: 460-85074-1

Matrix Spike - Batch: 460-258397

Method: 6010C
Preparation: 3010A

Lab Sample ID:	460-85093-L-1-C MS	Analysis Batch:	460-258582	Instrument ID:	ICP5
Client Matrix:	Water	Prep Batch:	460-258397	Lab File ID:	10272014.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	10/27/2014 2156	Units:	ug/L	Final Weight/Volume:	100 mL
Prep Date:	10/26/2014 1707				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	200	U	2000	1895	95	75 - 125	
Arsenic	18.1		2000	1918	95	75 - 125	
Barium	83.4	J	2000	2023	97	75 - 125	
Beryllium	2.0	U	50.0	49.20	98	75 - 125	
Cadmium	4.0	U	50.0	47.61	95	75 - 125	
Calcium	63600		20000	80450	84	75 - 125	
Chromium	10.0	U	200	201.0	101	75 - 125	
Cobalt	50.0	U	500	481.5	96	75 - 125	
Copper	25.0	U	250	240.8	96	75 - 125	
Magnesium	5690		20000	25310	98	75 - 125	
Nickel	40.0	U	500	488.6	98	75 - 125	
Potassium	2010	J	20000	21520	98	75 - 125	
Antimony	20.0	U	500	436.1	87	75 - 125	
Silver	10.0	U	50.0	48.64	97	75 - 125	
Selenium	20.0	U	2000	1875	94	75 - 125	
Sodium	213000		20000	220200	36	75 - 125	4
Thallium	20.0	U	2000	1970	99	75 - 125	
Vanadium	50.0	U	500	496.6	99	75 - 125	
Zinc	30.0	U	500	499.6	100	75 - 125	

Matrix Spike - Batch: 460-258397

Method: 6010C
Preparation: 3010A

Lab Sample ID:	460-85093-L-1-C MS	Analysis Batch:	460-258732	Instrument ID:	ICP4
Client Matrix:	Water	Prep Batch:	460-258397	Lab File ID:	258201.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	10/28/2014 0209	Units:	ug/L	Final Weight/Volume:	100 mL
Prep Date:	10/26/2014 1707				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Iron	62600		1000	60540	-209	75 - 125	4
Manganese	4560		500	4842	57	75 - 125	4
Lead	10.0	U	500	512.0	102	75 - 125	

Client: AKRF Inc

Job Number: 460-85074-1

Duplicate - Batch: 460-258397

Method: 6010C
Preparation: 3010A

Lab Sample ID:	460-85093-L-1-B DU	Analysis Batch:	460-258582	Instrument ID:	ICP5
Client Matrix:	Water	Prep Batch:	460-258397	Lab File ID:	10272014.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	10/27/2014 1747	Units:	ug/L	Final Weight/Volume:	100 mL
Prep Date:	10/26/2014 1707				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Aluminum	200	U	200	NC	20	U
Arsenic	18.1		17.20	5	20	
Barium	83.4	J	81.11	3	20	J
Beryllium	2.0	U	2.0	NC	20	U
Cadmium	4.0	U	4.0	NC	20	U
Calcium	63600		62030	3	20	
Chromium	10.0	U	10.0	NC	20	U
Cobalt	50.0	U	50.0	NC	20	U
Copper	25.0	U	25.0	NC	20	U
Magnesium	5690		5553	2	20	
Nickel	40.0	U	40.0	NC	20	U
Potassium	2010	J	2018	0.2	20	J
Antimony	20.0	U	20.0	NC	20	U
Silver	10.0	U	10.0	NC	20	U
Selenium	20.0	U	20.0	NC	20	U
Sodium	213000		209000	2	20	
Thallium	20.0	U	20.0	NC	20	U
Vanadium	50.0	U	50.0	NC	20	U
Zinc	30.0	U	30.0	NC	20	U

Duplicate - Batch: 460-258397

Method: 6010C
Preparation: 3010A

Lab Sample ID:	460-85093-L-1-B DU	Analysis Batch:	460-258732	Instrument ID:	ICP4
Client Matrix:	Water	Prep Batch:	460-258397	Lab File ID:	258201.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	10/28/2014 0157	Units:	ug/L	Final Weight/Volume:	100 mL
Prep Date:	10/26/2014 1707				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Iron	62600		60860	3	20	
Manganese	4560		4408	3	20	
Lead	10.0	U	10.0	NC	20	U

Client: AKRF Inc

Job Number: 460-85074-1

Method Blank - Batch: 460-258720

Method: 6010C
Preparation: 3010A
Dissolved

Lab Sample ID:	MB 460-258718/1-B	Analysis Batch:	460-258821	Instrument ID:	ICP4
Client Matrix:	Water	Prep Batch:	460-258720	Lab File ID:	258455.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	10/28/2014 1919	Units:	ug/L	Final Weight/Volume:	100 mL
Prep Date:	10/28/2014 0929				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	200	U	73.6	200
Arsenic	15.0	U	4.3	15.0
Barium	200	U	6.5	200
Beryllium	2.0	U	1.1	2.0
Cadmium	4.0	U	1.2	4.0
Calcium	5000	U	416	5000
Chromium	10.0	U	4.6	10.0
Cobalt	50.0	U	3.8	50.0
Copper	25.0	U	6.2	25.0
Iron	150	U	51.4	150
Magnesium	5000	U	355	5000
Manganese	15.0	U	4.3	15.0
Nickel	40.0	U	7.8	40.0
Potassium	5000	U	281	5000
Lead	10.0	U	4.6	10.0
Antimony	20.0	U	5.4	20.0
Silver	10.0	U	1.9	10.0
Selenium	20.0	U	6.7	20.0
Sodium	5000	U	514	5000
Thallium	20.0	U	9.2	20.0
Vanadium	50.0	U	4.2	50.0
Zinc	30.0	U	5.9	30.0

Client: AKRF Inc

Job Number: 460-85074-1

Lab Control Sample - Batch: 460-258720

Method: 6010C
Preparation: 3010A

Lab Sample ID:	LCS 460-258720/2-A	Analysis Batch:	460-258821	Instrument ID:	ICP4
Client Matrix:	Water	Prep Batch:	460-258720	Lab File ID:	258455.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	10/28/2014 1923	Units:	ug/L	Final Weight/Volume:	100 mL
Prep Date:	10/28/2014 0929				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	2000	1994	100	80 - 120	
Arsenic	2000	1963	98	80 - 120	
Barium	2000	2055	103	80 - 120	
Beryllium	50.0	50.18	100	80 - 120	
Cadmium	50.0	50.66	101	80 - 120	
Calcium	20000	19710	99	80 - 120	
Chromium	200	199.9	100	80 - 120	
Cobalt	500	513.2	103	80 - 120	
Copper	250	235.1	94	80 - 120	
Iron	1000	909.3	91	80 - 120	
Magnesium	20000	19580	98	80 - 120	
Manganese	500	501.1	100	80 - 120	
Nickel	500	525.8	105	80 - 120	
Potassium	20000	19210	96	80 - 120	
Lead	500	522.6	105	80 - 120	
Antimony	500	495.5	99	80 - 120	
Silver	50.0	49.48	99	80 - 120	
Selenium	2000	1971	99	80 - 120	
Sodium	20000	20110	101	80 - 120	
Thallium	2000	2125	106	80 - 120	
Vanadium	500	489.2	98	80 - 120	
Zinc	500	514.6	103	80 - 120	

Client: AKRF Inc

Job Number: 460-85074-1

Matrix Spike - Batch: 460-258720

Method: 6010C
Preparation: 3010A
Dissolved

Lab Sample ID:	460-85173-B-1-D MS	Analysis Batch:	460-258821	Instrument ID:	ICP4
Client Matrix:	Water	Prep Batch:	460-258720	Lab File ID:	258455.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	10/28/2014 1949	Units:	ug/L	Final Weight/Volume:	100 mL
Prep Date:	10/28/2014 0929				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	200	U	2000	1978	99	75 - 125	
Arsenic	15.0	U	2000	1959	98	75 - 125	
Barium	30.3	J	2000	2072	102	75 - 125	
Beryllium	2.0	U	50.0	49.26	99	75 - 125	
Cadmium	4.0	U	50.0	50.39	101	75 - 125	
Calcium	7740		20000	26830	95	75 - 125	
Chromium	10.0	U	200	195.0	98	75 - 125	
Cobalt	50.0	U	500	507.6	102	75 - 125	
Copper	25.0	U	250	234.1	94	75 - 125	
Iron	150	U	1000	901.5	90	75 - 125	
Magnesium	2390	J	20000	21470	95	75 - 125	
Manganese	18.6		500	510.5	98	75 - 125	
Nickel	40.0	U	500	518.5	104	75 - 125	
Potassium	885	J	20000	19910	95	75 - 125	
Lead	10.0	U	500	514.2	103	75 - 125	
Antimony	20.0	U	500	493.1	99	75 - 125	
Silver	10.0	U	50.0	48.95	98	75 - 125	
Selenium	20.0	U	2000	1954	98	75 - 125	
Sodium	21500		20000	40430	95	75 - 125	
Thallium	20.0	U	2000	2103	105	75 - 125	
Vanadium	50.0	U	500	483.8	97	75 - 125	
Zinc	6.1	J	500	516.7	102	75 - 125	

Client: AKRF Inc

Job Number: 460-85074-1

Duplicate - Batch: 460-258720

Method: 6010C
Preparation: 3010A
Dissolved

Lab Sample ID:	460-85173-B-1-C DU	Analysis Batch:	460-258821	Instrument ID:	ICP4
Client Matrix:	Water	Prep Batch:	460-258720	Lab File ID:	258455.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	10/28/2014 1927	Units:	ug/L	Final Weight/Volume:	100 mL
Prep Date:	10/28/2014 0929				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Aluminum	200	U	200	NC	20	U
Arsenic	15.0	U	15.0	NC	20	U
Barium	30.3	J	30.30	0.2	20	J
Beryllium	2.0	U	2.0	NC	20	U
Cadmium	4.0	U	4.0	NC	20	U
Calcium	7740		7801	0.8	20	
Chromium	10.0	U	10.0	NC	20	U
Cobalt	50.0	U	50.0	NC	20	U
Copper	25.0	U	25.0	NC	20	U
Iron	150	U	150	NC	20	U
Magnesium	2390	J	2418	1	20	J
Manganese	18.6		18.73	0.6	20	
Nickel	40.0	U	40.0	NC	20	U
Potassium	885	J	873.9	1	20	J
Lead	10.0	U	10.0	NC	20	U
Antimony	20.0	U	20.0	NC	20	U
Silver	10.0	U	10.0	NC	20	U
Selenium	20.0	U	20.0	NC	20	U
Sodium	21500		21580	0.5	20	
Thallium	20.0	U	20.0	NC	20	U
Vanadium	50.0	U	50.0	NC	20	U
Zinc	6.1	J	6.21	2	20	J

Client: AKRF Inc

Job Number: 460-85074-1

Method Blank - Batch: 460-259210

Method: 6010C
Preparation: 3010A

Lab Sample ID:	MB 460-259210/1-A	Analysis Batch:	460-259338	Instrument ID:	ICP4
Client Matrix:	Water	Prep Batch:	460-259210	Lab File ID:	10302014.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	10/30/2014 1537	Units:	ug/L	Final Weight/Volume:	100 mL
Prep Date:	10/30/2014 0947				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	200	U	73.6	200
Arsenic	15.0	U	4.3	15.0
Barium	200	U	6.5	200
Beryllium	2.0	U	1.1	2.0
Cadmium	4.0	U	1.2	4.0
Calcium	5000	U	416	5000
Chromium	10.0	U	4.6	10.0
Cobalt	50.0	U	3.8	50.0
Copper	25.0	U	6.2	25.0
Iron	150	U	51.4	150
Magnesium	5000	U	355	5000
Manganese	15.0	U	4.3	15.0
Nickel	40.0	U	7.8	40.0
Potassium	5000	U	281	5000
Lead	10.0	U	4.6	10.0
Antimony	20.0	U	5.4	20.0
Silver	10.0	U	1.9	10.0
Selenium	20.0	U	6.7	20.0
Sodium	5000	U	514	5000
Thallium	20.0	U	9.2	20.0
Vanadium	50.0	U	4.2	50.0
Zinc	30.0	U	5.9	30.0

Client: AKRF Inc

Job Number: 460-85074-1

Lab Control Sample - Batch: 460-259210

Method: 6010C
Preparation: 3010A

Lab Sample ID:	LCS 460-259210/2-A	Analysis Batch:	460-259338	Instrument ID:	ICP4
Client Matrix:	Water	Prep Batch:	460-259210	Lab File ID:	10302014.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	10/30/2014 1540	Units:	ug/L	Final Weight/Volume:	100 mL
Prep Date:	10/30/2014 0947				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	2000	2016	101	80 - 120	
Arsenic	2000	1930	97	80 - 120	
Barium	2000	2041	102	80 - 120	
Beryllium	50.0	51.34	103	80 - 120	
Cadmium	50.0	50.56	101	80 - 120	
Calcium	20000	19390	97	80 - 120	
Chromium	200	199.4	100	80 - 120	
Cobalt	500	505.0	101	80 - 120	
Copper	250	241.7	97	80 - 120	
Iron	1000	941.2	94	80 - 120	
Magnesium	20000	19370	97	80 - 120	
Manganese	500	509.8	102	80 - 120	
Nickel	500	521.3	104	80 - 120	
Potassium	20000	19150	96	80 - 120	
Lead	500	514.2	103	80 - 120	
Antimony	500	483.1	97	80 - 120	
Silver	50.0	48.83	98	80 - 120	
Selenium	2000	1941	97	80 - 120	
Sodium	20000	19460	97	80 - 120	
Thallium	2000	2129	106	80 - 120	
Vanadium	500	499.1	100	80 - 120	
Zinc	500	510.1	102	80 - 120	

Client: AKRF Inc

Job Number: 460-85074-1

Matrix Spike - Batch: 460-259210

Method: 6010C
Preparation: 3010A

Lab Sample ID:	460-85173-A-1-D MS	Analysis Batch:	460-259338	Instrument ID:	ICP4
Client Matrix:	Water	Prep Batch:	460-259210	Lab File ID:	10302014.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	10/30/2014 1511	Units:	ug/L	Final Weight/Volume:	100 mL
Prep Date:	10/30/2014 0947				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	456		2000	2481	101	75 - 125	
Arsenic	15.0	U	2000	1878	94	75 - 125	
Barium	32.8	J	2000	2016	99	75 - 125	
Beryllium	2.0	U	50.0	51.28	103	75 - 125	
Cadmium	4.0	U	50.0	49.01	98	75 - 125	
Calcium	7640		20000	27080	97	75 - 125	
Chromium	10.0	U	200	199.8	100	75 - 125	
Cobalt	50.0	U	500	489.2	98	75 - 125	
Copper	25.0	U	250	240.7	96	75 - 125	
Iron	488		1000	1427	94	75 - 125	
Magnesium	2410	J	20000	21600	96	75 - 125	
Manganese	32.7		500	540.4	102	75 - 125	
Nickel	40.0	U	500	502.9	101	75 - 125	
Potassium	903	J	20000	19620	94	75 - 125	
Lead	10.0	U	500	496.0	99	75 - 125	
Antimony	20.0	U	500	467.7	94	75 - 125	
Silver	10.0	U	50.0	48.17	96	75 - 125	
Selenium	20.0	U	2000	1873	94	75 - 125	
Sodium	20800		20000	39550	94	75 - 125	
Thallium	20.0	U	2000	2056	103	75 - 125	
Vanadium	50.0	U	500	494.9	99	75 - 125	
Zinc	30.0	U	500	500.6	100	75 - 125	

Client: AKRF Inc

Job Number: 460-85074-1

Duplicate - Batch: 460-259210

Method: 6010C
Preparation: 3010A

Lab Sample ID:	460-85173-A-1-C DU	Analysis Batch:	460-259338	Instrument ID:	ICP4
Client Matrix:	Water	Prep Batch:	460-259210	Lab File ID:	10302014.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	10/30/2014 1459	Units:	ug/L	Final Weight/Volume:	100 mL
Prep Date:	10/30/2014 0947				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Aluminum	456		468.1	3	20	
Arsenic	15.0	U	15.0	NC	20	U
Barium	32.8	J	32.30	2	20	J
Beryllium	2.0	U	2.0	NC	20	U
Cadmium	4.0	U	4.0	NC	20	U
Calcium	7640		7649	0.08	20	
Chromium	10.0	U	10.0	NC	20	U
Cobalt	50.0	U	50.0	NC	20	U
Copper	25.0	U	25.0	NC	20	U
Iron	488		496.1	2	20	
Magnesium	2410	J	2414	0.08	20	J
Manganese	32.7		33.02	0.9	20	
Nickel	40.0	U	40.0	NC	20	U
Potassium	903	J	897.1	0.7	20	J
Lead	10.0	U	10.0	NC	20	U
Antimony	20.0	U	20.0	NC	20	U
Silver	10.0	U	10.0	NC	20	U
Selenium	20.0	U	20.0	NC	20	U
Sodium	20800		20550	1	20	
Thallium	20.0	U	20.0	NC	20	U
Vanadium	50.0	U	50.0	NC	20	U
Zinc	30.0	U	30.0	NC	20	U

Client: AKRF Inc

Job Number: 460-85074-1

Method Blank - Batch: 460-259788

Method: 6010C
Preparation: 3010A

Lab Sample ID:	MB 460-259788/1-A	Analysis Batch:	460-259851	Instrument ID:	ICP5
Client Matrix:	Water	Prep Batch:	460-259788	Lab File ID:	11022014.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	11/02/2014 1832	Units:	ug/L	Final Weight/Volume:	100 mL
Prep Date:	11/01/2014 1847				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	200	U	73.6	200
Arsenic	15.0	U	4.3	15.0
Barium	200	U	6.5	200
Beryllium	2.0	U	1.1	2.0
Cadmium	4.0	U	1.2	4.0
Calcium	5000	U	416	5000
Chromium	10.0	U	4.6	10.0
Cobalt	50.0	U	3.8	50.0
Copper	25.0	U	6.2	25.0
Iron	150	U	51.4	150
Magnesium	5000	U	355	5000
Manganese	15.0	U	4.3	15.0
Nickel	40.0	U	7.8	40.0
Potassium	5000	U	281	5000
Lead	10.0	U	4.6	10.0
Antimony	20.0	U	5.4	20.0
Silver	10.0	U	1.9	10.0
Selenium	20.0	U	6.7	20.0
Sodium	5000	U	514	5000
Thallium	20.0	U	9.2	20.0
Vanadium	50.0	U	4.2	50.0
Zinc	30.0	U	5.9	30.0

Client: AKRF Inc

Job Number: 460-85074-1

Lab Control Sample - Batch: 460-259788

Method: 6010C
Preparation: 3010A

Lab Sample ID:	LCS 460-259788/2-A	Analysis Batch:	460-259851	Instrument ID:	ICP5
Client Matrix:	Water	Prep Batch:	460-259788	Lab File ID:	11022014.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	11/02/2014 1836	Units:	ug/L	Final Weight/Volume:	100 mL
Prep Date:	11/01/2014 1847				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	2000	1943	97	80 - 120	
Arsenic	2000	1945	97	80 - 120	
Barium	2000	2020	101	80 - 120	
Beryllium	50.0	48.68	97	80 - 120	
Cadmium	50.0	52.28	105	80 - 120	
Calcium	20000	20260	101	80 - 120	
Chromium	200	206.9	103	80 - 120	
Cobalt	500	509.0	102	80 - 120	
Copper	250	239.1	96	80 - 120	
Iron	1000	1053	105	80 - 120	
Magnesium	20000	19910	100	80 - 120	
Manganese	500	510.5	102	80 - 120	
Nickel	500	523.6	105	80 - 120	
Potassium	20000	18970	95	80 - 120	
Lead	500	527.2	105	80 - 120	
Antimony	500	459.9	92	80 - 120	
Silver	50.0	48.23	96	80 - 120	
Selenium	2000	1917	96	80 - 120	
Sodium	20000	19870	99	80 - 120	
Thallium	2000	2208	110	80 - 120	
Vanadium	500	503.2	101	80 - 120	
Zinc	500	529.9	106	80 - 120	

Client: AKRF Inc

Job Number: 460-85074-1

Matrix Spike - Batch: 460-259788

Method: 6010C
Preparation: 3010A

Lab Sample ID:	460-85481-E-1-C MS	Analysis Batch:	460-259851	Instrument ID:	ICP5
Client Matrix:	Water	Prep Batch:	460-259788	Lab File ID:	11022014.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	11/02/2014 1403	Units:	ug/L	Final Weight/Volume:	100 mL
Prep Date:	11/01/2014 1847				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	200	U	2000	1981	99	75 - 125	
Arsenic	15.0	U	2000	1921	96	75 - 125	
Barium	47.9	J	2000	2046	100	75 - 125	
Beryllium	2.0	U	50.0	49.80	100	75 - 125	
Cadmium	4.0	U	50.0	49.95	100	75 - 125	
Calcium	32700		20000	52340	98	75 - 125	
Chromium	10.0	U	200	200.4	100	75 - 125	
Cobalt	50.0	U	500	494.6	99	75 - 125	
Copper	25.0	U	250	242.2	97	75 - 125	
Iron	150	U	1000	1061	106	75 - 125	
Magnesium	19600		20000	39040	97	75 - 125	
Manganese	15.0	U	500	507.1	101	75 - 125	
Nickel	40.0	U	500	504.6	101	75 - 125	
Potassium	2430	J	20000	21550	96	75 - 125	
Lead	10.0	U	500	503.4	101	75 - 125	
Antimony	20.0	U	500	458.2	92	75 - 125	
Silver	10.0	U	50.0	47.57	95	75 - 125	
Selenium	20.0	U	2000	1895	95	75 - 125	
Sodium	48400		20000	68150	99	75 - 125	
Thallium	20.0	U	2000	2090	105	75 - 125	
Vanadium	50.0	U	500	498.2	100	75 - 125	
Zinc	30.0	U	500	512.6	103	75 - 125	

Client: AKRF Inc

Job Number: 460-85074-1

Duplicate - Batch: 460-259788

Method: 6010C
Preparation: 3010A

Lab Sample ID:	460-85481-E-1-B DU	Analysis Batch:	460-259851	Instrument ID:	ICP5
Client Matrix:	Water	Prep Batch:	460-259788	Lab File ID:	11022014.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	11/02/2014 1352	Units:	ug/L	Final Weight/Volume:	100 mL
Prep Date:	11/01/2014 1847				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Aluminum	200	U	200	NC	20	U
Arsenic	15.0	U	15.0	NC	20	U
Barium	47.9	J	47.95	0.1	20	J
Beryllium	2.0	U	2.0	NC	20	U
Cadmium	4.0	U	4.0	NC	20	U
Calcium	32700		32880	0.5	20	
Chromium	10.0	U	10.0	NC	20	U
Cobalt	50.0	U	50.0	NC	20	U
Copper	25.0	U	25.0	NC	20	U
Iron	150	U	54.72	NC	20	J
Magnesium	19600		19700	0.3	20	
Manganese	15.0	U	15.0	NC	20	U
Nickel	40.0	U	40.0	NC	20	U
Potassium	2430	J	2391	1	20	J
Lead	10.0	U	10.0	NC	20	U
Antimony	20.0	U	20.0	NC	20	U
Silver	10.0	U	10.0	NC	20	U
Selenium	20.0	U	20.0	NC	20	U
Sodium	48400		48410	0.04	20	
Thallium	20.0	U	20.0	NC	20	U
Vanadium	50.0	U	50.0	NC	20	U
Zinc	30.0	U	30.0	NC	20	U

Client: AKRF Inc

Job Number: 460-85074-1

Method Blank - Batch: 460-259789

Method: 6010C
Preparation: 3010A

Lab Sample ID:	MB 460-259789/1-A	Analysis Batch:	460-259851	Instrument ID:	ICP5
Client Matrix:	Water	Prep Batch:	460-259789	Lab File ID:	11022014.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	11/02/2014 1609	Units:	ug/L	Final Weight/Volume:	100 mL
Prep Date:	11/01/2014 1857				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	200	U	73.6	200
Arsenic	15.0	U	4.3	15.0
Barium	200	U	6.5	200
Beryllium	2.0	U	1.1	2.0
Cadmium	4.0	U	1.2	4.0
Calcium	5000	U	416	5000
Chromium	10.0	U	4.6	10.0
Cobalt	50.0	U	3.8	50.0
Copper	25.0	U	6.2	25.0
Iron	150	U	51.4	150
Magnesium	5000	U	355	5000
Manganese	15.0	U	4.3	15.0
Nickel	40.0	U	7.8	40.0
Potassium	5000	U	281	5000
Lead	10.0	U	4.6	10.0
Antimony	20.0	U	5.4	20.0
Silver	10.0	U	1.9	10.0
Selenium	20.0	U	6.7	20.0
Sodium	5000	U	514	5000
Thallium	20.0	U	9.2	20.0
Vanadium	50.0	U	4.2	50.0
Zinc	30.0	U	5.9	30.0

Client: AKRF Inc

Job Number: 460-85074-1

Lab Control Sample - Batch: 460-259789

Method: 6010C
Preparation: 3010A

Lab Sample ID:	LCS 460-259789/2-A	Analysis Batch:	460-259851	Instrument ID:	ICP5
Client Matrix:	Water	Prep Batch:	460-259789	Lab File ID:	11022014.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	11/02/2014 1613	Units:	ug/L	Final Weight/Volume:	100 mL
Prep Date:	11/01/2014 1857				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	2000	1919	96	80 - 120	
Arsenic	2000	1882	94	80 - 120	
Barium	2000	1982	99	80 - 120	
Beryllium	50.0	48.58	97	80 - 120	
Cadmium	50.0	50.39	101	80 - 120	
Calcium	20000	19720	99	80 - 120	
Chromium	200	200.5	100	80 - 120	
Cobalt	500	498.6	100	80 - 120	
Copper	250	237.2	95	80 - 120	
Iron	1000	1026	103	80 - 120	
Magnesium	20000	19400	97	80 - 120	
Manganese	500	501.3	100	80 - 120	
Nickel	500	509.9	102	80 - 120	
Potassium	20000	18800	94	80 - 120	
Lead	500	512.9	103	80 - 120	
Antimony	500	448.0	90	80 - 120	
Silver	50.0	47.36	95	80 - 120	
Selenium	2000	1860	93	80 - 120	
Sodium	20000	19730	99	80 - 120	
Thallium	2000	2137	107	80 - 120	
Vanadium	500	491.5	98	80 - 120	
Zinc	500	514.2	103	80 - 120	

Client: AKRF Inc

Job Number: 460-85074-1

Matrix Spike - Batch: 460-259789

Method: 6010C
Preparation: 3010A
Dissolved

Lab Sample ID:	460-85427-C-6-C MS	Analysis Batch:	460-259851	Instrument ID:	ICP5
Client Matrix:	Water	Prep Batch:	460-259789	Lab File ID:	11022014.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	11/02/2014 1628	Units:	ug/L	Final Weight/Volume:	100 mL
Prep Date:	11/01/2014 1857				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	200	U	2000	1984	99	75 - 125	
Arsenic	15.0	U	2000	1928	96	75 - 125	
Barium	35.5	J	2000	2045	100	75 - 125	
Beryllium	2.0	U	50.0	49.88	100	75 - 125	
Cadmium	4.0	U	50.0	50.92	102	75 - 125	
Calcium	15600		20000	35320	99	75 - 125	
Chromium	10.0	U	200	206.4	103	75 - 125	
Cobalt	50.0	U	500	502.0	100	75 - 125	
Copper	25.0	U	250	243.1	97	75 - 125	
Iron	150	U	1000	1054	105	75 - 125	
Magnesium	3650	J	20000	23200	98	75 - 125	
Manganese	145		500	649.3	101	75 - 125	
Nickel	40.0	U	500	512.6	103	75 - 125	
Potassium	13800		20000	33010	96	75 - 125	
Lead	10.0	U	500	512.8	103	75 - 125	
Antimony	20.0	U	500	455.9	91	75 - 125	
Silver	10.0	U	50.0	47.48	95	75 - 125	
Selenium	20.0	U	2000	1885	94	75 - 125	
Sodium	18200		20000	38200	100	75 - 125	
Thallium	20.0	U	2000	2118	106	75 - 125	
Vanadium	50.0	U	500	501.2	100	75 - 125	
Zinc	30.0	U	500	522.8	105	75 - 125	

Client: AKRF Inc

Job Number: 460-85074-1

Duplicate - Batch: 460-259789

Method: 6010C
Preparation: 3010A
Dissolved

Lab Sample ID:	460-85427-C-6-B DU	Analysis Batch:	460-259851	Instrument ID:	ICP5
Client Matrix:	Water	Prep Batch:	460-259789	Lab File ID:	11022014.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	11/02/2014 1617	Units:	ug/L	Final Weight/Volume:	100 mL
Prep Date:	11/01/2014 1857				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Aluminum	200	U	200	NC	20	U
Arsenic	15.0	U	15.0	NC	20	U
Barium	35.5	J	35.48	0	20	J
Beryllium	2.0	U	2.0	NC	20	U
Cadmium	4.0	U	4.0	NC	20	U
Calcium	15600		15510	0.4	20	
Chromium	10.0	U	10.0	NC	20	U
Cobalt	50.0	U	50.0	NC	20	U
Copper	25.0	U	25.0	NC	20	U
Iron	150	U	150	NC	20	U
Magnesium	3650	J	3633	0.6	20	J
Manganese	145		145.6	0.3	20	
Nickel	40.0	U	40.0	NC	20	U
Potassium	13800		13850	0.4	20	
Lead	10.0	U	10.0	NC	20	U
Antimony	20.0	U	20.0	NC	20	U
Silver	10.0	U	10.0	NC	20	U
Selenium	20.0	U	20.0	NC	20	U
Sodium	18200		18280	0.2	20	
Thallium	20.0	U	20.0	NC	20	U
Vanadium	50.0	U	50.0	NC	20	U
Zinc	30.0	U	30.0	NC	20	U

Client: AKRF Inc

Job Number: 460-85074-1

Method Blank - Batch: 460-258367

Method: 7470A
Preparation: 7470A

Lab Sample ID:	MB 460-258367/1-A	Analysis Batch:	460-258398	Instrument ID:	LEEMAN5
Client Matrix:	Water	Prep Batch:	460-258367	Lab File ID:	258366.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	10/26/2014 1737	Units:	ug/L	Final Weight/Volume:	30 mL
Prep Date:	10/26/2014 1101				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	0.20	U	0.16	0.20

Lab Control Sample - Batch: 460-258367

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 460-258367/2-A	Analysis Batch:	460-258398	Instrument ID:	LEEMAN5
Client Matrix:	Water	Prep Batch:	460-258367	Lab File ID:	258366.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	10/26/2014 1739	Units:	ug/L	Final Weight/Volume:	30 mL
Prep Date:	10/26/2014 1101				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	1.00	0.963	96	80 - 120	

Matrix Spike - Batch: 460-258367

Method: 7470A
Preparation: 7470A

Lab Sample ID:	460-84748-H-10-D MS	Analysis Batch:	460-258398	Instrument ID:	LEEMAN5
Client Matrix:	Water	Prep Batch:	460-258367	Lab File ID:	258366.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	10/26/2014 1745	Units:	ug/L	Final Weight/Volume:	30 mL
Prep Date:	10/26/2014 1101				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.20	U	1.00	0.998	100	80 - 120	

Client: AKRF Inc

Job Number: 460-85074-1

Duplicate - Batch: 460-258367

Method: 7470A
Preparation: 7470A

Lab Sample ID:	460-84748-H-10-C DU	Analysis Batch:	460-258398	Instrument ID:	LEEMAN5
Client Matrix:	Water	Prep Batch:	460-258367	Lab File ID:	258366.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	10/26/2014 1743	Units:	ug/L	Final Weight/Volume:	30 mL
Prep Date:	10/26/2014 1101				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Mercury	0.20	U	0.20	NC	20	U

Client: AKRF Inc

Job Number: 460-85074-1

Method Blank - Batch: 460-258517

Method: 7470A
Preparation: 7470A
Dissolved

Lab Sample ID:	MB 460-258515/1-B	Analysis Batch:	460-258538	Instrument ID:	LEEMAN6
Client Matrix:	Water	Prep Batch:	460-258517	Lab File ID:	258517hg1.CSV
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	10/27/2014 1358	Units:	ug/L	Final Weight/Volume:	30 mL
Prep Date:	10/27/2014 1207				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	0.20	U	0.16	0.20

Lab Control Sample - Batch: 460-258517

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 460-258517/2-A	Analysis Batch:	460-258538	Instrument ID:	LEEMAN6
Client Matrix:	Water	Prep Batch:	460-258517	Lab File ID:	258517hg1.CSV
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	10/27/2014 1400	Units:	ug/L	Final Weight/Volume:	30 mL
Prep Date:	10/27/2014 1207				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	1.00	0.917	92	80 - 120	

Matrix Spike - Batch: 460-258517

Method: 7470A
Preparation: 7470A
Dissolved

Lab Sample ID:	460-85098-C-12-C MS	Analysis Batch:	460-258538	Instrument ID:	LEEMAN6
Client Matrix:	Water	Prep Batch:	460-258517	Lab File ID:	258517hg1.CSV
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	10/27/2014 1405	Units:	ug/L	Final Weight/Volume:	30 mL
Prep Date:	10/27/2014 1207				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.20	U	1.00	0.955	95	80 - 120	

Client: AKRF Inc

Job Number: 460-85074-1

Duplicate - Batch: 460-258517

Method: 7470A
Preparation: 7470A
Dissolved

Lab Sample ID:	460-85098-C-12-B DU	Analysis Batch:	460-258538	Instrument ID:	LEEMAN6
Client Matrix:	Water	Prep Batch:	460-258517	Lab File ID:	258517hg1.CSV
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	10/27/2014 1403	Units:	ug/L	Final Weight/Volume:	30 mL
Prep Date:	10/27/2014 1207				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Mercury	0.20	U	0.20	NC	20	U

Client: AKRF Inc

Job Number: 460-85074-1

Method Blank - Batch: 460-258745

Method: 7470A
Preparation: 7470A
Dissolved

Lab Sample ID:	MB 460-258744/1-B	Analysis Batch:	460-258801	Instrument ID:	LEEMAN6
Client Matrix:	Water	Prep Batch:	460-258745	Lab File ID:	258745hg1.CSV
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	10/28/2014 1345	Units:	ug/L	Final Weight/Volume:	30 mL
Prep Date:	10/28/2014 1122				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	0.20	U	0.16	0.20

Lab Control Sample - Batch: 460-258745

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 460-258745/2-A	Analysis Batch:	460-258801	Instrument ID:	LEEMAN6
Client Matrix:	Water	Prep Batch:	460-258745	Lab File ID:	258745hg1.CSV
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	10/28/2014 1346	Units:	ug/L	Final Weight/Volume:	30 mL
Prep Date:	10/28/2014 1122				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	1.00	0.982	98	80 - 120	

Matrix Spike - Batch: 460-258745

Method: 7470A
Preparation: 7470A
Dissolved

Lab Sample ID:	460-85128-G-3-B MS	Analysis Batch:	460-258801	Instrument ID:	LEEMAN6
Client Matrix:	Water	Prep Batch:	460-258745	Lab File ID:	258745hg1.CSV
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	10/28/2014 1352	Units:	ug/L	Final Weight/Volume:	30 mL
Prep Date:	10/28/2014 1122				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.20	U	1.00	0.950	95	80 - 120	

Client: AKRF Inc

Job Number: 460-85074-1

Duplicate - Batch: 460-258745

Method: 7470A
Preparation: 7470A
Dissolved

Lab Sample ID:	460-85128-A-3-A DU	Analysis Batch:	460-258801	Instrument ID:	LEEMAN6
Client Matrix:	Water	Prep Batch:	460-258745	Lab File ID:	258745hg1.CSV
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	10/28/2014 1350	Units:	ug/L	Final Weight/Volume:	30 mL
Prep Date:	10/28/2014 1122				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Mercury	0.20	U	0.20	NC	20	U

Client: AKRF Inc

Job Number: 460-85074-1

Method Blank - Batch: 460-258975

Method: 7470A
Preparation: 7470A

Lab Sample ID:	MB 460-258975/1-A	Analysis Batch:	460-259049	Instrument ID:	LEEMAN6
Client Matrix:	Water	Prep Batch:	460-258975	Lab File ID:	258975hg1.CSV
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	10/29/2014 1352	Units:	ug/L	Final Weight/Volume:	30 mL
Prep Date:	10/29/2014 1110				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	0.20	U	0.16	0.20

Lab Control Sample - Batch: 460-258975

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 460-258975/2-A	Analysis Batch:	460-259049	Instrument ID:	LEEMAN6
Client Matrix:	Water	Prep Batch:	460-258975	Lab File ID:	258975hg1.CSV
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	10/29/2014 1354	Units:	ug/L	Final Weight/Volume:	30 mL
Prep Date:	10/29/2014 1110				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	1.00	0.955	96	80 - 120	

Matrix Spike - Batch: 460-258975

Method: 7470A
Preparation: 7470A

Lab Sample ID:	460-85128-H-3-C MS	Analysis Batch:	460-259049	Instrument ID:	LEEMAN6
Client Matrix:	Water	Prep Batch:	460-258975	Lab File ID:	258975hg1.CSV
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	10/29/2014 1359	Units:	ug/L	Final Weight/Volume:	30 mL
Prep Date:	10/29/2014 1110				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.20	U	1.00	0.965	96	80 - 120	

Client: AKRF Inc

Job Number: 460-85074-1

Duplicate - Batch: 460-258975

Method: 7470A
Preparation: 7470A

Lab Sample ID:	460-85128-H-3-B DU	Analysis Batch:	460-259049	Instrument ID:	LEEMAN6
Client Matrix:	Water	Prep Batch:	460-258975	Lab File ID:	258975hg1.CSV
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	10/29/2014 1357	Units:	ug/L	Final Weight/Volume:	30 mL
Prep Date:	10/29/2014 1110				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Mercury	0.20	U	0.20	NC	20	U

Client: AKRF Inc

Job Number: 460-85074-1

Method Blank - Batch: 460-259533

Method: 7470A
Preparation: 7470A

Lab Sample ID:	MB 460-259533/1-A	Analysis Batch:	460-259597	Instrument ID:	LEEMAN6
Client Matrix:	Water	Prep Batch:	460-259533	Lab File ID:	259533hg1.CSV
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	10/31/2014 1349	Units:	ug/L	Final Weight/Volume:	30 mL
Prep Date:	10/31/2014 1118				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	0.20	U	0.16	0.20

Lab Control Sample - Batch: 460-259533

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 460-259533/2-A	Analysis Batch:	460-259597	Instrument ID:	LEEMAN6
Client Matrix:	Water	Prep Batch:	460-259533	Lab File ID:	259533hg1.CSV
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	10/31/2014 1350	Units:	ug/L	Final Weight/Volume:	30 mL
Prep Date:	10/31/2014 1118				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	1.00	0.900	90	80 - 120	

Matrix Spike - Batch: 460-259533

Method: 7470A
Preparation: 7470A

Lab Sample ID:	460-85341-F-1-D MS	Analysis Batch:	460-259597	Instrument ID:	LEEMAN6
Client Matrix:	Water	Prep Batch:	460-259533	Lab File ID:	259533hg1.CSV
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	10/31/2014 1356	Units:	ug/L	Final Weight/Volume:	30 mL
Prep Date:	10/31/2014 1118				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.20	U	1.00	1.03	103	80 - 120	

Client: AKRF Inc

Job Number: 460-85074-1

Duplicate - Batch: 460-259533

Method: 7470A
Preparation: 7470A

Lab Sample ID:	460-85341-F-1-C DU	Analysis Batch:	460-259597	Instrument ID:	LEEMAN6
Client Matrix:	Water	Prep Batch:	460-259533	Lab File ID:	259533hg1.CSV
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	10/31/2014 1354	Units:	ug/L	Final Weight/Volume:	30 mL
Prep Date:	10/31/2014 1118				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Mercury	0.20	U	0.20	NC	20	U

777 New Durham Road
Edison, New Jersey 08817
Phone: (732) 549-3900 Fax: (732) 549-3679

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

CHAIN OF CUSTODY / ANALYSIS REQUEST

Name (for report and invoice): Stephen Malinowski
Company: AKRF, Inc.
Address: 440 Park Ave S. 7th Fl.
City: New York State: NY
Phone: (631) 574-3724 Fax:

Samplers Name (Printed): Mark Jepsen
P. O. # 12015

Site/Project Identification: 77 Commercial St.
State (Location of site): NJ: ☐ NY: ☒ Other:
Regulatory Program:

Analysis Turnaround Time
Standard ☒ (7day)
Rush Charges Authorized For:
2 Week ☐
1 Week ☐
Other ☐ _____

LAB USE ONLY
Project No:
Job No: 86674

ANALYSIS REQUESTED (ENTER "X" BELOW TO INDICATE REQUEST)

Sample Identification	Date	Time	Matrix	No. of Cont.	8270D	7470A/6010C	8260C	7470A/6010C	8082A	8081B						Sample Numbers
TW-6	10/23/14	1200	Water	11	X	X	X	X	X	X						1
TW-3	10/23/14	1500	Water	11	X	X	X	X	X	X						2

460-85074 Chain of Custody

Preservation Used: 1 = ICE, 2 = HCl, 3 = H_2SO_4, 4 = HNO_3, 5 = NaOH
6 = Other _____, 7 = Other _____

Soil:												
Water:	1	4	2	1	1	1						

5-Day RUSH

Special Instructions: See quote for correct TAT pricing

Water Metals Filtered (Yes/No)? _____

Relinquished by	Company	Date / Time	Received by	Company
Mark Jepsen	AKRF, Inc.	10/23/14 / 7:00	1)	T.A
Relinquished by 2)	Company T.A	10/23/14 / 8:00	Received by 2)	Company TA 10/23/14 1845
Relinquished by 3)	Company	Date / Time	Received by 3)	Company
Relinquished by 4)	Company	Date / Time	Received by 4)	Company

Laboratory Certifications: New Jersey (12028), New York (11452), Pennsylvania (68-522), Connecticut (PH-0200), Rhode Island (132).
Massachusetts (M-NJ312), North Carolina (No. 578) 2.0 / 4.0 IKB & WOC

TAL - 0016 (0408)

TestAmerica Edison
Receipt Temperature and pH Log

Job Number: 85574

Number of Coolers: 1 IR Gun # 5

Cooler Temperatures

	RAW	CORRECTED		RAW	CORRECTED		RAW	CORRECTED
Cooler #1:	7.0°C	7.0°C	Cooler #4:	°C	°C	Cooler #7:	°C	°C
Cooler #2:	°C	°C	Cooler #5:	°C	°C	Cooler #8:	°C	°C
Cooler #3:	°C	°C	Cooler #6:	°C	°C	Cooler #9:	°C	°C

TALS Sample Number	Ammonia (pH<2)	COD (pH<2)	Nitrate Nitrite (pH<2)	Metals* (pH<2)	Hardness (pH<2)	Pest (pH 5-9)	EPH or QAM (pH<2)	Phenols (pH<2)	Sulfide (pH>9)	TKN (pH<2)	TOC (pH<2)	Total Cyanide (pH>12)	Total Phos (pH<2)	Other	Other
1				<2											
2				<2											

If pH adjustments are required record the information below:

Sample No(s). adjusted: _____

Preservative Name/Conc.: _____ Volume of Preservative used (ml): _____

Lot # of Preservative(s): _____ Expiration Date: _____

The appropriate Project Manager and Department Manager should be notified about the samples which were pH adjusted.

** Samples for Metal analysis which are out of compliance must be acidified at least 24 hours prior to analysis.*

Initials: [illegible] Date: 10/23/13

EDS-WI-038, Rev 4, 06/09/2014

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

460-85134 Chain of Custody

777 New Durham Road
Edison, New Jersey 08817
Phone: (732) 549-3900 Fax: (732) 549-3679

CHAIN OF CUSTO

Name (for report and invoice) Stephen Malinowski	Samplers Name (Printed) Mark Sepsen	Site/Project Identification 77 Commercial St.
Company AKRF, Inc.	P. O. # 12015	State (Location of site): NJ: ☐ NY: ☒ Other:
		Regulatory Program:
Address 440 Park Ave S, 7th Fl	Analysis Turnaround Time Standard ☒ (7days)	
City New York State NY	Rush Chrages Authorized For: 2 Week ☐ 1 Week ☐ Other ☐	
Phone 631-574-3724 Fax		

ANALYSIS REQUESTED (ENTER "X" BELOW TO INDICATE REQUEST)

Sample Identification	Date	Time	Matrix	No. of. Cont.	8270D	7470A/6010C	8260C	7470A/6010C	8082A	8081B						Sample Numbers
TW-4	10/24/14	1045	Water	11	X	X	X	X	X	X						-1
TW-2		1300		11	X	X	X	X	X	X						-2
TW-1				11	X	X	X	X	X	X						-3
TW-5				11	X	X	X	X	X	X						-4
TB3	—		—	3			X									-5

LAB USE ONLY
Project No:
Job No: 85134

Preservation Used: 1 = ICE, 2 = HCl, 3 = H_2SO_4, 4 = HNO_3, 5 = NaOH
6 = Other _____, 7 = Other _____

Soil:												
Water:	1	4	2	1	1	1						

Special Instructions: ★ TW-1 and TW-5 only VOCs could be collected today

Water Metals Filtered (Yes/No)? _____

5-Day RUSH

Relinquished by	Company	Date / Time	Received by	Company
Mark Sepsen	AKRF, Inc.	10/24/14 1615	1)	T.A.
Relinquished by 2)	Company T.A.	Date / Time 10/24/14 18:20	Received by 2)	Company
Relinquished by 3)	Company	Date / Time	Received by 3)	Company 10/24/2014
Relinquished by 4)	Company	Date / Time	Received by 4)	Company 18:20

Laboratory Certifications: New Jersey (12028), New York (11452), Pennsylvania (68-522), Connecticut (PH-0200), Rhode Island (132).

TAL - 0016 (0408)

Massachusetts (M-NJ312), North Carolina (No. 578) 1.6/3.C 1.9 1.2.4 BR4 5 N.O.1

TestAmerica Edison
Receipt Temperature and pH Log

Job Number: 85134

Number of Coolers: 2 IR Gun # 1

Cooler Temperatures

	RAW	CORRECTED		RAW	CORRECTED		RAW	CORRECTED
Cooler #1:	1.2 °C	1.6 °C	Cooler #4:	°C	°C	Cooler #7:	°C	°C
Cooler #2:	1.9 °C	2.9 °C	Cooler #5:	°C	°C	Cooler #8:	°C	°C
Cooler #3:	°C	°C	Cooler #6:	°C	°C	Cooler #9:	°C	°C

TALS Sample Number	Ammonia (pH<2)	COD (pH<2)	Nitrate Nitrite (pH<2)	Metals* (pH<2)	Hardness (pH<2)	Pest (pH 5-9)	EPH or QAM (pH<2)	Phenols (pH<2)	Sulfide (pH>9)	TKN (pH<2)	TOC (pH<2)	Total Cyanide (pH>12)	Total Phos (pH<2)	Other	Other
1				<2											
2				<2											

If pH adjustments are required record the information below:

Sample No(s). adjusted: N/A

Preservative Name/Conc.: N/A Volume of Preservative used (ml): N/A

Lot # of Preservative(s): N/A Expiration Date: N/A

The appropriate Project Manager and Department Manager should be notified about the samples which were pH adjusted.

**Samples for Metal analysis which are out of compliance must be acidified at least 24 hours prior to analysis.*

Initials: KR Date: 10/24/14

EDS-WI-038, Rev 4, 06/09/2014

777 New Durham Road
Edison, New Jersey 08817
Phone: (732) 549-3900 Fax: (732) 549-3679

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

CHAIN OF CUSTODY / ANALYSIS REQUEST

Page 1 of 1

Name (for report and invoice): Stephen Malinowski	Samplers Name (Printed): Mark Jepsen	Site/Project Identification: 77 Commercial St.
Company: AKRF, Inc.	P. O. #: 12015	State (Location of site): NJ: ☐ NY: ☒ Other:
		Regulatory Program:
Address: 440 Park Ave S. 7th Fl.	Analysis Turnaround Time: Standard ☒ (7days)	
City: New York State: NY	Rush Chrages Authorized For: 2 Week ☐ 1 Week ☐ Other ☐	
Phone: 631-574-3724 Fax:		

ANALYSIS REQUESTED (ENTER "X" BELOW TO INDICATE REQUEST)

LAB USE ONLY
Project No:
Job No: 85171

Sample Identification	Date	Time	Matrix	No. of. Cont.	8270D	7470A/6010C	7470A/6010C	8082A	8081B						Sample Numbers
TW-5	10/24/14	1710	Water	8	X	X	X	X	X						1
Preservation Used: 1 = ICE, 2 = HCl, 3 = H_2SO_4, 4 = HNO_3, 5 = NaOH 6 = Other ______, 7 = Other ______				Soil:											
				Water:	1	4	1	1	1						

5-Day RUSH

460-85171 Chain of Custody

Special Instructions: TW-5 VOCs were picked up on 10/24/14. See quote for TAT pricing

Water Metals Filtered (Yes/No)? ______

Relinquished by	Company	Date / Time	Received by	Company
Mark Jepsen	AKRF, Inc.	10/27/14 [illegible]	1) [signature]	[illegible]
2) [signature]	[illegible]	10/27/14 1440	2) [signature]	[illegible]
3)			3)	10/27/14 1440
4)			4)	

Laboratory Certifications: New Jersey (12028), New York (11452), Pennsylvania (68-522), Connecticut (PH-0200), Rhode Island (132). Massachusetts (M-NJ312), North Carolina (No. 578) 1.8 13.8 IR# [illegible]

TAL - 0016 (0408)

TestAmerica Edison
Receipt Temperature and pH Log

Job Number: 85171

Number of Coolers: 1 IR Gun # 6

Cooler Temperatures

	RAW	CORRECTED		RAW	CORRECTED		RAW	CORRECTED
Cooler #1:	1.5 °C	1.5 °C	Cooler #4:	°C	°C	Cooler #7:	°C	°C
Cooler #2:	°C	°C	Cooler #5:	°C	°C	Cooler #8:	°C	°C
Cooler #3:	°C	°C	Cooler #6:	°C	°C	Cooler #9:	°C	°C

TALS Sample Number	Ammonia (pH<2)	COD (pH<2)	Nitrate Nitrite (pH<2)	Metals* (pH<2)	Hardness (pH<2)	Pest (pH 5-9)	EPH or QAM (pH<2)	Phenols (pH<2)	Sulfide (pH>9)	TKN (pH<2)	TOC (pH<2)	Total Cyanide (pH>12)	Total Phos (pH<2)	Other	Other

If pH adjustments are required record the information below:

Sample No(s). adjusted: _____

Preservative Name/Conc.: _____ Volume of Preservative used (ml): _____

Lot # of Preservative(s): _____ Expiration Date: _____

The appropriate Project Manager and Department Manager should be notified about the samples which were pH adjusted.

**Samples for Metal analysis which are out of compliance must be acidified at least 24 hours prior to analysis.*

Initials: ✓ Date: 10/27/14

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

460-85239 Chain of Custody

777 New Durham Road
Edison, New Jersey 08817
Phone: (732) 549-3900 Fax: (732) 549-3679

CHAIN OF CUSTO

11/04/2014

Name (for report and invoice) Stephen Malinowski	Samplers Name (Printed) Mark Jepsen	Site/Project Identification 77 Commercial St
Company AKRF, Inc.	P. O. # 12015	State (Location of site): NJ: ☐ NY: ☒ Other:
		Regulatory Program:
Address 440 Park Ave S. 7th Fl	Analysis Turnaround Time Standard ☒	
City New York State NY	Rush Chrages Authorized For: 2 Week ☐ 1 Week ☐ Other ☐	
Phone 631-574-3224 Fax		

Sample Identification	Date	Time	Matrix	No. of. Cont.	8270 SVOCs	1010C/7470	8081A									LAB USE ONLY Project No: Job No: 85239 Sample Numbers
TW-1	10/28/14	1245	Water	4	2	1	1									-1
Preservation Used: 1 = ICE, 2 = HCl, 3 = H_2SO_4, 4 = HNO_3, 5 = NaOH 6 = Other _____, 7 = Other _____				Soil:												
				Water:	1	1	1									

3-Day RUSH

Special Instructions See Quote for TAT, See email for additional instructions Water Metals Filtered (Yes/No)? ____

Relinquished by	Company	Date / Time	Received by	Company
Mark Jepsen	AKRF, Inc.	10/28/14 / 4:0.	1)	T.A
Relinquished by 2)	Company r.k.	Date / Time 10/28/14 15:00	Received by 2)	Company TA
Relinquished by 3)	Company	Date / Time	Received by 3)	Company
Relinquished by 4)	Company	Date / Time	Received by 4)	Company

Laboratory Certifications: New Jersey (12028), New York (11452), Pennsylvania (68-522), Connecticut (PH-0200), Rhode Island (132). TAL - 0016 (0408)

Massachusetts (M-NJ312), North Carolina (No. 578) 1.2 [illegible]

TestAmerica Edison
Receipt Temperature and pH Log

Job Number: 85239

Number of Coolers: 1 IR Gun # 5

Cooler Temperatures

	RAW	CORRECTED		RAW	CORRECTED		RAW	CORRECTED
Cooler #1:	1.2 °C	1.2 °C	Cooler #4:	°C	°C	Cooler #7:	°C	°C
Cooler #2:	°C	°C	Cooler #5:	°C	°C	Cooler #8:	°C	°C
Cooler #3:	°C	°C	Cooler #6:	°C	°C	Cooler #9:	°C	°C

TALS Sample Number	Ammonia (pH<2)	COD (pH<2)	Nitrate Nitrite (pH<2)	Metals* (pH<2)	Hardness (pH<2)	Pest (pH 5-9)	EPH or QAM (pH<2)	Phenols (pH<2)	Sulfide (pH>9)	TKN (pH<2)	TOC (pH<2)	Total Cyanide (pH>12)	Total Phos (pH<2)	Other	Other

If pH adjustments are required record the information below:

Sample No(s). adjusted: _____

Preservative Name/Conc.: _____ Volume of Preservative used (ml): _____

Lot # of Preservative(s): _____ Expiration Date: _____

The appropriate Project Manager and Department Manager should be notified about the samples which were pH adjusted.

** Samples for Metal analysis which are out of compliance must be acidified at least 24 hours prior to analysis.*

Initials: [signature] Date: 10/20/16

EDS-WI-038, Rev 4, 06/09/2014

Login Sample Receipt Checklist

Client: AKRF Inc

Job Number: 460-85074-1

Login Number: 85074

List Source: TestAmerica Edison

List Number: 1

Creator: Meyers, Gary

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.0 ° C IR #5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	No analysis requiring residual chlorine check assigned.

Login Sample Receipt Checklist

Client: AKRF Inc

Job Number: 460-85074-1

Login Number: 85134

List Source: TestAmerica Edison

List Number: 1

Creator: Rivera, Kenneth

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.6°C, 3.9°C, IR #5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	False	See NCM
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	See NCM
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	No analysis requiring residual chlorine check assigned.

Login Sample Receipt Checklist

Client: AKRF Inc

Job Number: 460-85074-1

Login Number: 85171

List Source: TestAmerica Edison

List Number: 1

Creator: Meyers, Gary

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.8 ° C IR #5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	No analysis requiring residual chlorine check assigned.

Login Sample Receipt Checklist

Client: AKRF Inc

Job Number: 460-85074-1

Login Number: 85239

List Source: TestAmerica Edison

List Number: 1

Creator: Rivera, Kenneth

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.2°C, IR #5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	False	See NCM
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	No analysis requiring residual chlorine check assigned.

ANALYTICAL REPORT

Job Number: 460-85120-1

Job Description: 77 Commercial Street

For:
AKRF Inc
440 Park Avenue South
7th Floor
New York, NY 10016

Attention: Stephen Malinowski

Approved for release.
Janet Mosley
Manager of Project Management Assistants
10/31/2014 1:38 PM

Designee for
Melissa Haas, Project Manager I
777 New Durham Road, Edison, NJ, 08817
(203)944-1310
melissa.haas@testamericainc.com
10/31/2014

The test results in this report meet all NELAP requirements unless specified within the case narrative. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Edison Project Manager.

TestAmerica Edison Certifications and Approvals: Connecticut: CTDOH #PH-0200, New Jersey: NJDEP (NELAP) #12028, New York: NYDOH (NELAP) #11452, NYDOH (ELAP) #11452, Pennsylvania: PADEP (NELAP) 68-00522 and Rhode Island: RIDOH LAO00132

CASE NARRATIVE

Client: AKRF Inc

Project: 77 Commercial Street

Report Number: 460-85120-1

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

It should be noted that samples with elevated Reporting Limits (RLs) as a result of a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the RLs are unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes or interferences which exceed the calibration range of the instrument.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 10/24/2014 6:20 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 3.6º C and 3.9º C.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

VOLATILE ORGANICS

Samples SB-5(1-2') (460-85120-1), SB-5(6-7') (460-85120-2), SB-16(1-2') (460-85120-3), SB-16(7-8') (460-85120-4), SB-15(1-2') (460-85120-5), SB-15(5-6') (460-85120-6), SB-14(1-2') (460-85120-7), SB-14(6-7') (460-85120-8), SB-13(1-2') (460-85120-9), SB-13(3-4') (460-85120-10), SB-11(1-2') (460-85120-11), SB-11(5-6') (460-85120-12), SB-8(1-2') (460-85120-13) and SB-8(9-10') (460-85120-14) were analyzed for Volatile organics in accordance with EPA SW-846 Methods 8260C. The samples were prepared on 10/25/2014 and analyzed on 10/28/2014 and 10/29/2014.

Acetone was detected in method blank MB 460-258879/6 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

The continuing calibration verification (CCV) associated with batch 258447 recovered outside control limit for Methyl acetate and Bromomethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Surrogate Dibromofluoromethane recovery for the following sample was outside control limits: SB-15(5-6') (460-85120-6), SB-16(7-8') (460-85120-4). Surrogate recoveries for the other three system monitoring compounds were within control limits; therefore, re-analysis was not performed.

The continuing calibration verification (CCV) associated with batch 258664 recovered outside control limit for 2-Methyl-2-propanol, Chlorodibromomethane, Methyl acetate, Bromoform, 1,4-Dioxane and Bromomethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 258664 recovered outside control limits for the following analyte: 1,4-Dioxane.

The peaks observed after 14.8 minutes are GC carryover and not reported, only 2 encores were received therefore reanalysis could not be performed.

SB-5(1-2') (460-85120-1)

The peaks observed after 13.19 minutes are GC carryover and not reported, reanalysis was performed and confirmed with data file #k33485.d.

SB-15(1-2') (460-85120-5)

The continuing calibration verification (CCV) associated with batch 258879 recovered above the upper control limit for Methyl acetate. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for batch 258879 recovered outside control limits for the following analyte: Methyl acetate. The LCS/LCSD precision for 1,4-Dioxane was also outside control limits. These analytes were biased high in the LCS/LCSD and were not detected in the associated samples; therefore, the data have been reported.

The continuing calibration verification (CCV) associated with batch 258887 recovered outside control limit for Mehylene Chloride and 2-Butanone. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for batch 258887 recovered outside control limits for the following analytes: 1,1,2-Trichloroethane and 1,2-Dibromo-3-Chloropropane. These analytes were biased high in the LCS and / or LCSD and were not detected in the associated samples; therefore, the data have been reported.

Acetone was detected in method blank LB3 460-258228/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Refer to the QC report for details.

No other difficulties were encountered during the Volatile organics analysis.

All other quality control parameters were within the acceptance limits.

VOLATILE ORGANICS

Samples TB2 (460-85120-15) and FB (460-85120-16) were analyzed for Volatile organics in accordance with EPA SW-846 Methods 8260C. The samples were analyzed on 10/27/2014.

Toluene failed the recovery criteria high for the MSD of sample 460-84736-2 in batch 460-258447.

The presence of the '4' qualifier in the data indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount.

Refer to the QC report for details.

No other difficulties were encountered during the Volatile organics analysis.

All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC/MS)

Sample FB (460-85120-16) was analyzed for semivolatile organic compounds (GC/MS) in accordance with EPA SW-846 Method 8270D. The samples were prepared on 10/25/2014 and analyzed on 10/28/2014.

The continuing calibration verification (CCV) analyzed in batch 258776 was outside the method criteria for the following analyte(s): Bis(2-chloroethyl)ether. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

The continuing calibration verification (CCV) analyzed in batch 258981 was outside the method criteria for the following analyte(s): 4-nitroaniline. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

The continuing calibration verification (CCV) analyzed in batch 258638 was outside the method criteria for the following analyte(s): Bis(2-chloroethyl)ether. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Acid extractable surrogate std recoveries are biased low for the following sample(s): SB-8(1-2') (460-85120-13). Sample(s) high pH is causing low A/E surrogate std recoveries.

Acid extractable surrogate std recoveries are biased low for the following sample(s): SB-15(5-6') (460-85120-6). Sample(s) high pH is causing low A/E surrogate std recoveries.

The laboratory control sample duplicate (LCSD) for batch 258263 recovered outside control limits for the following analyte: Di-n-octyl phthalate. This analyte was biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported. Hexachlorobutadiene exceeded the RPD limit.

Refer to the QC report for details.

The following sample(s) was diluted due to abundance of target analytes: SB-11(5-6') (460-85120-12). As such, surrogate recoveries are below the calibration range or are not reported, and elevated reporting limits (RLs) are provided.

No other difficulties were encountered during the semivolatiles analysis.

All other quality control parameters were within the acceptance limits.

PESTICIDES

Samples SB-5(1-2') (460-85120-1), SB-5(6-7') (460-85120-2), SB-16(1-2') (460-85120-3), SB-16(7-8') (460-85120-4), SB-15(1-2') (460-85120-5), SB-15(5-6') (460-85120-6), SB-14(1-2') (460-85120-7), SB-14(6-7') (460-85120-8), SB-13(1-2') (460-85120-9), SB-13(3-4') (460-85120-10), SB-11(1-2') (460-85120-11), SB-11(5-6') (460-85120-12), SB-8(1-2') (460-85120-13) and SB-8(9-10') (460-85120-14) were analyzed for Pesticides in accordance with EPA SW-846 Methods 8081A. The samples were prepared on 10/27/2014 and 10/28/2014 and analyzed on 10/28/2014, 10/29/2014 and 10/30/2014.

Surrogate TCMX recovery for the following sample was outside the control limit on the secondary column: SB-5(6-7') (460-85120-2). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Surrogate DCB recovery for the following sample was outside the control limit on the secondary column: SB-14(1-2') (460-85120-7). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

SurrogateDCB recovery for the following sample was outside the control limit on the Primary column: SB-14(6-7') (460-85120-8). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

DCB Surrogate recoveries for the following samples were outside the upper control limit on the secondary column SB-11(1-2') (460-85120-11). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

TCMX Surrogate recovery for the following sample was outside the upper control limit on the primary column SB-15(5-6') (460-85120-6). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

The closing calibration verification (CCV) associated with batch 259042 recovered above the upper control limit for multiple analytes on the secondary column. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. (CCV 460-259042/40).

The laboratory control sample (LCS) for batch 258500 recovered outside control limits for multiple analytes on the secondary column. These analytes were biased high in the LCS and were not detected in the associated samples. This result is from reanalysis, therefore, the data have been reported. (LCS 460-258500/2-A)

The laboratory control sample (LCS) for batch 258500 recovered outside control limits for 4,4'-DDD on the primary column. These analytes were biased high in the LCS and were not detected in the associated samples. This result is from reanalysis, therefore, the data have been reported. (LCS 460-258500/2-A)

The following samples required Mercury clean-up to reduce matrix interferences caused by sulfur: SB-11(1-2') (460-85120-11), SB-13(1-2') (460-85120-9), SB-13(3-4') (460-85120-10), SB-15(1-2') (460-85120-5), SB-15(5-6') (460-85120-6), SB-16(1-2') (460-85120-3), SB-16(7-8') (460-85120-4).

DCB Surrogate recovery for the following sample was outside the upper control limit on the primary column SB-11(5-6') (460-85120-12). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Refer to the QC report for details.

No other difficulties were encountered during the Pesticides analysis.

All other quality control parameters were within the acceptance limits.

POLYCHLORINATED BIPHENYLS

Samples SB-5(1-2') (460-85120-1), SB-5(6-7') (460-85120-2), SB-16(1-2') (460-85120-3), SB-16(7-8') (460-85120-4), SB-15(1-2') (460-85120-5), SB-15(5-6') (460-85120-6), SB-14(1-2') (460-85120-7), SB-14(6-7') (460-85120-8), SB-13(1-2') (460-85120-9), SB-13(3-4') (460-85120-10), SB-11(1-2') (460-85120-11), SB-11(5-6') (460-85120-12), SB-8(1-2') (460-85120-13) and SB-8(9-10') (460-85120-14) were analyzed for polychlorinated biphenyls in accordance with EPA SW-846 Method 8082. The samples were prepared on 10/27/2014 and 10/28/2014 and analyzed on 10/28/2014 and 10/29/2014.

The laboratory control sample (LCS) for batch 258704 recovered outside control limits for the following analytes Aroclor 1260 and DCB surrogate. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

The following samples required a copper/Mercury clean-up to reduce matrix interferences caused by sulfur: SB-11(1-2') (460-85120-11).

DCB Decachlorobiphenyl and DCB Decachlorobiphenyl failed the surrogate recovery criteria high for LCS 460-258704/2-A.

Refer to the QC report for details.

Aroclor 1260 and Aroclor 1260 failed the recovery criteria high for LCS 460-258704/2-A. Refer to the QC report for details.

No other difficulties were encountered during the PCBs analysis.

All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS

Samples SB-5(1-2') (460-85120-1), SB-5(6-7') (460-85120-2), SB-16(1-2') (460-85120-3), SB-16(7-8') (460-85120-4), SB-15(1-2') (460-85120-5), SB-15(5-6') (460-85120-6), SB-14(1-2') (460-85120-7), SB-14(6-7') (460-85120-8), SB-13(1-2') (460-85120-9), SB-13(3-4') (460-85120-10), SB-11(1-2') (460-85120-11), SB-11(5-6') (460-85120-12), SB-8(1-2') (460-85120-13) and SB-8(9-10') (460-85120-14) were analyzed for Semivolatile organic compounds in accordance with EPA SW-846 Method 8270D. The samples were prepared on 10/27/2014 and analyzed on 10/29/2014 and 10/30/2014.

The continuing calibration verification (CCV) analyzed in batch 258866 was outside the method criteria for the following analyte(s): 4-Nitroaniline and 4-Nitrophenol. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Phenol-d5 (Surr) failed the surrogate recovery criteria low for SB-11(5-6') (460-85120-12). 2,4,6-Tribromophenol (Surr) failed the surrogate recovery criteria low for SB-8(1-2') (460-85120-13). 2,4,6-Tribromophenol (Surr) and 2-Fluorophenol (Surr) failed the surrogate recovery criteria low for SB-15(5-6') (460-85120-6).

Benzo[a]pyrene, Benzo[b]fluoranthene and Di-n-octyl phthalate failed the recovery criteria high for the MS of sample 460-85115-4 in batch 460-258866.

2,3,4,6-Tetrachlorophenol failed the recovery criteria low for the MSD of sample 460-85115-4 in batch 460-258866.

Refer to the QC report for details.

Samples SB-5(1-2') (460-85120-1)[2X], SB-16(7-8') (460-85120-4)[2X], SB-15(5-6') (460-85120-6)[5X], SB-13(3-4') (460-85120-10)[5X], SB-11(1-2') (460-85120-11)[5X], SB-11(5-6') (460-85120-12)[10X] and SB-8(1-2') (460-85120-13)[2X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the Semivolatile organic compounds analysis.

All other quality control parameters were within the acceptance limits.

METALS

Samples SB-5(1-2') (460-85120-1), SB-5(6-7') (460-85120-2), SB-16(1-2') (460-85120-3), SB-16(7-8') (460-85120-4), SB-15(1-2') (460-85120-5), SB-15(5-6') (460-85120-6), SB-14(1-2') (460-85120-7), SB-14(6-7') (460-85120-8), SB-13(1-2') (460-85120-9), SB-13(3-4') (460-85120-10), SB-11(1-2') (460-85120-11), SB-11(5-6') (460-85120-12), SB-8(1-2') (460-85120-13) and SB-8(9-10') (460-85120-14) were analyzed for Metals in accordance with EPA SW-846 6010C. The samples were prepared on 10/27/2014 and analyzed on 10/28/2014.

Antimony failed the recovery criteria low for the MS of sample 460-85070-1 in batch 460-258821. Aluminum, Iron and Magnesium failed the recovery criteria high.

Refer to the QC report for details.

Samples SB-5(1-2') (460-85120-1)[4X], SB-5(6-7') (460-85120-2)[10X], SB-5(6-7') (460-85120-2)[4X], SB-16(1-2') (460-85120-3)[4X], SB-16(7-8') (460-85120-4)[4X], SB-15(1-2') (460-85120-5)[4X], SB-15(5-6') (460-85120-6)[4X], SB-14(1-2') (460-85120-7)[4X], SB-14(6-7') (460-85120-8)[4X], SB-13(1-2') (460-85120-9)[4X], SB-13(3-4') (460-85120-10)[4X], SB-11(1-2') (460-85120-11)[4X], SB-11(5-6') (460-85120-12)[4X], SB-8(1-2') (460-85120-13)[4X] and SB-8(9-10') (460-85120-14)[4X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the Metals analysis.

All other quality control parameters were within the acceptance limits.

METALS

Sample FB (460-85120-16) was analyzed for Metals in accordance with EPA SW-846 6010C. The samples were prepared and analyzed on 10/28/2014.

No other difficulties were encountered during the Metals analysis.

All other quality control parameters were within the acceptance limits.

METALS

Sample FB (460-85120-16) was analyzed for Metals in accordance with EPA SW-846 6010C. The samples were prepared on 10/26/2014 and analyzed on 10/27/2014 and 10/28/2014.

Manganese, Sodium and Iron failed the recovery criteria low for the MS of sample 460-85093-1 in batch 460-258732.

Refer to the QC report for details.

No other difficulties were encountered during the Metals analysis.

All other quality control parameters were within the acceptance limits.

DISSOLVED MERCURY

Sample FB (460-85120-16) was analyzed for dissolved mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 10/28/2014.

No difficulties were encountered during the dissolved mercury analysis.

All quality control parameters were within the acceptance limits.

TOTAL MERCURY

Sample FB (460-85120-16) was analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 10/26/2014.

No difficulties were encountered during the Hg analysis.

All quality control parameters were within the acceptance limits.

TOTAL MERCURY

Samples SB-5(1-2') (460-85120-1), SB-5(6-7') (460-85120-2), SB-16(1-2') (460-85120-3), SB-16(7-8') (460-85120-4), SB-15(1-2') (460-85120-5), SB-15(5-6') (460-85120-6), SB-14(1-2') (460-85120-7), SB-14(6-7') (460-85120-8), SB-13(1-2') (460-85120-9), SB-13(3-4') (460-85120-10), SB-11(1-2') (460-85120-11), SB-11(5-6') (460-85120-12), SB-8(1-2') (460-85120-13) and SB-8(9-10') (460-85120-14) were analyzed for total mercury in accordance with EPA SW-846 Method 7471B. The samples were prepared and analyzed on 10/25/2014 and 10/27/2014.

No difficulties were encountered during the Hg analysis.

All quality control parameters were within the acceptance limits.

PERCENT SOLIDS/PERCENT MOISTURE

Samples SB-5(1-2') (460-85120-1), SB-5(6-7') (460-85120-2), SB-16(1-2') (460-85120-3), SB-16(7-8') (460-85120-4), SB-15(1-2') (460-85120-5), SB-15(5-6') (460-85120-6), SB-14(1-2') (460-85120-7), SB-14(6-7') (460-85120-8), SB-13(1-2') (460-85120-9), SB-13(3-4') (460-85120-10), SB-11(1-2') (460-85120-11), SB-11(5-6') (460-85120-12), SB-8(1-2') (460-85120-13) and SB-8(9-10') (460-85120-14) were analyzed for percent solids/percent moisture in accordance with EPA Method CLPISM01.2 (Exhibit D). The samples were analyzed on 10/25/2014.

No difficulties were encountered during the %solids/moisture analysis.

All quality control parameters were within the acceptance limits.

EXECUTIVE SUMMARY - Detections

Client: AKRF Inc

Job Number: 460-85120-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
460-85120-1	**SB-5(1-2')**					
Isophorone		1900		290	ug/Kg	8270D
Naphthalene		290	J	730	ug/Kg	8270D
2-Methylnaphthalene		290	J	730	ug/Kg	8270D
Acenaphthylene		33	J	730	ug/Kg	8270D
Acenaphthene		200	J	730	ug/Kg	8270D
Dibenzofuran		170	J	730	ug/Kg	8270D
Fluorene		270	J	730	ug/Kg	8270D
Phenanthrene		2500		730	ug/Kg	8270D
Anthracene		570	J	730	ug/Kg	8270D
Carbazole		66	J	730	ug/Kg	8270D
Fluoranthene		2300		730	ug/Kg	8270D
Pyrene		3500		730	ug/Kg	8270D
Benzo[a]anthracene		1400		73	ug/Kg	8270D
Chrysene		1700		730	ug/Kg	8270D
Bis(2-ethylhexyl) phthalate		130	J	730	ug/Kg	8270D
Benzo[b]fluoranthene		1500		73	ug/Kg	8270D
Benzo[k]fluoranthene		470		73	ug/Kg	8270D
Benzo[a]pyrene		1300		73	ug/Kg	8270D
Indeno[1,2,3-cd]pyrene		790		73	ug/Kg	8270D
Dibenz(a,h)anthracene		250		73	ug/Kg	8270D
Benzo[g,h,i]perylene		800		730	ug/Kg	8270D
1,1'-Biphenyl		70	J	730	ug/Kg	8270D
Aroclor-1262		57	J	74	ug/Kg	8082A
Polychlorinated biphenyls, Total		57	J	74	ug/Kg	8082A
Aluminum		2690		43.0	mg/Kg	6010C
Arsenic		6.5		3.2	mg/Kg	6010C
Barium		53.6		43.0	mg/Kg	6010C
Calcium		18000		1070	mg/Kg	6010C
Cobalt		3.0	J	10.7	mg/Kg	6010C
Chromium		6.8		2.1	mg/Kg	6010C
Copper		20.7		5.4	mg/Kg	6010C
Iron		11300		32.2	mg/Kg	6010C
Potassium		400	J	1070	mg/Kg	6010C
Magnesium		5140		1070	mg/Kg	6010C
Manganese		262		3.2	mg/Kg	6010C
Sodium		111	J	1070	mg/Kg	6010C
Nickel		7.8	J	8.6	mg/Kg	6010C
Lead		43.8		2.1	mg/Kg	6010C
Vanadium		12.2		10.7	mg/Kg	6010C
Zinc		40.7		6.4	mg/Kg	6010C
Mercury		0.77		0.019	mg/Kg	7471B
Percent Moisture		9.6		1.0	%	Moisture
Percent Solids		90.4		1.0	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: AKRF Inc

Job Number: 460-85120-1

Lab Sample ID	Client Sample ID			Reporting		
Analyte		Result	Qualifier	Limit	Units	Method
460-85120-2	**SB-5(6-7')**					
Isophorone		190		150	ug/Kg	8270D
Naphthalene		400		380	ug/Kg	8270D
2-Methylnaphthalene		110	J	380	ug/Kg	8270D
2-Chloronaphthalene		16	J	380	ug/Kg	8270D
Acenaphthylene		67	J	380	ug/Kg	8270D
Acenaphthene		48	J	380	ug/Kg	8270D
Dibenzofuran		78	J	380	ug/Kg	8270D
Fluorene		56	J	380	ug/Kg	8270D
Phenanthrene		1200		380	ug/Kg	8270D
Anthracene		250	J	380	ug/Kg	8270D
Carbazole		53	J	380	ug/Kg	8270D
Fluoranthene		1500		380	ug/Kg	8270D
Pyrene		1500		380	ug/Kg	8270D
Benzo[a]anthracene		780		38	ug/Kg	8270D
Chrysene		970		380	ug/Kg	8270D
Bis(2-ethylhexyl) phthalate		650		380	ug/Kg	8270D
Benzo[b]fluoranthene		1100		38	ug/Kg	8270D
Benzo[k]fluoranthene		460		38	ug/Kg	8270D
Benzo[a]pyrene		770		38	ug/Kg	8270D
Indeno[1,2,3-cd]pyrene		410		38	ug/Kg	8270D
Dibenz(a,h)anthracene		110		38	ug/Kg	8270D
Benzo[g,h,i]perylene		350	J	380	ug/Kg	8270D
1,1'-Biphenyl		39	J	380	ug/Kg	8270D
Silver		0.76	J	2.3	mg/Kg	6010C
Aluminum		7060		45.4	mg/Kg	6010C
Arsenic		2.1	J	3.4	mg/Kg	6010C
Barium		110		45.4	mg/Kg	6010C
Beryllium		0.70		0.45	mg/Kg	6010C
Calcium		5130		1140	mg/Kg	6010C
Cobalt		6.9	J	11.4	mg/Kg	6010C
Chromium		15.0		2.3	mg/Kg	6010C
Copper		66.1		5.7	mg/Kg	6010C
Iron		61600		85.2	mg/Kg	6010C
Potassium		733	J	1140	mg/Kg	6010C
Magnesium		2110		1140	mg/Kg	6010C
Manganese		1060		3.4	mg/Kg	6010C
Sodium		155	J	1140	mg/Kg	6010C
Nickel		20.1		9.1	mg/Kg	6010C
Lead		94.2		2.3	mg/Kg	6010C
Vanadium		22.4		11.4	mg/Kg	6010C
Zinc		114		6.8	mg/Kg	6010C
Mercury		0.16		0.019	mg/Kg	7471B
Percent Moisture		12.8		1.0	%	Moisture
Percent Solids		87.2		1.0	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: AKRF Inc

Job Number: 460-85120-1

Lab Sample ID Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
460-85120-3	**SB-16(1-2')**					
Isophorone		19	J	140	ug/Kg	8270D
Phenanthrene		46	J	350	ug/Kg	8270D
Fluoranthene		54	J	350	ug/Kg	8270D
Pyrene		73	J	350	ug/Kg	8270D
Benzo[a]anthracene		35		35	ug/Kg	8270D
Chrysene		35	J	350	ug/Kg	8270D
Benzo[b]fluoranthene		36		35	ug/Kg	8270D
Benzo[a]pyrene		27	J	35	ug/Kg	8270D
Aluminum		2510		39.9	mg/Kg	6010C
Arsenic		1.9	J	3.0	mg/Kg	6010C
Barium		51.7		39.9	mg/Kg	6010C
Calcium		11200		998	mg/Kg	6010C
Cobalt		2.0	J	10	mg/Kg	6010C
Chromium		5.8		2.0	mg/Kg	6010C
Copper		7.4		5.0	mg/Kg	6010C
Iron		5450		29.9	mg/Kg	6010C
Potassium		396	J	998	mg/Kg	6010C
Magnesium		1060		998	mg/Kg	6010C
Manganese		125		3.0	mg/Kg	6010C
Nickel		5.9	J	8.0	mg/Kg	6010C
Lead		55.7		2.0	mg/Kg	6010C
Vanadium		10.8		10	mg/Kg	6010C
Zinc		18.2		6.0	mg/Kg	6010C
Mercury		0.030		0.017	mg/Kg	7471B
Percent Moisture		6.4		1.0	%	Moisture
Percent Solids		93.6		1.0	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: AKRF Inc

Job Number: 460-85120-1

Lab Sample ID	Client Sample ID			Reporting		
Analyte		Result	Qualifier	Limit	Units	Method
460-85120-4	**SB-16(7-8')**					
2-Butanone (MEK)		9.6		5.4	ug/Kg	8260C
Acetone		220	B	5.4	ug/Kg	8260C
Benzene		3.6		1.1	ug/Kg	8260C
Carbon disulfide		2.1		1.1	ug/Kg	8260C
Cyclohexane		1.0	J	1.1	ug/Kg	8260C
Ethylbenzene		0.90	J	1.1	ug/Kg	8260C
Isopropylbenzene		0.56	J	1.1	ug/Kg	8260C
Methylcyclohexane		2.0		1.1	ug/Kg	8260C
m-Xylene & p-Xylene		3.8		1.1	ug/Kg	8260C
o-Xylene		3.8		1.1	ug/Kg	8260C
Toluene		4.9		1.1	ug/Kg	8260C
Phenol		45	J	760	ug/Kg	8270D
4-Methylphenol		46	J	760	ug/Kg	8270D
Isophorone		300	J	310	ug/Kg	8270D
Naphthalene		1100		760	ug/Kg	8270D
2-Methylnaphthalene		350	J	760	ug/Kg	8270D
2-Chloronaphthalene		34	J	760	ug/Kg	8270D
Acenaphthylene		230	J	760	ug/Kg	8270D
Acenaphthene		620	J	760	ug/Kg	8270D
Dibenzofuran		530	J	760	ug/Kg	8270D
Fluorene		830		760	ug/Kg	8270D
Phenanthrene		5400		760	ug/Kg	8270D
Anthracene		1400		760	ug/Kg	8270D
Carbazole		490	J	760	ug/Kg	8270D
Fluoranthene		4400		760	ug/Kg	8270D
Pyrene		5000		760	ug/Kg	8270D
Benzo[a]anthracene		2000		76	ug/Kg	8270D
Chrysene		2100		760	ug/Kg	8270D
Benzo[b]fluoranthene		1800		76	ug/Kg	8270D
Benzo[a]pyrene		1500		76	ug/Kg	8270D
Indeno[1,2,3-cd]pyrene		950		76	ug/Kg	8270D
Dibenz(a,h)anthracene		240		76	ug/Kg	8270D
Benzo[g,h,i]perylene		800		760	ug/Kg	8270D
1,1'-Biphenyl		130	J	760	ug/Kg	8270D
Silver		0.48	J	2.2	mg/Kg	6010C
Aluminum		5610		44.1	mg/Kg	6010C
Arsenic		11.6		3.3	mg/Kg	6010C
Barium		63.0		44.1	mg/Kg	6010C
Beryllium		0.57		0.44	mg/Kg	6010C
Calcium		3180		1100	mg/Kg	6010C
Cobalt		10.8	J	11.0	mg/Kg	6010C
Chromium		29.8		2.2	mg/Kg	6010C
Copper		42.5		5.5	mg/Kg	6010C
Iron		21100		33.1	mg/Kg	6010C
Potassium		831	J	1100	mg/Kg	6010C
Magnesium		1850		1100	mg/Kg	6010C

EXECUTIVE SUMMARY - Detections

Client: AKRF Inc

Job Number: 460-85120-1

Lab Sample ID Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Manganese		698		3.3	mg/Kg	6010C
Sodium		648	J	1100	mg/Kg	6010C
Nickel		32.9		8.8	mg/Kg	6010C
Lead		366		2.2	mg/Kg	6010C
Vanadium		32.0		11.0	mg/Kg	6010C
Zinc		134		6.6	mg/Kg	6010C
Mercury		0.095		0.019	mg/Kg	7471B
Percent Moisture		13.6		1.0	%	Moisture
Percent Solids		86.4		1.0	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: AKRF Inc

Job Number: 460-85120-1

Lab Sample ID	Client Sample ID			Reporting		
Analyte		Result	Qualifier	Limit	Units	Method
460-85120-5	**SB-15(1-2')**					
1,1-Dichloroethane		0.88	J	1.3	ug/Kg	8260C
Acetone		47	B	6.3	ug/Kg	8260C
Benzene		0.26	J	1.3	ug/Kg	8260C
Methylcyclohexane		0.78	J	1.3	ug/Kg	8260C
2-Methylphenol		61	J	410	ug/Kg	8270D
4-Methylphenol		67	J	410	ug/Kg	8270D
Naphthalene		2900		410	ug/Kg	8270D
2-Methylnaphthalene		3000		410	ug/Kg	8270D
Acenaphthylene		150	J	410	ug/Kg	8270D
Acenaphthene		310	J	410	ug/Kg	8270D
Dibenzofuran		800		410	ug/Kg	8270D
Fluorene		320	J	410	ug/Kg	8270D
Phenanthrene		4400		410	ug/Kg	8270D
Anthracene		880		410	ug/Kg	8270D
Carbazole		340	J	410	ug/Kg	8270D
Di-n-butyl phthalate		14	J	410	ug/Kg	8270D
Fluoranthene		3700		410	ug/Kg	8270D
Pyrene		4200		410	ug/Kg	8270D
Benzo[a]anthracene		2100		41	ug/Kg	8270D
Chrysene		2400		410	ug/Kg	8270D
Bis(2-ethylhexyl) phthalate		75	J	410	ug/Kg	8270D
Benzo[b]fluoranthene		2700		41	ug/Kg	8270D
Benzo[k]fluoranthene		1000		41	ug/Kg	8270D
Benzo[a]pyrene		2000		41	ug/Kg	8270D
Indeno[1,2,3-cd]pyrene		1000		41	ug/Kg	8270D
Dibenz(a,h)anthracene		280		41	ug/Kg	8270D
Benzo[g,h,i]perylene		810		410	ug/Kg	8270D
1,1'-Biphenyl		270	J	410	ug/Kg	8270D
Acetophenone		320	J	410	ug/Kg	8270D
Silver		0.55	J	2.2	mg/Kg	6010C
Aluminum		6050		44.0	mg/Kg	6010C
Arsenic		6.6		3.3	mg/Kg	6010C
Barium		109		44.0	mg/Kg	6010C
Beryllium		0.35	J	0.44	mg/Kg	6010C
Calcium		27300		1100	mg/Kg	6010C
Cadmium		1.3		0.88	mg/Kg	6010C
Cobalt		5.1	J	11.0	mg/Kg	6010C
Chromium		16.0		2.2	mg/Kg	6010C
Copper		46.2		5.5	mg/Kg	6010C
Iron		16600		33.0	mg/Kg	6010C
Potassium		821	J	1100	mg/Kg	6010C
Magnesium		5040		1100	mg/Kg	6010C
Manganese		353		3.3	mg/Kg	6010C
Sodium		211	J	1100	mg/Kg	6010C
Nickel		22.2		8.8	mg/Kg	6010C
Lead		175		2.2	mg/Kg	6010C

EXECUTIVE SUMMARY - Detections

Client: AKRF Inc

Job Number: 460-85120-1

Lab Sample ID Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Vanadium		67.5		11.0	mg/Kg	6010C
Zinc		171		6.6	mg/Kg	6010C
Mercury		0.61		0.019	mg/Kg	7471B
Percent Moisture		18.8		1.0	%	Moisture
Percent Solids		81.2		1.0	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: AKRF Inc

Job Number: 460-85120-1

Lab Sample ID	Client Sample ID			Reporting		
Analyte		Result	Qualifier	Limit	Units	Method
460-85120-6	**SB-15(5-6')**					
Acetone		98	B	4.9	ug/Kg	8260C
Benzene		0.37	J	0.97	ug/Kg	8260C
Cyclohexane		0.74	J	0.97	ug/Kg	8260C
Methylcyclohexane		0.81	J	0.97	ug/Kg	8260C
o-Xylene		0.19	J	0.97	ug/Kg	8260C
Isophorone		6600		760	ug/Kg	8270D
Naphthalene		720	J	1900	ug/Kg	8270D
2-Methylnaphthalene		650	J	1900	ug/Kg	8270D
Acenaphthylene		220	J	1900	ug/Kg	8270D
Acenaphthene		330	J	1900	ug/Kg	8270D
Dibenzofuran		390	J	1900	ug/Kg	8270D
Fluorene		450	J	1900	ug/Kg	8270D
Phenanthrene		5500		1900	ug/Kg	8270D
Anthracene		1100	J	1900	ug/Kg	8270D
Carbazole		280	J	1900	ug/Kg	8270D
Fluoranthene		5400		1900	ug/Kg	8270D
Pyrene		6000		1900	ug/Kg	8270D
Benzo[a]anthracene		2700		190	ug/Kg	8270D
Chrysene		3000		1900	ug/Kg	8270D
Benzo[b]fluoranthene		3400		190	ug/Kg	8270D
Benzo[k]fluoranthene		1200		190	ug/Kg	8270D
Benzo[a]pyrene		2700		190	ug/Kg	8270D
Indeno[1,2,3-cd]pyrene		1800		190	ug/Kg	8270D
Dibenz(a,h)anthracene		500		190	ug/Kg	8270D
Benzo[g,h,i]perylene		1600	J	1900	ug/Kg	8270D
Aluminum		5480		41.1	mg/Kg	6010C
Arsenic		13.2		3.1	mg/Kg	6010C
Barium		108		41.1	mg/Kg	6010C
Beryllium		0.32	J	0.41	mg/Kg	6010C
Calcium		6530		1030	mg/Kg	6010C
Cobalt		7.3	J	10.3	mg/Kg	6010C
Chromium		35.9		2.1	mg/Kg	6010C
Copper		85.0		5.1	mg/Kg	6010C
Iron		23900		30.8	mg/Kg	6010C
Potassium		773	J	1030	mg/Kg	6010C
Magnesium		1790		1030	mg/Kg	6010C
Manganese		228		3.1	mg/Kg	6010C
Sodium		378	J	1030	mg/Kg	6010C
Nickel		16.6		8.2	mg/Kg	6010C
Lead		188		2.1	mg/Kg	6010C
Vanadium		25.3		10.3	mg/Kg	6010C
Zinc		179		6.2	mg/Kg	6010C
Mercury		0.51		0.020	mg/Kg	7471B
Percent Moisture		13.1		1.0	%	Moisture
Percent Solids		86.9		1.0	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: AKRF Inc

Job Number: 460-85120-1

Lab Sample ID	Client Sample ID			Reporting		
Analyte		Result	Qualifier	Limit	Units	Method
460-85120-7	**SB-14(1-2')**					
4-Methylphenol		63	J	390	ug/Kg	8270D
Isophorone		26	J	160	ug/Kg	8270D
Naphthalene		1300		390	ug/Kg	8270D
2-Methylnaphthalene		670		390	ug/Kg	8270D
2-Chloronaphthalene		43	J	390	ug/Kg	8270D
Acenaphthylene		370	J	390	ug/Kg	8270D
Acenaphthene		130	J	390	ug/Kg	8270D
Dibenzofuran		190	J	390	ug/Kg	8270D
Fluorene		240	J	390	ug/Kg	8270D
Phenanthrene		2100		390	ug/Kg	8270D
Anthracene		510		390	ug/Kg	8270D
Carbazole		61	J	390	ug/Kg	8270D
Fluoranthene		2000		390	ug/Kg	8270D
Pyrene		2300		390	ug/Kg	8270D
Benzo[a]anthracene		1100		39	ug/Kg	8270D
Chrysene		1400		390	ug/Kg	8270D
Benzo[b]fluoranthene		2000		39	ug/Kg	8270D
Benzo[k]fluoranthene		820		39	ug/Kg	8270D
Benzo[a]pyrene		1300		39	ug/Kg	8270D
Indeno[1,2,3-cd]pyrene		1100		39	ug/Kg	8270D
Dibenz(a,h)anthracene		320		39	ug/Kg	8270D
Benzo[g,h,i]perylene		960		390	ug/Kg	8270D
1,1'-Biphenyl		160	J	390	ug/Kg	8270D
Acetophenone		160	J	390	ug/Kg	8270D
Aluminum		2010		42.2	mg/Kg	6010C
Arsenic		33.9		3.2	mg/Kg	6010C
Barium		61.6		42.2	mg/Kg	6010C
Calcium		1170		1060	mg/Kg	6010C
Cobalt		2.6	J	10.6	mg/Kg	6010C
Chromium		11.8		2.1	mg/Kg	6010C
Copper		30.4		5.3	mg/Kg	6010C
Iron		17500		31.7	mg/Kg	6010C
Potassium		357	J	1060	mg/Kg	6010C
Magnesium		353	J	1060	mg/Kg	6010C
Manganese		22.4		3.2	mg/Kg	6010C
Sodium		203	J	1060	mg/Kg	6010C
Nickel		11.1		8.4	mg/Kg	6010C
Lead		64.8		2.1	mg/Kg	6010C
Vanadium		16.5		10.6	mg/Kg	6010C
Zinc		22.4		6.3	mg/Kg	6010C
Mercury		0.29		0.019	mg/Kg	7471B
Percent Moisture		14.7		1.0	%	Moisture
Percent Solids		85.3		1.0	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: AKRF Inc

Job Number: 460-85120-1

Lab Sample ID	Client Sample ID			Reporting		
Analyte		Result	Qualifier	Limit	Units	Method
460-85120-8	**SB-14(6-7')**					
Acetone		44	B	6.4	ug/Kg	8260C
Carbon disulfide		1.2	J	1.3	ug/Kg	8260C
Isophorone		270		150	ug/Kg	8270D
Naphthalene		18	J	370	ug/Kg	8270D
2-Methylnaphthalene		17	J	370	ug/Kg	8270D
Fluorene		9.6	J	370	ug/Kg	8270D
Phenanthrene		93	J	370	ug/Kg	8270D
Fluoranthene		89	J	370	ug/Kg	8270D
Pyrene		140	J	370	ug/Kg	8270D
Benzo[a]anthracene		51		37	ug/Kg	8270D
Chrysene		57	J	370	ug/Kg	8270D
Bis(2-ethylhexyl) phthalate		190	J	370	ug/Kg	8270D
Benzo[b]fluoranthene		62		37	ug/Kg	8270D
Benzo[a]pyrene		41		37	ug/Kg	8270D
Indeno[1,2,3-cd]pyrene		29	J	37	ug/Kg	8270D
Benzo[g,h,i]perylene		39	J	370	ug/Kg	8270D
Silver		0.47	J	2.1	mg/Kg	6010C
Aluminum		6900		42.5	mg/Kg	6010C
Arsenic		0.88	J	3.2	mg/Kg	6010C
Barium		103		42.5	mg/Kg	6010C
Beryllium		0.37	J	0.42	mg/Kg	6010C
Calcium		2350		1060	mg/Kg	6010C
Cobalt		24.8		10.6	mg/Kg	6010C
Chromium		25.8		2.1	mg/Kg	6010C
Copper		24.3		5.3	mg/Kg	6010C
Iron		19200		31.9	mg/Kg	6010C
Potassium		1270		1060	mg/Kg	6010C
Magnesium		7270		1060	mg/Kg	6010C
Manganese		731		3.2	mg/Kg	6010C
Sodium		236	J	1060	mg/Kg	6010C
Nickel		182		8.5	mg/Kg	6010C
Lead		51.8		2.1	mg/Kg	6010C
Vanadium		16.4		10.6	mg/Kg	6010C
Zinc		67.7		6.4	mg/Kg	6010C
Mercury		0.14		0.018	mg/Kg	7471B
Percent Moisture		10.3		1.0	%	Moisture
Percent Solids		89.7		1.0	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: AKRF Inc

Job Number: 460-85120-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
460-85120-9	**SB-13(1-2')**					
Isophorone		31	J	150	ug/Kg	8270D
Naphthalene		190	J	370	ug/Kg	8270D
2-Methylnaphthalene		180	J	370	ug/Kg	8270D
Acenaphthylene		37	J	370	ug/Kg	8270D
Acenaphthene		110	J	370	ug/Kg	8270D
Dibenzofuran		81	J	370	ug/Kg	8270D
Fluorene		79	J	370	ug/Kg	8270D
Phenanthrene		1000		370	ug/Kg	8270D
Anthracene		160	J	370	ug/Kg	8270D
Carbazole		57	J	370	ug/Kg	8270D
Fluoranthene		1000		370	ug/Kg	8270D
Pyrene		1500		370	ug/Kg	8270D
Benzo[a]anthracene		520		37	ug/Kg	8270D
Chrysene		710		370	ug/Kg	8270D
Bis(2-ethylhexyl) phthalate		130	J	370	ug/Kg	8270D
Benzo[b]fluoranthene		770		37	ug/Kg	8270D
Benzo[k]fluoranthene		250		37	ug/Kg	8270D
Benzo[a]pyrene		460		37	ug/Kg	8270D
Indeno[1,2,3-cd]pyrene		350		37	ug/Kg	8270D
Dibenz(a,h)anthracene		110		37	ug/Kg	8270D
Benzo[g,h,i]perylene		340	J	370	ug/Kg	8270D
1,1'-Biphenyl		52	J	370	ug/Kg	8270D
Acetophenone		22	J	370	ug/Kg	8270D
Silver		1.5	J	2.1	mg/Kg	6010C
Aluminum		4230		41.9	mg/Kg	6010C
Arsenic		16.2		3.1	mg/Kg	6010C
Barium		108		41.9	mg/Kg	6010C
Beryllium		0.45		0.42	mg/Kg	6010C
Calcium		2290		1050	mg/Kg	6010C
Cobalt		6.1	J	10.5	mg/Kg	6010C
Chromium		117		2.1	mg/Kg	6010C
Copper		90.6		5.2	mg/Kg	6010C
Iron		16500		31.4	mg/Kg	6010C
Potassium		499	J	1050	mg/Kg	6010C
Magnesium		1020	J	1050	mg/Kg	6010C
Manganese		135		3.1	mg/Kg	6010C
Sodium		101	J	1050	mg/Kg	6010C
Nickel		18.6		8.4	mg/Kg	6010C
Lead		247		2.1	mg/Kg	6010C
Vanadium		16.0		10.5	mg/Kg	6010C
Zinc		127		6.3	mg/Kg	6010C
Mercury		0.54		0.018	mg/Kg	7471B
Percent Moisture		10.7		1.0	%	Moisture
Percent Solids		89.3		1.0	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: AKRF Inc

Job Number: 460-85120-1

Lab Sample ID	Client Sample ID			Reporting		
Analyte		Result	Qualifier	Limit	Units	Method
460-85120-10	**SB-13(3-4')**					
2-Butanone (MEK)		12		7.5	ug/Kg	8260C
Acetone		98	B	7.5	ug/Kg	8260C
Benzene		0.39	J	1.5	ug/Kg	8260C
4-Methylphenol		110	J	2200	ug/Kg	8270D
Naphthalene		2800		2200	ug/Kg	8270D
2-Methylnaphthalene		1200	J	2200	ug/Kg	8270D
Acenaphthylene		820	J	2200	ug/Kg	8270D
Acenaphthene		2400		2200	ug/Kg	8270D
Dibenzofuran		2400		2200	ug/Kg	8270D
Fluorene		3100		2200	ug/Kg	8270D
Phenanthrene		24000		2200	ug/Kg	8270D
Anthracene		6400		2200	ug/Kg	8270D
Carbazole		2300		2200	ug/Kg	8270D
Fluoranthene		22000		2200	ug/Kg	8270D
Pyrene		24000		2200	ug/Kg	8270D
Benzo[a]anthracene		13000		220	ug/Kg	8270D
Chrysene		14000		2200	ug/Kg	8270D
Benzo[b]fluoranthene		18000		220	ug/Kg	8270D
Benzo[k]fluoranthene		6300		220	ug/Kg	8270D
Benzo[a]pyrene		13000		220	ug/Kg	8270D
Indeno[1,2,3-cd]pyrene		7900		220	ug/Kg	8270D
Dibenz(a,h)anthracene		2100		220	ug/Kg	8270D
Benzo[g,h,i]perylene		6500		2200	ug/Kg	8270D
1,1'-Biphenyl		510	J	2200	ug/Kg	8270D
Silver		0.52	J	2.4	mg/Kg	6010C
Aluminum		6020		47.5	mg/Kg	6010C
Arsenic		6.9		3.6	mg/Kg	6010C
Barium		566		47.5	mg/Kg	6010C
Calcium		2310		1190	mg/Kg	6010C
Cobalt		7.2	J	11.9	mg/Kg	6010C
Chromium		51.8		2.4	mg/Kg	6010C
Copper		115		5.9	mg/Kg	6010C
Iron		34000		35.6	mg/Kg	6010C
Potassium		887	J	1190	mg/Kg	6010C
Magnesium		2620		1190	mg/Kg	6010C
Manganese		229		3.6	mg/Kg	6010C
Sodium		391	J	1190	mg/Kg	6010C
Nickel		36.2		9.5	mg/Kg	6010C
Lead		2300		2.4	mg/Kg	6010C
Vanadium		14.4		11.9	mg/Kg	6010C
Zinc		161		7.1	mg/Kg	6010C
Mercury		0.83		0.022	mg/Kg	7471B
Percent Moisture		25.5		1.0	%	Moisture
Percent Solids		74.5		1.0	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: AKRF Inc

Job Number: 460-85120-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
460-85120-11	**SB-11(1-2')**					
Benzene		0.75	J	1.2	ug/Kg	8260C
Trichloroethene		0.97	J	1.2	ug/Kg	8260C
Naphthalene		3100		1900	ug/Kg	8270D
2-Methylnaphthalene		740	J	1900	ug/Kg	8270D
Acenaphthylene		1200	J	1900	ug/Kg	8270D
Acenaphthene		760	J	1900	ug/Kg	8270D
Dibenzofuran		1500	J	1900	ug/Kg	8270D
Fluorene		550	J	1900	ug/Kg	8270D
Phenanthrene		3200		1900	ug/Kg	8270D
Anthracene		2600		1900	ug/Kg	8270D
Carbazole		310	J	1900	ug/Kg	8270D
Fluoranthene		9400		1900	ug/Kg	8270D
Pyrene		11000		1900	ug/Kg	8270D
Benzo[a]anthracene		6900		190	ug/Kg	8270D
Chrysene		7600		1900	ug/Kg	8270D
Bis(2-ethylhexyl) phthalate		78	J	1900	ug/Kg	8270D
Benzo[b]fluoranthene		10000		190	ug/Kg	8270D
Benzo[k]fluoranthene		4200		190	ug/Kg	8270D
Benzo[a]pyrene		9100		190	ug/Kg	8270D
Indeno[1,2,3-cd]pyrene		5400		190	ug/Kg	8270D
Dibenz(a,h)anthracene		1500		190	ug/Kg	8270D
Benzo[g,h,i]perylene		4100		1900	ug/Kg	8270D
1,1'-Biphenyl		310	J	1900	ug/Kg	8270D
Aluminum		6070		41.7	mg/Kg	6010C
Arsenic		7.7		3.1	mg/Kg	6010C
Barium		69.7		41.7	mg/Kg	6010C
Beryllium		0.38	J	0.42	mg/Kg	6010C
Calcium		5630		1040	mg/Kg	6010C
Cobalt		5.1	J	10.4	mg/Kg	6010C
Chromium		18.1		2.1	mg/Kg	6010C
Copper		56.1		5.2	mg/Kg	6010C
Iron		16200		31.2	mg/Kg	6010C
Potassium		925	J	1040	mg/Kg	6010C
Magnesium		1830		1040	mg/Kg	6010C
Manganese		127		3.1	mg/Kg	6010C
Sodium		125	J	1040	mg/Kg	6010C
Nickel		13.6		8.3	mg/Kg	6010C
Lead		149		2.1	mg/Kg	6010C
Vanadium		21.1		10.4	mg/Kg	6010C
Zinc		94.9		6.2	mg/Kg	6010C
Mercury		0.36		0.019	mg/Kg	7471B
Percent Moisture		12.7		1.0	%	Moisture
Percent Solids		87.3		1.0	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: AKRF Inc

Job Number: 460-85120-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
460-85120-12	**SB-11(5-6')**					
Benzene		4.9		1.0	ug/Kg	8260C
Cyclohexane		5.4		1.0	ug/Kg	8260C
Ethylbenzene		5.7		1.0	ug/Kg	8260C
Isopropylbenzene		3.5		1.0	ug/Kg	8260C
Methylcyclohexane		4.0		1.0	ug/Kg	8260C
m-Xylene & p-Xylene		23		1.0	ug/Kg	8260C
o-Xylene		15		1.0	ug/Kg	8260C
Toluene		3.1		1.0	ug/Kg	8260C
Phenol		880	J	4000	ug/Kg	8270D
4-Methylphenol		690	J	4000	ug/Kg	8270D
Isophorone		210	J	1600	ug/Kg	8270D
Naphthalene		8200		4000	ug/Kg	8270D
2-Methylnaphthalene		2400	J	4000	ug/Kg	8270D
2-Chloronaphthalene		420	J	4000	ug/Kg	8270D
Acenaphthylene		880	J	4000	ug/Kg	8270D
Acenaphthene		5100		4000	ug/Kg	8270D
Dibenzofuran		4100		4000	ug/Kg	8270D
Fluorene		5100		4000	ug/Kg	8270D
Phenanthrene		52000		4000	ug/Kg	8270D
Anthracene		6800		4000	ug/Kg	8270D
Carbazole		490	J	4000	ug/Kg	8270D
Fluoranthene		35000		4000	ug/Kg	8270D
Pyrene		28000		4000	ug/Kg	8270D
Benzo[a]anthracene		12000		400	ug/Kg	8270D
Chrysene		18000		4000	ug/Kg	8270D
Benzo[b]fluoranthene		20000		400	ug/Kg	8270D
Benzo[k]fluoranthene		6500		400	ug/Kg	8270D
Benzo[a]pyrene		7000		400	ug/Kg	8270D
Indeno[1,2,3-cd]pyrene		5300		400	ug/Kg	8270D
Dibenz(a,h)anthracene		1600		400	ug/Kg	8270D
Benzo[g,h,i]perylene		4200		4000	ug/Kg	8270D
1,1'-Biphenyl		1200	J	4000	ug/Kg	8270D
Aluminum		4860		47.5	mg/Kg	6010C
Arsenic		7.4		3.6	mg/Kg	6010C
Barium		39.7	J	47.5	mg/Kg	6010C
Calcium		12400		1190	mg/Kg	6010C
Cadmium		0.51	J	0.95	mg/Kg	6010C
Cobalt		2.8	J	11.9	mg/Kg	6010C
Chromium		6.4		2.4	mg/Kg	6010C
Copper		27.7		5.9	mg/Kg	6010C
Iron		6580		35.6	mg/Kg	6010C
Potassium		503	J	1190	mg/Kg	6010C
Magnesium		1880		1190	mg/Kg	6010C
Manganese		212		3.6	mg/Kg	6010C
Sodium		569	J	1190	mg/Kg	6010C
Nickel		9.2	J	9.5	mg/Kg	6010C

EXECUTIVE SUMMARY - Detections

Client: AKRF Inc

Job Number: 460-85120-1

Lab Sample ID Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Lead		77.6		2.4	mg/Kg	6010C
Vanadium		18.3		11.9	mg/Kg	6010C
Zinc		126		7.1	mg/Kg	6010C
Mercury		0.13		0.019	mg/Kg	7471B
Percent Moisture		17.4		1.0	%	Moisture
Percent Solids		82.6		1.0	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: AKRF Inc

Job Number: 460-85120-1

Lab Sample ID	Client Sample ID			Reporting		
Analyte		Result	Qualifier	Limit	Units	Method
460-85120-13	**SB-8(1-2')**					
Isophorone		25	J	320	ug/Kg	8270D
Naphthalene		280	J	780	ug/Kg	8270D
2-Methylnaphthalene		210	J	780	ug/Kg	8270D
Acenaphthylene		52	J	780	ug/Kg	8270D
Acenaphthene		590	J	780	ug/Kg	8270D
Dibenzofuran		320	J	780	ug/Kg	8270D
Fluorene		450	J	780	ug/Kg	8270D
Phenanthrene		5100		780	ug/Kg	8270D
Anthracene		1100		780	ug/Kg	8270D
Carbazole		400	J	780	ug/Kg	8270D
Fluoranthene		4300		780	ug/Kg	8270D
Pyrene		5300		780	ug/Kg	8270D
Benzo[a]anthracene		2300		78	ug/Kg	8270D
Chrysene		2400		780	ug/Kg	8270D
Bis(2-ethylhexyl) phthalate		71	J	780	ug/Kg	8270D
Benzo[b]fluoranthene		2700		78	ug/Kg	8270D
Benzo[k]fluoranthene		1100		78	ug/Kg	8270D
Benzo[a]pyrene		2100		78	ug/Kg	8270D
Indeno[1,2,3-cd]pyrene		1300		78	ug/Kg	8270D
Dibenz(a,h)anthracene		320		78	ug/Kg	8270D
Benzo[g,h,i]perylene		1000		780	ug/Kg	8270D
Aluminum		6750		42.4	mg/Kg	6010C
Arsenic		12.2		3.2	mg/Kg	6010C
Barium		124		42.4	mg/Kg	6010C
Beryllium		0.51		0.42	mg/Kg	6010C
Calcium		25200		1060	mg/Kg	6010C
Cobalt		7.0	J	10.6	mg/Kg	6010C
Chromium		22.3		2.1	mg/Kg	6010C
Copper		68.8		5.3	mg/Kg	6010C
Iron		19500		31.8	mg/Kg	6010C
Potassium		902	J	1060	mg/Kg	6010C
Magnesium		3680		1060	mg/Kg	6010C
Manganese		283		3.2	mg/Kg	6010C
Sodium		232	J	1060	mg/Kg	6010C
Nickel		16.6		8.5	mg/Kg	6010C
Lead		269		2.1	mg/Kg	6010C
Vanadium		22.5		10.6	mg/Kg	6010C
Zinc		253		6.4	mg/Kg	6010C
Mercury		0.38		0.018	mg/Kg	7471B
Percent Moisture		15.7		1.0	%	Moisture
Percent Solids		84.3		1.0	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: AKRF Inc

Job Number: 460-85120-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
460-85120-14	**SB-8(9-10')**					
Phenanthrene		66	J	400	ug/Kg	8270D
Fluoranthene		120	J	400	ug/Kg	8270D
Pyrene		160	J	400	ug/Kg	8270D
Benzo[a]anthracene		81		40	ug/Kg	8270D
Chrysene		79	J	400	ug/Kg	8270D
Bis(2-ethylhexyl) phthalate		430		400	ug/Kg	8270D
Benzo[b]fluoranthene		80		40	ug/Kg	8270D
Benzo[a]pyrene		65		40	ug/Kg	8270D
Indeno[1,2,3-cd]pyrene		31	J	40	ug/Kg	8270D
Benzo[g,h,i]perylene		37	J	400	ug/Kg	8270D
Aluminum		7530		41.2	mg/Kg	6010C
Arsenic		3.4		3.1	mg/Kg	6010C
Barium		44.0		41.2	mg/Kg	6010C
Beryllium		0.37	J	0.41	mg/Kg	6010C
Calcium		18100		1030	mg/Kg	6010C
Cobalt		6.2	J	10.3	mg/Kg	6010C
Chromium		14.0		2.1	mg/Kg	6010C
Copper		18.6		5.1	mg/Kg	6010C
Iron		14000		30.9	mg/Kg	6010C
Potassium		940	J	1030	mg/Kg	6010C
Magnesium		11100		1030	mg/Kg	6010C
Manganese		469		3.1	mg/Kg	6010C
Sodium		251	J	1030	mg/Kg	6010C
Nickel		15.6		8.2	mg/Kg	6010C
Lead		36.3		2.1	mg/Kg	6010C
Vanadium		19.7		10.3	mg/Kg	6010C
Zinc		77.6		6.2	mg/Kg	6010C
Mercury		0.030		0.019	mg/Kg	7471B
Percent Moisture		17.0		1.0	%	Moisture
Percent Solids		83.0		1.0	%	Moisture
460-85120-16FB	**FB**					
Chloroform		0.69	J	1.0	ug/L	8260C
Dissolved						
Sodium		723	J	5000	ug/L	6010C

METHOD SUMMARY

Client: AKRF Inc

Job Number: 460-85120-1

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Volatile Organic Compounds by GC/MS	TAL EDI	SW846 8260C	
Closed System Purge and Trap	TAL EDI		SW846 5035
Semivolatile Organic Compounds (GC/MS)	TAL EDI	SW846 8270D	
Microwave Extraction	TAL EDI		SW846 3546
Organochlorine Pesticides (GC)	TAL EDI	SW846 8081B	
Microwave Extraction	TAL EDI		SW846 3546
Polychlorinated Biphenyls (PCBs) by Gas Chromatography	TAL EDI	SW846 8082A	
Microwave Extraction	TAL EDI		SW846 3546
Metals (ICP)	TAL EDI	SW846 6010C	
Preparation, Metals	TAL EDI		SW846 3050B
Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)	TAL EDI	SW846 7471B	
Preparation, Mercury	TAL EDI		SW846 7471B
Percent Moisture	TAL EDI	EPA Moisture	
Matrix: Water			
Volatile Organic Compounds by GC/MS	TAL EDI	SW846 8260C	
Purge and Trap	TAL EDI		SW846 5030C
Semivolatile Organic Compounds (GC/MS)	TAL EDI	SW846 8270D	
Liquid-Liquid Extraction (Separatory Funnel)	TAL EDI		SW846 3510C
Metals (ICP)	TAL EDI	SW846 6010C	
Preparation, Total Metals	TAL EDI		SW846 3010A
Metals (ICP)	TAL EDI	SW846 6010C	
Preparation, Total Metals	TAL EDI		SW846 3010A
Sample Filtration	TAL EDI		FILTRATION
Mercury (CVAA)	TAL EDI	SW846 7470A	
Preparation, Mercury	TAL EDI		SW846 7470A
Mercury (CVAA)	TAL EDI	SW846 7470A	
Preparation, Mercury	TAL EDI		SW846 7470A
Sample Filtration	TAL EDI		FILTRATION

Lab References:

TAL EDI = TestAmerica Edison

Method References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: AKRF Inc

Job Number: 460-85120-1

Method	Analyst	Analyst ID
SW846 8260C	Desai, Saurab	SZD
SW846 8260C	Moroney, Christopher J	CJM
SW846 8260C	Tupayachi, Audberto	AAT
SW846 8270D	Crocco, Michael	MMC
SW846 8270D	Gillins, Lauren E	LEG
SW846 8270D	Manlangit, Ferdie	FAM
SW846 8270D	Szczech, Anna	AAS
SW846 8081B	Foleyson, Temitope S	TSF
SW846 8081B	Kapoor, Sita	SAK
SW846 8082A	Patel, Jignesh	JHP
SW846 6010C	Huang, Yixin	YZH
SW846 6010C	Patel, Purva H	PHP
SW846 7470A	Patel, Purva H	PHP
SW846 7470A	Sheikh, Razia B	RBS
SW846 7471B	Patel, Purva H	PHP
SW846 7471B	Staib, Thomas	TJS
EPA Moisture	Martinez, Victor	VMM

SAMPLE SUMMARY

Client: AKRF Inc

Job Number: 460-85120-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
460-85120-1	SB-5(1-2')	Solid	10/24/2014 0945	10/24/2014 1820
460-85120-2	SB-5(6-7')	Solid	10/24/2014 0950	10/24/2014 1820
460-85120-3	SB-16(1-2')	Solid	10/24/2014 1020	10/24/2014 1820
460-85120-4	SB-16(7-8')	Solid	10/24/2014 1030	10/24/2014 1820
460-85120-5	SB-15(1-2')	Solid	10/24/2014 1045	10/24/2014 1820
460-85120-6	SB-15(5-6')	Solid	10/24/2014 1050	10/24/2014 1820
460-85120-7	SB-14(1-2')	Solid	10/24/2014 1120	10/24/2014 1820
460-85120-8	SB-14(6-7')	Solid	10/24/2014 1130	10/24/2014 1820
460-85120-9	SB-13(1-2')	Solid	10/24/2014 1145	10/24/2014 1820
460-85120-10	SB-13(3-4')	Solid	10/24/2014 1150	10/24/2014 1820
460-85120-11	SB-11(1-2')	Solid	10/24/2014 1300	10/24/2014 1820
460-85120-12	SB-11(5-6')	Solid	10/24/2014 1305	10/24/2014 1820
460-85120-13	SB-8(1-2')	Solid	10/24/2014 1330	10/24/2014 1820
460-85120-14	SB-8(9-10')	Solid	10/24/2014 1340	10/24/2014 1820
460-85120-15TB	TB2	Water	10/24/2014 1400	10/24/2014 1820
460-85120-16FB	FB	Water	10/24/2014 1430	10/24/2014 1820

SAMPLE RESULTS

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-5(1-2')**

Lab Sample ID: 460-85120-1

Client Matrix: Solid

% Moisture: 9.6

Date Sampled: 10/24/2014 0945

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258664	Instrument ID:	CVOAMS12
Prep Method:	5035	Prep Batch:	460-258228	Lab File ID:	O92808.D
Dilution:	1.0			Initial Weight/Volume:	5.22 g
Analysis Date:	10/28/2014 1034			Final Weight/Volume:	5 mL
Prep Date:	10/25/2014 0005				

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.1	U	0.21	1.1
1,1,2,2-Tetrachloroethane	1.1	U	0.14	1.1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.1	U	0.22	1.1
1,1,2-Trichloroethane	1.1	U	0.25	1.1
1,1-Dichloroethane	1.1	U	0.19	1.1
1,1-Dichloroethene	1.1	U	0.24	1.1
1,2,3-Trichlorobenzene	1.1	U	0.35	1.1
1,2,4-Trichlorobenzene	1.1	U	0.29	1.1
1,2-Dichloropropane	1.1	U	0.25	1.1
1,3-Dichlorobenzene	1.1	U	0.21	1.1
1,4-Dichlorobenzene	1.1	U	0.22	1.1
1,4-Dioxane	21	U *	13	21
2-Butanone (MEK)	5.3	U	1.6	5.3
2-Hexanone	5.3	U	0.73	5.3
4-Methyl-2-pentanone (MIBK)	5.3	U	0.72	5.3
Acetone	5.3	U	0.24	5.3
Benzene	1.1	U	0.20	1.1
Bromoform	1.1	U	0.16	1.1
Bromomethane	1.1	U	0.38	1.1
Carbon disulfide	1.1	U	0.18	1.1
Carbon tetrachloride	1.1	U	0.19	1.1
Chlorobenzene	1.1	U	0.18	1.1
Chlorobromomethane	1.1	U	0.33	1.1
Chlorodibromomethane	1.1	U	0.21	1.1
Chloroethane	1.1	U	0.51	1.1
Chloroform	1.1	U	0.17	1.1
Chloromethane	1.1	U	0.24	1.1
cis-1,2-Dichloroethene	1.1	U	0.23	1.1
cis-1,3-Dichloropropene	1.1	U	0.18	1.1
Cyclohexane	1.1	U	0.22	1.1
Dichlorobromomethane	1.1	U	0.17	1.1
Dichlorodifluoromethane	1.1	U	0.31	1.1
Ethylbenzene	1.1	U	0.15	1.1
Ethylene Dibromide	1.1	U	0.19	1.1
Isopropylbenzene	1.1	U	0.20	1.1
Methyl acetate	5.3	U	1.0	5.3
Methyl tert-butyl ether	1.1	U	0.21	1.1
Methylcyclohexane	1.1	U	0.20	1.1
Methylene Chloride	1.1	U	0.40	1.1
m-Xylene & p-Xylene	1.1	U	0.22	1.1
o-Xylene	1.1	U	0.18	1.1
Styrene	1.1	U	0.25	1.1
Tetrachloroethene	1.1	U	0.21	1.1
Toluene	1.1	U	0.29	1.1
trans-1,2-Dichloroethene	1.1	U	0.22	1.1
trans-1,3-Dichloropropene	1.1	U	0.19	1.1

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-5(1-2')**

Lab Sample ID: 460-85120-1

Client Matrix: Solid

% Moisture: 9.6

Date Sampled: 10/24/2014 0945

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258664	Instrument ID:	CVOAMS12
Prep Method:	5035	Prep Batch:	460-258228	Lab File ID:	O92808.D
Dilution:	1.0			Initial Weight/Volume:	5.22 g
Analysis Date:	10/28/2014 1034			Final Weight/Volume:	5 mL
Prep Date:	10/25/2014 0005				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Trichloroethene		1.1	U	0.21	1.1
Trichlorofluoromethane		1.1	U	0.20	1.1
Vinyl chloride		1.1	U	0.25	1.1
1,2-Dichloroethane		1.1	U	0.30	1.1
1,2-Dichlorobenzene		1.1	U	0.14	1.1
1,2-Dibromo-3-Chloropropane		1.1	U	0.49	1.1

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	89		70 - 130
4-Bromofluorobenzene	97		70 - 130
Dibromofluoromethane (Surr)	101		70 - 130
Toluene-d8 (Surr)	94		70 - 130

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-5(1-2')**

Lab Sample ID: 460-85120-1

Client Matrix: Solid

% Moisture: 9.6

Date Sampled: 10/24/2014 0945

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258664	Instrument ID:	CVOAMS12
Prep Method:	5035	Prep Batch:	460-258228	Lab File ID:	O92808.D
Dilution:	1.0			Initial Weight/Volume:	5.22 g
Analysis Date:	10/28/2014 1034			Final Weight/Volume:	5 mL
Prep Date:	10/25/2014 0005				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-5(6-7')**

Lab Sample ID: 460-85120-2

Client Matrix: Solid

% Moisture: 12.8

Date Sampled: 10/24/2014 0950

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258887	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258228	Lab File ID:	K33484.D
Dilution:	1.0			Initial Weight/Volume:	5.28 g
Analysis Date:	10/29/2014 1243			Final Weight/Volume:	5 mL
Prep Date:	10/25/2014 0006				

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.1	U	0.22	1.1
1,1,2,2-Tetrachloroethane	1.1	U	0.14	1.1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.1	U	0.23	1.1
1,1,2-Trichloroethane	1.1	U *	0.26	1.1
1,1-Dichloroethane	1.1	U	0.20	1.1
1,1-Dichloroethene	1.1	U	0.25	1.1
1,2,3-Trichlorobenzene	1.1	U	0.36	1.1
1,2,4-Trichlorobenzene	1.1	U	0.29	1.1
1,2-Dichloropropane	1.1	U	0.26	1.1
1,3-Dichlorobenzene	1.1	U	0.22	1.1
1,4-Dichlorobenzene	1.1	U	0.23	1.1
1,4-Dioxane	22	U	13	22
2-Butanone (MEK)	5.4	U	1.6	5.4
2-Hexanone	5.4	U	0.75	5.4
4-Methyl-2-pentanone (MIBK)	5.4	U	0.74	5.4
Acetone	5.4	U	0.25	5.4
Benzene	1.1	U	0.21	1.1
Bromoform	1.1	U	0.16	1.1
Bromomethane	1.1	U	0.39	1.1
Carbon disulfide	1.1	U	0.18	1.1
Carbon tetrachloride	1.1	U	0.20	1.1
Chlorobenzene	1.1	U	0.18	1.1
Chlorobromomethane	1.1	U	0.34	1.1
Chlorodibromomethane	1.1	U	0.22	1.1
Chloroethane	1.1	U	0.52	1.1
Chloroform	1.1	U	0.17	1.1
Chloromethane	1.1	U	0.25	1.1
cis-1,2-Dichloroethene	1.1	U	0.24	1.1
cis-1,3-Dichloropropene	1.1	U	0.18	1.1
Cyclohexane	1.1	U	0.23	1.1
Dichlorobromomethane	1.1	U	0.17	1.1
Dichlorodifluoromethane	1.1	U	0.32	1.1
Ethylbenzene	1.1	U	0.15	1.1
Ethylene Dibromide	1.1	U	0.20	1.1
Isopropylbenzene	1.1	U	0.21	1.1
Methyl acetate	5.4	U	1.0	5.4
Methyl tert-butyl ether	1.1	U	0.22	1.1
Methylcyclohexane	1.1	U	0.21	1.1
Methylene Chloride	1.1	U	0.41	1.1
m-Xylene & p-Xylene	1.1	U	0.23	1.1
o-Xylene	1.1	U	0.18	1.1
Styrene	1.1	U	0.26	1.1
Tetrachloroethene	1.1	U	0.22	1.1
Toluene	1.1	U	0.29	1.1
trans-1,2-Dichloroethene	1.1	U	0.23	1.1
trans-1,3-Dichloropropene	1.1	U	0.20	1.1

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-5(6-7')**

Lab Sample ID: 460-85120-2

Client Matrix: Solid

% Moisture: 12.8

Date Sampled: 10/24/2014 0950

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258887	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258228	Lab File ID:	K33484.D
Dilution:	1.0			Initial Weight/Volume:	5.28 g
Analysis Date:	10/29/2014 1243			Final Weight/Volume:	5 mL
Prep Date:	10/25/2014 0006				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Trichloroethene		1.1	U	0.22	1.1
Trichlorofluoromethane		1.1	U	0.21	1.1
Vinyl chloride		1.1	U	0.26	1.1
1,2-Dichloroethane		1.1	U	0.30	1.1
1,2-Dichlorobenzene		1.1	U	0.14	1.1
1,2-Dibromo-3-Chloropropane		1.1	U *	0.50	1.1

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	101		70 - 130
4-Bromofluorobenzene	92		70 - 130
Dibromofluoromethane (Surr)	108		70 - 130
Toluene-d8 (Surr)	113		70 - 130

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-5(6-7')**

Lab Sample ID: 460-85120-2

Client Matrix: Solid

% Moisture: 12.8

Date Sampled: 10/24/2014 0950

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258887	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258228	Lab File ID:	K33484.D
Dilution:	1.0			Initial Weight/Volume:	5.28 g
Analysis Date:	10/29/2014 1243			Final Weight/Volume:	5 mL
Prep Date:	10/25/2014 0006				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-16(1-2')**

Lab Sample ID: 460-85120-3

Client Matrix: Solid

% Moisture: 6.4

Date Sampled: 10/24/2014 1020

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258664	Instrument ID:	CVOAMS12
Prep Method:	5035	Prep Batch:	460-258228	Lab File ID:	O92810.D
Dilution:	1.0			Initial Weight/Volume:	5.19 g
Analysis Date:	10/28/2014 1126			Final Weight/Volume:	5 mL
Prep Date:	10/25/2014 0007				

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.21	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.13	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	0.22	1.0
1,1,2-Trichloroethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.19	1.0
1,1-Dichloroethene	1.0	U	0.24	1.0
1,2,3-Trichlorobenzene	1.0	U	0.34	1.0
1,2,4-Trichlorobenzene	1.0	U	0.28	1.0
1,2-Dichloropropane	1.0	U	0.25	1.0
1,3-Dichlorobenzene	1.0	U	0.21	1.0
1,4-Dichlorobenzene	1.0	U	0.22	1.0
1,4-Dioxane	21	U *	12	21
2-Butanone (MEK)	5.1	U	1.5	5.1
2-Hexanone	5.1	U	0.71	5.1
4-Methyl-2-pentanone (MIBK)	5.1	U	0.70	5.1
Acetone	5.1	U	0.24	5.1
Benzene	1.0	U	0.20	1.0
Bromoform	1.0	U	0.15	1.0
Bromomethane	1.0	U	0.37	1.0
Carbon disulfide	1.0	U	0.17	1.0
Carbon tetrachloride	1.0	U	0.19	1.0
Chlorobenzene	1.0	U	0.17	1.0
Chlorobromomethane	1.0	U	0.32	1.0
Chlorodibromomethane	1.0	U	0.21	1.0
Chloroethane	1.0	U	0.49	1.0
Chloroform	1.0	U	0.16	1.0
Chloromethane	1.0	U	0.24	1.0
cis-1,2-Dichloroethene	1.0	U	0.23	1.0
cis-1,3-Dichloropropene	1.0	U	0.17	1.0
Cyclohexane	1.0	U	0.22	1.0
Dichlorobromomethane	1.0	U	0.16	1.0
Dichlorodifluoromethane	1.0	U	0.30	1.0
Ethylbenzene	1.0	U	0.14	1.0
Ethylene Dibromide	1.0	U	0.19	1.0
Isopropylbenzene	1.0	U	0.20	1.0
Methyl acetate	5.1	U	0.97	5.1
Methyl tert-butyl ether	1.0	U	0.21	1.0
Methylcyclohexane	1.0	U	0.20	1.0
Methylene Chloride	1.0	U	0.39	1.0
m-Xylene & p-Xylene	1.0	U	0.22	1.0
o-Xylene	1.0	U	0.17	1.0
Styrene	1.0	U	0.25	1.0
Tetrachloroethene	1.0	U	0.21	1.0
Toluene	1.0	U	0.28	1.0
trans-1,2-Dichloroethene	1.0	U	0.22	1.0
trans-1,3-Dichloropropene	1.0	U	0.19	1.0

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-16(1-2')**

Lab Sample ID: 460-85120-3

Client Matrix: Solid

% Moisture: 6.4

Date Sampled: 10/24/2014 1020

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258664	Instrument ID:	CVOAMS12
Prep Method:	5035	Prep Batch:	460-258228	Lab File ID:	O92810.D
Dilution:	1.0			Initial Weight/Volume:	5.19 g
Analysis Date:	10/28/2014 1126			Final Weight/Volume:	5 mL
Prep Date:	10/25/2014 0007				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Trichloroethene		1.0	U	0.21	1.0
Trichlorofluoromethane		1.0	U	0.20	1.0
Vinyl chloride		1.0	U	0.25	1.0
1,2-Dichloroethane		1.0	U	0.29	1.0
1,2-Dichlorobenzene		1.0	U	0.13	1.0
1,2-Dibromo-3-Chloropropane		1.0	U	0.47	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	84		70 - 130
4-Bromofluorobenzene	96		70 - 130
Dibromofluoromethane (Surr)	99		70 - 130
Toluene-d8 (Surr)	88		70 - 130

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-16(1-2')**

Lab Sample ID: 460-85120-3

Client Matrix: Solid

% Moisture: 6.4

Date Sampled: 10/24/2014 1020

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258664	Instrument ID:	CVOAMS12
Prep Method:	5035	Prep Batch:	460-258228	Lab File ID:	O92810.D
Dilution:	1.0			Initial Weight/Volume:	5.19 g
Analysis Date:	10/28/2014 1126			Final Weight/Volume:	5 mL
Prep Date:	10/25/2014 0007				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-16(7-8')**

Lab Sample ID: 460-85120-4

Client Matrix: Solid

% Moisture: 13.6

Date Sampled: 10/24/2014 1030

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258664	Instrument ID:	CVOAMS12
Prep Method:	5035	Prep Batch:	460-258228	Lab File ID:	O92811.D
Dilution:	1.0			Initial Weight/Volume:	5.41 g
Analysis Date:	10/28/2014 1152			Final Weight/Volume:	5 mL
Prep Date:	10/25/2014 0008				

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.1	U	0.21	1.1
1,1,2,2-Tetrachloroethane	1.1	U	0.14	1.1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.1	U	0.22	1.1
1,1,2-Trichloroethane	1.1	U	0.26	1.1
1,1-Dichloroethane	1.1	U	0.19	1.1
1,1-Dichloroethene	1.1	U	0.25	1.1
1,2,3-Trichlorobenzene	1.1	U	0.35	1.1
1,2,4-Trichlorobenzene	1.1	U	0.29	1.1
1,2-Dichloropropane	1.1	U	0.26	1.1
1,3-Dichlorobenzene	1.1	U	0.21	1.1
1,4-Dichlorobenzene	1.1	U	0.22	1.1
1,4-Dioxane	21	U *	13	21
2-Butanone (MEK)	9.6		1.6	5.4
2-Hexanone	5.4	U	0.74	5.4
4-Methyl-2-pentanone (MIBK)	5.4	U	0.73	5.4
Acetone	220	B	0.25	5.4
Benzene	3.6		0.20	1.1
Bromoform	1.1	U	0.16	1.1
Bromomethane	1.1	U	0.39	1.1
Carbon disulfide	2.1		0.18	1.1
Carbon tetrachloride	1.1	U	0.19	1.1
Chlorobenzene	1.1	U	0.18	1.1
Chlorobromomethane	1.1	U	0.33	1.1
Chlorodibromomethane	1.1	U	0.21	1.1
Chloroethane	1.1	U	0.51	1.1
Chloroform	1.1	U	0.17	1.1
Chloromethane	1.1	U	0.25	1.1
cis-1,2-Dichloroethene	1.1	U	0.24	1.1
cis-1,3-Dichloropropene	1.1	U	0.18	1.1
Cyclohexane	1.0	J	0.22	1.1
Dichlorobromomethane	1.1	U	0.17	1.1
Dichlorodifluoromethane	1.1	U	0.31	1.1
Ethylbenzene	0.90	J	0.15	1.1
Ethylene Dibromide	1.1	U	0.19	1.1
Isopropylbenzene	0.56	J	0.20	1.1
Methyl acetate	5.4	U	1.0	5.4
Methyl tert-butyl ether	1.1	U	0.21	1.1
Methylcyclohexane	2.0		0.20	1.1
Methylene Chloride	1.1	U	0.41	1.1
m-Xylene & p-Xylene	3.8		0.22	1.1
o-Xylene	3.8		0.18	1.1
Styrene	1.1	U	0.26	1.1
Tetrachloroethene	1.1	U	0.21	1.1
Toluene	4.9		0.29	1.1
trans-1,2-Dichloroethene	1.1	U	0.22	1.1
trans-1,3-Dichloropropene	1.1	U	0.19	1.1

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-16(7-8')**

Lab Sample ID: 460-85120-4

Client Matrix: Solid

% Moisture: 13.6

Date Sampled: 10/24/2014 1030

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258664	Instrument ID:	CVOAMS12
Prep Method:	5035	Prep Batch:	460-258228	Lab File ID:	O92811.D
Dilution:	1.0			Initial Weight/Volume:	5.41 g
Analysis Date:	10/28/2014 1152			Final Weight/Volume:	5 mL
Prep Date:	10/25/2014 0008				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Trichloroethene		1.1	U	0.21	1.1
Trichlorofluoromethane		1.1	U	0.20	1.1
Vinyl chloride		1.1	U	0.26	1.1
1,2-Dichloroethane		1.1	U	0.30	1.1
1,2-Dichlorobenzene		1.1	U	0.14	1.1
1,2-Dibromo-3-Chloropropane		1.1	U	0.49	1.1

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	94		70 - 130
4-Bromofluorobenzene	104		70 - 130
Dibromofluoromethane (Surr)	37	*	70 - 130
Toluene-d8 (Surr)	98		70 - 130

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-16(7-8')**

Lab Sample ID: 460-85120-4

Client Matrix: Solid

% Moisture: 13.6

Date Sampled: 10/24/2014 1030

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258664	Instrument ID:	CVOAMS12
Prep Method:	5035	Prep Batch:	460-258228	Lab File ID:	O92811.D
Dilution:	1.0			Initial Weight/Volume:	5.41 g
Analysis Date:	10/28/2014 1152			Final Weight/Volume:	5 mL
Prep Date:	10/25/2014 0008				

Tentatively Identified Compounds **Number TIC's Found:** **9**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
95-63-6	Benzene, 1,2,4-trimethyl-	9.96	8.4	J N
496-11-7	Indane	10.90	8.2	J N
91-20-3	Naphthalene	13.19	270	J N
270-82-6	2-Benzothiophene #	13.30	5.4	J N
91-57-6	Naphthalene, 2-methyl-	14.13	39	J N
90-12-0	Naphthalene, 1-methyl-	14.27	26	J N
581-42-0	Naphthalene, 2,6-dimethyl-	14.90	5.7	J N
582-16-1	Naphthalene, 2,7-dimethyl-	15.00	8.9	J N
83-32-9	Acenaphthene	15.47	6.3	J N

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-15(1-2')**

Lab Sample ID: 460-85120-5

Client Matrix: Solid

% Moisture: 18.8

Date Sampled: 10/24/2014 1045

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258664	Instrument ID:	CVOAMS12
Prep Method:	5035	Prep Batch:	460-258228	Lab File ID:	O92812.D
Dilution:	1.0			Initial Weight/Volume:	4.92 g
Analysis Date:	10/28/2014 1218			Final Weight/Volume:	5 mL
Prep Date:	10/25/2014 0009				

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.3	U	0.25	1.3
1,1,2,2-Tetrachloroethane	1.3	U	0.16	1.3
1,1,2-Trichloro-1,2,2-trifluoroethane	1.3	U	0.26	1.3
1,1,2-Trichloroethane	1.3	U	0.30	1.3
1,1-Dichloroethane	0.88	J	0.23	1.3
1,1-Dichloroethene	1.3	U	0.29	1.3
1,2,3-Trichlorobenzene	1.3	U	0.41	1.3
1,2,4-Trichlorobenzene	1.3	U	0.34	1.3
1,2-Dichloropropane	1.3	U	0.30	1.3
1,3-Dichlorobenzene	1.3	U	0.25	1.3
1,4-Dichlorobenzene	1.3	U	0.26	1.3
1,4-Dioxane	25	U *	15	25
2-Butanone (MEK)	6.3	U	1.8	6.3
2-Hexanone	6.3	U	0.86	6.3
4-Methyl-2-pentanone (MIBK)	6.3	U	0.85	6.3
Acetone	47	B	0.29	6.3
Benzene	0.26	J	0.24	1.3
Bromoform	1.3	U	0.19	1.3
Bromomethane	1.3	U	0.45	1.3
Carbon disulfide	1.3	U	0.21	1.3
Carbon tetrachloride	1.3	U	0.23	1.3
Chlorobenzene	1.3	U	0.21	1.3
Chlorobromomethane	1.3	U	0.39	1.3
Chlorodibromomethane	1.3	U	0.25	1.3
Chloroethane	1.3	U	0.60	1.3
Chloroform	1.3	U	0.20	1.3
Chloromethane	1.3	U	0.29	1.3
cis-1,2-Dichloroethene	1.3	U	0.28	1.3
cis-1,3-Dichloropropene	1.3	U	0.21	1.3
Cyclohexane	1.3	U	0.26	1.3
Dichlorobromomethane	1.3	U	0.20	1.3
Dichlorodifluoromethane	1.3	U	0.36	1.3
Ethylbenzene	1.3	U	0.18	1.3
Ethylene Dibromide	1.3	U	0.23	1.3
Isopropylbenzene	1.3	U	0.24	1.3
Methyl acetate	6.3	U	1.2	6.3
Methyl tert-butyl ether	1.3	U	0.25	1.3
Methylcyclohexane	0.78	J	0.24	1.3
Methylene Chloride	1.3	U	0.48	1.3
m-Xylene & p-Xylene	1.3	U	0.26	1.3
o-Xylene	1.3	U	0.21	1.3
Styrene	1.3	U	0.30	1.3
Tetrachloroethene	1.3	U	0.25	1.3
Toluene	1.3	U	0.34	1.3
trans-1,2-Dichloroethene	1.3	U	0.26	1.3
trans-1,3-Dichloropropene	1.3	U	0.23	1.3

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-15(1-2')**

Lab Sample ID: 460-85120-5

Client Matrix: Solid

% Moisture: 18.8

Date Sampled: 10/24/2014 1045

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258664	Instrument ID:	CVOAMS12
Prep Method:	5035	Prep Batch:	460-258228	Lab File ID:	O92812.D
Dilution:	1.0			Initial Weight/Volume:	4.92 g
Analysis Date:	10/28/2014 1218			Final Weight/Volume:	5 mL
Prep Date:	10/25/2014 0009				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Trichloroethene		1.3	U	0.25	1.3
Trichlorofluoromethane		1.3	U	0.24	1.3
Vinyl chloride		1.3	U	0.30	1.3
1,2-Dichloroethane		1.3	U	0.35	1.3
1,2-Dichlorobenzene		1.3	U	0.16	1.3
1,2-Dibromo-3-Chloropropane		1.3	U	0.58	1.3

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	86		70 - 130
4-Bromofluorobenzene	91		70 - 130
Dibromofluoromethane (Surr)	107		70 - 130
Toluene-d8 (Surr)	97		70 - 130

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-15(1-2')**

Lab Sample ID: 460-85120-5

Client Matrix: Solid

% Moisture: 18.8

Date Sampled: 10/24/2014 1045

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258664	Instrument ID:	CVOAMS12
Prep Method:	5035	Prep Batch:	460-258228	Lab File ID:	O92812.D
Dilution:	1.0			Initial Weight/Volume:	4.92 g
Analysis Date:	10/28/2014 1218			Final Weight/Volume:	5 mL
Prep Date:	10/25/2014 0009				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-15(5-6')**

Lab Sample ID: 460-85120-6

Client Matrix: Solid

% Moisture: 13.1

Date Sampled: 10/24/2014 1050

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258664	Instrument ID:	CVOAMS12
Prep Method:	5035	Prep Batch:	460-258228	Lab File ID:	O92813.D
Dilution:	1.0			Initial Weight/Volume:	5.91 g
Analysis Date:	10/28/2014 1244			Final Weight/Volume:	5 mL
Prep Date:	10/25/2014 0010				

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1-Trichloroethane	0.97	U	0.19	0.97
1,1,2,2-Tetrachloroethane	0.97	U	0.13	0.97
1,1,2-Trichloro-1,2,2-trifluoroethane	0.97	U	0.20	0.97
1,1,2-Trichloroethane	0.97	U	0.23	0.97
1,1-Dichloroethane	0.97	U	0.18	0.97
1,1-Dichloroethene	0.97	U	0.22	0.97
1,2,3-Trichlorobenzene	0.97	U	0.32	0.97
1,2,4-Trichlorobenzene	0.97	U	0.26	0.97
1,2-Dichloropropane	0.97	U	0.23	0.97
1,3-Dichlorobenzene	0.97	U	0.19	0.97
1,4-Dichlorobenzene	0.97	U	0.20	0.97
1,4-Dioxane	19	U *	12	19
2-Butanone (MEK)	4.9	U	1.4	4.9
2-Hexanone	4.9	U	0.67	4.9
4-Methyl-2-pentanone (MIBK)	4.9	U	0.66	4.9
Acetone	98	B	0.22	4.9
Benzene	0.37	J	0.19	0.97
Bromoform	0.97	U	0.15	0.97
Bromomethane	0.97	U	0.35	0.97
Carbon disulfide	0.97	U	0.17	0.97
Carbon tetrachloride	0.97	U	0.18	0.97
Chlorobenzene	0.97	U	0.17	0.97
Chlorobromomethane	0.97	U	0.30	0.97
Chlorodibromomethane	0.97	U	0.19	0.97
Chloroethane	0.97	U	0.47	0.97
Chloroform	0.97	U	0.16	0.97
Chloromethane	0.97	U	0.22	0.97
cis-1,2-Dichloroethene	0.97	U	0.21	0.97
cis-1,3-Dichloropropene	0.97	U	0.17	0.97
Cyclohexane	0.74	J	0.20	0.97
Dichlorobromomethane	0.97	U	0.16	0.97
Dichlorodifluoromethane	0.97	U	0.28	0.97
Ethylbenzene	0.97	U	0.14	0.97
Ethylene Dibromide	0.97	U	0.18	0.97
Isopropylbenzene	0.97	U	0.19	0.97
Methyl acetate	4.9	U	0.92	4.9
Methyl tert-butyl ether	0.97	U	0.19	0.97
Methylcyclohexane	0.81	J	0.19	0.97
Methylene Chloride	0.97	U	0.37	0.97
m-Xylene & p-Xylene	0.97	U	0.20	0.97
o-Xylene	0.19	J	0.17	0.97
Styrene	0.97	U	0.23	0.97
Tetrachloroethene	0.97	U	0.19	0.97
Toluene	0.97	U	0.26	0.97
trans-1,2-Dichloroethene	0.97	U	0.20	0.97
trans-1,3-Dichloropropene	0.97	U	0.18	0.97

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-15(5-6')**

Lab Sample ID: 460-85120-6

Client Matrix: Solid

% Moisture: 13.1

Date Sampled: 10/24/2014 1050

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258664	Instrument ID:	CVOAMS12
Prep Method:	5035	Prep Batch:	460-258228	Lab File ID:	O92813.D
Dilution:	1.0			Initial Weight/Volume:	5.91 g
Analysis Date:	10/28/2014 1244			Final Weight/Volume:	5 mL
Prep Date:	10/25/2014 0010				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Trichloroethene		0.97	U	0.19	0.97
Trichlorofluoromethane		0.97	U	0.19	0.97
Vinyl chloride		0.97	U	0.23	0.97
1,2-Dichloroethane		0.97	U	0.27	0.97
1,2-Dichlorobenzene		0.97	U	0.13	0.97
1,2-Dibromo-3-Chloropropane		0.97	U	0.45	0.97

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	88		70 - 130
4-Bromofluorobenzene	96		70 - 130
Dibromofluoromethane (Surr)	56	*	70 - 130
Toluene-d8 (Surr)	88		70 - 130

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-15(5-6')**

Lab Sample ID: 460-85120-6

Client Matrix: Solid

% Moisture: 13.1

Date Sampled: 10/24/2014 1050

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258664	Instrument ID:	CVOAMS12
Prep Method:	5035	Prep Batch:	460-258228	Lab File ID:	O92813.D
Dilution:	1.0			Initial Weight/Volume:	5.91 g
Analysis Date:	10/28/2014 1244			Final Weight/Volume:	5 mL
Prep Date:	10/25/2014 0010				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-14(1-2')**

Lab Sample ID: 460-85120-7

Client Matrix: Solid

% Moisture: 14.7

Date Sampled: 10/24/2014 1120

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258887	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258228	Lab File ID:	K33488.D
Dilution:	1.0			Initial Weight/Volume:	4.89 g
Analysis Date:	10/29/2014 1421			Final Weight/Volume:	5 mL
Prep Date:	10/25/2014 0011				

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.2	U	0.24	1.2
1,1,2,2-Tetrachloroethane	1.2	U	0.16	1.2
1,1,2-Trichloro-1,2,2-trifluoroethane	1.2	U	0.25	1.2
1,1,2-Trichloroethane	1.2	U *	0.29	1.2
1,1-Dichloroethane	1.2	U	0.22	1.2
1,1-Dichloroethene	1.2	U	0.28	1.2
1,2,3-Trichlorobenzene	1.2	U	0.40	1.2
1,2,4-Trichlorobenzene	1.2	U	0.32	1.2
1,2-Dichloropropane	1.2	U	0.29	1.2
1,3-Dichlorobenzene	1.2	U	0.24	1.2
1,4-Dichlorobenzene	1.2	U	0.25	1.2
1,4-Dioxane	24	U	14	24
2-Butanone (MEK)	6.0	U	1.8	6.0
2-Hexanone	6.0	U	0.83	6.0
4-Methyl-2-pentanone (MIBK)	6.0	U	0.82	6.0
Acetone	6.0	U	0.28	6.0
Benzene	1.2	U	0.23	1.2
Bromoform	1.2	U	0.18	1.2
Bromomethane	1.2	U	0.43	1.2
Carbon disulfide	1.2	U	0.20	1.2
Carbon tetrachloride	1.2	U	0.22	1.2
Chlorobenzene	1.2	U	0.20	1.2
Chlorobromomethane	1.2	U	0.37	1.2
Chlorodibromomethane	1.2	U	0.24	1.2
Chloroethane	1.2	U	0.58	1.2
Chloroform	1.2	U	0.19	1.2
Chloromethane	1.2	U	0.28	1.2
cis-1,2-Dichloroethene	1.2	U	0.26	1.2
cis-1,3-Dichloropropene	1.2	U	0.20	1.2
Cyclohexane	1.2	U	0.25	1.2
Dichlorobromomethane	1.2	U	0.19	1.2
Dichlorodifluoromethane	1.2	U	0.35	1.2
Ethylbenzene	1.2	U	0.17	1.2
Ethylene Dibromide	1.2	U	0.22	1.2
Isopropylbenzene	1.2	U	0.23	1.2
Methyl acetate	6.0	U	1.1	6.0
Methyl tert-butyl ether	1.2	U	0.24	1.2
Methylcyclohexane	1.2	U	0.23	1.2
Methylene Chloride	1.2	U	0.46	1.2
m-Xylene & p-Xylene	1.2	U	0.25	1.2
o-Xylene	1.2	U	0.20	1.2
Styrene	1.2	U	0.29	1.2
Tetrachloroethene	1.2	U	0.24	1.2
Toluene	1.2	U	0.32	1.2
trans-1,2-Dichloroethene	1.2	U	0.25	1.2
trans-1,3-Dichloropropene	1.2	U	0.22	1.2

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-14(1-2')**

Lab Sample ID: 460-85120-7

Client Matrix: Solid

% Moisture: 14.7

Date Sampled: 10/24/2014 1120

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258887	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258228	Lab File ID:	K33488.D
Dilution:	1.0			Initial Weight/Volume:	4.89 g
Analysis Date:	10/29/2014 1421			Final Weight/Volume:	5 mL
Prep Date:	10/25/2014 0011				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Trichloroethene		1.2	U	0.24	1.2
Trichlorofluoromethane		1.2	U	0.23	1.2
Vinyl chloride		1.2	U	0.29	1.2
1,2-Dichloroethane		1.2	U	0.34	1.2
1,2-Dichlorobenzene		1.2	U	0.16	1.2
1,2-Dibromo-3-Chloropropane		1.2	U *	0.55	1.2

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	99		70 - 130
4-Bromofluorobenzene	101		70 - 130
Dibromofluoromethane (Surr)	107		70 - 130
Toluene-d8 (Surr)	107		70 - 130

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-14(1-2')**

Lab Sample ID: 460-85120-7

Client Matrix: Solid

% Moisture: 14.7

Date Sampled: 10/24/2014 1120

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258887	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258228	Lab File ID:	K33488.D
Dilution:	1.0			Initial Weight/Volume:	4.89 g
Analysis Date:	10/29/2014 1421			Final Weight/Volume:	5 mL
Prep Date:	10/25/2014 0011				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-14(6-7')**

Lab Sample ID: 460-85120-8

Client Matrix: Solid

% Moisture: 10.3

Date Sampled: 10/24/2014 1130

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258887	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258228	Lab File ID:	K33489.D
Dilution:	1.0			Initial Weight/Volume:	4.34 g
Analysis Date:	10/29/2014 1445			Final Weight/Volume:	5 mL
Prep Date:	10/25/2014 0012				

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.3	U	0.26	1.3
1,1,2,2-Tetrachloroethane	1.3	U	0.17	1.3
1,1,2-Trichloro-1,2,2-trifluoroethane	1.3	U	0.27	1.3
1,1,2-Trichloroethane	1.3	U *	0.31	1.3
1,1-Dichloroethane	1.3	U	0.23	1.3
1,1-Dichloroethene	1.3	U	0.30	1.3
1,2,3-Trichlorobenzene	1.3	U	0.42	1.3
1,2,4-Trichlorobenzene	1.3	U	0.35	1.3
1,2-Dichloropropane	1.3	U	0.31	1.3
1,3-Dichlorobenzene	1.3	U	0.26	1.3
1,4-Dichlorobenzene	1.3	U	0.27	1.3
1,4-Dioxane	26	U	15	26
2-Butanone (MEK)	6.4	U	1.9	6.4
2-Hexanone	6.4	U	0.89	6.4
4-Methyl-2-pentanone (MIBK)	6.4	U	0.87	6.4
Acetone	44	B	0.30	6.4
Benzene	1.3	U	0.24	1.3
Bromoform	1.3	U	0.19	1.3
Bromomethane	1.3	U	0.46	1.3
Carbon disulfide	1.2	J	0.22	1.3
Carbon tetrachloride	1.3	U	0.23	1.3
Chlorobenzene	1.3	U	0.22	1.3
Chlorobromomethane	1.3	U	0.40	1.3
Chlorodibromomethane	1.3	U	0.26	1.3
Chloroethane	1.3	U	0.62	1.3
Chloroform	1.3	U	0.21	1.3
Chloromethane	1.3	U	0.30	1.3
cis-1,2-Dichloroethene	1.3	U	0.28	1.3
cis-1,3-Dichloropropene	1.3	U	0.22	1.3
Cyclohexane	1.3	U	0.27	1.3
Dichlorobromomethane	1.3	U	0.21	1.3
Dichlorodifluoromethane	1.3	U	0.37	1.3
Ethylbenzene	1.3	U	0.18	1.3
Ethylene Dibromide	1.3	U	0.23	1.3
Isopropylbenzene	1.3	U	0.24	1.3
Methyl acetate	6.4	U	1.2	6.4
Methyl tert-butyl ether	1.3	U	0.26	1.3
Methylcyclohexane	1.3	U	0.24	1.3
Methylene Chloride	1.3	U	0.49	1.3
m-Xylene & p-Xylene	1.3	U	0.27	1.3
o-Xylene	1.3	U	0.22	1.3
Styrene	1.3	U	0.31	1.3
Tetrachloroethene	1.3	U	0.26	1.3
Toluene	1.3	U	0.35	1.3
trans-1,2-Dichloroethene	1.3	U	0.27	1.3
trans-1,3-Dichloropropene	1.3	U	0.23	1.3

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-14(6-7')**

Lab Sample ID: 460-85120-8

Client Matrix: Solid

% Moisture: 10.3

Date Sampled: 10/24/2014 1130

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258887	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258228	Lab File ID:	K33489.D
Dilution:	1.0			Initial Weight/Volume:	4.34 g
Analysis Date:	10/29/2014 1445			Final Weight/Volume:	5 mL
Prep Date:	10/25/2014 0012				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Trichloroethene		1.3	U	0.26	1.3
Trichlorofluoromethane		1.3	U	0.24	1.3
Vinyl chloride		1.3	U	0.31	1.3
1,2-Dichloroethane		1.3	U	0.36	1.3
1,2-Dichlorobenzene		1.3	U	0.17	1.3
1,2-Dibromo-3-Chloropropane		1.3	U *	0.59	1.3

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	95		70 - 130
4-Bromofluorobenzene	92		70 - 130
Dibromofluoromethane (Surr)	98		70 - 130
Toluene-d8 (Surr)	97		70 - 130

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-14(6-7')**

Lab Sample ID: 460-85120-8

Client Matrix: Solid

% Moisture: 10.3

Date Sampled: 10/24/2014 1130

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258887	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258228	Lab File ID:	K33489.D
Dilution:	1.0			Initial Weight/Volume:	4.34 g
Analysis Date:	10/29/2014 1445			Final Weight/Volume:	5 mL
Prep Date:	10/25/2014 0012				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-13(1-2')**

Lab Sample ID: 460-85120-9

Client Matrix: Solid

% Moisture: 10.7

Date Sampled: 10/24/2014 1145

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258887	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258228	Lab File ID:	K33486.D
Dilution:	1.0			Initial Weight/Volume:	5.43 g
Analysis Date:	10/29/2014 1332			Final Weight/Volume:	5 mL
Prep Date:	10/25/2014 0013				

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.21	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.13	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	0.22	1.0
1,1,2-Trichloroethane	1.0	U *	0.25	1.0
1,1-Dichloroethane	1.0	U	0.19	1.0
1,1-Dichloroethene	1.0	U	0.24	1.0
1,2,3-Trichlorobenzene	1.0	U	0.34	1.0
1,2,4-Trichlorobenzene	1.0	U	0.28	1.0
1,2-Dichloropropane	1.0	U	0.25	1.0
1,3-Dichlorobenzene	1.0	U	0.21	1.0
1,4-Dichlorobenzene	1.0	U	0.22	1.0
1,4-Dioxane	21	U	12	21
2-Butanone (MEK)	5.2	U	1.5	5.2
2-Hexanone	5.2	U	0.71	5.2
4-Methyl-2-pentanone (MIBK)	5.2	U	0.70	5.2
Acetone	5.2	U	0.24	5.2
Benzene	1.0	U	0.20	1.0
Bromoform	1.0	U	0.15	1.0
Bromomethane	1.0	U	0.37	1.0
Carbon disulfide	1.0	U	0.18	1.0
Carbon tetrachloride	1.0	U	0.19	1.0
Chlorobenzene	1.0	U	0.18	1.0
Chlorobromomethane	1.0	U	0.32	1.0
Chlorodibromomethane	1.0	U	0.21	1.0
Chloroethane	1.0	U	0.50	1.0
Chloroform	1.0	U	0.17	1.0
Chloromethane	1.0	U	0.24	1.0
cis-1,2-Dichloroethene	1.0	U	0.23	1.0
cis-1,3-Dichloropropene	1.0	U	0.18	1.0
Cyclohexane	1.0	U	0.22	1.0
Dichlorobromomethane	1.0	U	0.17	1.0
Dichlorodifluoromethane	1.0	U	0.30	1.0
Ethylbenzene	1.0	U	0.14	1.0
Ethylene Dibromide	1.0	U	0.19	1.0
Isopropylbenzene	1.0	U	0.20	1.0
Methyl acetate	5.2	U	0.97	5.2
Methyl tert-butyl ether	1.0	U	0.21	1.0
Methylcyclohexane	1.0	U	0.20	1.0
Methylene Chloride	1.0	U	0.39	1.0
m-Xylene & p-Xylene	1.0	U	0.22	1.0
o-Xylene	1.0	U	0.18	1.0
Styrene	1.0	U	0.25	1.0
Tetrachloroethene	1.0	U	0.21	1.0
Toluene	1.0	U	0.28	1.0
trans-1,2-Dichloroethene	1.0	U	0.22	1.0
trans-1,3-Dichloropropene	1.0	U	0.19	1.0

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-13(1-2')**

Lab Sample ID: 460-85120-9

Client Matrix: Solid

% Moisture: 10.7

Date Sampled: 10/24/2014 1145

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258887	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258228	Lab File ID:	K33486.D
Dilution:	1.0			Initial Weight/Volume:	5.43 g
Analysis Date:	10/29/2014 1332			Final Weight/Volume:	5 mL
Prep Date:	10/25/2014 0013				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Trichloroethene		1.0	U	0.21	1.0
Trichlorofluoromethane		1.0	U	0.20	1.0
Vinyl chloride		1.0	U	0.25	1.0
1,2-Dichloroethane		1.0	U	0.29	1.0
1,2-Dichlorobenzene		1.0	U	0.13	1.0
1,2-Dibromo-3-Chloropropane		1.0	U *	0.47	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	102		70 - 130
4-Bromofluorobenzene	96		70 - 130
Dibromofluoromethane (Surr)	112		70 - 130
Toluene-d8 (Surr)	115		70 - 130

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-13(1-2')**

Lab Sample ID: 460-85120-9

Client Matrix: Solid

% Moisture: 10.7

Date Sampled: 10/24/2014 1145

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258887	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258228	Lab File ID:	K33486.D
Dilution:	1.0			Initial Weight/Volume:	5.43 g
Analysis Date:	10/29/2014 1332			Final Weight/Volume:	5 mL
Prep Date:	10/25/2014 0013				

Tentatively Identified Compounds **Number TIC's Found:** **1**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
629-59-4	Tetradecane	14.05	5.9	J N

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-13(3-4')**

Lab Sample ID: 460-85120-10

Client Matrix: Solid

% Moisture: 25.5

Date Sampled: 10/24/2014 1150

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258664	Instrument ID:	CVOAMS12
Prep Method:	5035	Prep Batch:	460-258228	Lab File ID:	O92817.D
Dilution:	1.0			Initial Weight/Volume:	4.45 g
Analysis Date:	10/28/2014 1428			Final Weight/Volume:	5 mL
Prep Date:	10/25/2014 0014				

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.5	U	0.30	1.5
1,1,2,2-Tetrachloroethane	1.5	U	0.20	1.5
1,1,2-Trichloro-1,2,2-trifluoroethane	1.5	U	0.32	1.5
1,1,2-Trichloroethane	1.5	U	0.36	1.5
1,1-Dichloroethane	1.5	U	0.27	1.5
1,1-Dichloroethene	1.5	U	0.35	1.5
1,2,3-Trichlorobenzene	1.5	U	0.50	1.5
1,2,4-Trichlorobenzene	1.5	U	0.41	1.5
1,2-Dichloropropane	1.5	U	0.36	1.5
1,3-Dichlorobenzene	1.5	U	0.30	1.5
1,4-Dichlorobenzene	1.5	U	0.32	1.5
1,4-Dioxane	30	U *	18	30
2-Butanone (MEK)	12		2.2	7.5
2-Hexanone	7.5	U	1.0	7.5
4-Methyl-2-pentanone (MIBK)	7.5	U	1.0	7.5
Acetone	98	B	0.35	7.5
Benzene	0.39	J	0.29	1.5
Bromoform	1.5	U	0.23	1.5
Bromomethane	1.5	U	0.54	1.5
Carbon disulfide	1.5	U	0.26	1.5
Carbon tetrachloride	1.5	U	0.27	1.5
Chlorobenzene	1.5	U	0.26	1.5
Chlorobromomethane	1.5	U	0.47	1.5
Chlorodibromomethane	1.5	U	0.30	1.5
Chloroethane	1.5	U	0.72	1.5
Chloroform	1.5	U	0.24	1.5
Chloromethane	1.5	U	0.35	1.5
cis-1,2-Dichloroethene	1.5	U	0.33	1.5
cis-1,3-Dichloropropene	1.5	U	0.26	1.5
Cyclohexane	1.5	U	0.32	1.5
Dichlorobromomethane	1.5	U	0.24	1.5
Dichlorodifluoromethane	1.5	U	0.44	1.5
Ethylbenzene	1.5	U	0.21	1.5
Ethylene Dibromide	1.5	U	0.27	1.5
Isopropylbenzene	1.5	U	0.29	1.5
Methyl acetate	7.5	U	1.4	7.5
Methyl tert-butyl ether	1.5	U	0.30	1.5
Methylcyclohexane	1.5	U	0.29	1.5
Methylene Chloride	1.5	U	0.57	1.5
m-Xylene & p-Xylene	1.5	U	0.32	1.5
o-Xylene	1.5	U	0.26	1.5
Styrene	1.5	U	0.36	1.5
Tetrachloroethene	1.5	U	0.30	1.5
Toluene	1.5	U	0.41	1.5
trans-1,2-Dichloroethene	1.5	U	0.32	1.5
trans-1,3-Dichloropropene	1.5	U	0.27	1.5

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-13(3-4')**

Lab Sample ID: 460-85120-10

Client Matrix: Solid

% Moisture: 25.5

Date Sampled: 10/24/2014 1150

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258664	Instrument ID:	CVOAMS12
Prep Method:	5035	Prep Batch:	460-258228	Lab File ID:	O92817.D
Dilution:	1.0			Initial Weight/Volume:	4.45 g
Analysis Date:	10/28/2014 1428			Final Weight/Volume:	5 mL
Prep Date:	10/25/2014 0014				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Trichloroethene		1.5	U	0.30	1.5
Trichlorofluoromethane		1.5	U	0.29	1.5
Vinyl chloride		1.5	U	0.36	1.5
1,2-Dichloroethane		1.5	U	0.42	1.5
1,2-Dichlorobenzene		1.5	U	0.20	1.5
1,2-Dibromo-3-Chloropropane		1.5	U	0.69	1.5

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	75		70 - 130
4-Bromofluorobenzene	82		70 - 130
Dibromofluoromethane (Surr)	88		70 - 130
Toluene-d8 (Surr)	73		70 - 130

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-13(3-4')**

Lab Sample ID: 460-85120-10

Client Matrix: Solid

% Moisture: 25.5

Date Sampled: 10/24/2014 1150

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258664	Instrument ID:	CVOAMS12
Prep Method:	5035	Prep Batch:	460-258228	Lab File ID:	O92817.D
Dilution:	1.0			Initial Weight/Volume:	4.45 g
Analysis Date:	10/28/2014 1428			Final Weight/Volume:	5 mL
Prep Date:	10/25/2014 0014				

Tentatively Identified Compounds **Number TIC's Found:** **1**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
106-97-8	Butane	0.85	19	J N

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-11(1-2')**

Lab Sample ID: 460-85120-11

Client Matrix: Solid

% Moisture: 12.7

Date Sampled: 10/24/2014 1300

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258664	Instrument ID:	CVOAMS12
Prep Method:	5035	Prep Batch:	460-258228	Lab File ID:	O92818.D
Dilution:	1.0			Initial Weight/Volume:	4.81 g
Analysis Date:	10/28/2014 1454			Final Weight/Volume:	5 mL
Prep Date:	10/25/2014 0015				

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.2	U	0.24	1.2
1,1,2,2-Tetrachloroethane	1.2	U	0.15	1.2
1,1,2-Trichloro-1,2,2-trifluoroethane	1.2	U	0.25	1.2
1,1,2-Trichloroethane	1.2	U	0.29	1.2
1,1-Dichloroethane	1.2	U	0.21	1.2
1,1-Dichloroethene	1.2	U	0.27	1.2
1,2,3-Trichlorobenzene	1.2	U	0.39	1.2
1,2,4-Trichlorobenzene	1.2	U	0.32	1.2
1,2-Dichloropropane	1.2	U	0.29	1.2
1,3-Dichlorobenzene	1.2	U	0.24	1.2
1,4-Dichlorobenzene	1.2	U	0.25	1.2
1,4-Dioxane	24	U *	14	24
2-Butanone (MEK)	6.0	U	1.8	6.0
2-Hexanone	6.0	U	0.82	6.0
4-Methyl-2-pentanone (MIBK)	6.0	U	0.81	6.0
Acetone	6.0	U	0.27	6.0
Benzene	0.75	J	0.23	1.2
Bromoform	1.2	U	0.18	1.2
Bromomethane	1.2	U	0.43	1.2
Carbon disulfide	1.2	U	0.20	1.2
Carbon tetrachloride	1.2	U	0.21	1.2
Chlorobenzene	1.2	U	0.20	1.2
Chlorobromomethane	1.2	U	0.37	1.2
Chlorodibromomethane	1.2	U	0.24	1.2
Chloroethane	1.2	U	0.57	1.2
Chloroform	1.2	U	0.19	1.2
Chloromethane	1.2	U	0.27	1.2
cis-1,2-Dichloroethene	1.2	U	0.26	1.2
cis-1,3-Dichloropropene	1.2	U	0.20	1.2
Cyclohexane	1.2	U	0.25	1.2
Dichlorobromomethane	1.2	U	0.19	1.2
Dichlorodifluoromethane	1.2	U	0.35	1.2
Ethylbenzene	1.2	U	0.17	1.2
Ethylene Dibromide	1.2	U	0.21	1.2
Isopropylbenzene	1.2	U	0.23	1.2
Methyl acetate	6.0	U	1.1	6.0
Methyl tert-butyl ether	1.2	U	0.24	1.2
Methylcyclohexane	1.2	U	0.23	1.2
Methylene Chloride	1.2	U	0.45	1.2
m-Xylene & p-Xylene	1.2	U	0.25	1.2
o-Xylene	1.2	U	0.20	1.2
Styrene	1.2	U	0.29	1.2
Tetrachloroethene	1.2	U	0.24	1.2
Toluene	1.2	U	0.32	1.2
trans-1,2-Dichloroethene	1.2	U	0.25	1.2
trans-1,3-Dichloropropene	1.2	U	0.21	1.2

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-11(1-2')**

Lab Sample ID: 460-85120-11

Client Matrix: Solid

% Moisture: 12.7

Date Sampled: 10/24/2014 1300

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258664	Instrument ID:	CVOAMS12
Prep Method:	5035	Prep Batch:	460-258228	Lab File ID:	O92818.D
Dilution:	1.0			Initial Weight/Volume:	4.81 g
Analysis Date:	10/28/2014 1454			Final Weight/Volume:	5 mL
Prep Date:	10/25/2014 0015				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Trichloroethene		0.97	J	0.24	1.2
Trichlorofluoromethane		1.2	U	0.23	1.2
Vinyl chloride		1.2	U	0.29	1.2
1,2-Dichloroethane		1.2	U	0.33	1.2
1,2-Dichlorobenzene		1.2	U	0.15	1.2
1,2-Dibromo-3-Chloropropane		1.2	U	0.55	1.2

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	77		70 - 130
4-Bromofluorobenzene	87		70 - 130
Dibromofluoromethane (Surr)	92		70 - 130
Toluene-d8 (Surr)	81		70 - 130

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-11(1-2')**

Lab Sample ID: 460-85120-11

Client Matrix: Solid

% Moisture: 12.7

Date Sampled: 10/24/2014 1300

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258664	Instrument ID:	CVOAMS12
Prep Method:	5035	Prep Batch:	460-258228	Lab File ID:	O92818.D
Dilution:	1.0			Initial Weight/Volume:	4.81 g
Analysis Date:	10/28/2014 1454			Final Weight/Volume:	5 mL
Prep Date:	10/25/2014 0015				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-11(5-6')**

Lab Sample ID: 460-85120-12

Client Matrix: Solid

% Moisture: 17.4

Date Sampled: 10/24/2014 1305

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258664	Instrument ID:	CVOAMS12
Prep Method:	5035	Prep Batch:	460-258228	Lab File ID:	O92819.D
Dilution:	1.0			Initial Weight/Volume:	5.81 g
Analysis Date:	10/28/2014 1519			Final Weight/Volume:	5 mL
Prep Date:	10/25/2014 0016				

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.21	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.14	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	0.22	1.0
1,1,2-Trichloroethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.19	1.0
1,1-Dichloroethene	1.0	U	0.24	1.0
1,2,3-Trichlorobenzene	1.0	U	0.34	1.0
1,2,4-Trichlorobenzene	1.0	U	0.28	1.0
1,2-Dichloropropane	1.0	U	0.25	1.0
1,3-Dichlorobenzene	1.0	U	0.21	1.0
1,4-Dichlorobenzene	1.0	U	0.22	1.0
1,4-Dioxane	21	U *	12	21
2-Butanone (MEK)	5.2	U	1.5	5.2
2-Hexanone	5.2	U	0.72	5.2
4-Methyl-2-pentanone (MIBK)	5.2	U	0.71	5.2
Acetone	5.2	U	0.24	5.2
Benzene	4.9		0.20	1.0
Bromoform	1.0	U	0.16	1.0
Bromomethane	1.0	U	0.38	1.0
Carbon disulfide	1.0	U	0.18	1.0
Carbon tetrachloride	1.0	U	0.19	1.0
Chlorobenzene	1.0	U	0.18	1.0
Chlorobromomethane	1.0	U	0.32	1.0
Chlorodibromomethane	1.0	U	0.21	1.0
Chloroethane	1.0	U	0.50	1.0
Chloroform	1.0	U	0.17	1.0
Chloromethane	1.0	U	0.24	1.0
cis-1,2-Dichloroethene	1.0	U	0.23	1.0
cis-1,3-Dichloropropene	1.0	U	0.18	1.0
Cyclohexane	5.4		0.22	1.0
Dichlorobromomethane	1.0	U	0.17	1.0
Dichlorodifluoromethane	1.0	U	0.30	1.0
Ethylbenzene	5.7		0.15	1.0
Ethylene Dibromide	1.0	U	0.19	1.0
Isopropylbenzene	3.5		0.20	1.0
Methyl acetate	5.2	U	0.98	5.2
Methyl tert-butyl ether	1.0	U	0.21	1.0
Methylcyclohexane	4.0		0.20	1.0
Methylene Chloride	1.0	U	0.40	1.0
m-Xylene & p-Xylene	23		0.22	1.0
o-Xylene	15		0.18	1.0
Styrene	1.0	U	0.25	1.0
Tetrachloroethene	1.0	U	0.21	1.0
Toluene	3.1		0.28	1.0
trans-1,2-Dichloroethene	1.0	U	0.22	1.0
trans-1,3-Dichloropropene	1.0	U	0.19	1.0

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-11(5-6')**

Lab Sample ID: 460-85120-12

Client Matrix: Solid

% Moisture: 17.4

Date Sampled: 10/24/2014 1305

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258664	Instrument ID:	CVOAMS12
Prep Method:	5035	Prep Batch:	460-258228	Lab File ID:	O92819.D
Dilution:	1.0			Initial Weight/Volume:	5.81 g
Analysis Date:	10/28/2014 1519			Final Weight/Volume:	5 mL
Prep Date:	10/25/2014 0016				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Trichloroethene		1.0	U	0.21	1.0
Trichlorofluoromethane		1.0	U	0.20	1.0
Vinyl chloride		1.0	U	0.25	1.0
1,2-Dichloroethane		1.0	U	0.29	1.0
1,2-Dichlorobenzene		1.0	U	0.14	1.0
1,2-Dibromo-3-Chloropropane		1.0	U	0.48	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	83		70 - 130
4-Bromofluorobenzene	92		70 - 130
Dibromofluoromethane (Surr)	96		70 - 130
Toluene-d8 (Surr)	90		70 - 130

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-11(5-6')**

Lab Sample ID: 460-85120-12

Client Matrix: Solid

% Moisture: 17.4

Date Sampled: 10/24/2014 1305

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258664	Instrument ID:	CVOAMS12
Prep Method:	5035	Prep Batch:	460-258228	Lab File ID:	O92819.D
Dilution:	1.0			Initial Weight/Volume:	5.81 g
Analysis Date:	10/28/2014 1519			Final Weight/Volume:	5 mL
Prep Date:	10/25/2014 0016				

Tentatively Identified Compounds **Number TIC's Found:** **10**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
78-78-4	Butane, 2-methyl-	1.08	15	J N
611-14-3	Benzene, 1-ethyl-2-methyl-	9.22	32	J N
108-67-8	Benzene, 1,3,5-trimethyl-	9.37	17	J N
622-96-8	Benzene, 1-ethyl-4-methyl-	9.66	19	J N
95-63-6	Benzene, 1,2,4-trimethyl-	9.96	60	J N
496-11-7	Indane	10.90	20	J N
934-80-5	Benzene, 4-ethyl-1,2-dimethyl-	11.70	18	J N
91-20-3	Naphthalene	13.20	140	J N
91-57-6	Naphthalene, 2-methyl-	14.14	33	J N
90-12-0	Naphthalene, 1-methyl-	14.27	29	J N

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-8(1-2')**

Lab Sample ID: 460-85120-13

Client Matrix: Solid

% Moisture: 15.7

Date Sampled: 10/24/2014 1330

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258887	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258228	Lab File ID:	K33487.D
Dilution:	1.0			Initial Weight/Volume:	5.79 g
Analysis Date:	10/29/2014 1356			Final Weight/Volume:	5 mL
Prep Date:	10/25/2014 0017				

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.20	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.13	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	0.22	1.0
1,1,2-Trichloroethane	1.0	U *	0.25	1.0
1,1-Dichloroethane	1.0	U	0.18	1.0
1,1-Dichloroethene	1.0	U	0.24	1.0
1,2,3-Trichlorobenzene	1.0	U	0.34	1.0
1,2,4-Trichlorobenzene	1.0	U	0.28	1.0
1,2-Dichloropropane	1.0	U	0.25	1.0
1,3-Dichlorobenzene	1.0	U	0.20	1.0
1,4-Dichlorobenzene	1.0	U	0.22	1.0
1,4-Dioxane	20	U	12	20
2-Butanone (MEK)	5.1	U	1.5	5.1
2-Hexanone	5.1	U	0.71	5.1
4-Methyl-2-pentanone (MIBK)	5.1	U	0.70	5.1
Acetone	5.1	U	0.24	5.1
Benzene	1.0	U	0.19	1.0
Bromoform	1.0	U	0.15	1.0
Bromomethane	1.0	U	0.37	1.0
Carbon disulfide	1.0	U	0.17	1.0
Carbon tetrachloride	1.0	U	0.18	1.0
Chlorobenzene	1.0	U	0.17	1.0
Chlorobromomethane	1.0	U	0.32	1.0
Chlorodibromomethane	1.0	U	0.20	1.0
Chloroethane	1.0	U	0.49	1.0
Chloroform	1.0	U	0.16	1.0
Chloromethane	1.0	U	0.24	1.0
cis-1,2-Dichloroethene	1.0	U	0.23	1.0
cis-1,3-Dichloropropene	1.0	U	0.17	1.0
Cyclohexane	1.0	U	0.22	1.0
Dichlorobromomethane	1.0	U	0.16	1.0
Dichlorodifluoromethane	1.0	U	0.30	1.0
Ethylbenzene	1.0	U	0.14	1.0
Ethylene Dibromide	1.0	U	0.18	1.0
Isopropylbenzene	1.0	U	0.19	1.0
Methyl acetate	5.1	U	0.96	5.1
Methyl tert-butyl ether	1.0	U	0.20	1.0
Methylcyclohexane	1.0	U	0.19	1.0
Methylene Chloride	1.0	U	0.39	1.0
m-Xylene & p-Xylene	1.0	U	0.22	1.0
o-Xylene	1.0	U	0.17	1.0
Styrene	1.0	U	0.25	1.0
Tetrachloroethene	1.0	U	0.20	1.0
Toluene	1.0	U	0.28	1.0
trans-1,2-Dichloroethene	1.0	U	0.22	1.0
trans-1,3-Dichloropropene	1.0	U	0.18	1.0

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-8(1-2')**

Lab Sample ID: 460-85120-13

Client Matrix: Solid

% Moisture: 15.7

Date Sampled: 10/24/2014 1330

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258887	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258228	Lab File ID:	K33487.D
Dilution:	1.0			Initial Weight/Volume:	5.79 g
Analysis Date:	10/29/2014 1356			Final Weight/Volume:	5 mL
Prep Date:	10/25/2014 0017				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Trichloroethene		1.0	U	0.20	1.0
Trichlorofluoromethane		1.0	U	0.19	1.0
Vinyl chloride		1.0	U	0.25	1.0
1,2-Dichloroethane		1.0	U	0.29	1.0
1,2-Dichlorobenzene		1.0	U	0.13	1.0
1,2-Dibromo-3-Chloropropane		1.0	U *	0.47	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	100		70 - 130
4-Bromofluorobenzene	97		70 - 130
Dibromofluoromethane (Surr)	105		70 - 130
Toluene-d8 (Surr)	111		70 - 130

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-8(1-2')**

Lab Sample ID: 460-85120-13

Client Matrix: Solid

% Moisture: 15.7

Date Sampled: 10/24/2014 1330

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258887	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258228	Lab File ID:	K33487.D
Dilution:	1.0			Initial Weight/Volume:	5.79 g
Analysis Date:	10/29/2014 1356			Final Weight/Volume:	5 mL
Prep Date:	10/25/2014 0017				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-8(9-10')**

Lab Sample ID: 460-85120-14

Client Matrix: Solid

% Moisture: 17.0

Date Sampled: 10/24/2014 1340

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258887	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258228	Lab File ID:	K33490.D
Dilution:	1.0			Initial Weight/Volume:	5.64 g
Analysis Date:	10/29/2014 1509			Final Weight/Volume:	5 mL
Prep Date:	10/25/2014 0018				

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.1	U	0.21	1.1
1,1,2,2-Tetrachloroethane	1.1	U	0.14	1.1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.1	U	0.22	1.1
1,1,2-Trichloroethane	1.1	U *	0.26	1.1
1,1-Dichloroethane	1.1	U	0.19	1.1
1,1-Dichloroethene	1.1	U	0.25	1.1
1,2,3-Trichlorobenzene	1.1	U	0.35	1.1
1,2,4-Trichlorobenzene	1.1	U	0.29	1.1
1,2-Dichloropropane	1.1	U	0.26	1.1
1,3-Dichlorobenzene	1.1	U	0.21	1.1
1,4-Dichlorobenzene	1.1	U	0.22	1.1
1,4-Dioxane	21	U	13	21
2-Butanone (MEK)	5.3	U	1.6	5.3
2-Hexanone	5.3	U	0.74	5.3
4-Methyl-2-pentanone (MIBK)	5.3	U	0.73	5.3
Acetone	5.3	U	0.25	5.3
Benzene	1.1	U	0.20	1.1
Bromoform	1.1	U	0.16	1.1
Bromomethane	1.1	U	0.38	1.1
Carbon disulfide	1.1	U	0.18	1.1
Carbon tetrachloride	1.1	U	0.19	1.1
Chlorobenzene	1.1	U	0.18	1.1
Chlorobromomethane	1.1	U	0.33	1.1
Chlorodibromomethane	1.1	U	0.21	1.1
Chloroethane	1.1	U	0.51	1.1
Chloroform	1.1	U	0.17	1.1
Chloromethane	1.1	U	0.25	1.1
cis-1,2-Dichloroethene	1.1	U	0.23	1.1
cis-1,3-Dichloropropene	1.1	U	0.18	1.1
Cyclohexane	1.1	U	0.22	1.1
Dichlorobromomethane	1.1	U	0.17	1.1
Dichlorodifluoromethane	1.1	U	0.31	1.1
Ethylbenzene	1.1	U	0.15	1.1
Ethylene Dibromide	1.1	U	0.19	1.1
Isopropylbenzene	1.1	U	0.20	1.1
Methyl acetate	5.3	U	1.0	5.3
Methyl tert-butyl ether	1.1	U	0.21	1.1
Methylcyclohexane	1.1	U	0.20	1.1
Methylene Chloride	1.1	U	0.41	1.1
m-Xylene & p-Xylene	1.1	U	0.22	1.1
o-Xylene	1.1	U	0.18	1.1
Styrene	1.1	U	0.26	1.1
Tetrachloroethene	1.1	U	0.21	1.1
Toluene	1.1	U	0.29	1.1
trans-1,2-Dichloroethene	1.1	U	0.22	1.1
trans-1,3-Dichloropropene	1.1	U	0.19	1.1

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-8(9-10')**

Lab Sample ID: 460-85120-14

Client Matrix: Solid

% Moisture: 17.0

Date Sampled: 10/24/2014 1340

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258887	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258228	Lab File ID:	K33490.D
Dilution:	1.0			Initial Weight/Volume:	5.64 g
Analysis Date:	10/29/2014 1509			Final Weight/Volume:	5 mL
Prep Date:	10/25/2014 0018				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Trichloroethene		1.1	U	0.21	1.1
Trichlorofluoromethane		1.1	U	0.20	1.1
Vinyl chloride		1.1	U	0.26	1.1
1,2-Dichloroethane		1.1	U	0.30	1.1
1,2-Dichlorobenzene		1.1	U	0.14	1.1
1,2-Dibromo-3-Chloropropane		1.1	U *	0.49	1.1

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	94		70 - 130
4-Bromofluorobenzene	99		70 - 130
Dibromofluoromethane (Surr)	97		70 - 130
Toluene-d8 (Surr)	100		70 - 130

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-8(9-10')**

Lab Sample ID: 460-85120-14

Client Matrix: Solid

% Moisture: 17.0

Date Sampled: 10/24/2014 1340

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258887	Instrument ID:	CVOAMS9
Prep Method:	5035	Prep Batch:	460-258228	Lab File ID:	K33490.D
Dilution:	1.0			Initial Weight/Volume:	5.64 g
Analysis Date:	10/29/2014 1509			Final Weight/Volume:	5 mL
Prep Date:	10/25/2014 0018				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **TB2**

Lab Sample ID: 460-85120-15TB

Client Matrix: Water

Date Sampled: 10/24/2014 1400

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258447	Instrument ID:	CVOAMS5
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	E34590.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/27/2014 1517			Final Weight/Volume:	5 mL
Prep Date:	10/27/2014 1517				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.060	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.16	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	0.080	1.0
1,1,2-Trichloroethane	1.0	U	0.19	1.0
1,1-Dichloroethane	1.0	U	0.13	1.0
1,1-Dichloroethene	1.0	U	0.090	1.0
1,2,3-Trichlorobenzene	1.0	U	0.51	1.0
1,2,4-Trichlorobenzene	1.0	U	0.34	1.0
1,2-Dichloropropane	1.0	U	0.090	1.0
1,3-Dichlorobenzene	1.0	U	0.14	1.0
1,4-Dichlorobenzene	1.0	U	0.23	1.0
1,4-Dioxane	50	U	36	50
2-Butanone (MEK)	5.0	U	2.3	5.0
2-Hexanone	5.0	U	0.50	5.0
4-Methyl-2-pentanone (MIBK)	5.0	U	0.99	5.0
Acetone	5.0	U	2.7	5.0
Benzene	1.0	U	0.080	1.0
Bromoform	1.0	U	0.19	1.0
Bromomethane	1.0	U	0.18	1.0
Carbon disulfide	1.0	U	0.13	1.0
Carbon tetrachloride	1.0	U	0.060	1.0
Chlorobenzene	1.0	U	0.11	1.0
Chlorobromomethane	1.0	U	0.27	1.0
Chlorodibromomethane	1.0	U	0.20	1.0
Chloroethane	1.0	U	0.17	1.0
Chloroform	1.0	U	0.080	1.0
Chloromethane	1.0	U	0.10	1.0
cis-1,2-Dichloroethene	1.0	U	0.18	1.0
cis-1,3-Dichloropropene	1.0	U	0.18	1.0
Cyclohexane	1.0	U	0.16	1.0
Dichlorobromomethane	1.0	U	0.12	1.0
Dichlorodifluoromethane	1.0	U	0.22	1.0
Ethylbenzene	1.0	U	0.10	1.0
Ethylene Dibromide	1.0	U	0.28	1.0
Isopropylbenzene	1.0	U	0.080	1.0
Methyl acetate	5.0	U	0.34	5.0
Methyl tert-butyl ether	1.0	U	0.14	1.0
Methylcyclohexane	1.0	U	0.14	1.0
Methylene Chloride	1.0	U	0.18	1.0
m-Xylene & p-Xylene	1.0	U	0.25	1.0
o-Xylene	1.0	U	0.13	1.0
Styrene	1.0	U	0.12	1.0
Tetrachloroethene	1.0	U	0.10	1.0
Toluene	1.0	U	0.15	1.0
trans-1,2-Dichloroethene	1.0	U	0.13	1.0
trans-1,3-Dichloropropene	1.0	U	0.24	1.0

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **TB2**

Lab Sample ID: 460-85120-15TB

Client Matrix: Water

Date Sampled: 10/24/2014 1400

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258447	Instrument ID:	CVOAMS5
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	E34590.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/27/2014 1517			Final Weight/Volume:	5 mL
Prep Date:	10/27/2014 1517				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Trichloroethene	1.0	U	0.090	1.0
Trichlorofluoromethane	1.0	U	0.15	1.0
Vinyl chloride	1.0	U	0.14	1.0
1,2-Dichloroethane	1.0	U	0.19	1.0
1,2-Dichlorobenzene	1.0	U	0.21	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.40	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	95		70 - 130
4-Bromofluorobenzene	95		64 - 135
Dibromofluoromethane (Surr)	93		72 - 137
Toluene-d8 (Surr)	92		70 - 130

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **TB2**

Lab Sample ID: 460-85120-15TB

Client Matrix: Water

Date Sampled: 10/24/2014 1400

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258447	Instrument ID:	CVOAMS5
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	E34590.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/27/2014 1517			Final Weight/Volume:	5 mL
Prep Date:	10/27/2014 1517				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/L)	Qualifier
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **FB**

Lab Sample ID: 460-85120-16FB

Client Matrix: Water

Date Sampled: 10/24/2014 1430

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258447	Instrument ID:	CVOAMS5
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	E34591.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/27/2014 1542			Final Weight/Volume:	5 mL
Prep Date:	10/27/2014 1542				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.060	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.16	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	0.080	1.0
1,1,2-Trichloroethane	1.0	U	0.19	1.0
1,1-Dichloroethane	1.0	U	0.13	1.0
1,1-Dichloroethene	1.0	U	0.090	1.0
1,2,3-Trichlorobenzene	1.0	U	0.51	1.0
1,2,4-Trichlorobenzene	1.0	U	0.34	1.0
1,2-Dichloropropane	1.0	U	0.090	1.0
1,3-Dichlorobenzene	1.0	U	0.14	1.0
1,4-Dichlorobenzene	1.0	U	0.23	1.0
1,4-Dioxane	50	U	36	50
2-Butanone (MEK)	5.0	U	2.3	5.0
2-Hexanone	5.0	U	0.50	5.0
4-Methyl-2-pentanone (MIBK)	5.0	U	0.99	5.0
Acetone	5.0	U	2.7	5.0
Benzene	1.0	U	0.080	1.0
Bromoform	1.0	U	0.19	1.0
Bromomethane	1.0	U	0.18	1.0
Carbon disulfide	1.0	U	0.13	1.0
Carbon tetrachloride	1.0	U	0.060	1.0
Chlorobenzene	1.0	U	0.11	1.0
Chlorobromomethane	1.0	U	0.27	1.0
Chlorodibromomethane	1.0	U	0.20	1.0
Chloroethane	1.0	U	0.17	1.0
Chloroform	0.69	J	0.080	1.0
Chloromethane	1.0	U	0.10	1.0
cis-1,2-Dichloroethene	1.0	U	0.18	1.0
cis-1,3-Dichloropropene	1.0	U	0.18	1.0
Cyclohexane	1.0	U	0.16	1.0
Dichlorobromomethane	1.0	U	0.12	1.0
Dichlorodifluoromethane	1.0	U	0.22	1.0
Ethylbenzene	1.0	U	0.10	1.0
Ethylene Dibromide	1.0	U	0.28	1.0
Isopropylbenzene	1.0	U	0.080	1.0
Methyl acetate	5.0	U	0.34	5.0
Methyl tert-butyl ether	1.0	U	0.14	1.0
Methylcyclohexane	1.0	U	0.14	1.0
Methylene Chloride	1.0	U	0.18	1.0
m-Xylene & p-Xylene	1.0	U	0.25	1.0
o-Xylene	1.0	U	0.13	1.0
Styrene	1.0	U	0.12	1.0
Tetrachloroethene	1.0	U	0.10	1.0
Toluene	1.0	U	0.15	1.0
trans-1,2-Dichloroethene	1.0	U	0.13	1.0
trans-1,3-Dichloropropene	1.0	U	0.24	1.0

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **FB**

Lab Sample ID: 460-85120-16FB

Client Matrix: Water

Date Sampled: 10/24/2014 1430

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258447	Instrument ID:	CVOAMS5
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	E34591.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/27/2014 1542			Final Weight/Volume:	5 mL
Prep Date:	10/27/2014 1542				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Trichloroethene	1.0	U	0.090	1.0
Trichlorofluoromethane	1.0	U	0.15	1.0
Vinyl chloride	1.0	U	0.14	1.0
1,2-Dichloroethane	1.0	U	0.19	1.0
1,2-Dichlorobenzene	1.0	U	0.21	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.40	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	95		70 - 130
4-Bromofluorobenzene	97		64 - 135
Dibromofluoromethane (Surr)	97		72 - 137
Toluene-d8 (Surr)	95		70 - 130

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **FB**

Lab Sample ID: 460-85120-16FB

Client Matrix: Water

Date Sampled: 10/24/2014 1430

Date Received: 10/24/2014 1820

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-258447	Instrument ID:	CVOAMS5
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	E34591.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/27/2014 1542			Final Weight/Volume:	5 mL
Prep Date:	10/27/2014 1542				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/L)	Qualifier
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-5(1-2')**

Lab Sample ID: 460-85120-1

Client Matrix: Solid

% Moisture: 9.6

Date Sampled: 10/24/2014 0945

Date Received: 10/24/2014 1820

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258981	Instrument ID:	CBNAMS12
Prep Method:	3546	Prep Batch:	460-258467	Lab File ID:	L118167.D
Dilution:	2.0			Initial Weight/Volume:	15.0156 g
Analysis Date:	10/29/2014 2232			Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Phenol		730	U	24	730
2-Chlorophenol		730	U	19	730
2-Methylphenol		730	U	32	730
4-Methylphenol		730	U	20	730
2-Nitrophenol		730	U	25	730
2,4-Dimethylphenol		730	U	160	730
2,4-Dichlorophenol		730	U	17	730
4-Chloro-3-methylphenol		730	U	31	730
2,4,6-Trichlorophenol		290	U	21	290
2,4,5-Trichlorophenol		730	U	73	730
2,4-Dinitrotoluene		150	U	29	150
4-Nitrophenol		1500	U	350	1500
4,6-Dinitro-2-methylphenol		590	U	200	590
Pentachlorophenol		590	U	88	590
Bis(2-chloroethyl)ether		73	U	17	73
N-Nitrosodi-n-propylamine		73	U	25	73
Hexachloroethane		73	U	27	73
Nitrobenzene		73	U	23	73
Isophorone		1900		16	290
Naphthalene		290	J	19	730
4-Chloroaniline		730	U	19	730
Hexachlorobutadiene		150	U	21	150
2-Methylnaphthalene		290	J	16	730
Hexachlorocyclopentadiene		730	U	46	730
2-Chloronaphthalene		730	U	17	730
2-Nitroaniline		730	U	24	730
Dimethyl phthalate		730	U	21	730
Acenaphthylene		33	J	19	730
2,6-Dinitrotoluene		150	U	39	150
3-Nitroaniline		730	U	22	730
Acenaphthene		200	J	18	730
Dibenzofuran		170	J	22	730
2,4-Dinitrophenol		590	U	550	590
Diethyl phthalate		730	U	21	730
4-Chlorophenyl phenyl ether		730	U	22	730
Fluorene		270	J	16	730
4-Nitroaniline		730	U	28	730
N-Nitrosodiphenylamine		730	U	66	730
4-Bromophenyl phenyl ether		730	U	23	730
Hexachlorobenzene		73	U	30	73
Phenanthrene		2500		19	730
Anthracene		570	J	69	730
Carbazole		66	J	18	730
Di-n-butyl phthalate		730	U	22	730
Fluoranthene		2300		22	730
Pyrene		3500		33	730

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-5(1-2')**

Lab Sample ID: 460-85120-1

Client Matrix: Solid

% Moisture: 9.6

Date Sampled: 10/24/2014 0945

Date Received: 10/24/2014 1820

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258981	Instrument ID:	CBNAMS12
Prep Method:	3546	Prep Batch:	460-258467	Lab File ID:	L118167.D
Dilution:	2.0			Initial Weight/Volume:	15.0156 g
Analysis Date:	10/29/2014 2232			Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Butyl benzyl phthalate		730	U	23	730
Benzo[a]anthracene		1400		61	73
Chrysene		1700		20	730
Bis(2-ethylhexyl) phthalate		130	J	29	730
Di-n-octyl phthalate		730	U	37	730
Benzo[b]fluoranthene		1500		29	73
Benzo[k]fluoranthene		470		32	73
Benzo[a]pyrene		1300		22	73
Indeno[1,2,3-cd]pyrene		790		49	73
Dibenz(a,h)anthracene		250		38	73
Benzo[g,h,i]perylene		800		42	730
1,1'-Biphenyl		70	J	62	730
Acetophenone		730	U	16	730
Benzaldehyde		730	U	56	730
Caprolactam		730	U	53	730
Atrazine		290	U	33	290
2,2'-oxybis[1-chloropropane]		730	U	30	730
1,2,4,5-Tetrachlorobenzene		730	U	54	730
2,3,4,6-Tetrachlorophenol		730	U	69	730
3,3'-Dichlorobenzidine		290	U	82	290
Bis(2-chloroethoxy)methane		730	U	23	730

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5 (Surr)	63		38 - 105
Phenol-d5 (Surr)	58		41 - 118
Terphenyl-d14 (Surr)	75		16 - 151
2,4,6-Tribromophenol (Surr)	27		10 - 120
2-Fluorophenol (Surr)	50		37 - 125
2-Fluorobiphenyl	68		40 - 109

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-5(1-2')**

Lab Sample ID: 460-85120-1

Client Matrix: Solid

% Moisture: 9.6

Date Sampled: 10/24/2014 0945

Date Received: 10/24/2014 1820

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258981	Instrument ID:	CBNAMS12
Prep Method:	3546	Prep Batch:	460-258467	Lab File ID:	L118167.D
Dilution:	2.0			Initial Weight/Volume:	15.0156 g
Analysis Date:	10/29/2014 2232			Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL

Tentatively Identified Compounds **Number TIC's Found:** **8**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
1193-18-6	2-Cyclohexen-1-one, 3-methyl-	4.55	1400	J N
504-20-1	2,5-Heptadien-4-one, 2,6-dimethyl-	4.93	1900	J N
	Unknown	5.16	1600	J
	Unknown	5.48	1000	J
2531-84-2	Phenanthrene, 2-methyl-	9.24	660	J N
2531-84-2	Phenanthrene, 2-methyl-	9.26	780	J N
832-69-9	Phenanthrene, 1-methyl-	9.35	900	J N
198-55-0	Perylene	13.25	860	J N

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-5(6-7')**

Lab Sample ID: 460-85120-2

Client Matrix: Solid

% Moisture: 12.8

Date Sampled: 10/24/2014 0950

Date Received: 10/24/2014 1820

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258866	Instrument ID:	CBNAMS12
Prep Method:	3546	Prep Batch:	460-258467	Lab File ID:	L118131.D
Dilution:	1.0			Initial Weight/Volume:	15.0261 g
Analysis Date:	10/29/2014 0718			Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Phenol		380	U	12	380
2-Chlorophenol		380	U	9.6	380
2-Methylphenol		380	U	16	380
4-Methylphenol		380	U	10	380
2-Nitrophenol		380	U	13	380
2,4-Dimethylphenol		380	U	83	380
2,4-Dichlorophenol		380	U	8.9	380
4-Chloro-3-methylphenol		380	U	16	380
2,4,6-Trichlorophenol		150	U	11	150
2,4,5-Trichlorophenol		380	U	38	380
2,4-Dinitrotoluene		77	U	15	77
4-Nitrophenol		770	U	180	770
4,6-Dinitro-2-methylphenol		300	U	100	300
Pentachlorophenol		300	U	46	300
Bis(2-chloroethyl)ether		38	U	8.9	38
N-Nitrosodi-n-propylamine		38	U	13	38
Hexachloroethane		38	U	14	38
Nitrobenzene		38	U	12	38
Isophorone		190		8.1	150
Naphthalene		400		9.6	380
4-Chloroaniline		380	U	9.7	380
Hexachlorobutadiene		77	U	11	77
2-Methylnaphthalene		110	J	8.4	380
Hexachlorocyclopentadiene		380	U	24	380
2-Chloronaphthalene		16	J	8.6	380
2-Nitroaniline		380	U	12	380
Dimethyl phthalate		380	U	11	380
Acenaphthylene		67	J	9.7	380
2,6-Dinitrotoluene		77	U	20	77
3-Nitroaniline		380	U	11	380
Acenaphthene		48	J	9.2	380
Dibenzofuran		78	J	11	380
2,4-Dinitrophenol		300	U	290	300
Diethyl phthalate		380	U	11	380
4-Chlorophenyl phenyl ether		380	U	11	380
Fluorene		56	J	8.2	380
4-Nitroaniline		380	U	14	380
N-Nitrosodiphenylamine		380	U	34	380
4-Bromophenyl phenyl ether		380	U	12	380
Hexachlorobenzene		38	U	15	38
Phenanthrene		1200		10	380
Anthracene		250	J	36	380
Carbazole		53	J	9.4	380
Di-n-butyl phthalate		380	U	11	380
Fluoranthene		1500		11	380
Pyrene		1500		17	380

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-5(6-7')**

Lab Sample ID: 460-85120-2

Client Matrix: Solid

% Moisture: 12.8

Date Sampled: 10/24/2014 0950

Date Received: 10/24/2014 1820

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258866	Instrument ID:	CBNAMS12
Prep Method:	3546	Prep Batch:	460-258467	Lab File ID:	L118131.D
Dilution:	1.0			Initial Weight/Volume:	15.0261 g
Analysis Date:	10/29/2014 0718			Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Butyl benzyl phthalate		380	U	12	380
Benzo[a]anthracene		780		32	38
Chrysene		970		10	380
Bis(2-ethylhexyl) phthalate		650		15	380
Di-n-octyl phthalate		380	U	19	380
Benzo[b]fluoranthene		1100		15	38
Benzo[k]fluoranthene		460		16	38
Benzo[a]pyrene		770		11	38
Indeno[1,2,3-cd]pyrene		410		25	38
Dibenz(a,h)anthracene		110		20	38
Benzo[g,h,i]perylene		350	J	22	380
1,1'-Biphenyl		39	J	32	380
Acetophenone		380	U	8.2	380
Benzaldehyde		380	U	29	380
Caprolactam		380	U	27	380
Atrazine		150	U	17	150
2,2'-oxybis[1-chloropropane]		380	U	16	380
1,2,4,5-Tetrachlorobenzene		380	U	28	380
2,3,4,6-Tetrachlorophenol		380	U	36	380
3,3'-Dichlorobenzidine		150	U	42	150
Bis(2-chloroethoxy)methane		380	U	12	380

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5 (Surr)	71		38 - 105
Phenol-d5 (Surr)	64		41 - 118
Terphenyl-d14 (Surr)	71		16 - 151
2,4,6-Tribromophenol (Surr)	34		10 - 120
2-Fluorophenol (Surr)	59		37 - 125
2-Fluorobiphenyl	76		40 - 109

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-5(6-7')**

Lab Sample ID: 460-85120-2

Client Matrix: Solid

% Moisture: 12.8

Date Sampled: 10/24/2014 0950

Date Received: 10/24/2014 1820

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258866	Instrument ID:	CBNAMS12
Prep Method:	3546	Prep Batch:	460-258467	Lab File ID:	L118131.D
Dilution:	1.0			Initial Weight/Volume:	15.0261 g
Analysis Date:	10/29/2014 0718			Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL

Tentatively Identified Compounds **Number TIC's Found:** **5**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
1193-18-6	2-Cyclohexen-1-one, 3-methyl-	4.57	580	J N
	Unknown	5.18	1000	J
	Unknown	5.49	580	J
192-97-2	Benzo[e]pyrene	13.27	570	J N
	Unknown	14.63	380	J

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-16(1-2')**

Lab Sample ID: 460-85120-3

Client Matrix: Solid

% Moisture: 6.4

Date Sampled: 10/24/2014 1020

Date Received: 10/24/2014 1820

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258866	Instrument ID:	CBNAMS12
Prep Method:	3546	Prep Batch:	460-258467	Lab File ID:	L118124.D
Dilution:	1.0			Initial Weight/Volume:	15.0325 g
Analysis Date:	10/29/2014 0425			Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Phenol		350	U	12	350
2-Chlorophenol		350	U	9.0	350
2-Methylphenol		350	U	15	350
4-Methylphenol		350	U	9.6	350
2-Nitrophenol		350	U	12	350
2,4-Dimethylphenol		350	U	77	350
2,4-Dichlorophenol		350	U	8.3	350
4-Chloro-3-methylphenol		350	U	15	350
2,4,6-Trichlorophenol		140	U	10	140
2,4,5-Trichlorophenol		350	U	35	350
2,4-Dinitrotoluene		71	U	14	71
4-Nitrophenol		710	U	170	710
4,6-Dinitro-2-methylphenol		280	U	94	280
Pentachlorophenol		280	U	43	280
Bis(2-chloroethyl)ether		35	U	8.3	35
N-Nitrosodi-n-propylamine		35	U	12	35
Hexachloroethane		35	U	13	35
Nitrobenzene		35	U	11	35
Isophorone		19	J	7.6	140
Naphthalene		350	U	9.0	350
4-Chloroaniline		350	U	9.1	350
Hexachlorobutadiene		71	U	9.9	71
2-Methylnaphthalene		350	U	7.8	350
Hexachlorocyclopentadiene		350	U	22	350
2-Chloronaphthalene		350	U	8.0	350
2-Nitroaniline		350	U	12	350
Dimethyl phthalate		350	U	10	350
Acenaphthylene		350	U	9.1	350
2,6-Dinitrotoluene		71	U	19	71
3-Nitroaniline		350	U	10	350
Acenaphthene		350	U	8.5	350
Dibenzofuran		350	U	11	350
2,4-Dinitrophenol		280	U	270	280
Diethyl phthalate		350	U	10	350
4-Chlorophenyl phenyl ether		350	U	11	350
Fluorene		350	U	7.7	350
4-Nitroaniline		350	U	13	350
N-Nitrosodiphenylamine		350	U	32	350
4-Bromophenyl phenyl ether		350	U	11	350
Hexachlorobenzene		35	U	14	35
Phenanthrene		46	J	9.4	350
Anthracene		350	U	33	350
Carbazole		350	U	8.7	350
Di-n-butyl phthalate		350	U	11	350
Fluoranthene		54	J	10	350
Pyrene		73	J	16	350

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-16(1-2')**

Lab Sample ID: 460-85120-3

Client Matrix: Solid

% Moisture: 6.4

Date Sampled: 10/24/2014 1020

Date Received: 10/24/2014 1820

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258866	Instrument ID:	CBNAMS12
Prep Method:	3546	Prep Batch:	460-258467	Lab File ID:	L118124.D
Dilution:	1.0			Initial Weight/Volume:	15.0325 g
Analysis Date:	10/29/2014 0425			Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Butyl benzyl phthalate		350	U	11	350
Benzo[a]anthracene		35		29	35
Chrysene		35	J	9.6	350
Bis(2-ethylhexyl) phthalate		350	U	14	350
Di-n-octyl phthalate		350	U	18	350
Benzo[b]fluoranthene		36		14	35
Benzo[k]fluoranthene		35	U	15	35
Benzo[a]pyrene		27	J	11	35
Indeno[1,2,3-cd]pyrene		35	U	23	35
Dibenz(a,h)anthracene		35	U	18	35
Benzo[g,h,i]perylene		350	U	20	350
1,1'-Biphenyl		350	U	30	350
Acetophenone		350	U	7.7	350
Benzaldehyde		350	U	27	350
Caprolactam		350	U	25	350
Atrazine		140	U	16	140
2,2'-oxybis[1-chloropropane]		350	U	14	350
1,2,4,5-Tetrachlorobenzene		350	U	26	350
2,3,4,6-Tetrachlorophenol		350	U	33	350
3,3'-Dichlorobenzidine		140	U	39	140
Bis(2-chloroethoxy)methane		350	U	11	350

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5 (Surr)	72		38 - 105
Phenol-d5 (Surr)	66		41 - 118
Terphenyl-d14 (Surr)	96		16 - 151
2,4,6-Tribromophenol (Surr)	62		10 - 120
2-Fluorophenol (Surr)	66		37 - 125
2-Fluorobiphenyl	71		40 - 109

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-16(1-2')**

Lab Sample ID: 460-85120-3

Client Matrix: Solid

% Moisture: 6.4

Date Sampled: 10/24/2014 1020

Date Received: 10/24/2014 1820

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258866	Instrument ID:	CBNAMS12
Prep Method:	3546	Prep Batch:	460-258467	Lab File ID:	L118124.D
Dilution:	1.0			Initial Weight/Volume:	15.0325 g
Analysis Date:	10/29/2014 0425			Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-16(7-8')**

Lab Sample ID: 460-85120-4

Client Matrix: Solid

% Moisture: 13.6

Date Sampled: 10/24/2014 1030

Date Received: 10/24/2014 1820

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258981	Instrument ID:	CBNAMS12
Prep Method:	3546	Prep Batch:	460-258467	Lab File ID:	L118168.D
Dilution:	2.0			Initial Weight/Volume:	15.0279 g
Analysis Date:	10/29/2014 2257			Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Phenol		45	J	25	760
2-Chlorophenol		760	U	19	760
2-Methylphenol		760	U	33	760
4-Methylphenol		46	J	21	760
2-Nitrophenol		760	U	26	760
2,4-Dimethylphenol		760	U	170	760
2,4-Dichlorophenol		760	U	18	760
4-Chloro-3-methylphenol		760	U	33	760
2,4,6-Trichlorophenol		310	U	22	310
2,4,5-Trichlorophenol		760	U	76	760
2,4-Dinitrotoluene		150	U	30	150
4-Nitrophenol		1500	U	370	1500
4,6-Dinitro-2-methylphenol		610	U	200	610
Pentachlorophenol		610	U	92	610
Bis(2-chloroethyl)ether		76	U	18	76
N-Nitrosodi-n-propylamine		76	U	26	76
Hexachloroethane		76	U	28	76
Nitrobenzene		76	U	24	76
Isophorone		300	J	16	310
Naphthalene		1100		19	760
4-Chloroaniline		760	U	20	760
Hexachlorobutadiene		150	U	21	150
2-Methylnaphthalene		350	J	17	760
Hexachlorocyclopentadiene		760	U	48	760
2-Chloronaphthalene		34	J	17	760
2-Nitroaniline		760	U	25	760
Dimethyl phthalate		760	U	22	760
Acenaphthylene		230	J	20	760
2,6-Dinitrotoluene		150	U	41	150
3-Nitroaniline		760	U	23	760
Acenaphthene		620	J	18	760
Dibenzofuran		530	J	23	760
2,4-Dinitrophenol		610	U	580	610
Diethyl phthalate		760	U	22	760
4-Chlorophenyl phenyl ether		760	U	23	760
Fluorene		830		17	760
4-Nitroaniline		760	U	29	760
N-Nitrosodiphenylamine		760	U	69	760
4-Bromophenyl phenyl ether		760	U	24	760
Hexachlorobenzene		76	U	31	76
Phenanthrene		5400		20	760
Anthracene		1400		73	760
Carbazole		490	J	19	760
Di-n-butyl phthalate		760	U	23	760
Fluoranthene		4400		23	760
Pyrene		5000		35	760

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-16(7-8')**

Lab Sample ID: 460-85120-4

Client Matrix: Solid

% Moisture: 13.6

Date Sampled: 10/24/2014 1030

Date Received: 10/24/2014 1820

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258981	Instrument ID:	CBNAMS12
Prep Method:	3546	Prep Batch:	460-258467	Lab File ID:	L118168.D
Dilution:	2.0			Initial Weight/Volume:	15.0279 g
Analysis Date:	10/29/2014 2257			Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Butyl benzyl phthalate		760	U	24	760
Benzo[a]anthracene		2000		64	76
Chrysene		2100		21	760
Bis(2-ethylhexyl) phthalate		760	U	30	760
Di-n-octyl phthalate		760	U	39	760
Benzo[b]fluoranthene		1800		30	76
Benzo[k]fluoranthene		76	U	33	76
Benzo[a]pyrene		1500		23	76
Indeno[1,2,3-cd]pyrene		950		51	76
Dibenz(a,h)anthracene		240		40	76
Benzo[g,h,i]perylene		800		44	760
1,1'-Biphenyl		130	J	65	760
Acetophenone		760	U	17	760
Benzaldehyde		760	U	58	760
Caprolactam		760	U	55	760
Atrazine		310	U	34	310
2,2'-oxybis[1-chloropropane]		760	U	31	760
1,2,4,5-Tetrachlorobenzene		760	U	57	760
2,3,4,6-Tetrachlorophenol		760	U	72	760
3,3'-Dichlorobenzidine		310	U	85	310
Bis(2-chloroethoxy)methane		760	U	24	760

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5 (Surr)	61		38 - 105
Phenol-d5 (Surr)	62		41 - 118
Terphenyl-d14 (Surr)	81		16 - 151
2,4,6-Tribromophenol (Surr)	61		10 - 120
2-Fluorophenol (Surr)	59		37 - 125
2-Fluorobiphenyl	70		40 - 109

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-16(7-8')**

Lab Sample ID: 460-85120-4

Client Matrix: Solid

% Moisture: 13.6

Date Sampled: 10/24/2014 1030

Date Received: 10/24/2014 1820

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258981	Instrument ID:	CBNAMS12
Prep Method:	3546	Prep Batch:	460-258467	Lab File ID:	L118168.D
Dilution:	2.0			Initial Weight/Volume:	15.0279 g
Analysis Date:	10/29/2014 2257			Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL

Tentatively Identified Compounds **Number TIC's Found:** **6**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
2531-84-2	Phenanthrene, 2-methyl-	9.24	680	J N
2531-84-2	Phenanthrene, 2-methyl-	9.26	890	J N
	Unknown	9.35	1100	J
33543-31-6	Fluoranthene, 2-methyl-	10.50	650	J N
192-97-2	Benzo[e]pyrene	12.91	950	J N
192-97-2	Benzo[e]pyrene	13.25	1000	J N

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-15(1-2')**

Lab Sample ID: 460-85120-5

Client Matrix: Solid

% Moisture: 18.8

Date Sampled: 10/24/2014 1045

Date Received: 10/24/2014 1820

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258866	Instrument ID:	CBNAMS12
Prep Method:	3546	Prep Batch:	460-258467	Lab File ID:	L118139.D
Dilution:	1.0			Initial Weight/Volume:	15.0468 g
Analysis Date:	10/29/2014 1036			Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Phenol		410	U	13	410
2-Chlorophenol		410	U	10	410
2-Methylphenol		61	J	18	410
4-Methylphenol		67	J	11	410
2-Nitrophenol		410	U	14	410
2,4-Dimethylphenol		410	U	89	410
2,4-Dichlorophenol		410	U	9.6	410
4-Chloro-3-methylphenol		410	U	17	410
2,4,6-Trichlorophenol		160	U	12	160
2,4,5-Trichlorophenol		410	U	40	410
2,4-Dinitrotoluene		82	U	16	82
4-Nitrophenol		820	U	200	820
4,6-Dinitro-2-methylphenol		330	U	110	330
Pentachlorophenol		330	U	49	330
Bis(2-chloroethyl)ether		41	U	9.6	41
N-Nitrosodi-n-propylamine		41	U	14	41
Hexachloroethane		41	U	15	41
Nitrobenzene		41	U	13	41
Isophorone		160	U	8.7	160
Naphthalene		2900		10	410
4-Chloroaniline		410	U	10	410
Hexachlorobutadiene		82	U	11	82
2-Methylnaphthalene		3000		9.0	410
Hexachlorocyclopentadiene		410	U	25	410
2-Chloronaphthalene		410	U	9.2	410
2-Nitroaniline		410	U	13	410
Dimethyl phthalate		410	U	12	410
Acenaphthylene		150	J	10	410
2,6-Dinitrotoluene		82	U	22	82
3-Nitroaniline		410	U	12	410
Acenaphthene		310	J	9.8	410
Dibenzofuran		800		12	410
2,4-Dinitrophenol		330	U	310	330
Diethyl phthalate		410	U	12	410
4-Chlorophenyl phenyl ether		410	U	12	410
Fluorene		320	J	8.8	410
4-Nitroaniline		410	U	15	410
N-Nitrosodiphenylamine		410	U	37	410
4-Bromophenyl phenyl ether		410	U	13	410
Hexachlorobenzene		41	U	16	41
Phenanthrene		4400		11	410
Anthracene		880		39	410
Carbazole		340	J	10	410
Di-n-butyl phthalate		14	J	12	410
Fluoranthene		3700		12	410
Pyrene		4200		18	410

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-15(1-2')**

Lab Sample ID: 460-85120-5

Client Matrix: Solid

% Moisture: 18.8

Date Sampled: 10/24/2014 1045

Date Received: 10/24/2014 1820

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258866	Instrument ID:	CBNAMS12
Prep Method:	3546	Prep Batch:	460-258467	Lab File ID:	L118139.D
Dilution:	1.0			Initial Weight/Volume:	15.0468 g
Analysis Date:	10/29/2014 1036			Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Butyl benzyl phthalate		410	U	13	410
Benzo[a]anthracene		2100		34	41
Chrysene		2400		11	410
Bis(2-ethylhexyl) phthalate		75	J	16	410
Di-n-octyl phthalate		410	U	21	410
Benzo[b]fluoranthene		2700		16	41
Benzo[k]fluoranthene		1000		18	41
Benzo[a]pyrene		2000		12	41
Indeno[1,2,3-cd]pyrene		1000		27	41
Dibenz(a,h)anthracene		280		21	41
Benzo[g,h,i]perylene		810		23	410
1,1'-Biphenyl		270	J	35	410
Acetophenone		320	J	8.8	410
Benzaldehyde		410	U	31	410
Caprolactam		410	U	29	410
Atrazine		160	U	18	160
2,2'-oxybis[1-chloropropane]		410	U	17	410
1,2,4,5-Tetrachlorobenzene		410	U	30	410
2,3,4,6-Tetrachlorophenol		410	U	38	410
3,3'-Dichlorobenzidine		160	U	45	160
Bis(2-chloroethoxy)methane		410	U	13	410

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5 (Surr)	73		38 - 105
Phenol-d5 (Surr)	64		41 - 118
Terphenyl-d14 (Surr)	75		16 - 151
2,4,6-Tribromophenol (Surr)	24		10 - 120
2-Fluorophenol (Surr)	56		37 - 125
2-Fluorobiphenyl	77		40 - 109

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-15(1-2')**

Lab Sample ID: 460-85120-5

Client Matrix: Solid

% Moisture: 18.8

Date Sampled: 10/24/2014 1045

Date Received: 10/24/2014 1820

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258866	Instrument ID:	CBNAMS12
Prep Method:	3546	Prep Batch:	460-258467	Lab File ID:	L118139.D
Dilution:	1.0			Initial Weight/Volume:	15.0468 g
Analysis Date:	10/29/2014 1036			Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL

Tentatively Identified Compounds **Number TIC's Found:** **20**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	2.83	140000	J
108-38-3	Benzene, 1,3-dimethyl-	2.98	2000	J N
526-73-8	Benzene, 1,2,3-trimethyl-	4.08	2000	J N
90-12-0	Naphthalene, 1-methyl-	6.35	1900	J N
581-42-0	Naphthalene, 2,6-dimethyl-	6.88	1100	J N
581-40-8	Naphthalene, 2,3-dimethyl-	6.96	1400	J N
582-16-1	Naphthalene, 2,7-dimethyl-	6.98	1200	J N
581-40-8	Naphthalene, 2,3-dimethyl-	7.07	1100	J N
2245-38-7	Naphthalene, 1,6,7-trimethyl-	7.70	820	J N
1921-70-6	Pentadecane, 2,6,10,14-tetramethyl-	8.23	2900	J N
529-05-5	Azulene, 7-ethyl-1,4-dimethyl-	8.51	1700	J N
593-45-3	Octadecane	8.66	1500	J N
629-78-7	Heptadecane	9.08	1800	J N
832-69-9	Phenanthrene, 1-methyl-	9.26	1300	J N
949-41-7	1H-Cyclopropa[l]phenanthrene,1a,9b-dihyd	9.28	1100	J N
	Unknown	9.36	1100	J
112-95-8	Eicosane	9.49	1800	J N
638-36-8	Hexadecane, 2,6,10,14-tetramethyl-	9.63	1000	J N
629-94-7	Heneicosane	9.87	1900	J N
192-97-2	Benzo[e]pyrene	13.28	1400	J N

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-15(5-6')**

Lab Sample ID: 460-85120-6

Client Matrix: Solid

% Moisture: 13.1

Date Sampled: 10/24/2014 1050

Date Received: 10/24/2014 1820

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258981	Instrument ID:	CBNAMS12
Prep Method:	3546	Prep Batch:	460-258467	Lab File ID:	L118169.D
Dilution:	5.0			Initial Weight/Volume:	15.0134 g
Analysis Date:	10/29/2014 2322			Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Phenol		1900	U	62	1900
2-Chlorophenol		1900	U	48	1900
2-Methylphenol		1900	U	83	1900
4-Methylphenol		1900	U	52	1900
2-Nitrophenol		1900	U	64	1900
2,4-Dimethylphenol		1900	U	420	1900
2,4-Dichlorophenol		1900	U	45	1900
4-Chloro-3-methylphenol		1900	U	82	1900
2,4,6-Trichlorophenol		760	U	54	760
2,4,5-Trichlorophenol		1900	U	190	1900
2,4-Dinitrotoluene		390	U	75	390
4-Nitrophenol		3900	U	910	3900
4,6-Dinitro-2-methylphenol		1500	U	510	1500
Pentachlorophenol		1500	U	230	1500
Bis(2-chloroethyl)ether		190	U	45	190
N-Nitrosodi-n-propylamine		190	U	64	190
Hexachloroethane		190	U	70	190
Nitrobenzene		190	U	60	190
Isophorone		6600		41	760
Naphthalene		720	J	48	1900
4-Chloroaniline		1900	U	49	1900
Hexachlorobutadiene		390	U	53	390
2-Methylnaphthalene		650	J	42	1900
Hexachlorocyclopentadiene		1900	U	120	1900
2-Chloronaphthalene		1900	U	43	1900
2-Nitroaniline		1900	U	63	1900
Dimethyl phthalate		1900	U	55	1900
Acenaphthylene		220	J	49	1900
2,6-Dinitrotoluene		390	U	100	390
3-Nitroaniline		1900	U	56	1900
Acenaphthene		330	J	46	1900
Dibenzofuran		390	J	58	1900
2,4-Dinitrophenol		1500	U	1400	1500
Diethyl phthalate		1900	U	54	1900
4-Chlorophenyl phenyl ether		1900	U	57	1900
Fluorene		450	J	41	1900
4-Nitroaniline		1900	U	72	1900
N-Nitrosodiphenylamine		1900	U	170	1900
4-Bromophenyl phenyl ether		1900	U	60	1900
Hexachlorobenzene		190	U	77	190
Phenanthrene		5500		51	1900
Anthracene		1100	J	180	1900
Carbazole		280	J	47	1900
Di-n-butyl phthalate		1900	U	57	1900
Fluoranthene		5400		56	1900
Pyrene		6000		86	1900

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-15(5-6')**

Lab Sample ID: 460-85120-6

Client Matrix: Solid

% Moisture: 13.1

Date Sampled: 10/24/2014 1050

Date Received: 10/24/2014 1820

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258981	Instrument ID:	CBNAMS12
Prep Method:	3546	Prep Batch:	460-258467	Lab File ID:	L118169.D
Dilution:	5.0			Initial Weight/Volume:	15.0134 g
Analysis Date:	10/29/2014 2322			Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Butyl benzyl phthalate		1900	U	59	1900
Benzo[a]anthracene		2700		160	190
Chrysene		3000		52	1900
Bis(2-ethylhexyl) phthalate		1900	U	74	1900
Di-n-octyl phthalate		1900	U	97	1900
Benzo[b]fluoranthene		3400		74	190
Benzo[k]fluoranthene		1200		83	190
Benzo[a]pyrene		2700		58	190
Indeno[1,2,3-cd]pyrene		1800		130	190
Dibenz(a,h)anthracene		500		99	190
Benzo[g,h,i]perylene		1600	J	110	1900
1,1'-Biphenyl		1900	U	160	1900
Acetophenone		1900	U	41	1900
Benzaldehyde		1900	U	140	1900
Caprolactam		1900	U	140	1900
Atrazine		760	U	85	760
2,2'-oxybis[1-chloropropane]		1900	U	78	1900
1,2,4,5-Tetrachlorobenzene		1900	U	140	1900
2,3,4,6-Tetrachlorophenol		1900	U	180	1900
3,3'-Dichlorobenzidine		760	U	210	760
Bis(2-chloroethoxy)methane		1900	U	59	1900

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5 (Surr)	63		38 - 105
Phenol-d5 (Surr)	41		41 - 118
Terphenyl-d14 (Surr)	75		16 - 151
2,4,6-Tribromophenol (Surr)	5	*	10 - 120
2-Fluorophenol (Surr)	23	*	37 - 125
2-Fluorobiphenyl	75		40 - 109

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-15(5-6')**

Lab Sample ID: 460-85120-6

Client Matrix: Solid

% Moisture: 13.1

Date Sampled: 10/24/2014 1050

Date Received: 10/24/2014 1820

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258981	Instrument ID:	CBNAMS12
Prep Method:	3546	Prep Batch:	460-258467	Lab File ID:	L118169.D
Dilution:	5.0			Initial Weight/Volume:	15.0134 g
Analysis Date:	10/29/2014 2322			Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL

Tentatively Identified Compounds **Number TIC's Found:** **5**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
1193-18-6	2-Cyclohexen-1-one, 3-methyl-	4.55	5400	J N
504-20-1	2,5-Heptadien-4-one, 2,6-dimethyl-	4.93	5800	J N
	Unknown	5.16	7000	J
	Unknown	5.48	4400	J
198-55-0	Perylene	13.25	1900	J N

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-14(1-2')**

Lab Sample ID: 460-85120-7

Client Matrix: Solid

% Moisture: 14.7

Date Sampled: 10/24/2014 1120

Date Received: 10/24/2014 1820

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-259124	Instrument ID:	CBNAMS12
Prep Method:	3546	Prep Batch:	460-258467	Lab File ID:	L118193.D
Dilution:	1.0			Initial Weight/Volume:	15.0255 g
Analysis Date:	10/30/2014 1046			Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Phenol		390	U	13	390
2-Chlorophenol		390	U	9.8	390
2-Methylphenol		390	U	17	390
4-Methylphenol		63	J	11	390
2-Nitrophenol		390	U	13	390
2,4-Dimethylphenol		390	U	85	390
2,4-Dichlorophenol		390	U	9.1	390
4-Chloro-3-methylphenol		390	U	17	390
2,4,6-Trichlorophenol		160	U	11	160
2,4,5-Trichlorophenol		390	U	39	390
2,4-Dinitrotoluene		78	U	15	78
4-Nitrophenol		780	U	190	780
4,6-Dinitro-2-methylphenol		310	U	100	310
Pentachlorophenol		310	U	47	310
Bis(2-chloroethyl)ether		39	U	9.1	39
N-Nitrosodi-n-propylamine		39	U	13	39
Hexachloroethane		39	U	14	39
Nitrobenzene		39	U	12	39
Isophorone		26	J	8.3	160
Naphthalene		1300		9.8	390
4-Chloroaniline		390	U	9.9	390
Hexachlorobutadiene		78	U	11	78
2-Methylnaphthalene		670		8.5	390
Hexachlorocyclopentadiene		390	U	24	390
2-Chloronaphthalene		43	J	8.8	390
2-Nitroaniline		390	U	13	390
Dimethyl phthalate		390	U	11	390
Acenaphthylene		370	J	9.9	390
2,6-Dinitrotoluene		78	U	21	78
3-Nitroaniline		390	U	11	390
Acenaphthene		130	J	9.4	390
Dibenzofuran		190	J	12	390
2,4-Dinitrophenol		310	U	290	310
Diethyl phthalate		390	U	11	390
4-Chlorophenyl phenyl ether		390	U	12	390
Fluorene		240	J	8.4	390
4-Nitroaniline		390	U	15	390
N-Nitrosodiphenylamine		390	U	35	390
4-Bromophenyl phenyl ether		390	U	12	390
Hexachlorobenzene		39	U	16	39
Phenanthrene		2100		10	390
Anthracene		510		37	390
Carbazole		61	J	9.6	390
Di-n-butyl phthalate		390	U	12	390
Fluoranthene		2000		11	390
Pyrene		2300		18	390

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-14(1-2')**

Lab Sample ID: 460-85120-7

Client Matrix: Solid

% Moisture: 14.7

Date Sampled: 10/24/2014 1120

Date Received: 10/24/2014 1820

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-259124	Instrument ID:	CBNAMS12
Prep Method:	3546	Prep Batch:	460-258467	Lab File ID:	L118193.D
Dilution:	1.0			Initial Weight/Volume:	15.0255 g
Analysis Date:	10/30/2014 1046			Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Butyl benzyl phthalate		390	U	12	390
Benzo[a]anthracene		1100		32	39
Chrysene		1400		11	390
Bis(2-ethylhexyl) phthalate		390	U	15	390
Di-n-octyl phthalate		390	U	20	390
Benzo[b]fluoranthene		2000		15	39
Benzo[k]fluoranthene		820		17	39
Benzo[a]pyrene		1300		12	39
Indeno[1,2,3-cd]pyrene		1100		26	39
Dibenz(a,h)anthracene		320		20	39
Benzo[g,h,i]perylene		960		22	390
1,1'-Biphenyl		160	J	33	390
Acetophenone		160	J	8.4	390
Benzaldehyde		390	U	29	390
Caprolactam		390	U	28	390
Atrazine		160	U	17	160
2,2'-oxybis[1-chloropropane]		390	U	16	390
1,2,4,5-Tetrachlorobenzene		390	U	29	390
2,3,4,6-Tetrachlorophenol		390	U	36	390
3,3'-Dichlorobenzidine		160	U	43	160
Bis(2-chloroethoxy)methane		390	U	12	390

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5 (Surr)	75		38 - 105
Phenol-d5 (Surr)	69		41 - 118
Terphenyl-d14 (Surr)	81		16 - 151
2,4,6-Tribromophenol (Surr)	80		10 - 120
2-Fluorophenol (Surr)	67		37 - 125
2-Fluorobiphenyl	82		40 - 109

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-14(1-2')**

Lab Sample ID: 460-85120-7

Client Matrix: Solid

% Moisture: 14.7

Date Sampled: 10/24/2014 1120

Date Received: 10/24/2014 1820

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-259124	Instrument ID:	CBNAMS12
Prep Method:	3546	Prep Batch:	460-258467	Lab File ID:	L118193.D
Dilution:	1.0			Initial Weight/Volume:	15.0255 g
Analysis Date:	10/30/2014 1046			Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL

Tentatively Identified Compounds **Number TIC's Found:** **20**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
79-34-5	Ethane, 1,1,2,2-tetrachloro-	3.41	440	J N
637-50-3	Benzene, 1-propenyl-	4.07	850	J N
1120-21-4	Undecane	4.85	650	J N
	Unknown	5.16	710	J
575-43-9	Naphthalene, 1,6-dimethyl-	6.86	400	J N
629-78-7	Heptadecane	8.20	520	J N
629-78-7	Heptadecane	9.06	420	J N
613-12-7	Anthracene, 2-methyl-	9.24	460	J N
2531-84-2	Phenanthrene, 2-methyl-	9.26	620	J N
	Unknown	9.35	630	J
2531-84-2	Phenanthrene, 2-methyl-	9.37	410	J N
781-43-1	9,10-Dimethylanthracene	9.78	410	J N
629-94-7	Heneicosane	9.85	730	J N
3442-78-2	Pyrene, 2-methyl-	10.50	440	J N
2541-69-7	Benz[a]anthracene, 7-methyl-	12.00	390	J N
	Unknown	12.22	380	J
	Unknown	13.13	410	J
198-55-0	Perylene	13.25	1200	J N
	Unknown	14.59	430	J
192-65-4	1,2:4,5-Dibenzopyrene	16.83	450	J N

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-14(6-7')**

Lab Sample ID: 460-85120-8

Client Matrix: Solid

% Moisture: 10.3

Date Sampled: 10/24/2014 1130

Date Received: 10/24/2014 1820

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258866	Instrument ID:	CBNAMS12
Prep Method:	3546	Prep Batch:	460-258467	Lab File ID:	L118125.D
Dilution:	1.0			Initial Weight/Volume:	15.0383 g
Analysis Date:	10/29/2014 0449			Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Phenol		370	U	12	370
2-Chlorophenol		370	U	9.3	370
2-Methylphenol		370	U	16	370
4-Methylphenol		370	U	10	370
2-Nitrophenol		370	U	12	370
2,4-Dimethylphenol		370	U	81	370
2,4-Dichlorophenol		370	U	8.7	370
4-Chloro-3-methylphenol		370	U	16	370
2,4,6-Trichlorophenol		150	U	10	150
2,4,5-Trichlorophenol		370	U	37	370
2,4-Dinitrotoluene		75	U	15	75
4-Nitrophenol		750	U	180	750
4,6-Dinitro-2-methylphenol		300	U	98	300
Pentachlorophenol		300	U	44	300
Bis(2-chloroethyl)ether		37	U	8.7	37
N-Nitrosodi-n-propylamine		37	U	12	37
Hexachloroethane		37	U	13	37
Nitrobenzene		37	U	12	37
Isophorone		270		7.9	150
Naphthalene		18	J	9.3	370
4-Chloroaniline		370	U	9.5	370
Hexachlorobutadiene		75	U	10	75
2-Methylnaphthalene		17	J	8.1	370
Hexachlorocyclopentadiene		370	U	23	370
2-Chloronaphthalene		370	U	8.3	370
2-Nitroaniline		370	U	12	370
Dimethyl phthalate		370	U	11	370
Acenaphthylene		370	U	9.5	370
2,6-Dinitrotoluene		75	U	20	75
3-Nitroaniline		370	U	11	370
Acenaphthene		370	U	8.9	370
Dibenzofuran		370	U	11	370
2,4-Dinitrophenol		300	U	280	300
Diethyl phthalate		370	U	10	370
4-Chlorophenyl phenyl ether		370	U	11	370
Fluorene		9.6	J	8.0	370
4-Nitroaniline		370	U	14	370
N-Nitrosodiphenylamine		370	U	33	370
4-Bromophenyl phenyl ether		370	U	12	370
Hexachlorobenzene		37	U	15	37
Phenanthrene		93	J	9.8	370
Anthracene		370	U	35	370
Carbazole		370	U	9.1	370
Di-n-butyl phthalate		370	U	11	370
Fluoranthene		89	J	11	370
Pyrene		140	J	17	370

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-14(6-7')**

Lab Sample ID: 460-85120-8

Client Matrix: Solid

% Moisture: 10.3

Date Sampled: 10/24/2014 1130

Date Received: 10/24/2014 1820

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258866	Instrument ID:	CBNAMS12
Prep Method:	3546	Prep Batch:	460-258467	Lab File ID:	L118125.D
Dilution:	1.0			Initial Weight/Volume:	15.0383 g
Analysis Date:	10/29/2014 0449			Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Butyl benzyl phthalate		370	U	11	370
Benzo[a]anthracene		51		31	37
Chrysene		57	J	10	370
Bis(2-ethylhexyl) phthalate		190	J	14	370
Di-n-octyl phthalate		370	U	19	370
Benzo[b]fluoranthene		62		14	37
Benzo[k]fluoranthene		37	U	16	37
Benzo[a]pyrene		41		11	37
Indeno[1,2,3-cd]pyrene		29	J	24	37
Dibenz(a,h)anthracene		37	U	19	37
Benzo[g,h,i]perylene		39	J	21	370
1,1'-Biphenyl		370	U	31	370
Acetophenone		370	U	8.0	370
Benzaldehyde		370	U	28	370
Caprolactam		370	U	26	370
Atrazine		150	U	16	150
2,2'-oxybis[1-chloropropane]		370	U	15	370
1,2,4,5-Tetrachlorobenzene		370	U	27	370
2,3,4,6-Tetrachlorophenol		370	U	35	370
3,3'-Dichlorobenzidine		150	U	41	150
Bis(2-chloroethoxy)methane		370	U	11	370

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5 (Surr)	73		38 - 105
Phenol-d5 (Surr)	62		41 - 118
Terphenyl-d14 (Surr)	99		16 - 151
2,4,6-Tribromophenol (Surr)	11		10 - 120
2-Fluorophenol (Surr)	40		37 - 125
2-Fluorobiphenyl	72		40 - 109

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-14(6-7')**

Lab Sample ID: 460-85120-8

Client Matrix: Solid

% Moisture: 10.3

Date Sampled: 10/24/2014 1130

Date Received: 10/24/2014 1820

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258866	Instrument ID:	CBNAMS12
Prep Method:	3546	Prep Batch:	460-258467	Lab File ID:	L118125.D
Dilution:	1.0			Initial Weight/Volume:	15.0383 g
Analysis Date:	10/29/2014 0449			Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL

Tentatively Identified Compounds **Number TIC's Found:** **3**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
504-20-1	2,5-Heptadien-4-one, 2,6-dimethyl-	4.95	450	J N
	Unknown	5.19	2200	J
	Unknown	5.50	3000	J

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-13(1-2')**

Lab Sample ID: 460-85120-9

Client Matrix: Solid

% Moisture: 10.7

Date Sampled: 10/24/2014 1145

Date Received: 10/24/2014 1820

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258866	Instrument ID:	CBNAMS12
Prep Method:	3546	Prep Batch:	460-258467	Lab File ID:	L118126.D
Dilution:	1.0			Initial Weight/Volume:	15.0375 g
Analysis Date:	10/29/2014 0514			Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Phenol		370	U	12	370
2-Chlorophenol		370	U	9.4	370
2-Methylphenol		370	U	16	370
4-Methylphenol		370	U	10	370
2-Nitrophenol		370	U	12	370
2,4-Dimethylphenol		370	U	81	370
2,4-Dichlorophenol		370	U	8.7	370
4-Chloro-3-methylphenol		370	U	16	370
2,4,6-Trichlorophenol		150	U	11	150
2,4,5-Trichlorophenol		370	U	37	370
2,4-Dinitrotoluene		75	U	15	75
4-Nitrophenol		750	U	180	750
4,6-Dinitro-2-methylphenol		300	U	99	300
Pentachlorophenol		300	U	45	300
Bis(2-chloroethyl)ether		37	U	8.7	37
N-Nitrosodi-n-propylamine		37	U	12	37
Hexachloroethane		37	U	14	37
Nitrobenzene		37	U	12	37
Isophorone		31	J	7.9	150
Naphthalene		190	J	9.4	370
4-Chloroaniline		370	U	9.5	370
Hexachlorobutadiene		75	U	10	75
2-Methylnaphthalene		180	J	8.2	370
Hexachlorocyclopentadiene		370	U	23	370
2-Chloronaphthalene		370	U	8.4	370
2-Nitroaniline		370	U	12	370
Dimethyl phthalate		370	U	11	370
Acenaphthylene		37	J	9.5	370
2,6-Dinitrotoluene		75	U	20	75
3-Nitroaniline		370	U	11	370
Acenaphthene		110	J	8.9	370
Dibenzofuran		81	J	11	370
2,4-Dinitrophenol		300	U	280	300
Diethyl phthalate		370	U	11	370
4-Chlorophenyl phenyl ether		370	U	11	370
Fluorene		79	J	8.0	370
4-Nitroaniline		370	U	14	370
N-Nitrosodiphenylamine		370	U	34	370
4-Bromophenyl phenyl ether		370	U	12	370
Hexachlorobenzene		37	U	15	37
Phenanthrene		1000		9.8	370
Anthracene		160	J	35	370
Carbazole		57	J	9.2	370
Di-n-butyl phthalate		370	U	11	370
Fluoranthene		1000		11	370
Pyrene		1500		17	370

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-13(1-2')**

Lab Sample ID: 460-85120-9

Client Matrix: Solid

% Moisture: 10.7

Date Sampled: 10/24/2014 1145

Date Received: 10/24/2014 1820

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258866	Instrument ID:	CBNAMS12
Prep Method:	3546	Prep Batch:	460-258467	Lab File ID:	L118126.D
Dilution:	1.0			Initial Weight/Volume:	15.0375 g
Analysis Date:	10/29/2014 0514			Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Butyl benzyl phthalate		370	U	11	370
Benzo[a]anthracene		520		31	37
Chrysene		710		10	370
Bis(2-ethylhexyl) phthalate		130	J	14	370
Di-n-octyl phthalate		370	U	19	370
Benzo[b]fluoranthene		770		14	37
Benzo[k]fluoranthene		250		16	37
Benzo[a]pyrene		460		11	37
Indeno[1,2,3-cd]pyrene		350		25	37
Dibenz(a,h)anthracene		110		19	37
Benzo[g,h,i]perylene		340	J	21	370
1,1'-Biphenyl		52	J	32	370
Acetophenone		22	J	8.0	370
Benzaldehyde		370	U	28	370
Caprolactam		370	U	27	370
Atrazine		150	U	16	150
2,2'-oxybis[1-chloropropane]		370	U	15	370
1,2,4,5-Tetrachlorobenzene		370	U	27	370
2,3,4,6-Tetrachlorophenol		370	U	35	370
3,3'-Dichlorobenzidine		150	U	41	150
Bis(2-chloroethoxy)methane		370	U	12	370

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5 (Surr)	80		38 - 105
Phenol-d5 (Surr)	73		41 - 118
Terphenyl-d14 (Surr)	101		16 - 151
2,4,6-Tribromophenol (Surr)	49		10 - 120
2-Fluorophenol (Surr)	66		37 - 125
2-Fluorobiphenyl	79		40 - 109

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-13(1-2')**

Lab Sample ID: 460-85120-9

Client Matrix: Solid

% Moisture: 10.7

Date Sampled: 10/24/2014 1145

Date Received: 10/24/2014 1820

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258866	Instrument ID:	CBNAMS12
Prep Method:	3546	Prep Batch:	460-258467	Lab File ID:	L118126.D
Dilution:	1.0			Initial Weight/Volume:	15.0375 g
Analysis Date:	10/29/2014 0514			Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL

Tentatively Identified Compounds **Number TIC's Found:** **4**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
1120-21-4	Undecane	4.86	370	J N
	Unknown	5.18	460	J
	Unknown	5.49	390	J
646-31-1	Tetracosane	8.22	350	J N

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-13(3-4')**

Lab Sample ID: 460-85120-10

Client Matrix: Solid

% Moisture: 25.5

Date Sampled: 10/24/2014 1150

Date Received: 10/24/2014 1820

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258866	Instrument ID:	CBNAMS12
Prep Method:	3546	Prep Batch:	460-258467	Lab File ID:	L118137.D
Dilution:	5.0			Initial Weight/Volume:	15.0254 g
Analysis Date:	10/29/2014 0947			Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Phenol		2200	U	72	2200
2-Chlorophenol		2200	U	56	2200
2-Methylphenol		2200	U	97	2200
4-Methylphenol		110	J	60	2200
2-Nitrophenol		2200	U	74	2200
2,4-Dimethylphenol		2200	U	490	2200
2,4-Dichlorophenol		2200	U	52	2200
4-Chloro-3-methylphenol		2200	U	95	2200
2,4,6-Trichlorophenol		890	U	63	890
2,4,5-Trichlorophenol		2200	U	220	2200
2,4-Dinitrotoluene		450	U	88	450
4-Nitrophenol		4500	U	1100	4500
4,6-Dinitro-2-methylphenol		1800	U	590	1800
Pentachlorophenol		1800	U	270	1800
Bis(2-chloroethyl)ether		220	U	52	220
N-Nitrosodi-n-propylamine		220	U	74	220
Hexachloroethane		220	U	81	220
Nitrobenzene		220	U	70	220
Isophorone		890	U	48	890
Naphthalene		2800		56	2200
4-Chloroaniline		2200	U	57	2200
Hexachlorobutadiene		450	U	62	450
2-Methylnaphthalene		1200	J	49	2200
Hexachlorocyclopentadiene		2200	U	140	2200
2-Chloronaphthalene		2200	U	50	2200
2-Nitroaniline		2200	U	73	2200
Dimethyl phthalate		2200	U	64	2200
Acenaphthylene		820	J	57	2200
2,6-Dinitrotoluene		450	U	120	450
3-Nitroaniline		2200	U	66	2200
Acenaphthene		2400		54	2200
Dibenzofuran		2400		67	2200
2,4-Dinitrophenol		1800	U	1700	1800
Diethyl phthalate		2200	U	63	2200
4-Chlorophenyl phenyl ether		2200	U	66	2200
Fluorene		3100		48	2200
4-Nitroaniline		2200	U	84	2200
N-Nitrosodiphenylamine		2200	U	200	2200
4-Bromophenyl phenyl ether		2200	U	70	2200
Hexachlorobenzene		220	U	90	220
Phenanthrene		24000		59	2200
Anthracene		6400		210	2200
Carbazole		2300		55	2200
Di-n-butyl phthalate		2200	U	66	2200
Fluoranthene		22000		66	2200
Pyrene		24000		100	2200

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-13(3-4')**

Lab Sample ID: 460-85120-10

Client Matrix: Solid

% Moisture: 25.5

Date Sampled: 10/24/2014 1150

Date Received: 10/24/2014 1820

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258866	Instrument ID:	CBNAMS12
Prep Method:	3546	Prep Batch:	460-258467	Lab File ID:	L118137.D
Dilution:	5.0			Initial Weight/Volume:	15.0254 g
Analysis Date:	10/29/2014 0947			Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Butyl benzyl phthalate		2200	U	68	2200
Benzo[a]anthracene		13000		180	220
Chrysene		14000		60	2200
Bis(2-ethylhexyl) phthalate		2200	U	86	2200
Di-n-octyl phthalate		2200	U	110	2200
Benzo[b]fluoranthene		18000		86	220
Benzo[k]fluoranthene		6300		97	220
Benzo[a]pyrene		13000		67	220
Indeno[1,2,3-cd]pyrene		7900		150	220
Dibenz(a,h)anthracene		2100		120	220
Benzo[g,h,i]perylene		6500		130	2200
1,1'-Biphenyl		510	J	190	2200
Acetophenone		2200	U	48	2200
Benzaldehyde		2200	U	170	2200
Caprolactam		2200	U	160	2200
Atrazine		890	U	99	890
2,2'-oxybis[1-chloropropane]		2200	U	91	2200
1,2,4,5-Tetrachlorobenzene		2200	U	160	2200
2,3,4,6-Tetrachlorophenol		2200	U	210	2200
3,3'-Dichlorobenzidine		890	U	250	890
Bis(2-chloroethoxy)methane		2200	U	69	2200

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5 (Surr)	74		38 - 105
Phenol-d5 (Surr)	72		41 - 118
Terphenyl-d14 (Surr)	80		16 - 151
2,4,6-Tribromophenol (Surr)	53		10 - 120
2-Fluorophenol (Surr)	68		37 - 125
2-Fluorobiphenyl	88		40 - 109

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-13(3-4')**

Lab Sample ID: 460-85120-10

Client Matrix: Solid

% Moisture: 25.5

Date Sampled: 10/24/2014 1150

Date Received: 10/24/2014 1820

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258866	Instrument ID:	CBNAMS12
Prep Method:	3546	Prep Batch:	460-258467	Lab File ID:	L118137.D
Dilution:	5.0			Initial Weight/Volume:	15.0254 g
Analysis Date:	10/29/2014 0947			Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL

Tentatively Identified Compounds **Number TIC's Found:** **9**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
832-69-9	Phenanthrene, 1-methyl-	9.28	3000	J N
203-64-5	4H-Cyclopenta[def]phenanthrene	9.36	4100	J N
198-55-0	Perylene	12.94	6800	J N
192-97-2	Benzo[e]pyrene	13.05	2900	J N
198-55-0	Perylene	13.28	9100	J N
198-55-0	Perylene	13.46	4300	J N
	Unknown	14.74	3400	J
215-58-7	Benzo[b]triphenylene	15.07	2400	J N
192-65-4	1,2:4,5-Dibenzopyrene	16.86	2400	J N

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-11(1-2')**

Lab Sample ID: 460-85120-11

Client Matrix: Solid

% Moisture: 12.7

Date Sampled: 10/24/2014 1300

Date Received: 10/24/2014 1820

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258866	Instrument ID:	CBNAMS12
Prep Method:	3546	Prep Batch:	460-258467	Lab File ID:	L118135.D
Dilution:	5.0			Initial Weight/Volume:	15.0231 g
Analysis Date:	10/29/2014 0857			Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Phenol		1900	U	62	1900
2-Chlorophenol		1900	U	48	1900
2-Methylphenol		1900	U	82	1900
4-Methylphenol		1900	U	51	1900
2-Nitrophenol		1900	U	63	1900
2,4-Dimethylphenol		1900	U	420	1900
2,4-Dichlorophenol		1900	U	45	1900
4-Chloro-3-methylphenol		1900	U	81	1900
2,4,6-Trichlorophenol		760	U	54	760
2,4,5-Trichlorophenol		1900	U	190	1900
2,4-Dinitrotoluene		380	U	75	380
4-Nitrophenol		3800	U	910	3800
4,6-Dinitro-2-methylphenol		1500	U	500	1500
Pentachlorophenol		1500	U	230	1500
Bis(2-chloroethyl)ether		190	U	45	190
N-Nitrosodi-n-propylamine		190	U	63	190
Hexachloroethane		190	U	69	190
Nitrobenzene		190	U	59	190
Isophorone		760	U	41	760
Naphthalene		3100		48	1900
4-Chloroaniline		1900	U	49	1900
Hexachlorobutadiene		380	U	53	380
2-Methylnaphthalene		740	J	42	1900
Hexachlorocyclopentadiene		1900	U	120	1900
2-Chloronaphthalene		1900	U	43	1900
2-Nitroaniline		1900	U	62	1900
Dimethyl phthalate		1900	U	55	1900
Acenaphthylene		1200	J	49	1900
2,6-Dinitrotoluene		380	U	100	380
3-Nitroaniline		1900	U	56	1900
Acenaphthene		760	J	46	1900
Dibenzofuran		1500	J	57	1900
2,4-Dinitrophenol		1500	U	1400	1500
Diethyl phthalate		1900	U	54	1900
4-Chlorophenyl phenyl ether		1900	U	57	1900
Fluorene		550	J	41	1900
4-Nitroaniline		1900	U	71	1900
N-Nitrosodiphenylamine		1900	U	170	1900
4-Bromophenyl phenyl ether		1900	U	59	1900
Hexachlorobenzene		190	U	77	190
Phenanthrene		3200		50	1900
Anthracene		2600		180	1900
Carbazole		310	J	47	1900
Di-n-butyl phthalate		1900	U	57	1900
Fluoranthene		9400		56	1900
Pyrene		11000		86	1900

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-11(1-2')**

Lab Sample ID: 460-85120-11

Client Matrix: Solid

% Moisture: 12.7

Date Sampled: 10/24/2014 1300

Date Received: 10/24/2014 1820

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258866	Instrument ID:	CBNAMS12
Prep Method:	3546	Prep Batch:	460-258467	Lab File ID:	L118135.D
Dilution:	5.0			Initial Weight/Volume:	15.0231 g
Analysis Date:	10/29/2014 0857			Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Butyl benzyl phthalate		1900	U	58	1900
Benzo[a]anthracene		6900		160	190
Chrysene		7600		51	1900
Bis(2-ethylhexyl) phthalate		78	J	74	1900
Di-n-octyl phthalate		1900	U	96	1900
Benzo[b]fluoranthene		10000		74	190
Benzo[k]fluoranthene		4200		82	190
Benzo[a]pyrene		9100		57	190
Indeno[1,2,3-cd]pyrene		5400		130	190
Dibenz(a,h)anthracene		1500		98	190
Benzo[g,h,i]perylene		4100		110	1900
1,1'-Biphenyl		310	J	160	1900
Acetophenone		1900	U	41	1900
Benzaldehyde		1900	U	140	1900
Caprolactam		1900	U	140	1900
Atrazine		760	U	84	760
2,2'-oxybis[1-chloropropane]		1900	U	78	1900
1,2,4,5-Tetrachlorobenzene		1900	U	140	1900
2,3,4,6-Tetrachlorophenol		1900	U	180	1900
3,3'-Dichlorobenzidine		760	U	210	760
Bis(2-chloroethoxy)methane		1900	U	59	1900

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5 (Surr)	69		38 - 105
Phenol-d5 (Surr)	68		41 - 118
Terphenyl-d14 (Surr)	82		16 - 151
2,4,6-Tribromophenol (Surr)	54		10 - 120
2-Fluorophenol (Surr)	66		37 - 125
2-Fluorobiphenyl	83		40 - 109

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-11(1-2')**

Lab Sample ID: 460-85120-11

Client Matrix: Solid

% Moisture: 12.7

Date Sampled: 10/24/2014 1300

Date Received: 10/24/2014 1820

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258866	Instrument ID:	CBNAMS12
Prep Method:	3546	Prep Batch:	460-258467	Lab File ID:	L118135.D
Dilution:	5.0			Initial Weight/Volume:	15.0231 g
Analysis Date:	10/29/2014 0857			Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL

Tentatively Identified Compounds **Number TIC's Found:** **11**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
203-64-5	4H-Cyclopenta[def]phenanthrene	9.36	2400	J N
10544-50-0	Cyclic octaatomic sulfur	10.00	2100	J N
238-84-6	11H-Benzo[a]fluorene	10.52	1700	J N
33543-31-6	Fluoranthene, 2-methyl-	10.63	1700	J N
192-97-2	Benzo[e]pyrene	13.04	3000	J N
198-55-0	Perylene	13.27	5100	J N
192-97-2	Benzo[e]pyrene	13.46	2700	J N
193-43-1	Indeno[1,2,3-cd]fluoranthene	14.74	2300	J N
213-46-7	1,2:7,8-Dibenzophenanthrene	15.03	1700	J N
191-26-4	Dibenzo[def,mno]chrysene	15.40	2300	J N
192-65-4	1,2:4,5-Dibenzopyrene	16.86	1800	J N

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-11(5-6')**

Lab Sample ID: 460-85120-12

Client Matrix: Solid

% Moisture: 17.4

Date Sampled: 10/24/2014 1305

Date Received: 10/24/2014 1820

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258866	Instrument ID:	CBNAMS12
Prep Method:	3546	Prep Batch:	460-258467	Lab File ID:	L118138.D
Dilution:	10			Initial Weight/Volume:	15.0437 g
Analysis Date:	10/29/2014 1011	Run Type:	DL	Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Phenol		880	J	130	4000
2-Chlorophenol		4000	U	100	4000
2-Methylphenol		4000	U	170	4000
4-Methylphenol		690	J	110	4000
2-Nitrophenol		4000	U	130	4000
2,4-Dimethylphenol		4000	U	880	4000
2,4-Dichlorophenol		4000	U	94	4000
4-Chloro-3-methylphenol		4000	U	170	4000
2,4,6-Trichlorophenol		1600	U	110	1600
2,4,5-Trichlorophenol		4000	U	400	4000
2,4-Dinitrotoluene		810	U	160	810
4-Nitrophenol		8100	U	1900	8100
4,6-Dinitro-2-methylphenol		3200	U	1100	3200
Pentachlorophenol		3200	U	480	3200
Bis(2-chloroethyl)ether		400	U	94	400
N-Nitrosodi-n-propylamine		400	U	130	400
Hexachloroethane		400	U	150	400
Nitrobenzene		400	U	130	400
Isophorone		210	J	86	1600
Naphthalene		8200		100	4000
4-Chloroaniline		4000	U	100	4000
Hexachlorobutadiene		810	U	110	810
2-Methylnaphthalene		2400	J	88	4000
Hexachlorocyclopentadiene		4000	U	250	4000
2-Chloronaphthalene		420	J	91	4000
2-Nitroaniline		4000	U	130	4000
Dimethyl phthalate		4000	U	120	4000
Acenaphthylene		880	J	100	4000
2,6-Dinitrotoluene		810	U	210	810
3-Nitroaniline		4000	U	120	4000
Acenaphthene		5100		97	4000
Dibenzofuran		4100		120	4000
2,4-Dinitrophenol		3200	U	3000	3200
Diethyl phthalate		4000	U	110	4000
4-Chlorophenyl phenyl ether		4000	U	120	4000
Fluorene		5100		87	4000
4-Nitroaniline		4000	U	150	4000
N-Nitrosodiphenylamine		4000	U	360	4000
4-Bromophenyl phenyl ether		4000	U	130	4000
Hexachlorobenzene		400	U	160	400
Phenanthrene		52000		110	4000
Anthracene		6800		380	4000
Carbazole		490	J	99	4000
Di-n-butyl phthalate		4000	U	120	4000
Fluoranthene		35000		120	4000
Pyrene		28000		180	4000

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-11(5-6')**

Lab Sample ID: 460-85120-12

Client Matrix: Solid

% Moisture: 17.4

Date Sampled: 10/24/2014 1305

Date Received: 10/24/2014 1820

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258866	Instrument ID:	CBNAMS12
Prep Method:	3546	Prep Batch:	460-258467	Lab File ID:	L118138.D
Dilution:	10			Initial Weight/Volume:	15.0437 g
Analysis Date:	10/29/2014 1011	Run Type:	DL	Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Butyl benzyl phthalate		4000	U	120	4000
Benzo[a]anthracene		12000		330	400
Chrysene		18000		110	4000
Bis(2-ethylhexyl) phthalate		4000	U	160	4000
Di-n-octyl phthalate		4000	U	200	4000
Benzo[b]fluoranthene		20000		160	400
Benzo[k]fluoranthene		6500		170	400
Benzo[a]pyrene		7000		120	400
Indeno[1,2,3-cd]pyrene		5300		270	400
Dibenz(a,h)anthracene		1600		210	400
Benzo[g,h,i]perylene		4200		230	4000
1,1'-Biphenyl		1200	J	340	4000
Acetophenone		4000	U	87	4000
Benzaldehyde		4000	U	300	4000
Caprolactam		4000	U	290	4000
Atrazine		1600	U	180	1600
2,2'-oxybis[1-chloropropane]		4000	U	160	4000
1,2,4,5-Tetrachlorobenzene		4000	U	300	4000
2,3,4,6-Tetrachlorophenol		4000	U	380	4000
3,3'-Dichlorobenzidine		1600	U	450	1600
Bis(2-chloroethoxy)methane		4000	U	120	4000

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5 (Surr)	46		38 - 105
Phenol-d5 (Surr)	39	*	41 - 118
Terphenyl-d14 (Surr)	49		16 - 151
2,4,6-Tribromophenol (Surr)	42		10 - 120
2-Fluorophenol (Surr)	64		37 - 125
2-Fluorobiphenyl	85		40 - 109

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-11(5-6')**

Lab Sample ID: 460-85120-12

Client Matrix: Solid

% Moisture: 17.4

Date Sampled: 10/24/2014 1305

Date Received: 10/24/2014 1820

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258866	Instrument ID:	CBNAMS12
Prep Method:	3546	Prep Batch:	460-258467	Lab File ID:	L118138.D
Dilution:	10			Initial Weight/Volume:	15.0437 g
Analysis Date:	10/29/2014 1011	Run Type:	DL	Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL

Tentatively Identified Compounds **Number TIC's Found:** **9**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
79-34-5	Ethane, 1,1,2,2-tetrachloro-	3.39	4500	J N
	Unknown	8.08	3900	J
613-12-7	Anthracene, 2-methyl-	9.25	5600	J N
2531-84-2	Phenanthrene, 2-methyl-	9.28	6700	J N
832-64-4	Phenanthrene, 4-methyl-	9.36	7400	J N
2531-84-2	Phenanthrene, 2-methyl-	9.39	4300	J N
612-94-2	Naphthalene, 2-phenyl-	9.55	4200	J N
33543-31-6	Fluoranthene, 2-methyl-	10.51	5900	J N
198-55-0	Perylene	13.27	8600	J N

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-8(1-2')**

Lab Sample ID: 460-85120-13

Client Matrix: Solid

% Moisture: 15.7

Date Sampled: 10/24/2014 1330

Date Received: 10/24/2014 1820

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258866	Instrument ID:	CBNAMS12
Prep Method:	3546	Prep Batch:	460-258467	Lab File ID:	L118136.D
Dilution:	2.0			Initial Weight/Volume:	15.0248 g
Analysis Date:	10/29/2014 0922			Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Phenol		780	U	26	780
2-Chlorophenol		780	U	20	780
2-Methylphenol		780	U	34	780
4-Methylphenol		780	U	21	780
2-Nitrophenol		780	U	26	780
2,4-Dimethylphenol		780	U	170	780
2,4-Dichlorophenol		780	U	18	780
4-Chloro-3-methylphenol		780	U	34	780
2,4,6-Trichlorophenol		320	U	22	320
2,4,5-Trichlorophenol		780	U	78	780
2,4-Dinitrotoluene		160	U	31	160
4-Nitrophenol		1600	U	380	1600
4,6-Dinitro-2-methylphenol		630	U	210	630
Pentachlorophenol		630	U	95	630
Bis(2-chloroethyl)ether		78	U	18	78
N-Nitrosodi-n-propylamine		78	U	26	78
Hexachloroethane		78	U	29	78
Nitrobenzene		78	U	25	78
Isophorone		25	J	17	320
Naphthalene		280	J	20	780
4-Chloroaniline		780	U	20	780
Hexachlorobutadiene		160	U	22	160
2-Methylnaphthalene		210	J	17	780
Hexachlorocyclopentadiene		780	U	49	780
2-Chloronaphthalene		780	U	18	780
2-Nitroaniline		780	U	26	780
Dimethyl phthalate		780	U	23	780
Acenaphthylene		52	J	20	780
2,6-Dinitrotoluene		160	U	42	160
3-Nitroaniline		780	U	23	780
Acenaphthene		590	J	19	780
Dibenzofuran		320	J	24	780
2,4-Dinitrophenol		630	U	590	630
Diethyl phthalate		780	U	22	780
4-Chlorophenyl phenyl ether		780	U	23	780
Fluorene		450	J	17	780
4-Nitroaniline		780	U	30	780
N-Nitrosodiphenylamine		780	U	71	780
4-Bromophenyl phenyl ether		780	U	25	780
Hexachlorobenzene		78	U	32	78
Phenanthrene		5100		21	780
Anthracene		1100		74	780
Carbazole		400	J	19	780
Di-n-butyl phthalate		780	U	23	780
Fluoranthene		4300		23	780
Pyrene		5300		36	780

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-8(1-2')**

Lab Sample ID: 460-85120-13

Client Matrix: Solid

% Moisture: 15.7

Date Sampled: 10/24/2014 1330

Date Received: 10/24/2014 1820

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258866	Instrument ID:	CBNAMS12
Prep Method:	3546	Prep Batch:	460-258467	Lab File ID:	L118136.D
Dilution:	2.0			Initial Weight/Volume:	15.0248 g
Analysis Date:	10/29/2014 0922			Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Butyl benzyl phthalate		780	U	24	780
Benzo[a]anthracene		2300		65	78
Chrysene		2400		21	780
Bis(2-ethylhexyl) phthalate		71	J	31	780
Di-n-octyl phthalate		780	U	40	780
Benzo[b]fluoranthene		2700		31	78
Benzo[k]fluoranthene		1100		34	78
Benzo[a]pyrene		2100		24	78
Indeno[1,2,3-cd]pyrene		1300		52	78
Dibenz(a,h)anthracene		320		41	78
Benzo[g,h,i]perylene		1000		45	780
1,1'-Biphenyl		780	U	67	780
Acetophenone		780	U	17	780
Benzaldehyde		780	U	60	780
Caprolactam		780	U	56	780
Atrazine		320	U	35	320
2,2'-oxybis[1-chloropropane]		780	U	32	780
1,2,4,5-Tetrachlorobenzene		780	U	58	780
2,3,4,6-Tetrachlorophenol		780	U	74	780
3,3'-Dichlorobenzidine		320	U	87	320
Bis(2-chloroethoxy)methane		780	U	24	780

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5 (Surr)	66		38 - 105
Phenol-d5 (Surr)	57		41 - 118
Terphenyl-d14 (Surr)	76		16 - 151
2,4,6-Tribromophenol (Surr)	8	*	10 - 120
2-Fluorophenol (Surr)	41		37 - 125
2-Fluorobiphenyl	70		40 - 109

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-8(1-2')**

Lab Sample ID: 460-85120-13

Client Matrix: Solid

% Moisture: 15.7

Date Sampled: 10/24/2014 1330

Date Received: 10/24/2014 1820

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258866	Instrument ID:	CBNAMS12
Prep Method:	3546	Prep Batch:	460-258467	Lab File ID:	L118136.D
Dilution:	2.0			Initial Weight/Volume:	15.0248 g
Analysis Date:	10/29/2014 0922			Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL

Tentatively Identified Compounds **Number TIC's Found:** **7**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	5.49	1300	J
2531-84-2	Phenanthrene, 2-methyl-	9.26	750	J N
2531-84-2	Phenanthrene, 2-methyl-	9.28	820	J N
	Unknown	9.36	1000	J
949-41-7	1H-Cyclopropa[l]phenanthrene,1a,9b-dihyd	9.39	640	J N
198-55-0	Perylene	13.27	1400	J N
192-97-2	Benzo[e]pyrene	13.46	800	J N

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-8(9-10')**

Lab Sample ID: 460-85120-14

Client Matrix: Solid

% Moisture: 17.0

Date Sampled: 10/24/2014 1340

Date Received: 10/24/2014 1820

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258866	Instrument ID:	CBNAMS12
Prep Method:	3546	Prep Batch:	460-258467	Lab File ID:	L118127.D
Dilution:	1.0			Initial Weight/Volume:	15.0193 g
Analysis Date:	10/29/2014 0539			Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Phenol		400	U	13	400
2-Chlorophenol		400	U	10	400
2-Methylphenol		400	U	17	400
4-Methylphenol		400	U	11	400
2-Nitrophenol		400	U	13	400
2,4-Dimethylphenol		400	U	87	400
2,4-Dichlorophenol		400	U	9.4	400
4-Chloro-3-methylphenol		400	U	17	400
2,4,6-Trichlorophenol		160	U	11	160
2,4,5-Trichlorophenol		400	U	40	400
2,4-Dinitrotoluene		81	U	16	81
4-Nitrophenol		810	U	190	810
4,6-Dinitro-2-methylphenol		320	U	110	320
Pentachlorophenol		320	U	48	320
Bis(2-chloroethyl)ether		40	U	9.4	40
N-Nitrosodi-n-propylamine		40	U	13	40
Hexachloroethane		40	U	15	40
Nitrobenzene		40	U	13	40
Isophorone		160	U	8.5	160
Naphthalene		400	U	10	400
4-Chloroaniline		400	U	10	400
Hexachlorobutadiene		81	U	11	81
2-Methylnaphthalene		400	U	8.8	400
Hexachlorocyclopentadiene		400	U	25	400
2-Chloronaphthalene		400	U	9.0	400
2-Nitroaniline		400	U	13	400
Dimethyl phthalate		400	U	12	400
Acenaphthylene		400	U	10	400
2,6-Dinitrotoluene		81	U	21	81
3-Nitroaniline		400	U	12	400
Acenaphthene		400	U	9.6	400
Dibenzofuran		400	U	12	400
2,4-Dinitrophenol		320	U	300	320
Diethyl phthalate		400	U	11	400
4-Chlorophenyl phenyl ether		400	U	12	400
Fluorene		400	U	8.7	400
4-Nitroaniline		400	U	15	400
N-Nitrosodiphenylamine		400	U	36	400
4-Bromophenyl phenyl ether		400	U	13	400
Hexachlorobenzene		40	U	16	40
Phenanthrene		66	J	11	400
Anthracene		400	U	38	400
Carbazole		400	U	9.9	400
Di-n-butyl phthalate		400	U	12	400
Fluoranthene		120	J	12	400
Pyrene		160	J	18	400

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-8(9-10')**

Lab Sample ID: 460-85120-14

Client Matrix: Solid

% Moisture: 17.0

Date Sampled: 10/24/2014 1340

Date Received: 10/24/2014 1820

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258866	Instrument ID:	CBNAMS12
Prep Method:	3546	Prep Batch:	460-258467	Lab File ID:	L118127.D
Dilution:	1.0			Initial Weight/Volume:	15.0193 g
Analysis Date:	10/29/2014 0539			Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Butyl benzyl phthalate		400	U	12	400
Benzo[a]anthracene		81		33	40
Chrysene		79	J	11	400
Bis(2-ethylhexyl) phthalate		430		16	400
Di-n-octyl phthalate		400	U	20	400
Benzo[b]fluoranthene		80		16	40
Benzo[k]fluoranthene		40	U	17	40
Benzo[a]pyrene		65		12	40
Indeno[1,2,3-cd]pyrene		31	J	26	40
Dibenz(a,h)anthracene		40	U	21	40
Benzo[g,h,i]perylene		37	J	23	400
1,1'-Biphenyl		400	U	34	400
Acetophenone		400	U	8.7	400
Benzaldehyde		400	U	30	400
Caprolactam		400	U	29	400
Atrazine		160	U	18	160
2,2'-oxybis[1-chloropropane]		400	U	16	400
1,2,4,5-Tetrachlorobenzene		400	U	30	400
2,3,4,6-Tetrachlorophenol		400	U	37	400
3,3'-Dichlorobenzidine		160	U	44	160
Bis(2-chloroethoxy)methane		400	U	12	400

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5 (Surr)	72		38 - 105
Phenol-d5 (Surr)	68		41 - 118
Terphenyl-d14 (Surr)	99		16 - 151
2,4,6-Tribromophenol (Surr)	43		10 - 120
2-Fluorophenol (Surr)	66		37 - 125
2-Fluorobiphenyl	71		40 - 109

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-8(9-10')**

Lab Sample ID: 460-85120-14

Client Matrix: Solid

% Moisture: 17.0

Date Sampled: 10/24/2014 1340

Date Received: 10/24/2014 1820

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258866	Instrument ID:	CBNAMS12
Prep Method:	3546	Prep Batch:	460-258467	Lab File ID:	L118127.D
Dilution:	1.0			Initial Weight/Volume:	15.0193 g
Analysis Date:	10/29/2014 0539			Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **FB**

Lab Sample ID: 460-85120-16FB

Client Matrix: Water

Date Sampled: 10/24/2014 1430

Date Received: 10/24/2014 1820

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258776	Instrument ID:	CBNAMS6
Prep Method:	3510C	Prep Batch:	460-258263	Lab File ID:	M86134.D
Dilution:	1.0			Initial Weight/Volume:	250 mL
Analysis Date:	10/28/2014 2312			Final Weight/Volume:	2 mL
Prep Date:	10/25/2014 0948			Injection Volume:	5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1'-Biphenyl	10	U	1.8	10
1,2,4,5-Tetrachlorobenzene	10	U	1.8	10
2,2'-oxybis[1-chloropropane]	10	U	1.3	10
2,3,4,6-Tetrachlorophenol	10	U	0.89	10
2,4,5-Trichlorophenol	10	U	2.2	10
2,4,6-Trichlorophenol	10	U	1.4	10
2,4-Dichlorophenol	10	U	1.1	10
2,4-Dimethylphenol	10	U	1.2	10
2,4-Dinitrophenol	30	U	2.0	30
2,4-Dinitrotoluene	2.0	U	0.28	2.0
2,6-Dinitrotoluene	2.0	U	0.27	2.0
2-Chloronaphthalene	10	U	1.3	10
2-Chlorophenol	10	U	0.93	10
2-Methylnaphthalene	10	U	1.5	10
2-Methylphenol	10	U	1.4	10
2-Nitroaniline	20	U	2.0	20
2-Nitrophenol	10	U	0.68	10
3,3'-Dichlorobenzidine	20	U	3.2	20
3-Nitroaniline	20	U	2.9	20
4,6-Dinitro-2-methylphenol	30	U	3.0	30
4-Bromophenyl phenyl ether	10	U	1.1	10
4-Chloro-3-methylphenol	10	U	1.1	10
4-Chloroaniline	1.0	U	0.32	1.0
4-Chlorophenyl phenyl ether	10	U	1.5	10
4-Methylphenol	10	U	1.0	10
4-Nitroaniline	20	U	2.9	20
4-Nitrophenol	30	U	2.0	30
Acenaphthene	10	U	1.1	10
Acenaphthylene	10	U	1.8	10
Acetophenone	10	U	0.89	10
Anthracene	10	U	0.85	10
Atrazine	10	U	1.0	10
Benzaldehyde	10	U	2.1	10
Benzo[a]anthracene	1.0	U	0.18	1.0
Benzo[a]pyrene	1.0	U	0.14	1.0
Benzo[b]fluoranthene	1.0	U	0.21	1.0
Benzo[g,h,i]perylene	10	U	0.93	10
Benzo[k]fluoranthene	1.0	U	0.14	1.0
Bis(2-chloroethoxy)methane	10	U	1.0	10
Bis(2-chloroethyl)ether	1.0	U	0.30	1.0
Bis(2-ethylhexyl) phthalate	10	U	0.81	10
Butyl benzyl phthalate	10	U	1.4	10
Caprolactam	10	U	0.91	10
Carbazole	10	U	1.2	10
Chrysene	10	U	1.4	10
Dibenz(a,h)anthracene	1.0	U	0.16	1.0

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **FB**

Lab Sample ID: 460-85120-16FB

Client Matrix: Water

Date Sampled: 10/24/2014 1430

Date Received: 10/24/2014 1820

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258776	Instrument ID:	CBNAMS6
Prep Method:	3510C	Prep Batch:	460-258263	Lab File ID:	M86134.D
Dilution:	1.0			Initial Weight/Volume:	250 mL
Analysis Date:	10/28/2014 2312			Final Weight/Volume:	2 mL
Prep Date:	10/25/2014 0948			Injection Volume:	5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Dibenzofuran	10	U	1.5	10
Diethyl phthalate	10	U	1.4	10
Dimethyl phthalate	10	U	1.1	10
Di-n-butyl phthalate	10	U	1.0	10
Di-n-octyl phthalate	10	U	0.88	10
Fluoranthene	10	U	1.1	10
Fluorene	10	U	1.7	10
Hexachlorobenzene	1.0	U	0.20	1.0
Hexachlorobutadiene	2.0	U	0.68	2.0
Hexachlorocyclopentadiene	10	U	1.5	10
Hexachloroethane	1.0	U	0.15	1.0
Indeno[1,2,3-cd]pyrene	1.0	U	0.11	1.0
Isophorone	10	U	1.3	10
Naphthalene	10	U	2.0	10
Nitrobenzene	1.0	U	0.34	1.0
N-Nitrosodi-n-propylamine	1.0	U	0.27	1.0
N-Nitrosodiphenylamine	10	U	1.0	10
Pentachlorophenol	30	U	2.7	30
Phenanthrene	10	U	1.2	10
Phenol	10	U	0.60	10
Pyrene	10	U	1.1	10

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol (Surr)	54		51 - 126
2-Fluorobiphenyl	85		50 - 120
2-Fluorophenol (Surr)	53		15 - 96
Nitrobenzene-d5 (Surr)	99		60 - 114
Phenol-d5 (Surr)	37		4 - 86
Terphenyl-d14 (Surr)	97		72 - 130

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **FB**

Lab Sample ID: 460-85120-16FB

Client Matrix: Water

Date Sampled: 10/24/2014 1430

Date Received: 10/24/2014 1820

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-258776	Instrument ID:	CBNAMS6
Prep Method:	3510C	Prep Batch:	460-258263	Lab File ID:	M86134.D
Dilution:	1.0			Initial Weight/Volume:	250 mL
Analysis Date:	10/28/2014 2312			Final Weight/Volume:	2 mL
Prep Date:	10/25/2014 0948			Injection Volume:	5 uL

Tentatively Identified Compounds **Number TIC's Found:** **2**

Cas Number	Analyte	RT	Est. Result (ug/L)	Qualifier
111-06-8	Hexadecanoic acid, butyl ester	10.42	15	J N
123-95-5	Octadecanoic acid, butyl ester	11.21	12	J N

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-5(1-2')**

Lab Sample ID: 460-85120-1

Client Matrix: Solid

% Moisture: 9.6

Date Sampled: 10/24/2014 0945

Date Received: 10/24/2014 1820

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-258783	Instrument ID:	CPESTGC5
Prep Method:	3546	Prep Batch:	460-258500	Initial Weight/Volume:	15.0281 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/28/2014 1404			Injection Volume:	1 uL
Prep Date:	10/27/2014 1047			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		7.4	U	1.4	7.4
4,4'-DDE		7.4	U	1.4	7.4
4,4'-DDT		7.4	U	1.8	7.4
Aldrin		7.4	U	1.5	7.4
alpha-BHC		2.2	U	1.7	2.2
beta-BHC		2.2	U	1.8	2.2
Chlordane (technical)		74	U	21	74
delta-BHC		2.2	U	1.3	2.2
Dieldrin		2.2	U	1.3	2.2
Endosulfan I		7.4	U	1.7	7.4
Endosulfan II		7.4	U	1.4	7.4
Endosulfan sulfate		7.4	U	1.4	7.4
Endrin		7.4	U	1.8	7.4
Endrin aldehyde		7.4	U	1.1	7.4
Endrin ketone		7.4	U	1.4	7.4
gamma-BHC (Lindane)		2.2	U	1.3	2.2
Heptachlor		7.4	U	1.8	7.4
Heptachlor epoxide		7.4	U	1.7	7.4
Methoxychlor		7.4	U	1.8	7.4
Toxaphene		74	U	20	74

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	110		76 - 149
Tetrachloro-m-xylene	76	p	72 - 136

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-5(1-2')**

Lab Sample ID: 460-85120-1

Client Matrix: Solid

% Moisture: 9.6

Date Sampled: 10/24/2014 0945

Date Received: 10/24/2014 1820

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-258783	Instrument ID:	CPESTGC5
Prep Method:	3546	Prep Batch:	460-258500	Initial Weight/Volume:	15.0281 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/28/2014 1404			Injection Volume:	1 uL
Prep Date:	10/27/2014 1047			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	91		76 - 149
Tetrachloro-m-xylene	133		72 - 136

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-5(6-7')**

Lab Sample ID: 460-85120-2

Client Matrix: Solid

% Moisture: 12.8

Date Sampled: 10/24/2014 0950

Date Received: 10/24/2014 1820

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-258783	Instrument ID:	CPESTGC5
Prep Method:	3546	Prep Batch:	460-258500	Initial Weight/Volume:	15.0231 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/28/2014 1418			Injection Volume:	1 uL
Prep Date:	10/27/2014 1047			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		7.7	U	1.5	7.7
4,4'-DDE		7.7	U	1.5	7.7
4,4'-DDT		7.7	U	1.8	7.7
Aldrin		7.7	U	1.6	7.7
alpha-BHC		2.3	U	1.7	2.3
beta-BHC		2.3	U	1.8	2.3
Chlordane (technical)		77	U	22	77
delta-BHC		2.3	U	1.4	2.3
Dieldrin		2.3	U	1.4	2.3
Endosulfan I		7.7	U	1.7	7.7
Endosulfan II		7.7	U	1.5	7.7
Endosulfan sulfate		7.7	U	1.5	7.7
Endrin		7.7	U	1.8	7.7
Endrin aldehyde		7.7	U	1.1	7.7
Endrin ketone		7.7	U	1.5	7.7
gamma-BHC (Lindane)		2.3	U	1.4	2.3
Heptachlor		7.7	U	1.8	7.7
Heptachlor epoxide		7.7	U	1.7	7.7
Methoxychlor		7.7	U	1.8	7.7
Toxaphene		77	U	21	77

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	88		76 - 149
Tetrachloro-m-xylene	72		72 - 136

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-5(6-7')**

Lab Sample ID: 460-85120-2

Client Matrix: Solid

% Moisture: 12.8

Date Sampled: 10/24/2014 0950

Date Received: 10/24/2014 1820

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-258783	Instrument ID:	CPESTGC5
Prep Method:	3546	Prep Batch:	460-258500	Initial Weight/Volume:	15.0231 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/28/2014 1418			Injection Volume:	1 uL
Prep Date:	10/27/2014 1047			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	84		76 - 149
Tetrachloro-m-xylene	58	*	72 - 136

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-16(1-2')**

Lab Sample ID: 460-85120-3

Client Matrix: Solid

% Moisture: 6.4

Date Sampled: 10/24/2014 1020

Date Received: 10/24/2014 1820

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-259042	Instrument ID:	CPESTGC9
Prep Method:	3546	Prep Batch:	460-258500	Initial Weight/Volume:	15.0338 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/29/2014 1834	Run Type:	RA	Injection Volume:	1 uL
Prep Date:	10/27/2014 1047			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		7.1	U *	1.4	7.1
4,4'-DDE		7.1	U	1.4	7.1
4,4'-DDT		7.1	U	1.7	7.1
Aldrin		7.1	U	1.5	7.1
alpha-BHC		2.1	U	1.6	2.1
beta-BHC		2.1	U	1.7	2.1
Chlordane (technical)		71	U	20	71
delta-BHC		2.1	U	1.3	2.1
Dieldrin		2.1	U	1.3	2.1
Endosulfan I		7.1	U	1.6	7.1
Endosulfan II		7.1	U	1.4	7.1
Endosulfan sulfate		7.1	U	1.4	7.1
Endrin		7.1	U	1.7	7.1
Endrin aldehyde		7.1	U	1.1	7.1
Endrin ketone		7.1	U	1.4	7.1
gamma-BHC (Lindane)		2.1	U	1.3	2.1
Heptachlor		7.1	U	1.7	7.1
Heptachlor epoxide		7.1	U	1.6	7.1
Methoxychlor		7.1	U	1.7	7.1
Toxaphene		71	U	19	71

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	104		76 - 149
Tetrachloro-m-xylene	93		72 - 136

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-16(1-2')**

Lab Sample ID: 460-85120-3

Client Matrix: Solid

% Moisture: 6.4

Date Sampled: 10/24/2014 1020

Date Received: 10/24/2014 1820

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-259042	Instrument ID:	CPESTGC9
Prep Method:	3546	Prep Batch:	460-258500	Initial Weight/Volume:	15.0338 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/29/2014 1834	Run Type:	RA	Injection Volume:	1 uL
Prep Date:	10/27/2014 1047			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	96		76 - 149
Tetrachloro-m-xylene	93		72 - 136

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-16(7-8')**

Lab Sample ID: 460-85120-4

Client Matrix: Solid

% Moisture: 13.6

Date Sampled: 10/24/2014 1030

Date Received: 10/24/2014 1820

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-259042	Instrument ID:	CPESTGC9
Prep Method:	3546	Prep Batch:	460-258500	Initial Weight/Volume:	15.0450 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/29/2014 1845	Run Type:	RA	Injection Volume:	1 uL
Prep Date:	10/27/2014 1047			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		7.7	U *	1.5	7.7
4,4'-DDE		7.7	U	1.5	7.7
4,4'-DDT		7.7	U	1.8	7.7
Aldrin		7.7	U	1.6	7.7
alpha-BHC		2.3	U	1.7	2.3
beta-BHC		2.3	U	1.8	2.3
Chlordane (technical)		77	U	22	77
delta-BHC		2.3	U	1.4	2.3
Dieldrin		2.3	U	1.4	2.3
Endosulfan I		7.7	U	1.7	7.7
Endosulfan II		7.7	U	1.5	7.7
Endosulfan sulfate		7.7	U	1.5	7.7
Endrin		7.7	U	1.8	7.7
Endrin aldehyde		7.7	U	1.2	7.7
Endrin ketone		7.7	U	1.5	7.7
gamma-BHC (Lindane)		2.3	U	1.4	2.3
Heptachlor		7.7	U	1.8	7.7
Heptachlor epoxide		7.7	U	1.7	7.7
Methoxychlor		7.7	U	1.8	7.7
Toxaphene		77	U	21	77

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	129		76 - 149
Tetrachloro-m-xylene	98		72 - 136

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-16(7-8')**

Lab Sample ID: 460-85120-4

Client Matrix: Solid

% Moisture: 13.6

Date Sampled: 10/24/2014 1030

Date Received: 10/24/2014 1820

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-259042	Instrument ID:	CPESTGC9
Prep Method:	3546	Prep Batch:	460-258500	Initial Weight/Volume:	15.0450 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/29/2014 1845	Run Type:	RA	Injection Volume:	1 uL
Prep Date:	10/27/2014 1047			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	99		76 - 149
Tetrachloro-m-xylene	97		72 - 136

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-15(1-2')**

Lab Sample ID: 460-85120-5

Client Matrix: Solid

% Moisture: 18.8

Date Sampled: 10/24/2014 1045

Date Received: 10/24/2014 1820

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-259042	Instrument ID:	CPESTGC9
Prep Method:	3546	Prep Batch:	460-258500	Initial Weight/Volume:	15.0264 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/29/2014 1857	Run Type:	RA	Injection Volume:	1 uL
Prep Date:	10/27/2014 1047			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		8.2	U *	1.6	8.2
4,4'-DDE		8.2	U	1.6	8.2
4,4'-DDT		8.2	U	2.0	8.2
Aldrin		8.2	U	1.7	8.2
alpha-BHC		2.5	U	1.8	2.5
beta-BHC		2.5	U	2.0	2.5
Chlordane (technical)		82	U	23	82
delta-BHC		2.5	U	1.5	2.5
Dieldrin		2.5	U	1.5	2.5
Endosulfan I		8.2	U	1.8	8.2
Endosulfan II		8.2	U	1.6	8.2
Endosulfan sulfate		8.2	U	1.6	8.2
Endrin		8.2	U	2.0	8.2
Endrin aldehyde		8.2	U	1.2	8.2
Endrin ketone		8.2	U	1.6	8.2
gamma-BHC (Lindane)		2.5	U	1.5	2.5
Heptachlor		8.2	U	2.0	8.2
Heptachlor epoxide		8.2	U	1.8	8.2
Methoxychlor		8.2	U	2.0	8.2
Toxaphene		82	U	22	82

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	111		76 - 149
Tetrachloro-m-xylene	92		72 - 136

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-15(1-2')**

Lab Sample ID: 460-85120-5

Client Matrix: Solid

% Moisture: 18.8

Date Sampled: 10/24/2014 1045

Date Received: 10/24/2014 1820

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-259042	Instrument ID:	CPESTGC9
Prep Method:	3546	Prep Batch:	460-258500	Initial Weight/Volume:	15.0264 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/29/2014 1857	Run Type:	RA	Injection Volume:	1 uL
Prep Date:	10/27/2014 1047			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	96		76 - 149
Tetrachloro-m-xylene	90		72 - 136

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-15(5-6')**

Lab Sample ID: 460-85120-6

Client Matrix: Solid

% Moisture: 13.1

Date Sampled: 10/24/2014 1050

Date Received: 10/24/2014 1820

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-259042	Instrument ID:	CPESTGC9
Prep Method:	3546	Prep Batch:	460-258500	Initial Weight/Volume:	15.0521 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/29/2014 1908	Run Type:	RA	Injection Volume:	1 uL
Prep Date:	10/27/2014 1047			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		7.7	U *	1.5	7.7
4,4'-DDE		7.7	U	1.5	7.7
4,4'-DDT		7.7	U	1.8	7.7
Aldrin		7.7	U	1.6	7.7
alpha-BHC		2.3	U	1.7	2.3
beta-BHC		2.3	U	1.8	2.3
Chlordane (technical)		77	U	22	77
delta-BHC		2.3	U	1.4	2.3
Dieldrin		2.3	U	1.4	2.3
Endosulfan I		7.7	U	1.7	7.7
Endosulfan II		7.7	U	1.5	7.7
Endosulfan sulfate		7.7	U	1.5	7.7
Endrin		7.7	U	1.8	7.7
Endrin aldehyde		7.7	U	1.1	7.7
Endrin ketone		7.7	U	1.5	7.7
gamma-BHC (Lindane)		2.3	U	1.4	2.3
Heptachlor		7.7	U	1.8	7.7
Heptachlor epoxide		7.7	U	1.7	7.7
Methoxychlor		7.7	U	1.8	7.7
Toxaphene		77	U	21	77

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	83	p	76 - 149
Tetrachloro-m-xylene	81	p	72 - 136

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-15(5-6')**

Lab Sample ID: 460-85120-6

Client Matrix: Solid

% Moisture: 13.1

Date Sampled: 10/24/2014 1050

Date Received: 10/24/2014 1820

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-259042	Instrument ID:	CPESTGC9
Prep Method:	3546	Prep Batch:	460-258500	Initial Weight/Volume:	15.0521 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/29/2014 1908	Run Type:	RA	Injection Volume:	1 uL
Prep Date:	10/27/2014 1047			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	141		76 - 149
Tetrachloro-m-xylene	244	*	72 - 136

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-14(1-2')**

Lab Sample ID: 460-85120-7

Client Matrix: Solid

% Moisture: 14.7

Date Sampled: 10/24/2014 1120

Date Received: 10/24/2014 1820

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-258783	Instrument ID:	CPESTGC5
Prep Method:	3546	Prep Batch:	460-258500	Initial Weight/Volume:	15.0329 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/28/2014 1527			Injection Volume:	1 uL
Prep Date:	10/27/2014 1047			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		7.8	U	1.5	7.8
4,4'-DDE		7.8	U	1.5	7.8
4,4'-DDT		7.8	U	1.9	7.8
Aldrin		7.8	U	1.6	7.8
alpha-BHC		2.3	U	1.8	2.3
beta-BHC		2.3	U	1.9	2.3
Chlordane (technical)		78	U	22	78
delta-BHC		2.3	U	1.4	2.3
Dieldrin		2.3	U	1.4	2.3
Endosulfan I		7.8	U	1.8	7.8
Endosulfan II		7.8	U	1.5	7.8
Endosulfan sulfate		7.8	U	1.5	7.8
Endrin		7.8	U	1.9	7.8
Endrin aldehyde		7.8	U	1.2	7.8
Endrin ketone		7.8	U	1.5	7.8
gamma-BHC (Lindane)		2.3	U	1.4	2.3
Heptachlor		7.8	U	1.9	7.8
Heptachlor epoxide		7.8	U	1.8	7.8
Methoxychlor		7.8	U	1.9	7.8
Toxaphene		78	U	21	78

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	77		76 - 149
Tetrachloro-m-xylene	120		72 - 136

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-14(1-2')**

Lab Sample ID: 460-85120-7

Client Matrix: Solid

% Moisture: 14.7

Date Sampled: 10/24/2014 1120

Date Received: 10/24/2014 1820

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-258783	Instrument ID:	CPESTGC5
Prep Method:	3546	Prep Batch:	460-258500	Initial Weight/Volume:	15.0329 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/28/2014 1527			Injection Volume:	1 uL
Prep Date:	10/27/2014 1047			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	71	*	76 - 149
Tetrachloro-m-xylene	98		72 - 136

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-14(6-7')**

Lab Sample ID: 460-85120-8

Client Matrix: Solid

% Moisture: 10.3

Date Sampled: 10/24/2014 1130

Date Received: 10/24/2014 1820

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-258783	Instrument ID:	CPESTGC5
Prep Method:	3546	Prep Batch:	460-258500	Initial Weight/Volume:	15.0547 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/28/2014 1541			Injection Volume:	1 uL
Prep Date:	10/27/2014 1047			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		7.4	U	1.4	7.4
4,4'-DDE		7.4	U	1.4	7.4
4,4'-DDT		7.4	U	1.8	7.4
Aldrin		7.4	U	1.6	7.4
alpha-BHC		2.2	U	1.7	2.2
beta-BHC		2.2	U	1.8	2.2
Chlordane (technical)		74	U	21	74
delta-BHC		2.2	U	1.3	2.2
Dieldrin		2.2	U	1.3	2.2
Endosulfan I		7.4	U	1.7	7.4
Endosulfan II		7.4	U	1.4	7.4
Endosulfan sulfate		7.4	U	1.4	7.4
Endrin		7.4	U	1.8	7.4
Endrin aldehyde		7.4	U	1.1	7.4
Endrin ketone		7.4	U	1.4	7.4
gamma-BHC (Lindane)		2.2	U	1.3	2.2
Heptachlor		7.4	U	1.8	7.4
Heptachlor epoxide		7.4	U	1.7	7.4
Methoxychlor		7.4	U	1.8	7.4
Toxaphene		74	U	20	74

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	77		76 - 149
Tetrachloro-m-xylene	77	p	72 - 136

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-14(6-7')**

Lab Sample ID: 460-85120-8

Client Matrix: Solid

% Moisture: 10.3

Date Sampled: 10/24/2014 1130

Date Received: 10/24/2014 1820

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-258783	Instrument ID:	CPESTGC5
Prep Method:	3546	Prep Batch:	460-258500	Initial Weight/Volume:	15.0547 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/28/2014 1541			Injection Volume:	1 uL
Prep Date:	10/27/2014 1047			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	64	*	76 - 149
Tetrachloro-m-xylene	128		72 - 136

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-13(1-2')**

Lab Sample ID: 460-85120-9

Client Matrix: Solid

% Moisture: 10.7

Date Sampled: 10/24/2014 1145

Date Received: 10/24/2014 1820

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-259042	Instrument ID:	CPESTGC9
Prep Method:	3546	Prep Batch:	460-258500	Initial Weight/Volume:	15.0412 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/29/2014 1920	Run Type:	RA	Injection Volume:	1 uL
Prep Date:	10/27/2014 1047			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		7.5	U *	1.5	7.5
4,4'-DDE		7.5	U	1.5	7.5
4,4'-DDT		7.5	U	1.8	7.5
Aldrin		7.5	U	1.6	7.5
alpha-BHC		2.2	U	1.7	2.2
beta-BHC		2.2	U	1.8	2.2
Chlordane (technical)		75	U	21	75
delta-BHC		2.2	U	1.3	2.2
Dieldrin		2.2	U	1.3	2.2
Endosulfan I		7.5	U	1.7	7.5
Endosulfan II		7.5	U	1.5	7.5
Endosulfan sulfate		7.5	U	1.5	7.5
Endrin		7.5	U	1.8	7.5
Endrin aldehyde		7.5	U	1.1	7.5
Endrin ketone		7.5	U	1.5	7.5
gamma-BHC (Lindane)		2.2	U	1.3	2.2
Heptachlor		7.5	U	1.8	7.5
Heptachlor epoxide		7.5	U	1.7	7.5
Methoxychlor		7.5	U	1.8	7.5
Toxaphene		75	U	20	75

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	109		76 - 149
Tetrachloro-m-xylene	101		72 - 136

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-13(1-2')**

Lab Sample ID: 460-85120-9

Client Matrix: Solid

% Moisture: 10.7

Date Sampled: 10/24/2014 1145

Date Received: 10/24/2014 1820

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-259042	Instrument ID:	CPESTGC9
Prep Method:	3546	Prep Batch:	460-258500	Initial Weight/Volume:	15.0412 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/29/2014 1920	Run Type:	RA	Injection Volume:	1 uL
Prep Date:	10/27/2014 1047			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	102		76 - 149
Tetrachloro-m-xylene	101		72 - 136

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-13(3-4')**

Lab Sample ID: 460-85120-10

Client Matrix: Solid

% Moisture: 25.5

Date Sampled: 10/24/2014 1150

Date Received: 10/24/2014 1820

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-259042	Instrument ID:	CPESTGC9
Prep Method:	3546	Prep Batch:	460-258500	Initial Weight/Volume:	15.0301 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/29/2014 1931	Run Type:	RA	Injection Volume:	1 uL
Prep Date:	10/27/2014 1047			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		9.0	U *	1.7	9.0
4,4'-DDE		9.0	U	1.7	9.0
4,4'-DDT		9.0	U	2.1	9.0
Aldrin		9.0	U	1.9	9.0
alpha-BHC		2.7	U	2.0	2.7
beta-BHC		2.7	U	2.1	2.7
Chlordane (technical)		90	U	25	90
delta-BHC		2.7	U	1.6	2.7
Dieldrin		2.7	U	1.6	2.7
Endosulfan I		9.0	U	2.0	9.0
Endosulfan II		9.0	U	1.7	9.0
Endosulfan sulfate		9.0	U	1.7	9.0
Endrin		9.0	U	2.1	9.0
Endrin aldehyde		9.0	U	1.3	9.0
Endrin ketone		9.0	U	1.7	9.0
gamma-BHC (Lindane)		2.7	U	1.6	2.7
Heptachlor		9.0	U	2.1	9.0
Heptachlor epoxide		9.0	U	2.0	9.0
Methoxychlor		9.0	U	2.1	9.0
Toxaphene		90	U	24	90

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	122		76 - 149
Tetrachloro-m-xylene	89		72 - 136

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-13(3-4')**

Lab Sample ID: 460-85120-10

Client Matrix: Solid

% Moisture: 25.5

Date Sampled: 10/24/2014 1150

Date Received: 10/24/2014 1820

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-259042	Instrument ID:	CPESTGC9
Prep Method:	3546	Prep Batch:	460-258500	Initial Weight/Volume:	15.0301 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/29/2014 1931	Run Type:	RA	Injection Volume:	1 uL
Prep Date:	10/27/2014 1047			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	88		76 - 149
Tetrachloro-m-xylene	88		72 - 136

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-11(1-2')**

Lab Sample ID: 460-85120-11

Client Matrix: Solid

% Moisture: 12.7

Date Sampled: 10/24/2014 1300

Date Received: 10/24/2014 1820

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-259042	Instrument ID:	CPESTGC9
Prep Method:	3546	Prep Batch:	460-258709	Initial Weight/Volume:	15.0243 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/29/2014 1725	Run Type:	RA	Injection Volume:	1 uL
Prep Date:	10/28/2014 0841			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		7.7	U	1.5	7.7
4,4'-DDE		7.7	U	1.5	7.7
4,4'-DDT		7.7	U	1.8	7.7
Aldrin		7.7	U	1.6	7.7
alpha-BHC		2.3	U	1.7	2.3
beta-BHC		2.3	U	1.8	2.3
Chlordane (technical)		77	U	22	77
delta-BHC		2.3	U	1.4	2.3
Dieldrin		2.3	U	1.4	2.3
Endosulfan I		7.7	U	1.7	7.7
Endosulfan II		7.7	U	1.5	7.7
Endosulfan sulfate		7.7	U	1.5	7.7
Endrin		7.7	U	1.8	7.7
Endrin aldehyde		7.7	U	1.1	7.7
Endrin ketone		7.7	U	1.5	7.7
gamma-BHC (Lindane)		2.3	U	1.4	2.3
Heptachlor		7.7	U	1.8	7.7
Heptachlor epoxide		7.7	U	1.7	7.7
Methoxychlor		7.7	U	1.8	7.7
Toxaphene		77	U	21	77

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	80	p	76 - 149
Tetrachloro-m-xylene	108		72 - 136

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-11(1-2')**

Lab Sample ID: 460-85120-11

Client Matrix: Solid

% Moisture: 12.7

Date Sampled: 10/24/2014 1300

Date Received: 10/24/2014 1820

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-259042	Instrument ID:	CPESTGC9
Prep Method:	3546	Prep Batch:	460-258709	Initial Weight/Volume:	15.0243 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/29/2014 1725	Run Type:	RA	Injection Volume:	1 uL
Prep Date:	10/28/2014 0841			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	399	*	76 - 149
Tetrachloro-m-xylene	108		72 - 136

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-11(5-6')**

Lab Sample ID: 460-85120-12

Client Matrix: Solid

% Moisture: 17.4

Date Sampled: 10/24/2014 1305

Date Received: 10/24/2014 1820

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-259250	Instrument ID:	CPESTGC5
Prep Method:	3546	Prep Batch:	460-258709	Initial Weight/Volume:	15.0435 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/30/2014 1503			Injection Volume:	1 uL
Prep Date:	10/28/2014 0841			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		8.1	U	1.6	8.1
4,4'-DDE		8.1	U	1.6	8.1
4,4'-DDT		8.1	U	1.9	8.1
Aldrin		8.1	U	1.7	8.1
alpha-BHC		2.4	U	1.8	2.4
beta-BHC		2.4	U	1.9	2.4
Chlordane (technical)		81	U	23	81
delta-BHC		2.4	U	1.4	2.4
Dieldrin		2.4	U	1.4	2.4
Endosulfan I		8.1	U	1.8	8.1
Endosulfan II		8.1	U	1.6	8.1
Endosulfan sulfate		8.1	U	1.6	8.1
Endrin		8.1	U	1.9	8.1
Endrin aldehyde		8.1	U	1.2	8.1
Endrin ketone		8.1	U	1.6	8.1
gamma-BHC (Lindane)		2.4	U	1.4	2.4
Heptachlor		8.1	U	1.9	8.1
Heptachlor epoxide		8.1	U	1.8	8.1
Methoxychlor		8.1	U	1.9	8.1
Toxaphene		81	U	22	81

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	122	p	76 - 149
Tetrachloro-m-xylene	84		72 - 136

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-11(5-6')**

Lab Sample ID: 460-85120-12

Client Matrix: Solid

% Moisture: 17.4

Date Sampled: 10/24/2014 1305

Date Received: 10/24/2014 1820

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-259250	Instrument ID:	CPESTGC5
Prep Method:	3546	Prep Batch:	460-258709	Initial Weight/Volume:	15.0435 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/30/2014 1503			Injection Volume:	1 uL
Prep Date:	10/28/2014 0841			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	1297	*	76 - 149
Tetrachloro-m-xylene	80		72 - 136

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-8(1-2')**

Lab Sample ID: 460-85120-13

Client Matrix: Solid

% Moisture: 15.7

Date Sampled: 10/24/2014 1330

Date Received: 10/24/2014 1820

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-259250	Instrument ID:	CPESTGC5
Prep Method:	3546	Prep Batch:	460-258709	Initial Weight/Volume:	15.0177 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/30/2014 1516			Injection Volume:	1 uL
Prep Date:	10/28/2014 0841			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		7.9	U	1.5	7.9
4,4'-DDE		7.9	U	1.5	7.9
4,4'-DDT		7.9	U	1.9	7.9
Aldrin		7.9	U	1.7	7.9
alpha-BHC		2.4	U	1.8	2.4
beta-BHC		2.4	U	1.9	2.4
Chlordane (technical)		79	U	23	79
delta-BHC		2.4	U	1.4	2.4
Dieldrin		2.4	U	1.4	2.4
Endosulfan I		7.9	U	1.8	7.9
Endosulfan II		7.9	U	1.5	7.9
Endosulfan sulfate		7.9	U	1.5	7.9
Endrin		7.9	U	1.9	7.9
Endrin aldehyde		7.9	U	1.2	7.9
Endrin ketone		7.9	U	1.5	7.9
gamma-BHC (Lindane)		2.4	U	1.4	2.4
Heptachlor		7.9	U	1.9	7.9
Heptachlor epoxide		7.9	U	1.8	7.9
Methoxychlor		7.9	U	1.9	7.9
Toxaphene		79	U	21	79

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	146		76 - 149
Tetrachloro-m-xylene	132		72 - 136

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-8(1-2')**

Lab Sample ID: 460-85120-13

Client Matrix: Solid

% Moisture: 15.7

Date Sampled: 10/24/2014 1330

Date Received: 10/24/2014 1820

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-259250	Instrument ID:	CPESTGC5
Prep Method:	3546	Prep Batch:	460-258709	Initial Weight/Volume:	15.0177 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/30/2014 1516			Injection Volume:	1 uL
Prep Date:	10/28/2014 0841			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	142		76 - 149
Tetrachloro-m-xylene	111		72 - 136

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-8(9-10')**

Lab Sample ID: 460-85120-14

Client Matrix: Solid

% Moisture: 17.0

Date Sampled: 10/24/2014 1340

Date Received: 10/24/2014 1820

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-259250	Instrument ID:	CPESTGC5
Prep Method:	3546	Prep Batch:	460-258709	Initial Weight/Volume:	15.0215 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/30/2014 1530			Injection Volume:	1 uL
Prep Date:	10/28/2014 0841			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		8.1	U	1.6	8.1
4,4'-DDE		8.1	U	1.6	8.1
4,4'-DDT		8.1	U	1.9	8.1
Aldrin		8.1	U	1.7	8.1
alpha-BHC		2.4	U	1.8	2.4
beta-BHC		2.4	U	1.9	2.4
Chlordane (technical)		81	U	23	81
delta-BHC		2.4	U	1.4	2.4
Dieldrin		2.4	U	1.4	2.4
Endosulfan I		8.1	U	1.8	8.1
Endosulfan II		8.1	U	1.6	8.1
Endosulfan sulfate		8.1	U	1.6	8.1
Endrin		8.1	U	1.9	8.1
Endrin aldehyde		8.1	U	1.2	8.1
Endrin ketone		8.1	U	1.6	8.1
gamma-BHC (Lindane)		2.4	U	1.4	2.4
Heptachlor		8.1	U	1.9	8.1
Heptachlor epoxide		8.1	U	1.8	8.1
Methoxychlor		8.1	U	1.9	8.1
Toxaphene		81	U	22	81

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	103		76 - 149
Tetrachloro-m-xylene	77		72 - 136

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-8(9-10')**

Lab Sample ID: 460-85120-14

Client Matrix: Solid

% Moisture: 17.0

Date Sampled: 10/24/2014 1340

Date Received: 10/24/2014 1820

8081B Organochlorine Pesticides (GC)

Analysis Method:	8081B	Analysis Batch:	460-259250	Instrument ID:	CPESTGC5
Prep Method:	3546	Prep Batch:	460-258709	Initial Weight/Volume:	15.0215 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/30/2014 1530			Injection Volume:	1 uL
Prep Date:	10/28/2014 0841			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	86		76 - 149
Tetrachloro-m-xylene	76		72 - 136

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-5(1-2')**

Lab Sample ID: 460-85120-1

Client Matrix: Solid

% Moisture: 9.6

Date Sampled: 10/24/2014 0945

Date Received: 10/24/2014 1820

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258618	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-258501	Initial Weight/Volume:	15.0281 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/28/2014 0139			Injection Volume:	1 uL
Prep Date:	10/27/2014 1048			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		74	U	17	74
Aroclor 1221		74	U	17	74
Aroclor 1232		74	U	17	74
Aroclor 1242		74	U	17	74
Aroclor 1248		74	U	17	74
Aroclor 1254		74	U	21	74
Aroclor 1260		74	U	21	74
Aroclor-1262		57	J	21	74
Aroclor 1268		74	U	21	74
Polychlorinated biphenyls, Total		57	J	21	74

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	110		53 - 150

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-5(1-2')**

Lab Sample ID: 460-85120-1

Client Matrix: Solid

% Moisture: 9.6

Date Sampled: 10/24/2014 0945

Date Received: 10/24/2014 1820

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258618	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-258501	Initial Weight/Volume:	15.0281 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/28/2014 0139			Injection Volume:	1 uL
Prep Date:	10/27/2014 1048			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	97		53 - 150

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-5(6-7')**

Lab Sample ID: 460-85120-2

Client Matrix: Solid

% Moisture: 12.8

Date Sampled: 10/24/2014 0950

Date Received: 10/24/2014 1820

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258618	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-258501	Initial Weight/Volume:	15.0231 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/28/2014 0156			Injection Volume:	1 uL
Prep Date:	10/27/2014 1048			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		77	U	17	77
Aroclor 1221		77	U	17	77
Aroclor 1232		77	U	17	77
Aroclor 1242		77	U	17	77
Aroclor 1248		77	U	17	77
Aroclor 1254		77	U	22	77
Aroclor 1260		77	U	22	77
Aroclor-1262		77	U	22	77
Aroclor 1268		77	U	22	77
Polychlorinated biphenyls, Total		77	U	22	77

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	89		53 - 150

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-5(6-7')**

Lab Sample ID: 460-85120-2

Client Matrix: Solid

% Moisture: 12.8

Date Sampled: 10/24/2014 0950

Date Received: 10/24/2014 1820

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258618	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-258501	Initial Weight/Volume:	15.0231 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/28/2014 0156			Injection Volume:	1 uL
Prep Date:	10/27/2014 1048			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	86		53 - 150

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-16(1-2')**

Lab Sample ID: 460-85120-3

Client Matrix: Solid

% Moisture: 6.4

Date Sampled: 10/24/2014 1020

Date Received: 10/24/2014 1820

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258618	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-258501	Initial Weight/Volume:	15.0338 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/28/2014 0212			Injection Volume:	1 uL
Prep Date:	10/27/2014 1048			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		71	U	16	71
Aroclor 1221		71	U	16	71
Aroclor 1232		71	U	16	71
Aroclor 1242		71	U	16	71
Aroclor 1248		71	U	16	71
Aroclor 1254		71	U	20	71
Aroclor 1260		71	U	20	71
Aroclor-1262		71	U	20	71
Aroclor 1268		71	U	20	71
Polychlorinated biphenyls, Total		71	U	20	71

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	97		53 - 150

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-16(1-2')**

Lab Sample ID: 460-85120-3

Client Matrix: Solid

% Moisture: 6.4

Date Sampled: 10/24/2014 1020

Date Received: 10/24/2014 1820

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258618	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-258501	Initial Weight/Volume:	15.0338 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/28/2014 0212			Injection Volume:	1 uL
Prep Date:	10/27/2014 1048			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	94		53 - 150

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-16(7-8')**

Lab Sample ID: 460-85120-4

Client Matrix: Solid

% Moisture: 13.6

Date Sampled: 10/24/2014 1030

Date Received: 10/24/2014 1820

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258618	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-258501	Initial Weight/Volume:	15.0450 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/28/2014 0228			Injection Volume:	1 uL
Prep Date:	10/27/2014 1048			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		77	U	17	77
Aroclor 1221		77	U	17	77
Aroclor 1232		77	U	17	77
Aroclor 1242		77	U	17	77
Aroclor 1248		77	U	17	77
Aroclor 1254		77	U	22	77
Aroclor 1260		77	U	22	77
Aroclor-1262		77	U	22	77
Aroclor 1268		77	U	22	77
Polychlorinated biphenyls, Total		77	U	22	77

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	106		53 - 150

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-16(7-8')**

Lab Sample ID: 460-85120-4

Client Matrix: Solid

% Moisture: 13.6

Date Sampled: 10/24/2014 1030

Date Received: 10/24/2014 1820

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258618	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-258501	Initial Weight/Volume:	15.0450 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/28/2014 0228			Injection Volume:	1 uL
Prep Date:	10/27/2014 1048			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	97		53 - 150

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-15(1-2')**

Lab Sample ID: 460-85120-5

Client Matrix: Solid

% Moisture: 18.8

Date Sampled: 10/24/2014 1045

Date Received: 10/24/2014 1820

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258618	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-258501	Initial Weight/Volume:	15.0264 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/28/2014 0244			Injection Volume:	1 uL
Prep Date:	10/27/2014 1048			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		82	U	18	82
Aroclor 1221		82	U	18	82
Aroclor 1232		82	U	18	82
Aroclor 1242		82	U	18	82
Aroclor 1248		82	U	18	82
Aroclor 1254		82	U	23	82
Aroclor 1260		82	U	23	82
Aroclor-1262		82	U	23	82
Aroclor 1268		82	U	23	82
Polychlorinated biphenyls, Total		82	U	23	82

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	97		53 - 150

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-15(1-2')**

Lab Sample ID: 460-85120-5

Client Matrix: Solid

% Moisture: 18.8

Date Sampled: 10/24/2014 1045

Date Received: 10/24/2014 1820

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258618	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-258501	Initial Weight/Volume:	15.0264 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/28/2014 0244			Injection Volume:	1 uL
Prep Date:	10/27/2014 1048			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	93		53 - 150

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-15(5-6')**

Lab Sample ID: 460-85120-6

Client Matrix: Solid

% Moisture: 13.1

Date Sampled: 10/24/2014 1050

Date Received: 10/24/2014 1820

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258618	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-258501	Initial Weight/Volume:	15.0521 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/28/2014 0300			Injection Volume:	1 uL
Prep Date:	10/27/2014 1048			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		77	U	17	77
Aroclor 1221		77	U	17	77
Aroclor 1232		77	U	17	77
Aroclor 1242		77	U	17	77
Aroclor 1248		77	U	17	77
Aroclor 1254		77	U	22	77
Aroclor 1260		77	U	22	77
Aroclor-1262		77	U	22	77
Aroclor 1268		77	U	22	77
Polychlorinated biphenyls, Total		77	U	22	77

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	94		53 - 150

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-15(5-6')**

Lab Sample ID: 460-85120-6

Client Matrix: Solid

% Moisture: 13.1

Date Sampled: 10/24/2014 1050

Date Received: 10/24/2014 1820

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258618	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-258501	Initial Weight/Volume:	15.0521 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/28/2014 0300			Injection Volume:	1 uL
Prep Date:	10/27/2014 1048			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	89		53 - 150

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-14(1-2')**

Lab Sample ID: 460-85120-7

Client Matrix: Solid

% Moisture: 14.7

Date Sampled: 10/24/2014 1120

Date Received: 10/24/2014 1820

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258618	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-258501	Initial Weight/Volume:	15.0329 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/28/2014 0317			Injection Volume:	1 uL
Prep Date:	10/27/2014 1048			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		78	U	18	78
Aroclor 1221		78	U	18	78
Aroclor 1232		78	U	18	78
Aroclor 1242		78	U	18	78
Aroclor 1248		78	U	18	78
Aroclor 1254		78	U	22	78
Aroclor 1260		78	U	22	78
Aroclor-1262		78	U	22	78
Aroclor 1268		78	U	22	78
Polychlorinated biphenyls, Total		78	U	22	78

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	98		53 - 150

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-14(1-2')**

Lab Sample ID: 460-85120-7

Client Matrix: Solid

% Moisture: 14.7

Date Sampled: 10/24/2014 1120

Date Received: 10/24/2014 1820

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258618	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-258501	Initial Weight/Volume:	15.0329 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/28/2014 0317			Injection Volume:	1 uL
Prep Date:	10/27/2014 1048			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	97		53 - 150

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-14(6-7')**

Lab Sample ID: 460-85120-8

Client Matrix: Solid

% Moisture: 10.3

Date Sampled: 10/24/2014 1130

Date Received: 10/24/2014 1820

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258618	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-258501	Initial Weight/Volume:	15.0547 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/28/2014 0333			Injection Volume:	1 uL
Prep Date:	10/27/2014 1048			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		74	U	17	74
Aroclor 1221		74	U	17	74
Aroclor 1232		74	U	17	74
Aroclor 1242		74	U	17	74
Aroclor 1248		74	U	17	74
Aroclor 1254		74	U	21	74
Aroclor 1260		74	U	21	74
Aroclor-1262		74	U	21	74
Aroclor 1268		74	U	21	74
Polychlorinated biphenyls, Total		74	U	21	74

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	101		53 - 150

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-14(6-7')**

Lab Sample ID: 460-85120-8

Client Matrix: Solid

% Moisture: 10.3

Date Sampled: 10/24/2014 1130

Date Received: 10/24/2014 1820

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258618	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-258501	Initial Weight/Volume:	15.0547 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/28/2014 0333			Injection Volume:	1 uL
Prep Date:	10/27/2014 1048			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	96		53 - 150

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-13(1-2')**

Lab Sample ID: 460-85120-9

Client Matrix: Solid

% Moisture: 10.7

Date Sampled: 10/24/2014 1145

Date Received: 10/24/2014 1820

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258618	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-258501	Initial Weight/Volume:	15.0412 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/28/2014 0349			Injection Volume:	1 uL
Prep Date:	10/27/2014 1048			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		75	U	17	75
Aroclor 1221		75	U	17	75
Aroclor 1232		75	U	17	75
Aroclor 1242		75	U	17	75
Aroclor 1248		75	U	17	75
Aroclor 1254		75	U	21	75
Aroclor 1260		75	U	21	75
Aroclor-1262		75	U	21	75
Aroclor 1268		75	U	21	75
Polychlorinated biphenyls, Total		75	U	21	75

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	107		53 - 150

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-13(1-2')**

Lab Sample ID: 460-85120-9

Client Matrix: Solid

% Moisture: 10.7

Date Sampled: 10/24/2014 1145

Date Received: 10/24/2014 1820

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258618	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-258501	Initial Weight/Volume:	15.0412 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/28/2014 0349			Injection Volume:	1 uL
Prep Date:	10/27/2014 1048			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	97		53 - 150

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-13(3-4')**

Lab Sample ID: 460-85120-10

Client Matrix: Solid

% Moisture: 25.5

Date Sampled: 10/24/2014 1150

Date Received: 10/24/2014 1820

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258618	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-258501	Initial Weight/Volume:	15.0301 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/28/2014 0122			Injection Volume:	1 uL
Prep Date:	10/27/2014 1048			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		90	U	20	90
Aroclor 1221		90	U	20	90
Aroclor 1232		90	U	20	90
Aroclor 1242		90	U	20	90
Aroclor 1248		90	U	20	90
Aroclor 1254		90	U	25	90
Aroclor 1260		90	U	25	90
Aroclor-1262		90	U	25	90
Aroclor 1268		90	U	25	90
Polychlorinated biphenyls, Total		90	U	25	90

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	105		53 - 150

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-13(3-4')**

Lab Sample ID: 460-85120-10

Client Matrix: Solid

% Moisture: 25.5

Date Sampled: 10/24/2014 1150

Date Received: 10/24/2014 1820

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258618	Instrument ID:	CPESTGC7
Prep Method:	3546	Prep Batch:	460-258501	Initial Weight/Volume:	15.0301 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/28/2014 0122			Injection Volume:	1 uL
Prep Date:	10/27/2014 1048			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	98		53 - 150

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-11(1-2')**

Lab Sample ID: 460-85120-11

Client Matrix: Solid

% Moisture: 12.7

Date Sampled: 10/24/2014 1300

Date Received: 10/24/2014 1820

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258944	Instrument ID:	CPESTGC8
Prep Method:	3546	Prep Batch:	460-258704	Initial Weight/Volume:	15.0218 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/29/2014 1039	Run Type:	RA	Injection Volume:	1 uL
Prep Date:	10/28/2014 0826			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		77	U	17	77
Aroclor 1221		77	U	17	77
Aroclor 1232		77	U	17	77
Aroclor 1242		77	U	17	77
Aroclor 1248		77	U	17	77
Aroclor 1254		77	U	22	77
Aroclor 1260		77	U *	22	77
Aroclor-1262		77	U	22	77
Aroclor 1268		77	U	22	77
Polychlorinated biphenyls, Total		77	U	22	77

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	132		53 - 150

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-11(1-2')**

Lab Sample ID: 460-85120-11

Client Matrix: Solid

% Moisture: 12.7

Date Sampled: 10/24/2014 1300

Date Received: 10/24/2014 1820

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258944	Instrument ID:	CPESTGC8
Prep Method:	3546	Prep Batch:	460-258704	Initial Weight/Volume:	15.0218 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/29/2014 1039	Run Type:	RA	Injection Volume:	1 uL
Prep Date:	10/28/2014 0826			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	130		53 - 150

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-11(5-6')**

Lab Sample ID: 460-85120-12

Client Matrix: Solid

% Moisture: 17.4

Date Sampled: 10/24/2014 1305

Date Received: 10/24/2014 1820

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258870	Instrument ID:	CPESTGC11
Prep Method:	3546	Prep Batch:	460-258704	Initial Weight/Volume:	15.0181 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/29/2014 0458			Injection Volume:	1 uL
Prep Date:	10/28/2014 0826			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		81	U	18	81
Aroclor 1221		81	U	18	81
Aroclor 1232		81	U	18	81
Aroclor 1242		81	U	18	81
Aroclor 1248		81	U	18	81
Aroclor 1254		81	U	23	81
Aroclor 1260		81	U *	23	81
Aroclor-1262		81	U	23	81
Aroclor 1268		81	U	23	81
Polychlorinated biphenyls, Total		81	U	23	81

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	105	p	53 - 150

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-11(5-6')**

Lab Sample ID: 460-85120-12

Client Matrix: Solid

% Moisture: 17.4

Date Sampled: 10/24/2014 1305

Date Received: 10/24/2014 1820

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258870	Instrument ID:	CPESTGC11
Prep Method:	3546	Prep Batch:	460-258704	Initial Weight/Volume:	15.0181 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/29/2014 0458			Injection Volume:	1 uL
Prep Date:	10/28/2014 0826			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	171	*	53 - 150

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-8(1-2')**

Lab Sample ID: 460-85120-13

Client Matrix: Solid

% Moisture: 15.7

Date Sampled: 10/24/2014 1330

Date Received: 10/24/2014 1820

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258870	Instrument ID:	CPESTGC11
Prep Method:	3546	Prep Batch:	460-258704	Initial Weight/Volume:	15.0385 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/29/2014 0516			Injection Volume:	1 uL
Prep Date:	10/28/2014 0826			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		79	U	18	79
Aroclor 1221		79	U	18	79
Aroclor 1232		79	U	18	79
Aroclor 1242		79	U	18	79
Aroclor 1248		79	U	18	79
Aroclor 1254		79	U	22	79
Aroclor 1260		79	U *	22	79
Aroclor-1262		79	U	22	79
Aroclor 1268		79	U	22	79
Polychlorinated biphenyls, Total		79	U	22	79

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	136		53 - 150

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-8(1-2')**

Lab Sample ID: 460-85120-13

Client Matrix: Solid

% Moisture: 15.7

Date Sampled: 10/24/2014 1330

Date Received: 10/24/2014 1820

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258870	Instrument ID:	CPESTGC11
Prep Method:	3546	Prep Batch:	460-258704	Initial Weight/Volume:	15.0385 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/29/2014 0516			Injection Volume:	1 uL
Prep Date:	10/28/2014 0826			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	130		53 - 150

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-8(9-10')**

Lab Sample ID: 460-85120-14

Client Matrix: Solid

% Moisture: 17.0

Date Sampled: 10/24/2014 1340

Date Received: 10/24/2014 1820

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258870	Instrument ID:	CPESTGC11
Prep Method:	3546	Prep Batch:	460-258704	Initial Weight/Volume:	15.0482 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/29/2014 0535			Injection Volume:	1 uL
Prep Date:	10/28/2014 0826			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		80	U	18	80
Aroclor 1221		80	U	18	80
Aroclor 1232		80	U	18	80
Aroclor 1242		80	U	18	80
Aroclor 1248		80	U	18	80
Aroclor 1254		80	U	23	80
Aroclor 1260		80	U *	23	80
Aroclor-1262		80	U	23	80
Aroclor 1268		80	U	23	80
Polychlorinated biphenyls, Total		80	U	23	80

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	93		53 - 150

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-8(9-10')**

Lab Sample ID: 460-85120-14

Client Matrix: Solid

% Moisture: 17.0

Date Sampled: 10/24/2014 1340

Date Received: 10/24/2014 1820

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082A	Analysis Batch:	460-258870	Instrument ID:	CPESTGC11
Prep Method:	3546	Prep Batch:	460-258704	Initial Weight/Volume:	15.0482 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	10/29/2014 0535			Injection Volume:	1 uL
Prep Date:	10/28/2014 0826			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	92		53 - 150

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-5(1-2')**

Lab Sample ID: 460-85120-1

Client Matrix: Solid

% Moisture: 9.6

Date Sampled: 10/24/2014 0945

Date Received: 10/24/2014 1820

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-258821	Instrument ID:	ICP4
Prep Method:	3050B	Prep Batch:	460-258455	Lab File ID:	258455.asc
Dilution:	4.0			Initial Weight/Volume:	1.03 g
Analysis Date:	10/28/2014 1217			Final Weight/Volume:	50 mL
Prep Date:	10/27/2014 0715				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Silver		2.1	U	0.42	2.1
Aluminum		2690		23.7	43.0
Arsenic		6.5		0.88	3.2
Barium		53.6		1.9	43.0
Beryllium		0.43	U	0.29	0.43
Calcium		18000		82.2	1070
Cadmium		0.86	U	0.30	0.86
Cobalt		3.0	J	0.97	10.7
Chromium		6.8		0.86	2.1
Copper		20.7		1.9	5.4
Iron		11300		26.8	32.2
Potassium		400	J	29.7	1070
Magnesium		5140		71.3	1070
Manganese		262		0.93	3.2
Sodium		111	J	81.2	1070
Nickel		7.8	J	1.9	8.6
Lead		43.8		0.88	2.1
Antimony		4.3	U	1.6	4.3
Selenium		4.3	U	1.2	4.3
Thallium		4.3	U	2.1	4.3
Vanadium		12.2		0.89	10.7
Zinc		40.7		1.8	6.4

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	460-258332	Instrument ID:	LEEMAN5
Prep Method:	7471B	Prep Batch:	460-258285	Lab File ID:	258285.PRN
Dilution:	1.0			Initial Weight/Volume:	0.61 g
Analysis Date:	10/25/2014 1722			Final Weight/Volume:	50 mL
Prep Date:	10/25/2014 1215				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.77		0.013	0.019

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-5(6-7')**

Lab Sample ID: 460-85120-2

Client Matrix: Solid

% Moisture: 12.8

Date Sampled: 10/24/2014 0950

Date Received: 10/24/2014 1820

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-258821	Instrument ID:	ICP4
Prep Method:	3050B	Prep Batch:	460-258455	Lab File ID:	258455.asc
Dilution:	4.0			Initial Weight/Volume:	1.01 g
Analysis Date:	10/28/2014 1220			Final Weight/Volume:	50 mL
Prep Date:	10/27/2014 0715				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Silver		0.76	J	0.44	2.3
Aluminum		7060		25.1	45.4
Arsenic		2.1	J	0.93	3.4
Barium		110		2.0	45.4
Beryllium		0.70		0.31	0.45
Calcium		5130		86.9	1140
Cadmium		0.91	U	0.32	0.91
Cobalt		6.9	J	1.0	11.4
Chromium		15.0		0.91	2.3
Copper		66.1		2.0	5.7
Potassium		733	J	31.3	1140
Magnesium		2110		75.4	1140
Manganese		1060		0.98	3.4
Sodium		155	J	85.9	1140
Nickel		20.1		2.0	9.1
Lead		94.2		0.93	2.3
Antimony		4.5	U	1.7	4.5
Thallium		4.5	U	2.2	4.5
Vanadium		22.4		0.94	11.4
Zinc		114		1.9	6.8

Analysis Method:	6010C	Analysis Batch:	460-258821	Instrument ID:	ICP4
Prep Method:	3050B	Prep Batch:	460-258455	Lab File ID:	258455.asc
Dilution:	10			Initial Weight/Volume:	1.01 g
Analysis Date:	10/28/2014 1641			Final Weight/Volume:	50 mL
Prep Date:	10/27/2014 0715				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Iron		61600		70.7	85.2
Selenium		11.4	U	3.2	11.4

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	460-258332	Instrument ID:	LEEMAN5
Prep Method:	7471B	Prep Batch:	460-258285	Lab File ID:	258285.PRN
Dilution:	1.0			Initial Weight/Volume:	0.62 g
Analysis Date:	10/25/2014 1724			Final Weight/Volume:	50 mL
Prep Date:	10/25/2014 1215				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.16		0.013	0.019

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-16(1-2')**

Lab Sample ID: 460-85120-3

Client Matrix: Solid

% Moisture: 6.4

Date Sampled: 10/24/2014 1020

Date Received: 10/24/2014 1820

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-258821	Instrument ID:	ICP4
Prep Method:	3050B	Prep Batch:	460-258455	Lab File ID:	258455.asc
Dilution:	4.0			Initial Weight/Volume:	1.07 g
Analysis Date:	10/28/2014 1224			Final Weight/Volume:	50 mL
Prep Date:	10/27/2014 0715				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Silver		2.0	U	0.39	2.0
Aluminum		2510		22.1	39.9
Arsenic		1.9	J	0.82	3.0
Barium		51.7		1.7	39.9
Beryllium		0.40	U	0.27	0.40
Calcium		11200		76.3	998
Cadmium		0.80	U	0.28	0.80
Cobalt		2.0	J	0.90	10
Chromium		5.8		0.80	2.0
Copper		7.4		1.8	5.0
Iron		5450		24.8	29.9
Potassium		396	J	27.5	998
Magnesium		1060		66.3	998
Manganese		125		0.86	3.0
Sodium		998	U	75.4	998
Nickel		5.9	J	1.8	8.0
Lead		55.7		0.82	2.0
Antimony		4.0	U	1.5	4.0
Selenium		4.0	U	1.1	4.0
Thallium		4.0	U	2.0	4.0
Vanadium		10.8		0.83	10
Zinc		18.2		1.7	6.0

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	460-258493	Instrument ID:	LEEMAN5
Prep Method:	7471B	Prep Batch:	460-258407	Lab File ID:	258407HG1.PRN
Dilution:	1.0			Initial Weight/Volume:	0.64 g
Analysis Date:	10/27/2014 0823			Final Weight/Volume:	50 mL
Prep Date:	10/27/2014 0314				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.030		0.012	0.017

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-16(7-8')**

Lab Sample ID: 460-85120-4

Client Matrix: Solid

% Moisture: 13.6

Date Sampled: 10/24/2014 1030

Date Received: 10/24/2014 1820

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-258821	Instrument ID:	ICP4
Prep Method:	3050B	Prep Batch:	460-258455	Lab File ID:	258455.asc
Dilution:	4.0			Initial Weight/Volume:	1.05 g
Analysis Date:	10/28/2014 1227			Final Weight/Volume:	50 mL
Prep Date:	10/27/2014 0715				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Silver		0.48	J	0.43	2.2
Aluminum		5610		24.4	44.1
Arsenic		11.6		0.90	3.3
Barium		63.0		1.9	44.1
Beryllium		0.57		0.30	0.44
Calcium		3180		84.4	1100
Cadmium		0.88	U	0.31	0.88
Cobalt		10.8	J	0.99	11.0
Chromium		29.8		0.88	2.2
Copper		42.5		1.9	5.5
Iron		21100		27.5	33.1
Potassium		831	J	30.4	1100
Magnesium		1850		73.2	1100
Manganese		698		0.95	3.3
Sodium		648	J	83.4	1100
Nickel		32.9		2.0	8.8
Lead		366		0.91	2.2
Antimony		4.4	U	1.7	4.4
Selenium		4.4	U	1.3	4.4
Thallium		4.4	U	2.2	4.4
Vanadium		32.0		0.91	11.0
Zinc		134		1.9	6.6

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	460-258493	Instrument ID:	LEEMAN5
Prep Method:	7471B	Prep Batch:	460-258407	Lab File ID:	258407HG1.PRN
Dilution:	1.0			Initial Weight/Volume:	0.62 g
Analysis Date:	10/27/2014 0825			Final Weight/Volume:	50 mL
Prep Date:	10/27/2014 0314				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.095		0.013	0.019

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-15(1-2')**

Lab Sample ID: 460-85120-5

Client Matrix: Solid

% Moisture: 18.8

Date Sampled: 10/24/2014 1045

Date Received: 10/24/2014 1820

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-258821	Instrument ID:	ICP4
Prep Method:	3050B	Prep Batch:	460-258455	Lab File ID:	258455.asc
Dilution:	4.0			Initial Weight/Volume:	1.12 g
Analysis Date:	10/28/2014 1231			Final Weight/Volume:	50 mL
Prep Date:	10/27/2014 0715				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Silver		0.55	J	0.43	2.2
Aluminum		6050		24.3	44.0
Arsenic		6.6		0.90	3.3
Barium		109		1.9	44.0
Beryllium		0.35	J	0.30	0.44
Calcium		27300		84.2	1100
Cadmium		1.3		0.31	0.88
Cobalt		5.1	J	0.99	11.0
Chromium		16.0		0.88	2.2
Copper		46.2		1.9	5.5
Iron		16600		27.4	33.0
Potassium		821	J	30.4	1100
Magnesium		5040		73.0	1100
Manganese		353		0.95	3.3
Sodium		211	J	83.2	1100
Nickel		22.2		2.0	8.8
Lead		175		0.90	2.2
Antimony		4.4	U	1.7	4.4
Selenium		4.4	U	1.3	4.4
Thallium		4.4	U	2.2	4.4
Vanadium		67.5		0.91	11.0
Zinc		171		1.9	6.6

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	460-258493	Instrument ID:	LEEMAN5
Prep Method:	7471B	Prep Batch:	460-258407	Lab File ID:	258407HG1.PRN
Dilution:	1.0			Initial Weight/Volume:	0.66 g
Analysis Date:	10/27/2014 0830			Final Weight/Volume:	50 mL
Prep Date:	10/27/2014 0314				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.61		0.013	0.019

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-15(5-6')**

Lab Sample ID: 460-85120-6

Client Matrix: Solid

% Moisture: 13.1

Date Sampled: 10/24/2014 1050

Date Received: 10/24/2014 1820

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-258821	Instrument ID:	ICP4
Prep Method:	3050B	Prep Batch:	460-258455	Lab File ID:	258455.asc
Dilution:	4.0			Initial Weight/Volume:	1.12 g
Analysis Date:	10/28/2014 1234			Final Weight/Volume:	50 mL
Prep Date:	10/27/2014 0715				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Silver		2.1	U	0.40	2.1
Aluminum		5480		22.7	41.1
Arsenic		13.2		0.84	3.1
Barium		108		1.8	41.1
Beryllium		0.32	J	0.28	0.41
Calcium		6530		78.6	1030
Cadmium		0.82	U	0.29	0.82
Cobalt		7.3	J	0.93	10.3
Chromium		35.9		0.82	2.1
Copper		85.0		1.8	5.1
Iron		23900		25.6	30.8
Potassium		773	J	28.4	1030
Magnesium		1790		68.3	1030
Manganese		228		0.89	3.1
Sodium		378	J	77.7	1030
Nickel		16.6		1.8	8.2
Lead		188		0.84	2.1
Antimony		4.1	U	1.6	4.1
Selenium		4.1	U	1.2	4.1
Thallium		4.1	U	2.0	4.1
Vanadium		25.3		0.85	10.3
Zinc		179		1.8	6.2

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	460-258493	Instrument ID:	LEEMAN5
Prep Method:	7471B	Prep Batch:	460-258407	Lab File ID:	258407HG1.PRN
Dilution:	1.0			Initial Weight/Volume:	0.60 g
Analysis Date:	10/27/2014 0833			Final Weight/Volume:	50 mL
Prep Date:	10/27/2014 0314				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.51		0.014	0.020

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-14(1-2')**

Lab Sample ID: 460-85120-7

Client Matrix: Solid

% Moisture: 14.7

Date Sampled: 10/24/2014 1120

Date Received: 10/24/2014 1820

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-258821	Instrument ID:	ICP4
Prep Method:	3050B	Prep Batch:	460-258455	Lab File ID:	258455.asc
Dilution:	4.0			Initial Weight/Volume:	1.11 g
Analysis Date:	10/28/2014 1238			Final Weight/Volume:	50 mL
Prep Date:	10/27/2014 0715				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Silver		2.1	U	0.41	2.1
Aluminum		2010		23.3	42.2
Arsenic		33.9		0.86	3.2
Barium		61.6		1.8	42.2
Beryllium		0.42	U	0.29	0.42
Calcium		1170		80.8	1060
Cadmium		0.84	U	0.30	0.84
Cobalt		2.6	J	0.95	10.6
Chromium		11.8		0.85	2.1
Copper		30.4		1.9	5.3
Iron		17500		26.3	31.7
Potassium		357	J	29.1	1060
Magnesium		353	J	70.1	1060
Manganese		22.4		0.91	3.2
Sodium		203	J	79.8	1060
Nickel		11.1		1.9	8.4
Lead		64.8		0.87	2.1
Antimony		4.2	U	1.6	4.2
Selenium		4.2	U	1.2	4.2
Thallium		4.2	U	2.1	4.2
Vanadium		16.5		0.87	10.6
Zinc		22.4		1.8	6.3

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	460-258493	Instrument ID:	LEEMAN5
Prep Method:	7471B	Prep Batch:	460-258407	Lab File ID:	258407HG1.PRN
Dilution:	1.0			Initial Weight/Volume:	0.63 g
Analysis Date:	10/27/2014 0835			Final Weight/Volume:	50 mL
Prep Date:	10/27/2014 0314				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.29		0.013	0.019

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-14(6-7')**

Lab Sample ID: 460-85120-8

Client Matrix: Solid

% Moisture: 10.3

Date Sampled: 10/24/2014 1130

Date Received: 10/24/2014 1820

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-258821	Instrument ID:	ICP4
Prep Method:	3050B	Prep Batch:	460-258455	Lab File ID:	258455.asc
Dilution:	4.0			Initial Weight/Volume:	1.05 g
Analysis Date:	10/28/2014 1242			Final Weight/Volume:	50 mL
Prep Date:	10/27/2014 0715				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Silver		0.47	J	0.41	2.1
Aluminum		6900		23.5	42.5
Arsenic		0.88	J	0.87	3.2
Barium		103		1.8	42.5
Beryllium		0.37	J	0.29	0.42
Calcium		2350		81.2	1060
Cadmium		0.85	U	0.30	0.85
Cobalt		24.8		0.96	10.6
Chromium		25.8		0.85	2.1
Copper		24.3		1.9	5.3
Iron		19200		26.4	31.9
Potassium		1270		29.3	1060
Magnesium		7270		70.5	1060
Manganese		731		0.92	3.2
Sodium		236	J	80.3	1060
Nickel		182		1.9	8.5
Lead		51.8		0.87	2.1
Antimony		4.2	U	1.6	4.2
Selenium		4.2	U	1.2	4.2
Thallium		4.2	U	2.1	4.2
Vanadium		16.4		0.88	10.6
Zinc		67.7		1.8	6.4

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	460-258493	Instrument ID:	LEEMAN5
Prep Method:	7471B	Prep Batch:	460-258407	Lab File ID:	258407HG1.PRN
Dilution:	1.0			Initial Weight/Volume:	0.62 g
Analysis Date:	10/27/2014 0837			Final Weight/Volume:	50 mL
Prep Date:	10/27/2014 0314				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.14		0.013	0.018

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-13(1-2')**

Lab Sample ID: 460-85120-9

Client Matrix: Solid

% Moisture: 10.7

Date Sampled: 10/24/2014 1145

Date Received: 10/24/2014 1820

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-258821	Instrument ID:	ICP4
Prep Method:	3050B	Prep Batch:	460-258455	Lab File ID:	258455.asc
Dilution:	4.0			Initial Weight/Volume:	1.07 g
Analysis Date:	10/28/2014 1245			Final Weight/Volume:	50 mL
Prep Date:	10/27/2014 0715				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Silver		1.5	J	0.41	2.1
Aluminum		4230		23.1	41.9
Arsenic		16.2		0.86	3.1
Barium		108		1.8	41.9
Beryllium		0.45		0.28	0.42
Calcium		2290		80.1	1050
Cadmium		0.84	U	0.30	0.84
Cobalt		6.1	J	0.94	10.5
Chromium		117		0.84	2.1
Copper		90.6		1.8	5.2
Iron		16500		26.1	31.4
Potassium		499	J	28.9	1050
Magnesium		1020	J	69.5	1050
Manganese		135		0.90	3.1
Sodium		101	J	79.1	1050
Nickel		18.6		1.9	8.4
Lead		247		0.86	2.1
Antimony		4.2	U	1.6	4.2
Selenium		4.2	U	1.2	4.2
Thallium		4.2	U	2.1	4.2
Vanadium		16.0		0.87	10.5
Zinc		127		1.8	6.3

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	460-258493	Instrument ID:	LEEMAN5
Prep Method:	7471B	Prep Batch:	460-258407	Lab File ID:	258407HG1.PRN
Dilution:	1.0			Initial Weight/Volume:	0.65 g
Analysis Date:	10/27/2014 0839			Final Weight/Volume:	50 mL
Prep Date:	10/27/2014 0314				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.54		0.012	0.018

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-13(3-4')**

Lab Sample ID: 460-85120-10

Client Matrix: Solid

% Moisture: 25.5

Date Sampled: 10/24/2014 1150

Date Received: 10/24/2014 1820

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-258821	Instrument ID:	ICP4
Prep Method:	3050B	Prep Batch:	460-258455	Lab File ID:	258455.asc
Dilution:	4.0			Initial Weight/Volume:	1.13 g
Analysis Date:	10/28/2014 1249			Final Weight/Volume:	50 mL
Prep Date:	10/27/2014 0715				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Silver		0.52	J	0.46	2.4
Aluminum		6020		26.3	47.5
Arsenic		6.9		0.97	3.6
Barium		566		2.1	47.5
Beryllium		0.48	U	0.32	0.48
Calcium		2310		90.9	1190
Cadmium		0.95	U	0.34	0.95
Cobalt		7.2	J	1.1	11.9
Chromium		51.8		0.95	2.4
Copper		115		2.1	5.9
Iron		34000		29.6	35.6
Potassium		887	J	32.8	1190
Magnesium		2620		78.9	1190
Manganese		229		1.0	3.6
Sodium		391	J	89.8	1190
Nickel		36.2		2.1	9.5
Lead		2300		0.98	2.4
Antimony		4.8	U	1.8	4.8
Selenium		4.8	U	1.4	4.8
Thallium		4.8	U	2.3	4.8
Vanadium		14.4		0.98	11.9
Zinc		161		2.0	7.1

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	460-258493	Instrument ID:	LEEMAN5
Prep Method:	7471B	Prep Batch:	460-258407	Lab File ID:	258407HG1.PRN
Dilution:	1.0			Initial Weight/Volume:	0.63 g
Analysis Date:	10/27/2014 0841			Final Weight/Volume:	50 mL
Prep Date:	10/27/2014 0314				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.83		0.015	0.022

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-11(1-2')**

Lab Sample ID: 460-85120-11

Client Matrix: Solid

% Moisture: 12.7

Date Sampled: 10/24/2014 1300

Date Received: 10/24/2014 1820

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-258821	Instrument ID:	ICP4
Prep Method:	3050B	Prep Batch:	460-258455	Lab File ID:	258455.asc
Dilution:	4.0			Initial Weight/Volume:	1.10 g
Analysis Date:	10/28/2014 1303			Final Weight/Volume:	50 mL
Prep Date:	10/27/2014 0715				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Silver		2.1	U	0.40	2.1
Aluminum		6070		23.0	41.7
Arsenic		7.7		0.85	3.1
Barium		69.7		1.8	41.7
Beryllium		0.38	J	0.28	0.42
Calcium		5630		79.7	1040
Cadmium		0.83	U	0.29	0.83
Cobalt		5.1	J	0.94	10.4
Chromium		18.1		0.83	2.1
Copper		56.1		1.8	5.2
Iron		16200		25.9	31.2
Potassium		925	J	28.7	1040
Magnesium		1830		69.1	1040
Manganese		127		0.90	3.1
Sodium		125	J	78.7	1040
Nickel		13.6		1.9	8.3
Lead		149		0.85	2.1
Antimony		4.2	U	1.6	4.2
Selenium		4.2	U	1.2	4.2
Thallium		4.2	U	2.0	4.2
Vanadium		21.1		0.86	10.4
Zinc		94.9		1.8	6.2

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	460-258493	Instrument ID:	LEEMAN5
Prep Method:	7471B	Prep Batch:	460-258407	Lab File ID:	258407HG1.PRN
Dilution:	1.0			Initial Weight/Volume:	0.61 g
Analysis Date:	10/27/2014 0843			Final Weight/Volume:	50 mL
Prep Date:	10/27/2014 0314				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.36		0.014	0.019

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-11(5-6')**

Lab Sample ID: 460-85120-12

Client Matrix: Solid

% Moisture: 17.4

Date Sampled: 10/24/2014 1305

Date Received: 10/24/2014 1820

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-258821	Instrument ID:	ICP4
Prep Method:	3050B	Prep Batch:	460-258455	Lab File ID:	258455.asc
Dilution:	4.0			Initial Weight/Volume:	1.02 g
Analysis Date:	10/28/2014 1307			Final Weight/Volume:	50 mL
Prep Date:	10/27/2014 0715				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Silver		2.4	U	0.46	2.4
Aluminum		4860		26.2	47.5
Arsenic		7.4		0.97	3.6
Barium		39.7	J	2.1	47.5
Beryllium		0.47	U	0.32	0.47
Calcium		12400		90.8	1190
Cadmium		0.51	J	0.34	0.95
Cobalt		2.8	J	1.1	11.9
Chromium		6.4		0.95	2.4
Copper		27.7		2.1	5.9
Iron		6580		29.6	35.6
Potassium		503	J	32.8	1190
Magnesium		1880		78.8	1190
Manganese		212		1.0	3.6
Sodium		569	J	89.8	1190
Nickel		9.2	J	2.1	9.5
Lead		77.6		0.97	2.4
Antimony		4.7	U	1.8	4.7
Selenium		4.7	U	1.4	4.7
Thallium		4.7	U	2.3	4.7
Vanadium		18.3		0.98	11.9
Zinc		126		2.0	7.1

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	460-258493	Instrument ID:	LEEMAN5
Prep Method:	7471B	Prep Batch:	460-258407	Lab File ID:	258407HG1.PRN
Dilution:	1.0			Initial Weight/Volume:	0.64 g
Analysis Date:	10/27/2014 0845			Final Weight/Volume:	50 mL
Prep Date:	10/27/2014 0314				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.13		0.014	0.019

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-8(1-2')**

Lab Sample ID: 460-85120-13

Client Matrix: Solid

% Moisture: 15.7

Date Sampled: 10/24/2014 1330

Date Received: 10/24/2014 1820

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-258821	Instrument ID:	ICP4
Prep Method:	3050B	Prep Batch:	460-258455	Lab File ID:	258455.asc
Dilution:	4.0			Initial Weight/Volume:	1.12 g
Analysis Date:	10/28/2014 1311			Final Weight/Volume:	50 mL
Prep Date:	10/27/2014 0715				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Silver		2.1	U	0.41	2.1
Aluminum		6750		23.4	42.4
Arsenic		12.2		0.87	3.2
Barium		124		1.8	42.4
Beryllium		0.51		0.29	0.42
Calcium		25200		81.0	1060
Cadmium		0.85	U	0.30	0.85
Cobalt		7.0	J	0.96	10.6
Chromium		22.3		0.85	2.1
Copper		68.8		1.9	5.3
Iron		19500		26.4	31.8
Potassium		902	J	29.2	1060
Magnesium		3680		70.3	1060
Manganese		283		0.91	3.2
Sodium		232	J	80.1	1060
Nickel		16.6		1.9	8.5
Lead		269		0.87	2.1
Antimony		4.2	U	1.6	4.2
Selenium		4.2	U	1.2	4.2
Thallium		4.2	U	2.1	4.2
Vanadium		22.5		0.88	10.6
Zinc		253		1.8	6.4

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	460-258493	Instrument ID:	LEEMAN5
Prep Method:	7471B	Prep Batch:	460-258407	Lab File ID:	258407HG1.PRN
Dilution:	1.0			Initial Weight/Volume:	0.67 g
Analysis Date:	10/27/2014 0847			Final Weight/Volume:	50 mL
Prep Date:	10/27/2014 0314				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.38		0.013	0.018

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **SB-8(9-10')**

Lab Sample ID: 460-85120-14

Client Matrix: Solid

% Moisture: 17.0

Date Sampled: 10/24/2014 1340

Date Received: 10/24/2014 1820

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-258821	Instrument ID:	ICP4
Prep Method:	3050B	Prep Batch:	460-258455	Lab File ID:	258455.asc
Dilution:	4.0			Initial Weight/Volume:	1.17 g
Analysis Date:	10/28/2014 1314			Final Weight/Volume:	50 mL
Prep Date:	10/27/2014 0715				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Silver		2.1	U	0.40	2.1
Aluminum		7530		22.7	41.2
Arsenic		3.4		0.84	3.1
Barium		44.0		1.8	41.2
Beryllium		0.37	J	0.28	0.41
Calcium		18100		78.7	1030
Cadmium		0.82	U	0.29	0.82
Cobalt		6.2	J	0.93	10.3
Chromium		14.0		0.82	2.1
Copper		18.6		1.8	5.1
Iron		14000		25.6	30.9
Potassium		940	J	28.4	1030
Magnesium		11100		68.3	1030
Manganese		469		0.89	3.1
Sodium		251	J	77.8	1030
Nickel		15.6		1.8	8.2
Lead		36.3		0.85	2.1
Antimony		4.1	U	1.6	4.1
Selenium		4.1	U	1.2	4.1
Thallium		4.1	U	2.0	4.1
Vanadium		19.7		0.85	10.3
Zinc		77.6		1.8	6.2

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	460-258493	Instrument ID:	LEEMAN5
Prep Method:	7471B	Prep Batch:	460-258407	Lab File ID:	258407HG1.PRN
Dilution:	1.0			Initial Weight/Volume:	0.63 g
Analysis Date:	10/27/2014 0850			Final Weight/Volume:	50 mL
Prep Date:	10/27/2014 0314				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.030		0.014	0.019

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **FB**

Lab Sample ID: 460-85120-16FB

Client Matrix: Water

Date Sampled: 10/24/2014 1430

Date Received: 10/24/2014 1820

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-258582	Instrument ID:	ICP5
Prep Method:	3010A	Prep Batch:	460-258397	Lab File ID:	10272014.asc
Dilution:	1.0			Initial Weight/Volume:	100 mL
Analysis Date:	10/27/2014 1851			Final Weight/Volume:	100 mL
Prep Date:	10/26/2014 1707				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aluminum	200	U	73.6	200
Antimony	20.0	U	5.4	20.0
Arsenic	15.0	U	4.3	15.0
Barium	200	U	6.5	200
Beryllium	2.0	U	1.1	2.0
Cadmium	4.0	U	1.2	4.0
Calcium	5000	U	416	5000
Chromium	10.0	U	4.6	10.0
Cobalt	50.0	U	3.8	50.0
Copper	25.0	U	6.2	25.0
Lead	10.0	U	4.6	10.0
Magnesium	5000	U	355	5000
Manganese	15.0	U	4.3	15.0
Nickel	40.0	U	7.8	40.0
Potassium	5000	U	281	5000
Selenium	20.0	U	6.7	20.0
Silver	10.0	U	1.9	10.0
Sodium	5000	U	514	5000
Thallium	20.0	U	9.2	20.0
Vanadium	50.0	U	4.2	50.0
Zinc	30.0	U	5.9	30.0

Analysis Method:	6010C	Analysis Batch:	460-258732	Instrument ID:	ICP4
Prep Method:	3010A	Prep Batch:	460-258397	Lab File ID:	258201.asc
Dilution:	1.0			Initial Weight/Volume:	100 mL
Analysis Date:	10/28/2014 0308			Final Weight/Volume:	100 mL
Prep Date:	10/26/2014 1707				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Iron	150	U	51.4	150

6010C Metals (ICP)-Dissolved

Analysis Method:	6010C	Analysis Batch:	460-258821	Instrument ID:	ICP4
Prep Method:	3010A	Prep Batch:	460-258720	Lab File ID:	258455.asc
Dilution:	1.0			Initial Weight/Volume:	100 mL
Analysis Date:	10/28/2014 2011			Final Weight/Volume:	100 mL
Prep Date:	10/28/2014 0929				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Silver	10.0	U	1.9	10.0
Aluminum	200	U	73.6	200
Arsenic	15.0	U	4.3	15.0
Barium	200	U	6.5	200

Client: AKRF Inc

Job Number: 460-85120-1

Client Sample ID: **FB**

Lab Sample ID: 460-85120-16FB

Client Matrix: Water

Date Sampled: 10/24/2014 1430

Date Received: 10/24/2014 1820

6010C Metals (ICP)-Dissolved

Analyte	Result (ug/L)	Qualifier	MDL	RL
Beryllium	2.0	U	1.1	2.0
Calcium	5000	U	416	5000
Cadmium	4.0	U	1.2	4.0
Cobalt	50.0	U	3.8	50.0
Chromium	10.0	U	4.6	10.0
Copper	25.0	U	6.2	25.0
Iron	150	U	51.4	150
Potassium	5000	U	281	5000
Magnesium	5000	U	355	5000
Manganese	15.0	U	4.3	15.0
Sodium	723	J	514	5000
Nickel	40.0	U	7.8	40.0
Lead	10.0	U	4.6	10.0
Antimony	20.0	U	5.4	20.0
Selenium	20.0	U	6.7	20.0
Thallium	20.0	U	9.2	20.0
Vanadium	50.0	U	4.2	50.0
Zinc	30.0	U	5.9	30.0

7470A Mercury (CVAA)

Analysis Method:	7470A	Analysis Batch:	460-258398	Instrument ID:	LEEMAN5
Prep Method:	7470A	Prep Batch:	460-258367	Lab File ID:	258366.PRN
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	10/26/2014 1813			Final Weight/Volume:	30 mL
Prep Date:	10/26/2014 1101				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.16	0.20

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	460-258801	Instrument ID:	LEEMAN6
Prep Method:	7470A	Prep Batch:	460-258745	Lab File ID:	258745hg1.CSV
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	10/28/2014 1411			Final Weight/Volume:	30 mL
Prep Date:	10/28/2014 1122				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.16	0.20

General Chemistry

Client Sample ID: **SB-5(1-2')**

Lab Sample ID: 460-85120-1

Client Matrix: Solid

Date Sampled: 10/24/2014 0945

Date Received: 10/24/2014 1820

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	9.6		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258301		Analysis Date: 10/25/2014 1330				DryWt Corrected: N
Percent Solids	90.4		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258301		Analysis Date: 10/25/2014 1330				DryWt Corrected: N

General Chemistry

Client Sample ID: **SB-5(6-7')**

Lab Sample ID: 460-85120-2

Client Matrix: Solid

Date Sampled: 10/24/2014 0950

Date Received: 10/24/2014 1820

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	12.8		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258301		Analysis Date: 10/25/2014 1330				DryWt Corrected: N
Percent Solids	87.2		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258301		Analysis Date: 10/25/2014 1330				DryWt Corrected: N

General Chemistry

Client Sample ID: **SB-16(1-2')**

Lab Sample ID: 460-85120-3

Client Matrix: Solid

Date Sampled: 10/24/2014 1020

Date Received: 10/24/2014 1820

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	6.4		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258301		Analysis Date: 10/25/2014 1330				DryWt Corrected: N
Percent Solids	93.6		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258301		Analysis Date: 10/25/2014 1330				DryWt Corrected: N

General Chemistry

Client Sample ID: **SB-16(7-8')**

Lab Sample ID: 460-85120-4

Client Matrix: Solid

Date Sampled: 10/24/2014 1030

Date Received: 10/24/2014 1820

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	13.6		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258301		Analysis Date: 10/25/2014 1330				DryWt Corrected: N
Percent Solids	86.4		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258301		Analysis Date: 10/25/2014 1330				DryWt Corrected: N

General Chemistry

Client Sample ID: **SB-15(1-2')**

Lab Sample ID: 460-85120-5

Client Matrix: Solid

Date Sampled: 10/24/2014 1045

Date Received: 10/24/2014 1820

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	18.8		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258301		Analysis Date: 10/25/2014 1330				DryWt Corrected: N
Percent Solids	81.2		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258301		Analysis Date: 10/25/2014 1330				DryWt Corrected: N

General Chemistry

Client Sample ID: **SB-15(5-6')**

Lab Sample ID: 460-85120-6

Client Matrix: Solid

Date Sampled: 10/24/2014 1050

Date Received: 10/24/2014 1820

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	13.1		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258301		Analysis Date: 10/25/2014 1330				DryWt Corrected: N
Percent Solids	86.9		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258301		Analysis Date: 10/25/2014 1330				DryWt Corrected: N

General Chemistry

Client Sample ID: **SB-14(1-2')**

Lab Sample ID: 460-85120-7

Client Matrix: Solid

Date Sampled: 10/24/2014 1120

Date Received: 10/24/2014 1820

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	14.7		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258301		Analysis Date: 10/25/2014 1330				DryWt Corrected: N
Percent Solids	85.3		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258301		Analysis Date: 10/25/2014 1330				DryWt Corrected: N

General Chemistry

Client Sample ID: **SB-14(6-7')**

Lab Sample ID: 460-85120-8

Client Matrix: Solid

Date Sampled: 10/24/2014 1130

Date Received: 10/24/2014 1820

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	10.3		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258301	Analysis Date: 10/25/2014 1330					DryWt Corrected: N
Percent Solids	89.7		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258301	Analysis Date: 10/25/2014 1330					DryWt Corrected: N

General Chemistry

Client Sample ID: **SB-13(1-2')**

Lab Sample ID: 460-85120-9

Client Matrix: Solid

Date Sampled: 10/24/2014 1145

Date Received: 10/24/2014 1820

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	10.7		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258301		Analysis Date: 10/25/2014 1330				DryWt Corrected: N
Percent Solids	89.3		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258301		Analysis Date: 10/25/2014 1330				DryWt Corrected: N

General Chemistry

Client Sample ID: **SB-13(3-4')**

Lab Sample ID: 460-85120-10

Client Matrix: Solid

Date Sampled: 10/24/2014 1150

Date Received: 10/24/2014 1820

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	25.5		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258301		Analysis Date: 10/25/2014 1330				DryWt Corrected: N
Percent Solids	74.5		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258301		Analysis Date: 10/25/2014 1330				DryWt Corrected: N

General Chemistry

Client Sample ID: **SB-11(1-2')**

Lab Sample ID: 460-85120-11

Client Matrix: Solid

Date Sampled: 10/24/2014 1300

Date Received: 10/24/2014 1820

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	12.7		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258301		Analysis Date: 10/25/2014 1330				DryWt Corrected: N
Percent Solids	87.3		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258301		Analysis Date: 10/25/2014 1330				DryWt Corrected: N

General Chemistry

Client Sample ID: **SB-11(5-6')**

Lab Sample ID: 460-85120-12

Client Matrix: Solid

Date Sampled: 10/24/2014 1305

Date Received: 10/24/2014 1820

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	17.4		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258301		Analysis Date: 10/25/2014 1330				DryWt Corrected: N
Percent Solids	82.6		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258301		Analysis Date: 10/25/2014 1330				DryWt Corrected: N

General Chemistry

Client Sample ID: **SB-8(1-2')**

Lab Sample ID: 460-85120-13

Client Matrix: Solid

Date Sampled: 10/24/2014 1330

Date Received: 10/24/2014 1820

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	15.7		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258301		Analysis Date: 10/25/2014 1330				DryWt Corrected: N
Percent Solids	84.3		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258301		Analysis Date: 10/25/2014 1330				DryWt Corrected: N

General Chemistry

Client Sample ID: **SB-8(9-10')**

Lab Sample ID: 460-85120-14

Client Matrix: Solid

Date Sampled: 10/24/2014 1340

Date Received: 10/24/2014 1820

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	17.0		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258301		Analysis Date: 10/25/2014 1330				DryWt Corrected: N
Percent Solids	83.0		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-258301		Analysis Date: 10/25/2014 1330				DryWt Corrected: N

DATA REPORTING QUALIFIERS

Client: AKRF Inc

Job Number: 460-85120-1

Lab Section	Qualifier	Description
GC/MS VOA		
	U	Analyzed for but not detected.
	J	Indicates an estimated value.
	*	LCS or LCSD exceeds the control limits
	*	MS or MSD exceeds the control limits
	*	RPD of the LCS and LCSD exceeds the control limits
	*	Surrogate exceeds the control limit
	B	The analyte was found in an associated blank, as well as in the sample.
	N	This flag indicates the presumptive evidence of a compound.
GC/MS Semi VOA		
	U	Analyzed for but not detected.
	J	Indicates an estimated value.
	*	LCS or LCSD exceeds the control limits
	*	MS or MSD exceeds the control limits
	*	RPD of the LCS and LCSD exceeds the control limits
	*	Surrogate exceeds the control limit
	N	This flag indicates the presumptive evidence of a compound.
GC Semi VOA		
	U	Analyzed for but not detected.
	J	Indicates an estimated value.
	*	LCS or LCSD exceeds the control limits
	*	MS or MSD exceeds the control limits
	*	Surrogate exceeds the control limit
	p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.

DATA REPORTING QUALIFIERS

Client: AKRF Inc

Job Number: 460-85120-1

Lab Section	Qualifier	Description
Metals		
	U	Indicates analyzed for but not detected.
	4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
	J	Sample result is greater than the MDL but below the CRDL
	N	Spiked sample recovery is not within control limits.

QUALITY CONTROL RESULTS

Client: AKRF Inc

Job Number: 460-85120-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Prep Batch: 460-258228					
LB3 460-258228/1-A	Neutral Leach or MeOH Extraction Blank	T	Solid	5035	
460-85120-1	SB-5(1-2')	T	Solid	5035	
460-85120-2	SB-5(6-7')	T	Solid	5035	
460-85120-3	SB-16(1-2')	T	Solid	5035	
460-85120-4	SB-16(7-8')	T	Solid	5035	
460-85120-5	SB-15(1-2')	T	Solid	5035	
460-85120-6	SB-15(5-6')	T	Solid	5035	
460-85120-7	SB-14(1-2')	T	Solid	5035	
460-85120-8	SB-14(6-7')	T	Solid	5035	
460-85120-9	SB-13(1-2')	T	Solid	5035	
460-85120-10	SB-13(3-4')	T	Solid	5035	
460-85120-11	SB-11(1-2')	T	Solid	5035	
460-85120-12	SB-11(5-6')	T	Solid	5035	
460-85120-13	SB-8(1-2')	T	Solid	5035	
460-85120-14	SB-8(9-10')	T	Solid	5035	
Analysis Batch:460-258447					
LCS 460-258447/4	Lab Control Sample	T	Water	8260C	
MB 460-258447/7	Method Blank	T	Water	8260C	
460-84736-F-2 MS	Matrix Spike	T	Water	8260C	
460-84736-F-2 MSD	Matrix Spike Duplicate	T	Water	8260C	
460-85120-15TB	TB2	T	Water	8260C	
460-85120-16FB	FB	T	Water	8260C	
Analysis Batch:460-258664					
LCS 460-258664/3	Lab Control Sample	T	Solid	8260C	
LCSD 460-258664/4	Lab Control Sample Duplicate	T	Solid	8260C	
MB 460-258664/6	Method Blank	T	Solid	8260C	
460-85120-1	SB-5(1-2')	T	Solid	8260C	460-258228
460-85120-3	SB-16(1-2')	T	Solid	8260C	460-258228
460-85120-4	SB-16(7-8')	T	Solid	8260C	460-258228
460-85120-5	SB-15(1-2')	T	Solid	8260C	460-258228
460-85120-6	SB-15(5-6')	T	Solid	8260C	460-258228
460-85120-10	SB-13(3-4')	T	Solid	8260C	460-258228
460-85120-11	SB-11(1-2')	T	Solid	8260C	460-258228
460-85120-12	SB-11(5-6')	T	Solid	8260C	460-258228
Analysis Batch:460-258879					
LCS 460-258879/3	Lab Control Sample	T	Solid	8260C	
LCSD 460-258879/4	Lab Control Sample Duplicate	T	Solid	8260C	
MB 460-258879/6	Method Blank	T	Solid	8260C	
LB3 460-258228/1-A	Neutral Leach or MeOH Extraction Blank	T	Solid	8260C	460-258228

Client: AKRF Inc

Job Number: 460-85120-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:460-258887					
LCS 460-258887/4	Lab Control Sample	T	Solid	8260C	
LCSD 460-258887/5	Lab Control Sample Duplicate	T	Solid	8260C	
MB 460-258887/7	Method Blank	T	Solid	8260C	
460-85120-2	SB-5(6-7')	T	Solid	8260C	460-258228
460-85120-7	SB-14(1-2')	T	Solid	8260C	460-258228
460-85120-8	SB-14(6-7')	T	Solid	8260C	460-258228
460-85120-9	SB-13(1-2')	T	Solid	8260C	460-258228
460-85120-13	SB-8(1-2')	T	Solid	8260C	460-258228
460-85120-14	SB-8(9-10')	T	Solid	8260C	460-258228

Report Basis

T = Total

Client: AKRF Inc

Job Number: 460-85120-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 460-258263					
LCS 460-258263/2-A	Lab Control Sample	T	Water	3510C	
LCS 460-258263/4-A	Lab Control Sample	T	Water	3510C	
LCSD 460-258263/3-A	Lab Control Sample Duplicate	T	Water	3510C	
LCSD 460-258263/5-A	Lab Control Sample Duplicate	T	Water	3510C	
MB 460-258263/1-A	Method Blank	T	Water	3510C	
460-85120-16FB	FB	T	Water	3510C	
Prep Batch: 460-258467					
LCS 460-258467/2-A	Lab Control Sample	T	Solid	3546	
LCS 460-258467/3-A	Lab Control Sample	T	Solid	3546	
MB 460-258467/1-A	Method Blank	T	Solid	3546	
460-85115-E-4-A MS	Matrix Spike	T	Solid	3546	
460-85115-E-4-B MSD	Matrix Spike Duplicate	T	Solid	3546	
460-85120-1	SB-5(1-2')	T	Solid	3546	
460-85120-2	SB-5(6-7')	T	Solid	3546	
460-85120-3	SB-16(1-2')	T	Solid	3546	
460-85120-4	SB-16(7-8')	T	Solid	3546	
460-85120-5	SB-15(1-2')	T	Solid	3546	
460-85120-6	SB-15(5-6')	T	Solid	3546	
460-85120-7	SB-14(1-2')	T	Solid	3546	
460-85120-8	SB-14(6-7')	T	Solid	3546	
460-85120-9	SB-13(1-2')	T	Solid	3546	
460-85120-10	SB-13(3-4')	T	Solid	3546	
460-85120-11	SB-11(1-2')	T	Solid	3546	
460-85120-12DL	SB-11(5-6')	T	Solid	3546	
460-85120-13	SB-8(1-2')	T	Solid	3546	
460-85120-14	SB-8(9-10')	T	Solid	3546	
Analysis Batch:460-258638					
LCS 460-258263/4-A	Lab Control Sample	T	Water	8270D	460-258263
LCSD 460-258263/5-A	Lab Control Sample Duplicate	T	Water	8270D	460-258263
MB 460-258263/1-A	Method Blank	T	Water	8270D	460-258263
Analysis Batch:460-258776					
LCS 460-258263/2-A	Lab Control Sample	T	Water	8270D	460-258263
460-85120-16FB	FB	T	Water	8270D	460-258263

Client: AKRF Inc

Job Number: 460-85120-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Analysis Batch:460-258866					
LCS 460-258467/2-A	Lab Control Sample	T	Solid	8270D	460-258467
MB 460-258467/1-A	Method Blank	T	Solid	8270D	460-258467
460-85115-E-4-A MS	Matrix Spike	T	Solid	8270D	460-258467
460-85115-E-4-B MSD	Matrix Spike Duplicate	T	Solid	8270D	460-258467
460-85120-2	SB-5(6-7')	T	Solid	8270D	460-258467
460-85120-3	SB-16(1-2')	T	Solid	8270D	460-258467
460-85120-5	SB-15(1-2')	T	Solid	8270D	460-258467
460-85120-8	SB-14(6-7')	T	Solid	8270D	460-258467
460-85120-9	SB-13(1-2')	T	Solid	8270D	460-258467
460-85120-10	SB-13(3-4')	T	Solid	8270D	460-258467
460-85120-11	SB-11(1-2')	T	Solid	8270D	460-258467
460-85120-12DL	SB-11(5-6')	T	Solid	8270D	460-258467
460-85120-13	SB-8(1-2')	T	Solid	8270D	460-258467
460-85120-14	SB-8(9-10')	T	Solid	8270D	460-258467
Analysis Batch:460-258981					
460-85120-1	SB-5(1-2')	T	Solid	8270D	460-258467
460-85120-4	SB-16(7-8')	T	Solid	8270D	460-258467
460-85120-6	SB-15(5-6')	T	Solid	8270D	460-258467
Analysis Batch:460-258986					
LCSD 460-258263/3-A	Lab Control Sample Duplicate	T	Water	8270D	460-258263
Analysis Batch:460-259124					
LCS 460-258467/3-A	Lab Control Sample	T	Solid	8270D	460-258467
460-85120-7	SB-14(1-2')	T	Solid	8270D	460-258467

Report Basis

T = Total

Client: AKRF Inc

Job Number: 460-85120-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 460-258500					
LCS 460-258500/2-ARA	Lab Control Sample	T	Solid	3546	
MB 460-258500/1-ARA	Method Blank	T	Solid	3546	
460-85120-1	SB-5(1-2')	T	Solid	3546	
460-85120-2	SB-5(6-7')	T	Solid	3546	
460-85120-3RA	SB-16(1-2')	T	Solid	3546	
460-85120-4RA	SB-16(7-8')	T	Solid	3546	
460-85120-5RA	SB-15(1-2')	T	Solid	3546	
460-85120-6RA	SB-15(5-6')	T	Solid	3546	
460-85120-7	SB-14(1-2')	T	Solid	3546	
460-85120-8	SB-14(6-7')	T	Solid	3546	
460-85120-9RA	SB-13(1-2')	T	Solid	3546	
460-85120-10RA	SB-13(3-4')	T	Solid	3546	
Prep Batch: 460-258501					
LCS 460-258501/2-A	Lab Control Sample	T	Solid	3546	
MB 460-258501/1-A	Method Blank	T	Solid	3546	
460-85110-J-3-C MS	Matrix Spike	T	Solid	3546	
460-85110-J-3-D MSD	Matrix Spike Duplicate	T	Solid	3546	
460-85120-1	SB-5(1-2')	T	Solid	3546	
460-85120-2	SB-5(6-7')	T	Solid	3546	
460-85120-3	SB-16(1-2')	T	Solid	3546	
460-85120-4	SB-16(7-8')	T	Solid	3546	
460-85120-5	SB-15(1-2')	T	Solid	3546	
460-85120-6	SB-15(5-6')	T	Solid	3546	
460-85120-7	SB-14(1-2')	T	Solid	3546	
460-85120-8	SB-14(6-7')	T	Solid	3546	
460-85120-9	SB-13(1-2')	T	Solid	3546	
460-85120-10	SB-13(3-4')	T	Solid	3546	
Analysis Batch:460-258618					
LCS 460-258501/2-A	Lab Control Sample	T	Solid	8082A	460-258501
MB 460-258501/1-A	Method Blank	T	Solid	8082A	460-258501
460-85110-J-3-C MS	Matrix Spike	T	Solid	8082A	460-258501
460-85110-J-3-D MSD	Matrix Spike Duplicate	T	Solid	8082A	460-258501
460-85120-1	SB-5(1-2')	T	Solid	8082A	460-258501
460-85120-2	SB-5(6-7')	T	Solid	8082A	460-258501
460-85120-3	SB-16(1-2')	T	Solid	8082A	460-258501
460-85120-4	SB-16(7-8')	T	Solid	8082A	460-258501
460-85120-5	SB-15(1-2')	T	Solid	8082A	460-258501
460-85120-6	SB-15(5-6')	T	Solid	8082A	460-258501
460-85120-7	SB-14(1-2')	T	Solid	8082A	460-258501
460-85120-8	SB-14(6-7')	T	Solid	8082A	460-258501
460-85120-9	SB-13(1-2')	T	Solid	8082A	460-258501
460-85120-10	SB-13(3-4')	T	Solid	8082A	460-258501

Client: AKRF Inc

Job Number: 460-85120-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 460-258704					
LCS 460-258704/2-A	Lab Control Sample	T	Solid	3546	
LCS 460-258704/2-ARA	Lab Control Sample	T	Solid	3546	
MB 460-258704/1-A	Method Blank	T	Solid	3546	
MB 460-258704/1-ARA	Method Blank	T	Solid	3546	
460-85120-11RA	SB-11(1-2')	T	Solid	3546	
460-85120-12	SB-11(5-6')	T	Solid	3546	
460-85120-13	SB-8(1-2')	T	Solid	3546	
460-85120-14	SB-8(9-10')	T	Solid	3546	
460-85165-B-21-C MS	Matrix Spike	T	Solid	3546	
460-85165-B-21-D MSD	Matrix Spike Duplicate	T	Solid	3546	
Prep Batch: 460-258709					
LCS 460-258709/2-ARA	Lab Control Sample	T	Solid	3546	
MB 460-258709/1-ARA	Method Blank	T	Solid	3546	
460-85120-11RA	SB-11(1-2')	T	Solid	3546	
460-85120-12	SB-11(5-6')	T	Solid	3546	
460-85120-13	SB-8(1-2')	T	Solid	3546	
460-85120-14	SB-8(9-10')	T	Solid	3546	
Analysis Batch:460-258783					
460-85120-1	SB-5(1-2')	T	Solid	8081B	460-258500
460-85120-2	SB-5(6-7')	T	Solid	8081B	460-258500
460-85120-7	SB-14(1-2')	T	Solid	8081B	460-258500
460-85120-8	SB-14(6-7')	T	Solid	8081B	460-258500
Analysis Batch:460-258870					
460-85120-12	SB-11(5-6')	T	Solid	8082A	460-258704
460-85120-13	SB-8(1-2')	T	Solid	8082A	460-258704
460-85120-14	SB-8(9-10')	T	Solid	8082A	460-258704
460-85165-B-21-C MS	Matrix Spike	T	Solid	8082A	460-258704
460-85165-B-21-D MSD	Matrix Spike Duplicate	T	Solid	8082A	460-258704
Analysis Batch:460-258944					
LCS 460-258704/2-A	Lab Control Sample	T	Solid	8082A	460-258704
LCS 460-258704/2-ARA	Lab Control Sample	T	Solid	8082A	460-258704
MB 460-258704/1-A	Method Blank	T	Solid	8082A	460-258704
MB 460-258704/1-ARA	Method Blank	T	Solid	8082A	460-258704
460-85120-11RA	SB-11(1-2')	T	Solid	8082A	460-258704

Client: AKRF Inc

Job Number: 460-85120-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Analysis Batch:460-259042					
LCS 460-258500/2-ARA	Lab Control Sample	T	Solid	8081B	460-258500
MB 460-258500/1-ARA	Method Blank	T	Solid	8081B	460-258500
LCS 460-258709/2-ARA	Lab Control Sample	T	Solid	8081B	460-258709
MB 460-258709/1-ARA	Method Blank	T	Solid	8081B	460-258709
460-85120-3RA	SB-16(1-2')	T	Solid	8081B	460-258500
460-85120-4RA	SB-16(7-8')	T	Solid	8081B	460-258500
460-85120-5RA	SB-15(1-2')	T	Solid	8081B	460-258500
460-85120-6RA	SB-15(5-6')	T	Solid	8081B	460-258500
460-85120-9RA	SB-13(1-2')	T	Solid	8081B	460-258500
460-85120-10RA	SB-13(3-4')	T	Solid	8081B	460-258500
460-85120-11RA	SB-11(1-2')	T	Solid	8081B	460-258709
Analysis Batch:460-259250					
460-85120-12	SB-11(5-6')	T	Solid	8081B	460-258709
460-85120-13	SB-8(1-2')	T	Solid	8081B	460-258709
460-85120-14	SB-8(9-10')	T	Solid	8081B	460-258709

Report Basis

T = Total

Client: AKRF Inc

Job Number: 460-85120-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 460-258285					
LCSSRM 460-258285/2-A ^50	LCS-Certified Reference Material	T	Solid	7471B	
MB 460-258285/1-A	Method Blank	T	Solid	7471B	
460-84931-A-1-K DU	Duplicate	T	Solid	7471B	
460-84931-A-1-L MS	Matrix Spike	T	Solid	7471B	
460-85120-1	SB-5(1-2')	T	Solid	7471B	
460-85120-2	SB-5(6-7')	T	Solid	7471B	
Analysis Batch:460-258332					
LCSSRM 460-258285/2-A ^50	LCS-Certified Reference Material	T	Solid	7471B	460-258285
MB 460-258285/1-A	Method Blank	T	Solid	7471B	460-258285
460-84931-A-1-K DU	Duplicate	T	Solid	7471B	460-258285
460-84931-A-1-L MS	Matrix Spike	T	Solid	7471B	460-258285
460-85120-1	SB-5(1-2')	T	Solid	7471B	460-258285
460-85120-2	SB-5(6-7')	T	Solid	7471B	460-258285
Prep Batch: 460-258367					
LCS 460-258367/2-A	Lab Control Sample	T	Water	7470A	
MB 460-258367/1-A	Method Blank	T	Water	7470A	
460-84748-H-10-C DU	Duplicate	T	Water	7470A	
460-84748-H-10-D MS	Matrix Spike	T	Water	7470A	
460-85120-16FB	FB	T	Water	7470A	
Prep Batch: 460-258397					
LCS 460-258397/2-A	Lab Control Sample	T	Water	3010A	
MB 460-258397/1-A	Method Blank	T	Water	3010A	
460-85093-L-1-B DU	Duplicate	T	Water	3010A	
460-85093-L-1-C MS	Matrix Spike	T	Water	3010A	
460-85120-16FB	FB	T	Water	3010A	
Analysis Batch:460-258398					
LCS 460-258367/2-A	Lab Control Sample	T	Water	7470A	460-258367
MB 460-258367/1-A	Method Blank	T	Water	7470A	460-258367
460-84748-H-10-C DU	Duplicate	T	Water	7470A	460-258367
460-84748-H-10-D MS	Matrix Spike	T	Water	7470A	460-258367
460-85120-16FB	FB	T	Water	7470A	460-258367

Client: AKRF Inc

Job Number: 460-85120-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 460-258407					
LCSSRM 460-258407/11-A ^20	LCS-Certified Reference Material	T	Solid	7471B	
MB 460-258407/10-A	Method Blank	T	Solid	7471B	
460-85021-C-1-L DU	Duplicate	T	Solid	7471B	
460-85021-C-1-M MS	Matrix Spike	T	Solid	7471B	
460-85120-3	SB-16(1-2')	T	Solid	7471B	
460-85120-4	SB-16(7-8')	T	Solid	7471B	
460-85120-5	SB-15(1-2')	T	Solid	7471B	
460-85120-6	SB-15(5-6')	T	Solid	7471B	
460-85120-7	SB-14(1-2')	T	Solid	7471B	
460-85120-8	SB-14(6-7')	T	Solid	7471B	
460-85120-9	SB-13(1-2')	T	Solid	7471B	
460-85120-10	SB-13(3-4')	T	Solid	7471B	
460-85120-11	SB-11(1-2')	T	Solid	7471B	
460-85120-12	SB-11(5-6')	T	Solid	7471B	
460-85120-13	SB-8(1-2')	T	Solid	7471B	
460-85120-14	SB-8(9-10')	T	Solid	7471B	
Prep Batch: 460-258455					
LCSSRM 460-258455/2-A	LCS-Certified Reference Material	T	Solid	3050B	
MB 460-258455/1-A ^2	Method Blank	T	Solid	3050B	
460-85070-A-1-C DU ^4	Duplicate	T	Solid	3050B	
460-85070-A-1-D MS ^4	Matrix Spike	T	Solid	3050B	
460-85120-1	SB-5(1-2')	T	Solid	3050B	
460-85120-2	SB-5(6-7')	T	Solid	3050B	
460-85120-3	SB-16(1-2')	T	Solid	3050B	
460-85120-4	SB-16(7-8')	T	Solid	3050B	
460-85120-5	SB-15(1-2')	T	Solid	3050B	
460-85120-6	SB-15(5-6')	T	Solid	3050B	
460-85120-7	SB-14(1-2')	T	Solid	3050B	
460-85120-8	SB-14(6-7')	T	Solid	3050B	
460-85120-9	SB-13(1-2')	T	Solid	3050B	
460-85120-10	SB-13(3-4')	T	Solid	3050B	
460-85120-11	SB-11(1-2')	T	Solid	3050B	
460-85120-12	SB-11(5-6')	T	Solid	3050B	
460-85120-13	SB-8(1-2')	T	Solid	3050B	
460-85120-14	SB-8(9-10')	T	Solid	3050B	

Client: AKRF Inc

Job Number: 460-85120-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:460-258493					
LCSSRM 460-258407/11-A ^20	LCS-Certified Reference Material	T	Solid	7471B	460-258407
MB 460-258407/10-A	Method Blank	T	Solid	7471B	460-258407
460-85021-C-1-L DU	Duplicate	T	Solid	7471B	460-258407
460-85021-C-1-M MS	Matrix Spike	T	Solid	7471B	460-258407
460-85120-3	SB-16(1-2')	T	Solid	7471B	460-258407
460-85120-4	SB-16(7-8')	T	Solid	7471B	460-258407
460-85120-5	SB-15(1-2')	T	Solid	7471B	460-258407
460-85120-6	SB-15(5-6')	T	Solid	7471B	460-258407
460-85120-7	SB-14(1-2')	T	Solid	7471B	460-258407
460-85120-8	SB-14(6-7')	T	Solid	7471B	460-258407
460-85120-9	SB-13(1-2')	T	Solid	7471B	460-258407
460-85120-10	SB-13(3-4')	T	Solid	7471B	460-258407
460-85120-11	SB-11(1-2')	T	Solid	7471B	460-258407
460-85120-12	SB-11(5-6')	T	Solid	7471B	460-258407
460-85120-13	SB-8(1-2')	T	Solid	7471B	460-258407
460-85120-14	SB-8(9-10')	T	Solid	7471B	460-258407
Analysis Batch:460-258582					
LCS 460-258397/2-A	Lab Control Sample	T	Water	6010C	460-258397
MB 460-258397/1-A	Method Blank	T	Water	6010C	460-258397
460-85093-L-1-B DU	Duplicate	T	Water	6010C	460-258397
460-85093-L-1-C MS	Matrix Spike	T	Water	6010C	460-258397
460-85120-16FB	FB	T	Water	6010C	460-258397
Prep Batch: 460-258720					
LCS 460-258720/2-A	Lab Control Sample	T	Water	3010A	
MB 460-258718/1-B	Method Blank	D	Water	3010A	
460-85120-16FB	FB	D	Water	3010A	
460-85173-B-1-C DU	Duplicate	D	Water	3010A	
460-85173-B-1-D MS	Matrix Spike	D	Water	3010A	
Analysis Batch:460-258732					
LCS 460-258397/2-A	Lab Control Sample	T	Water	6010C	460-258397
MB 460-258397/1-A	Method Blank	T	Water	6010C	460-258397
460-85093-L-1-B DU	Duplicate	T	Water	6010C	460-258397
460-85093-L-1-C MS	Matrix Spike	T	Water	6010C	460-258397
460-85120-16FB	FB	T	Water	6010C	460-258397
Prep Batch: 460-258745					
LCS 460-258745/2-A	Lab Control Sample	T	Water	7470A	
MB 460-258744/1-B	Method Blank	D	Water	7470A	
460-85120-16FB	FB	D	Water	7470A	
460-85128-A-3-A DU	Duplicate	D	Water	7470A	
460-85128-G-3-B MS	Matrix Spike	D	Water	7470A	

Client: AKRF Inc

Job Number: 460-85120-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:460-258801					
LCS 460-258745/2-A	Lab Control Sample	T	Water	7470A	460-258745
MB 460-258744/1-B	Method Blank	D	Water	7470A	460-258745
460-85120-16FB	FB	D	Water	7470A	460-258745
460-85128-A-3-A DU	Duplicate	D	Water	7470A	460-258745
460-85128-G-3-B MS	Matrix Spike	D	Water	7470A	460-258745
Analysis Batch:460-258821					
LCSSRM 460-258455/2-A	LCS-Certified Reference Material	T	Solid	6010C	460-258455
MB 460-258455/1-A ^2	Method Blank	T	Solid	6010C	460-258455
LCS 460-258720/2-A	Lab Control Sample	T	Water	6010C	460-258720
MB 460-258718/1-B	Method Blank	D	Water	6010C	460-258720
460-85070-A-1-C DU ^4	Duplicate	T	Solid	6010C	460-258455
460-85070-A-1-D MS ^4	Matrix Spike	T	Solid	6010C	460-258455
460-85120-1	SB-5(1-2')	T	Solid	6010C	460-258455
460-85120-2	SB-5(6-7')	T	Solid	6010C	460-258455
460-85120-3	SB-16(1-2')	T	Solid	6010C	460-258455
460-85120-4	SB-16(7-8')	T	Solid	6010C	460-258455
460-85120-5	SB-15(1-2')	T	Solid	6010C	460-258455
460-85120-6	SB-15(5-6')	T	Solid	6010C	460-258455
460-85120-7	SB-14(1-2')	T	Solid	6010C	460-258455
460-85120-8	SB-14(6-7')	T	Solid	6010C	460-258455
460-85120-9	SB-13(1-2')	T	Solid	6010C	460-258455
460-85120-10	SB-13(3-4')	T	Solid	6010C	460-258455
460-85120-11	SB-11(1-2')	T	Solid	6010C	460-258455
460-85120-12	SB-11(5-6')	T	Solid	6010C	460-258455
460-85120-13	SB-8(1-2')	T	Solid	6010C	460-258455
460-85120-14	SB-8(9-10')	T	Solid	6010C	460-258455
460-85120-16FB	FB	D	Water	6010C	460-258720
460-85173-B-1-C DU	Duplicate	D	Water	6010C	460-258720
460-85173-B-1-D MS	Matrix Spike	D	Water	6010C	460-258720

Report Basis

D = Dissolved

T = Total

Client: AKRF Inc

Job Number: 460-85120-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:460-258301					
460-85120-1	SB-5(1-2')	T	Solid	Moisture	
460-85120-2	SB-5(6-7')	T	Solid	Moisture	
460-85120-3	SB-16(1-2')	T	Solid	Moisture	
460-85120-4	SB-16(7-8')	T	Solid	Moisture	
460-85120-5	SB-15(1-2')	T	Solid	Moisture	
460-85120-6	SB-15(5-6')	T	Solid	Moisture	
460-85120-7	SB-14(1-2')	T	Solid	Moisture	
460-85120-8	SB-14(6-7')	T	Solid	Moisture	
460-85120-9	SB-13(1-2')	T	Solid	Moisture	
460-85120-10	SB-13(3-4')	T	Solid	Moisture	
460-85120-11	SB-11(1-2')	T	Solid	Moisture	
460-85120-12	SB-11(5-6')	T	Solid	Moisture	
460-85120-13	SB-8(1-2')	T	Solid	Moisture	
460-85120-14	SB-8(9-10')	T	Solid	Moisture	
460-85137-B-2 DU	Duplicate	T	Solid	Moisture	

Report Basis

T = Total

Client: AKRF Inc

Job Number: 460-85120-1

Surrogate Recovery Report

8260C Volatile Organic Compounds by GC/MS

Client Matrix: Solid

Lab Sample ID	Client Sample ID	DCA %Rec	BFB %Rec	DBFM %Rec	TOL %Rec
460-85120-1	SB-5(1-2')	89	97	101	94
460-85120-2	SB-5(6-7')	101	92	108	113
460-85120-3	SB-16(1-2')	84	96	99	88
460-85120-4	SB-16(7-8')	94	104	37*	98
460-85120-5	SB-15(1-2')	86	91	107	97
460-85120-6	SB-15(5-6')	88	96	56*	88
460-85120-7	SB-14(1-2')	99	101	107	107
460-85120-8	SB-14(6-7')	95	92	98	97
460-85120-9	SB-13(1-2')	102	96	112	115
460-85120-10	SB-13(3-4')	75	82	88	73
460-85120-11	SB-11(1-2')	77	87	92	81
460-85120-12	SB-11(5-6')	83	92	96	90
460-85120-13	SB-8(1-2')	100	97	105	111
460-85120-14	SB-8(9-10')	94	99	97	100
MB 460-258664/6		81	88	92	80
MB 460-258879/6		97	96	103	91
MB 460-258887/7		91	96	116	94
LB3 460-258228/1-A		93	91	102	87
LCS 460-258664/3		80	89	85	86
LCS 460-258879/3		90	90	93	90
LCS 460-258887/4		94	103	95	102
LCSD 460-258664/4		87	90	95	87
LCSD 460-258879/4		103	103	110	104
LCSD 460-258887/5		91	110	94	97

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	70-130
BFB = 4-Bromofluorobenzene	70-130
DBFM = Dibromofluoromethane (Surr)	70-130
TOL = Toluene-d8 (Surr)	70-130

Client: AKRF Inc

Job Number: 460-85120-1

Surrogate Recovery Report

8260C Volatile Organic Compounds by GC/MS

Client Matrix: Water

Lab Sample ID	Client Sample ID	DCA %Rec	BFB %Rec	DBFM %Rec	TOL %Rec
460-85120-15	TB2	95	95	93	92
460-85120-16	FB	95	97	97	95
MB 460-258447/7		96	101	102	97
LCS 460-258447/4		98	100	96	95
460-84736-F-2 MS		101	102	100	95
460-84736-F-2 MSD		96	102	97	96

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	70-130
BFB = 4-Bromofluorobenzene	64-135
DBFM = Dibromofluoromethane (Surr)	72-137
TOL = Toluene-d8 (Surr)	70-130

Client: AKRF Inc

Job Number: 460-85120-1

Surrogate Recovery Report

8270D Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	NBZ %Rec	PHL %Rec	TPH %Rec	TBP %Rec	2FP %Rec	FBP %Rec
460-85120-1	SB-5(1-2')	63	58	75	27	50	68
460-85120-2	SB-5(6-7')	71	64	71	34	59	76
460-85120-3	SB-16(1-2')	72	66	96	62	66	71
460-85120-4	SB-16(7-8')	61	62	81	61	59	70
460-85120-5	SB-15(1-2')	73	64	75	24	56	77
460-85120-6	SB-15(5-6')	63	41	75	5*	23*	75
460-85120-7	SB-14(1-2')	75	69	81	80	67	82
460-85120-8	SB-14(6-7')	73	62	99	11	40	72
460-85120-9	SB-13(1-2')	80	73	101	49	66	79
460-85120-10	SB-13(3-4')	74	72	80	53	68	88
460-85120-11	SB-11(1-2')	69	68	82	54	66	83
460-85120-12 DL	SB-11(5-6') DL	46	39*	49	42	64	85
460-85120-13	SB-8(1-2')	66	57	76	8*	41	70
460-85120-14	SB-8(9-10')	72	68	99	43	66	71

Surrogate	Acceptance Limits
NBZ = Nitrobenzene-d5 (Surr)	38-105
PHL = Phenol-d5 (Surr)	41-118
TPH = Terphenyl-d14 (Surr)	16-151
TBP = 2,4,6-Tribromophenol (Surr)	10-120
2FP = 2-Fluorophenol (Surr)	37-125
FBP = 2-Fluorobiphenyl	40-109

Client: AKRF Inc

Job Number: 460-85120-1

Surrogate Recovery Report

8270D Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	NBZ %Rec	TBP %Rec	2FP %Rec	FBP %Rec	PHL %Rec	TPH %Rec
MB 460-258467/1-A		101	116	95	95	96	131
LCS 460-258467/2-A		101	119	95	93	98	127
LCS 460-258467/3-A		82	96	72	83	73	99
460-85115-E-4-A MS		84	93	78	84	80	112
460-85115-E-4-B MSD		74	82	69	73	71	99

Surrogate	Acceptance Limits
NBZ = Nitrobenzene-d5 (Surr)	38-105
TBP = 2,4,6-Tribromophenol (Surr)	10-120
2FP = 2-Fluorophenol (Surr)	37-125
FBP = 2-Fluorobiphenyl	40-109
PHL = Phenol-d5 (Surr)	41-118
TPH = Terphenyl-d14 (Surr)	16-151

Client: AKRF Inc

Job Number: 460-85120-1

Surrogate Recovery Report

8270D Semivolatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	NBZ %Rec	TBP %Rec	2FP %Rec	FBP %Rec	PHL %Rec	TPH %Rec
MB 460-258263/1-A		87	75	42	74	26	87
LCS 460-258263/2-A		85	103	44	78	28	86
LCS 460-258263/4-A		105	88	50	96	31	114
LCSD 460-258263/3-A		83	77	48	79	31	91
LCSD 460-258263/5-A		104	88	51	91	31	104

Surrogate	Acceptance Limits
NBZ = Nitrobenzene-d5 (Surr)	60-114
TBP = 2,4,6-Tribromophenol (Surr)	51-126
2FP = 2-Fluorophenol (Surr)	15-96
FBP = 2-Fluorobiphenyl	50-120
PHL = Phenol-d5 (Surr)	4-86
TPH = Terphenyl-d14 (Surr)	72-130

Client: AKRF Inc

Job Number: 460-85120-1

Surrogate Recovery Report

8270D Semivolatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	TBP %Rec	FBP %Rec	2FP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec
460-85120-16	FB	54	85	53	99	37	97

Surrogate	Acceptance Limits
TBP = 2,4,6-Tribromophenol (Surr)	51-126
FBP = 2-Fluorobiphenyl	50-120
2FP = 2-Fluorophenol (Surr)	15-96
NBZ = Nitrobenzene-d5 (Surr)	60-114
PHL = Phenol-d5 (Surr)	4-86
TPH = Terphenyl-d14 (Surr)	72-130

Client: AKRF Inc

Job Number: 460-85120-1

Surrogate Recovery Report

8081B Organochlorine Pesticides (GC)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	DCB1 %Rec	DCB2 %Rec	TCX1 %Rec	TCX2 %Rec
460-85120-1	SB-5(1-2')	110	91	133	76p
460-85120-2	SB-5(6-7')	84	88	72	58*
460-85120-3 RA	SB-16(1-2') RA	96	104	93	93
460-85120-4 RA	SB-16(7-8') RA	99	129	97	98
460-85120-5 RA	SB-15(1-2') RA	111	96	90	92
460-85120-6 RA	SB-15(5-6') RA	83p	141	244*	81p
460-85120-7	SB-14(1-2')	77	71*	120	98
460-85120-8	SB-14(6-7')	64*	77	128	77p
460-85120-9 RA	SB-13(1-2') RA	102	109	101	101
460-85120-10 RA	SB-13(3-4') RA	88	122	88	89
460-85120-11 RA	SB-11(1-2') RA	80p	399*	108	108
460-85120-12	SB-11(5-6')	1297*	122p	80	84
460-85120-13	SB-8(1-2')	146	142	132	111
460-85120-14	SB-8(9-10')	86	103	76	77
MB 460-258500/1-A RA		105	118	108	104
MB 460-258709/1-A RA		116	127	119	113
LCS 460-258500/2-A RA		122	145	122	116
LCS 460-258709/2-A RA		106	122	119	108

Surrogate	Acceptance Limits
DCB = DCB Decachlorobiphenyl	76-149
TCX = Tetrachloro-m-xylene	72-136

Client: AKRF Inc

Job Number: 460-85120-1

Surrogate Recovery Report

8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Matrix: Solid

Lab Sample ID	Client Sample ID	DCB1 %Rec	DCB2 %Rec
460-85120-1	SB-5(1-2')	110	97
460-85120-2	SB-5(6-7')	86	89
460-85120-3	SB-16(1-2')	97	94
460-85120-4	SB-16(7-8')	106	97
460-85120-5	SB-15(1-2')	97	93
460-85120-6	SB-15(5-6')	94	89
460-85120-7	SB-14(1-2')	98	97
460-85120-8	SB-14(6-7')	101	96
460-85120-9	SB-13(1-2')	107	97
460-85120-10	SB-13(3-4')	105	98
460-85120-11 RA	SB-11(1-2') RA	130	132
460-85120-12	SB-11(5-6')	171*	105p
460-85120-13	SB-8(1-2')	136	130
460-85120-14	SB-8(9-10')	92	93
MB 460-258501/1-A		111	100
MB 460-258704/1-A		146	149
MB 460-258704/1-A RA		143	145
LCS 460-258501/2-A		106	95
LCS 460-258704/2-A		159*	159*
LCS 460-258704/2-A RA		153*	155*
460-85110-J-3-C MS		106	96
460-85165-B-21-C MS		80	82
460-85110-J-3-D MSD		93	86
460-85165-B-21-D MSD		74	78

Surrogate	Acceptance Limits
DCB = DCB Decachlorobiphenyl	53-150

Client: AKRF Inc

Job Number: 460-85120-1

Neutral Leach or MeOH Extraction Blank - Batch: 460-258228

Method: 8260C
Preparation: 5035

Lab Sample ID:	LB3 460-258228/1-A	Analysis Batch:	460-258879	Instrument ID:	CVOAMS12
Client Matrix:	Solid	Prep Batch:	460-258228	Lab File ID:	O92829.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	10/29/2014 0916	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	10/25/2014 0005				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.20	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.13	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	0.21	1.0
1,1,2-Trichloroethane	1.0	U	0.24	1.0
1,1-Dichloroethane	1.0	U	0.18	1.0
1,1-Dichloroethene	1.0	U	0.23	1.0
1,2,3-Trichlorobenzene	1.0	U	0.33	1.0
1,2,4-Trichlorobenzene	1.0	U	0.27	1.0
1,2-Dichloropropane	1.0	U	0.24	1.0
1,3-Dichlorobenzene	1.0	U	0.20	1.0
1,4-Dichlorobenzene	1.0	U	0.21	1.0
1,4-Dioxane	20	U	12	20
2-Butanone (MEK)	5.0	U	1.5	5.0
2-Hexanone	5.0	U	0.69	5.0
4-Methyl-2-pentanone (MIBK)	5.0	U	0.68	5.0
Acetone	3.34	J	0.23	5.0
Benzene	1.0	U	0.19	1.0
Bromoform	1.0	U	0.15	1.0
Bromomethane	1.0	U	0.36	1.0
Carbon disulfide	1.0	U	0.17	1.0
Carbon tetrachloride	1.0	U	0.18	1.0
Chlorobenzene	1.0	U	0.17	1.0
Chlorobromomethane	1.0	U	0.31	1.0
Chlorodibromomethane	1.0	U	0.20	1.0
Chloroethane	1.0	U	0.48	1.0
Chloroform	1.0	U	0.16	1.0
Chloromethane	1.0	U	0.23	1.0
cis-1,2-Dichloroethene	1.0	U	0.22	1.0
cis-1,3-Dichloropropene	1.0	U	0.17	1.0
Cyclohexane	1.0	U	0.21	1.0
Dichlorobromomethane	1.0	U	0.16	1.0
Dichlorodifluoromethane	1.0	U	0.29	1.0
Ethylbenzene	1.0	U	0.14	1.0
Ethylene Dibromide	1.0	U	0.18	1.0
Isopropylbenzene	1.0	U	0.19	1.0
Methyl acetate	5.0	U	0.94	5.0
Methyl tert-butyl ether	1.0	U	0.20	1.0
Methylcyclohexane	1.0	U	0.19	1.0
Methylene Chloride	1.0	U	0.38	1.0
m-Xylene & p-Xylene	1.0	U	0.21	1.0
o-Xylene	1.0	U	0.17	1.0
Styrene	1.0	U	0.24	1.0
Tetrachloroethene	1.0	U	0.20	1.0
Toluene	1.0	U	0.27	1.0
trans-1,2-Dichloroethene	1.0	U	0.21	1.0

Client: AKRF Inc

Job Number: 460-85120-1

Neutral Leach or MeOH Extraction Blank - Batch: 460-258228

Method: 8260C
Preparation: 5035

Lab Sample ID:	LB3 460-258228/1-A	Analysis Batch:	460-258879	Instrument ID:	CVOAMS12
Client Matrix:	Solid	Prep Batch:	460-258228	Lab File ID:	O92829.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	10/29/2014 0916	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	10/25/2014 0005				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
trans-1,3-Dichloropropene	1.0	U	0.18	1.0
Trichloroethene	1.0	U	0.20	1.0
Trichlorofluoromethane	1.0	U	0.19	1.0
Vinyl chloride	1.0	U	0.24	1.0
1,2-Dichloroethane	1.0	U	0.28	1.0
1,2-Dichlorobenzene	1.0	U	0.13	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.46	1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	93	70 - 130
4-Bromofluorobenzene	91	70 - 130
Dibromofluoromethane (Surr)	102	70 - 130
Toluene-d8 (Surr)	87	70 - 130

Method Blank TICs- Batch: 460-258228

Cas Number	Analyte	RT	Est. Result (ug/K	Qual
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85120-1

Method Blank - Batch: 460-258447

Method: 8260C
Preparation: 5030C

Lab Sample ID:	MB 460-258447/7	Analysis Batch:	460-258447	Instrument ID:	CVOAMS5
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E34578.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/27/2014 1013	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	10/27/2014 1013				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.060	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.16	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	0.080	1.0
1,1,2-Trichloroethane	1.0	U	0.19	1.0
1,1-Dichloroethane	1.0	U	0.13	1.0
1,1-Dichloroethene	1.0	U	0.090	1.0
1,2,3-Trichlorobenzene	1.0	U	0.51	1.0
1,2,4-Trichlorobenzene	1.0	U	0.34	1.0
1,2-Dichloropropane	1.0	U	0.090	1.0
1,3-Dichlorobenzene	1.0	U	0.14	1.0
1,4-Dichlorobenzene	1.0	U	0.23	1.0
1,4-Dioxane	50	U	36	50
2-Butanone (MEK)	5.0	U	2.3	5.0
2-Hexanone	5.0	U	0.50	5.0
4-Methyl-2-pentanone (MIBK)	5.0	U	0.99	5.0
Acetone	5.0	U	2.7	5.0
Benzene	1.0	U	0.080	1.0
Bromoform	1.0	U	0.19	1.0
Bromomethane	1.0	U	0.18	1.0
Carbon disulfide	1.0	U	0.13	1.0
Carbon tetrachloride	1.0	U	0.060	1.0
Chlorobenzene	1.0	U	0.11	1.0
Chlorobromomethane	1.0	U	0.27	1.0
Chlorodibromomethane	1.0	U	0.20	1.0
Chloroethane	1.0	U	0.17	1.0
Chloroform	1.0	U	0.080	1.0
Chloromethane	1.0	U	0.10	1.0
cis-1,2-Dichloroethene	1.0	U	0.18	1.0
cis-1,3-Dichloropropene	1.0	U	0.18	1.0
Cyclohexane	1.0	U	0.16	1.0
Dichlorobromomethane	1.0	U	0.12	1.0
Dichlorodifluoromethane	1.0	U	0.22	1.0
Ethylbenzene	1.0	U	0.10	1.0
Ethylene Dibromide	1.0	U	0.28	1.0
Isopropylbenzene	1.0	U	0.080	1.0
Methyl acetate	5.0	U	0.34	5.0
Methyl tert-butyl ether	1.0	U	0.14	1.0
Methylcyclohexane	1.0	U	0.14	1.0
Methylene Chloride	1.0	U	0.18	1.0
m-Xylene & p-Xylene	1.0	U	0.25	1.0
o-Xylene	1.0	U	0.13	1.0
Styrene	1.0	U	0.12	1.0
Tetrachloroethene	1.0	U	0.10	1.0
Toluene	1.0	U	0.15	1.0
trans-1,2-Dichloroethene	1.0	U	0.13	1.0

Client: AKRF Inc

Job Number: 460-85120-1

Method Blank - Batch: 460-258447

Method: 8260C
Preparation: 5030C

Lab Sample ID:	MB 460-258447/7	Analysis Batch:	460-258447	Instrument ID:	CVOAMS5
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E34578.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/27/2014 1013	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	10/27/2014 1013				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
trans-1,3-Dichloropropene	1.0	U	0.24	1.0
Trichloroethene	1.0	U	0.090	1.0
Trichlorofluoromethane	1.0	U	0.15	1.0
Vinyl chloride	1.0	U	0.14	1.0
1,2-Dichloroethane	1.0	U	0.19	1.0
1,2-Dichlorobenzene	1.0	U	0.21	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.40	1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	96	70 - 130
4-Bromofluorobenzene	101	64 - 135
Dibromofluoromethane (Surr)	102	72 - 137
Toluene-d8 (Surr)	97	70 - 130

Method Blank TICs- Batch: 460-258447

Cas Number	Analyte	RT	Est. Result (ug/L	Qual
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85120-1

Lab Control Sample - Batch: 460-258447

Method: 8260C
Preparation: 5030C

Lab Sample ID:	LCS 460-258447/4	Analysis Batch:	460-258447	Instrument ID:	CVOAMS5
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E34575.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/27/2014 0857	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	10/27/2014 0857				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1,1-Trichloroethane	20.0	21.2	106	73 - 134	
1,1,2,2-Tetrachloroethane	20.0	22.7	113	55 - 133	
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	22.7	114	60 - 144	
1,1,2-Trichloroethane	20.0	22.4	112	68 - 121	
1,1-Dichloroethane	20.0	22.5	113	75 - 126	
1,1-Dichloroethene	20.0	20.4	102	71 - 123	
1,2,3-Trichlorobenzene	20.0	18.9	95	72 - 135	
1,2,4-Trichlorobenzene	20.0	20.4	102	76 - 129	
1,2-Dichloropropane	20.0	21.0	105	70 - 120	
1,3-Dichlorobenzene	20.0	20.7	104	75 - 120	
1,4-Dichlorobenzene	20.0	19.6	98	75 - 120	
1,4-Dioxane	400	422	106	46 - 150	
2-Butanone (MEK)	100	86.9	87	52 - 140	
2-Hexanone	100	107	107	49 - 131	
4-Methyl-2-pentanone (MIBK)	100	113	113	56 - 132	
Acetone	100	107	107	26 - 150	
Benzene	20.0	20.9	105	69 - 125	
Bromoform	20.0	17.4	87	50 - 134	
Bromomethane	20.0	13.2	66	27 - 150	
Carbon disulfide	20.0	20.7	103	61 - 126	
Carbon tetrachloride	20.0	19.4	97	58 - 150	
Chlorobenzene	20.0	19.3	96	77 - 120	
Chlorobromomethane	20.0	21.3	107	70 - 134	
Chlorodibromomethane	20.0	20.1	100	63 - 131	
Chloroethane	20.0	21.7	108	58 - 145	
Chloroform	20.0	20.7	104	81 - 122	
Chloromethane	20.0	24.2	121	43 - 145	
cis-1,2-Dichloroethene	20.0	21.3	106	78 - 121	
cis-1,3-Dichloropropene	20.0	22.1	110	71 - 120	
Cyclohexane	20.0	20.5	103	62 - 135	
Dichlorobromomethane	20.0	21.1	106	72 - 123	
Dichlorodifluoromethane	20.0	25.7	128	40 - 150	
Ethylbenzene	20.0	20.5	103	74 - 120	
Ethylene Dibromide	20.0	21.4	107	77 - 117	
Isopropylbenzene	20.0	20.6	103	74 - 127	
Methyl acetate	100	130	130	62 - 140	
Methyl tert-butyl ether	20.0	20.8	104	73 - 125	
Methylcyclohexane	20.0	22.3	112	64 - 136	
Methylene Chloride	20.0	19.6	98	76 - 123	
m-Xylene & p-Xylene	20.0	19.4	97	78 - 119	
o-Xylene	20.0	19.1	96	79 - 120	

Client: AKRF Inc

Job Number: 460-85120-1

Lab Control Sample - Batch: 460-258447

Method: 8260C
Preparation: 5030C

Lab Sample ID:	LCS 460-258447/4	Analysis Batch:	460-258447	Instrument ID:	CVOAMS5
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E34575.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/27/2014 0857	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	10/27/2014 0857				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Styrene	20.0	19.6	98	76 - 120	
Tetrachloroethene	20.0	19.3	96	70 - 136	
Toluene	20.0	19.3	96	78 - 120	
trans-1,2-Dichloroethene	20.0	21.2	106	79 - 120	
trans-1,3-Dichloropropene	20.0	22.1	111	71 - 123	
Trichloroethene	20.0	18.5	92	74 - 120	
Trichlorofluoromethane	20.0	20.9	105	65 - 142	
Vinyl chloride	20.0	24.0	120	56 - 137	
1,2-Dichloroethane	20.0	20.5	102	75 - 127	
1,2-Dichlorobenzene	20.0	20.2	101	81 - 120	
1,2-Dibromo-3-Chloropropane	20.0	18.9	95	53 - 136	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	98	70 - 130
4-Bromofluorobenzene	100	64 - 135
Dibromofluoromethane (Surr)	96	72 - 137
Toluene-d8 (Surr)	95	70 - 130

Client: AKRF Inc

Job Number: 460-85120-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 460-258447

Method: 8260C
Preparation: 5030C

MS Lab Sample ID:	460-84736-F-2 MS	Analysis Batch:	460-258447	Instrument ID:	CVOAMS5
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E34586.D
Dilution:	1000	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/27/2014 1335			Final Weight/Volume:	5 mL
Prep Date:	10/27/2014 1335				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	460-84736-F-2 MSD	Analysis Batch:	460-258447	Instrument ID:	CVOAMS5
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E34587.D
Dilution:	1000	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/27/2014 1400			Final Weight/Volume:	5 mL
Prep Date:	10/27/2014 1400				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,1,1-Trichloroethane	99	99	73 - 134	0	30		
1,1,2,2-Tetrachloroethane	115	119	55 - 133	4	30		
1,1,2-Trichloro-1,2,2-trifluoroethane	97	100	60 - 144	3	30		
1,1,2-Trichloroethane	107	115	68 - 121	7	30		
1,1-Dichloroethane	109	114	75 - 126	4	30		
1,1-Dichloroethene	96	98	71 - 123	2	30		
1,2,3-Trichlorobenzene	92	96	72 - 135	5	30		
1,2,4-Trichlorobenzene	100	106	76 - 129	6	30		
1,2-Dichloropropane	109	108	70 - 120	1	30		
1,3-Dichlorobenzene	95	103	75 - 120	8	30		
1,4-Dichlorobenzene	95	99	75 - 120	3	30		
1,4-Dioxane	97	102	46 - 150	4	30		
2-Butanone (MEK)	80	83	52 - 140	4	30		
2-Hexanone	109	111	49 - 131	2	30		
4-Methyl-2-pentanone (MIBK)	112	117	56 - 132	5	30		
Acetone	94	93	26 - 150	1	30		
Benzene	102	105	69 - 125	2	30		
Bromoform	86	91	50 - 134	5	30		
Bromomethane	46	63	27 - 150	30	30		
Carbon disulfide	100	103	61 - 126	2	30		
Carbon tetrachloride	99	97	58 - 150	2	30		
Chlorobenzene	93	98	77 - 120	5	30		
Chlorobromomethane	110	107	70 - 134	3	30		
Chlorodibromomethane	98	104	63 - 131	7	30		
Chloroethane	98	99	58 - 145	2	30		
Chloroform	102	102	81 - 122	1	30		
Chloromethane	99	101	43 - 145	1	30		
cis-1,2-Dichloroethene	106	108	78 - 121	1	30		
cis-1,3-Dichloropropene	108	113	71 - 120	5	30		
Cyclohexane	93	90	62 - 135	3	30		
Dichlorobromomethane	103	105	72 - 123	2	30		
Dichlorodifluoromethane	87	88	40 - 150	1	30		

Client: AKRF Inc

Job Number: 460-85120-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 460-258447

Method: 8260C
Preparation: 5030C

MS Lab Sample ID:	460-84736-F-2 MS	Analysis Batch:	460-258447	Instrument ID:	CVOAMS5
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E34586.D
Dilution:	1000	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/27/2014 1335			Final Weight/Volume:	5 mL
Prep Date:	10/27/2014 1335				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	460-84736-F-2 MSD	Analysis Batch:	460-258447	Instrument ID:	CVOAMS5
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E34587.D
Dilution:	1000	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/27/2014 1400			Final Weight/Volume:	5 mL
Prep Date:	10/27/2014 1400				5 mL
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Ethylbenzene	100	101	74 - 120	1	30		
Ethylene Dibromide	107	110	77 - 117	3	30		
Isopropylbenzene	97	101	74 - 127	4	30		
Methyl acetate	121	121	62 - 140	1	30		
Methyl tert-butyl ether	102	106	73 - 125	4	30		
Methylcyclohexane	100	103	64 - 136	3	30		
Methylene Chloride	101	103	76 - 123	2	30		
m-Xylene & p-Xylene	102	102	78 - 119	0	30		
o-Xylene	96	100	79 - 120	4	30		
Styrene	94	97	76 - 120	3	30		
Tetrachloroethene	92	95	70 - 136	3	30		
Toluene	83	132	78 - 120	4	30		*
trans-1,2-Dichloroethene	101	103	79 - 120	2	30		
trans-1,3-Dichloropropene	117	117	71 - 123	1	30		
Trichloroethene	97	89	74 - 120	8	30		
Trichlorofluoromethane	89	86	65 - 142	4	30		
Vinyl chloride	96	97	56 - 137	1	30		
1,2-Dichloroethane	98	97	75 - 127	2	30		
1,2-Dichlorobenzene	100	106	81 - 120	5	30		
1,2-Dibromo-3-Chloropropane	102	102	53 - 136	0	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	101	96	70 - 130
4-Bromofluorobenzene	102	102	64 - 135
Dibromofluoromethane (Surr)	100	97	72 - 137
Toluene-d8 (Surr)	95	96	70 - 130

Client: AKRF Inc

Job Number: 460-85120-1

Method Blank - Batch: 460-258664

Method: 8260C
Preparation: N/A

Lab Sample ID:	MB 460-258664/6	Analysis Batch:	460-258664	Instrument ID:	CVOAMS12
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	O92801.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	10/28/2014 0733	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.20	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.13	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	0.21	1.0
1,1,2-Trichloroethane	1.0	U	0.24	1.0
1,1-Dichloroethane	1.0	U	0.18	1.0
1,1-Dichloroethene	1.0	U	0.23	1.0
1,2,3-Trichlorobenzene	1.0	U	0.33	1.0
1,2,4-Trichlorobenzene	1.0	U	0.27	1.0
1,2-Dichloropropane	1.0	U	0.24	1.0
1,3-Dichlorobenzene	1.0	U	0.20	1.0
1,4-Dichlorobenzene	1.0	U	0.21	1.0
1,4-Dioxane	20	U	12	20
2-Butanone (MEK)	5.0	U	1.5	5.0
2-Hexanone	5.0	U	0.69	5.0
4-Methyl-2-pentanone (MIBK)	5.0	U	0.68	5.0
Acetone	5.0	U	0.23	5.0
Benzene	1.0	U	0.19	1.0
Bromoform	1.0	U	0.15	1.0
Bromomethane	1.0	U	0.36	1.0
Carbon disulfide	1.0	U	0.17	1.0
Carbon tetrachloride	1.0	U	0.18	1.0
Chlorobenzene	1.0	U	0.17	1.0
Chlorobromomethane	1.0	U	0.31	1.0
Chlorodibromomethane	1.0	U	0.20	1.0
Chloroethane	1.0	U	0.48	1.0
Chloroform	1.0	U	0.16	1.0
Chloromethane	1.0	U	0.23	1.0
cis-1,2-Dichloroethene	1.0	U	0.22	1.0
cis-1,3-Dichloropropene	1.0	U	0.17	1.0
Cyclohexane	1.0	U	0.21	1.0
Dichlorobromomethane	1.0	U	0.16	1.0
Dichlorodifluoromethane	1.0	U	0.29	1.0
Ethylbenzene	1.0	U	0.14	1.0
Ethylene Dibromide	1.0	U	0.18	1.0
Isopropylbenzene	1.0	U	0.19	1.0
Methyl acetate	5.0	U	0.94	5.0
Methyl tert-butyl ether	1.0	U	0.20	1.0
Methylcyclohexane	1.0	U	0.19	1.0
Methylene Chloride	1.0	U	0.38	1.0
m-Xylene & p-Xylene	1.0	U	0.21	1.0
o-Xylene	1.0	U	0.17	1.0
Styrene	1.0	U	0.24	1.0
Tetrachloroethene	1.0	U	0.20	1.0
Toluene	1.0	U	0.27	1.0
trans-1,2-Dichloroethene	1.0	U	0.21	1.0

Client: AKRF Inc

Job Number: 460-85120-1

Method Blank - Batch: 460-258664

Method: 8260C
Preparation: N/A

Lab Sample ID:	MB 460-258664/6	Analysis Batch:	460-258664	Instrument ID:	CVOAMS12
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	O92801.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	10/28/2014 0733	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
trans-1,3-Dichloropropene	1.0	U	0.18	1.0
Trichloroethene	1.0	U	0.20	1.0
Trichlorofluoromethane	1.0	U	0.19	1.0
Vinyl chloride	1.0	U	0.24	1.0
1,2-Dichloroethane	1.0	U	0.28	1.0
1,2-Dichlorobenzene	1.0	U	0.13	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.46	1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	81	70 - 130
4-Bromofluorobenzene	88	70 - 130
Dibromofluoromethane (Surr)	92	70 - 130
Toluene-d8 (Surr)	80	70 - 130

Method Blank TICs- Batch: 460-258664

Cas Number	Analyte	RT	Est. Result (ug/K	Qual
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85120-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 460-258664

Method: 8260C
Preparation: N/A

LCS Lab Sample ID:	LCS 460-258664/3	Analysis Batch:	460-258664	Instrument ID:	CVOAMS12
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	O92798.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	10/28/2014 0603	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				5 mL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 460-258664/4	Analysis Batch:	460-258664	Instrument ID:	CVOAMS12
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	O92799.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	10/28/2014 0629	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
1,1,1-Trichloroethane	101	116	82 - 129	14	30		
1,1,2,2-Tetrachloroethane	94	91	66 - 121	3	30		
1,1,2-Trichloro-1,2,2-trifluoroethane	106	128	73 - 134	18	30		
1,1,2-Trichloroethane	89	85	74 - 116	5	30		
1,1-Dichloroethane	103	120	78 - 125	15	30		
1,1-Dichloroethene	108	127	74 - 128	16	30		
1,2,3-Trichlorobenzene	117	122	81 - 123	5	30		
1,2,4-Trichlorobenzene	117	122	81 - 127	4	30		
1,2-Dichloropropane	96	101	72 - 123	5	30		
1,3-Dichlorobenzene	111	115	78 - 120	3	30		
1,4-Dichlorobenzene	111	115	77 - 120	4	30		
1,4-Dioxane	75	111	69 - 142	39	30		*
2-Butanone (MEK)	100	97	58 - 140	3	30		
2-Hexanone	88	90	52 - 134	2	30		
4-Methyl-2-pentanone (MIBK)	86	87	55 - 133	2	30		
Acetone	117	116	58 - 139	1	30		
Benzene	101	103	75 - 123	2	30		
Bromoform	74	72	70 - 130	2	30		
Bromomethane	113	129	62 - 150	13	30		
Carbon disulfide	98	114	73 - 127	15	30		
Carbon tetrachloride	98	110	77 - 137	11	30		
Chlorobenzene	106	111	80 - 120	4	30		
Chlorobromomethane	99	116	82 - 127	16	30		
Chlorodibromomethane	82	79	74 - 124	3	30		
Chloroethane	92	106	60 - 140	14	30		
Chloroform	103	117	77 - 122	13	30		
Chloromethane	94	113	48 - 144	19	30		
cis-1,2-Dichloroethene	100	117	82 - 121	16	30		
cis-1,3-Dichloropropene	89	88	75 - 119	1	30		
Cyclohexane	100	110	66 - 128	10	30		
Dichlorobromomethane	92	98	77 - 122	7	30		
Dichlorodifluoromethane	89	108	52 - 145	19	30		
Ethylbenzene	102	106	80 - 120	4	30		
Ethylene Dibromide	91	90	78 - 117	1	30		
Isopropylbenzene	107	114	80 - 120	7	30		

Client: AKRF Inc

Job Number: 460-85120-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 460-258664

Method: 8260C
Preparation: N/A

LCS Lab Sample ID:	LCS 460-258664/3	Analysis Batch:	460-258664	Instrument ID:	CVOAMS12
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	O92798.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	10/28/2014 0603	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				5 mL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 460-258664/4	Analysis Batch:	460-258664	Instrument ID:	CVOAMS12
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	O92799.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	10/28/2014 0629	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				5 mL
Leach Date:	N/A				

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Methyl acetate	129	130	61 - 137	1	30		
Methyl tert-butyl ether	88	92	75 - 124	4	30		
Methylcyclohexane	98	108	80 - 125	10	30		
Methylene Chloride	99	117	75 - 124	17	30		
m-Xylene & p-Xylene	106	110	79 - 120	4	30		
o-Xylene	102	104	77 - 120	3	30		
Styrene	103	110	78 - 120	7	30		
Tetrachloroethene	100	108	80 - 127	7	30		
Toluene	99	107	82 - 117	8	30		
trans-1,2-Dichloroethene	103	118	83 - 124	13	30		
trans-1,3-Dichloropropene	84	81	74 - 119	3	30		
Trichloroethene	95	99	78 - 122	4	30		
Trichlorofluoromethane	94	112	63 - 147	17	30		
Vinyl chloride	90	105	62 - 132	16	30		
1,2-Dichloroethane	101	109	79 - 120	7	30		
1,2-Dichlorobenzene	109	114	77 - 120	4	30		
1,2-Dibromo-3-Chloropropane	83	86	61 - 125	4	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	80	87	70 - 130
4-Bromofluorobenzene	89	90	70 - 130
Dibromofluoromethane (Surr)	85	95	70 - 130
Toluene-d8 (Surr)	86	87	70 - 130

Client: AKRF Inc

Job Number: 460-85120-1

Method Blank - Batch: 460-258879

Method: 8260C
Preparation: N/A

Lab Sample ID:	MB 460-258879/6	Analysis Batch:	460-258879	Instrument ID:	CVOAMS12
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	O92828.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	10/29/2014 0849	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.20	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.13	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	0.21	1.0
1,1,2-Trichloroethane	1.0	U	0.24	1.0
1,1-Dichloroethane	1.0	U	0.18	1.0
1,1-Dichloroethene	1.0	U	0.23	1.0
1,2,3-Trichlorobenzene	1.0	U	0.33	1.0
1,2,4-Trichlorobenzene	1.0	U	0.27	1.0
1,2-Dichloropropane	1.0	U	0.24	1.0
1,3-Dichlorobenzene	1.0	U	0.20	1.0
1,4-Dichlorobenzene	1.0	U	0.21	1.0
1,4-Dioxane	20	U	12	20
2-Butanone (MEK)	5.0	U	1.5	5.0
2-Hexanone	5.0	U	0.69	5.0
4-Methyl-2-pentanone (MIBK)	5.0	U	0.68	5.0
Acetone	3.36	J	0.23	5.0
Benzene	1.0	U	0.19	1.0
Bromoform	1.0	U	0.15	1.0
Bromomethane	1.0	U	0.36	1.0
Carbon disulfide	1.0	U	0.17	1.0
Carbon tetrachloride	1.0	U	0.18	1.0
Chlorobenzene	1.0	U	0.17	1.0
Chlorobromomethane	1.0	U	0.31	1.0
Chlorodibromomethane	1.0	U	0.20	1.0
Chloroethane	1.0	U	0.48	1.0
Chloroform	1.0	U	0.16	1.0
Chloromethane	1.0	U	0.23	1.0
cis-1,2-Dichloroethene	1.0	U	0.22	1.0
cis-1,3-Dichloropropene	1.0	U	0.17	1.0
Cyclohexane	1.0	U	0.21	1.0
Dichlorobromomethane	1.0	U	0.16	1.0
Dichlorodifluoromethane	1.0	U	0.29	1.0
Ethylbenzene	1.0	U	0.14	1.0
Ethylene Dibromide	1.0	U	0.18	1.0
Isopropylbenzene	1.0	U	0.19	1.0
Methyl acetate	5.0	U	0.94	5.0
Methyl tert-butyl ether	1.0	U	0.20	1.0
Methylcyclohexane	1.0	U	0.19	1.0
Methylene Chloride	1.0	U	0.38	1.0
m-Xylene & p-Xylene	1.0	U	0.21	1.0
o-Xylene	1.0	U	0.17	1.0
Styrene	1.0	U	0.24	1.0
Tetrachloroethene	1.0	U	0.20	1.0
Toluene	1.0	U	0.27	1.0
trans-1,2-Dichloroethene	1.0	U	0.21	1.0

Client: AKRF Inc

Job Number: 460-85120-1

Method Blank - Batch: 460-258879

Method: 8260C
Preparation: N/A

Lab Sample ID:	MB 460-258879/6	Analysis Batch:	460-258879	Instrument ID:	CVOAMS12
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	O92828.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	10/29/2014 0849	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
trans-1,3-Dichloropropene	1.0	U	0.18	1.0
Trichloroethene	1.0	U	0.20	1.0
Trichlorofluoromethane	1.0	U	0.19	1.0
Vinyl chloride	1.0	U	0.24	1.0
1,2-Dichloroethane	1.0	U	0.28	1.0
1,2-Dichlorobenzene	1.0	U	0.13	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.46	1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	97	70 - 130
4-Bromofluorobenzene	96	70 - 130
Dibromofluoromethane (Surr)	103	70 - 130
Toluene-d8 (Surr)	91	70 - 130

Method Blank TICs- Batch: 460-258879

Cas Number	Analyte	RT	Est. Result (ug/K	Qual
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85120-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 460-258879

Method: 8260C
Preparation: N/A

LCS Lab Sample ID:	LCS 460-258879/3	Analysis Batch:	460-258879	Instrument ID:	CVOAMS12
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	O92825.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	10/29/2014 0651	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				5 mL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 460-258879/4	Analysis Batch:	460-258879	Instrument ID:	CVOAMS12
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	O92826.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	10/29/2014 0717	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
1,1,1-Trichloroethane	105	104	82 - 129	1	30		
1,1,2,2-Tetrachloroethane	98	91	66 - 121	7	30		
1,1,2-Trichloro-1,2,2-trifluoroethane	113	112	73 - 134	1	30		
1,1,2-Trichloroethane	95	87	74 - 116	9	30		
1,1-Dichloroethane	111	112	78 - 125	1	30		
1,1-Dichloroethene	112	111	74 - 128	1	30		
1,2,3-Trichlorobenzene	119	112	81 - 123	6	30		
1,2,4-Trichlorobenzene	118	113	81 - 127	4	30		
1,2-Dichloropropane	102	99	72 - 123	3	30		
1,3-Dichlorobenzene	108	108	78 - 120	0	30		
1,4-Dichlorobenzene	109	108	77 - 120	1	30		
1,4-Dioxane	125	84	69 - 142	39	30		*
2-Butanone (MEK)	112	114	58 - 140	2	30		
2-Hexanone	95	86	52 - 134	11	30		
4-Methyl-2-pentanone (MIBK)	97	87	55 - 133	11	30		
Acetone	118	124	58 - 139	5	30		
Benzene	104	100	75 - 123	4	30		
Bromoform	75	70	70 - 130	7	30		
Bromomethane	114	114	62 - 150	1	30		
Carbon disulfide	100	100	73 - 127	0	30		
Carbon tetrachloride	102	99	77 - 137	3	30		
Chlorobenzene	105	103	80 - 120	3	30		
Chlorobromomethane	106	101	82 - 127	5	30		
Chlorodibromomethane	85	79	74 - 124	8	30		
Chloroethane	94	96	60 - 140	3	30		
Chloroform	105	106	77 - 122	1	30		
Chloromethane	102	101	48 - 144	1	30		
cis-1,2-Dichloroethene	105	107	82 - 121	2	30		
cis-1,3-Dichloropropene	94	87	75 - 119	7	30		
Cyclohexane	104	103	66 - 128	2	30		
Dichlorobromomethane	97	96	77 - 122	0	30		
Dichlorodifluoromethane	92	90	52 - 145	2	30		
Ethylbenzene	101	99	80 - 120	3	30		
Ethylene Dibromide	93	89	78 - 117	5	30		
Isopropylbenzene	107	105	80 - 120	2	30		

Client: AKRF Inc

Job Number: 460-85120-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 460-258879

Method: 8260C
Preparation: N/A

LCS Lab Sample ID:	LCS 460-258879/3	Analysis Batch:	460-258879	Instrument ID:	CVOAMS12
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	O92825.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	10/29/2014 0651	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				5 mL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 460-258879/4	Analysis Batch:	460-258879	Instrument ID:	CVOAMS12
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	O92826.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	10/29/2014 0717	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				5 mL
Leach Date:	N/A				

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Methyl acetate	141	148	61 - 137	5	30	*	*
Methyl tert-butyl ether	97	91	75 - 124	6	30		
Methylcyclohexane	101	98	80 - 125	3	30		
Methylene Chloride	119	119	75 - 124	1	30		
m-Xylene & p-Xylene	106	100	79 - 120	6	30		
o-Xylene	103	99	77 - 120	3	30		
Styrene	106	101	78 - 120	4	30		
Tetrachloroethene	100	97	80 - 127	3	30		
Toluene	103	99	82 - 117	4	30		
trans-1,2-Dichloroethene	104	108	83 - 124	4	30		
trans-1,3-Dichloropropene	89	81	74 - 119	10	30		
Trichloroethene	96	93	78 - 122	4	30		
Trichlorofluoromethane	97	101	63 - 147	4	30		
Vinyl chloride	92	93	62 - 132	1	30		
1,2-Dichloroethane	106	101	79 - 120	5	30		
1,2-Dichlorobenzene	107	106	77 - 120	1	30		
1,2-Dibromo-3-Chloropropane	89	78	61 - 125	12	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	90	103	70 - 130
4-Bromofluorobenzene	90	103	70 - 130
Dibromofluoromethane (Surr)	93	110	70 - 130
Toluene-d8 (Surr)	90	104	70 - 130

Client: AKRF Inc

Job Number: 460-85120-1

Method Blank - Batch: 460-258887

Method: 8260C
Preparation: N/A

Lab Sample ID:	MB 460-258887/7	Analysis Batch:	460-258887	Instrument ID:	CVOAMS9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	K33478.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/29/2014 1016	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.20	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.13	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	0.21	1.0
1,1,2-Trichloroethane	1.0	U	0.24	1.0
1,1-Dichloroethane	1.0	U	0.18	1.0
1,1-Dichloroethene	1.0	U	0.23	1.0
1,2,3-Trichlorobenzene	1.0	U	0.33	1.0
1,2,4-Trichlorobenzene	1.0	U	0.27	1.0
1,2-Dichloropropane	1.0	U	0.24	1.0
1,3-Dichlorobenzene	1.0	U	0.20	1.0
1,4-Dichlorobenzene	1.0	U	0.21	1.0
1,4-Dioxane	20	U	12	20
2-Butanone (MEK)	5.0	U	1.5	5.0
2-Hexanone	5.0	U	0.69	5.0
4-Methyl-2-pentanone (MIBK)	5.0	U	0.68	5.0
Acetone	5.0	U	0.23	5.0
Benzene	1.0	U	0.19	1.0
Bromoform	1.0	U	0.15	1.0
Bromomethane	1.0	U	0.36	1.0
Carbon disulfide	1.0	U	0.17	1.0
Carbon tetrachloride	1.0	U	0.18	1.0
Chlorobenzene	1.0	U	0.17	1.0
Chlorobromomethane	1.0	U	0.31	1.0
Chlorodibromomethane	1.0	U	0.20	1.0
Chloroethane	1.0	U	0.48	1.0
Chloroform	1.0	U	0.16	1.0
Chloromethane	1.0	U	0.23	1.0
cis-1,2-Dichloroethene	1.0	U	0.22	1.0
cis-1,3-Dichloropropene	1.0	U	0.17	1.0
Cyclohexane	1.0	U	0.21	1.0
Dichlorobromomethane	1.0	U	0.16	1.0
Dichlorodifluoromethane	1.0	U	0.29	1.0
Ethylbenzene	1.0	U	0.14	1.0
Ethylene Dibromide	1.0	U	0.18	1.0
Isopropylbenzene	1.0	U	0.19	1.0
Methyl acetate	5.0	U	0.94	5.0
Methyl tert-butyl ether	1.0	U	0.20	1.0
Methylcyclohexane	1.0	U	0.19	1.0
Methylene Chloride	1.0	U	0.38	1.0
m-Xylene & p-Xylene	1.0	U	0.21	1.0
o-Xylene	1.0	U	0.17	1.0
Styrene	1.0	U	0.24	1.0
Tetrachloroethene	1.0	U	0.20	1.0
Toluene	1.0	U	0.27	1.0
trans-1,2-Dichloroethene	1.0	U	0.21	1.0

Client: AKRF Inc

Job Number: 460-85120-1

Method Blank - Batch: 460-258887

Method: 8260C
Preparation: N/A

Lab Sample ID:	MB 460-258887/7	Analysis Batch:	460-258887	Instrument ID:	CVOAMS9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	K33478.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/29/2014 1016	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
trans-1,3-Dichloropropene	1.0	U	0.18	1.0
Trichloroethene	1.0	U	0.20	1.0
Trichlorofluoromethane	1.0	U	0.19	1.0
Vinyl chloride	1.0	U	0.24	1.0
1,2-Dichloroethane	1.0	U	0.28	1.0
1,2-Dichlorobenzene	1.0	U	0.13	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.46	1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	91	70 - 130
4-Bromofluorobenzene	96	70 - 130
Dibromofluoromethane (Surr)	116	70 - 130
Toluene-d8 (Surr)	94	70 - 130

Method Blank TICs- Batch: 460-258887

Cas Number	Analyte	RT	Est. Result (ug/K	Qual
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85120-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 460-258887

Method: 8260C
Preparation: N/A

LCS Lab Sample ID:	LCS 460-258887/4	Analysis Batch:	460-258887	Instrument ID:	CVOAMS9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	K33475.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/29/2014 0738	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				5 mL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 460-258887/5	Analysis Batch:	460-258887	Instrument ID:	CVOAMS9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	K33476.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/29/2014 0914	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
1,1,1-Trichloroethane	97	90	82 - 129	7	30		
1,1,2,2-Tetrachloroethane	82	71	66 - 121	14	30		
1,1,2-Trichloro-1,2,2-trifluoroethane	103	85	73 - 134	18	30		
1,1,2-Trichloroethane	100	117	74 - 116	15	30		*
1,1-Dichloroethane	89	85	78 - 125	5	30		
1,1-Dichloroethene	91	93	74 - 128	2	30		
1,2,3-Trichlorobenzene	101	84	81 - 123	18	30		
1,2,4-Trichlorobenzene	107	85	81 - 127	23	30		
1,2-Dichloropropane	96	93	72 - 123	3	30		
1,3-Dichlorobenzene	98	97	78 - 120	1	30		
1,4-Dichlorobenzene	100	93	77 - 120	7	30		
1,4-Dioxane	121	107	69 - 142	12	30		
2-Butanone (MEK)	83	82	58 - 140	1	30		
2-Hexanone	106	129	52 - 134	19	30		
4-Methyl-2-pentanone (MIBK)	107	104	55 - 133	3	30		
Acetone	91	100	58 - 139	10	30		
Benzene	100	91	75 - 123	9	30		
Bromoform	94	95	70 - 130	1	30		
Bromomethane	106	105	62 - 150	1	30		
Carbon disulfide	102	87	73 - 127	15	30		
Carbon tetrachloride	98	95	77 - 137	4	30		
Chlorobenzene	101	97	80 - 120	4	30		
Chlorobromomethane	96	92	82 - 127	4	30		
Chlorodibromomethane	97	115	74 - 124	17	30		
Chloroethane	109	104	60 - 140	4	30		
Chloroform	94	93	77 - 122	2	30		
Chloromethane	112	101	48 - 144	10	30		
cis-1,2-Dichloroethene	89	86	82 - 121	3	30		
cis-1,3-Dichloropropene	101	97	75 - 119	3	30		
Cyclohexane	88	81	66 - 128	8	30		
Dichlorobromomethane	97	94	77 - 122	3	30		
Dichlorodifluoromethane	98	90	52 - 145	8	30		
Ethylbenzene	102	95	80 - 120	6	30		
Ethylene Dibromide	98	112	78 - 117	14	30		
Isopropylbenzene	102	103	80 - 120	1	30		

Client: AKRF Inc

Job Number: 460-85120-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 460-258887

Method: 8260C
Preparation: N/A

LCS Lab Sample ID:	LCS 460-258887/4	Analysis Batch:	460-258887	Instrument ID:	CVOAMS9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	K33475.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/29/2014 0738	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				5 mL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 460-258887/5	Analysis Batch:	460-258887	Instrument ID:	CVOAMS9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	K33476.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/29/2014 0914	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Methyl acetate	116	101	61 - 137	14	30		
Methyl tert-butyl ether	95	88	75 - 124	8	30		
Methylcyclohexane	98	94	80 - 125	4	30		
Methylene Chloride	90	81	75 - 124	11	30		
m-Xylene & p-Xylene	104	100	79 - 120	4	30		
o-Xylene	103	103	77 - 120	0	30		
Styrene	102	96	78 - 120	6	30		
Tetrachloroethene	100	116	80 - 127	15	30		
Toluene	101	94	82 - 117	7	30		
trans-1,2-Dichloroethene	90	84	83 - 124	7	30		
trans-1,3-Dichloropropene	98	96	74 - 119	2	30		
Trichloroethene	99	93	78 - 122	6	30		
Trichlorofluoromethane	105	96	63 - 147	8	30		
Vinyl chloride	110	102	62 - 132	7	30		
1,2-Dichloroethane	96	92	79 - 120	4	30		
1,2-Dichlorobenzene	104	97	77 - 120	7	30		
1,2-Dibromo-3-Chloropropane	126	104	61 - 125	19	30	*	

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	94	91	70 - 130
4-Bromofluorobenzene	103	110	70 - 130
Dibromofluoromethane (Surr)	95	94	70 - 130
Toluene-d8 (Surr)	102	97	70 - 130

Client: AKRF Inc

Job Number: 460-85120-1

Method Blank - Batch: 460-258263

Method: 8270D
Preparation: 3510C

Lab Sample ID:	MB 460-258263/1-A	Analysis Batch:	460-258638	Instrument ID:	CBNAMS6
Client Matrix:	Water	Prep Batch:	460-258263	Lab File ID:	M86106.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	10/28/2014 1231	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	10/25/2014 0948			Injection Volume:	5 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
2,4-Dichlorophenol	10	U	1.1	10
2,4,6-Trichlorophenol	10	U	1.4	10
2,4-Dimethylphenol	10	U	1.2	10
2,4,5-Trichlorophenol	10	U	2.2	10
2,4-Dinitrotoluene	2.0	U	0.28	2.0
2-Chlorophenol	10	U	0.93	10
2-Methylphenol	10	U	1.4	10
2-Nitrophenol	10	U	0.68	10
2-Methylnaphthalene	10	U	1.5	10
4,6-Dinitro-2-methylphenol	30	U	3.0	30
2-Chloronaphthalene	10	U	1.3	10
4-Chloro-3-methylphenol	10	U	1.1	10
2-Nitroaniline	20	U	2.0	20
4-Chloroaniline	1.0	U	0.32	1.0
4-Methylphenol	10	U	1.0	10
2,6-Dinitrotoluene	2.0	U	0.27	2.0
3-Nitroaniline	20	U	2.9	20
4-Nitrophenol	30	U	2.0	30
Acenaphthene	10	U	1.1	10
Acenaphthylene	10	U	1.8	10
2,4-Dinitrophenol	30	U	2.0	30
4-Chlorophenyl phenyl ether	10	U	1.5	10
4-Nitroaniline	20	U	2.9	20
4-Bromophenyl phenyl ether	10	U	1.1	10
Anthracene	10	U	0.85	10
Bis(2-chloroethyl)ether	1.0	U	0.30	1.0
Butyl benzyl phthalate	10	U	1.4	10
Carbazole	10	U	1.2	10
Benzo[a]anthracene	1.0	U	0.18	1.0
Chrysene	10	U	1.4	10
Bis(2-ethylhexyl) phthalate	10	U	0.81	10
Dibenzofuran	10	U	1.5	10
Diethyl phthalate	10	U	1.4	10
Benzo[b]fluoranthene	1.0	U	0.21	1.0
Dimethyl phthalate	10	U	1.1	10
Benzo[k]fluoranthene	1.0	U	0.14	1.0
Di-n-butyl phthalate	10	U	1.0	10
Benzo[a]pyrene	1.0	U	0.14	1.0
Di-n-octyl phthalate	10	U	0.88	10
Fluoranthene	10	U	1.1	10
Dibenz(a,h)anthracene	1.0	U	0.16	1.0
Fluorene	10	U	1.7	10
Benzo[g,h,i]perylene	10	U	0.93	10
Hexachlorobenzene	1.0	U	0.20	1.0
1,1'-Biphenyl	10	U	1.8	10

Client: AKRF Inc

Job Number: 460-85120-1

Method Blank - Batch: 460-258263

Method: 8270D
Preparation: 3510C

Lab Sample ID:	MB 460-258263/1-A	Analysis Batch:	460-258638	Instrument ID:	CBNAMS6
Client Matrix:	Water	Prep Batch:	460-258263	Lab File ID:	M86106.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	10/28/2014 1231	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	10/25/2014 0948			Injection Volume:	5 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Hexachlorobutadiene	2.0	U	0.68	2.0
Acetophenone	10	U	0.89	10
Hexachlorocyclopentadiene	10	U	1.5	10
Benzaldehyde	10	U	2.1	10
Hexachloroethane	1.0	U	0.15	1.0
Caprolactam	10	U	0.91	10
Indeno[1,2,3-cd]pyrene	1.0	U	0.11	1.0
Atrazine	10	U	1.0	10
Isophorone	10	U	1.3	10
Naphthalene	10	U	2.0	10
Nitrobenzene	1.0	U	0.34	1.0
N-Nitrosodi-n-propylamine	1.0	U	0.27	1.0
N-Nitrosodiphenylamine	10	U	1.0	10
Pentachlorophenol	30	U	2.7	30
Phenanthrene	10	U	1.2	10
2,2'-oxybis[1-chloropropane]	10	U	1.3	10
Phenol	10	U	0.60	10
1,2,4,5-Tetrachlorobenzene	10	U	1.8	10
2,3,4,6-Tetrachlorophenol	10	U	0.89	10
Pyrene	10	U	1.1	10
3,3'-Dichlorobenzidine	20	U	3.2	20
Bis(2-chloroethoxy)methane	10	U	1.0	10

Surrogate	% Rec	Acceptance Limits
Nitrobenzene-d5 (Surr)	87	60 - 114
2,4,6-Tribromophenol (Surr)	75	51 - 126
2-Fluorophenol (Surr)	42	15 - 96
2-Fluorobiphenyl	74	50 - 120
Phenol-d5 (Surr)	26	4 - 86
Terphenyl-d14 (Surr)	87	72 - 130

Method Blank TICs- Batch: 460-258263

Cas Number	Analyte	RT	Est. Result (ug/L	Qual
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85120-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 460-258263

Method: 8270D
Preparation: 3510C

LCS Lab Sample ID:	LCS 460-258263/4-A	Analysis Batch:	460-258638	Instrument ID:	CBNAMS6
Client Matrix:	Water	Prep Batch:	460-258263	Lab File ID:	M86088.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	10/28/2014 0616	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	10/25/2014 0948			Injection Volume:	5 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 460-258263/5-A	Analysis Batch:	460-258638	Instrument ID:	CBNAMS6
Client Matrix:	Water	Prep Batch:	460-258263	Lab File ID:	M86089.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	10/28/2014 0638	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	10/25/2014 0948			Injection Volume:	5 uL
Leach Date:	N/A				

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Benzaldehyde	109	108	52 - 150	1	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Nitrobenzene-d5 (Surr)	105	104	60 - 114
2,4,6-Tribromophenol (Surr)	88	88	51 - 126
2-Fluorophenol (Surr)	50	51	15 - 96
2-Fluorobiphenyl	96	91	50 - 120
Phenol-d5 (Surr)	31	31	4 - 86
Terphenyl-d14 (Surr)	114	104	72 - 130

Client: AKRF Inc

Job Number: 460-85120-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 460-258263

Method: 8270D
Preparation: 3510C

LCS Lab Sample ID:	LCS 460-258263/2-A	Analysis Batch:	460-258776	Instrument ID:	CBNAMS6
Client Matrix:	Water	Prep Batch:	460-258263	Lab File ID:	M86113.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	10/28/2014 1558	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	10/25/2014 0948			Injection Volume:	5 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 460-258263/3-A	Analysis Batch:	460-258986	Instrument ID:	CBNAMS6
Client Matrix:	Water	Prep Batch:	460-258263	Lab File ID:	M86162.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	10/29/2014 2035	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	10/25/2014 0948			Injection Volume:	5 uL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
2,4-Dichlorophenol	78	78	64 - 107	0	30		
2,4,6-Trichlorophenol	89	88	67 - 111	1	30		
2,4-Dimethylphenol	77	81	55 - 100	4	30		
2,4,5-Trichlorophenol	93	88	67 - 114	6	30		
2,4-Dinitrotoluene	97	91	65 - 113	7	30		
2-Chlorophenol	71	73	53 - 101	2	30		
2-Methylphenol	56	69	40 - 90	20	30		
2-Nitrophenol	86	83	65 - 107	3	30		
2-Methylnaphthalene	76	76	66 - 102	0	30		
4,6-Dinitro-2-methylphenol	101	103	58 - 115	3	30		
2-Chloronaphthalene	80	89	65 - 107	11	30		
4-Chloro-3-methylphenol	73	75	57 - 106	3	30		
2-Nitroaniline	76	90	73 - 116	17	30		
4-Chloroaniline	79	80	58 - 105	1	30		
4-Methylphenol	48	62	30 - 75	25	30		
2,6-Dinitrotoluene	93	98	68 - 114	5	30		
3-Nitroaniline	91	96	59 - 108	6	30		
4-Nitrophenol	37	35	10 - 44	5	30		
Acenaphthene	87	92	66 - 108	5	30		
Acenaphthylene	79	89	67 - 107	12	30		
2,4-Dinitrophenol	84	97	19 - 113	14	30		
4-Chlorophenyl phenyl ether	96	84	68 - 105	13	30		
4-Nitroaniline	100	107	49 - 119	7	30		
4-Bromophenyl phenyl ether	98	82	66 - 110	18	30		
Anthracene	94	98	68 - 108	4	30		
Bis(2-chloroethyl)ether	67	81	62 - 108	19	30		
Butyl benzyl phthalate	95	109	66 - 115	13	30		
Carbazole	98	101	67 - 110	3	30		
Benzo[a]anthracene	89	90	65 - 106	2	30		
Chrysene	90	91	68 - 112	1	30		
Bis(2-ethylhexyl) phthalate	95	111	66 - 114	15	30		
Dibenzofuran	89	92	68 - 105	3	30		
Diethyl phthalate	107	93	66 - 109	14	30		
Benzo[b]fluoranthene	95	103	65 - 111	8	30		
Dimethyl phthalate	92	95	69 - 111	3	30		

Client: AKRF Inc

Job Number: 460-85120-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 460-258263

Method: 8270D
Preparation: 3510C

LCS Lab Sample ID:	LCS 460-258263/2-A	Analysis Batch:	460-258776	Instrument ID:	CBNAMS6
Client Matrix:	Water	Prep Batch:	460-258263	Lab File ID:	M86113.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	10/28/2014 1558	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	10/25/2014 0948			Injection Volume:	5 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 460-258263/3-A	Analysis Batch:	460-258986	Instrument ID:	CBNAMS6
Client Matrix:	Water	Prep Batch:	460-258263	Lab File ID:	M86162.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	10/29/2014 2035	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	10/25/2014 0948			Injection Volume:	5 uL
Leach Date:	N/A				

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Benzo[k]fluoranthene	101	99	66 - 114	2	30		
Di-n-butyl phthalate	106	108	68 - 111	2	30		
Benzo[a]pyrene	99	101	58 - 101	2	30		
Di-n-octyl phthalate	98	119	51 - 115	19	30		*
Fluoranthene	106	96	68 - 108	10	30		
Dibenz(a,h)anthracene	115	121	67 - 124	5	30		
Fluorene	95	96	68 - 105	1	30		
Benzo[g,h,i]perylene	109	113	65 - 134	3	30		
Hexachlorobenzene	96	79	65 - 107	19	30		
1,1'-Biphenyl	82	90	66 - 112	10	30		
Hexachlorobutadiene	75	53	52 - 99	35	30		*
Acetophenone	72	82	68 - 109	13	30		
Hexachlorocyclopentadiene	61	51	40 - 105	17	30		
Hexachloroethane	63	66	50 - 99	5	30		
Caprolactam	23	22	10 - 30	4	30		
Indeno[1,2,3-cd]pyrene	119	118	68 - 121	1	30		
Atrazine	100	89	56 - 116	12	30		
Isophorone	76	82	68 - 108	8	30		
Naphthalene	73	73	63 - 101	0	30		
Nitrobenzene	80	75	66 - 106	7	30		
N-Nitrosodi-n-propylamine	70	82	70 - 109	15	30		
N-Nitrosodiphenylamine	93	96	71 - 121	3	30		
Pentachlorophenol	105	85	55 - 116	21	30		
Phenanthrene	97	100	68 - 110	3	30		
2,2'-oxybis[1-chloropropane]	72	89	68 - 107	21	30		
Phenol	26	33	12 - 44	23	30		
1,2,4,5-Tetrachlorobenzene	86	77	70 - 130	11	30		
2,3,4,6-Tetrachlorophenol	96	90	70 - 130	7	30		
Pyrene	88	94	61 - 110	7	30		
3,3'-Dichlorobenzidine	93	89	69 - 129	5	30		
Bis(2-chloroethoxy)methane	77	87	69 - 108	12	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Nitrobenzene-d5 (Surr)	85	83	60 - 114
2,4,6-Tribromophenol (Surr)	103	77	51 - 126
2-Fluorophenol (Surr)	44	48	15 - 96

Client: AKRF Inc

Job Number: 460-85120-1

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
2-Fluorobiphenyl	78	79	50 - 120
Phenol-d5 (Surr)	28	31	4 - 86
Terphenyl-d14 (Surr)	86	91	72 - 130

Client: AKRF Inc

Job Number: 460-85120-1

Method Blank - Batch: 460-258467

Method: 8270D
Preparation: 3546

Lab Sample ID:	MB 460-258467/1-A	Analysis Batch:	460-258866	Instrument ID:	CBNAMS12
Client Matrix:	Solid	Prep Batch:	460-258467	Lab File ID:	L118117.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0000 g
Analysis Date:	10/29/2014 0128	Units:	ug/Kg	Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
2,4-Dichlorophenol	330	U	7.8	330
2,4,6-Trichlorophenol	130	U	9.4	130
2,4-Dimethylphenol	330	U	73	330
2,4,5-Trichlorophenol	330	U	33	330
2,4-Dinitrotoluene	67	U	13	67
2-Chlorophenol	330	U	8.4	330
2-Methylphenol	330	U	14	330
2-Nitrophenol	330	U	11	330
2-Methylnaphthalene	330	U	7.3	330
4,6-Dinitro-2-methylphenol	270	U	88	270
2-Chloronaphthalene	330	U	7.5	330
4-Chloro-3-methylphenol	330	U	14	330
2-Nitroaniline	330	U	11	330
4-Chloroaniline	330	U	8.5	330
4-Methylphenol	330	U	9.0	330
2,6-Dinitrotoluene	67	U	18	67
3-Nitroaniline	330	U	9.8	330
4-Nitrophenol	670	U	160	670
Acenaphthene	330	U	8.0	330
Acenaphthylene	330	U	8.5	330
2,4-Dinitrophenol	270	U	250	270
4-Chlorophenyl phenyl ether	330	U	9.9	330
4-Nitroaniline	330	U	13	330
4-Bromophenyl phenyl ether	330	U	10	330
Anthracene	330	U	31	330
Bis(2-chloroethyl)ether	33	U	7.8	33
Butyl benzyl phthalate	330	U	10	330
Carbazole	330	U	8.2	330
Benzo[a]anthracene	33	U	28	33
Chrysene	330	U	9.0	330
Bis(2-ethylhexyl) phthalate	330	U	13	330
Dibenzofuran	330	U	10	330
Diethyl phthalate	330	U	9.4	330
Benzo[b]fluoranthene	33	U	13	33
Dimethyl phthalate	330	U	9.6	330
Benzo[k]fluoranthene	33	U	14	33
Di-n-butyl phthalate	330	U	9.9	330
Benzo[a]pyrene	33	U	10	33
Di-n-octyl phthalate	330	U	17	330
Fluoranthene	330	U	9.8	330
Dibenz(a,h)anthracene	33	U	17	33
Fluorene	330	U	7.2	330
Benzo[g,h,i]perylene	330	U	19	330
Hexachlorobenzene	33	U	13	33
1,1'-Biphenyl	330	U	28	330

Client: AKRF Inc

Job Number: 460-85120-1

Method Blank - Batch: 460-258467

Method: 8270D
Preparation: 3546

Lab Sample ID:	MB 460-258467/1-A	Analysis Batch:	460-258866	Instrument ID:	CBNAMS12
Client Matrix:	Solid	Prep Batch:	460-258467	Lab File ID:	L118117.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0000 g
Analysis Date:	10/29/2014 0128	Units:	ug/Kg	Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Hexachlorobutadiene	67	U	9.3	67
Acetophenone	330	U	7.2	330
Hexachlorocyclopentadiene	330	U	21	330
Benzaldehyde	330	U	25	330
Hexachloroethane	33	U	12	33
Caprolactam	330	U	24	330
Indeno[1,2,3-cd]pyrene	33	U	22	33
Atrazine	130	U	15	130
Isophorone	130	U	7.1	130
Naphthalene	330	U	8.4	330
Nitrobenzene	33	U	10	33
N-Nitrosodi-n-propylamine	33	U	11	33
N-Nitrosodiphenylamine	330	U	30	330
Pentachlorophenol	270	U	40	270
Phenanthrene	330	U	8.8	330
2,2'-oxybis[1-chloropropane]	330	U	14	330
Phenol	330	U	11	330
1,2,4,5-Tetrachlorobenzene	330	U	25	330
2,3,4,6-Tetrachlorophenol	330	U	31	330
Pyrene	330	U	15	330
3,3'-Dichlorobenzidine	130	U	37	130
Bis(2-chloroethoxy)methane	330	U	10	330

Surrogate	% Rec	Acceptance Limits
Nitrobenzene-d5 (Surr)	101	38 - 105
2,4,6-Tribromophenol (Surr)	116	10 - 120
2-Fluorophenol (Surr)	95	37 - 125
2-Fluorobiphenyl	95	40 - 109
Phenol-d5 (Surr)	96	41 - 118
Terphenyl-d14 (Surr)	131	16 - 151

Method Blank TICs- Batch: 460-258467

Cas Number	Analyte	RT	Est. Result (ug/K	Qual
	Tentatively Identified Compound		None	

Client: AKRF Inc

Job Number: 460-85120-1

Lab Control Sample - Batch: 460-258467

Method: 8270D
Preparation: 3546

Lab Sample ID:	LCS 460-258467/2-A	Analysis Batch:	460-258866	Instrument ID:	CBNAMS12
Client Matrix:	Solid	Prep Batch:	460-258467	Lab File ID:	L118118.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0000 g
Analysis Date:	10/29/2014 0154	Units:	ug/Kg	Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Benzaldehyde	6670	6300	94	10 - 160	

Surrogate	% Rec	Acceptance Limits
Nitrobenzene-d5 (Surr)	101	38 - 105
2,4,6-Tribromophenol (Surr)	119	10 - 120
2-Fluorophenol (Surr)	95	37 - 125
2-Fluorobiphenyl	93	40 - 109
Phenol-d5 (Surr)	98	41 - 118
Terphenyl-d14 (Surr)	127	16 - 151

Lab Control Sample - Batch: 460-258467

Method: 8270D
Preparation: 3546

Lab Sample ID:	LCS 460-258467/3-A	Analysis Batch:	460-259124	Instrument ID:	CBNAMS12
Client Matrix:	Solid	Prep Batch:	460-258467	Lab File ID:	L118187.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0000 g
Analysis Date:	10/30/2014 0817	Units:	ug/Kg	Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
2,4-Dichlorophenol	3330	2630	79	58 - 115	
2,4,6-Trichlorophenol	3330	2800	84	53 - 118	
2,4-Dimethylphenol	3330	2660	80	56 - 112	
2,4,5-Trichlorophenol	3330	2780	83	50 - 115	
2,4-Dinitrotoluene	3330	2700	81	53 - 110	
2-Chlorophenol	3330	2490	75	56 - 110	
2-Methylphenol	3330	2410	72	54 - 117	
2-Nitrophenol	3330	2860	86	55 - 101	
2-Methylnaphthalene	3330	2670	80	51 - 98	
4,6-Dinitro-2-methylphenol	6670	5790	87	10 - 110	
2-Chloronaphthalene	3330	2770	83	51 - 102	
4-Chloro-3-methylphenol	3330	2620	79	55 - 117	
2-Nitroaniline	3330	2380	72	51 - 109	
4-Chloroaniline	3330	1480	44	10 - 96	
4-Methylphenol	3330	2310	69	47 - 103	
2,6-Dinitrotoluene	3330	2860	86	51 - 115	
3-Nitroaniline	3330	1800	54	32 - 104	
4-Nitrophenol	6670	4700	70	45 - 114	
Acenaphthene	3330	2420	73	46 - 100	

Client: AKRF Inc

Job Number: 460-85120-1

Lab Control Sample - Batch: 460-258467

Method: 8270D
Preparation: 3546

Lab Sample ID:	LCS 460-258467/3-A	Analysis Batch:	460-259124	Instrument ID:	CBNAMS12
Client Matrix:	Solid	Prep Batch:	460-258467	Lab File ID:	L118187.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0000 g
Analysis Date:	10/30/2014 0817	Units:	ug/Kg	Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acenaphthylene	3330	2700	81	51 - 103	
2,4-Dinitrophenol	6670	5380	81	10 - 129	
4-Chlorophenyl phenyl ether	3330	2550	77	50 - 106	
4-Nitroaniline	3330	2130	64	45 - 106	
4-Bromophenyl phenyl ether	3330	3100	93	44 - 102	
Anthracene	3330	2820	85	50 - 107	
Bis(2-chloroethyl)ether	3330	2430	73	44 - 101	
Butyl benzyl phthalate	3330	3030	91	49 - 117	
Carbazole	3330	2670	80	49 - 104	
Benzo[a]anthracene	3330	2690	81	46 - 112	
Chrysene	3330	2650	80	45 - 114	
Bis(2-ethylhexyl) phthalate	3330	2800	84	49 - 119	
Dibenzofuran	3330	2560	77	52 - 106	
Diethyl phthalate	3330	2630	79	52 - 114	
Benzo[b]fluoranthene	3330	3040	91	33 - 96	
Dimethyl phthalate	3330	2720	82	52 - 112	
Benzo[k]fluoranthene	3330	3090	93	35 - 115	
Di-n-butyl phthalate	3330	2690	81	50 - 108	
Benzo[a]pyrene	3330	2900	87	36 - 89	
Di-n-octyl phthalate	3330	3280	98	40 - 106	
Fluoranthene	3330	2580	78	49 - 108	
Dibenz(a,h)anthracene	3330	2770	83	43 - 107	
Fluorene	3330	2640	79	51 - 108	
Benzo[g,h,i]perylene	3330	2660	80	43 - 106	
Hexachlorobenzene	3330	3120	94	43 - 104	
1,1'-Biphenyl	3330	2760	83	50 - 105	
Hexachlorobutadiene	3330	2820	85	45 - 98	
Acetophenone	3330	2360	71	40 - 95	
Hexachlorocyclopentadiene	3330	2360	71	24 - 98	
Hexachloroethane	3330	2440	73	45 - 90	
Caprolactam	3330	2540	76	10 - 127	
Indeno[1,2,3-cd]pyrene	3330	3280	98	43 - 109	
Atrazine	3330	2450	74	30 - 100	
Isophorone	3330	2600	78	48 - 97	
Naphthalene	3330	2680	81	53 - 94	
Nitrobenzene	3330	2570	77	42 - 106	
N-Nitrosodi-n-propylamine	3330	2430	73	42 - 107	
N-Nitrosodiphenylamine	3330	3110	93	49 - 106	
Pentachlorophenol	6670	5240	79	19 - 113	
Phenanthrene	3330	2820	85	48 - 108	
2,2'-oxybis[1-chloropropane]	3330	2660	80	45 - 102	

Client: AKRF Inc

Job Number: 460-85120-1

Lab Control Sample - Batch: 460-258467

Method: 8270D
Preparation: 3546

Lab Sample ID:	LCS 460-258467/3-A	Analysis Batch:	460-259124	Instrument ID:	CBNAMS12
Client Matrix:	Solid	Prep Batch:	460-258467	Lab File ID:	L118187.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0000 g
Analysis Date:	10/30/2014 0817	Units:	ug/Kg	Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Phenol	3330	2490	75	54 - 115	
1,2,4,5-Tetrachlorobenzene	3330	2920	87	70 - 130	
2,3,4,6-Tetrachlorophenol	3330	2740	82	70 - 130	
Pyrene	3330	3210	96	49 - 116	
3,3'-Dichlorobenzidine	3330	1870	56	24 - 105	
Bis(2-chloroethoxy)methane	3330	2620	79	51 - 100	

Surrogate	% Rec	Acceptance Limits
Nitrobenzene-d5 (Surr)	82	38 - 105
2,4,6-Tribromophenol (Surr)	96	10 - 120
2-Fluorophenol (Surr)	72	37 - 125
2-Fluorobiphenyl	83	40 - 109
Phenol-d5 (Surr)	73	41 - 118
Terphenyl-d14 (Surr)	99	16 - 151

Client: AKRF Inc

Job Number: 460-85120-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 460-258467

Method: 8270D
Preparation: 3546

MS Lab Sample ID:	460-85115-E-4-A MS	Analysis Batch:	460-258866	Instrument ID:	CBNAMS12
Client Matrix:	Solid	Prep Batch:	460-258467	Lab File ID:	L118120.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0258 g
Analysis Date:	10/29/2014 0244			Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	460-85115-E-4-B MSD	Analysis Batch:	460-258866	Instrument ID:	CBNAMS12
Client Matrix:	Solid	Prep Batch:	460-258467	Lab File ID:	L118121.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0148 g
Analysis Date:	10/29/2014 0309			Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
2,4-Dichlorophenol	82	71	58 - 115	13	30		
2,4,6-Trichlorophenol	87	74	53 - 118	16	30		
2,4-Dimethylphenol	83	72	56 - 112	14	30		
2,4,5-Trichlorophenol	83	71	50 - 115	15	30		
2,4-Dinitrotoluene	85	72	53 - 110	16	30		
2-Chlorophenol	79	69	56 - 110	14	30		
2-Methylphenol	69	60	54 - 117	14	30		
2-Nitrophenol	85	73	55 - 101	14	30		
2-Methylnaphthalene	83	73	51 - 98	14	30		
4,6-Dinitro-2-methylphenol	49	40	10 - 110	19	30		
2-Chloronaphthalene	85	73	51 - 102	16	30		
4-Chloro-3-methylphenol	83	73	55 - 117	13	30		
2-Nitroaniline	78	67	51 - 109	15	30		
4-Chloroaniline	31	27	10 - 96	13	30		
4-Methylphenol	77	70	47 - 103	9	30		
2,6-Dinitrotoluene	93	79	51 - 115	17	30		
3-Nitroaniline	58	50	32 - 104	14	30		
4-Nitrophenol	68	57	45 - 114	17	30		
Acenaphthene	76	66	46 - 100	14	30		
Acenaphthylene	85	73	51 - 103	15	30		
2,4-Dinitrophenol	19	16	10 - 129	16	30		
4-Chlorophenyl phenyl ether	76	67	50 - 106	12	30		
4-Nitroaniline	63	55	45 - 106	13	30		
4-Bromophenyl phenyl ether	97	84	44 - 102	15	30		
Anthracene	86	75	50 - 107	14	30		
Bis(2-chloroethyl)ether	79	67	44 - 101	15	30		
Butyl benzyl phthalate	103	88	49 - 117	15	30		
Carbazole	80	69	49 - 104	15	30		
Benzo[a]anthracene	86	72	46 - 112	17	30		
Chrysene	81	71	45 - 114	13	30		
Bis(2-ethylhexyl) phthalate	89	79	49 - 119	12	30		
Dibenzofuran	80	68	52 - 106	15	30		

Client: AKRF Inc

Job Number: 460-85120-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 460-258467

Method: 8270D
Preparation: 3546

MS Lab Sample ID:	460-85115-E-4-A MS	Analysis Batch:	460-258866	Instrument ID:	CBNAMS12
Client Matrix:	Solid	Prep Batch:	460-258467	Lab File ID:	L118120.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0258 g
Analysis Date:	10/29/2014 0244			Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	460-85115-E-4-B MSD	Analysis Batch:	460-258866	Instrument ID:	CBNAMS12
Client Matrix:	Solid	Prep Batch:	460-258467	Lab File ID:	L118121.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0148 g
Analysis Date:	10/29/2014 0309			Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Diethyl phthalate	84	71	52 - 114	17	30		
Benzo[b]fluoranthene	98	82	33 - 96	17	30	*	
Dimethyl phthalate	86	73	52 - 112	16	30		
Benzo[k]fluoranthene	101	86	35 - 115	17	30		
Di-n-butyl phthalate	82	71	50 - 108	15	30		
Benzo[a]pyrene	93	78	36 - 89	17	30	*	
Di-n-octyl phthalate	114	97	40 - 106	16	30	*	
Fluoranthene	75	64	49 - 108	16	30		
Dibenz(a,h)anthracene	86	75	43 - 107	14	30		
Fluorene	79	69	51 - 108	14	30		
Benzo[g,h,i]perylene	81	72	43 - 106	12	30		
Hexachlorobenzene	95	83	43 - 104	14	30		
1,1'-Biphenyl	84	73	50 - 105	14	30		
Hexachlorobutadiene	83	72	45 - 98	14	30		
Acetophenone	74	65	40 - 95	14	30		
Hexachlorocyclopentadiene	72	62	24 - 98	14	30		
Benzaldehyde	70	60	10 - 160	15	30		
Hexachloroethane	74	64	45 - 90	15	30		
Caprolactam	74	64	10 - 127	13	30		
Indeno[1,2,3-cd]pyrene	81	72	43 - 109	12	30		
Atrazine	77	67	30 - 100	15	30		
Isophorone	82	71	48 - 97	14	30		
Naphthalene	82	72	53 - 94	13	30		
Nitrobenzene	77	68	42 - 106	13	30		
N-Nitrosodi-n-propylamine	79	68	42 - 107	15	30		
N-Nitrosodiphenylamine	99	86	49 - 106	13	30		
Pentachlorophenol	57	46	19 - 113	21	30		
Phenanthrene	86	74	48 - 108	14	30		
2,2'-oxybis[1-chloropropane]	82	71	45 - 102	14	30		
Phenol	82	71	54 - 115	14	30		
1,2,4,5-Tetrachlorobenzene	87	75	70 - 130	15	30		
2,3,4,6-Tetrachlorophenol	78	66	70 - 130	17	30		*

Client: AKRF Inc

Job Number: 460-85120-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 460-258467

Method: 8270D
Preparation: 3546

MS Lab Sample ID:	460-85115-E-4-A MS	Analysis Batch:	460-258866	Instrument ID:	CBNAMS12
Client Matrix:	Solid	Prep Batch:	460-258467	Lab File ID:	L118120.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0258 g
Analysis Date:	10/29/2014 0244			Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	460-85115-E-4-B MSD	Analysis Batch:	460-258866	Instrument ID:	CBNAMS12
Client Matrix:	Solid	Prep Batch:	460-258467	Lab File ID:	L118121.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0148 g
Analysis Date:	10/29/2014 0309			Final Weight/Volume:	1 mL
Prep Date:	10/27/2014 0817			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Pyrene	112	98	49 - 116	13	30		
3,3'-Dichlorobenzidine	51	45	24 - 105	11	30		
Bis(2-chloroethoxy)methane	83	72	51 - 100	14	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
Nitrobenzene-d5 (Surr)	84	74	38 - 105
2,4,6-Tribromophenol (Surr)	93	82	10 - 120
2-Fluorophenol (Surr)	78	69	37 - 125
2-Fluorobiphenyl	84	73	40 - 109
Phenol-d5 (Surr)	80	71	41 - 118
Terphenyl-d14 (Surr)	112	99	16 - 151

Client: AKRF Inc

Job Number: 460-85120-1

Method Blank - Batch: 460-258500

Method: 8081B
Preparation: 3546

Lab Sample ID:	MB 460-258500/1-ARA	Analysis Batch:	460-259042	Instrument ID:	CPESTGC9
Client Matrix:	Solid	Prep Batch:	460-258500	Lab File ID:	VR497318.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0073 g
Analysis Date:	10/29/2014 2005	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	10/27/2014 1047	Run Type:	RA	Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
4,4'-DDD	6.7	U	1.3	6.7
4,4'-DDE	6.7	U	1.3	6.7
4,4'-DDT	6.7	U	1.6	6.7
Aldrin	6.7	U	1.4	6.7
alpha-BHC	2.0	U	1.5	2.0
beta-BHC	2.0	U	1.6	2.0
Chlordane (technical)	67	U	19	67
delta-BHC	2.0	U	1.2	2.0
Dieldrin	2.0	U	1.2	2.0
Endosulfan I	6.7	U	1.5	6.7
Endosulfan II	6.7	U	1.3	6.7
Endosulfan sulfate	6.7	U	1.3	6.7
Endrin	6.7	U	1.6	6.7
Endrin aldehyde	6.7	U	1.0	6.7
Endrin ketone	6.7	U	1.3	6.7
gamma-BHC (Lindane)	2.0	U	1.2	2.0
Heptachlor	6.7	U	1.6	6.7
Heptachlor epoxide	6.7	U	1.5	6.7
Methoxychlor	6.7	U	1.6	6.7
Toxaphene	67	U	18	67

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	118	76 - 149
Tetrachloro-m-xylene	108	72 - 136

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	105	76 - 149
Tetrachloro-m-xylene	104	72 - 136

Client: AKRF Inc

Job Number: 460-85120-1

Lab Control Sample - Batch: 460-258500

Method: 8081B
Preparation: 3546

Lab Sample ID:	LCS 460-258500/2-ARA	Analysis Batch:	460-259042	Instrument ID:	CPESTGC9
Client Matrix:	Solid	Prep Batch:	460-258500	Lab File ID:	VR497317.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0024 g
Analysis Date:	10/29/2014 1954	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	10/27/2014 1047	Run Type:	RA	Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
4,4'-DDD	133	190	142	50 - 131	*
4,4'-DDE	133	177	133	49 - 130	*
4,4'-DDT	133	146	109	48 - 132	
Aldrin	133	164	123	53 - 126	
alpha-BHC	133	176	132	50 - 129	*
beta-BHC	133	169	127	51 - 131	
delta-BHC	133	176	132	40 - 130	*
Dieldrin	133	173	130	48 - 126	*
Endosulfan I	133	162	122	53 - 127	
Endosulfan II	133	157	118	52 - 127	
Endosulfan sulfate	133	156	117	52 - 124	
Endrin	133	156	117	48 - 126	
Endrin aldehyde	133	153	115	57 - 124	
Endrin ketone	133	177	133	55 - 124	*
gamma-BHC (Lindane)	133	177	133	52 - 129	*
Heptachlor	133	156	117	52 - 128	
Heptachlor epoxide	133	168	126	53 - 122	*
Methoxychlor	133	150	113	47 - 126	

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	145	76 - 149
Tetrachloro-m-xylene	122	72 - 136

Lab Control Sample - Batch: 460-258500

Method: 8081B
Preparation: 3546

Lab Sample ID:	LCS 460-258500/2-ARA	Analysis Batch:	460-259042	Instrument ID:	CPESTGC9
Client Matrix:	Solid	Prep Batch:	460-258500	Lab File ID:	VR497317.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0024 g
Analysis Date:	10/29/2014 1954	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	10/27/2014 1047	Run Type:	RA	Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	SECONDARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
4,4'-DDD	133	178	134	50 - 131	*
4,4'-DDE	133	163	122	49 - 130	
4,4'-DDT	133	143	107	48 - 132	
Aldrin	133	154	116	53 - 126	
alpha-BHC	133	161	121	50 - 129	
beta-BHC	133	158	118	51 - 131	

Client: AKRF Inc

Job Number: 460-85120-1

Lab Control Sample - Batch: 460-258500

Method: 8081B
Preparation: 3546

Lab Sample ID:	LCS 460-258500/2-ARA	Analysis Batch:	460-259042	Instrument ID:	CPESTGC9
Client Matrix:	Solid	Prep Batch:	460-258500	Lab File ID:	VR497317.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0024 g
Analysis Date:	10/29/2014 1954	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	10/27/2014 1047	Run Type:	RA	Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	SECONDARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
delta-BHC	133	152	114	40 - 130	
Dieldrin	133	161	121	48 - 126	
Endosulfan I	133	152	114	53 - 127	
Endosulfan II	133	152	114	52 - 127	
Endosulfan sulfate	133	145	109	52 - 124	
Endrin	133	141	106	48 - 126	
Endrin aldehyde	133	145	109	57 - 124	
Endrin ketone	133	147	111	55 - 124	
gamma-BHC (Lindane)	133	145	109	52 - 129	
Heptachlor	133	143	107	52 - 128	
Heptachlor epoxide	133	151	113	53 - 122	
Methoxychlor	133	135	101	47 - 126	

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	122	76 - 149
Tetrachloro-m-xylene	116	72 - 136

Client: AKRF Inc

Job Number: 460-85120-1

Method Blank - Batch: 460-258709

Method: 8081B
Preparation: 3546

Lab Sample ID:	MB 460-258709/1-ARA	Analysis Batch:	460-259042	Instrument ID:	CPESTGC9
Client Matrix:	Solid	Prep Batch:	460-258709	Lab File ID:	VR497309.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0000 g
Analysis Date:	10/29/2014 1822	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	10/28/2014 0841	Run Type:	RA	Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
4,4'-DDD	6.7	U	1.3	6.7
4,4'-DDE	6.7	U	1.3	6.7
4,4'-DDT	6.7	U	1.6	6.7
Aldrin	6.7	U	1.4	6.7
alpha-BHC	2.0	U	1.5	2.0
beta-BHC	2.0	U	1.6	2.0
Chlordane (technical)	67	U	19	67
delta-BHC	2.0	U	1.2	2.0
Dieldrin	2.0	U	1.2	2.0
Endosulfan I	6.7	U	1.5	6.7
Endosulfan II	6.7	U	1.3	6.7
Endosulfan sulfate	6.7	U	1.3	6.7
Endrin	6.7	U	1.6	6.7
Endrin aldehyde	6.7	U	1.0	6.7
Endrin ketone	6.7	U	1.3	6.7
gamma-BHC (Lindane)	2.0	U	1.2	2.0
Heptachlor	6.7	U	1.6	6.7
Heptachlor epoxide	6.7	U	1.5	6.7
Methoxychlor	6.7	U	1.6	6.7
Toxaphene	67	U	18	67

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	127	76 - 149
Tetrachloro-m-xylene	119	72 - 136

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	116	76 - 149
Tetrachloro-m-xylene	113	72 - 136

Client: AKRF Inc

Job Number: 460-85120-1

Lab Control Sample - Batch: 460-258709

Method: 8081B
Preparation: 3546

Lab Sample ID:	LCS 460-258709/2-ARA	Analysis Batch:	460-259042	Instrument ID:	CPESTGC9
Client Matrix:	Solid	Prep Batch:	460-258709	Lab File ID:	VR497308.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0000 g
Analysis Date:	10/29/2014 1811	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	10/28/2014 0841	Run Type:	RA	Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
4,4'-DDD	133	173	130	50 - 131	
4,4'-DDE	133	169	127	49 - 130	
4,4'-DDT	133	145	109	48 - 132	
Aldrin	133	154	115	53 - 126	
alpha-BHC	133	169	127	50 - 129	
beta-BHC	133	159	119	51 - 131	
delta-BHC	133	167	125	40 - 130	
Dieldrin	133	162	122	48 - 126	
Endosulfan I	133	154	115	53 - 127	
Endosulfan II	133	150	112	52 - 127	
Endosulfan sulfate	133	156	117	52 - 124	
Endrin	133	152	114	48 - 126	
Endrin aldehyde	133	155	116	57 - 124	
Endrin ketone	133	151	113	55 - 124	
gamma-BHC (Lindane)	133	170	128	52 - 129	
Heptachlor	133	149	112	52 - 128	
Heptachlor epoxide	133	157	118	53 - 122	
Methoxychlor	133	142	107	47 - 126	

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	122	76 - 149
Tetrachloro-m-xylene	119	72 - 136

Lab Control Sample - Batch: 460-258709

Method: 8081B
Preparation: 3546

Lab Sample ID:	LCS 460-258709/2-ARA	Analysis Batch:	460-259042	Instrument ID:	CPESTGC9
Client Matrix:	Solid	Prep Batch:	460-258709	Lab File ID:	VR497308.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0000 g
Analysis Date:	10/29/2014 1811	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	10/28/2014 0841	Run Type:	RA	Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	SECONDARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
4,4'-DDD	133	172	129	50 - 131	
4,4'-DDE	133	162	121	49 - 130	
4,4'-DDT	133	142	107	48 - 132	
Aldrin	133	152	114	53 - 126	
alpha-BHC	133	162	121	50 - 129	
beta-BHC	133	157	118	51 - 131	

Client: AKRF Inc

Job Number: 460-85120-1

Lab Control Sample - Batch: 460-258709

Method: 8081B
Preparation: 3546

Lab Sample ID:	LCS 460-258709/2-ARA	Analysis Batch:	460-259042	Instrument ID:	CPESTGC9
Client Matrix:	Solid	Prep Batch:	460-258709	Lab File ID:	VR497308.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0000 g
Analysis Date:	10/29/2014 1811	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	10/28/2014 0841	Run Type:	RA	Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	SECONDARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
delta-BHC	133	149	112	40 - 130	
Dieldrin	133	159	119	48 - 126	
Endosulfan I	133	152	114	53 - 127	
Endosulfan II	133	149	112	52 - 127	
Endosulfan sulfate	133	137	103	52 - 124	
Endrin	133	144	108	48 - 126	
Endrin aldehyde	133	147	110	57 - 124	
Endrin ketone	133	135	102	55 - 124	
gamma-BHC (Lindane)	133	149	112	52 - 129	
Heptachlor	133	142	107	52 - 128	
Heptachlor epoxide	133	149	112	53 - 122	
Methoxychlor	133	133	100	47 - 126	

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	106	76 - 149
Tetrachloro-m-xylene	108	72 - 136

Client: AKRF Inc

Job Number: 460-85120-1

Method Blank - Batch: 460-258501

Method: 8082A
Preparation: 3546

Lab Sample ID:	MB 460-258501/1-A	Analysis Batch:	460-258618	Instrument ID:	CPESTGC7
Client Matrix:	Solid	Prep Batch:	460-258501	Lab File ID:	OR223305.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0064 g
Analysis Date:	10/28/2014 0033	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	10/27/2014 1048			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
Aroclor 1016	67	U	15	67
Aroclor 1221	67	U	15	67
Aroclor 1232	67	U	15	67
Aroclor 1242	67	U	15	67
Aroclor 1248	67	U	15	67
Aroclor 1254	67	U	19	67
Aroclor 1260	67	U	19	67
Aroclor-1262	67	U	19	67
Aroclor 1268	67	U	19	67
Polychlorinated biphenyls, Total	67	U	19	67

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	111	53 - 150

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	100	53 - 150

Client: AKRF Inc

Job Number: 460-85120-1

Lab Control Sample - Batch: 460-258501

Method: 8082A
Preparation: 3546

Lab Sample ID:	LCS 460-258501/2-A	Analysis Batch:	460-258618	Instrument ID:	CPESTGC7
Client Matrix:	Solid	Prep Batch:	460-258501	Lab File ID:	OR223306.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0093 g
Analysis Date:	10/28/2014 0049	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	10/27/2014 1048			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aroclor 1016	333	372	112	64 - 145	
Aroclor 1260	333	323	97	59 - 150	

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	106	53 - 150

Lab Control Sample - Batch: 460-258501

Method: 8082A
Preparation: 3546

Lab Sample ID:	LCS 460-258501/2-A	Analysis Batch:	460-258618	Instrument ID:	CPESTGC7
Client Matrix:	Solid	Prep Batch:	460-258501	Lab File ID:	OR223306.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0093 g
Analysis Date:	10/28/2014 0049	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	10/27/2014 1048			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	SECONDARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aroclor 1016	333	340	102	64 - 145	
Aroclor 1260	333	319	96	59 - 150	

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	95	53 - 150

Client: AKRF Inc

Job Number: 460-85120-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 460-258501

Method: 8082A
Preparation: 3546

MS Lab Sample ID:	460-85110-J-3-C MS	Analysis Batch:	460-258618	Instrument ID:	CPESTGC7
Client Matrix:	Solid	Prep Batch:	460-258501	Lab File ID:	OR223307.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0266 g
Analysis Date:	10/28/2014 0106			Final Weight/Volume:	10 mL
Prep Date:	10/27/2014 1048			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

MSD Lab Sample ID:	460-85110-J-3-D MSD	Analysis Batch:	460-258618	Instrument ID:	CPESTGC7
Client Matrix:	Solid	Prep Batch:	460-258501	Lab File ID:	OR223318.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0462 g
Analysis Date:	10/28/2014 0406			Final Weight/Volume:	10 mL
Prep Date:	10/27/2014 1048			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aroclor 1016	106	100	64 - 145	6	30		
Aroclor 1260	103	91	59 - 150	12	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
DCB Decachlorobiphenyl	106	93	53 - 150

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 460-258501

Method: 8082A
Preparation: 3546

MS Lab Sample ID:	460-85110-J-3-C MS	Analysis Batch:	460-258618	Instrument ID:	CPESTGC7
Client Matrix:	Solid	Prep Batch:	460-258501	Lab File ID:	OR223307.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0266 g
Analysis Date:	10/28/2014 0106			Final Weight/Volume:	10 mL
Prep Date:	10/27/2014 1048			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	SECONDARY

MSD Lab Sample ID:	460-85110-J-3-D MSD	Analysis Batch:	460-258618	Instrument ID:	CPESTGC7
Client Matrix:	Solid	Prep Batch:	460-258501	Lab File ID:	OR223318.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0462 g
Analysis Date:	10/28/2014 0406			Final Weight/Volume:	10 mL
Prep Date:	10/27/2014 1048			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	SECONDARY

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aroclor 1016	98	87	64 - 145	12	30		
Aroclor 1260	96	85	59 - 150	12	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
DCB Decachlorobiphenyl	96	86	53 - 150

Client: AKRF Inc

Job Number: 460-85120-1

Method Blank - Batch: 460-258704

Method: 8082A
Preparation: 3546

Lab Sample ID:	MB 460-258704/1-A	Analysis Batch:	460-258944	Instrument ID:	CPESTGC8
Client Matrix:	Solid	Prep Batch:	460-258704	Lab File ID:	QR106687.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0000 g
Analysis Date:	10/29/2014 0916	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	10/28/2014 0826			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
Aroclor 1016	67	U	15	67
Aroclor 1221	67	U	15	67
Aroclor 1232	67	U	15	67
Aroclor 1242	67	U	15	67
Aroclor 1248	67	U	15	67
Aroclor 1254	67	U	19	67
Aroclor 1260	67	U	19	67
Aroclor-1262	67	U	19	67
Aroclor 1268	67	U	19	67
Polychlorinated biphenyls, Total	67	U	19	67

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	149	53 - 150

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	146	53 - 150

Method Blank - Batch: 460-258704

Method: 8082A
Preparation: 3546

Lab Sample ID:	MB 460-258704/1-ARA	Analysis Batch:	460-258944	Instrument ID:	CPESTGC8
Client Matrix:	Solid	Prep Batch:	460-258704	Lab File ID:	QR106698.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0000 g
Analysis Date:	10/29/2014 1217	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	10/28/2014 0826	Run Type:	RA	Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
Aroclor 1016	67	U	15	67
Aroclor 1221	67	U	15	67
Aroclor 1232	67	U	15	67
Aroclor 1242	67	U	15	67
Aroclor 1248	67	U	15	67
Aroclor 1254	67	U	19	67
Aroclor 1260	67	U	19	67
Aroclor-1262	67	U	19	67
Aroclor 1268	67	U	19	67
Polychlorinated biphenyls, Total	67	U	19	67

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	145	53 - 150

Client: AKRF Inc

Job Number: 460-85120-1

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	143	53 - 150

Client: AKRF Inc

Job Number: 460-85120-1

Lab Control Sample - Batch: 460-258704

Method: 8082A
Preparation: 3546

Lab Sample ID:	LCS 460-258704/2-A	Analysis Batch:	460-258944	Instrument ID:	CPESTGC8
Client Matrix:	Solid	Prep Batch:	460-258704	Lab File ID:	QR106688.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0000 g
Analysis Date:	10/29/2014 0933	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	10/28/2014 0826			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aroclor 1016	333	460	138	64 - 145	
Aroclor 1260	333	526	158	59 - 150	*

Surrogate	% Rec		Acceptance Limits
DCB Decachlorobiphenyl	159	*	53 - 150

Lab Control Sample - Batch: 460-258704

Method: 8082A
Preparation: 3546

Lab Sample ID:	LCS 460-258704/2-A	Analysis Batch:	460-258944	Instrument ID:	CPESTGC8
Client Matrix:	Solid	Prep Batch:	460-258704	Lab File ID:	QR106688.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0000 g
Analysis Date:	10/29/2014 0933	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	10/28/2014 0826			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	SECONDARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aroclor 1016	333	452	136	64 - 145	
Aroclor 1260	333	522	156	59 - 150	*

Surrogate	% Rec		Acceptance Limits
DCB Decachlorobiphenyl	159	*	53 - 150

Lab Control Sample - Batch: 460-258704

Method: 8082A
Preparation: 3546

Lab Sample ID:	LCS 460-258704/2-ARA	Analysis Batch:	460-258944	Instrument ID:	CPESTGC8
Client Matrix:	Solid	Prep Batch:	460-258704	Lab File ID:	QR106697.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0000 g
Analysis Date:	10/29/2014 1200	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	10/28/2014 0826	Run Type:	RA	Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aroclor 1016	333	457	137	64 - 145	
Aroclor 1260	333	547	164	59 - 150	*

Surrogate	% Rec		Acceptance Limits
DCB Decachlorobiphenyl	155	*	53 - 150

Client: AKRF Inc

Job Number: 460-85120-1

Lab Control Sample - Batch: 460-258704

Method: 8082A
Preparation: 3546

Lab Sample ID:	LCS 460-258704/2-ARA	Analysis Batch:	460-258944	Instrument ID:	CPESTGC8
Client Matrix:	Solid	Prep Batch:	460-258704	Lab File ID:	QR106697.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0000 g
Analysis Date:	10/29/2014 1200	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	10/28/2014 0826	Run Type:	RA	Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	SECONDARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aroclor 1016	333	456	137	64 - 145	
Aroclor 1260	333	513	154	59 - 150	*

Surrogate	% Rec		Acceptance Limits
DCB Decachlorobiphenyl	153	*	53 - 150

Client: AKRF Inc

Job Number: 460-85120-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 460-258704

Method: 8082A
Preparation: 3546

MS Lab Sample ID:	460-85165-B-21-C MS	Analysis Batch:	460-258870	Instrument ID:	CPESTGC11
Client Matrix:	Solid	Prep Batch:	460-258704	Lab File ID:	T010007.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0274 g
Analysis Date:	10/28/2014 2355			Final Weight/Volume:	10 mL
Prep Date:	10/28/2014 0826			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

MSD Lab Sample ID:	460-85165-B-21-D MSD	Analysis Batch:	460-258870	Instrument ID:	CPESTGC11
Client Matrix:	Solid	Prep Batch:	460-258704	Lab File ID:	T010008.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0215 g
Analysis Date:	10/29/2014 0014			Final Weight/Volume:	10 mL
Prep Date:	10/28/2014 0826			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aroclor 1016	78	64	64 - 145	20	30		
Aroclor 1260	74	63	59 - 150	16	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
DCB Decachlorobiphenyl	82	78	53 - 150

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 460-258704

Method: 8082A
Preparation: 3546

MS Lab Sample ID:	460-85165-B-21-C MS	Analysis Batch:	460-258870	Instrument ID:	CPESTGC11
Client Matrix:	Solid	Prep Batch:	460-258704	Lab File ID:	T010007.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0274 g
Analysis Date:	10/28/2014 2355			Final Weight/Volume:	10 mL
Prep Date:	10/28/2014 0826			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	SECONDARY

MSD Lab Sample ID:	460-85165-B-21-D MSD	Analysis Batch:	460-258870	Instrument ID:	CPESTGC11
Client Matrix:	Solid	Prep Batch:	460-258704	Lab File ID:	T010008.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0215 g
Analysis Date:	10/29/2014 0014			Final Weight/Volume:	10 mL
Prep Date:	10/28/2014 0826			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	SECONDARY

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aroclor 1016	78	61	64 - 145	25	30		*
Aroclor 1260	70	55	59 - 150	23	30		*

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
DCB Decachlorobiphenyl	80	74	53 - 150

Client: AKRF Inc

Job Number: 460-85120-1

Method Blank - Batch: 460-258397

Method: 6010C
Preparation: 3010A

Lab Sample ID:	MB 460-258397/1-A	Analysis Batch:	460-258582	Instrument ID:	ICP5
Client Matrix:	Water	Prep Batch:	460-258397	Lab File ID:	10272014.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	10/27/2014 1758	Units:	ug/L	Final Weight/Volume:	100 mL
Prep Date:	10/26/2014 1707				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	200	U	73.6	200
Arsenic	15.0	U	4.3	15.0
Barium	200	U	6.5	200
Beryllium	2.0	U	1.1	2.0
Cadmium	4.0	U	1.2	4.0
Calcium	5000	U	416	5000
Chromium	10.0	U	4.6	10.0
Cobalt	50.0	U	3.8	50.0
Copper	25.0	U	6.2	25.0
Magnesium	5000	U	355	5000
Manganese	15.0	U	4.3	15.0
Nickel	40.0	U	7.8	40.0
Potassium	5000	U	281	5000
Lead	10.0	U	4.6	10.0
Antimony	20.0	U	5.4	20.0
Silver	10.0	U	1.9	10.0
Selenium	20.0	U	6.7	20.0
Sodium	5000	U	514	5000
Thallium	20.0	U	9.2	20.0
Vanadium	50.0	U	4.2	50.0
Zinc	30.0	U	5.9	30.0

Method Blank - Batch: 460-258397

Method: 6010C
Preparation: 3010A

Lab Sample ID:	MB 460-258397/1-A	Analysis Batch:	460-258732	Instrument ID:	ICP4
Client Matrix:	Water	Prep Batch:	460-258397	Lab File ID:	258201.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	10/28/2014 0150	Units:	ug/L	Final Weight/Volume:	100 mL
Prep Date:	10/26/2014 1707				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Iron	150	U	51.4	150

Client: AKRF Inc

Job Number: 460-85120-1

Lab Control Sample - Batch: 460-258397

Method: 6010C
Preparation: 3010A

Lab Sample ID:	LCS 460-258397/2-A	Analysis Batch:	460-258582	Instrument ID:	ICP5
Client Matrix:	Water	Prep Batch:	460-258397	Lab File ID:	10272014.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	10/27/2014 1802	Units:	ug/L	Final Weight/Volume:	100 mL
Prep Date:	10/26/2014 1707				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	2000	1972	99	80 - 120	
Arsenic	2000	1917	96	80 - 120	
Barium	2000	2087	104	80 - 120	
Beryllium	50.0	51.41	103	80 - 120	
Cadmium	50.0	51.42	103	80 - 120	
Calcium	20000	19780	99	80 - 120	
Chromium	200	207.4	104	80 - 120	
Cobalt	500	514.5	103	80 - 120	
Copper	250	248.4	99	80 - 120	
Magnesium	20000	20410	102	80 - 120	
Manganese	500	527.6	106	80 - 120	
Nickel	500	529.0	106	80 - 120	
Potassium	20000	18970	95	80 - 120	
Lead	500	523.0	105	80 - 120	
Antimony	500	451.6	90	80 - 120	
Silver	50.0	48.13	96	80 - 120	
Selenium	2000	1903	95	80 - 120	
Sodium	20000	19680	98	80 - 120	
Thallium	2000	2143	107	80 - 120	
Vanadium	500	516.8	103	80 - 120	
Zinc	500	517.6	104	80 - 120	

Lab Control Sample - Batch: 460-258397

Method: 6010C
Preparation: 3010A

Lab Sample ID:	LCS 460-258397/2-A	Analysis Batch:	460-258732	Instrument ID:	ICP4
Client Matrix:	Water	Prep Batch:	460-258397	Lab File ID:	258201.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	10/28/2014 0154	Units:	ug/L	Final Weight/Volume:	100 mL
Prep Date:	10/26/2014 1707				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Iron	1000	900.3	90	80 - 120	

Client: AKRF Inc

Job Number: 460-85120-1

Matrix Spike - Batch: 460-258397

Method: 6010C
Preparation: 3010A

Lab Sample ID:	460-85093-L-1-C MS	Analysis Batch:	460-258582	Instrument ID:	ICP5
Client Matrix:	Water	Prep Batch:	460-258397	Lab File ID:	10272014.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	10/27/2014 2156	Units:	ug/L	Final Weight/Volume:	100 mL
Prep Date:	10/26/2014 1707				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	200	U	2000	1895	95	75 - 125	
Arsenic	18.1		2000	1918	95	75 - 125	
Barium	83.4	J	2000	2023	97	75 - 125	
Beryllium	2.0	U	50.0	49.20	98	75 - 125	
Cadmium	4.0	U	50.0	47.61	95	75 - 125	
Calcium	63600		20000	80450	84	75 - 125	
Chromium	10.0	U	200	201.0	101	75 - 125	
Cobalt	50.0	U	500	481.5	96	75 - 125	
Copper	25.0	U	250	240.8	96	75 - 125	
Magnesium	5690		20000	25310	98	75 - 125	
Manganese	4440		500	4638	39	75 - 125	4
Nickel	40.0	U	500	488.6	98	75 - 125	
Potassium	2010	J	20000	21520	98	75 - 125	
Lead	10.0	U	500	482.0	96	75 - 125	
Antimony	20.0	U	500	436.1	87	75 - 125	
Silver	10.0	U	50.0	48.64	97	75 - 125	
Selenium	20.0	U	2000	1875	94	75 - 125	
Sodium	213000		20000	220200	36	75 - 125	4
Thallium	20.0	U	2000	1970	99	75 - 125	
Vanadium	50.0	U	500	496.6	99	75 - 125	
Zinc	30.0	U	500	499.6	100	75 - 125	

Matrix Spike - Batch: 460-258397

Method: 6010C
Preparation: 3010A

Lab Sample ID:	460-85093-L-1-C MS	Analysis Batch:	460-258732	Instrument ID:	ICP4
Client Matrix:	Water	Prep Batch:	460-258397	Lab File ID:	258201.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	10/28/2014 0209	Units:	ug/L	Final Weight/Volume:	100 mL
Prep Date:	10/26/2014 1707				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Iron	62600	1000	60540	-209	75 - 125	4

Client: AKRF Inc

Job Number: 460-85120-1

Duplicate - Batch: 460-258397

Method: 6010C
Preparation: 3010A

Lab Sample ID:	460-85093-L-1-B DU	Analysis Batch:	460-258582	Instrument ID:	ICP5
Client Matrix:	Water	Prep Batch:	460-258397	Lab File ID:	10272014.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	10/27/2014 1747	Units:	ug/L	Final Weight/Volume:	100 mL
Prep Date:	10/26/2014 1707				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Aluminum	200	U	200	NC	20	U
Arsenic	18.1		17.20	5	20	
Barium	83.4	J	81.11	3	20	J
Beryllium	2.0	U	2.0	NC	20	U
Cadmium	4.0	U	4.0	NC	20	U
Calcium	63600		62030	3	20	
Chromium	10.0	U	10.0	NC	20	U
Cobalt	50.0	U	50.0	NC	20	U
Copper	25.0	U	25.0	NC	20	U
Magnesium	5690		5553	2	20	
Manganese	4440		4349	2	20	
Nickel	40.0	U	40.0	NC	20	U
Potassium	2010	J	2018	0.2	20	J
Lead	10.0	U	10.0	NC	20	U
Antimony	20.0	U	20.0	NC	20	U
Silver	10.0	U	10.0	NC	20	U
Selenium	20.0	U	20.0	NC	20	U
Sodium	213000		209000	2	20	
Thallium	20.0	U	20.0	NC	20	U
Vanadium	50.0	U	50.0	NC	20	U
Zinc	30.0	U	30.0	NC	20	U

Duplicate - Batch: 460-258397

Method: 6010C
Preparation: 3010A

Lab Sample ID:	460-85093-L-1-B DU	Analysis Batch:	460-258732	Instrument ID:	ICP4
Client Matrix:	Water	Prep Batch:	460-258397	Lab File ID:	258201.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	10/28/2014 0157	Units:	ug/L	Final Weight/Volume:	100 mL
Prep Date:	10/26/2014 1707				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Iron	62600	60860	3	20	

Client: AKRF Inc

Job Number: 460-85120-1

Method Blank - Batch: 460-258455

Method: 6010C
Preparation: 3050B

Lab Sample ID:	MB 460-258455/1-A ^2	Analysis Batch:	460-258821	Instrument ID:	ICP4
Client Matrix:	Solid	Prep Batch:	460-258455	Lab File ID:	258455.asc
Dilution:	2.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	10/28/2014 1140	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	10/27/2014 0715				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	20.0	U	11.1	20.0
Arsenic	1.5	U	0.41	1.5
Barium	20.0	U	0.87	20.0
Beryllium	0.20	U	0.14	0.20
Cadmium	0.40	U	0.14	0.40
Calcium	500	U	38.3	500
Chromium	1.0	U	0.40	1.0
Cobalt	5.0	U	0.45	5.0
Copper	2.5	U	0.88	2.5
Iron	15.0	U	12.5	15.0
Magnesium	500	U	33.2	500
Manganese	1.5	U	0.43	1.5
Nickel	4.0	U	0.90	4.0
Potassium	500	U	13.8	500
Lead	1.0	U	0.41	1.0
Antimony	2.0	U	0.76	2.0
Silver	1.0	U	0.19	1.0
Selenium	2.0	U	0.57	2.0
Sodium	500	U	37.8	500
Thallium	2.0	U	0.98	2.0
Vanadium	5.0	U	0.41	5.0
Zinc	3.0	U	0.86	3.0

Client: AKRF Inc

Job Number: 460-85120-1

LCS-Certified Reference Material - Batch: 460-258455

Method: 6010C
Preparation: 3050B

Lab Sample ID:	LCSSRM 460-258455/2-A	Analysis Batch:	460-258821	Instrument ID:	ICP4
Client Matrix:	Solid	Prep Batch:	460-258455	Lab File ID:	258455.asc
Dilution:	4.0	Leach Batch:	N/A	Initial Weight/Volume:	1.01 g
Analysis Date:	10/28/2014 1144	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	10/27/2014 0715				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	7460	6630	88.9	47.1 - 152.8	
Arsenic	139	135.0	97.1	78.4 - 121.6	
Barium	203	202.6	99.8	82.8 - 117.7	
Beryllium	96.1	100.7	104.7	82.8 - 117.6	
Cadmium	96.0	109.2	113.8	81.7 - 117.7	
Calcium	6040	6230	103.1	80.6 - 119.4	
Chromium	136	149.2	109.7	78.7 - 120.6	
Cobalt	148	167.5	113.2	83.1 - 116.9	
Copper	168	170.1	101.3	81.5 - 118.5	
Iron	14100	16340	115.9	43.0 - 156.7	
Magnesium	2800	2699	96.4	75.4 - 125.0	
Manganese	297	315.6	106.3	80.5 - 119.2	
Nickel	123	142.1	115.5	82.1 - 118.7	
Potassium	2540	2394	94.3	68.9 - 131.1	
Lead	133	136.8	102.9	82.0 - 118.8	
Antimony	88.8	171.5	193.2	0.0 - 209.5	
Silver	40.2	40.00	99.5	74.9 - 125.4	
Selenium	177	178.2	100.7	77.4 - 122.6	
Sodium	761	770.1	101.2	70.3 - 129.6	J
Thallium	138	161.7	117.2	78.3 - 121.7	
Vanadium	107	115.5	107.9	76.6 - 123.4	
Zinc	189	203.0	107.4	81.5 - 118.5	

Client: AKRF Inc

Job Number: 460-85120-1

Matrix Spike - Batch: 460-258455

Method: 6010C
Preparation: 3050B

Lab Sample ID:	460-85070-A-1-D MS ^4	Analysis Batch:	460-258821	Instrument ID:	ICP4
Client Matrix:	Solid	Prep Batch:	460-258455	Lab File ID:	258455.asc
Dilution:	4.0	Leach Batch:	N/A	Initial Weight/Volume:	1.06 g
Analysis Date:	10/28/2014 1158	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	10/27/2014 0715				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	31300		228	37270	2619	75 - 125	4
Arsenic	3.4	U	228	206.9	91	75 - 125	
Barium	324		228	589.0	116	75 - 125	
Beryllium	1.1		5.70	6.50	95	75 - 125	
Cadmium	0.89	U	5.70	5.00	88	75 - 125	
Calcium	2000		2280	4406	105	75 - 125	
Chromium	34.8		22.8	58.01	102	75 - 125	
Cobalt	15.2		57.0	70.03	96	75 - 125	
Copper	23.9		28.5	52.73	101	75 - 125	
Iron	36100		114	39250	2758	75 - 125	4
Magnesium	7840		2280	11120	143	75 - 125	N
Manganese	496		57.0	555.1	104	75 - 125	4
Nickel	18.4		57.0	74.97	99	75 - 125	
Potassium	3460		2280	6253	122	75 - 125	
Lead	7.5		57.0	61.57	95	75 - 125	
Antimony	4.5	U	57.0	27.10	48	75 - 125	N
Silver	2.2	U	5.70	5.80	102	75 - 125	
Selenium	4.5	U	228	204.0	90	75 - 125	
Sodium	183	J	2280	2337	94	75 - 125	
Thallium	4.5	U	228	218.5	96	75 - 125	
Vanadium	74.4		57.0	136.6	109	75 - 125	
Zinc	62.0		57.0	126.1	112	75 - 125	

Client: AKRF Inc

Job Number: 460-85120-1

Duplicate - Batch: 460-258455

Method: 6010C
Preparation: 3050B

Lab Sample ID:	460-85070-A-1-C DU ^4	Analysis Batch:	460-258821	Instrument ID:	ICP4
Client Matrix:	Solid	Prep Batch:	460-258455	Lab File ID:	258455.asc
Dilution:	4.0	Leach Batch:	N/A	Initial Weight/Volume:	1.04 g
Analysis Date:	10/28/2014 1147	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	10/27/2014 0715				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Aluminum	31300		32200	3	20	
Arsenic	3.4	U	1.01	NC	20	J
Barium	324		330.8	2	20	
Beryllium	1.1		1.13	3	20	
Cadmium	0.89	U	0.93	NC	20	U
Calcium	2000		2033	1	20	
Chromium	34.8		35.50	2	20	
Cobalt	15.2		15.45	2	20	
Copper	23.9		24.40	2	20	
Iron	36100		36780	2	20	
Magnesium	7840		7971	2	20	
Manganese	496		503.9	2	20	
Nickel	18.4		18.79	2	20	
Potassium	3460		3557	3	20	
Lead	7.5		8.21	9	20	
Antimony	4.5	U	4.6	NC	20	U
Silver	2.2	U	2.3	NC	20	U
Selenium	4.5	U	4.6	NC	20	U
Sodium	183	J	190.8	4	20	J
Thallium	4.5	U	4.6	NC	20	U
Vanadium	74.4		75.65	2	20	
Zinc	62.0		62.94	2	20	

Client: AKRF Inc

Job Number: 460-85120-1

Method Blank - Batch: 460-258720

Method: 6010C
Preparation: 3010A
Dissolved

Lab Sample ID:	MB 460-258718/1-B	Analysis Batch:	460-258821	Instrument ID:	ICP4
Client Matrix:	Water	Prep Batch:	460-258720	Lab File ID:	258455.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	10/28/2014 1919	Units:	ug/L	Final Weight/Volume:	100 mL
Prep Date:	10/28/2014 0929				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	200	U	73.6	200
Arsenic	15.0	U	4.3	15.0
Barium	200	U	6.5	200
Beryllium	2.0	U	1.1	2.0
Cadmium	4.0	U	1.2	4.0
Calcium	5000	U	416	5000
Chromium	10.0	U	4.6	10.0
Cobalt	50.0	U	3.8	50.0
Copper	25.0	U	6.2	25.0
Iron	150	U	51.4	150
Magnesium	5000	U	355	5000
Manganese	15.0	U	4.3	15.0
Nickel	40.0	U	7.8	40.0
Potassium	5000	U	281	5000
Lead	10.0	U	4.6	10.0
Antimony	20.0	U	5.4	20.0
Silver	10.0	U	1.9	10.0
Selenium	20.0	U	6.7	20.0
Sodium	5000	U	514	5000
Thallium	20.0	U	9.2	20.0
Vanadium	50.0	U	4.2	50.0
Zinc	30.0	U	5.9	30.0

Client: AKRF Inc

Job Number: 460-85120-1

Lab Control Sample - Batch: 460-258720

Method: 6010C
Preparation: 3010A

Lab Sample ID:	LCS 460-258720/2-A	Analysis Batch:	460-258821	Instrument ID:	ICP4
Client Matrix:	Water	Prep Batch:	460-258720	Lab File ID:	258455.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	10/28/2014 1923	Units:	ug/L	Final Weight/Volume:	100 mL
Prep Date:	10/28/2014 0929				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	2000	1994	100	80 - 120	
Arsenic	2000	1963	98	80 - 120	
Barium	2000	2055	103	80 - 120	
Beryllium	50.0	50.18	100	80 - 120	
Cadmium	50.0	50.66	101	80 - 120	
Calcium	20000	19710	99	80 - 120	
Chromium	200	199.9	100	80 - 120	
Cobalt	500	513.2	103	80 - 120	
Copper	250	235.1	94	80 - 120	
Iron	1000	909.3	91	80 - 120	
Magnesium	20000	19580	98	80 - 120	
Manganese	500	501.1	100	80 - 120	
Nickel	500	525.8	105	80 - 120	
Potassium	20000	19210	96	80 - 120	
Lead	500	522.6	105	80 - 120	
Antimony	500	495.5	99	80 - 120	
Silver	50.0	49.48	99	80 - 120	
Selenium	2000	1971	99	80 - 120	
Sodium	20000	20110	101	80 - 120	
Thallium	2000	2125	106	80 - 120	
Vanadium	500	489.2	98	80 - 120	
Zinc	500	514.6	103	80 - 120	

Client: AKRF Inc

Job Number: 460-85120-1

Matrix Spike - Batch: 460-258720

Method: 6010C
Preparation: 3010A
Dissolved

Lab Sample ID:	460-85173-B-1-D MS	Analysis Batch:	460-258821	Instrument ID:	ICP4
Client Matrix:	Water	Prep Batch:	460-258720	Lab File ID:	258455.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	10/28/2014 1949	Units:	ug/L	Final Weight/Volume:	100 mL
Prep Date:	10/28/2014 0929				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	200	U	2000	1978	99	75 - 125	
Arsenic	15.0	U	2000	1959	98	75 - 125	
Barium	30.3	J	2000	2072	102	75 - 125	
Beryllium	2.0	U	50.0	49.26	99	75 - 125	
Cadmium	4.0	U	50.0	50.39	101	75 - 125	
Calcium	7740		20000	26830	95	75 - 125	
Chromium	10.0	U	200	195.0	98	75 - 125	
Cobalt	50.0	U	500	507.6	102	75 - 125	
Copper	25.0	U	250	234.1	94	75 - 125	
Iron	150	U	1000	901.5	90	75 - 125	
Magnesium	2390	J	20000	21470	95	75 - 125	
Manganese	18.6		500	510.5	98	75 - 125	
Nickel	40.0	U	500	518.5	104	75 - 125	
Potassium	885	J	20000	19910	95	75 - 125	
Lead	10.0	U	500	514.2	103	75 - 125	
Antimony	20.0	U	500	493.1	99	75 - 125	
Silver	10.0	U	50.0	48.95	98	75 - 125	
Selenium	20.0	U	2000	1954	98	75 - 125	
Sodium	21500		20000	40430	95	75 - 125	
Thallium	20.0	U	2000	2103	105	75 - 125	
Vanadium	50.0	U	500	483.8	97	75 - 125	
Zinc	6.1	J	500	516.7	102	75 - 125	

Client: AKRF Inc

Job Number: 460-85120-1

Duplicate - Batch: 460-258720

Method: 6010C
Preparation: 3010A
Dissolved

Lab Sample ID:	460-85173-B-1-C DU	Analysis Batch:	460-258821	Instrument ID:	ICP4
Client Matrix:	Water	Prep Batch:	460-258720	Lab File ID:	258455.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	10/28/2014 1927	Units:	ug/L	Final Weight/Volume:	100 mL
Prep Date:	10/28/2014 0929				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Aluminum	200	U	200	NC	20	U
Arsenic	15.0	U	15.0	NC	20	U
Barium	30.3	J	30.30	0.2	20	J
Beryllium	2.0	U	2.0	NC	20	U
Cadmium	4.0	U	4.0	NC	20	U
Calcium	7740		7801	0.8	20	
Chromium	10.0	U	10.0	NC	20	U
Cobalt	50.0	U	50.0	NC	20	U
Copper	25.0	U	25.0	NC	20	U
Iron	150	U	150	NC	20	U
Magnesium	2390	J	2418	1	20	J
Manganese	18.6		18.73	0.6	20	
Nickel	40.0	U	40.0	NC	20	U
Potassium	885	J	873.9	1	20	J
Lead	10.0	U	10.0	NC	20	U
Antimony	20.0	U	20.0	NC	20	U
Silver	10.0	U	10.0	NC	20	U
Selenium	20.0	U	20.0	NC	20	U
Sodium	21500		21580	0.5	20	
Thallium	20.0	U	20.0	NC	20	U
Vanadium	50.0	U	50.0	NC	20	U
Zinc	6.1	J	6.21	2	20	J

Client: AKRF Inc

Job Number: 460-85120-1

Method Blank - Batch: 460-258367

Method: 7470A
Preparation: 7470A

Lab Sample ID:	MB 460-258367/1-A	Analysis Batch:	460-258398	Instrument ID:	LEEMAN5
Client Matrix:	Water	Prep Batch:	460-258367	Lab File ID:	258366.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	10/26/2014 1737	Units:	ug/L	Final Weight/Volume:	30 mL
Prep Date:	10/26/2014 1101				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	0.20	U	0.16	0.20

Lab Control Sample - Batch: 460-258367

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 460-258367/2-A	Analysis Batch:	460-258398	Instrument ID:	LEEMAN5
Client Matrix:	Water	Prep Batch:	460-258367	Lab File ID:	258366.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	10/26/2014 1739	Units:	ug/L	Final Weight/Volume:	30 mL
Prep Date:	10/26/2014 1101				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	1.00	0.963	96	80 - 120	

Matrix Spike - Batch: 460-258367

Method: 7470A
Preparation: 7470A

Lab Sample ID:	460-84748-H-10-D MS	Analysis Batch:	460-258398	Instrument ID:	LEEMAN5
Client Matrix:	Water	Prep Batch:	460-258367	Lab File ID:	258366.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	10/26/2014 1745	Units:	ug/L	Final Weight/Volume:	30 mL
Prep Date:	10/26/2014 1101				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.20	U	1.00	0.998	100	80 - 120	

Client: AKRF Inc

Job Number: 460-85120-1

Duplicate - Batch: 460-258367

Method: 7470A
Preparation: 7470A

Lab Sample ID:	460-84748-H-10-C DU	Analysis Batch:	460-258398	Instrument ID:	LEEMAN5
Client Matrix:	Water	Prep Batch:	460-258367	Lab File ID:	258366.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	10/26/2014 1743	Units:	ug/L	Final Weight/Volume:	30 mL
Prep Date:	10/26/2014 1101				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Mercury	0.20	U	0.20	NC	20	U

Client: AKRF Inc

Job Number: 460-85120-1

Method Blank - Batch: 460-258745

Method: 7470A
Preparation: 7470A
Dissolved

Lab Sample ID:	MB 460-258744/1-B	Analysis Batch:	460-258801	Instrument ID:	LEEMAN6
Client Matrix:	Water	Prep Batch:	460-258745	Lab File ID:	258745hg1.CSV
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	10/28/2014 1345	Units:	ug/L	Final Weight/Volume:	30 mL
Prep Date:	10/28/2014 1122				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	0.20	U	0.16	0.20

Lab Control Sample - Batch: 460-258745

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 460-258745/2-A	Analysis Batch:	460-258801	Instrument ID:	LEEMAN6
Client Matrix:	Water	Prep Batch:	460-258745	Lab File ID:	258745hg1.CSV
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	10/28/2014 1346	Units:	ug/L	Final Weight/Volume:	30 mL
Prep Date:	10/28/2014 1122				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	1.00	0.982	98	80 - 120	

Matrix Spike - Batch: 460-258745

Method: 7470A
Preparation: 7470A
Dissolved

Lab Sample ID:	460-85128-G-3-B MS	Analysis Batch:	460-258801	Instrument ID:	LEEMAN6
Client Matrix:	Water	Prep Batch:	460-258745	Lab File ID:	258745hg1.CSV
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	10/28/2014 1352	Units:	ug/L	Final Weight/Volume:	30 mL
Prep Date:	10/28/2014 1122				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.20	U	1.00	0.950	95	80 - 120	

Client: AKRF Inc

Job Number: 460-85120-1

Duplicate - Batch: 460-258745

Method: 7470A
Preparation: 7470A
Dissolved

Lab Sample ID:	460-85128-A-3-A DU	Analysis Batch:	460-258801	Instrument ID:	LEEMAN6
Client Matrix:	Water	Prep Batch:	460-258745	Lab File ID:	258745hg1.CSV
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	10/28/2014 1350	Units:	ug/L	Final Weight/Volume:	30 mL
Prep Date:	10/28/2014 1122				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Mercury	0.20	U	0.20	NC	20	U

Client: AKRF Inc

Job Number: 460-85120-1

Method Blank - Batch: 460-258285

Method: 7471B
Preparation: 7471B

Lab Sample ID:	MB 460-258285/1-A	Analysis Batch:	460-258332	Instrument ID:	LEEMAN5
Client Matrix:	Solid	Prep Batch:	460-258285	Lab File ID:	258285.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	10/25/2014 1628	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	10/25/2014 1215				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	0.017	U	0.012	0.017

LCS-Certified Reference Material - Batch: 460-258285

Method: 7471B
Preparation: 7471B

Lab Sample ID:	LCSSRM 460-258285/2-A ^5	Analysis Batch:	460-258332	Instrument ID:	LEEMAN5
Client Matrix:	Solid	Prep Batch:	460-258285	Lab File ID:	258285.PRN
Dilution:	50	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	10/25/2014 1629	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	10/25/2014 1215				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	12.9	11.92	92.4	72.9 - 127.1	

Matrix Spike - Batch: 460-258285

Method: 7471B
Preparation: 7471B

Lab Sample ID:	460-84931-A-1-L MS	Analysis Batch:	460-258332	Instrument ID:	LEEMAN5
Client Matrix:	Solid	Prep Batch:	460-258285	Lab File ID:	258285.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	10/25/2014 1636	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	10/25/2014 1215				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.018	U	0.0871	0.0949	109	80 - 120	

Client: AKRF Inc

Job Number: 460-85120-1

Duplicate - Batch: 460-258285

Method: 7471B
Preparation: 7471B

Lab Sample ID:	460-84931-A-1-K DU	Analysis Batch:	460-258332	Instrument ID:	LEEMAN5
Client Matrix:	Solid	Prep Batch:	460-258285	Lab File ID:	258285.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	10/25/2014 1634	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	10/25/2014 1215				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Mercury	0.018	U	0.018	NC	20	U

Client: AKRF Inc

Job Number: 460-85120-1

Method Blank - Batch: 460-258407

Method: 7471B
Preparation: 7471B

Lab Sample ID:	MB 460-258407/10-A	Analysis Batch:	460-258493	Instrument ID:	LEEMAN5
Client Matrix:	Solid	Prep Batch:	460-258407	Lab File ID:	258407HG1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	10/27/2014 0807	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	10/27/2014 0314				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	0.017	U	0.012	0.017

LCS-Certified Reference Material - Batch: 460-258407

Method: 7471B
Preparation: 7471B

Lab Sample ID:	LCSSRM 460-258407/11-A	Analysis Batch:	460-258493	Instrument ID:	LEEMAN5
Client Matrix:	Solid	Prep Batch:	460-258407	Lab File ID:	258407HG1.PRN
Dilution:	20	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	10/27/2014 0809	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	10/27/2014 0314				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	12.9	12.62	97.8	72.9 - 127.1	

Matrix Spike - Batch: 460-258407

Method: 7471B
Preparation: 7471B

Lab Sample ID:	460-85021-C-1-M MS	Analysis Batch:	460-258493	Instrument ID:	LEEMAN5
Client Matrix:	Solid	Prep Batch:	460-258407	Lab File ID:	258407HG1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.67 g
Analysis Date:	10/27/2014 0815	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	10/27/2014 0314				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.017	U	0.0819	0.0909	111	80 - 120	

Client: AKRF Inc

Job Number: 460-85120-1

Duplicate - Batch: 460-258407

Method: 7471B
Preparation: 7471B

Lab Sample ID:	460-85021-C-1-L DU	Analysis Batch:	460-258493	Instrument ID:	LEEMAN5
Client Matrix:	Solid	Prep Batch:	460-258407	Lab File ID:	258407HG1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.67 g
Analysis Date:	10/27/2014 0813	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	10/27/2014 0314				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Mercury	0.017	U	0.017	NC	20	U

Client: AKRF Inc

Job Number: 460-85120-1

Duplicate - Batch: 460-258301

Method: Moisture
Preparation: N/A

Lab Sample ID:	460-85137-B-2 DU	Analysis Batch:	460-258301	Instrument ID:	No Equipment Assigned
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	10/25/2014 1330	Units:	%	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Moisture	25.2	22.6	11	20	
Percent Solids	74.8	77.4	3	20	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

777 New Durham Road
Edison, New Jersey 08817
Phone: (732) 549-3900 Fax: (732) 549-3679

CHAIN OF CUSTODY

460-85120 Chain of Custody

10/31/2014

Name (for report and invoice): Stephen Malinowski	Samplers Name (Printed): Mark Jepsen	Site/Project Identification: 77 Commercial St.
Company: AKRF, Inc.	P. O. #: 12015	State (Location of site): NJ: [ ] NY: [X] Other:
		Regulatory Program:
Address: 440 Park Ave S, 7th Fl	Analysis Turnaround Time: Standard [X] (7 days)	
City: New York State: NY	Rush Charges Authorized For: 2 Week [ ] 1 Week [ ] Other [ ]	
Phone: (631-574-3724 Fax:		

ANALYSIS REQUESTED (ENTER "X" BELOW TO INDICATE REQUEST)

LAB USE ONLY
Project No:
Job No: 85120

Sample Identification	Date	Time	Matrix	No. of Cont.	8082A	6010C (4/14)	7471B	8081B	8270D	8260C						Sample Numbers
SB-5 (1-2')	10/21/14	945	Soil	5	X	X	X	X	X	X						-1
SB-5 (6-7')		950			X	X	X	X	X	X						-2
SB-16 (1-2')		1020			X	X	X	X	X	X						-3
SB-16 (7-8')		1030			X	X	X	X	X	X						-4
SB-15 (1-2')		1045			X	X	X	X	X	X						-5
SB-15 (5-6')		1050			X	X	X	X	X	X						-6
SB-14 (1-2')		1120			X	X	X	X	X	X						-7
SB-14 (6-7')		1130			X	X	X	X	X	X						-8
SB-13 (1-2')		1145			X	X	X	X	X	X						-9
SB-13 (3-4')		1150			X	X	X	X	X	X						-10
Preservation Used: 1 = ICE, 2 = HCl, 3 = H_2SO_4, 4 = HNO_3, 5 = NaOH — Soil:					1	1	1	1	1	1						
6 = Other _____, 7 = Other _____ — Water:																

Special Instructions _____ Water Metals Filtered (Yes/No)? _____

Relinquished by	Company	Date / Time	Received by	Company
Mark Jepsen	AKRF, Inc.	10/24/14 15:15	1)	T. H.
Relinquished by 2)	Company T. H.	Date / Time 10/24/14 18:20	Received by 2)	Company T. H.
Relinquished by 3)	Company	Date / Time	Received by 3)	Company 10/24/2014
Relinquished by 4)	Company	Date / Time	Received by 4)	Company 18:20

SHORT HOLD

Laboratory Certifications: New Jersey (12028), New York (11452), Pennsylvania (68-522), Connecticut (PH-0200), Rhode Island (132).

TAL - 0016 (0408)

Massachusetts (M-NJ312), North Carolina (No. 578) 1.5/3.6 1.9/3.4 IRB JAN 0C1

777 New Durham Road
Edison, New Jersey 08817
Phone: (732) 549-3900 Fax: (732) 549-3679

TestAmerica
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CHAIN OF CUSTODY / ANALYSIS REQUEST

Name (for report and invoice): Stephen Malinowski
Company: AKRF, Inc.
Address: 440 Park Ave S, 7th Fl.
City: New York State: NY
Phone: 631-574-3724 Fax:

Samplers Name (Printed): Mark Jepsen
P. O. #: 12015

Site/Project Identification: 77 Commercial St
State (Location of site): NJ: ☐ NY: ☒ Other:
Regulatory Program:

Analysis Turnaround Time
Standard ☒ (7 days)
Rush Chrages Authorized For:
2 Week ☐
1 Week ☐
Other ☐ _____

LAB USE ONLY
Project No:
Job No: 85720

Sample Identification	Date	Time	Matrix	No. of. Cont.	8082A	6010C (4 Hg)	7471B	8081B	8270D	8260C	6010C (4 Hg)					Sample Numbers
SB-11 (1-2')	10/24/14	1300	Soil	5	X	X	X	X	X	X						-11
SB-11 (5-6')		1305	Soil	5	X	X	X	X	X	X						-12
SB-8 (1-2')		1330	Soil	5	X	X	X	X	X	X						-13
SB-8 (9-10')		1346	Soil	5	X	X	X	X	X	X						-14
TB2		1400	Water	3						X						-15
FB	10/24/14	1430	Water	7		X			X	X	X					-16

Preservation Used: 1 = ICE, 2 = HCl, 3 = H_2SO_4, 4 = HNO_3, 5 = NaOH
6 = Other _____, 7 = Other _____

	8082A	6010C (4 Hg)	7471B	8081B	8270D	8260C	6010C (4 Hg)
Soil:	1	1	1	1	1	1	
Water:		1			1	2	4

Special Instructions

Water Metals Filtered (Yes/No)? _____

Relinquished by	Company	Date / Time	Received by	Company
Mark Jepsen	AKRF, Inc	10/24/14 6:15	1)	
Relinquished by 2)	Company	Date / Time	Received by 2)	Company
		10/24/14 18:20		
Relinquished by 3)	Company	Date / Time	Received by 3)	Company 10/24/2014
Relinquished by 4)	Company	Date / Time	Received by 4)	Company 18:20

Laboratory Certifications: New Jersey (12028), New York (11452), Pennsylvania (68-522), Connecticut (PH-0200), Rhode Island (132). TAL - 0016 (0408)

Massachusetts (M-NJ312), North Carolina (No. 578) 1.5/3.6 1.9/3.9 thru 5 NOCs.

TestAmerica Edison
Receipt Temperature and pH Log

Job Number: 85120

Number of Coolers: 2 IR Gun # 5

Cooler Temperatures

	RAW	CORRECTED		RAW	CORRECTED		RAW	CORRECTED
Cooler #1:	1.6 °C	2.6 °C	Cooler #4:	°C	°C	Cooler #7:	°C	°C
Cooler #2:	1.9 °C	2.9 °C	Cooler #5:	°C	°C	Cooler #8:	°C	°C
Cooler #3:	°C	°C	Cooler #6:	°C	°C	Cooler #9:	°C	°C

TALS Sample Number	Ammonia (pH<2)	COD (pH<2)	Nitrate Nitrite (pH<2)	Metals* (pH<2)	Hardness (pH<2)	Pest (pH 5-9)	EPH or QAM (pH<2)	Phenols (pH<2)	Sulfide (pH>9)	TKN (pH<2)	TOC (pH<2)	Total Cyanide (pH>12)	Total Phos (pH<2)	Other	Other
16				✓											

If pH adjustments are required record the information below:

Sample No(s). adjusted: NA

Preservative Name/Conc.: NA Volume of Preservative used (ml): NA

Lot # of Preservative(s): NA Expiration Date: NA

The appropriate Project Manager and Department Manager should be notified about the samples which were pH adjusted.

** Samples for Metal analysis which are out of compliance must be acidified at least 24 hours prior to analysis.*

Initials: ~ Date: 10/24/15

Login Sample Receipt Checklist

Client: AKRF Inc

Job Number: 460-85120-1

Login Number: 85120

List Source: TestAmerica Edison

List Number: 1

Creator: Rivera, Kenneth

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.6°C, 3.9°C, IR #5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	No analysis requiring residual chlorine check assigned.

APPENDIX I

LABORATORY ANALYTICAL REPORTS FOR SOIL GAS SAMPLES

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
Tel: (865)291-3000

TestAmerica Job ID: 140-2214-1
Client Project/Site: 77 Commercial Street, Brooklyn, NY

For:
AKRF Inc
440 Park Avenue South
7th Floor
New York, New York 10016

Attn: Stephen Malinowski

Authorized for release by:
11/4/2014 9:14:42 AM

Jamie McKinney, Senior Project Manager
(865)291-3000
jamie.mckinney@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: AKRF Inc
Project/Site: 77 Commercial Street, Brooklyn, NY

TestAmerica Job ID: 140-2214-1

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
E	Result exceeded calibration range.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 140-2214-1

Laboratory: TestAmerica Knoxville

Narrative

Job Narrative
140-2214-1

Comments
No additional comments.

Receipt
The samples were received on 10/24/2014 10:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice.

Air - GC/MS VOA
Method(s) TO 15 LL, TO-15: Can Certification Comments:
Due to the large number of analytes in the CCV, there is a high probability that one or more analytes will recover outside acceptance limits. The laboratory's SOP allows for several analytes to recover outside criteria for this method when analyzing for a full list. The CCV associated with the can cleaning batches had analytes outside control limits. These results have been reported and qualified.

Method(s) TO 14A, TO 15 LL, TO-14A, TO-15: EPA methods TO-14A and TO-15 specify the use of humidified “zero air” as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of “zero air” by TestAmerica Knoxville.

Method(s) TO 15 LL, TO-15: The continuing calibration verification (CCV) associated with batch 1876 exhibited % difference of > 30% for the following analyte(s) 1.2.4-trichlorobenzene, however the results were within the LCS acceptance limits. The EPA method requires that all target analytes in the continuing calibration verification standard be within 30% difference from the initial calibration. According to the laboratory standard operating procedure, the continuing calibration is acceptable if it meets the laboratory control sample acceptance criteria.

Method(s) TO 15 LL, TO-14A, TO-15: This report includes canister certification data for the batch certified and/or individually certified canisters used to collect samples as well as for any canisters used for dilution of those samples. All of the canisters used for sample collection or sample dilution for this job were certified to be clean to the levels listed on the results page. Please note that results for individually certified canisters that were not used for sample collection or sample dilution may also be included in the report because these canisters were in the same cleaning batch as the canisters used for this project. Since these canisters were not used for this job, the results have no bearing on the sample results.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: AKRF Inc
Project/Site: 77 Commercial Street, Brooklyn, NY

TestAmerica Job ID: 140-2214-1

Client Sample ID: SV-3 — Lab Sample ID: 140-2214-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	2.2		0.80	0.25	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.52	J	0.80	0.26	ppb v/v	1		TO 15 LL	Total/NA
2,2,4-Trimethylpentane	0.32	J	2.0	0.16	ppb v/v	1		TO 15 LL	Total/NA
4-Ethyltoluene	0.67	J	1.6	0.26	ppb v/v	1		TO 15 LL	Total/NA
Acetone	23		20	5.4	ppb v/v	1		TO 15 LL	Total/NA
Benzene	1.7		0.80	0.23	ppb v/v	1		TO 15 LL	Total/NA
Carbon disulfide	11	B	2.0	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chloromethane	1.2	J B	2.0	0.64	ppb v/v	1		TO 15 LL	Total/NA
Cyclohexane	10		2.0	0.16	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.60	J	0.80	0.27	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	2.5		0.80	0.27	ppb v/v	1		TO 15 LL	Total/NA
methyl isobutyl ketone	0.67	J	2.0	0.18	ppb v/v	1		TO 15 LL	Total/NA
m-Xylene & p-Xylene	10		0.80	0.53	ppb v/v	1		TO 15 LL	Total/NA
n-Butane	30		1.6	0.73	ppb v/v	1		TO 15 LL	Total/NA
n-Heptane	2.9		2.0	0.19	ppb v/v	1		TO 15 LL	Total/NA
n-Hexane	28	B	2.0	0.13	ppb v/v	1		TO 15 LL	Total/NA
n-Propylbenzene	0.38	J	1.6	0.22	ppb v/v	1		TO 15 LL	Total/NA
o-Xylene	3.5		0.80	0.24	ppb v/v	1		TO 15 LL	Total/NA
tert-Butyl alcohol	0.87	J	8.0	0.15	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	4.4		0.80	0.16	ppb v/v	1		TO 15 LL	Total/NA
Toluene	17		1.2	1.2	ppb v/v	1		TO 15 LL	Total/NA
Trichlorofluoromethane	0.18	J	0.80	0.10	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	14		1.6	0.24	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	11		3.9	1.2	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	2.5	J	3.9	1.3	ug/m3	1		TO 15 LL	Total/NA
2,2,4-Trimethylpentane	1.5	J	9.3	0.75	ug/m3	1		TO 15 LL	Total/NA
4-Ethyltoluene	3.3	J	7.9	1.3	ug/m3	1		TO 15 LL	Total/NA
Acetone	54		48	13	ug/m3	1		TO 15 LL	Total/NA
Benzene	5.4		2.6	0.73	ug/m3	1		TO 15 LL	Total/NA
Carbon disulfide	33	B	6.2	0.37	ug/m3	1		TO 15 LL	Total/NA
Chloromethane	2.5	J B	4.1	1.3	ug/m3	1		TO 15 LL	Total/NA
Cyclohexane	35		6.9	0.55	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	3.0	J	4.0	1.3	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	11		3.5	1.2	ug/m3	1		TO 15 LL	Total/NA
methyl isobutyl ketone	2.7	J	8.2	0.74	ug/m3	1		TO 15 LL	Total/NA
m-Xylene & p-Xylene	45		3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
n-Butane	72		3.8	1.7	ug/m3	1		TO 15 LL	Total/NA
n-Heptane	12		8.2	0.78	ug/m3	1		TO 15 LL	Total/NA
n-Hexane	97	B	7.0	0.46	ug/m3	1		TO 15 LL	Total/NA
n-Propylbenzene	1.8	J	7.9	1.1	ug/m3	1		TO 15 LL	Total/NA
o-Xylene	15		3.5	1.0	ug/m3	1		TO 15 LL	Total/NA
tert-Butyl alcohol	2.6	J	24	0.45	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	30		5.4	1.1	ug/m3	1		TO 15 LL	Total/NA
Toluene	63		4.5	4.5	ug/m3	1		TO 15 LL	Total/NA
Trichlorofluoromethane	1.0	J	4.5	0.56	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	59		6.9	1.0	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-6 — Lab Sample ID: 140-2214-2

This Detection Summary does not include radiochemical test results.

Client Sample ID: SV-6 (Continued)

Lab Sample ID: 140-2214-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	2.6		0.80	0.25	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.68	J	0.80	0.26	ppb v/v	1		TO 15 LL	Total/NA
2,2,4-Trimethylpentane	0.39	J	2.0	0.16	ppb v/v	1		TO 15 LL	Total/NA
4-Ethyltoluene	0.84	J	1.6	0.26	ppb v/v	1		TO 15 LL	Total/NA
4-Isopropyltoluene	0.87		0.80	0.23	ppb v/v	1		TO 15 LL	Total/NA
Acetone	16	J	20	5.4	ppb v/v	1		TO 15 LL	Total/NA
Benzene	7.5		0.80	0.23	ppb v/v	1		TO 15 LL	Total/NA
Carbon disulfide	7.1	B	2.0	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.30	J	0.80	0.15	ppb v/v	1		TO 15 LL	Total/NA
Chloromethane	0.89	J B	2.0	0.64	ppb v/v	1		TO 15 LL	Total/NA
Cyclohexane	6.4		2.0	0.16	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.62	J	0.80	0.27	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	2.4		0.80	0.27	ppb v/v	1		TO 15 LL	Total/NA
Methyl Ethyl Ketone	2.0	J	4.0	0.80	ppb v/v	1		TO 15 LL	Total/NA
methyl isobutyl ketone	0.84	J	2.0	0.18	ppb v/v	1		TO 15 LL	Total/NA
m-Xylene & p-Xylene	11		0.80	0.53	ppb v/v	1		TO 15 LL	Total/NA
n-Butane	34		1.6	0.73	ppb v/v	1		TO 15 LL	Total/NA
n-Butylbenzene	0.19	J	1.6	0.18	ppb v/v	1		TO 15 LL	Total/NA
n-Heptane	2.6		2.0	0.19	ppb v/v	1		TO 15 LL	Total/NA
n-Hexane	3.8	B	2.0	0.13	ppb v/v	1		TO 15 LL	Total/NA
n-Propylbenzene	0.55	J	1.6	0.22	ppb v/v	1		TO 15 LL	Total/NA
o-Xylene	3.7		0.80	0.24	ppb v/v	1		TO 15 LL	Total/NA
tert-Butyl alcohol	1.1	J	8.0	0.15	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	5.9		0.80	0.16	ppb v/v	1		TO 15 LL	Total/NA
Toluene	11		1.2	1.2	ppb v/v	1		TO 15 LL	Total/NA
Trichlorofluoromethane	0.35	J	0.80	0.10	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	15		1.6	0.24	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	13		3.9	1.2	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	3.3	J	3.9	1.3	ug/m3	1		TO 15 LL	Total/NA
2,2,4-Trimethylpentane	1.8	J	9.3	0.75	ug/m3	1		TO 15 LL	Total/NA
4-Ethyltoluene	4.1	J	7.9	1.3	ug/m3	1		TO 15 LL	Total/NA
4-Isopropyltoluene	4.8		4.4	1.3	ug/m3	1		TO 15 LL	Total/NA
Acetone	39	J	48	13	ug/m3	1		TO 15 LL	Total/NA
Benzene	24		2.6	0.73	ug/m3	1		TO 15 LL	Total/NA
Carbon disulfide	22	B	6.2	0.37	ug/m3	1		TO 15 LL	Total/NA
Chloroform	1.4	J	3.9	0.73	ug/m3	1		TO 15 LL	Total/NA
Chloromethane	1.8	J B	4.1	1.3	ug/m3	1		TO 15 LL	Total/NA
Cyclohexane	22		6.9	0.55	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	3.1	J	4.0	1.3	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	10		3.5	1.2	ug/m3	1		TO 15 LL	Total/NA
Methyl Ethyl Ketone	5.8	J	12	2.4	ug/m3	1		TO 15 LL	Total/NA
methyl isobutyl ketone	3.4	J	8.2	0.74	ug/m3	1		TO 15 LL	Total/NA
m-Xylene & p-Xylene	49		3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
n-Butane	80		3.8	1.7	ug/m3	1		TO 15 LL	Total/NA
n-Butylbenzene	1.0	J	8.8	0.99	ug/m3	1		TO 15 LL	Total/NA
n-Heptane	11		8.2	0.78	ug/m3	1		TO 15 LL	Total/NA
n-Hexane	13	B	7.0	0.46	ug/m3	1		TO 15 LL	Total/NA
n-Propylbenzene	2.7	J	7.9	1.1	ug/m3	1		TO 15 LL	Total/NA
o-Xylene	16		3.5	1.0	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: SV-6 (Continued) — Lab Sample ID: 140-2214-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
tert-Butyl alcohol	3.3	J	24	0.45	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	40		5.4	1.1	ug/m3	1		TO 15 LL	Total/NA
Toluene	42		4.5	4.5	ug/m3	1		TO 15 LL	Total/NA
Trichlorofluoromethane	2.0	J	4.5	0.56	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	64		6.9	1.0	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-4 — Lab Sample ID: 140-2214-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	6.2		0.80	0.25	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	1.6		0.80	0.26	ppb v/v	1		TO 15 LL	Total/NA
4-Ethyltoluene	2.5		1.6	0.26	ppb v/v	1		TO 15 LL	Total/NA
4-Isopropyltoluene	0.72	J	0.80	0.23	ppb v/v	1		TO 15 LL	Total/NA
Benzene	3.8		0.80	0.23	ppb v/v	1		TO 15 LL	Total/NA
Carbon disulfide	7.8	B	2.0	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	1.2		0.80	0.15	ppb v/v	1		TO 15 LL	Total/NA
Chloromethane	1.2	J B	2.0	0.64	ppb v/v	1		TO 15 LL	Total/NA
Cumene	0.43	J	1.6	0.24	ppb v/v	1		TO 15 LL	Total/NA
Cyclohexane	18		2.0	0.16	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.74	J	0.80	0.27	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	4.0		0.80	0.27	ppb v/v	1		TO 15 LL	Total/NA
Methyl Butyl Ketone (2-Hexanone)	0.59	J	2.0	0.23	ppb v/v	1		TO 15 LL	Total/NA
methyl isobutyl ketone	3.4		2.0	0.18	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.3	J B	2.0	1.3	ppb v/v	1		TO 15 LL	Total/NA
m-Xylene & p-Xylene	18		0.80	0.53	ppb v/v	1		TO 15 LL	Total/NA
n-Butane	660	E	1.6	0.73	ppb v/v	1		TO 15 LL	Total/NA
n-Butylbenzene	0.59	J	1.6	0.18	ppb v/v	1		TO 15 LL	Total/NA
n-Heptane	20		2.0	0.19	ppb v/v	1		TO 15 LL	Total/NA
n-Hexane	64	B	2.0	0.13	ppb v/v	1		TO 15 LL	Total/NA
n-Propylbenzene	1.2	J	1.6	0.22	ppb v/v	1		TO 15 LL	Total/NA
o-Xylene	8.0		0.80	0.24	ppb v/v	1		TO 15 LL	Total/NA
Styrene	0.76	J	0.80	0.23	ppb v/v	1		TO 15 LL	Total/NA
tert-Butyl alcohol	2.4	J	8.0	0.15	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	3.7		0.80	0.16	ppb v/v	1		TO 15 LL	Total/NA
Toluene	11		1.2	1.2	ppb v/v	1		TO 15 LL	Total/NA
Trichlorofluoromethane	0.48	J	0.80	0.10	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	26		1.6	0.24	ppb v/v	1		TO 15 LL	Total/NA
n-Butane - DL	540		7.3	3.3	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	30		3.9	1.2	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	7.7		3.9	1.3	ug/m3	1		TO 15 LL	Total/NA
4-Ethyltoluene	12		7.9	1.3	ug/m3	1		TO 15 LL	Total/NA
4-Isopropyltoluene	4.0	J	4.4	1.3	ug/m3	1		TO 15 LL	Total/NA
Benzene	12		2.6	0.73	ug/m3	1		TO 15 LL	Total/NA
Carbon disulfide	24	B	6.2	0.37	ug/m3	1		TO 15 LL	Total/NA
Chloroform	5.7		3.9	0.73	ug/m3	1		TO 15 LL	Total/NA
Chloromethane	2.5	J B	4.1	1.3	ug/m3	1		TO 15 LL	Total/NA
Cumene	2.1	J	7.9	1.2	ug/m3	1		TO 15 LL	Total/NA
Cyclohexane	62		6.9	0.55	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	3.7	J	4.0	1.3	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: AKRF Inc
Project/Site: 77 Commercial Street, Brooklyn, NY

TestAmerica Job ID: 140-2214-1

Client Sample ID: SV-4 (Continued)

Lab Sample ID: 140-2214-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ethylbenzene	17		3.5	1.2	ug/m3	1		TO 15 LL	Total/NA
Methyl Butyl Ketone (2-Hexanone)	2.4	J	8.2	0.94	ug/m3	1		TO 15 LL	Total/NA
methyl isobutyl ketone	14		8.2	0.74	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	4.6	J B	6.9	4.5	ug/m3	1		TO 15 LL	Total/NA
m-Xylene & p-Xylene	78		3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
n-Butane	1600	E	3.8	1.7	ug/m3	1		TO 15 LL	Total/NA
n-Butylbenzene	3.3	J	8.8	0.99	ug/m3	1		TO 15 LL	Total/NA
n-Heptane	81		8.2	0.78	ug/m3	1		TO 15 LL	Total/NA
n-Hexane	230	B	7.0	0.46	ug/m3	1		TO 15 LL	Total/NA
n-Propylbenzene	6.0	J	7.9	1.1	ug/m3	1		TO 15 LL	Total/NA
o-Xylene	35		3.5	1.0	ug/m3	1		TO 15 LL	Total/NA
Styrene	3.2	J	3.4	0.98	ug/m3	1		TO 15 LL	Total/NA
tert-Butyl alcohol	7.1	J	24	0.45	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	25		5.4	1.1	ug/m3	1		TO 15 LL	Total/NA
Toluene	42		4.5	4.5	ug/m3	1		TO 15 LL	Total/NA
Trichlorofluoromethane	2.7	J	4.5	0.56	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	110		6.9	1.0	ug/m3	1		TO 15 LL	Total/NA
n-Butane - DL	1300		17	7.9	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: AKRF Inc
Project/Site: 77 Commercial Street, Brooklyn, NY

TestAmerica Job ID: 140-2214-1

Client Sample ID: SV-3

Lab Sample ID: 140-2214-1

Date Collected: 10/23/14 13:05
Matrix: Air
Date Received: 10/24/14 10:20
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.80	0.12	ppb v/v			10/30/14 21:01	1
1,1,2,2-Tetrachloroethane	ND		0.80	0.24	ppb v/v			10/30/14 21:01	1
1,1,2-Trichloroethane	ND		0.80	0.21	ppb v/v			10/30/14 21:01	1
1,1-Dichloroethane	ND		0.80	0.10	ppb v/v			10/30/14 21:01	1
1,1-Dichloroethene	ND		0.80	0.14	ppb v/v			10/30/14 21:01	1
1,2,4-Trichlorobenzene	ND		4.0	0.39	ppb v/v			10/30/14 21:01	1
1,2,4-Trimethylbenzene	**2.2**		0.80	0.25	ppb v/v			10/30/14 21:01	1
1,2-Dibromoethane (EDB)	ND		0.80	0.18	ppb v/v			10/30/14 21:01	1
1,2-Dichlorobenzene	ND		0.80	0.28	ppb v/v			10/30/14 21:01	1
1,2-Dichloroethane	ND		0.80	0.19	ppb v/v			10/30/14 21:01	1
1,2-Dichloroethene, Total	ND		1.6	0.20	ppb v/v			10/30/14 21:01	1
1,2-Dichloropropane	ND		0.80	0.21	ppb v/v			10/30/14 21:01	1
1,2-Dichlorotetrafluoroethane	ND		0.80	0.13	ppb v/v			10/30/14 21:01	1
1,3,5-Trimethylbenzene	**0.52**	**J**	0.80	0.26	ppb v/v			10/30/14 21:01	1
1,3-Butadiene	ND		1.6	0.25	ppb v/v			10/30/14 21:01	1
1,3-Dichlorobenzene	ND		0.80	0.26	ppb v/v			10/30/14 21:01	1
1,4-Dichlorobenzene	ND		0.80	0.26	ppb v/v			10/30/14 21:01	1
1,4-Dioxane	ND		2.0	0.32	ppb v/v			10/30/14 21:01	1
2,2,4-Trimethylpentane	**0.32**	**J**	2.0	0.16	ppb v/v			10/30/14 21:01	1
2-Chlorotoluene	ND		1.6	0.25	ppb v/v			10/30/14 21:01	1
3-Chloropropene	ND		0.80	0.19	ppb v/v			10/30/14 21:01	1
4-Ethyltoluene	**0.67**	**J**	1.6	0.26	ppb v/v			10/30/14 21:01	1
4-Isopropyltoluene	ND		0.80	0.23	ppb v/v			10/30/14 21:01	1
Acetone	**23**		20	5.4	ppb v/v			10/30/14 21:01	1
Benzene	**1.7**		0.80	0.23	ppb v/v			10/30/14 21:01	1
Benzyl chloride	ND		1.6	0.31	ppb v/v			10/30/14 21:01	1
Bromodichloromethane	ND		0.80	0.18	ppb v/v			10/30/14 21:01	1
Bromoethene(Vinyl Bromide)	ND		0.80	0.14	ppb v/v			10/30/14 21:01	1
Bromoform	ND		0.80	0.19	ppb v/v			10/30/14 21:01	1
Bromomethane	ND		0.80	0.13	ppb v/v			10/30/14 21:01	1
Carbon disulfide	**11**	**B**	2.0	0.12	ppb v/v			10/30/14 21:01	1
Carbon tetrachloride	ND		0.80	0.15	ppb v/v			10/30/14 21:01	1
Chlorobenzene	ND		0.80	0.20	ppb v/v			10/30/14 21:01	1
Chloroethane	ND		0.80	0.14	ppb v/v			10/30/14 21:01	1
Chloroform	ND		0.80	0.15	ppb v/v			10/30/14 21:01	1
Chloromethane	**1.2**	**J B**	2.0	0.64	ppb v/v			10/30/14 21:01	1
cis-1,2-Dichloroethene	ND		0.80	0.24	ppb v/v			10/30/14 21:01	1
cis-1,3-Dichloropropene	ND		0.80	0.29	ppb v/v			10/30/14 21:01	1
Cumene	ND		1.6	0.24	ppb v/v			10/30/14 21:01	1
Cyclohexane	**10**		2.0	0.16	ppb v/v			10/30/14 21:01	1
Dibromochloromethane	ND		0.80	0.17	ppb v/v			10/30/14 21:01	1
Dichlorodifluoromethane	**0.60**	**J**	0.80	0.27	ppb v/v			10/30/14 21:01	1
Ethylbenzene	**2.5**		0.80	0.27	ppb v/v			10/30/14 21:01	1
Freon 22	ND		0.80	0.15	ppb v/v			10/30/14 21:01	1
Freon TF	ND		0.80	0.12	ppb v/v			10/30/14 21:01	1
Hexachlorobutadiene	ND		4.0	0.49	ppb v/v			10/30/14 21:01	1
Isopropyl alcohol	ND		8.0	0.94	ppb v/v			10/30/14 21:01	1
Methyl Butyl Ketone (2-Hexanone)	ND		2.0	0.23	ppb v/v			10/30/14 21:01	1

Client Sample ID: SV-3

Lab Sample ID: 140-2214-1

Date Collected: 10/23/14 13:05

Matrix: Air

Date Received: 10/24/14 10:20

Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Ethyl Ketone	ND		4.0	0.80	ppb v/v			10/30/14 21:01	1
methyl isobutyl ketone	**0.67**	**J**	2.0	0.18	ppb v/v			10/30/14 21:01	1
Methyl methacrylate	ND		2.0	0.32	ppb v/v			10/30/14 21:01	1
Methyl tert-butyl ether	ND		4.0	0.68	ppb v/v			10/30/14 21:01	1
Methylene Chloride	ND		2.0	1.3	ppb v/v			10/30/14 21:01	1
m-Xylene & p-Xylene	**10**		0.80	0.53	ppb v/v			10/30/14 21:01	1
Naphthalene	ND		2.0	0.40	ppb v/v			10/30/14 21:01	1
n-Butane	**30**		1.6	0.73	ppb v/v			10/30/14 21:01	1
n-Butylbenzene	ND		1.6	0.18	ppb v/v			10/30/14 21:01	1
n-Heptane	**2.9**		2.0	0.19	ppb v/v			10/30/14 21:01	1
n-Hexane	**28**	**B**	2.0	0.13	ppb v/v			10/30/14 21:01	1
n-Propylbenzene	**0.38**	**J**	1.6	0.22	ppb v/v			10/30/14 21:01	1
o-Xylene	**3.5**		0.80	0.24	ppb v/v			10/30/14 21:01	1
sec-Butylbenzene	ND		1.6	0.25	ppb v/v			10/30/14 21:01	1
Styrene	ND		0.80	0.23	ppb v/v			10/30/14 21:01	1
tert-Butyl alcohol	**0.87**	**J**	8.0	0.15	ppb v/v			10/30/14 21:01	1
tert-Butylbenzene	ND		2.0	0.26	ppb v/v			10/30/14 21:01	1
Tetrachloroethene	**4.4**		0.80	0.16	ppb v/v			10/30/14 21:01	1
Tetrahydrofuran	ND		4.0	0.25	ppb v/v			10/30/14 21:01	1
Toluene	**17**		1.2	1.2	ppb v/v			10/30/14 21:01	1
trans-1,2-Dichloroethene	ND		0.80	0.20	ppb v/v			10/30/14 21:01	1
trans-1,3-Dichloropropene	ND		0.80	0.19	ppb v/v			10/30/14 21:01	1
Trichloroethene	ND		0.40	0.14	ppb v/v			10/30/14 21:01	1
Trichlorofluoromethane	**0.18**	**J**	0.80	0.10	ppb v/v			10/30/14 21:01	1
Vinyl chloride	ND		0.80	0.29	ppb v/v			10/30/14 21:01	1
Xylenes, Total	**14**		1.6	0.24	ppb v/v			10/30/14 21:01	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		4.4	0.65	ug/m3			10/30/14 21:01	1
1,1,2,2-Tetrachloroethane	ND		5.5	1.6	ug/m3			10/30/14 21:01	1
1,1,2-Trichloroethane	ND		4.4	1.1	ug/m3			10/30/14 21:01	1
1,1-Dichloroethane	ND		3.2	0.40	ug/m3			10/30/14 21:01	1
1,1-Dichloroethene	ND		3.2	0.56	ug/m3			10/30/14 21:01	1
1,2,4-Trichlorobenzene	ND		30	2.9	ug/m3			10/30/14 21:01	1
1,2,4-Trimethylbenzene	**11**		3.9	1.2	ug/m3			10/30/14 21:01	1
1,2-Dibromoethane (EDB)	ND		6.1	1.4	ug/m3			10/30/14 21:01	1
1,2-Dichlorobenzene	ND		4.8	1.7	ug/m3			10/30/14 21:01	1
1,2-Dichloroethane	ND		3.2	0.77	ug/m3			10/30/14 21:01	1
1,2-Dichloroethene, Total	ND		6.3	0.79	ug/m3			10/30/14 21:01	1
1,2-Dichloropropane	ND		3.7	0.97	ug/m3			10/30/14 21:01	1
1,2-Dichlorotetrafluoroethane	ND		5.6	0.91	ug/m3			10/30/14 21:01	1
1,3,5-Trimethylbenzene	**2.5**	**J**	3.9	1.3	ug/m3			10/30/14 21:01	1
1,3-Butadiene	ND		3.5	0.55	ug/m3			10/30/14 21:01	1
1,3-Dichlorobenzene	ND		4.8	1.6	ug/m3			10/30/14 21:01	1
1,4-Dichlorobenzene	ND		4.8	1.6	ug/m3			10/30/14 21:01	1
1,4-Dioxane	ND		7.2	1.2	ug/m3			10/30/14 21:01	1
2,2,4-Trimethylpentane	**1.5**	**J**	9.3	0.75	ug/m3			10/30/14 21:01	1
2-Chlorotoluene	ND		8.3	1.3	ug/m3			10/30/14 21:01	1
3-Chloropropene	ND		2.5	0.59	ug/m3			10/30/14 21:01	1

Client Sample Results

Client: AKRF Inc
Project/Site: 77 Commercial Street, Brooklyn, NY

TestAmerica Job ID: 140-2214-1

Client Sample ID: SV-3

Lab Sample ID: 140-2214-1

Date Collected: 10/23/14 13:05
Matrix: Air
Date Received: 10/24/14 10:20
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Ethyltoluene	**3.3**	**J**	7.9	1.3	ug/m3			10/30/14 21:01	1
4-Isopropyltoluene	ND		4.4	1.3	ug/m3			10/30/14 21:01	1
Acetone	**54**		48	13	ug/m3			10/30/14 21:01	1
Benzene	**5.4**		2.6	0.73	ug/m3			10/30/14 21:01	1
Benzyl chloride	ND		8.3	1.6	ug/m3			10/30/14 21:01	1
Bromodichloromethane	ND		5.4	1.2	ug/m3			10/30/14 21:01	1
Bromoethene(Vinyl Bromide)	ND		3.5	0.61	ug/m3			10/30/14 21:01	1
Bromoform	ND		8.3	2.0	ug/m3			10/30/14 21:01	1
Bromomethane	ND		3.1	0.50	ug/m3			10/30/14 21:01	1
Carbon disulfide	**33**	**B**	6.2	0.37	ug/m3			10/30/14 21:01	1
Carbon tetrachloride	ND		5.0	0.94	ug/m3			10/30/14 21:01	1
Chlorobenzene	ND		3.7	0.92	ug/m3			10/30/14 21:01	1
Chloroethane	ND		2.1	0.37	ug/m3			10/30/14 21:01	1
Chloroform	ND		3.9	0.73	ug/m3			10/30/14 21:01	1
Chloromethane	**2.5**	**J B**	4.1	1.3	ug/m3			10/30/14 21:01	1
cis-1,2-Dichloroethene	ND		3.2	0.95	ug/m3			10/30/14 21:01	1
cis-1,3-Dichloropropene	ND		3.6	1.3	ug/m3			10/30/14 21:01	1
Cumene	ND		7.9	1.2	ug/m3			10/30/14 21:01	1
Cyclohexane	**35**		6.9	0.55	ug/m3			10/30/14 21:01	1
Dibromochloromethane	ND		6.8	1.4	ug/m3			10/30/14 21:01	1
Dichlorodifluoromethane	**3.0**	**J**	4.0	1.3	ug/m3			10/30/14 21:01	1
Ethylbenzene	**11**		3.5	1.2	ug/m3			10/30/14 21:01	1
Freon 22	ND		2.8	0.53	ug/m3			10/30/14 21:01	1
Freon TF	ND		6.1	0.92	ug/m3			10/30/14 21:01	1
Hexachlorobutadiene	ND		43	5.2	ug/m3			10/30/14 21:01	1
Isopropyl alcohol	ND		20	2.3	ug/m3			10/30/14 21:01	1
Methyl Butyl Ketone (2-Hexanone)	ND		8.2	0.94	ug/m3			10/30/14 21:01	1
Methyl Ethyl Ketone	ND		12	2.4	ug/m3			10/30/14 21:01	1
methyl isobutyl ketone	**2.7**	**J**	8.2	0.74	ug/m3			10/30/14 21:01	1
Methyl methacrylate	ND		8.2	1.3	ug/m3			10/30/14 21:01	1
Methyl tert-butyl ether	ND		14	2.5	ug/m3			10/30/14 21:01	1
Methylene Chloride	ND		6.9	4.5	ug/m3			10/30/14 21:01	1
m-Xylene & p-Xylene	**45**		3.5	2.3	ug/m3			10/30/14 21:01	1
Naphthalene	ND		10	2.1	ug/m3			10/30/14 21:01	1
n-Butane	**72**		3.8	1.7	ug/m3			10/30/14 21:01	1
n-Butylbenzene	ND		8.8	0.99	ug/m3			10/30/14 21:01	1
n-Heptane	**12**		8.2	0.78	ug/m3			10/30/14 21:01	1
n-Hexane	**97**	**B**	7.0	0.46	ug/m3			10/30/14 21:01	1
n-Propylbenzene	**1.8**	**J**	7.9	1.1	ug/m3			10/30/14 21:01	1
o-Xylene	**15**		3.5	1.0	ug/m3			10/30/14 21:01	1
sec-Butylbenzene	ND		8.8	1.4	ug/m3			10/30/14 21:01	1
Styrene	ND		3.4	0.98	ug/m3			10/30/14 21:01	1
tert-Butyl alcohol	**2.6**	**J**	24	0.45	ug/m3			10/30/14 21:01	1
tert-Butylbenzene	ND		11	1.4	ug/m3			10/30/14 21:01	1
Tetrachloroethene	**30**		5.4	1.1	ug/m3			10/30/14 21:01	1
Tetrahydrofuran	ND		12	0.74	ug/m3			10/30/14 21:01	1
Toluene	**63**		4.5	4.5	ug/m3			10/30/14 21:01	1
trans-1,2-Dichloroethene	ND		3.2	0.79	ug/m3			10/30/14 21:01	1

Client Sample ID: SV-3

Lab Sample ID: 140-2214-1

Date Collected: 10/23/14 13:05
Matrix: Air
Date Received: 10/24/14 10:20
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		3.6	0.86	ug/m3			10/30/14 21:01	1
Trichloroethene	ND		2.1	0.75	ug/m3			10/30/14 21:01	1
Trichlorofluoromethane	**1.0**	**J**	4.5	0.56	ug/m3			10/30/14 21:01	1
Vinyl chloride	ND		2.0	0.74	ug/m3			10/30/14 21:01	1
Xylenes, Total	**59**		6.9	1.0	ug/m3			10/30/14 21:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*60 - 140*		*10/30/14 21:01*	*1*

Client Sample ID: SV-6

Lab Sample ID: 140-2214-2

Date Collected: 10/23/14 13:06
Matrix: Air
Date Received: 10/24/14 10:20
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.80	0.12	ppb v/v			10/30/14 21:56	1
1,1,2,2-Tetrachloroethane	ND		0.80	0.24	ppb v/v			10/30/14 21:56	1
1,1,2-Trichloroethane	ND		0.80	0.21	ppb v/v			10/30/14 21:56	1
1,1-Dichloroethane	ND		0.80	0.10	ppb v/v			10/30/14 21:56	1
1,1-Dichloroethene	ND		0.80	0.14	ppb v/v			10/30/14 21:56	1
1,2,4-Trichlorobenzene	ND		4.0	0.39	ppb v/v			10/30/14 21:56	1
1,2,4-Trimethylbenzene	**2.6**		0.80	0.25	ppb v/v			10/30/14 21:56	1
1,2-Dibromoethane (EDB)	ND		0.80	0.18	ppb v/v			10/30/14 21:56	1
1,2-Dichlorobenzene	ND		0.80	0.28	ppb v/v			10/30/14 21:56	1
1,2-Dichloroethane	ND		0.80	0.19	ppb v/v			10/30/14 21:56	1
1,2-Dichloroethene, Total	ND		1.6	0.20	ppb v/v			10/30/14 21:56	1
1,2-Dichloropropane	ND		0.80	0.21	ppb v/v			10/30/14 21:56	1
1,2-Dichlorotetrafluoroethane	ND		0.80	0.13	ppb v/v			10/30/14 21:56	1
1,3,5-Trimethylbenzene	**0.68**	**J**	0.80	0.26	ppb v/v			10/30/14 21:56	1
1,3-Butadiene	ND		1.6	0.25	ppb v/v			10/30/14 21:56	1
1,3-Dichlorobenzene	ND		0.80	0.26	ppb v/v			10/30/14 21:56	1
1,4-Dichlorobenzene	ND		0.80	0.26	ppb v/v			10/30/14 21:56	1
1,4-Dioxane	ND		2.0	0.32	ppb v/v			10/30/14 21:56	1
2,2,4-Trimethylpentane	**0.39**	**J**	2.0	0.16	ppb v/v			10/30/14 21:56	1
2-Chlorotoluene	ND		1.6	0.25	ppb v/v			10/30/14 21:56	1
3-Chloropropene	ND		0.80	0.19	ppb v/v			10/30/14 21:56	1
4-Ethyltoluene	**0.84**	**J**	1.6	0.26	ppb v/v			10/30/14 21:56	1
4-Isopropyltoluene	**0.87**		0.80	0.23	ppb v/v			10/30/14 21:56	1
Acetone	**16**	**J**	20	5.4	ppb v/v			10/30/14 21:56	1
Benzene	**7.5**		0.80	0.23	ppb v/v			10/30/14 21:56	1
Benzyl chloride	ND		1.6	0.31	ppb v/v			10/30/14 21:56	1
Bromodichloromethane	ND		0.80	0.18	ppb v/v			10/30/14 21:56	1
Bromoethene(Vinyl Bromide)	ND		0.80	0.14	ppb v/v			10/30/14 21:56	1
Bromoform	ND		0.80	0.19	ppb v/v			10/30/14 21:56	1
Bromomethane	ND		0.80	0.13	ppb v/v			10/30/14 21:56	1
Carbon disulfide	**7.1**	**B**	2.0	0.12	ppb v/v			10/30/14 21:56	1
Carbon tetrachloride	ND		0.80	0.15	ppb v/v			10/30/14 21:56	1
Chlorobenzene	ND		0.80	0.20	ppb v/v			10/30/14 21:56	1

Client: AKRF Inc
Project/Site: 77 Commercial Street, Brooklyn, NY

TestAmerica Job ID: 140-2214-1

Client Sample ID: SV-6
Date Collected: 10/23/14 13:06
Date Received: 10/24/14 10:20
Sample Container: Summa Canister 6L

Lab Sample ID: 140-2214-2
Matrix: Air

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND		0.80	0.14	ppb v/v			10/30/14 21:56	1
Chloroform	**0.30**	**J**	0.80	0.15	ppb v/v			10/30/14 21:56	1
Chloromethane	**0.89**	**J B**	2.0	0.64	ppb v/v			10/30/14 21:56	1
cis-1,2-Dichloroethene	ND		0.80	0.24	ppb v/v			10/30/14 21:56	1
cis-1,3-Dichloropropene	ND		0.80	0.29	ppb v/v			10/30/14 21:56	1
Cumene	ND		1.6	0.24	ppb v/v			10/30/14 21:56	1
Cyclohexane	**6.4**		2.0	0.16	ppb v/v			10/30/14 21:56	1
Dibromochloromethane	ND		0.80	0.17	ppb v/v			10/30/14 21:56	1
Dichlorodifluoromethane	**0.62**	**J**	0.80	0.27	ppb v/v			10/30/14 21:56	1
Ethylbenzene	**2.4**		0.80	0.27	ppb v/v			10/30/14 21:56	1
Freon 22	ND		0.80	0.15	ppb v/v			10/30/14 21:56	1
Freon TF	ND		0.80	0.12	ppb v/v			10/30/14 21:56	1
Hexachlorobutadiene	ND		4.0	0.49	ppb v/v			10/30/14 21:56	1
Isopropyl alcohol	ND		8.0	0.94	ppb v/v			10/30/14 21:56	1
Methyl Butyl Ketone (2-Hexanone)	ND		2.0	0.23	ppb v/v			10/30/14 21:56	1
Methyl Ethyl Ketone	**2.0**	**J**	4.0	0.80	ppb v/v			10/30/14 21:56	1
methyl isobutyl ketone	**0.84**	**J**	2.0	0.18	ppb v/v			10/30/14 21:56	1
Methyl methacrylate	ND		2.0	0.32	ppb v/v			10/30/14 21:56	1
Methyl tert-butyl ether	ND		4.0	0.68	ppb v/v			10/30/14 21:56	1
Methylene Chloride	ND		2.0	1.3	ppb v/v			10/30/14 21:56	1
m-Xylene & p-Xylene	**11**		0.80	0.53	ppb v/v			10/30/14 21:56	1
Naphthalene	ND		2.0	0.40	ppb v/v			10/30/14 21:56	1
n-Butane	**34**		1.6	0.73	ppb v/v			10/30/14 21:56	1
n-Butylbenzene	**0.19**	**J**	1.6	0.18	ppb v/v			10/30/14 21:56	1
n-Heptane	**2.6**		2.0	0.19	ppb v/v			10/30/14 21:56	1
n-Hexane	**3.8**	**B**	2.0	0.13	ppb v/v			10/30/14 21:56	1
n-Propylbenzene	**0.55**	**J**	1.6	0.22	ppb v/v			10/30/14 21:56	1
o-Xylene	**3.7**		0.80	0.24	ppb v/v			10/30/14 21:56	1
sec-Butylbenzene	ND		1.6	0.25	ppb v/v			10/30/14 21:56	1
Styrene	ND		0.80	0.23	ppb v/v			10/30/14 21:56	1
tert-Butyl alcohol	**1.1**	**J**	8.0	0.15	ppb v/v			10/30/14 21:56	1
tert-Butylbenzene	ND		2.0	0.26	ppb v/v			10/30/14 21:56	1
Tetrachloroethene	**5.9**		0.80	0.16	ppb v/v			10/30/14 21:56	1
Tetrahydrofuran	ND		4.0	0.25	ppb v/v			10/30/14 21:56	1
Toluene	**11**		1.2	1.2	ppb v/v			10/30/14 21:56	1
trans-1,2-Dichloroethene	ND		0.80	0.20	ppb v/v			10/30/14 21:56	1
trans-1,3-Dichloropropene	ND		0.80	0.19	ppb v/v			10/30/14 21:56	1
Trichloroethene	ND		0.40	0.14	ppb v/v			10/30/14 21:56	1
Trichlorofluoromethane	**0.35**	**J**	0.80	0.10	ppb v/v			10/30/14 21:56	1
Vinyl chloride	ND		0.80	0.29	ppb v/v			10/30/14 21:56	1
Xylenes, Total	**15**		1.6	0.24	ppb v/v			10/30/14 21:56	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		4.4	0.65	ug/m3			10/30/14 21:56	1
1,1,2,2-Tetrachloroethane	ND		5.5	1.6	ug/m3			10/30/14 21:56	1
1,1,2-Trichloroethane	ND		4.4	1.1	ug/m3			10/30/14 21:56	1
1,1-Dichloroethane	ND		3.2	0.40	ug/m3			10/30/14 21:56	1
1,1-Dichloroethene	ND		3.2	0.56	ug/m3			10/30/14 21:56	1
1,2,4-Trichlorobenzene	ND		30	2.9	ug/m3			10/30/14 21:56	1

Client: AKRF Inc
Project/Site: 77 Commercial Street, Brooklyn, NY

TestAmerica Job ID: 140-2214-1

Client Sample ID: SV-6
Date Collected: 10/23/14 13:06
Date Received: 10/24/14 10:20
Sample Container: Summa Canister 6L

Lab Sample ID: 140-2214-2
Matrix: Air

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	**13**		3.9	1.2	ug/m3			10/30/14 21:56	1
1,2-Dibromoethane (EDB)	ND		6.1	1.4	ug/m3			10/30/14 21:56	1
1,2-Dichlorobenzene	ND		4.8	1.7	ug/m3			10/30/14 21:56	1
1,2-Dichloroethane	ND		3.2	0.77	ug/m3			10/30/14 21:56	1
1,2-Dichloroethene, Total	ND		6.3	0.79	ug/m3			10/30/14 21:56	1
1,2-Dichloropropane	ND		3.7	0.97	ug/m3			10/30/14 21:56	1
1,2-Dichlorotetrafluoroethane	ND		5.6	0.91	ug/m3			10/30/14 21:56	1
1,3,5-Trimethylbenzene	**3.3**	**J**	3.9	1.3	ug/m3			10/30/14 21:56	1
1,3-Butadiene	ND		3.5	0.55	ug/m3			10/30/14 21:56	1
1,3-Dichlorobenzene	ND		4.8	1.6	ug/m3			10/30/14 21:56	1
1,4-Dichlorobenzene	ND		4.8	1.6	ug/m3			10/30/14 21:56	1
1,4-Dioxane	ND		7.2	1.2	ug/m3			10/30/14 21:56	1
2,2,4-Trimethylpentane	**1.8**	**J**	9.3	0.75	ug/m3			10/30/14 21:56	1
2-Chlorotoluene	ND		8.3	1.3	ug/m3			10/30/14 21:56	1
3-Chloropropene	ND		2.5	0.59	ug/m3			10/30/14 21:56	1
4-Ethyltoluene	**4.1**	**J**	7.9	1.3	ug/m3			10/30/14 21:56	1
4-Isopropyltoluene	**4.8**		4.4	1.3	ug/m3			10/30/14 21:56	1
Acetone	**39**	**J**	48	13	ug/m3			10/30/14 21:56	1
Benzene	**24**		2.6	0.73	ug/m3			10/30/14 21:56	1
Benzyl chloride	ND		8.3	1.6	ug/m3			10/30/14 21:56	1
Bromodichloromethane	ND		5.4	1.2	ug/m3			10/30/14 21:56	1
Bromoethene(Vinyl Bromide)	ND		3.5	0.61	ug/m3			10/30/14 21:56	1
Bromoform	ND		8.3	2.0	ug/m3			10/30/14 21:56	1
Bromomethane	ND		3.1	0.50	ug/m3			10/30/14 21:56	1
Carbon disulfide	**22**	**B**	6.2	0.37	ug/m3			10/30/14 21:56	1
Carbon tetrachloride	ND		5.0	0.94	ug/m3			10/30/14 21:56	1
Chlorobenzene	ND		3.7	0.92	ug/m3			10/30/14 21:56	1
Chloroethane	ND		2.1	0.37	ug/m3			10/30/14 21:56	1
Chloroform	**1.4**	**J**	3.9	0.73	ug/m3			10/30/14 21:56	1
Chloromethane	**1.8**	**J B**	4.1	1.3	ug/m3			10/30/14 21:56	1
cis-1,2-Dichloroethene	ND		3.2	0.95	ug/m3			10/30/14 21:56	1
cis-1,3-Dichloropropene	ND		3.6	1.3	ug/m3			10/30/14 21:56	1
Cumene	ND		7.9	1.2	ug/m3			10/30/14 21:56	1
Cyclohexane	**22**		6.9	0.55	ug/m3			10/30/14 21:56	1
Dibromochloromethane	ND		6.8	1.4	ug/m3			10/30/14 21:56	1
Dichlorodifluoromethane	**3.1**	**J**	4.0	1.3	ug/m3			10/30/14 21:56	1
Ethylbenzene	**10**		3.5	1.2	ug/m3			10/30/14 21:56	1
Freon 22	ND		2.8	0.53	ug/m3			10/30/14 21:56	1
Freon TF	ND		6.1	0.92	ug/m3			10/30/14 21:56	1
Hexachlorobutadiene	ND		43	5.2	ug/m3			10/30/14 21:56	1
Isopropyl alcohol	ND		20	2.3	ug/m3			10/30/14 21:56	1
Methyl Butyl Ketone (2-Hexanone)	ND		8.2	0.94	ug/m3			10/30/14 21:56	1
Methyl Ethyl Ketone	**5.8**	**J**	12	2.4	ug/m3			10/30/14 21:56	1
methyl isobutyl ketone	**3.4**	**J**	8.2	0.74	ug/m3			10/30/14 21:56	1
Methyl methacrylate	ND		8.2	1.3	ug/m3			10/30/14 21:56	1
Methyl tert-butyl ether	ND		14	2.5	ug/m3			10/30/14 21:56	1
Methylene Chloride	ND		6.9	4.5	ug/m3			10/30/14 21:56	1
m-Xylene & p-Xylene	**49**		3.5	2.3	ug/m3			10/30/14 21:56	1

Client Sample ID: SV-6

Lab Sample ID: 140-2214-2

Date Collected: 10/23/14 13:06
Matrix: Air
Date Received: 10/24/14 10:20
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		10	2.1	ug/m3			10/30/14 21:56	1
n-Butane	**80**		3.8	1.7	ug/m3			10/30/14 21:56	1
n-Butylbenzene	**1.0**	**J**	8.8	0.99	ug/m3			10/30/14 21:56	1
n-Heptane	**11**		8.2	0.78	ug/m3			10/30/14 21:56	1
n-Hexane	**13**	**B**	7.0	0.46	ug/m3			10/30/14 21:56	1
n-Propylbenzene	**2.7**	**J**	7.9	1.1	ug/m3			10/30/14 21:56	1
o-Xylene	**16**		3.5	1.0	ug/m3			10/30/14 21:56	1
sec-Butylbenzene	ND		8.8	1.4	ug/m3			10/30/14 21:56	1
Styrene	ND		3.4	0.98	ug/m3			10/30/14 21:56	1
tert-Butyl alcohol	**3.3**	**J**	24	0.45	ug/m3			10/30/14 21:56	1
tert-Butylbenzene	ND		11	1.4	ug/m3			10/30/14 21:56	1
Tetrachloroethene	**40**		5.4	1.1	ug/m3			10/30/14 21:56	1
Tetrahydrofuran	ND		12	0.74	ug/m3			10/30/14 21:56	1
Toluene	**42**		4.5	4.5	ug/m3			10/30/14 21:56	1
trans-1,2-Dichloroethene	ND		3.2	0.79	ug/m3			10/30/14 21:56	1
trans-1,3-Dichloropropene	ND		3.6	0.86	ug/m3			10/30/14 21:56	1
Trichloroethene	ND		2.1	0.75	ug/m3			10/30/14 21:56	1
Trichlorofluoromethane	**2.0**	**J**	4.5	0.56	ug/m3			10/30/14 21:56	1
Vinyl chloride	ND		2.0	0.74	ug/m3			10/30/14 21:56	1
Xylenes, Total	**64**		6.9	1.0	ug/m3			10/30/14 21:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*60 - 140*		*10/30/14 21:56*	*1*

Client Sample ID: SV-4

Lab Sample ID: 140-2214-3

Date Collected: 10/23/14 12:35
Matrix: Air
Date Received: 10/24/14 10:20
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.80	0.12	ppb v/v			10/30/14 22:51	1
1,1,2,2-Tetrachloroethane	ND		0.80	0.24	ppb v/v			10/30/14 22:51	1
1,1,2-Trichloroethane	ND		0.80	0.21	ppb v/v			10/30/14 22:51	1
1,1-Dichloroethane	ND		0.80	0.10	ppb v/v			10/30/14 22:51	1
1,1-Dichloroethene	ND		0.80	0.14	ppb v/v			10/30/14 22:51	1
1,2,4-Trichlorobenzene	ND		4.0	0.39	ppb v/v			10/30/14 22:51	1
1,2,4-Trimethylbenzene	**6.2**		0.80	0.25	ppb v/v			10/30/14 22:51	1
1,2-Dibromoethane (EDB)	ND		0.80	0.18	ppb v/v			10/30/14 22:51	1
1,2-Dichlorobenzene	ND		0.80	0.28	ppb v/v			10/30/14 22:51	1
1,2-Dichloroethane	ND		0.80	0.19	ppb v/v			10/30/14 22:51	1
1,2-Dichloroethene, Total	ND		1.6	0.20	ppb v/v			10/30/14 22:51	1
1,2-Dichloropropane	ND		0.80	0.21	ppb v/v			10/30/14 22:51	1
1,2-Dichlorotetrafluoroethane	ND		0.80	0.13	ppb v/v			10/30/14 22:51	1
1,3,5-Trimethylbenzene	**1.6**		0.80	0.26	ppb v/v			10/30/14 22:51	1
1,3-Butadiene	ND		1.6	0.25	ppb v/v			10/30/14 22:51	1
1,3-Dichlorobenzene	ND		0.80	0.26	ppb v/v			10/30/14 22:51	1
1,4-Dichlorobenzene	ND		0.80	0.26	ppb v/v			10/30/14 22:51	1
1,4-Dioxane	ND		2.0	0.32	ppb v/v			10/30/14 22:51	1

Client: AKRF Inc
Project/Site: 77 Commercial Street, Brooklyn, NY

TestAmerica Job ID: 140-2214-1

Client Sample ID: SV-4
Date Collected: 10/23/14 12:35
Date Received: 10/24/14 10:20
Sample Container: Summa Canister 6L

Lab Sample ID: 140-2214-3
Matrix: Air

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,2,4-Trimethylpentane	ND		2.0	0.16	ppb v/v			10/30/14 22:51	1
2-Chlorotoluene	ND		1.6	0.25	ppb v/v			10/30/14 22:51	1
3-Chloropropene	ND		0.80	0.19	ppb v/v			10/30/14 22:51	1
4-Ethyltoluene	**2.5**		1.6	0.26	ppb v/v			10/30/14 22:51	1
4-Isopropyltoluene	**0.72**	**J**	0.80	0.23	ppb v/v			10/30/14 22:51	1
Acetone	ND		20	5.4	ppb v/v			10/30/14 22:51	1
Benzene	**3.8**		0.80	0.23	ppb v/v			10/30/14 22:51	1
Benzyl chloride	ND		1.6	0.31	ppb v/v			10/30/14 22:51	1
Bromodichloromethane	ND		0.80	0.18	ppb v/v			10/30/14 22:51	1
Bromoethene(Vinyl Bromide)	ND		0.80	0.14	ppb v/v			10/30/14 22:51	1
Bromoform	ND		0.80	0.19	ppb v/v			10/30/14 22:51	1
Bromomethane	ND		0.80	0.13	ppb v/v			10/30/14 22:51	1
Carbon disulfide	**7.8**	**B**	2.0	0.12	ppb v/v			10/30/14 22:51	1
Carbon tetrachloride	ND		0.80	0.15	ppb v/v			10/30/14 22:51	1
Chlorobenzene	ND		0.80	0.20	ppb v/v			10/30/14 22:51	1
Chloroethane	ND		0.80	0.14	ppb v/v			10/30/14 22:51	1
Chloroform	**1.2**		0.80	0.15	ppb v/v			10/30/14 22:51	1
Chloromethane	**1.2**	**J B**	2.0	0.64	ppb v/v			10/30/14 22:51	1
cis-1,2-Dichloroethene	ND		0.80	0.24	ppb v/v			10/30/14 22:51	1
cis-1,3-Dichloropropene	ND		0.80	0.29	ppb v/v			10/30/14 22:51	1
Cumene	**0.43**	**J**	1.6	0.24	ppb v/v			10/30/14 22:51	1
Cyclohexane	**18**		2.0	0.16	ppb v/v			10/30/14 22:51	1
Dibromochloromethane	ND		0.80	0.17	ppb v/v			10/30/14 22:51	1
Dichlorodifluoromethane	**0.74**	**J**	0.80	0.27	ppb v/v			10/30/14 22:51	1
Ethylbenzene	**4.0**		0.80	0.27	ppb v/v			10/30/14 22:51	1
Freon 22	ND		0.80	0.15	ppb v/v			10/30/14 22:51	1
Freon TF	ND		0.80	0.12	ppb v/v			10/30/14 22:51	1
Hexachlorobutadiene	ND		4.0	0.49	ppb v/v			10/30/14 22:51	1
Isopropyl alcohol	ND		8.0	0.94	ppb v/v			10/30/14 22:51	1
Methyl Butyl Ketone (2-Hexanone)	**0.59**	**J**	2.0	0.23	ppb v/v			10/30/14 22:51	1
Methyl Ethyl Ketone	ND		4.0	0.80	ppb v/v			10/30/14 22:51	1
methyl isobutyl ketone	**3.4**		2.0	0.18	ppb v/v			10/30/14 22:51	1
Methyl methacrylate	ND		2.0	0.32	ppb v/v			10/30/14 22:51	1
Methyl tert-butyl ether	ND		4.0	0.68	ppb v/v			10/30/14 22:51	1
Methylene Chloride	**1.3**	**J B**	2.0	1.3	ppb v/v			10/30/14 22:51	1
m-Xylene & p-Xylene	**18**		0.80	0.53	ppb v/v			10/30/14 22:51	1
Naphthalene	ND		2.0	0.40	ppb v/v			10/30/14 22:51	1
n-Butane	**660**	**E**	1.6	0.73	ppb v/v			10/30/14 22:51	1
n-Butylbenzene	**0.59**	**J**	1.6	0.18	ppb v/v			10/30/14 22:51	1
n-Heptane	**20**		2.0	0.19	ppb v/v			10/30/14 22:51	1
n-Hexane	**64**	**B**	2.0	0.13	ppb v/v			10/30/14 22:51	1
n-Propylbenzene	**1.2**	**J**	1.6	0.22	ppb v/v			10/30/14 22:51	1
o-Xylene	**8.0**		0.80	0.24	ppb v/v			10/30/14 22:51	1
sec-Butylbenzene	ND		1.6	0.25	ppb v/v			10/30/14 22:51	1
Styrene	**0.76**	**J**	0.80	0.23	ppb v/v			10/30/14 22:51	1
tert-Butyl alcohol	**2.4**	**J**	8.0	0.15	ppb v/v			10/30/14 22:51	1
tert-Butylbenzene	ND		2.0	0.26	ppb v/v			10/30/14 22:51	1
Tetrachloroethene	**3.7**		0.80	0.16	ppb v/v			10/30/14 22:51	1

Client: AKRF Inc
Project/Site: 77 Commercial Street, Brooklyn, NY

TestAmerica Job ID: 140-2214-1

Client Sample ID: SV-4

Lab Sample ID: 140-2214-3

Date Collected: 10/23/14 12:35
Matrix: Air
Date Received: 10/24/14 10:20
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrahydrofuran	ND		4.0	0.25	ppb v/v			10/30/14 22:51	1
Toluene	**11**		1.2	1.2	ppb v/v			10/30/14 22:51	1
trans-1,2-Dichloroethene	ND		0.80	0.20	ppb v/v			10/30/14 22:51	1
trans-1,3-Dichloropropene	ND		0.80	0.19	ppb v/v			10/30/14 22:51	1
Trichloroethene	ND		0.40	0.14	ppb v/v			10/30/14 22:51	1
Trichlorofluoromethane	**0.48**	**J**	0.80	0.10	ppb v/v			10/30/14 22:51	1
Vinyl chloride	ND		0.80	0.29	ppb v/v			10/30/14 22:51	1
Xylenes, Total	**26**		1.6	0.24	ppb v/v			10/30/14 22:51	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		4.4	0.65	ug/m3			10/30/14 22:51	1
1,1,2,2-Tetrachloroethane	ND		5.5	1.6	ug/m3			10/30/14 22:51	1
1,1,2-Trichloroethane	ND		4.4	1.1	ug/m3			10/30/14 22:51	1
1,1-Dichloroethane	ND		3.2	0.40	ug/m3			10/30/14 22:51	1
1,1-Dichloroethene	ND		3.2	0.56	ug/m3			10/30/14 22:51	1
1,2,4-Trichlorobenzene	ND		30	2.9	ug/m3			10/30/14 22:51	1
1,2,4-Trimethylbenzene	**30**		3.9	1.2	ug/m3			10/30/14 22:51	1
1,2-Dibromoethane (EDB)	ND		6.1	1.4	ug/m3			10/30/14 22:51	1
1,2-Dichlorobenzene	ND		4.8	1.7	ug/m3			10/30/14 22:51	1
1,2-Dichloroethane	ND		3.2	0.77	ug/m3			10/30/14 22:51	1
1,2-Dichloroethene, Total	ND		6.3	0.79	ug/m3			10/30/14 22:51	1
1,2-Dichloropropane	ND		3.7	0.97	ug/m3			10/30/14 22:51	1
1,2-Dichlorotetrafluoroethane	ND		5.6	0.91	ug/m3			10/30/14 22:51	1
1,3,5-Trimethylbenzene	**7.7**		3.9	1.3	ug/m3			10/30/14 22:51	1
1,3-Butadiene	ND		3.5	0.55	ug/m3			10/30/14 22:51	1
1,3-Dichlorobenzene	ND		4.8	1.6	ug/m3			10/30/14 22:51	1
1,4-Dichlorobenzene	ND		4.8	1.6	ug/m3			10/30/14 22:51	1
1,4-Dioxane	ND		7.2	1.2	ug/m3			10/30/14 22:51	1
2,2,4-Trimethylpentane	ND		9.3	0.75	ug/m3			10/30/14 22:51	1
2-Chlorotoluene	ND		8.3	1.3	ug/m3			10/30/14 22:51	1
3-Chloropropene	ND		2.5	0.59	ug/m3			10/30/14 22:51	1
4-Ethyltoluene	**12**		7.9	1.3	ug/m3			10/30/14 22:51	1
4-Isopropyltoluene	**4.0**	**J**	4.4	1.3	ug/m3			10/30/14 22:51	1
Acetone	ND		48	13	ug/m3			10/30/14 22:51	1
Benzene	**12**		2.6	0.73	ug/m3			10/30/14 22:51	1
Benzyl chloride	ND		8.3	1.6	ug/m3			10/30/14 22:51	1
Bromodichloromethane	ND		5.4	1.2	ug/m3			10/30/14 22:51	1
Bromoethene(Vinyl Bromide)	ND		3.5	0.61	ug/m3			10/30/14 22:51	1
Bromoform	ND		8.3	2.0	ug/m3			10/30/14 22:51	1
Bromomethane	ND		3.1	0.50	ug/m3			10/30/14 22:51	1
Carbon disulfide	**24**	**B**	6.2	0.37	ug/m3			10/30/14 22:51	1
Carbon tetrachloride	ND		5.0	0.94	ug/m3			10/30/14 22:51	1
Chlorobenzene	ND		3.7	0.92	ug/m3			10/30/14 22:51	1
Chloroethane	ND		2.1	0.37	ug/m3			10/30/14 22:51	1
Chloroform	**5.7**		3.9	0.73	ug/m3			10/30/14 22:51	1
Chloromethane	**2.5**	**J B**	4.1	1.3	ug/m3			10/30/14 22:51	1
cis-1,2-Dichloroethene	ND		3.2	0.95	ug/m3			10/30/14 22:51	1
cis-1,3-Dichloropropene	ND		3.6	1.3	ug/m3			10/30/14 22:51	1
Cumene	**2.1**	**J**	7.9	1.2	ug/m3			10/30/14 22:51	1

Client Sample Results

Client: AKRF Inc
Project/Site: 77 Commercial Street, Brooklyn, NY

TestAmerica Job ID: 140-2214-1

Client Sample ID: SV-4

Lab Sample ID: 140-2214-3

Date Collected: 10/23/14 12:35
Matrix: Air
Date Received: 10/24/14 10:20
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyclohexane	62		6.9	0.55	ug/m3			10/30/14 22:51	1
Dibromochloromethane	ND		6.8	1.4	ug/m3			10/30/14 22:51	1
Dichlorodifluoromethane	3.7	J	4.0	1.3	ug/m3			10/30/14 22:51	1
Ethylbenzene	17		3.5	1.2	ug/m3			10/30/14 22:51	1
Freon 22	ND		2.8	0.53	ug/m3			10/30/14 22:51	1
Freon TF	ND		6.1	0.92	ug/m3			10/30/14 22:51	1
Hexachlorobutadiene	ND		43	5.2	ug/m3			10/30/14 22:51	1
Isopropyl alcohol	ND		20	2.3	ug/m3			10/30/14 22:51	1
Methyl Butyl Ketone (2-Hexanone)	2.4	J	8.2	0.94	ug/m3			10/30/14 22:51	1
Methyl Ethyl Ketone	ND		12	2.4	ug/m3			10/30/14 22:51	1
methyl isobutyl ketone	14		8.2	0.74	ug/m3			10/30/14 22:51	1
Methyl methacrylate	ND		8.2	1.3	ug/m3			10/30/14 22:51	1
Methyl tert-butyl ether	ND		14	2.5	ug/m3			10/30/14 22:51	1
Methylene Chloride	4.6	J B	6.9	4.5	ug/m3			10/30/14 22:51	1
m-Xylene & p-Xylene	78		3.5	2.3	ug/m3			10/30/14 22:51	1
Naphthalene	ND		10	2.1	ug/m3			10/30/14 22:51	1
n-Butane	1600	E	3.8	1.7	ug/m3			10/30/14 22:51	1
n-Butylbenzene	3.3	J	8.8	0.99	ug/m3			10/30/14 22:51	1
n-Heptane	81		8.2	0.78	ug/m3			10/30/14 22:51	1
n-Hexane	230	B	7.0	0.46	ug/m3			10/30/14 22:51	1
n-Propylbenzene	6.0	J	7.9	1.1	ug/m3			10/30/14 22:51	1
o-Xylene	35		3.5	1.0	ug/m3			10/30/14 22:51	1
sec-Butylbenzene	ND		8.8	1.4	ug/m3			10/30/14 22:51	1
Styrene	3.2	J	3.4	0.98	ug/m3			10/30/14 22:51	1
tert-Butyl alcohol	7.1	J	24	0.45	ug/m3			10/30/14 22:51	1
tert-Butylbenzene	ND		11	1.4	ug/m3			10/30/14 22:51	1
Tetrachloroethene	25		5.4	1.1	ug/m3			10/30/14 22:51	1
Tetrahydrofuran	ND		12	0.74	ug/m3			10/30/14 22:51	1
Toluene	42		4.5	4.5	ug/m3			10/30/14 22:51	1
trans-1,2-Dichloroethene	ND		3.2	0.79	ug/m3			10/30/14 22:51	1
trans-1,3-Dichloropropene	ND		3.6	0.86	ug/m3			10/30/14 22:51	1
Trichloroethene	ND		2.1	0.75	ug/m3			10/30/14 22:51	1
Trichlorofluoromethane	2.7	J	4.5	0.56	ug/m3			10/30/14 22:51	1
Vinyl chloride	ND		2.0	0.74	ug/m3			10/30/14 22:51	1
Xylenes, Total	110		6.9	1.0	ug/m3			10/30/14 22:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*60 - 140*		*10/30/14 22:51*	*1*

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butane	540		7.3	3.3	ppb v/v			10/31/14 13:47	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butane	1300		17	7.9	ug/m3			10/31/14 13:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*60 - 140*		*10/31/14 13:47*	*1*

Surrogate Summary

Client: AKRF Inc
Project/Site: 77 Commercial Street, Brooklyn, NY

TestAmerica Job ID: 140-2214-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Matrix: Air **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)						
Lab Sample ID	**Client Sample ID**	**BFB (60-140)**						
140-2214-1	SV-3	96						
140-2214-2	SV-6	100						
140-2214-3	SV-4	104						
140-2214-3 - DL	SV-4	101						
LCS 140-1876/1002	Lab Control Sample	106						
LCS 140-1880/1002	Lab Control Sample	104						
MB 140-1876/7	Method Blank	101						
MB 140-1880/4	Method Blank	104						

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Lab Sample ID: MB 140-1876/7
Matrix: Air
Analysis Batch: 1876

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			10/30/14 16:54	1
1,1,2,2-Tetrachloroethane	ND		0.080	0.024	ppb v/v			10/30/14 16:54	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			10/30/14 16:54	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			10/30/14 16:54	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			10/30/14 16:54	1
1,2,4-Trichlorobenzene	ND		0.40	0.039	ppb v/v			10/30/14 16:54	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			10/30/14 16:54	1
1,2-Dibromoethane (EDB)	ND		0.080	0.018	ppb v/v			10/30/14 16:54	1
1,2-Dichlorobenzene	ND		0.080	0.028	ppb v/v			10/30/14 16:54	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			10/30/14 16:54	1
1,2-Dichloroethene, Total	ND		0.16	0.020	ppb v/v			10/30/14 16:54	1
1,2-Dichloropropane	ND		0.080	0.021	ppb v/v			10/30/14 16:54	1
1,2-Dichlorotetrafluoroethane	ND		0.080	0.013	ppb v/v			10/30/14 16:54	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			10/30/14 16:54	1
1,3-Butadiene	ND		0.16	0.025	ppb v/v			10/30/14 16:54	1
1,3-Dichlorobenzene	ND		0.080	0.026	ppb v/v			10/30/14 16:54	1
1,4-Dichlorobenzene	ND		0.080	0.026	ppb v/v			10/30/14 16:54	1
1,4-Dioxane	ND		0.20	0.032	ppb v/v			10/30/14 16:54	1
2,2,4-Trimethylpentane	ND		0.20	0.016	ppb v/v			10/30/14 16:54	1
2-Chlorotoluene	ND		0.16	0.025	ppb v/v			10/30/14 16:54	1
3-Chloropropene	ND		0.080	0.019	ppb v/v			10/30/14 16:54	1
4-Ethyltoluene	ND		0.16	0.026	ppb v/v			10/30/14 16:54	1
4-Isopropyltoluene	ND		0.080	0.023	ppb v/v			10/30/14 16:54	1
Acetone	ND		2.0	0.54	ppb v/v			10/30/14 16:54	1
Benzene	ND		0.080	0.023	ppb v/v			10/30/14 16:54	1
Benzyl chloride	ND		0.16	0.031	ppb v/v			10/30/14 16:54	1
Bromodichloromethane	ND		0.080	0.018	ppb v/v			10/30/14 16:54	1
Bromoethene(Vinyl Bromide)	ND		0.080	0.014	ppb v/v			10/30/14 16:54	1
Bromoform	ND		0.080	0.019	ppb v/v			10/30/14 16:54	1
Bromomethane	ND		0.080	0.013	ppb v/v			10/30/14 16:54	1
Carbon disulfide	0.0743	J	0.20	0.012	ppb v/v			10/30/14 16:54	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			10/30/14 16:54	1
Chlorobenzene	ND		0.080	0.020	ppb v/v			10/30/14 16:54	1
Chloroethane	ND		0.080	0.014	ppb v/v			10/30/14 16:54	1
Chloroform	ND		0.080	0.015	ppb v/v			10/30/14 16:54	1
Chloromethane	0.0676	J	0.20	0.064	ppb v/v			10/30/14 16:54	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			10/30/14 16:54	1
cis-1,3-Dichloropropene	ND		0.080	0.029	ppb v/v			10/30/14 16:54	1
Cumene	ND		0.16	0.024	ppb v/v			10/30/14 16:54	1
Cyclohexane	ND		0.20	0.016	ppb v/v			10/30/14 16:54	1
Dibromochloromethane	ND		0.080	0.017	ppb v/v			10/30/14 16:54	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			10/30/14 16:54	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			10/30/14 16:54	1
Freon 22	ND		0.080	0.015	ppb v/v			10/30/14 16:54	1
Freon TF	ND		0.080	0.012	ppb v/v			10/30/14 16:54	1
Hexachlorobutadiene	ND		0.40	0.049	ppb v/v			10/30/14 16:54	1
Isopropyl alcohol	ND		0.80	0.094	ppb v/v			10/30/14 16:54	1
Methyl Butyl Ketone (2-Hexanone)	ND		0.20	0.023	ppb v/v			10/30/14 16:54	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-1876/7
Matrix: Air
Analysis Batch: 1876

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Ethyl Ketone	ND		0.40	0.080	ppb v/v			10/30/14 16:54	1
methyl isobutyl ketone	ND		0.20	0.018	ppb v/v			10/30/14 16:54	1
Methyl methacrylate	ND		0.20	0.032	ppb v/v			10/30/14 16:54	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			10/30/14 16:54	1
Methylene Chloride	0.185	J	0.20	0.13	ppb v/v			10/30/14 16:54	1
m-Xylene & p-Xylene	ND		0.080	0.053	ppb v/v			10/30/14 16:54	1
Naphthalene	ND		0.20	0.040	ppb v/v			10/30/14 16:54	1
n-Butane	ND		0.16	0.073	ppb v/v			10/30/14 16:54	1
n-Butylbenzene	ND		0.16	0.018	ppb v/v			10/30/14 16:54	1
n-Heptane	ND		0.20	0.019	ppb v/v			10/30/14 16:54	1
n-Hexane	0.0262	J	0.20	0.013	ppb v/v			10/30/14 16:54	1
n-Propylbenzene	ND		0.16	0.022	ppb v/v			10/30/14 16:54	1
o-Xylene	ND		0.080	0.024	ppb v/v			10/30/14 16:54	1
sec-Butylbenzene	ND		0.16	0.025	ppb v/v			10/30/14 16:54	1
Styrene	ND		0.080	0.023	ppb v/v			10/30/14 16:54	1
tert-Butyl alcohol	ND		0.80	0.015	ppb v/v			10/30/14 16:54	1
tert-Butylbenzene	ND		0.20	0.026	ppb v/v			10/30/14 16:54	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			10/30/14 16:54	1
Tetrahydrofuran	ND		0.40	0.025	ppb v/v			10/30/14 16:54	1
Toluene	ND		0.12	0.12	ppb v/v			10/30/14 16:54	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			10/30/14 16:54	1
trans-1,3-Dichloropropene	ND		0.080	0.019	ppb v/v			10/30/14 16:54	1
Trichloroethene	ND		0.040	0.014	ppb v/v			10/30/14 16:54	1
Trichlorofluoromethane	ND		0.080	0.010	ppb v/v			10/30/14 16:54	1
Vinyl chloride	ND		0.080	0.029	ppb v/v			10/30/14 16:54	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			10/30/14 16:54	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			10/30/14 16:54	1
1,1,2,2-Tetrachloroethane	ND		0.55	0.16	ug/m3			10/30/14 16:54	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			10/30/14 16:54	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			10/30/14 16:54	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			10/30/14 16:54	1
1,2,4-Trichlorobenzene	ND		3.0	0.29	ug/m3			10/30/14 16:54	1
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			10/30/14 16:54	1
1,2-Dibromoethane (EDB)	ND		0.61	0.14	ug/m3			10/30/14 16:54	1
1,2-Dichlorobenzene	ND		0.48	0.17	ug/m3			10/30/14 16:54	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			10/30/14 16:54	1
1,2-Dichloroethene, Total	ND		0.63	0.079	ug/m3			10/30/14 16:54	1
1,2-Dichloropropane	ND		0.37	0.097	ug/m3			10/30/14 16:54	1
1,2-Dichlorotetrafluoroethane	ND		0.56	0.091	ug/m3			10/30/14 16:54	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			10/30/14 16:54	1
1,3-Butadiene	ND		0.35	0.055	ug/m3			10/30/14 16:54	1
1,3-Dichlorobenzene	ND		0.48	0.16	ug/m3			10/30/14 16:54	1
1,4-Dichlorobenzene	ND		0.48	0.16	ug/m3			10/30/14 16:54	1
1,4-Dioxane	ND		0.72	0.12	ug/m3			10/30/14 16:54	1
2,2,4-Trimethylpentane	ND		0.93	0.075	ug/m3			10/30/14 16:54	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-1876/7
Matrix: Air
Analysis Batch: 1876

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chlorotoluene	ND		0.83	0.13	ug/m3			10/30/14 16:54	1
3-Chloropropene	ND		0.25	0.059	ug/m3			10/30/14 16:54	1
4-Ethyltoluene	ND		0.79	0.13	ug/m3			10/30/14 16:54	1
4-Isopropyltoluene	ND		0.44	0.13	ug/m3			10/30/14 16:54	1
Acetone	ND		4.8	1.3	ug/m3			10/30/14 16:54	1
Benzene	ND		0.26	0.073	ug/m3			10/30/14 16:54	1
Benzyl chloride	ND		0.83	0.16	ug/m3			10/30/14 16:54	1
Bromodichloromethane	ND		0.54	0.12	ug/m3			10/30/14 16:54	1
Bromoethene(Vinyl Bromide)	ND		0.35	0.061	ug/m3			10/30/14 16:54	1
Bromoform	ND		0.83	0.20	ug/m3			10/30/14 16:54	1
Bromomethane	ND		0.31	0.050	ug/m3			10/30/14 16:54	1
Carbon disulfide	0.231	J	0.62	0.037	ug/m3			10/30/14 16:54	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			10/30/14 16:54	1
Chlorobenzene	ND		0.37	0.092	ug/m3			10/30/14 16:54	1
Chloroethane	ND		0.21	0.037	ug/m3			10/30/14 16:54	1
Chloroform	ND		0.39	0.073	ug/m3			10/30/14 16:54	1
Chloromethane	0.140	J	0.41	0.13	ug/m3			10/30/14 16:54	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			10/30/14 16:54	1
cis-1,3-Dichloropropene	ND		0.36	0.13	ug/m3			10/30/14 16:54	1
Cumene	ND		0.79	0.12	ug/m3			10/30/14 16:54	1
Cyclohexane	ND		0.69	0.055	ug/m3			10/30/14 16:54	1
Dibromochloromethane	ND		0.68	0.14	ug/m3			10/30/14 16:54	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			10/30/14 16:54	1
Ethylbenzene	ND		0.35	0.12	ug/m3			10/30/14 16:54	1
Freon 22	ND		0.28	0.053	ug/m3			10/30/14 16:54	1
Freon TF	ND		0.61	0.092	ug/m3			10/30/14 16:54	1
Hexachlorobutadiene	ND		4.3	0.52	ug/m3			10/30/14 16:54	1
Isopropyl alcohol	ND		2.0	0.23	ug/m3			10/30/14 16:54	1
Methyl Butyl Ketone (2-Hexanone)	ND		0.82	0.094	ug/m3			10/30/14 16:54	1
Methyl Ethyl Ketone	ND		1.2	0.24	ug/m3			10/30/14 16:54	1
methyl isobutyl ketone	ND		0.82	0.074	ug/m3			10/30/14 16:54	1
Methyl methacrylate	ND		0.82	0.13	ug/m3			10/30/14 16:54	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			10/30/14 16:54	1
Methylene Chloride	0.643	J	0.69	0.45	ug/m3			10/30/14 16:54	1
m-Xylene & p-Xylene	ND		0.35	0.23	ug/m3			10/30/14 16:54	1
Naphthalene	ND		1.0	0.21	ug/m3			10/30/14 16:54	1
n-Butane	ND		0.38	0.17	ug/m3			10/30/14 16:54	1
n-Butylbenzene	ND		0.88	0.099	ug/m3			10/30/14 16:54	1
n-Heptane	ND		0.82	0.078	ug/m3			10/30/14 16:54	1
n-Hexane	0.0922	J	0.70	0.046	ug/m3			10/30/14 16:54	1
n-Propylbenzene	ND		0.79	0.11	ug/m3			10/30/14 16:54	1
o-Xylene	ND		0.35	0.10	ug/m3			10/30/14 16:54	1
sec-Butylbenzene	ND		0.88	0.14	ug/m3			10/30/14 16:54	1
Styrene	ND		0.34	0.098	ug/m3			10/30/14 16:54	1
tert-Butyl alcohol	ND		2.4	0.045	ug/m3			10/30/14 16:54	1
tert-Butylbenzene	ND		1.1	0.14	ug/m3			10/30/14 16:54	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			10/30/14 16:54	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-1876/7
Matrix: Air
Analysis Batch: 1876

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrahydrofuran	ND		1.2	0.074	ug/m3			10/30/14 16:54	1
Toluene	ND		0.45	0.45	ug/m3			10/30/14 16:54	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			10/30/14 16:54	1
trans-1,3-Dichloropropene	ND		0.36	0.086	ug/m3			10/30/14 16:54	1
Trichloroethene	ND		0.21	0.075	ug/m3			10/30/14 16:54	1
Trichlorofluoromethane	ND		0.45	0.056	ug/m3			10/30/14 16:54	1
Vinyl chloride	ND		0.20	0.074	ug/m3			10/30/14 16:54	1
Xylenes, Total	ND		0.69	0.10	ug/m3			10/30/14 16:54	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*60 - 140*		*10/30/14 16:54*	*1*

Lab Sample ID: LCS 140-1876/1002
Matrix: Air
Analysis Batch: 1876

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	2.00	1.88		ppb v/v		94	70 - 130
1,1,2,2-Tetrachloroethane	2.00	1.80		ppb v/v		90	70 - 130
1,1,2-Trichloroethane	2.00	1.75		ppb v/v		88	70 - 130
1,1-Dichloroethane	2.00	1.97		ppb v/v		98	70 - 130
1,1-Dichloroethene	2.00	2.05		ppb v/v		102	70 - 130
1,2,4-Trichlorobenzene	2.00	1.29		ppb v/v		64	60 - 140
1,2,4-Trimethylbenzene	2.00	1.79		ppb v/v		90	70 - 130
1,2-Dibromoethane (EDB)	2.00	1.66		ppb v/v		83	70 - 130
1,2-Dichlorobenzene	2.00	1.58		ppb v/v		79	70 - 130
1,2-Dichloroethane	2.00	1.92		ppb v/v		96	70 - 130
1,2-Dichloroethene, Total	4.00	3.84		ppb v/v		96	70 - 130
1,2-Dichloropropane	2.00	1.86		ppb v/v		93	70 - 130
1,2-Dichlorotetrafluoroethane	2.00	2.27		ppb v/v		113	60 - 140
1,3,5-Trimethylbenzene	2.00	1.73		ppb v/v		87	70 - 130
1,3-Butadiene	2.00	2.09		ppb v/v		104	60 - 140
1,3-Dichlorobenzene	2.00	1.49		ppb v/v		75	70 - 130
1,4-Dichlorobenzene	2.00	1.51		ppb v/v		76	70 - 130
1,4-Dioxane	2.00	2.09		ppb v/v		104	60 - 140
2,2,4-Trimethylpentane	2.00	1.86		ppb v/v		93	70 - 130
2-Chlorotoluene	2.00	1.65		ppb v/v		82	70 - 130
3-Chloropropene	2.00	1.83		ppb v/v		91	60 - 140
4-Ethyltoluene	2.00	1.80		ppb v/v		90	70 - 130
4-Isopropyltoluene	2.00	1.77		ppb v/v		89	70 - 130
Acetone	6.00	5.54		ppb v/v		92	60 - 140
Benzene	2.00	1.78		ppb v/v		89	70 - 130
Benzyl chloride	2.00	1.63		ppb v/v		81	70 - 130
Bromodichloromethane	2.00	1.88		ppb v/v		94	70 - 130
Bromoethene(Vinyl Bromide)	2.00	2.12		ppb v/v		106	60 - 140
Bromoform	2.00	1.68		ppb v/v		84	60 - 140
Bromomethane	2.00	2.07		ppb v/v		103	70 - 130

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-1876/1002
Matrix: Air
Analysis Batch: 1876

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon disulfide	2.00	2.13		ppb v/v		107	70 - 130
Carbon tetrachloride	2.00	2.06		ppb v/v		103	70 - 130
Chlorobenzene	2.00	1.66		ppb v/v		83	70 - 130
Chloroethane	2.00	2.07		ppb v/v		104	70 - 130
Chloroform	2.00	1.92		ppb v/v		96	70 - 130
Chloromethane	2.00	2.23		ppb v/v		112	60 - 140
cis-1,2-Dichloroethene	2.00	1.87		ppb v/v		94	70 - 130
cis-1,3-Dichloropropene	2.00	1.84		ppb v/v		92	70 - 130
Cumene	2.00	1.75		ppb v/v		87	70 - 130
Cyclohexane	2.00	1.86		ppb v/v		93	70 - 130
Dibromochloromethane	2.00	1.79		ppb v/v		89	70 - 130
Dichlorodifluoromethane	2.00	2.34		ppb v/v		117	60 - 140
Ethylbenzene	2.00	1.75		ppb v/v		87	70 - 130
Freon 22	2.00	2.16		ppb v/v		108	60 - 140
Freon TF	2.00	1.98		ppb v/v		99	70 - 130
Hexachlorobutadiene	2.00	1.44		ppb v/v		72	60 - 140
Isopropyl alcohol	6.00	6.40		ppb v/v		107	60 - 140
Methyl Butyl Ketone (2-Hexanone)	2.00	1.80		ppb v/v		90	60 - 140
Methyl Ethyl Ketone	2.00	1.99		ppb v/v		99	60 - 140
methyl isobutyl ketone	2.00	1.83		ppb v/v		91	60 - 140
Methyl methacrylate	2.00	1.99		ppb v/v		100	60 - 140
Methyl tert-butyl ether	2.00	2.04		ppb v/v		102	60 - 140
Methylene Chloride	2.00	1.87		ppb v/v		94	70 - 130
m-Xylene & p-Xylene	4.00	3.61		ppb v/v		90	70 - 130
Naphthalene	2.00	1.48		ppb v/v		74	40 - 140
n-Butane	2.00	2.07		ppb v/v		103	60 - 140
n-Butylbenzene	2.00	1.75		ppb v/v		88	60 - 140
n-Heptane	2.00	1.81		ppb v/v		90	70 - 130
n-Hexane	2.00	1.89		ppb v/v		94	70 - 130
n-Propylbenzene	2.00	1.73		ppb v/v		86	70 - 130
o-Xylene	2.00	1.77		ppb v/v		89	70 - 130
sec-Butylbenzene	2.00	1.79		ppb v/v		90	70 - 130
Styrene	2.00	1.70		ppb v/v		85	70 - 130
tert-Butyl alcohol	2.00	2.09		ppb v/v		105	60 - 140
tert-Butylbenzene	2.00	1.77		ppb v/v		88	70 - 130
Tetrachloroethene	2.00	1.67		ppb v/v		84	70 - 130
Tetrahydrofuran	2.00	2.08		ppb v/v		104	60 - 140
Toluene	2.00	1.73		ppb v/v		86	70 - 130
trans-1,2-Dichloroethene	2.00	1.97		ppb v/v		99	70 - 130
trans-1,3-Dichloropropene	2.00	1.76		ppb v/v		88	70 - 130
Trichloroethene	2.00	1.72		ppb v/v		86	70 - 130
Trichlorofluoromethane	2.00	2.17		ppb v/v		109	60 - 140
Vinyl chloride	2.00	2.16		ppb v/v		108	70 - 130
Xylenes, Total	6.00	5.38		ppb v/v		90	70 - 130

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-1876/1002
Matrix: Air
Analysis Batch: 1876

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	11	10.3		ug/m3		94	70 - 130
1,1,2,2-Tetrachloroethane	14	12.4		ug/m3		90	70 - 130
1,1,2-Trichloroethane	11	9.56		ug/m3		88	70 - 130
1,1-Dichloroethane	8.1	7.96		ug/m3		98	70 - 130
1,1-Dichloroethene	7.9	8.12		ug/m3		102	70 - 130
1,2,4-Trichlorobenzene	15	9.57		ug/m3		64	60 - 140
1,2,4-Trimethylbenzene	9.8	8.81		ug/m3		90	70 - 130
1,2-Dibromoethane (EDB)	15	12.7		ug/m3		83	70 - 130
1,2-Dichlorobenzene	12	9.52		ug/m3		79	70 - 130
1,2-Dichloroethane	8.1	7.76		ug/m3		96	70 - 130
1,2-Dichloroethene, Total	16	15.2		ug/m3		96	70 - 130
1,2-Dichloropropane	9.2	8.60		ug/m3		93	70 - 130
1,2-Dichlorotetrafluoroethane	14	15.8		ug/m3		113	60 - 140
1,3,5-Trimethylbenzene	9.8	8.53		ug/m3		87	70 - 130
1,3-Butadiene	4.4	4.62		ug/m3		104	60 - 140
1,3-Dichlorobenzene	12	8.98		ug/m3		75	70 - 130
1,4-Dichlorobenzene	12	9.09		ug/m3		76	70 - 130
1,4-Dioxane	7.2	7.53		ug/m3		104	60 - 140
2,2,4-Trimethylpentane	9.3	8.68		ug/m3		93	70 - 130
2-Chlorotoluene	10	8.53		ug/m3		82	70 - 130
3-Chloropropene	6.3	5.72		ug/m3		91	60 - 140
4-Ethyltoluene	9.8	8.86		ug/m3		90	70 - 130
4-Isopropyltoluene	11	9.74		ug/m3		89	70 - 130
Acetone	14	13.2		ug/m3		92	60 - 140
Benzene	6.4	5.69		ug/m3		89	70 - 130
Benzyl chloride	10	8.43		ug/m3		81	70 - 130
Bromodichloromethane	13	12.6		ug/m3		94	70 - 130
Bromoethene(Vinyl Bromide)	8.8	9.27		ug/m3		106	60 - 140
Bromoform	21	17.3		ug/m3		84	60 - 140
Bromomethane	7.8	8.03		ug/m3		103	70 - 130
Carbon disulfide	6.2	6.65		ug/m3		107	70 - 130
Carbon tetrachloride	13	12.9		ug/m3		103	70 - 130
Chlorobenzene	9.2	7.64		ug/m3		83	70 - 130
Chloroethane	5.3	5.47		ug/m3		104	70 - 130
Chloroform	9.8	9.36		ug/m3		96	70 - 130
Chloromethane	4.1	4.62		ug/m3		112	60 - 140
cis-1,2-Dichloroethene	7.9	7.42		ug/m3		94	70 - 130
cis-1,3-Dichloropropene	9.1	8.37		ug/m3		92	70 - 130
Cumene	9.8	8.60		ug/m3		87	70 - 130
Cyclohexane	6.9	6.39		ug/m3		93	70 - 130
Dibromochloromethane	17	15.2		ug/m3		89	70 - 130
Dichlorodifluoromethane	9.9	11.6		ug/m3		117	60 - 140
Ethylbenzene	8.7	7.58		ug/m3		87	70 - 130
Freon 22	7.1	7.64		ug/m3		108	60 - 140
Freon TF	15	15.2		ug/m3		99	70 - 130
Hexachlorobutadiene	21	15.3		ug/m3		72	60 - 140
Isopropyl alcohol	15	15.7		ug/m3		107	60 - 140

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-1876/1002
Matrix: Air
Analysis Batch: 1876

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl Butyl Ketone (2-Hexanone)	8.2	7.39		ug/m3		90	60 - 140
Methyl Ethyl Ketone	5.9	5.87		ug/m3		99	60 - 140
methyl isobutyl ketone	8.2	7.48		ug/m3		91	60 - 140
Methyl methacrylate	8.2	8.15		ug/m3		100	60 - 140
Methyl tert-butyl ether	7.2	7.35		ug/m3		102	60 - 140
Methylene Chloride	7.0	6.51		ug/m3		94	70 - 130
m-Xylene & p-Xylene	17	15.7		ug/m3		90	70 - 130
Naphthalene	10	7.77		ug/m3		74	40 - 140
n-Butane	4.8	4.92		ug/m3		103	60 - 140
n-Butylbenzene	11	9.63		ug/m3		88	60 - 140
n-Heptane	8.2	7.41		ug/m3		90	70 - 130
n-Hexane	7.1	6.66		ug/m3		94	70 - 130
n-Propylbenzene	9.8	8.50		ug/m3		86	70 - 130
o-Xylene	8.7	7.69		ug/m3		89	70 - 130
sec-Butylbenzene	11	9.84		ug/m3		90	70 - 130
Styrene	8.5	7.23		ug/m3		85	70 - 130
tert-Butyl alcohol	6.1	6.34		ug/m3		105	60 - 140
tert-Butylbenzene	11	9.70		ug/m3		88	70 - 130
Tetrachloroethene	14	11.3		ug/m3		84	70 - 130
Tetrahydrofuran	5.9	6.14		ug/m3		104	60 - 140
Toluene	7.5	6.52		ug/m3		86	70 - 130
trans-1,2-Dichloroethene	7.9	7.83		ug/m3		99	70 - 130
trans-1,3-Dichloropropene	9.1	7.98		ug/m3		88	70 - 130
Trichloroethene	11	9.22		ug/m3		86	70 - 130
Trichlorofluoromethane	11	12.2		ug/m3		109	60 - 140
Vinyl chloride	5.1	5.53		ug/m3		108	70 - 130
Xylenes, Total	26	23.4		ug/m3		90	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*60 - 140*

Lab Sample ID: MB 140-1880/4
Matrix: Air
Analysis Batch: 1880

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butane	ND		0.16	0.073	ppb v/v			10/31/14 13:05	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butane	ND		0.38	0.17	ug/m3			10/31/14 13:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*60 - 140*		*10/31/14 13:05*	*1*

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-1880/1002
Matrix: Air
Analysis Batch: 1880

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
n-Butane			5.00	4.22		ppb v/v		84	60 - 140		

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
n-Butane			12	10.0		ug/m3		84	60 - 140		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*60 - 140*

QC Association Summary

Client: AKRF Inc
Project/Site: 77 Commercial Street, Brooklyn, NY

TestAmerica Job ID: 140-2214-1

Air - GC/MS VOA

Analysis Batch: 1876

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-2214-1	SV-3	Total/NA	Air	TO 15 LL	
140-2214-2	SV-6	Total/NA	Air	TO 15 LL	
140-2214-3	SV-4	Total/NA	Air	TO 15 LL	
LCS 140-1876/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	
MB 140-1876/7	Method Blank	Total/NA	Air	TO 15 LL	

Analysis Batch: 1880

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-2214-3 - DL	SV-4	Total/NA	Air	TO 15 LL	
LCS 140-1880/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	
MB 140-1880/4	Method Blank	Total/NA	Air	TO 15 LL	

Lab Chronicle

Client: AKRF Inc
Project/Site: 77 Commercial Street, Brooklyn, NY

TestAmerica Job ID: 140-2214-1

Client Sample ID: SV-3 — Lab Sample ID: 140-2214-1

Date Collected: 10/23/14 13:05 — **Matrix: Air**
Date Received: 10/24/14 10:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	50 mL	500 mL	1876	10/30/14 21:01	HMT	TAL KNX
	Instrument ID: MJ									

Client Sample ID: SV-6 — Lab Sample ID: 140-2214-2

Date Collected: 10/23/14 13:06 — **Matrix: Air**
Date Received: 10/24/14 10:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	50 mL	500 mL	1876	10/30/14 21:56	HMT	TAL KNX
	Instrument ID: MJ									

Client Sample ID: SV-4 — Lab Sample ID: 140-2214-3

Date Collected: 10/23/14 12:35 — **Matrix: Air**
Date Received: 10/24/14 10:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL	DL	1	11 mL	500 mL	1880	10/31/14 13:47	AFB	TAL KNX
	Instrument ID: MG									
Total/NA	Analysis	TO 15 LL		1	50 mL	500 mL	1876	10/30/14 22:51	HMT	TAL KNX
	Instrument ID: MJ									

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Certification Summary

Client: AKRF Inc
Project/Site: 77 Commercial Street, Brooklyn, NY

TestAmerica Job ID: 140-2214-1

Laboratory: TestAmerica Knoxville

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
New York	NELAP	2	10781	03-31-15

The following analytes are included in this report, but are not certified under this certification:

Analysis Method	Prep Method	Matrix	Analyte
TO 15 LL		Air	1,2,4-Trimethylbenzene
TO 15 LL		Air	1,2-Dichlorotetrafluoroethane
TO 15 LL		Air	1,3,5-Trimethylbenzene
TO 15 LL		Air	1,4-Dioxane
TO 15 LL		Air	2-Chlorotoluene
TO 15 LL		Air	3-Chloropropene
TO 15 LL		Air	Acetone
TO 15 LL		Air	Bromodichloromethane
TO 15 LL		Air	Cyclohexane
TO 15 LL		Air	Dibromochloromethane
TO 15 LL		Air	Dichlorodifluoromethane
TO 15 LL		Air	Freon TF
TO 15 LL		Air	Isopropyl alcohol
TO 15 LL		Air	Methyl methacrylate
TO 15 LL		Air	Naphthalene
TO 15 LL		Air	n-Heptane
TO 15 LL		Air	o-Xylene
TO 15 LL		Air	Trichlorofluoromethane

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
TO 15 LL		Air	1,2-Dichloroethene, Total
TO 15 LL		Air	4-Ethyltoluene
TO 15 LL		Air	4-Isopropyltoluene
TO 15 LL		Air	Freon 22
TO 15 LL		Air	Methyl Butyl Ketone (2-Hexanone)
TO 15 LL		Air	n-Butane
TO 15 LL		Air	n-Butylbenzene
TO 15 LL		Air	n-Propylbenzene
TO 15 LL		Air	sec-Butylbenzene
TO 15 LL		Air	tert-Butyl alcohol
TO 15 LL		Air	tert-Butylbenzene
TO 15 LL		Air	Tetrahydrofuran

Method Summary

Client: AKRF Inc
Project/Site: 77 Commercial Street, Brooklyn, NY

TestAmerica Job ID: 140-2214-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: AKRF Inc
Project/Site: 77 Commercial Street, Brooklyn, NY

TestAmerica Job ID: 140-2214-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-2214-1	SV-3	Air	10/23/14 13:05	10/24/14 10:20
140-2214-2	SV-6	Air	10/23/14 13:06	10/24/14 10:20
140-2214-3	SV-4	Air	10/23/14 12:35	10/24/14 10:20

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information
Company: AKRF, Inc.
Address: 440 Park Ave S. 7th Fl
City/State/Zip New York, NY 10016
Phone: 631-574-3724
FAX:
Project Name: 77 Commercial St.
Site/location: Brooklyn, NY
PO # 12015

Project Manager: Stephen Malinowski
Phone: 631-574-3724
Site Contact: Mark Jepsen
TAL Contact:

Sampled By: Mark Jepsen

1 of 1 COCs

140-2214 Chain of Custody

Analysis Turnaround Time
Standard (Specify) X (See quote)
Rush (Specify)

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
SV-3	10/23/14	11:38	13:05	-30.0	-4.00	09754	11137	X											
SV-6		11:17	13:06	-27.0	-5.00	09702	09817	X											
SV-4		10:45	12:35	-30.0	-6.00	10057	10425	X											

Sampled by : MJ

Temperature (Fahrenheit)	Interior	Ambient
Start		
Stop		

Pressure (inches of Hg)	Interior	Ambient
Start		
Stop		

Received @ ambient / box
No custody seal, UPS Next Day Air
trk# 1Z 083 95E 01 5820 1377
KW 10/24/14

Special Instructions/QC Requirements & Comments:
1 defective Canister returned w/ these Samples.

Canisters Shipped by:	Date/Time: 10/23/14/zero	Canisters Received by: 10/24/14 1020	4 Cans
Samples Relinquished by: Mark Jepsen	Date/Time: 10/23/14	Received by: 10/24/14 17:00	4 flow
Relinquished by:	Date/Time:	Received by:	8 cc

Login Sample Receipt Checklist

Client: AKRF Inc

Job Number: 140-2214-1

Login Number: 2214
List Number: 1
Creator: Wilson, Ken

List Source: TestAmerica Knoxville

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	N/A	
Cooler Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	N/A	This is checked in the lab.
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	N/A	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	N/A	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

TestAmerica Knoxville - Air Canister Initial Pressure Check

Gauge ID: G1

Analyst	Date	Sample ID	6 L	1 L	Pressure @ Receipt (-in Hg or +psig)	Time	Comments
AFB	10/24/2014	140-2214-a-1	X		-1.3	1905	
AFB	10/24/2014	140-2214-a-2	X		-4.7	1906	
AFB	10/24/2014	140-2214-a-3	X		-4.0	1907	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-1822-1

SDG No.:

Client Sample ID: 10541 | Lab Sample ID: 140-1822-2

Matrix: Air | Lab File ID: BLK1822-02.D

Analysis Method: TO 15 LL | Date Collected: 08/13/2014 14:20

Sample wt/vol: 500(mL) | Date Analyzed: 08/15/2014 13:48

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 1583 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
74-83-9	Bromomethane	ND		0.080	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
67-66-3	Chloroform	ND		0.080	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
74-87-3	Chloromethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
75-71-8	Dichlorodifluoromethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
78-93-3	2-Butanone	ND		0.32	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
95-49-8	2-Chlorotoluene	ND		0.16	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
591-78-6	2-Hexanone	ND		0.20	
107-05-1	3-Chloroprene	ND		0.080	
100-41-4	Ethylbenzene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
75-69-4	Trichlorofluoromethane	ND		0.080	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		0.080	
67-64-1	Acetone	ND		2.0	
75-09-2	Methylene Chloride	ND		0.20	
75-05-8	Acetonitrile	ND		0.40	
100-42-5	Styrene	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-1822-1

SDG No.:

Client Sample ID: 10541 | Lab Sample ID: 140-1822-2

Matrix: Air | Lab File ID: BLK1822-02.D

Analysis Method: TO 15 LL | Date Collected: 08/13/2014 14:20

Sample wt/vol: 500(mL) | Date Analyzed: 08/15/2014 13:48

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 1583 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
107-02-8	Acrolein	ND		0.16	
107-13-1	Acrylonitrile	ND		0.80	
127-18-4	Tetrachloroethene	ND		0.040	
98-83-9	Alpha Methyl Styrene	ND		0.16	
108-88-3	Toluene	ND		0.12	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
75-27-4	Bromodichloromethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-97-8	Butane	ND		0.16	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
75-15-0	Carbon disulfide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.040	
95-47-6	o-Xylene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
110-82-7	Cyclohexane	ND		0.20	
124-18-5	n-Decane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
112-40-3	n-Dodecane	ND		0.40	
64-17-5	Ethanol	ND		0.80	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
142-82-5	n-Heptane	ND		0.20	
110-54-3	Hexane	ND		0.20	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
91-20-3	Naphthalene	ND		0.20	

FORM I TO 15 LL

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-1822-1

SDG No.:

Client Sample ID: 10541 | Lab Sample ID: 140-1822-2

Matrix: Air | Lab File ID: BLK1822-02.D

Analysis Method: TO 15 LL | Date Collected: 08/13/2014 14:20

Sample wt/vol: 500(mL) | Date Analyzed: 08/15/2014 13:48

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 1583 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
104-51-8	n-Butylbenzene	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
111-65-9	n-Octane	ND		0.16	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
98-06-6	tert-Butylbenzene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		0.40	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.080	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.080	
90-12-0	1-Methylnaphthalene	ND		1.0	
3074-71-3	2,3-Dimethylheptane	ND		0.080	
872-55-9	2-Ethylthiophene	ND		0.080	
554-14-3	2-Methylthiophene	ND		0.080	
91-57-6	2-Methylnaphthalene	ND		1.0	
616-44-4	3-Methylthiophene	ND		0.080	
95-15-8	Benzo(b)thiophene	ND		0.16	
110-02-1	Thiophene	ND		0.080	
1678-93-9	Butylcyclohexane	ND		0.080	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-78-4	2-Methylbutane	ND		0.20	
107-83-5	2-Methylpentane	ND		0.080	
75-07-0	Acetaldehyde	ND		4.0	
98-82-8	Cumene	ND		0.16	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-1822-1
SDG No.:
Client Sample ID: 10541
Lab Sample ID: 140-1822-2
Matrix: Air
Lab File ID: BLK1822-02.D
Analysis Method: TO 15 LL
Date Collected: 08/13/2014 14:20
Sample wt/vol: 500(mL)
Date Analyzed: 08/15/2014 13:48
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 1583
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-87-6	p-Cymene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
108-87-2	Methylcyclohexane	ND		0.080	
111-84-2	n-Nonane	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\KNXCHROM\ChromData\MJ\20140814-886.b\BLK1822-02.D				
Lims ID:	140-1822-A-2	Lab Sample ID:	140-1822-2		
Client ID:	10541				
Sample Type:	Client				
Inject. Date:	15-Aug-2014 13:48:30	ALS Bottle#:	3	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	10541				
Misc. Info.:	J081514,TO15,,140-0000886-006				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\KNXCHROM\ChromData\MJ\20140814-886.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	18-Aug-2014 08:37:16	Calib Date:	01-Jul-2014 23:32:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\KNXCHROM\ChromData\MJ\20140701-793.b\ic l9.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK017				

First Level Reviewer: tajh Date: 18-Aug-2014 08:37:16

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.204	9.200	0.004	94	349585	4.00	
* 2 1,4-Difluorobenzene	114	11.367	11.367	0.000	96	1602962	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.058	16.058	0.000	90	1330407	4.00	
$ 5 4-Bromofluorobenzene (Surr	95	17.693	17.688	0.005	85	903406	3.69	
31 Methylene Chloride	84	6.638	6.628	0.010	98	5877	0.0562	

Reagents:

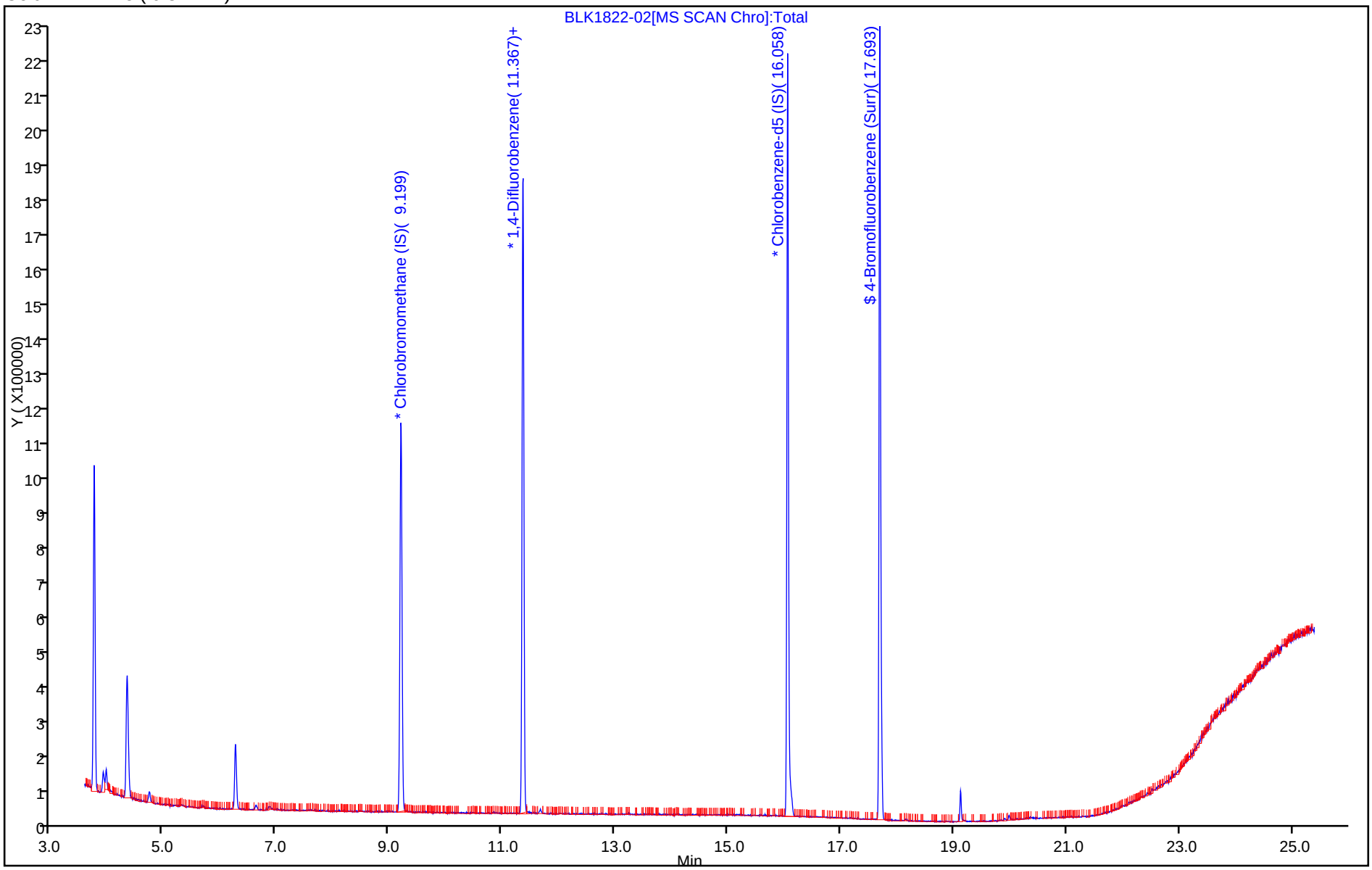
MAissur1_00002 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 18-Aug-2014 08:37:17 Chrom Revision: 2.2 24-Jun-2014 07:21:42

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140814-886.b\BLK1822-02.D				
Injection Date:	15-Aug-2014 13:48:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	140-1822-A-2	Lab Sample ID:	140-1822-2	Worklist Smp#:	6
Client ID:	10541				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-1822-1

SDG No.:

Client Sample ID: 10425 | Lab Sample ID: 140-1822-6

Matrix: Air | Lab File ID: BLK1822-06.D

Analysis Method: TO 15 LL | Date Collected: 08/13/2014 14:20

Sample wt/vol: 500(mL) | Date Analyzed: 08/15/2014 17:34

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 1583 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
74-83-9	Bromomethane	ND		0.080	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
67-66-3	Chloroform	ND		0.080	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
74-87-3	Chloromethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
75-71-8	Dichlorodifluoromethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
78-93-3	2-Butanone	ND		0.32	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
95-49-8	2-Chlorotoluene	ND		0.16	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
591-78-6	2-Hexanone	ND		0.20	
107-05-1	3-Chloroprene	ND		0.080	
100-41-4	Ethylbenzene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
75-69-4	Trichlorofluoromethane	ND		0.080	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		0.080	
67-64-1	Acetone	ND		2.0	
75-09-2	Methylene Chloride	ND		0.20	
75-05-8	Acetonitrile	ND		0.40	
100-42-5	Styrene	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-1822-1

SDG No.:

Client Sample ID: 10425 | Lab Sample ID: 140-1822-6

Matrix: Air | Lab File ID: BLK1822-06.D

Analysis Method: TO 15 LL | Date Collected: 08/13/2014 14:20

Sample wt/vol: 500(mL) | Date Analyzed: 08/15/2014 17:34

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 1583 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
107-02-8	Acrolein	ND		0.16	
107-13-1	Acrylonitrile	ND		0.80	
127-18-4	Tetrachloroethene	ND		0.040	
98-83-9	Alpha Methyl Styrene	ND		0.16	
108-88-3	Toluene	ND		0.12	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
75-27-4	Bromodichloromethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-97-8	Butane	ND		0.16	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
75-15-0	Carbon disulfide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.040	
95-47-6	o-Xylene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
110-82-7	Cyclohexane	ND		0.20	
124-18-5	n-Decane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
112-40-3	n-Dodecane	ND		0.40	
64-17-5	Ethanol	ND		0.80	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
142-82-5	n-Heptane	ND		0.20	
110-54-3	Hexane	ND		0.20	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
91-20-3	Naphthalene	ND		0.20	

FORM I TO 15 LL

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-1822-1

SDG No.:

Client Sample ID: 10425 | Lab Sample ID: 140-1822-6

Matrix: Air | Lab File ID: BLK1822-06.D

Analysis Method: TO 15 LL | Date Collected: 08/13/2014 14:20

Sample wt/vol: 500(mL) | Date Analyzed: 08/15/2014 17:34

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 1583 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
104-51-8	n-Butylbenzene	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
111-65-9	n-Octane	ND		0.16	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
98-06-6	tert-Butylbenzene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		0.40	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.080	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.080	
90-12-0	1-Methylnaphthalene	ND		1.0	
3074-71-3	2,3-Dimethylheptane	ND		0.080	
872-55-9	2-Ethylthiophene	ND		0.080	
554-14-3	2-Methylthiophene	ND		0.080	
91-57-6	2-Methylnaphthalene	ND		1.0	
616-44-4	3-Methylthiophene	ND		0.080	
95-15-8	Benzo(b)thiophene	ND		0.16	
110-02-1	Thiophene	ND		0.080	
1678-93-9	Butylcyclohexane	ND		0.080	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-78-4	2-Methylbutane	ND		0.20	
107-83-5	2-Methylpentane	ND		0.080	
75-07-0	Acetaldehyde	ND		4.0	
98-82-8	Cumene	ND		0.16	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-1822-1

SDG No.:

Client Sample ID: 10425 Lab Sample ID: 140-1822-6

Matrix: Air Lab File ID: BLK1822-06.D

Analysis Method: TO 15 LL Date Collected: 08/13/2014 14:20

Sample wt/vol: 500(mL) Date Analyzed: 08/15/2014 17:34

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 1583 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-87-6	p-Cymene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
108-87-2	Methylcyclohexane	ND		0.080	
111-84-2	n-Nonane	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\KNXCHROM\ChromData\MJ\20140814-886.b\BLK1822-06.D				
Lims ID:	140-1822-A-6	Lab Sample ID:	140-1822-6		
Client ID:	10425				
Sample Type:	Client				
Inject. Date:	15-Aug-2014 17:34:30	ALS Bottle#:	7	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	10425				
Misc. Info.:	J081514,TO15,,140-0000886-010				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\KNXCHROM\ChromData\MJ\20140814-886.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	18-Aug-2014 08:40:17	Calib Date:	01-Jul-2014 23:32:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\KNXCHROM\ChromData\MJ\20140701-793.b\ic l9.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK017				

First Level Reviewer: tajh Date: 18-Aug-2014 08:40:17

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.199	9.200	-0.001	94	334778	4.00	
* 2 1,4-Difluorobenzene	114	11.362	11.367	-0.005	96	1499974	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.058	16.058	0.000	89	1251729	4.00	
$ 5 4-Bromofluorobenzene (Surr	95	17.693	17.688	0.005	94	848617	3.68	
6 Chlorodifluoromethane	67	3.938	3.944	-0.006	93	1026	0.0197	
13 Butane	43	4.481	4.476	0.005	95	20024	0.1028	
19 2-Methylbutane	43	5.337	5.337	0.000	93	20372	0.1214	
25 Pentane	72	5.794	5.789	0.005	96	921	0.0471	
31 Methylene Chloride	84	6.628	6.628	0.000	98	11179	0.1117	
40 Hexane	56	8.484	8.479	0.005	91	2041	0.0199	

Reagents:

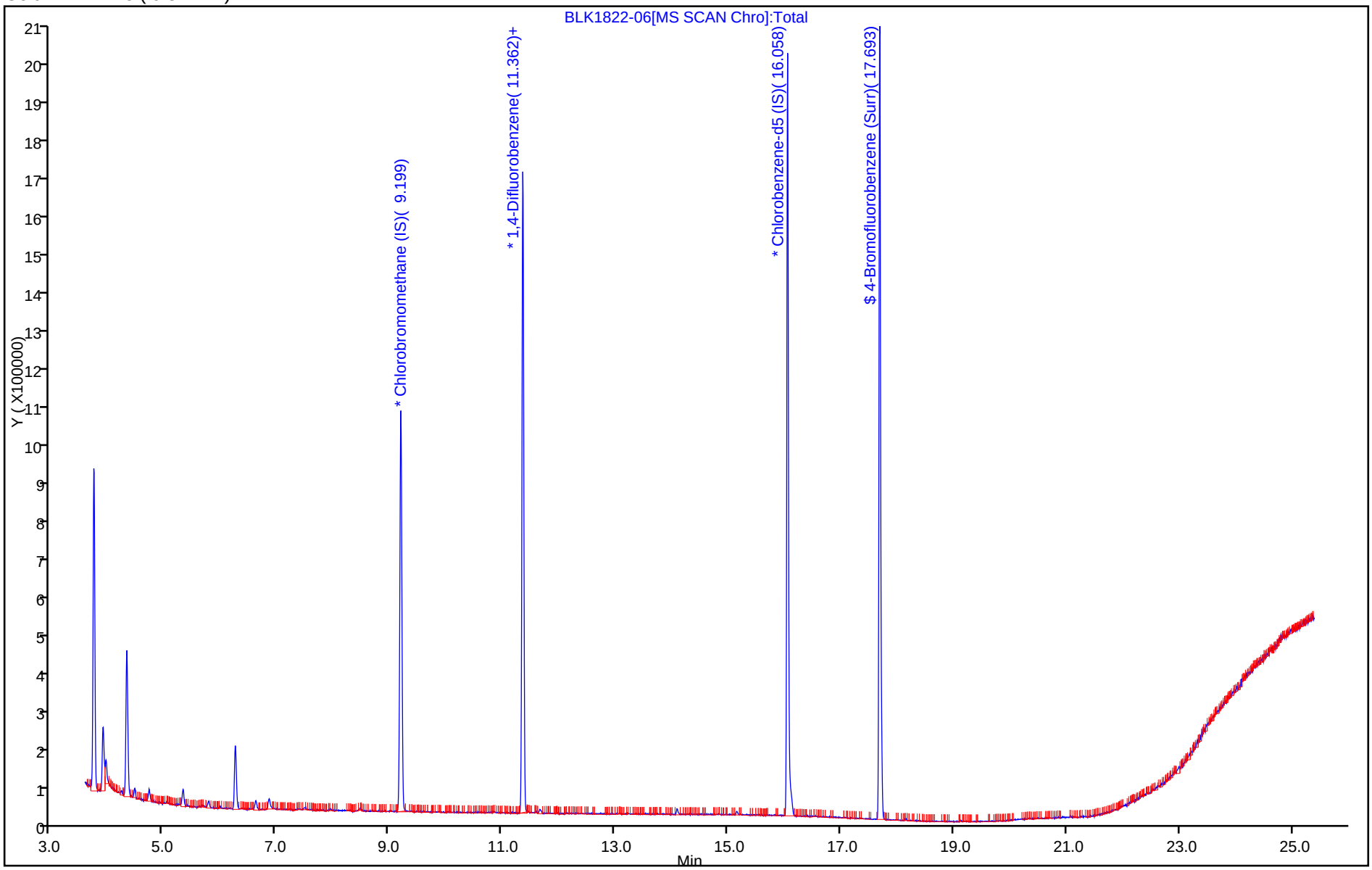
MAissur1_00002 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 18-Aug-2014 08:40:18 Chrom Revision: 2.2 24-Jun-2014 07:21:42

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140814-886.b\BLK1822-06.D				
Injection Date:	15-Aug-2014 17:34:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	140-1822-A-6	Lab Sample ID:	140-1822-6	Worklist Smp#:	10
Client ID:	10425				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-1822-1

SDG No.:

Client Sample ID: 10184 | Lab Sample ID: 140-1822-8

Matrix: Air | Lab File ID: BLK1822-08.D

Analysis Method: TO 15 LL | Date Collected: 08/13/2014 14:20

Sample wt/vol: 500(mL) | Date Analyzed: 08/15/2014 19:25

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 1583 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
74-83-9	Bromomethane	ND		0.080	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
67-66-3	Chloroform	ND		0.080	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
74-87-3	Chloromethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
75-71-8	Dichlorodifluoromethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
78-93-3	2-Butanone	ND		0.32	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
95-49-8	2-Chlorotoluene	ND		0.16	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
591-78-6	2-Hexanone	ND		0.20	
107-05-1	3-Chloroprene	ND		0.080	
100-41-4	Ethylbenzene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
75-69-4	Trichlorofluoromethane	ND		0.080	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		0.080	
67-64-1	Acetone	ND		2.0	
75-09-2	Methylene Chloride	0.23		0.20	
75-05-8	Acetonitrile	ND		0.40	
100-42-5	Styrene	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-1822-1

SDG No.:

Client Sample ID: 10184 | Lab Sample ID: 140-1822-8

Matrix: Air | Lab File ID: BLK1822-08.D

Analysis Method: TO 15 LL | Date Collected: 08/13/2014 14:20

Sample wt/vol: 500(mL) | Date Analyzed: 08/15/2014 19:25

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 1583 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
107-02-8	Acrolein	ND		0.16	
107-13-1	Acrylonitrile	ND		0.80	
127-18-4	Tetrachloroethene	ND		0.040	
98-83-9	Alpha Methyl Styrene	ND		0.16	
108-88-3	Toluene	0.16		0.12	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
75-27-4	Bromodichloromethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-97-8	Butane	0.30		0.16	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
75-15-0	Carbon disulfide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.040	
95-47-6	o-Xylene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
110-82-7	Cyclohexane	ND		0.20	
124-18-5	n-Decane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
112-40-3	n-Dodecane	ND		0.40	
64-17-5	Ethanol	ND		0.80	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
142-82-5	n-Heptane	ND		0.20	
110-54-3	Hexane	ND		0.20	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
91-20-3	Naphthalene	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-1822-1

SDG No.:

Client Sample ID: 10184 | Lab Sample ID: 140-1822-8

Matrix: Air | Lab File ID: BLK1822-08.D

Analysis Method: TO 15 LL | Date Collected: 08/13/2014 14:20

Sample wt/vol: 500(mL) | Date Analyzed: 08/15/2014 19:25

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 1583 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
104-51-8	n-Butylbenzene	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
111-65-9	n-Octane	ND		0.16	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
98-06-6	tert-Butylbenzene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		0.40	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.080	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.080	
90-12-0	1-Methylnaphthalene	ND		1.0	
3074-71-3	2,3-Dimethylheptane	ND		0.080	
872-55-9	2-Ethylthiophene	ND		0.080	
554-14-3	2-Methylthiophene	ND		0.080	
91-57-6	2-Methylnaphthalene	ND		1.0	
616-44-4	3-Methylthiophene	ND		0.080	
95-15-8	Benzo(b)thiophene	ND		0.16	
110-02-1	Thiophene	ND		0.080	
1678-93-9	Butylcyclohexane	ND		0.080	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-78-4	2-Methylbutane	0.36		0.20	
107-83-5	2-Methylpentane	ND		0.080	
75-07-0	Acetaldehyde	ND		4.0	
98-82-8	Cumene	ND		0.16	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	

FORM I TO 15 LL

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-1822-1

SDG No.:

Client Sample ID: 10184 Lab Sample ID: 140-1822-8

Matrix: Air Lab File ID: BLK1822-08.D

Analysis Method: TO 15 LL Date Collected: 08/13/2014 14:20

Sample wt/vol: 500(mL) Date Analyzed: 08/15/2014 19:25

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 1583 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-87-6	p-Cymene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
108-87-2	Methylcyclohexane	ND		0.080	
111-84-2	n-Nonane	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\KNXCHROM\ChromData\MJ\20140814-886.b\BLK1822-08.D				
Lims ID:	140-1822-A-8	Lab Sample ID:	140-1822-8		
Client ID:	10184				
Sample Type:	Client				
Inject. Date:	15-Aug-2014 19:25:30	ALS Bottle#:	9	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	10184				
Misc. Info.:	J081514,TO15,,140-0000886-012				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\KNXCHROM\ChromData\MJ\20140814-886.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	18-Aug-2014 08:41:37	Calib Date:	01-Jul-2014 23:32:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\KNXCHROM\ChromData\MJ\20140701-793.b\ic l9.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK017				

First Level Reviewer: tajh Date: 18-Aug-2014 08:41:37

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.202	9.200	0.002	94	330490	4.00	
* 2 1,4-Difluorobenzene	114	11.364	11.367	-0.003	96	1504954	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.055	16.058	-0.003	90	1244170	4.00	
$ 5 4-Bromofluorobenzene (Surr	95	17.691	17.688	0.003	85	837991	3.66	
6 Chlorodifluoromethane	67	3.951	3.944	0.007	96	2311	0.0449	
13 Butane	43	4.484	4.476	0.008	96	57984	0.3014	
19 2-Methylbutane	43	5.339	5.337	0.002	95	58839	0.3551	
25 Pentane	72	5.791	5.789	0.002	95	2824	0.1462	
28 2-Methyl-2-propanol	59	6.388	6.359	0.029	91	6283	0.0329	
31 Methylene Chloride	84	6.630	6.628	0.002	97	22268	0.2253	
40 Hexane	56	8.492	8.479	0.013	90	5716	0.0564	
48 Benzene	78	10.848	10.840	0.008	84	7090	0.0241	
65 Toluene	91	14.103	14.100	0.003	93	44296	0.1621	

Reagents:

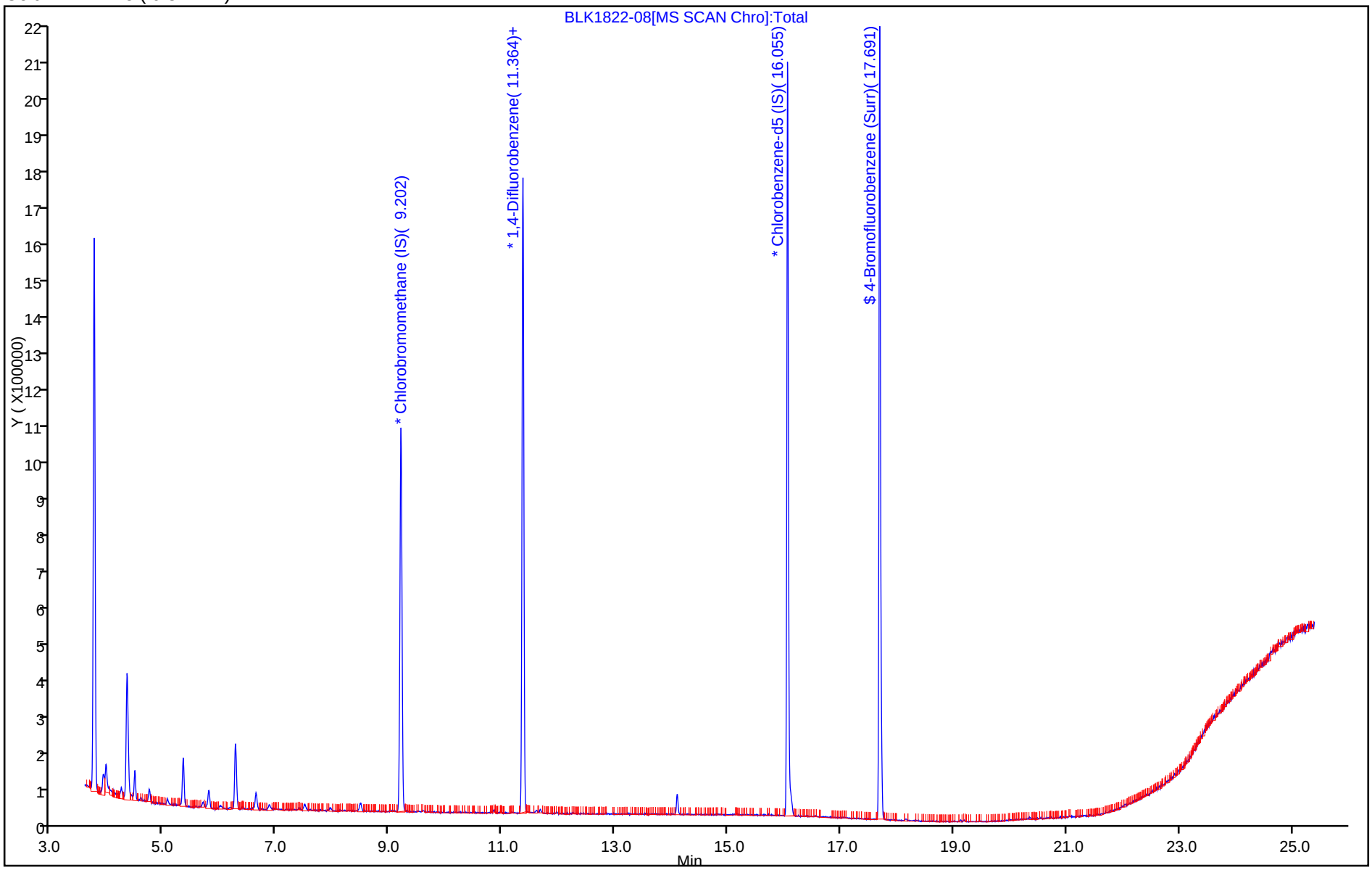
MAissur1_00002 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 18-Aug-2014 08:41:38 Chrom Revision: 2.2 24-Jun-2014 07:21:42

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140814-886.b\BLK1822-08.D				
Injection Date:	15-Aug-2014 19:25:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	140-1822-A-8	Lab Sample ID:	140-1822-8	Worklist Smp#:	12
Client ID:	10184				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

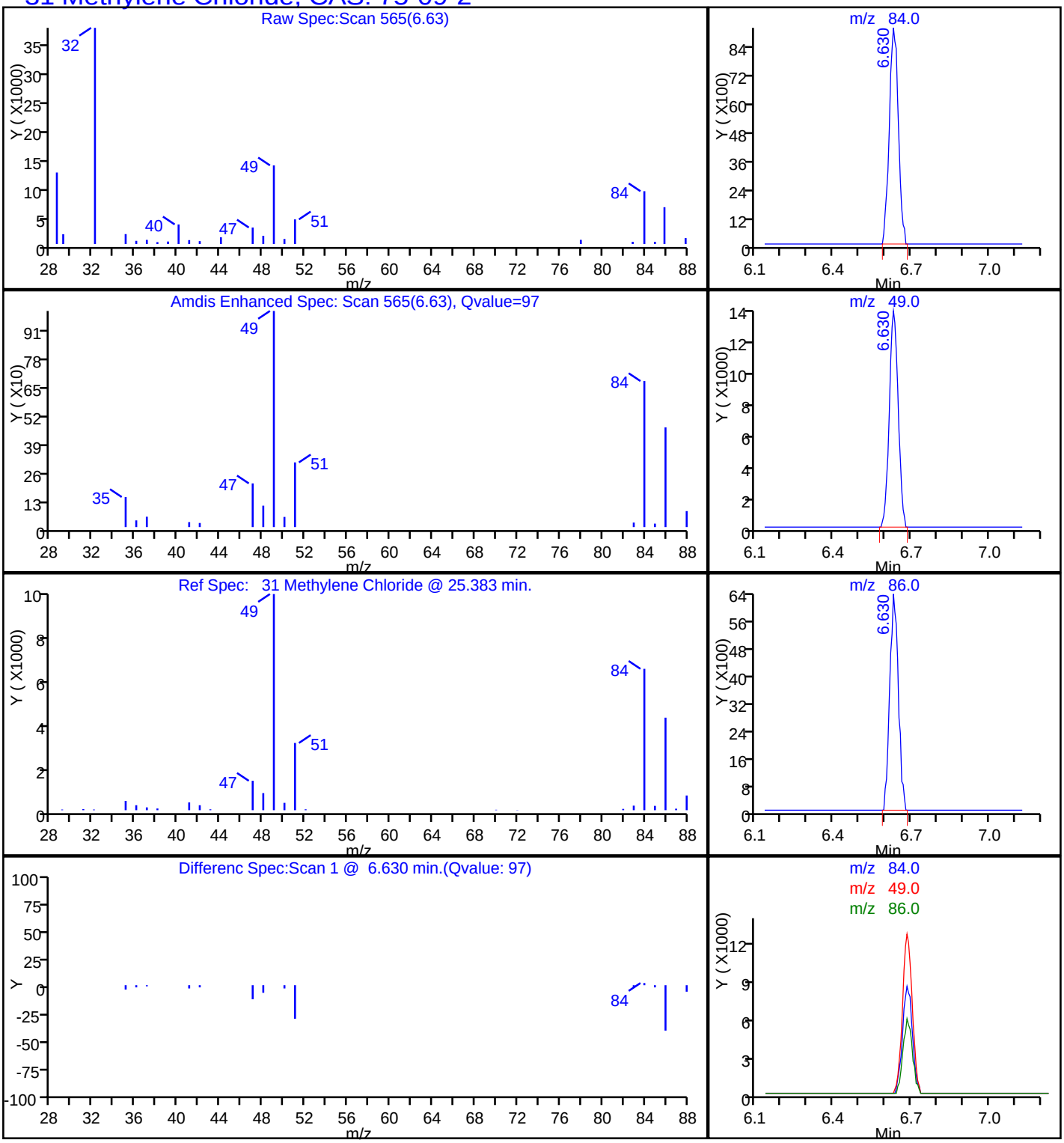


Report Date: 18-Aug-2014 08:41:38 Chrom Revision: 2.2 24-Jun-2014 07:21:42

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140814-886.b\BLK1822-08.D				
Injection Date:	15-Aug-2014 19:25:30	Instrument ID:	MJ		
Lims ID:	140-1822-A-8	Lab Sample ID:	140-1822-8		
Client ID:	10184				
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

31 Methylene Chloride, CAS: 75-09-2

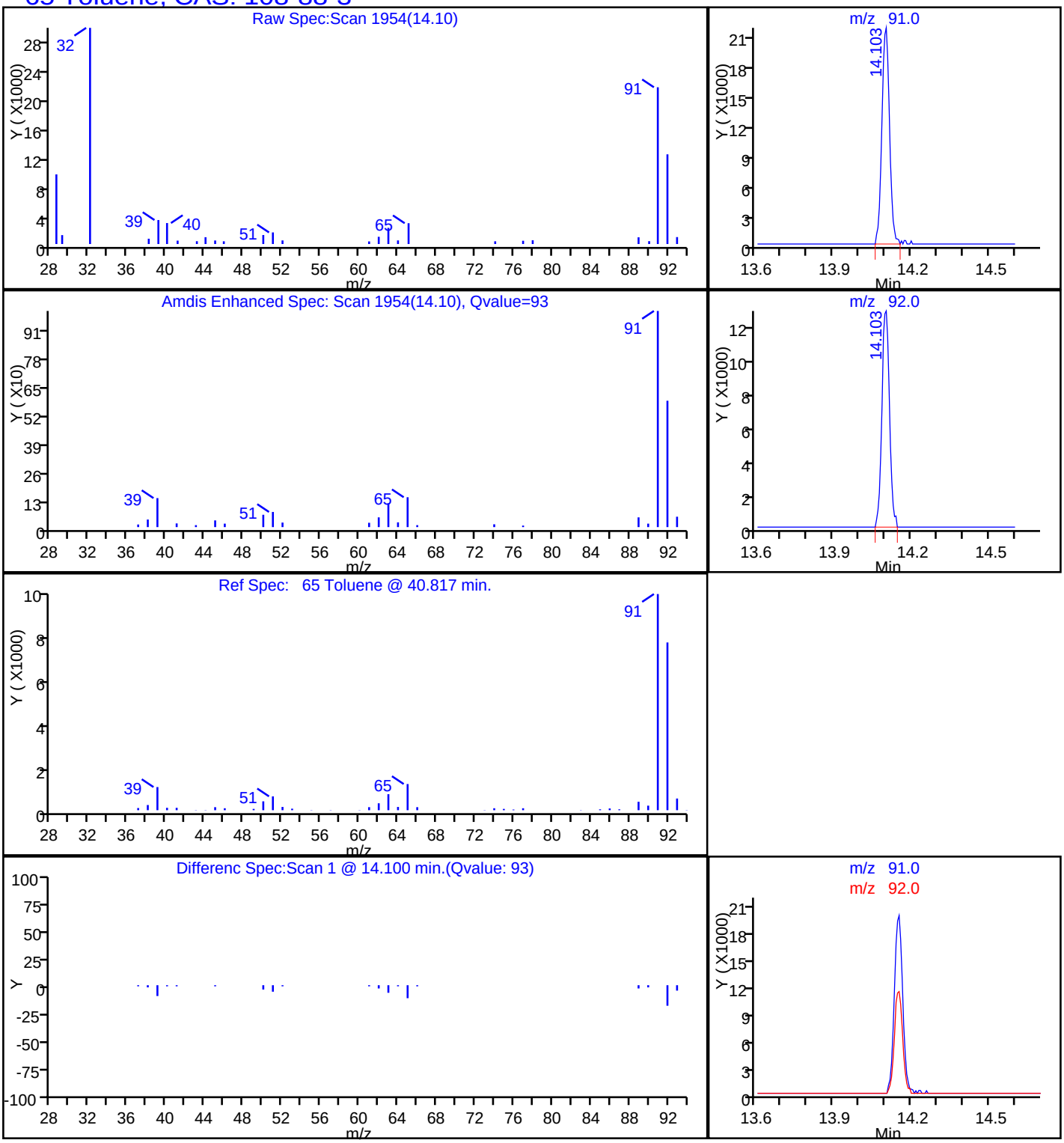


Report Date: 18-Aug-2014 08:41:38 Chrom Revision: 2.2 24-Jun-2014 07:21:42

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140814-886.b\BLK1822-08.D				
Injection Date:	15-Aug-2014 19:25:30	Instrument ID:	MJ		
Lims ID:	140-1822-A-8	Lab Sample ID:	140-1822-8		
Client ID:	10184				
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

65 Toluene, CAS: 108-88-3

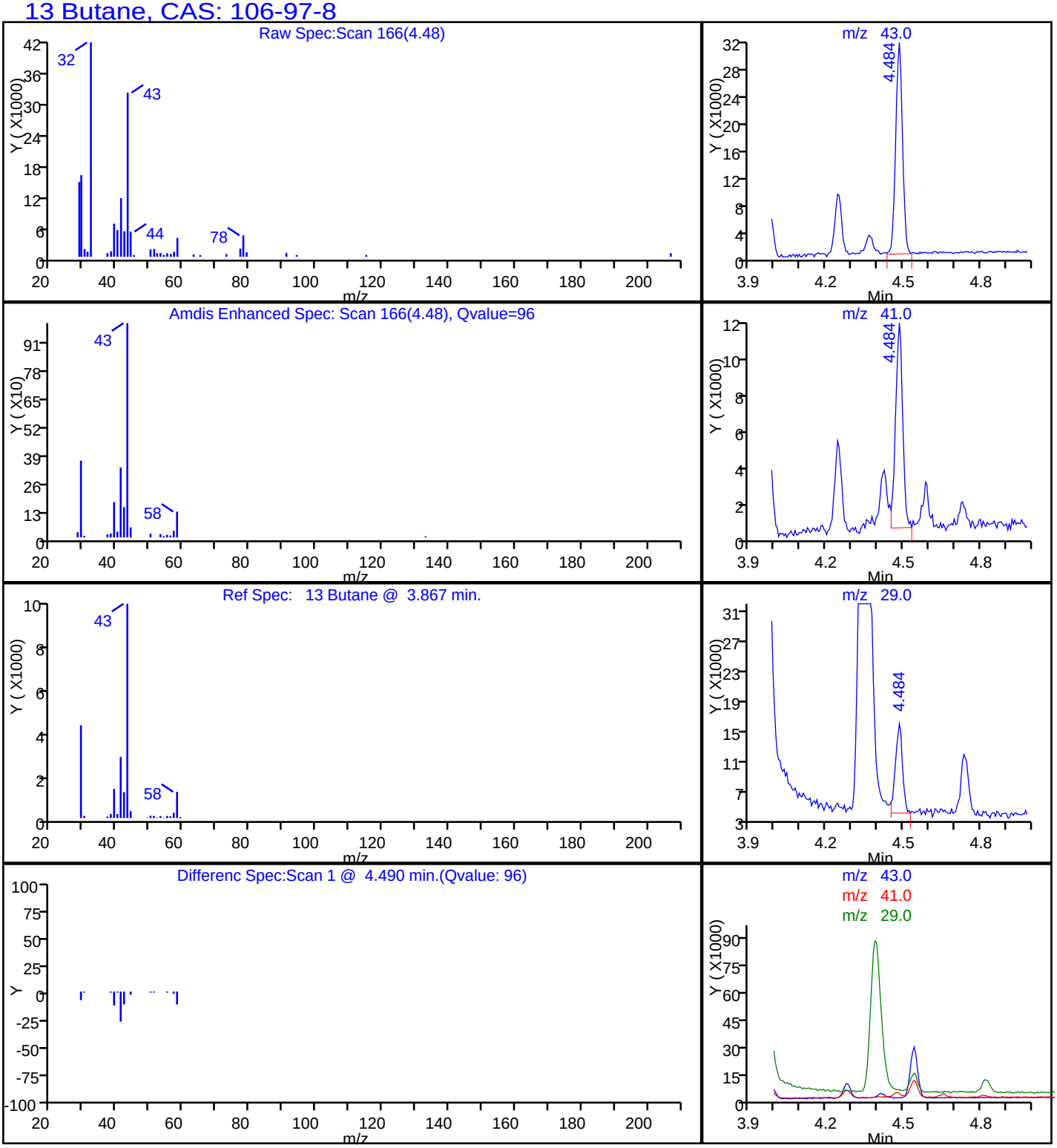


Report Date: 18-Aug-2014 08:41:38 Chrom Revision: 2.2 24-Jun-2014 07:21:42

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140814-886.b\BLK1822-08.D				
Injection Date:	15-Aug-2014 19:25:30	Instrument ID:	MJ		
Lims ID:	140-1822-A-8	Lab Sample ID:	140-1822-8		
Client ID:	10184				
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

13 Butane, CAS: 106-97-8

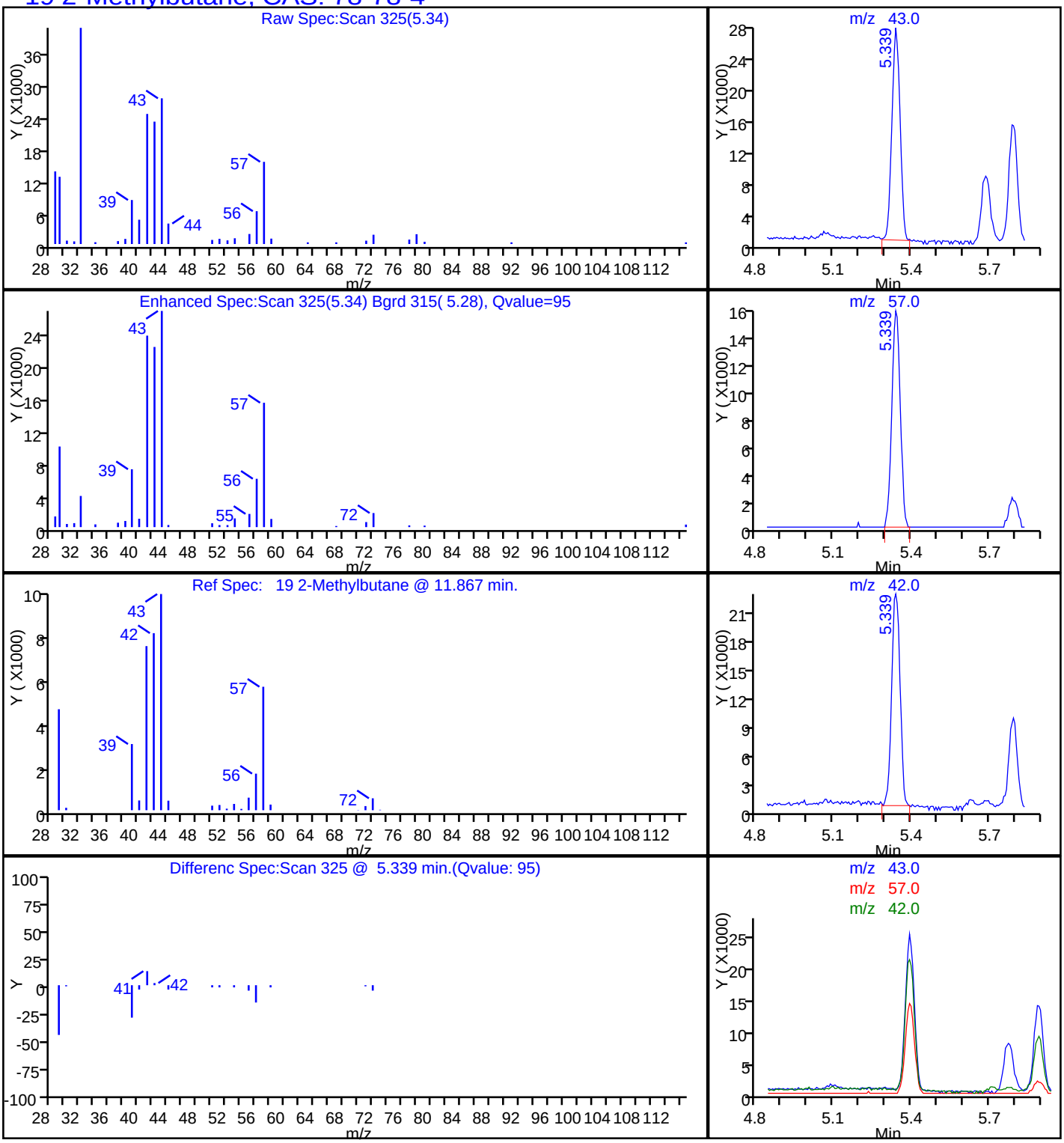


Report Date: 18-Aug-2014 08:41:38 Chrom Revision: 2.2 24-Jun-2014 07:21:42

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140814-886.b\BLK1822-08.D				
Injection Date:	15-Aug-2014 19:25:30	Instrument ID:	MJ		
Lims ID:	140-1822-A-8	Lab Sample ID:	140-1822-8		
Client ID:	10184				
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

19 2-Methylbutane, CAS: 78-78-4



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-1822-1

SDG No.:

Client Sample ID: 10511 | Lab Sample ID: 140-1822-10

Matrix: Air | Lab File ID: BLK1822-10.D

Analysis Method: TO 15 LL | Date Collected: 08/13/2014 14:20

Sample wt/vol: 500(mL) | Date Analyzed: 08/15/2014 21:19

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 1583 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
74-83-9	Bromomethane	ND		0.080	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
67-66-3	Chloroform	ND		0.080	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
74-87-3	Chloromethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
75-71-8	Dichlorodifluoromethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
78-93-3	2-Butanone	ND		0.32	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
95-49-8	2-Chlorotoluene	ND		0.16	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
591-78-6	2-Hexanone	ND		0.20	
107-05-1	3-Chloroprene	ND		0.080	
100-41-4	Ethylbenzene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
75-69-4	Trichlorofluoromethane	ND		0.080	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		0.080	
67-64-1	Acetone	ND		2.0	
75-09-2	Methylene Chloride	ND		0.20	
75-05-8	Acetonitrile	ND		0.40	
100-42-5	Styrene	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-1822-1

SDG No.:

Client Sample ID: 10511 | Lab Sample ID: 140-1822-10

Matrix: Air | Lab File ID: BLK1822-10.D

Analysis Method: TO 15 LL | Date Collected: 08/13/2014 14:20

Sample wt/vol: 500(mL) | Date Analyzed: 08/15/2014 21:19

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 1583 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
107-02-8	Acrolein	ND		0.16	
107-13-1	Acrylonitrile	ND		0.80	
127-18-4	Tetrachloroethene	ND		0.040	
98-83-9	Alpha Methyl Styrene	ND		0.16	
108-88-3	Toluene	ND		0.12	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
75-27-4	Bromodichloromethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-97-8	Butane	ND		0.16	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
75-15-0	Carbon disulfide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.040	
95-47-6	o-Xylene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
110-82-7	Cyclohexane	ND		0.20	
124-18-5	n-Decane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
112-40-3	n-Dodecane	ND		0.40	
64-17-5	Ethanol	ND		0.80	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
142-82-5	n-Heptane	ND		0.20	
110-54-3	Hexane	ND		0.20	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
91-20-3	Naphthalene	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-1822-1

SDG No.:

Client Sample ID: 10511 | Lab Sample ID: 140-1822-10

Matrix: Air | Lab File ID: BLK1822-10.D

Analysis Method: TO 15 LL | Date Collected: 08/13/2014 14:20

Sample wt/vol: 500(mL) | Date Analyzed: 08/15/2014 21:19

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 1583 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
104-51-8	n-Butylbenzene	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
111-65-9	n-Octane	ND		0.16	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
98-06-6	tert-Butylbenzene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		0.40	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.080	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.080	
90-12-0	1-Methylnaphthalene	ND		1.0	
3074-71-3	2,3-Dimethylheptane	ND		0.080	
872-55-9	2-Ethylthiophene	ND		0.080	
554-14-3	2-Methylthiophene	ND		0.080	
91-57-6	2-Methylnaphthalene	ND		1.0	
616-44-4	3-Methylthiophene	ND		0.080	
95-15-8	Benzo(b)thiophene	ND		0.16	
110-02-1	Thiophene	ND		0.080	
1678-93-9	Butylcyclohexane	ND		0.080	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-78-4	2-Methylbutane	ND		0.20	
107-83-5	2-Methylpentane	ND		0.080	
75-07-0	Acetaldehyde	ND		4.0	
98-82-8	Cumene	ND		0.16	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-1822-1

SDG No.:

Client Sample ID: 10511 Lab Sample ID: 140-1822-10

Matrix: Air Lab File ID: BLK1822-10.D

Analysis Method: TO 15 LL Date Collected: 08/13/2014 14:20

Sample wt/vol: 500(mL) Date Analyzed: 08/15/2014 21:19

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 1583 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-87-6	p-Cymene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
108-87-2	Methylcyclohexane	ND		0.080	
111-84-2	n-Nonane	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\KNXCHROM\ChromData\MJ\20140814-886.b\BLK1822-10.D				
Lims ID:	140-1822-A-10	Lab Sample ID:	140-1822-10		
Client ID:	10511				
Sample Type:	Client				
Inject. Date:	15-Aug-2014 21:19:30	ALS Bottle#:	11	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	10511				
Misc. Info.:	J081514,TO15,,140-0000886-014				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\KNXCHROM\ChromData\MJ\20140814-886.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	18-Aug-2014 08:42:25	Calib Date:	01-Jul-2014 23:32:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\KNXCHROM\ChromData\MJ\20140701-793.b\ic l9.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK017				

First Level Reviewer: tajh Date: 18-Aug-2014 08:42:25

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.201	9.200	0.001	96	332930	4.00	
* 2 1,4-Difluorobenzene	114	11.364	11.367	-0.003	96	1528403	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.055	16.058	-0.003	90	1258479	4.00	
$ 5 4-Bromofluorobenzene (Surr	95	17.690	17.688	0.002	85	853324	3.69	
13 Butane	43	4.478	4.476	0.002	93	6259	0.0323	
19 2-Methylbutane	43	5.344	5.337	0.007	94	7101	0.0425	
31 Methylene Chloride	84	6.630	6.628	0.002	96	6348	0.0638	
62 4-Methyl-2-pentanone (MIBK	43	13.225	13.218	0.007	97	5908	0.0281	
112 Naphthalene	128	21.418	21.416	0.002	98	8227	0.0459	

Reagents:

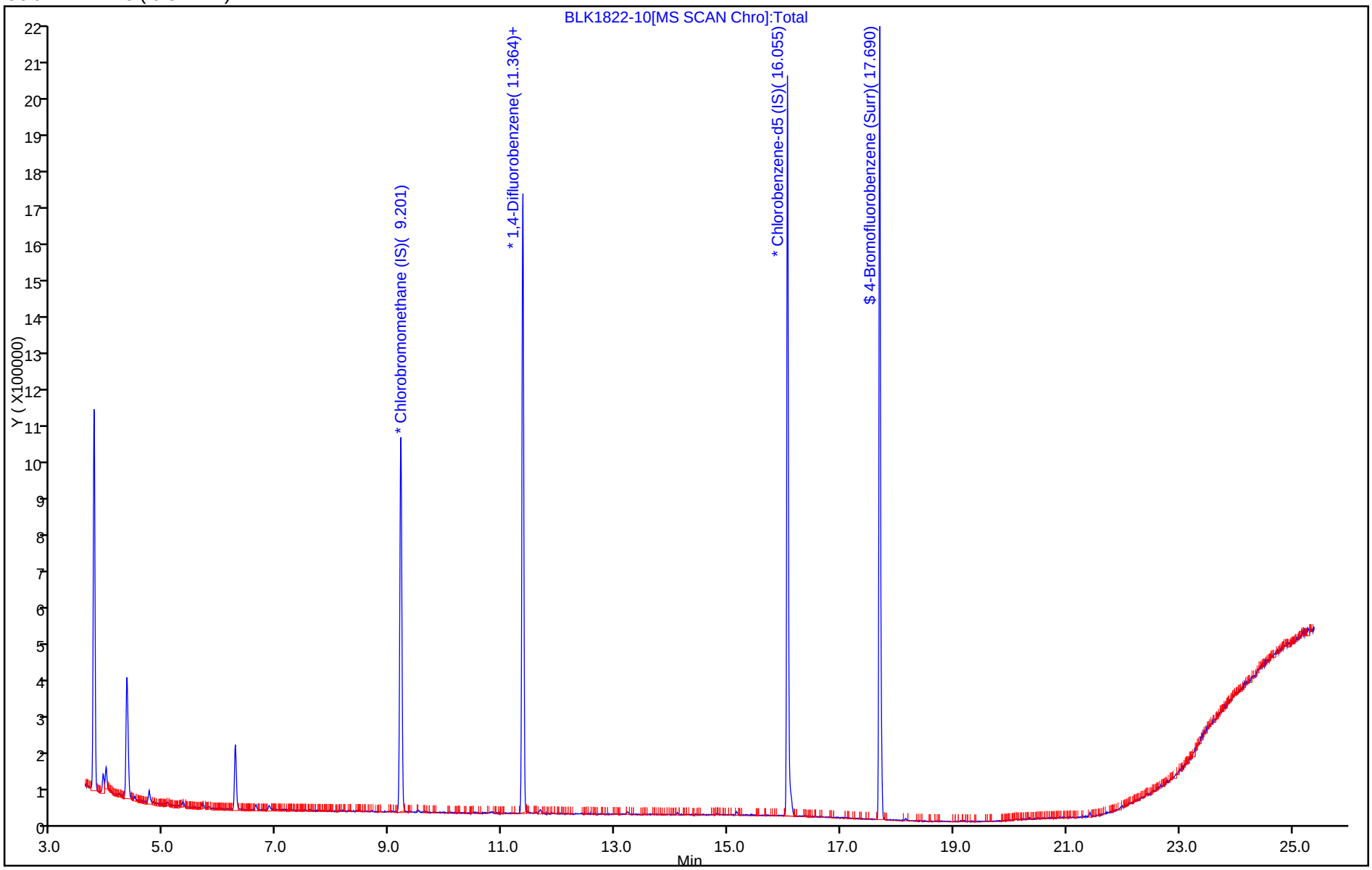
MAissur1_00002 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 18-Aug-2014 08:42:26 Chrom Revision: 2.2 24-Jun-2014 07:21:42

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140814-886.b\BLK1822-10.D				
Injection Date:	15-Aug-2014 21:19:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	140-1822-A-10	Lab Sample ID:	140-1822-10	Worklist Smp#:	14
Client ID:	10511				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-1822-1

SDG No.:

Client Sample ID: 10967 | Lab Sample ID: 140-1822-12

Matrix: Air | Lab File ID: BLK1822-12.D

Analysis Method: TO 15 LL | Date Collected: 08/13/2014 14:20

Sample wt/vol: 500(mL) | Date Analyzed: 08/15/2014 23:11

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 1583 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
74-83-9	Bromomethane	ND		0.080	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
67-66-3	Chloroform	ND		0.080	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
74-87-3	Chloromethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
75-71-8	Dichlorodifluoromethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
78-93-3	2-Butanone	ND		0.32	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
95-49-8	2-Chlorotoluene	ND		0.16	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
591-78-6	2-Hexanone	ND		0.20	
107-05-1	3-Chloroprene	ND		0.080	
100-41-4	Ethylbenzene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
75-69-4	Trichlorofluoromethane	ND		0.080	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		0.080	
67-64-1	Acetone	ND		2.0	
75-09-2	Methylene Chloride	ND		0.20	
75-05-8	Acetonitrile	ND		0.40	
100-42-5	Styrene	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-1822-1

SDG No.:

Client Sample ID: 10967 | Lab Sample ID: 140-1822-12

Matrix: Air | Lab File ID: BLK1822-12.D

Analysis Method: TO 15 LL | Date Collected: 08/13/2014 14:20

Sample wt/vol: 500(mL) | Date Analyzed: 08/15/2014 23:11

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 1583 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
107-02-8	Acrolein	ND		0.16	
107-13-1	Acrylonitrile	ND		0.80	
127-18-4	Tetrachloroethene	ND		0.040	
98-83-9	Alpha Methyl Styrene	ND		0.16	
108-88-3	Toluene	ND		0.12	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
75-27-4	Bromodichloromethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-97-8	Butane	ND		0.16	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
75-15-0	Carbon disulfide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.040	
95-47-6	o-Xylene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
110-82-7	Cyclohexane	ND		0.20	
124-18-5	n-Decane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
112-40-3	n-Dodecane	ND		0.40	
64-17-5	Ethanol	ND		0.80	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
142-82-5	n-Heptane	ND		0.20	
110-54-3	Hexane	ND		0.20	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
91-20-3	Naphthalene	ND		0.20	

FORM I TO 15 LL

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-1822-1

SDG No.:

Client Sample ID: 10967 | Lab Sample ID: 140-1822-12

Matrix: Air | Lab File ID: BLK1822-12.D

Analysis Method: TO 15 LL | Date Collected: 08/13/2014 14:20

Sample wt/vol: 500(mL) | Date Analyzed: 08/15/2014 23:11

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 1583 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
104-51-8	n-Butylbenzene	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
111-65-9	n-Octane	ND		0.16	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
98-06-6	tert-Butylbenzene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		0.40	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.080	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.080	
90-12-0	1-Methylnaphthalene	ND		1.0	
3074-71-3	2,3-Dimethylheptane	ND		0.080	
872-55-9	2-Ethylthiophene	ND		0.080	
554-14-3	2-Methylthiophene	ND		0.080	
91-57-6	2-Methylnaphthalene	ND		1.0	
616-44-4	3-Methylthiophene	ND		0.080	
95-15-8	Benzo(b)thiophene	ND		0.16	
110-02-1	Thiophene	ND		0.080	
1678-93-9	Butylcyclohexane	ND		0.080	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-78-4	2-Methylbutane	ND		0.20	
107-83-5	2-Methylpentane	ND		0.080	
75-07-0	Acetaldehyde	ND		4.0	
98-82-8	Cumene	ND		0.16	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-1822-1
SDG No.:
Client Sample ID: 10967
Lab Sample ID: 140-1822-12
Matrix: Air
Lab File ID: BLK1822-12.D
Analysis Method: TO 15 LL
Date Collected: 08/13/2014 14:20
Sample wt/vol: 500(mL)
Date Analyzed: 08/15/2014 23:11
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 1583
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-87-6	p-Cymene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
108-87-2	Methylcyclohexane	ND		0.080	
111-84-2	n-Nonane	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\KNXCHROM\ChromData\MJ\20140814-886.b\BLK1822-12.D				
Lims ID:	140-1822-A-12	Lab Sample ID:	140-1822-12		
Client ID:	10967				
Sample Type:	Client				
Inject. Date:	15-Aug-2014 23:11:30	ALS Bottle#:	13	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	10967				
Misc. Info.:	J081514,TO15,,140-0000886-016				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\KNXCHROM\ChromData\MJ\20140814-886.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	18-Aug-2014 08:43:29	Calib Date:	01-Jul-2014 23:32:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\KNXCHROM\ChromData\MJ\20140701-793.b\ic l9.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK017				

First Level Reviewer: tajh Date: 18-Aug-2014 08:43:29

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.201	9.200	0.001	93	328545	4.00	
* 2 1,4-Difluorobenzene	114	11.364	11.367	-0.003	96	1518653	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.055	16.058	-0.003	90	1292027	4.00	
$ 5 4-Bromofluorobenzene (Surr	95	17.690	17.688	0.002	85	897662	3.78	
13 Butane	43	4.489	4.476	0.013	93	7070	0.0370	
19 2-Methylbutane	43	5.339	5.337	0.002	90	6291	0.0382	
31 Methylene Chloride	84	6.630	6.628	0.002	94	6694	0.0681	

Reagents:

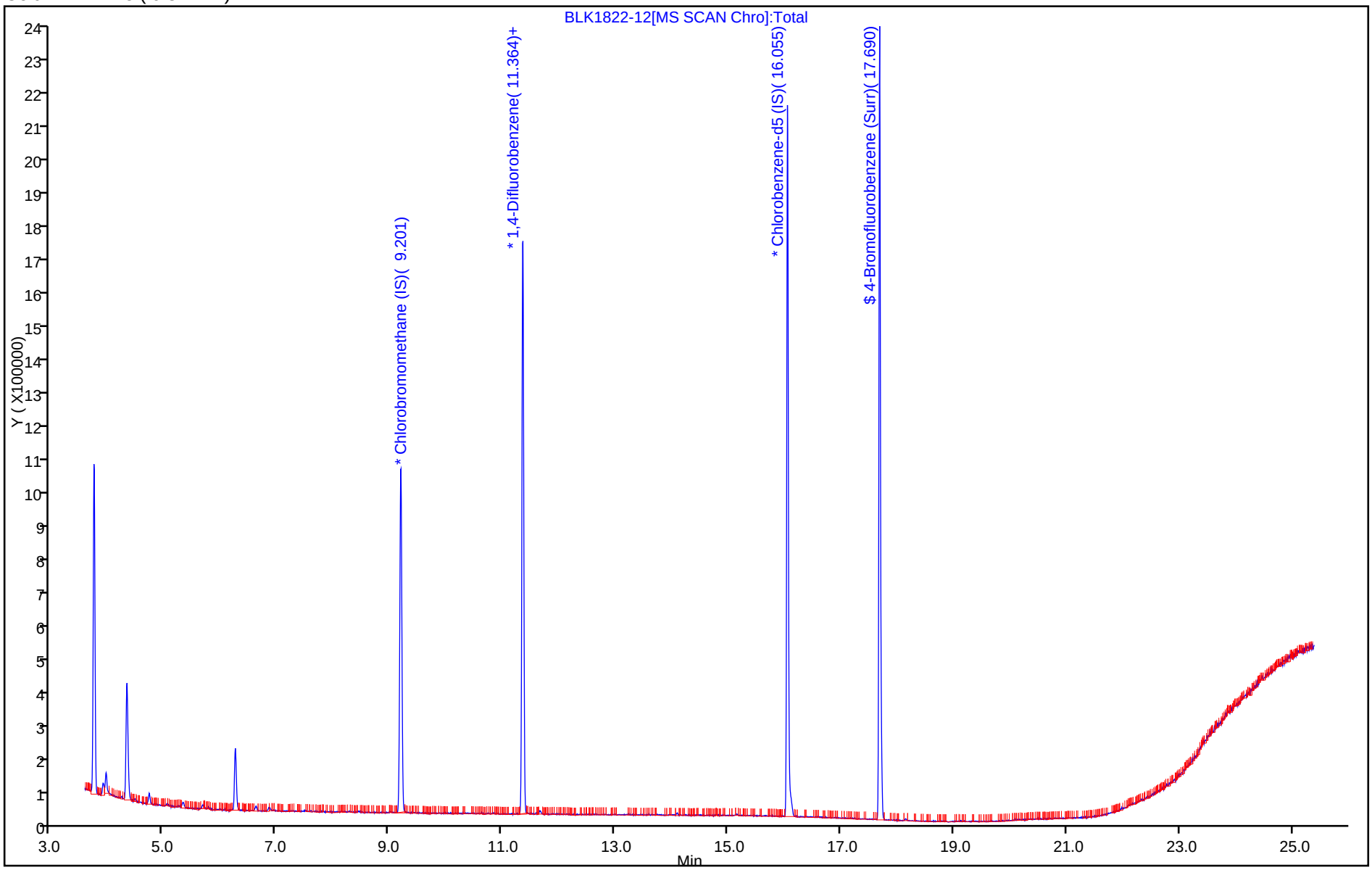
MAissur1_00002 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 18-Aug-2014 08:43:30 Chrom Revision: 2.2 24-Jun-2014 07:21:42

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140814-886.b\BLK1822-12.D				
Injection Date:	15-Aug-2014 23:11:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	140-1822-A-12	Lab Sample ID:	140-1822-12	Worklist Smp#:	16
Client ID:	10967				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-1822-1

SDG No.:

Client Sample ID: 10578 | Lab Sample ID: 140-1822-13

Matrix: Air | Lab File ID: BLK1822-13.D

Analysis Method: TO 15 LL | Date Collected: 08/13/2014 14:20

Sample wt/vol: 500(mL) | Date Analyzed: 08/16/2014 00:06

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 1583 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
74-83-9	Bromomethane	ND		0.080	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
67-66-3	Chloroform	ND		0.080	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
74-87-3	Chloromethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
75-71-8	Dichlorodifluoromethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
78-93-3	2-Butanone	ND		0.32	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
95-49-8	2-Chlorotoluene	ND		0.16	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
591-78-6	2-Hexanone	ND		0.20	
107-05-1	3-Chloroprene	ND		0.080	
100-41-4	Ethylbenzene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
75-69-4	Trichlorofluoromethane	ND		0.080	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		0.080	
67-64-1	Acetone	ND		2.0	
75-09-2	Methylene Chloride	0.22		0.20	
75-05-8	Acetonitrile	ND		0.40	
100-42-5	Styrene	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-1822-1

SDG No.:

Client Sample ID: 10578 | Lab Sample ID: 140-1822-13

Matrix: Air | Lab File ID: BLK1822-13.D

Analysis Method: TO 15 LL | Date Collected: 08/13/2014 14:20

Sample wt/vol: 500(mL) | Date Analyzed: 08/16/2014 00:06

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 1583 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
107-02-8	Acrolein	ND		0.16	
107-13-1	Acrylonitrile	ND		0.80	
127-18-4	Tetrachloroethene	ND		0.040	
98-83-9	Alpha Methyl Styrene	ND		0.16	
108-88-3	Toluene	0.15		0.12	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
75-27-4	Bromodichloromethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-97-8	Butane	0.33		0.16	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
75-15-0	Carbon disulfide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.040	
95-47-6	o-Xylene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
110-82-7	Cyclohexane	ND		0.20	
124-18-5	n-Decane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
112-40-3	n-Dodecane	ND		0.40	
64-17-5	Ethanol	ND		0.80	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
142-82-5	n-Heptane	ND		0.20	
110-54-3	Hexane	ND		0.20	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
91-20-3	Naphthalene	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-1822-1

SDG No.:

Client Sample ID: 10578 | Lab Sample ID: 140-1822-13

Matrix: Air | Lab File ID: BLK1822-13.D

Analysis Method: TO 15 LL | Date Collected: 08/13/2014 14:20

Sample wt/vol: 500(mL) | Date Analyzed: 08/16/2014 00:06

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 1583 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
104-51-8	n-Butylbenzene	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
111-65-9	n-Octane	ND		0.16	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
98-06-6	tert-Butylbenzene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		0.40	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.080	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.080	
90-12-0	1-Methylnaphthalene	ND		1.0	
3074-71-3	2,3-Dimethylheptane	ND		0.080	
872-55-9	2-Ethylthiophene	ND		0.080	
554-14-3	2-Methylthiophene	ND		0.080	
91-57-6	2-Methylnaphthalene	ND		1.0	
616-44-4	3-Methylthiophene	ND		0.080	
95-15-8	Benzo(b)thiophene	ND		0.16	
110-02-1	Thiophene	ND		0.080	
1678-93-9	Butylcyclohexane	ND		0.080	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-78-4	2-Methylbutane	0.38		0.20	
107-83-5	2-Methylpentane	ND		0.080	
75-07-0	Acetaldehyde	ND		4.0	
98-82-8	Cumene	ND		0.16	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-1822-1

SDG No.:

Client Sample ID: 10578 Lab Sample ID: 140-1822-13

Matrix: Air Lab File ID: BLK1822-13.D

Analysis Method: TO 15 LL Date Collected: 08/13/2014 14:20

Sample wt/vol: 500(mL) Date Analyzed: 08/16/2014 00:06

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 1583 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-87-6	p-Cymene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
108-87-2	Methylcyclohexane	ND		0.080	
111-84-2	n-Nonane	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\KNXCHROM\ChromData\MJ\20140814-886.b\BLK1822-13.D				
Lims ID:	140-1822-A-13	Lab Sample ID:	140-1822-13		
Client ID:	10578				
Sample Type:	Client				
Inject. Date:	16-Aug-2014 00:06:30	ALS Bottle#:	14	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	10578				
Misc. Info.:	J081514,TO15,,140-0000886-017				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\KNXCHROM\ChromData\MJ\20140814-886.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	18-Aug-2014 08:44:11	Calib Date:	01-Jul-2014 23:32:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\KNXCHROM\ChromData\MJ\20140701-793.b\ic l9.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK017				

First Level Reviewer: tajh Date: 18-Aug-2014 08:44:11

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.200	9.200	0.000	93	335992	4.00	
* 2 1,4-Difluorobenzene	114	11.362	11.367	-0.005	96	1499200	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.058	16.058	0.000	90	1251955	4.00	
$ 5 4-Bromofluorobenzene (Surr	95	17.688	17.688	0.000	85	845328	3.67	
6 Chlorodifluoromethane	67	3.944	3.944	0.000	94	3181	0.0607	
13 Butane	43	4.482	4.476	0.006	95	63604	0.3252	
19 2-Methylbutane	43	5.337	5.337	0.000	95	64258	0.3815	
25 Pentane	72	5.800	5.789	0.011	96	3256	0.1658	
31 Methylene Chloride	84	6.628	6.628	0.000	98	22031	0.2193	
40 Hexane	56	8.484	8.479	0.005	89	6371	0.0619	
48 Benzene	78	10.846	10.840	0.006	94	6819	0.0233	
65 Toluene	91	14.100	14.100	0.000	92	42075	0.1530	

Reagents:

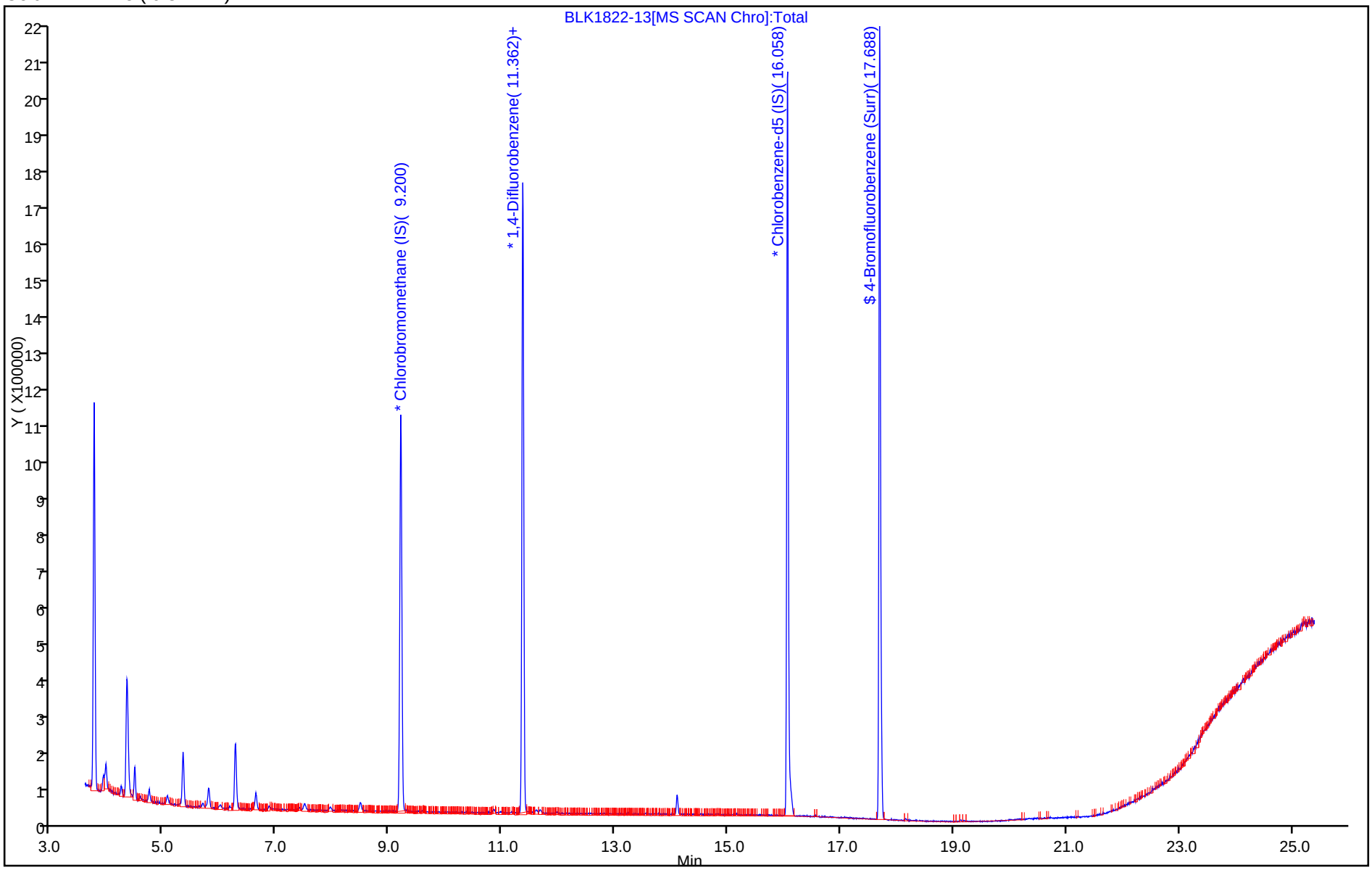
MAissur1_00002 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 18-Aug-2014 08:44:12 Chrom Revision: 2.2 24-Jun-2014 07:21:42

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140814-886.b\BLK1822-13.D				
Injection Date:	16-Aug-2014 00:06:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	140-1822-A-13	Lab Sample ID:	140-1822-13	Worklist Smp#:	17
Client ID:	10578				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

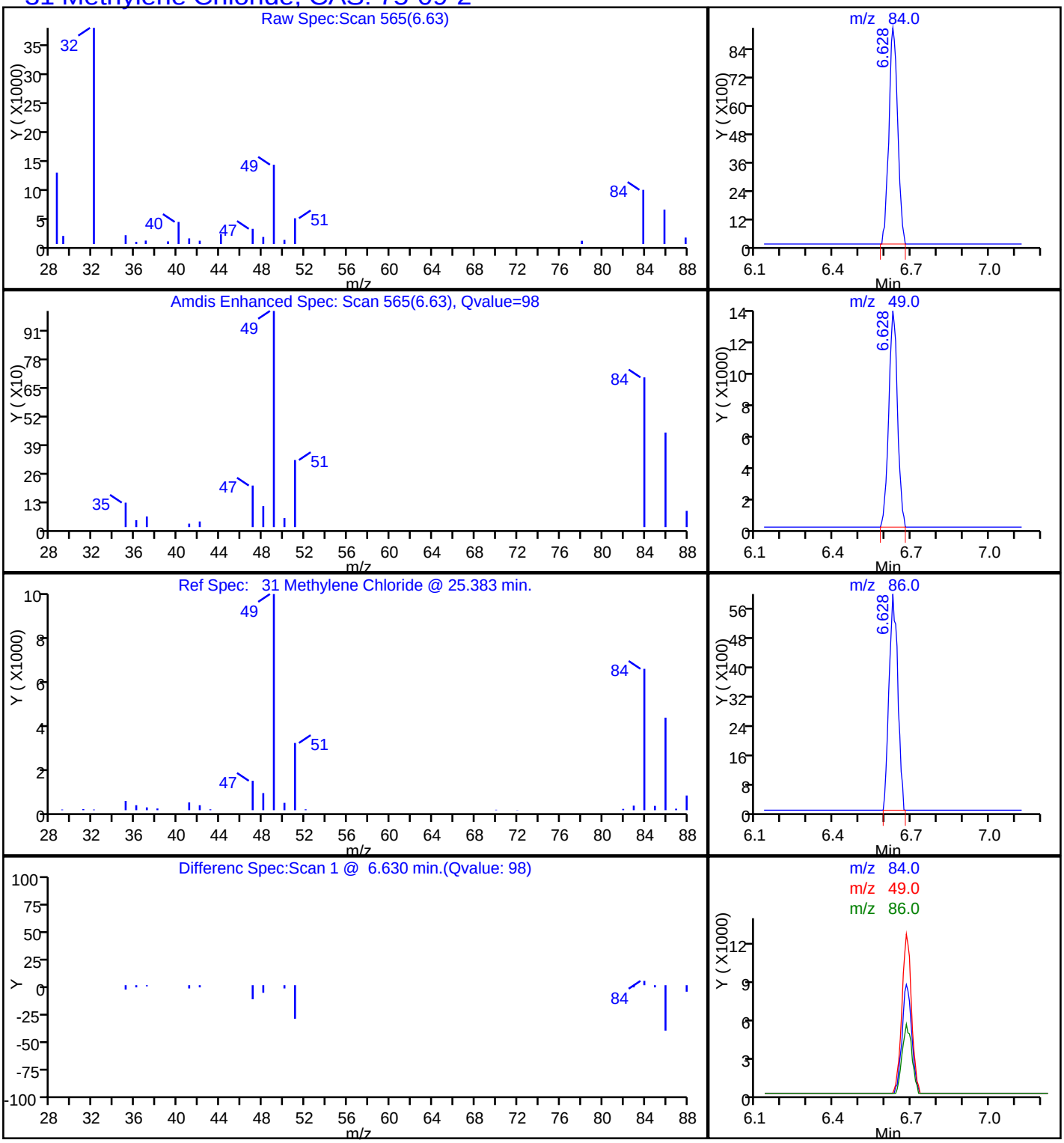


Report Date: 18-Aug-2014 08:44:12 Chrom Revision: 2.2 24-Jun-2014 07:21:42

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140814-886.b\BLK1822-13.D				
Injection Date:	16-Aug-2014 00:06:30	Instrument ID:	MJ		
Lims ID:	140-1822-A-13	Lab Sample ID:	140-1822-13		
Client ID:	10578				
Operator ID:	7126	ALS Bottle#:	14	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

31 Methylene Chloride, CAS: 75-09-2

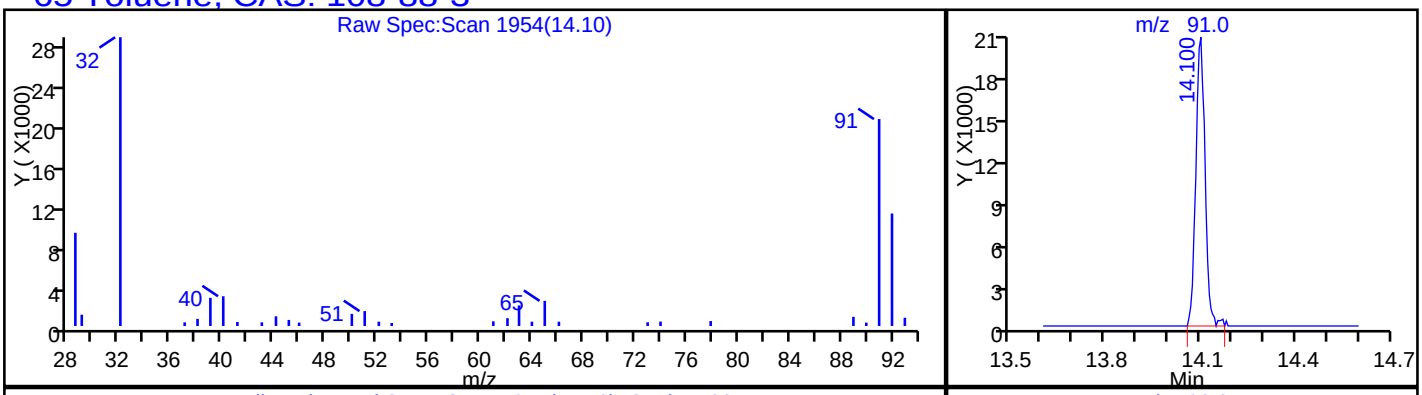


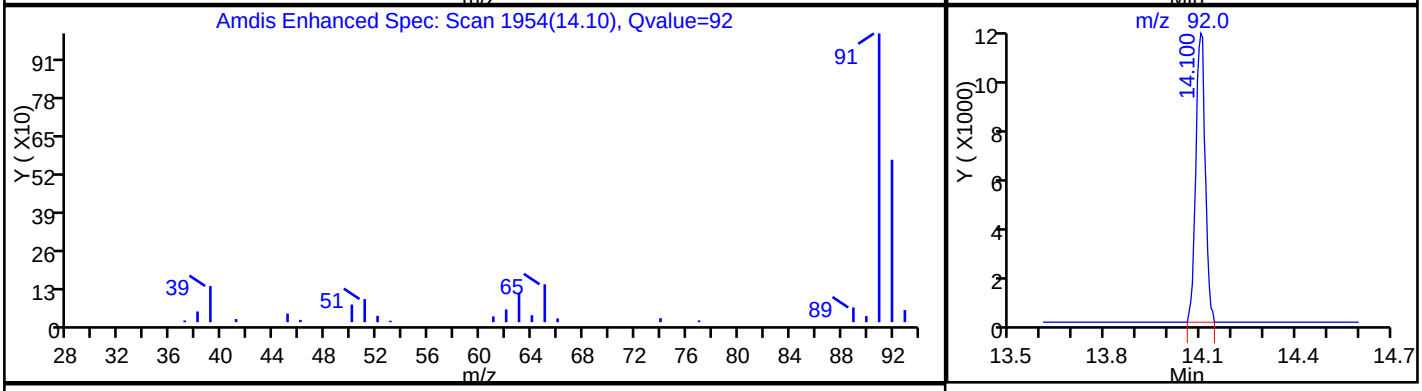
Report Date: 18-Aug-2014 08:44:12 Chrom Revision: 2.2 24-Jun-2014 07:21:42

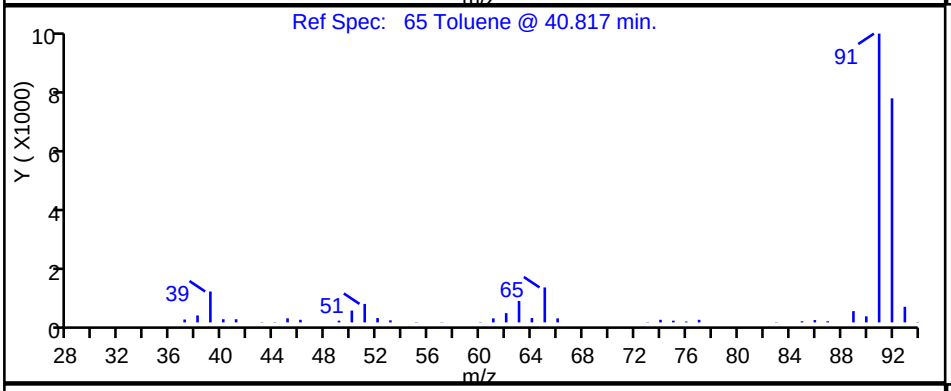
TestAmerica Knoxville

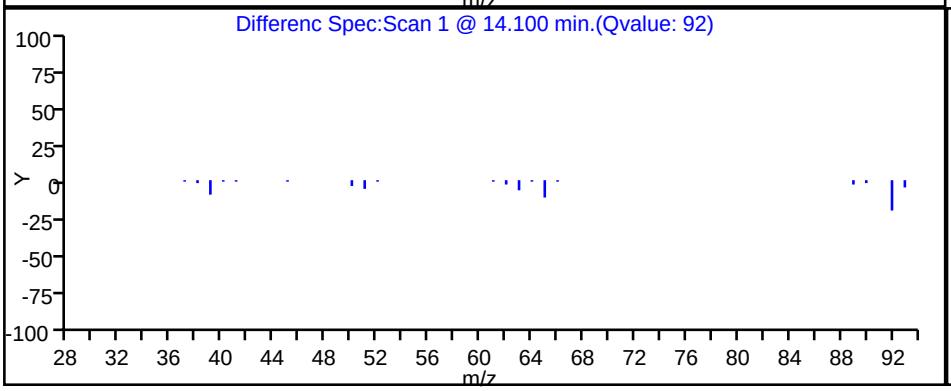
Data File:	\\KNXCHROM\ChromData\MJ\20140814-886.b\BLK1822-13.D				
Injection Date:	16-Aug-2014 00:06:30	Instrument ID:	MJ		
Lims ID:	140-1822-A-13	Lab Sample ID:	140-1822-13		
Client ID:	10578				
Operator ID:	7126	ALS Bottle#:	14	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

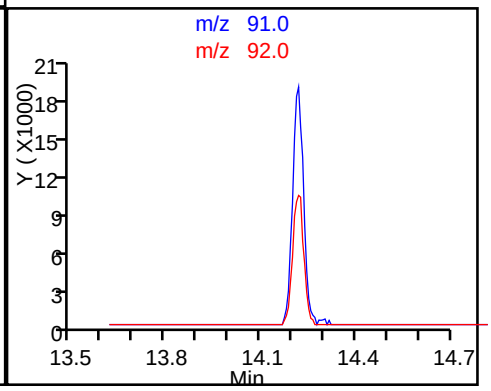
65 Toluene, CAS: 108-88-3









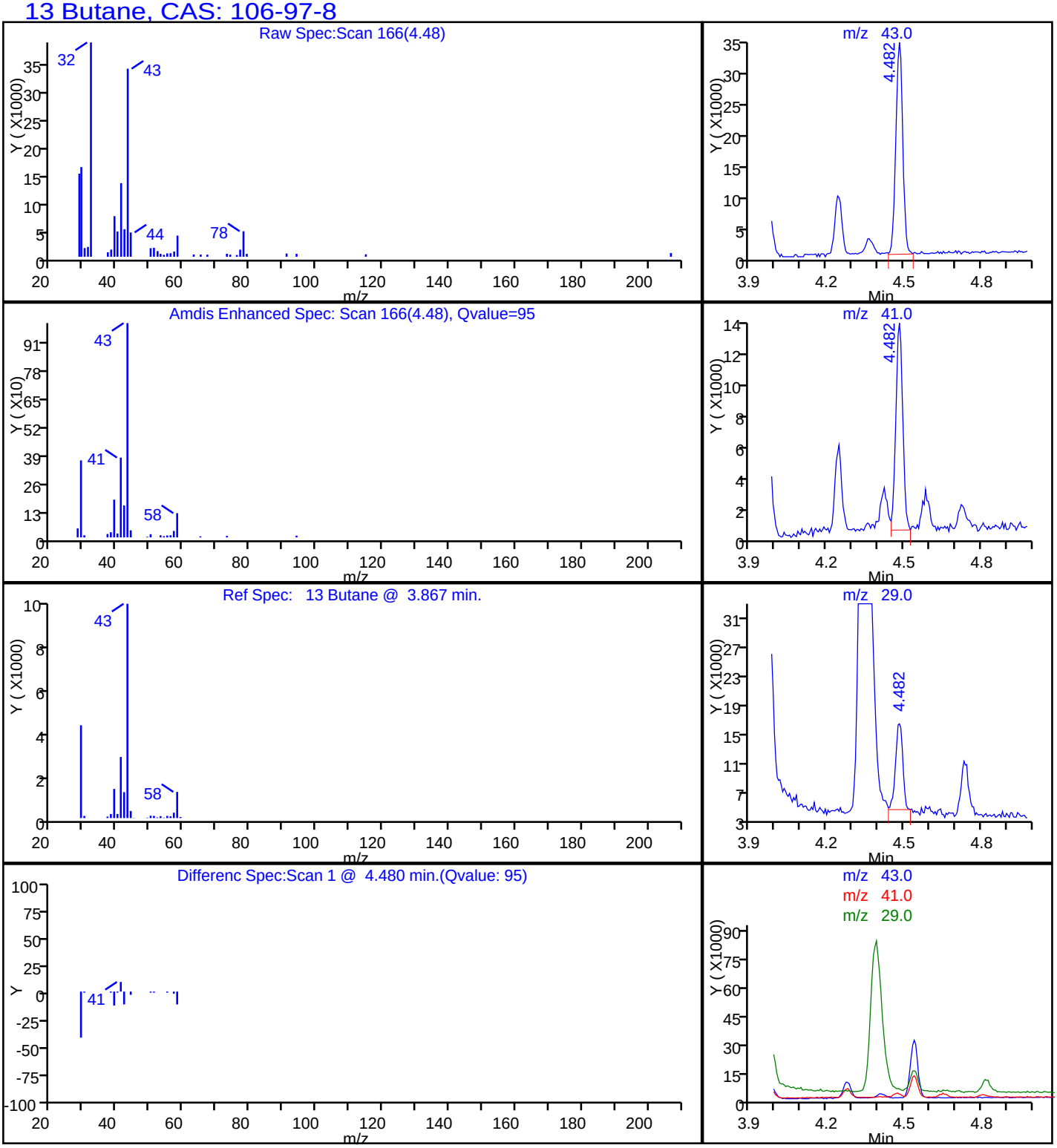


Report Date: 18-Aug-2014 08:44:12 Chrom Revision: 2.2 24-Jun-2014 07:21:42

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140814-886.b\BLK1822-13.D				
Injection Date:	16-Aug-2014 00:06:30	Instrument ID:	MJ		
Lims ID:	140-1822-A-13	Lab Sample ID:	140-1822-13		
Client ID:	10578				
Operator ID:	7126	ALS Bottle#:	14	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

13 Butane, CAS: 106-97-8

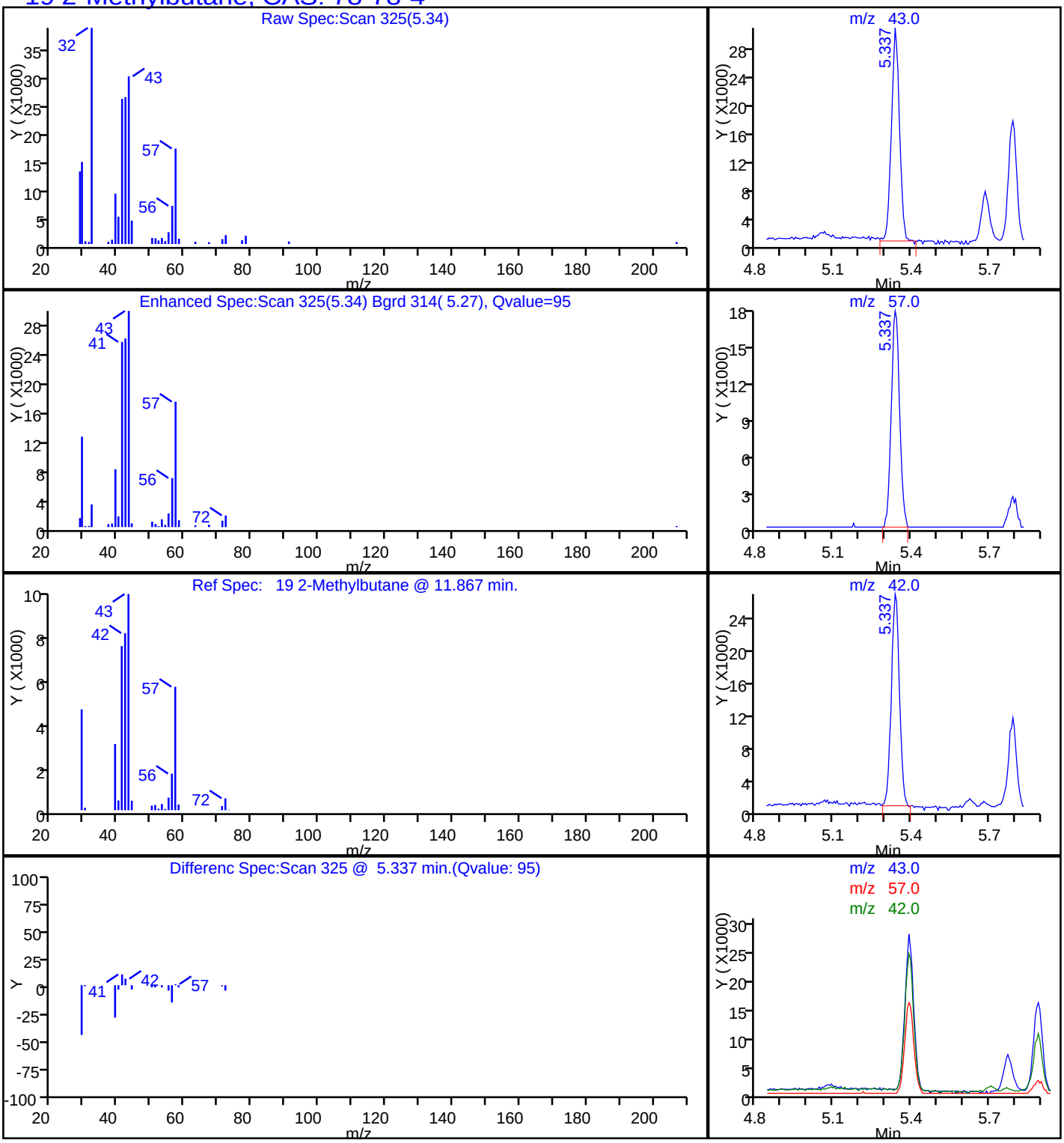


Report Date: 18-Aug-2014 08:44:12 Chrom Revision: 2.2 24-Jun-2014 07:21:42

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140814-886.b\BLK1822-13.D				
Injection Date:	16-Aug-2014 00:06:30	Instrument ID:	MJ		
Lims ID:	140-1822-A-13	Lab Sample ID:	140-1822-13		
Client ID:	10578				
Operator ID:	7126	ALS Bottle#:	14	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

19 2-Methylbutane, CAS: 78-78-4



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-2131-1
SDG No.:
Client Sample ID: 10124
Lab Sample ID: 140-2131-13
Matrix: Air
Lab File ID: 140-2131-a-13.D
Analysis Method: TO 15 LL
Date Collected: 10/10/2014 14:20
Sample wt/vol: 500(mL)
Date Analyzed: 10/11/2014 20:21
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5
ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 1795
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
74-83-9	Bromomethane	ND		0.080	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
67-66-3	Chloroform	ND		0.080	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
74-87-3	Chloromethane	ND	*	0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
75-71-8	Dichlorodifluoromethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
78-93-3	2-Butanone	ND		0.32	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
95-49-8	2-Chlorotoluene	ND		0.16	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
591-78-6	2-Hexanone	ND		0.20	
107-05-1	3-Chloroprene	ND		0.080	
100-41-4	Ethylbenzene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
75-69-4	Trichlorofluoromethane	ND		0.080	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		0.080	
67-64-1	Acetone	ND		2.0	
75-09-2	Methylene Chloride	ND		0.20	
75-05-8	Acetonitrile	ND		0.40	
100-42-5	Styrene	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-2131-1

SDG No.:

Client Sample ID: 10124 | Lab Sample ID: 140-2131-13

Matrix: Air | Lab File ID: 140-2131-a-13.D

Analysis Method: TO 15 LL | Date Collected: 10/10/2014 14:20

Sample wt/vol: 500(mL) | Date Analyzed: 10/11/2014 20:21

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 1795 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
107-02-8	Acrolein	ND		0.16	
107-13-1	Acrylonitrile	ND		0.80	
127-18-4	Tetrachloroethene	ND		0.040	
98-83-9	Alpha Methyl Styrene	ND		0.16	
108-88-3	Toluene	ND		0.12	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
75-27-4	Bromodichloromethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-97-8	Butane	ND	*	0.16	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
75-15-0	Carbon disulfide	ND		0.20	
75-01-4	Vinyl chloride	ND	*	0.040	
95-47-6	o-Xylene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
110-82-7	Cyclohexane	ND		0.20	
124-18-5	n-Decane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
112-40-3	n-Dodecane	ND	*	0.40	
64-17-5	Ethanol	ND		0.80	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
142-82-5	n-Heptane	ND		0.20	
110-54-3	Hexane	ND		0.20	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
91-20-3	Naphthalene	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-2131-1

SDG No.:

Client Sample ID: 10124 | Lab Sample ID: 140-2131-13

Matrix: Air | Lab File ID: 140-2131-a-13.D

Analysis Method: TO 15 LL | Date Collected: 10/10/2014 14:20

Sample wt/vol: 500(mL) | Date Analyzed: 10/11/2014 20:21

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 1795 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
104-51-8	n-Butylbenzene	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
111-65-9	n-Octane	ND		0.16	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND	*	0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
98-06-6	tert-Butylbenzene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		0.40	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.080	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.080	
90-12-0	1-Methylnaphthalene	ND		1.0	
3074-71-3	2,3-Dimethylheptane	ND		0.080	
872-55-9	2-Ethylthiophene	ND		0.080	
554-14-3	2-Methylthiophene	ND		0.080	
91-57-6	2-Methylnaphthalene	ND		1.0	
616-44-4	3-Methylthiophene	ND		0.080	
95-15-8	Benzo(b)thiophene	ND		0.16	
110-02-1	Thiophene	ND		0.080	
1678-93-9	Butylcyclohexane	ND		0.080	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-78-4	2-Methylbutane	ND		0.20	
107-83-5	2-Methylpentane	ND		0.080	
75-07-0	Acetaldehyde	ND		4.0	
98-82-8	Cumene	ND		0.16	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-2131-1

SDG No.:

Client Sample ID: 10124 Lab Sample ID: 140-2131-13

Matrix: Air Lab File ID: 140-2131-a-13.D

Analysis Method: TO 15 LL Date Collected: 10/10/2014 14:20

Sample wt/vol: 500(mL) Date Analyzed: 10/11/2014 20:21

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 1795 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-87-6	p-Cymene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
108-87-2	Methylcyclohexane	ND		0.080	
111-84-2	n-Nonane	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\KNXCHROM\ChromData\ME\20141010-1018.b\140-2131-a-13.D				
Lims ID:	140-2131-A-13	Lab Sample ID:	140-2131-13		
Client ID:	10124				
Sample Type:	Client				
Inject. Date:	11-Oct-2014 20:21:30	ALS Bottle#:	15	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	10124				
Misc. Info.:	E101114,TO155,,140-0001018-006				
Operator ID:	403648	Instrument ID:	ME		
Method:	\\KNXCHROM\ChromData\ME\20141010-1018.b\ME_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	13-Oct-2014 11:10:06	Calib Date:	26-Sep-2014 02:12:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\KNXCHROM\ChromData\ME\20140925-978.b\EI25IC9x.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK049				
First Level Reviewer: barlozhetskayaa		Date:	13-Oct-2014 11:10:06		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.270	8.281	-0.011	93	262465	4.00	
* 2 1,4-Difluorobenzene	114	10.502	10.508	-0.006	97	1268119	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.323	15.323	0.000	96	1109519	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.973	16.973	0.000	77	925296	4.24	
31 Methylene Chloride	84	5.752	5.757	-0.005	94	5088	0.0804	
62 4-Methyl-2-pentanone (MIBK	43	12.487	12.470	0.017	93	3059	0.0233	

Reagents:

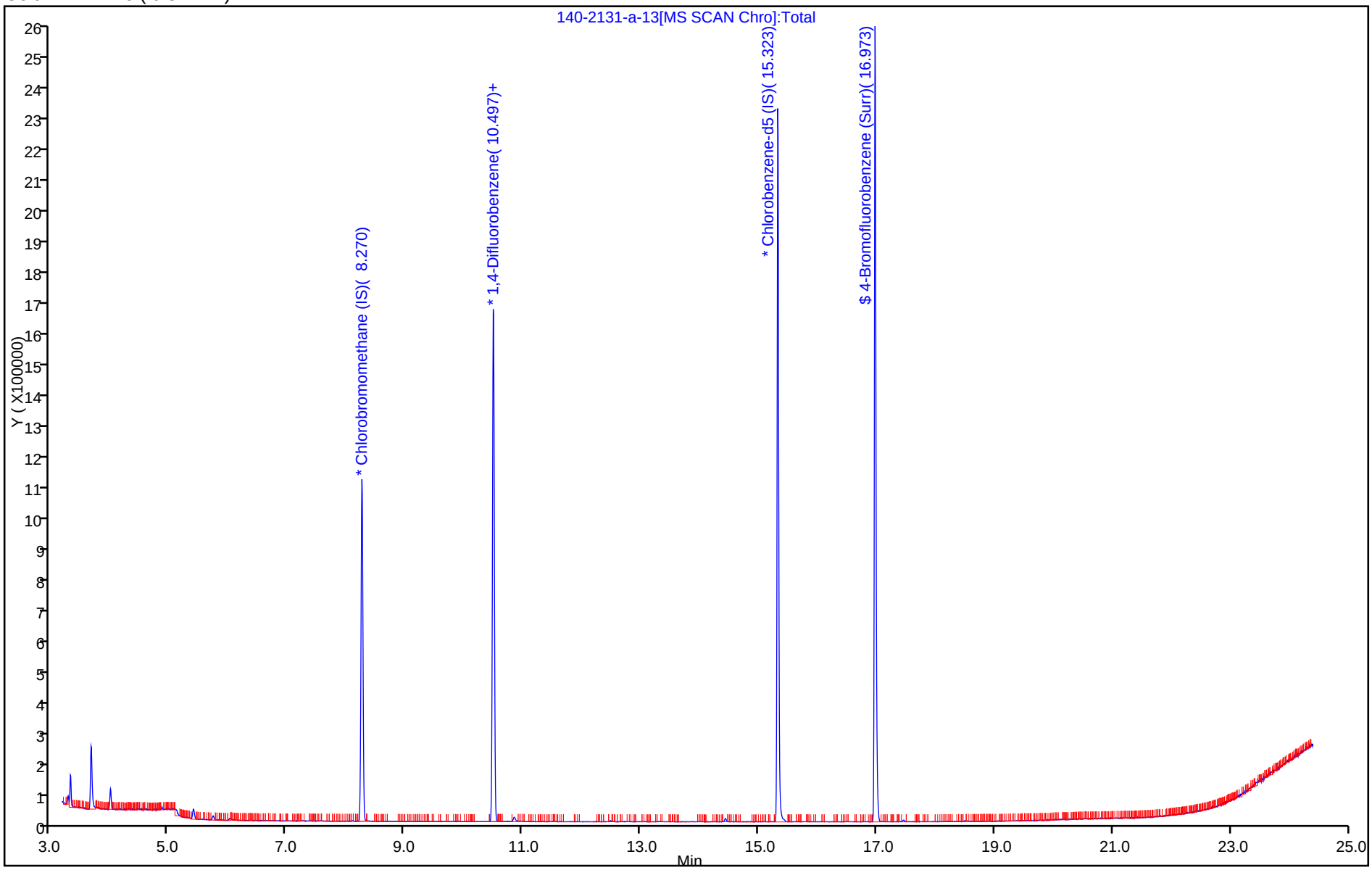
MAissur1_00002 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 13-Oct-2014 11:10:07 Chrom Revision: 2.2 18-Aug-2014 12:17:36

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\ME\20141010-1018.b\140-2131-a-13.D				
Injection Date:	11-Oct-2014 20:21:30	Instrument ID:	ME	Operator ID:	403648
Lims ID:	140-2131-A-13	Lab Sample ID:	140-2131-13	Worklist Smp#:	6
Client ID:	10124				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
Tel: (865)291-3000

TestAmerica Job ID: 140-2220-1
Client Project/Site: 77 Commercial Street, Brooklyn, NY

For:
AKRF Inc
440 Park Avenue South
7th Floor
New York, New York 10016

Attn: Stephen Malinowski

Authorized for release by:
11/4/2014 2:40:39 PM

Jamie McKinney, Senior Project Manager
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LINKS

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: AKRF Inc
Project/Site: 77 Commercial Street, Brooklyn, NY

TestAmerica Job ID: 140-2220-1

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 140-2220-1

Laboratory: TestAmerica Knoxville

Narrative

Job Narrative
140-2220-1

Comments
No additional comments.

Receipt
The samples were received on 10/27/2014 9:10 AM; the samples arrived in good condition, properly preserved and, where required, on ice.

The client canceld the analysis of sample SV-5.

Air - GC/MS VOA
Method(s) TO 14A, TO 15 LL, TO-14A, TO-15: EPA methods TO-14A and TO-15 specify the use of humidified “zero air” as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of “zero air” by TestAmerica Knoxville.

Method(s) TO 15 LL, TO-15: The continuing calibration verification (CCV) associated with batch 1876 exhibited % difference of > 30% for the following analyte(s) 1.2.4-trichlorobenzene, however the results were within the LCS acceptance limits. The EPA method requires that all target analytes in the continuing calibration verification standard be within 30% difference from the initial calibration. According to the laboratory standard operating procedure, the continuing calibration is acceptable if it meets the laboratory control sample acceptance criteria.

Method(s) TO 15 LL, TO-15: Can Certification Comments:
Due to the large number of analytes in the CCV, there is a high probability that one or more analytes will recover outside acceptance limits. The laboratory's SOP allows for several analytes to recover outside criteria for this method when analyzing for a full list. The CCV associated with the can cleaning batches had analytes outside control limits. These results have been reported and qualified.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: AKRF Inc
Project/Site: 77 Commercial Street, Brooklyn, NY

TestAmerica Job ID: 140-2220-1

Client Sample ID: SV-1 — Lab Sample ID: 140-2220-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	0.27	J	0.77	0.12	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	18		0.77	0.24	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	9.3		0.77	0.25	ppb v/v	1		TO 15 LL	Total/NA
1,3-Butadiene	0.34	J	1.5	0.24	ppb v/v	1		TO 15 LL	Total/NA
2,2,4-Trimethylpentane	0.20	J	1.9	0.15	ppb v/v	1		TO 15 LL	Total/NA
4-Ethyltoluene	3.0		1.5	0.25	ppb v/v	1		TO 15 LL	Total/NA
Acetone	40		19	5.2	ppb v/v	1		TO 15 LL	Total/NA
Benzene	2.2		0.77	0.22	ppb v/v	1		TO 15 LL	Total/NA
Carbon disulfide	2.0	B	1.9	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.18	J	0.77	0.14	ppb v/v	1		TO 15 LL	Total/NA
Chloromethane	0.81	J B	1.9	0.62	ppb v/v	1		TO 15 LL	Total/NA
Cumene	6.8		1.5	0.23	ppb v/v	1		TO 15 LL	Total/NA
Cyclohexane	0.60	J	1.9	0.15	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.61	J	0.77	0.26	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	25		0.77	0.26	ppb v/v	1		TO 15 LL	Total/NA
Freon 22	0.63	J	0.77	0.14	ppb v/v	1		TO 15 LL	Total/NA
Isopropyl alcohol	4.0	J	7.7	0.90	ppb v/v	1		TO 15 LL	Total/NA
Methyl Butyl Ketone (2-Hexanone)	2.0		1.9	0.22	ppb v/v	1		TO 15 LL	Total/NA
Methyl Ethyl Ketone	6.2		3.8	0.77	ppb v/v	1		TO 15 LL	Total/NA
methyl isobutyl ketone	160		1.9	0.17	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.3	J B	1.9	1.3	ppb v/v	1		TO 15 LL	Total/NA
m-Xylene & p-Xylene	110		0.77	0.51	ppb v/v	1		TO 15 LL	Total/NA
n-Butane	3.5		1.5	0.70	ppb v/v	1		TO 15 LL	Total/NA
n-Butylbenzene	0.31	J	1.5	0.17	ppb v/v	1		TO 15 LL	Total/NA
n-Heptane	2.4		1.9	0.18	ppb v/v	1		TO 15 LL	Total/NA
n-Hexane	1.6	J B	1.9	0.13	ppb v/v	1		TO 15 LL	Total/NA
n-Propylbenzene	3.8		1.5	0.21	ppb v/v	1		TO 15 LL	Total/NA
o-Xylene	80		0.77	0.23	ppb v/v	1		TO 15 LL	Total/NA
sec-Butylbenzene	0.37	J	1.5	0.24	ppb v/v	1		TO 15 LL	Total/NA
tert-Butyl alcohol	4.6	J	7.7	0.14	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	5.2		0.77	0.15	ppb v/v	1		TO 15 LL	Total/NA
Tetrahydrofuran	0.74	J	3.8	0.24	ppb v/v	1		TO 15 LL	Total/NA
Toluene	12		1.2	1.2	ppb v/v	1		TO 15 LL	Total/NA
Trichlorofluoromethane	0.30	J	0.77	0.096	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	190		1.5	0.23	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	1.5	J	4.2	0.63	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	87		3.8	1.2	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	46		3.8	1.2	ug/m3	1		TO 15 LL	Total/NA
1,3-Butadiene	0.75	J	3.4	0.53	ug/m3	1		TO 15 LL	Total/NA
2,2,4-Trimethylpentane	0.95	J	9.0	0.72	ug/m3	1		TO 15 LL	Total/NA
4-Ethyltoluene	15		7.6	1.2	ug/m3	1		TO 15 LL	Total/NA
Acetone	95		46	12	ug/m3	1		TO 15 LL	Total/NA
Benzene	7.2		2.5	0.71	ug/m3	1		TO 15 LL	Total/NA
Carbon disulfide	6.1	B	6.0	0.36	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.88	J	3.8	0.70	ug/m3	1		TO 15 LL	Total/NA
Chloromethane	1.7	J B	4.0	1.3	ug/m3	1		TO 15 LL	Total/NA
Cumene	33		7.6	1.1	ug/m3	1		TO 15 LL	Total/NA
Cyclohexane	2.1	J	6.6	0.53	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	3.0	J	3.8	1.3	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: AKRF Inc
Project/Site: 77 Commercial Street, Brooklyn, NY

TestAmerica Job ID: 140-2220-1

Client Sample ID: SV-1 (Continued) — Lab Sample ID: 140-2220-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ethylbenzene	110		3.3	1.1	ug/m3	1		TO 15 LL	Total/NA
Freon 22	2.2	J	2.7	0.51	ug/m3	1		TO 15 LL	Total/NA
Isopropyl alcohol	9.9	J	19	2.2	ug/m3	1		TO 15 LL	Total/NA
Methyl Butyl Ketone (2-Hexanone)	8.3		7.9	0.91	ug/m3	1		TO 15 LL	Total/NA
Methyl Ethyl Ketone	18		11	2.3	ug/m3	1		TO 15 LL	Total/NA
methyl isobutyl ketone	640		7.9	0.71	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	4.4	J B	6.7	4.3	ug/m3	1		TO 15 LL	Total/NA
m-Xylene & p-Xylene	500		3.3	2.2	ug/m3	1		TO 15 LL	Total/NA
n-Butane	8.4		3.7	1.7	ug/m3	1		TO 15 LL	Total/NA
n-Butylbenzene	1.7	J	8.4	0.95	ug/m3	1		TO 15 LL	Total/NA
n-Heptane	9.9		7.9	0.75	ug/m3	1		TO 15 LL	Total/NA
n-Hexane	5.5	J B	6.8	0.44	ug/m3	1		TO 15 LL	Total/NA
n-Propylbenzene	19		7.6	1.0	ug/m3	1		TO 15 LL	Total/NA
o-Xylene	350		3.3	1.0	ug/m3	1		TO 15 LL	Total/NA
sec-Butylbenzene	2.1	J	8.4	1.3	ug/m3	1		TO 15 LL	Total/NA
tert-Butyl alcohol	14	J	23	0.44	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	35		5.2	1.0	ug/m3	1		TO 15 LL	Total/NA
Tetrahydrofuran	2.2	J	11	0.71	ug/m3	1		TO 15 LL	Total/NA
Toluene	45		4.3	4.3	ug/m3	1		TO 15 LL	Total/NA
Trichlorofluoromethane	1.7	J	4.3	0.54	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	830		6.7	1.0	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-2 — Lab Sample ID: 140-2220-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	0.16	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	1.7		0.80	0.25	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.49	J	0.80	0.26	ppb v/v	1		TO 15 LL	Total/NA
2,2,4-Trimethylpentane	0.17	J	2.0	0.16	ppb v/v	1		TO 15 LL	Total/NA
4-Ethyltoluene	0.54	J	1.6	0.26	ppb v/v	1		TO 15 LL	Total/NA
Acetone	8.5	J	20	5.4	ppb v/v	1		TO 15 LL	Total/NA
Benzene	0.52	J	0.80	0.23	ppb v/v	1		TO 15 LL	Total/NA
Carbon disulfide	1.0	J B	2.0	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chloromethane	0.95	J B	2.0	0.64	ppb v/v	1		TO 15 LL	Total/NA
Cyclohexane	1.7	J	2.0	0.16	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.65	J	0.80	0.27	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	1.3		0.80	0.27	ppb v/v	1		TO 15 LL	Total/NA
Freon 22	0.63	J	0.80	0.15	ppb v/v	1		TO 15 LL	Total/NA
methyl isobutyl ketone	24		2.0	0.18	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.9	J B	2.0	1.3	ppb v/v	1		TO 15 LL	Total/NA
m-Xylene & p-Xylene	5.8		0.80	0.53	ppb v/v	1		TO 15 LL	Total/NA
n-Butane	33		1.6	0.73	ppb v/v	1		TO 15 LL	Total/NA
n-Heptane	2.0		2.0	0.19	ppb v/v	1		TO 15 LL	Total/NA
n-Hexane	3.5	B	2.0	0.13	ppb v/v	1		TO 15 LL	Total/NA
n-Propylbenzene	0.26	J	1.6	0.22	ppb v/v	1		TO 15 LL	Total/NA
o-Xylene	2.3		0.80	0.24	ppb v/v	1		TO 15 LL	Total/NA
tert-Butyl alcohol	0.92	J	8.0	0.15	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	2.3		0.80	0.16	ppb v/v	1		TO 15 LL	Total/NA
Toluene	4.7		1.2	1.2	ppb v/v	1		TO 15 LL	Total/NA
Trichlorofluoromethane	1.6		0.80	0.10	ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: AKRF Inc
Project/Site: 77 Commercial Street, Brooklyn, NY

TestAmerica Job ID: 140-2220-1

Client Sample ID: SV-2 (Continued) — Lab Sample ID: 140-2220-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Xylenes, Total	8.1		1.6	0.24	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	0.87	J	4.4	0.65	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	8.2		3.9	1.2	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	2.4	J	3.9	1.3	ug/m3	1		TO 15 LL	Total/NA
2,2,4-Trimethylpentane	0.80	J	9.3	0.75	ug/m3	1		TO 15 LL	Total/NA
4-Ethyltoluene	2.7	J	7.9	1.3	ug/m3	1		TO 15 LL	Total/NA
Acetone	20	J	48	13	ug/m3	1		TO 15 LL	Total/NA
Benzene	1.7	J	2.6	0.73	ug/m3	1		TO 15 LL	Total/NA
Carbon disulfide	3.2	J B	6.2	0.37	ug/m3	1		TO 15 LL	Total/NA
Chloromethane	2.0	J B	4.1	1.3	ug/m3	1		TO 15 LL	Total/NA
Cyclohexane	5.8	J	6.9	0.55	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	3.2	J	4.0	1.3	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	5.6		3.5	1.2	ug/m3	1		TO 15 LL	Total/NA
Freon 22	2.2	J	2.8	0.53	ug/m3	1		TO 15 LL	Total/NA
methyl isobutyl ketone	97		8.2	0.74	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	6.6	J B	6.9	4.5	ug/m3	1		TO 15 LL	Total/NA
m-Xylene & p-Xylene	25		3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
n-Butane	79		3.8	1.7	ug/m3	1		TO 15 LL	Total/NA
n-Heptane	8.3		8.2	0.78	ug/m3	1		TO 15 LL	Total/NA
n-Hexane	12	B	7.0	0.46	ug/m3	1		TO 15 LL	Total/NA
n-Propylbenzene	1.3	J	7.9	1.1	ug/m3	1		TO 15 LL	Total/NA
o-Xylene	9.8		3.5	1.0	ug/m3	1		TO 15 LL	Total/NA
tert-Butyl alcohol	2.8	J	24	0.45	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	16		5.4	1.1	ug/m3	1		TO 15 LL	Total/NA
Toluene	18		4.5	4.5	ug/m3	1		TO 15 LL	Total/NA
Trichlorofluoromethane	8.9		4.5	0.56	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	35		6.9	1.0	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-7 — Lab Sample ID: 140-2220-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	0.23	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	4.8		0.80	0.25	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	1.3		0.80	0.26	ppb v/v	1		TO 15 LL	Total/NA
1,3-Butadiene	0.31	J	1.6	0.25	ppb v/v	1		TO 15 LL	Total/NA
2,2,4-Trimethylpentane	0.52	J	2.0	0.16	ppb v/v	1		TO 15 LL	Total/NA
4-Ethyltoluene	1.2	J	1.6	0.26	ppb v/v	1		TO 15 LL	Total/NA
Acetone	21		20	5.4	ppb v/v	1		TO 15 LL	Total/NA
Benzene	1.4		0.80	0.23	ppb v/v	1		TO 15 LL	Total/NA
Carbon disulfide	6.4	B	2.0	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.16	J	0.80	0.15	ppb v/v	1		TO 15 LL	Total/NA
Cumene	0.32	J	1.6	0.24	ppb v/v	1		TO 15 LL	Total/NA
Cyclohexane	0.87	J	2.0	0.16	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.66	J	0.80	0.27	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	3.2		0.80	0.27	ppb v/v	1		TO 15 LL	Total/NA
Methyl Butyl Ketone (2-Hexanone)	0.31	J	2.0	0.23	ppb v/v	1		TO 15 LL	Total/NA
Methyl Ethyl Ketone	3.3	J	4.0	0.80	ppb v/v	1		TO 15 LL	Total/NA
methyl isobutyl ketone	9.2		2.0	0.18	ppb v/v	1		TO 15 LL	Total/NA
m-Xylene & p-Xylene	16		0.80	0.53	ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: SV-7 (Continued)

Lab Sample ID: 140-2220-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
n-Butane	5.4		1.6	0.73	ppb v/v	1		TO 15 LL	Total/NA
n-Butylbenzene	0.33	J	1.6	0.18	ppb v/v	1		TO 15 LL	Total/NA
n-Heptane	1.7	J	2.0	0.19	ppb v/v	1		TO 15 LL	Total/NA
n-Hexane	2.3	B	2.0	0.13	ppb v/v	1		TO 15 LL	Total/NA
n-Propylbenzene	0.68	J	1.6	0.22	ppb v/v	1		TO 15 LL	Total/NA
o-Xylene	5.9		0.80	0.24	ppb v/v	1		TO 15 LL	Total/NA
tert-Butyl alcohol	1.5	J	8.0	0.15	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	5.8		0.80	0.16	ppb v/v	1		TO 15 LL	Total/NA
Tetrahydrofuran	0.69	J	4.0	0.25	ppb v/v	1		TO 15 LL	Total/NA
Toluene	8.3		1.2	1.2	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	17		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Trichlorofluoromethane	0.33	J	0.80	0.10	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	22		1.6	0.24	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	1.2	J	4.4	0.65	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	23		3.9	1.2	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	6.5		3.9	1.3	ug/m3	1		TO 15 LL	Total/NA
1,3-Butadiene	0.68	J	3.5	0.55	ug/m3	1		TO 15 LL	Total/NA
2,2,4-Trimethylpentane	2.4	J	9.3	0.75	ug/m3	1		TO 15 LL	Total/NA
4-Ethyltoluene	5.7	J	7.9	1.3	ug/m3	1		TO 15 LL	Total/NA
Acetone	49		48	13	ug/m3	1		TO 15 LL	Total/NA
Benzene	4.4		2.6	0.73	ug/m3	1		TO 15 LL	Total/NA
Carbon disulfide	20	B	6.2	0.37	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.80	J	3.9	0.73	ug/m3	1		TO 15 LL	Total/NA
Cumene	1.6	J	7.9	1.2	ug/m3	1		TO 15 LL	Total/NA
Cyclohexane	3.0	J	6.9	0.55	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	3.3	J	4.0	1.3	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	14		3.5	1.2	ug/m3	1		TO 15 LL	Total/NA
Methyl Butyl Ketone (2-Hexanone)	1.3	J	8.2	0.94	ug/m3	1		TO 15 LL	Total/NA
Methyl Ethyl Ketone	9.8	J	12	2.4	ug/m3	1		TO 15 LL	Total/NA
methyl isobutyl ketone	38		8.2	0.74	ug/m3	1		TO 15 LL	Total/NA
m-Xylene & p-Xylene	69		3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
n-Butane	13		3.8	1.7	ug/m3	1		TO 15 LL	Total/NA
n-Butylbenzene	1.8	J	8.8	0.99	ug/m3	1		TO 15 LL	Total/NA
n-Heptane	7.0	J	8.2	0.78	ug/m3	1		TO 15 LL	Total/NA
n-Hexane	8.1	B	7.0	0.46	ug/m3	1		TO 15 LL	Total/NA
n-Propylbenzene	3.4	J	7.9	1.1	ug/m3	1		TO 15 LL	Total/NA
o-Xylene	26		3.5	1.0	ug/m3	1		TO 15 LL	Total/NA
tert-Butyl alcohol	4.4	J	24	0.45	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	39		5.4	1.1	ug/m3	1		TO 15 LL	Total/NA
Tetrahydrofuran	2.0	J	12	0.74	ug/m3	1		TO 15 LL	Total/NA
Toluene	31		4.5	4.5	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	94		2.1	0.75	ug/m3	1		TO 15 LL	Total/NA
Trichlorofluoromethane	1.8	J	4.5	0.56	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	95		6.9	1.0	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: AKRF Inc
Project/Site: 77 Commercial Street, Brooklyn, NY

TestAmerica Job ID: 140-2220-1

Client Sample ID: SV-1

Lab Sample ID: 140-2220-1

Date Collected: 10/24/14 14:45
Matrix: Air
Date Received: 10/27/14 09:10
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**0.27**	**J**	0.77	0.12	ppb v/v			10/30/14 23:45	1
1,1,2,2-Tetrachloroethane	ND		0.77	0.23	ppb v/v			10/30/14 23:45	1
1,1,2-Trichloroethane	ND		0.77	0.20	ppb v/v			10/30/14 23:45	1
1,1-Dichloroethane	ND		0.77	0.096	ppb v/v			10/30/14 23:45	1
1,1-Dichloroethene	ND		0.77	0.13	ppb v/v			10/30/14 23:45	1
1,2,4-Trichlorobenzene	ND		3.8	0.38	ppb v/v			10/30/14 23:45	1
1,2,4-Trimethylbenzene	**18**		0.77	0.24	ppb v/v			10/30/14 23:45	1
1,2-Dibromoethane (EDB)	ND		0.77	0.17	ppb v/v			10/30/14 23:45	1
1,2-Dichlorobenzene	ND		0.77	0.27	ppb v/v			10/30/14 23:45	1
1,2-Dichloroethane	ND		0.77	0.18	ppb v/v			10/30/14 23:45	1
1,2-Dichloroethene, Total	ND		1.5	0.19	ppb v/v			10/30/14 23:45	1
1,2-Dichloropropane	ND		0.77	0.20	ppb v/v			10/30/14 23:45	1
1,2-Dichlorotetrafluoroethane	ND		0.77	0.13	ppb v/v			10/30/14 23:45	1
1,3,5-Trimethylbenzene	**9.3**		0.77	0.25	ppb v/v			10/30/14 23:45	1
1,3-Butadiene	**0.34**	**J**	1.5	0.24	ppb v/v			10/30/14 23:45	1
1,3-Dichlorobenzene	ND		0.77	0.25	ppb v/v			10/30/14 23:45	1
1,4-Dichlorobenzene	ND		0.77	0.25	ppb v/v			10/30/14 23:45	1
1,4-Dioxane	ND		1.9	0.31	ppb v/v			10/30/14 23:45	1
2,2,4-Trimethylpentane	**0.20**	**J**	1.9	0.15	ppb v/v			10/30/14 23:45	1
2-Chlorotoluene	ND		1.5	0.24	ppb v/v			10/30/14 23:45	1
3-Chloropropene	ND		0.77	0.18	ppb v/v			10/30/14 23:45	1
4-Ethyltoluene	**3.0**		1.5	0.25	ppb v/v			10/30/14 23:45	1
4-Isopropyltoluene	ND		0.77	0.22	ppb v/v			10/30/14 23:45	1
Acetone	**40**		19	5.2	ppb v/v			10/30/14 23:45	1
Benzene	**2.2**		0.77	0.22	ppb v/v			10/30/14 23:45	1
Benzyl chloride	ND		1.5	0.30	ppb v/v			10/30/14 23:45	1
Bromodichloromethane	ND		0.77	0.17	ppb v/v			10/30/14 23:45	1
Bromoethene(Vinyl Bromide)	ND		0.77	0.13	ppb v/v			10/30/14 23:45	1
Bromoform	ND		0.77	0.18	ppb v/v			10/30/14 23:45	1
Bromomethane	ND		0.77	0.13	ppb v/v			10/30/14 23:45	1
Carbon disulfide	**2.0**	**B**	1.9	0.12	ppb v/v			10/30/14 23:45	1
Carbon tetrachloride	ND		0.77	0.14	ppb v/v			10/30/14 23:45	1
Chlorobenzene	ND		0.77	0.19	ppb v/v			10/30/14 23:45	1
Chloroethane	ND		0.77	0.13	ppb v/v			10/30/14 23:45	1
Chloroform	**0.18**	**J**	0.77	0.14	ppb v/v			10/30/14 23:45	1
Chloromethane	**0.81**	**J B**	1.9	0.62	ppb v/v			10/30/14 23:45	1
cis-1,2-Dichloroethene	ND		0.77	0.23	ppb v/v			10/30/14 23:45	1
cis-1,3-Dichloropropene	ND		0.77	0.28	ppb v/v			10/30/14 23:45	1
Cumene	**6.8**		1.5	0.23	ppb v/v			10/30/14 23:45	1
Cyclohexane	**0.60**	**J**	1.9	0.15	ppb v/v			10/30/14 23:45	1
Dibromochloromethane	ND		0.77	0.16	ppb v/v			10/30/14 23:45	1
Dichlorodifluoromethane	**0.61**	**J**	0.77	0.26	ppb v/v			10/30/14 23:45	1
Ethylbenzene	**25**		0.77	0.26	ppb v/v			10/30/14 23:45	1
Freon 22	**0.63**	**J**	0.77	0.14	ppb v/v			10/30/14 23:45	1
Freon TF	ND		0.77	0.12	ppb v/v			10/30/14 23:45	1
Hexachlorobutadiene	ND		3.8	0.47	ppb v/v			10/30/14 23:45	1
Isopropyl alcohol	**4.0**	**J**	7.7	0.90	ppb v/v			10/30/14 23:45	1
Methyl Butyl Ketone (2-Hexanone)	**2.0**		1.9	0.22	ppb v/v			10/30/14 23:45	1

Client: AKRF Inc
Project/Site: 77 Commercial Street, Brooklyn, NY

TestAmerica Job ID: 140-2220-1

Client Sample ID: SV-1

Lab Sample ID: 140-2220-1

Date Collected: 10/24/14 14:45
Matrix: Air
Date Received: 10/27/14 09:10
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Ethyl Ketone	**6.2**		3.8	0.77	ppb v/v			10/30/14 23:45	1
methyl isobutyl ketone	**160**		1.9	0.17	ppb v/v			10/30/14 23:45	1
Methyl methacrylate	ND		1.9	0.31	ppb v/v			10/30/14 23:45	1
Methyl tert-butyl ether	ND		3.8	0.65	ppb v/v			10/30/14 23:45	1
Methylene Chloride	**1.3**	**J B**	1.9	1.3	ppb v/v			10/30/14 23:45	1
m-Xylene & p-Xylene	**110**		0.77	0.51	ppb v/v			10/30/14 23:45	1
Naphthalene	ND		1.9	0.38	ppb v/v			10/30/14 23:45	1
n-Butane	**3.5**		1.5	0.70	ppb v/v			10/30/14 23:45	1
n-Butylbenzene	**0.31**	**J**	1.5	0.17	ppb v/v			10/30/14 23:45	1
n-Heptane	**2.4**		1.9	0.18	ppb v/v			10/30/14 23:45	1
n-Hexane	**1.6**	**J B**	1.9	0.13	ppb v/v			10/30/14 23:45	1
n-Propylbenzene	**3.8**		1.5	0.21	ppb v/v			10/30/14 23:45	1
o-Xylene	**80**		0.77	0.23	ppb v/v			10/30/14 23:45	1
sec-Butylbenzene	**0.37**	**J**	1.5	0.24	ppb v/v			10/30/14 23:45	1
Styrene	ND		0.77	0.22	ppb v/v			10/30/14 23:45	1
tert-Butyl alcohol	**4.6**	**J**	7.7	0.14	ppb v/v			10/30/14 23:45	1
tert-Butylbenzene	ND		1.9	0.25	ppb v/v			10/30/14 23:45	1
Tetrachloroethene	**5.2**		0.77	0.15	ppb v/v			10/30/14 23:45	1
Tetrahydrofuran	**0.74**	**J**	3.8	0.24	ppb v/v			10/30/14 23:45	1
Toluene	**12**		1.2	1.2	ppb v/v			10/30/14 23:45	1
trans-1,2-Dichloroethene	ND		0.77	0.19	ppb v/v			10/30/14 23:45	1
trans-1,3-Dichloropropene	ND		0.77	0.18	ppb v/v			10/30/14 23:45	1
Trichloroethene	ND		0.38	0.13	ppb v/v			10/30/14 23:45	1
Trichlorofluoromethane	**0.30**	**J**	0.77	0.096	ppb v/v			10/30/14 23:45	1
Vinyl chloride	ND		0.77	0.28	ppb v/v			10/30/14 23:45	1
Xylenes, Total	**190**		1.5	0.23	ppb v/v			10/30/14 23:45	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**1.5**	**J**	4.2	0.63	ug/m3			10/30/14 23:45	1
1,1,2,2-Tetrachloroethane	ND		5.3	1.6	ug/m3			10/30/14 23:45	1
1,1,2-Trichloroethane	ND		4.2	1.1	ug/m3			10/30/14 23:45	1
1,1-Dichloroethane	ND		3.1	0.39	ug/m3			10/30/14 23:45	1
1,1-Dichloroethene	ND		3.0	0.53	ug/m3			10/30/14 23:45	1
1,2,4-Trichlorobenzene	ND		29	2.8	ug/m3			10/30/14 23:45	1
1,2,4-Trimethylbenzene	**87**		3.8	1.2	ug/m3			10/30/14 23:45	1
1,2-Dibromoethane (EDB)	ND		5.9	1.3	ug/m3			10/30/14 23:45	1
1,2-Dichlorobenzene	ND		4.6	1.6	ug/m3			10/30/14 23:45	1
1,2-Dichloroethane	ND		3.1	0.74	ug/m3			10/30/14 23:45	1
1,2-Dichloroethene, Total	ND		6.1	0.76	ug/m3			10/30/14 23:45	1
1,2-Dichloropropane	ND		3.6	0.93	ug/m3			10/30/14 23:45	1
1,2-Dichlorotetrafluoroethane	ND		5.4	0.87	ug/m3			10/30/14 23:45	1
1,3,5-Trimethylbenzene	**46**		3.8	1.2	ug/m3			10/30/14 23:45	1
1,3-Butadiene	**0.75**	**J**	3.4	0.53	ug/m3			10/30/14 23:45	1
1,3-Dichlorobenzene	ND		4.6	1.5	ug/m3			10/30/14 23:45	1
1,4-Dichlorobenzene	ND		4.6	1.5	ug/m3			10/30/14 23:45	1
1,4-Dioxane	ND		6.9	1.1	ug/m3			10/30/14 23:45	1
2,2,4-Trimethylpentane	**0.95**	**J**	9.0	0.72	ug/m3			10/30/14 23:45	1
2-Chlorotoluene	ND		8.0	1.2	ug/m3			10/30/14 23:45	1
3-Chloropropene	ND		2.4	0.57	ug/m3			10/30/14 23:45	1

Client: AKRF Inc
Project/Site: 77 Commercial Street, Brooklyn, NY

TestAmerica Job ID: 140-2220-1

Client Sample ID: SV-1
Date Collected: 10/24/14 14:45
Date Received: 10/27/14 09:10
Sample Container: Summa Canister 6L

Lab Sample ID: 140-2220-1
Matrix: Air

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Ethyltoluene	15		7.6	1.2	ug/m3			10/30/14 23:45	1
4-Isopropyltoluene	ND		4.2	1.2	ug/m3			10/30/14 23:45	1
Acetone	95		46	12	ug/m3			10/30/14 23:45	1
Benzene	7.2		2.5	0.71	ug/m3			10/30/14 23:45	1
Benzyl chloride	ND		8.0	1.5	ug/m3			10/30/14 23:45	1
Bromodichloromethane	ND		5.2	1.2	ug/m3			10/30/14 23:45	1
Bromoethene(Vinyl Bromide)	ND		3.4	0.59	ug/m3			10/30/14 23:45	1
Bromoform	ND		8.0	1.9	ug/m3			10/30/14 23:45	1
Bromomethane	ND		3.0	0.49	ug/m3			10/30/14 23:45	1
Carbon disulfide	6.1	B	6.0	0.36	ug/m3			10/30/14 23:45	1
Carbon tetrachloride	ND		4.8	0.91	ug/m3			10/30/14 23:45	1
Chlorobenzene	ND		3.5	0.89	ug/m3			10/30/14 23:45	1
Chloroethane	ND		2.0	0.36	ug/m3			10/30/14 23:45	1
Chloroform	0.88	J	3.8	0.70	ug/m3			10/30/14 23:45	1
Chloromethane	1.7	J B	4.0	1.3	ug/m3			10/30/14 23:45	1
cis-1,2-Dichloroethene	ND		3.0	0.91	ug/m3			10/30/14 23:45	1
cis-1,3-Dichloropropene	ND		3.5	1.3	ug/m3			10/30/14 23:45	1
Cumene	33		7.6	1.1	ug/m3			10/30/14 23:45	1
Cyclohexane	2.1	J	6.6	0.53	ug/m3			10/30/14 23:45	1
Dibromochloromethane	ND		6.6	1.4	ug/m3			10/30/14 23:45	1
Dichlorodifluoromethane	3.0	J	3.8	1.3	ug/m3			10/30/14 23:45	1
Ethylbenzene	110		3.3	1.1	ug/m3			10/30/14 23:45	1
Freon 22	2.2	J	2.7	0.51	ug/m3			10/30/14 23:45	1
Freon TF	ND		5.9	0.88	ug/m3			10/30/14 23:45	1
Hexachlorobutadiene	ND		41	5.0	ug/m3			10/30/14 23:45	1
Isopropyl alcohol	9.9	J	19	2.2	ug/m3			10/30/14 23:45	1
Methyl Butyl Ketone (2-Hexanone)	8.3		7.9	0.91	ug/m3			10/30/14 23:45	1
Methyl Ethyl Ketone	18		11	2.3	ug/m3			10/30/14 23:45	1
methyl isobutyl ketone	640		7.9	0.71	ug/m3			10/30/14 23:45	1
Methyl methacrylate	ND		7.9	1.3	ug/m3			10/30/14 23:45	1
Methyl tert-butyl ether	ND		14	2.4	ug/m3			10/30/14 23:45	1
Methylene Chloride	4.4	J B	6.7	4.3	ug/m3			10/30/14 23:45	1
m-Xylene & p-Xylene	500		3.3	2.2	ug/m3			10/30/14 23:45	1
Naphthalene	ND		10	2.0	ug/m3			10/30/14 23:45	1
n-Butane	8.4		3.7	1.7	ug/m3			10/30/14 23:45	1
n-Butylbenzene	1.7	J	8.4	0.95	ug/m3			10/30/14 23:45	1
n-Heptane	9.9		7.9	0.75	ug/m3			10/30/14 23:45	1
n-Hexane	5.5	J B	6.8	0.44	ug/m3			10/30/14 23:45	1
n-Propylbenzene	19		7.6	1.0	ug/m3			10/30/14 23:45	1
o-Xylene	350		3.3	1.0	ug/m3			10/30/14 23:45	1
sec-Butylbenzene	2.1	J	8.4	1.3	ug/m3			10/30/14 23:45	1
Styrene	ND		3.3	0.94	ug/m3			10/30/14 23:45	1
tert-Butyl alcohol	14	J	23	0.44	ug/m3			10/30/14 23:45	1
tert-Butylbenzene	ND		11	1.4	ug/m3			10/30/14 23:45	1
Tetrachloroethene	35		5.2	1.0	ug/m3			10/30/14 23:45	1
Tetrahydrofuran	2.2	J	11	0.71	ug/m3			10/30/14 23:45	1
Toluene	45		4.3	4.3	ug/m3			10/30/14 23:45	1
trans-1,2-Dichloroethene	ND		3.0	0.76	ug/m3			10/30/14 23:45	1

Client Sample ID: SV-1

Lab Sample ID: 140-2220-1

Date Collected: 10/24/14 14:45
Matrix: Air
Date Received: 10/27/14 09:10
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		3.5	0.83	ug/m3			10/30/14 23:45	1
Trichloroethene	ND		2.1	0.72	ug/m3			10/30/14 23:45	1
Trichlorofluoromethane	**1.7**	**J**	4.3	0.54	ug/m3			10/30/14 23:45	1
Vinyl chloride	ND		2.0	0.71	ug/m3			10/30/14 23:45	1
Xylenes, Total	**830**		6.7	1.0	ug/m3			10/30/14 23:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*60 - 140*		*10/30/14 23:45*	*1*

Client Sample ID: SV-2

Lab Sample ID: 140-2220-2

Date Collected: 10/24/14 13:20
Matrix: Air
Date Received: 10/27/14 09:10
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**0.16**	**J**	0.80	0.12	ppb v/v			10/31/14 00:40	1
1,1,2,2-Tetrachloroethane	ND		0.80	0.24	ppb v/v			10/31/14 00:40	1
1,1,2-Trichloroethane	ND		0.80	0.21	ppb v/v			10/31/14 00:40	1
1,1-Dichloroethane	ND		0.80	0.10	ppb v/v			10/31/14 00:40	1
1,1-Dichloroethene	ND		0.80	0.14	ppb v/v			10/31/14 00:40	1
1,2,4-Trichlorobenzene	ND		4.0	0.39	ppb v/v			10/31/14 00:40	1
1,2,4-Trimethylbenzene	**1.7**		0.80	0.25	ppb v/v			10/31/14 00:40	1
1,2-Dibromoethane (EDB)	ND		0.80	0.18	ppb v/v			10/31/14 00:40	1
1,2-Dichlorobenzene	ND		0.80	0.28	ppb v/v			10/31/14 00:40	1
1,2-Dichloroethane	ND		0.80	0.19	ppb v/v			10/31/14 00:40	1
1,2-Dichloroethene, Total	ND		1.6	0.20	ppb v/v			10/31/14 00:40	1
1,2-Dichloropropane	ND		0.80	0.21	ppb v/v			10/31/14 00:40	1
1,2-Dichlorotetrafluoroethane	ND		0.80	0.13	ppb v/v			10/31/14 00:40	1
1,3,5-Trimethylbenzene	**0.49**	**J**	0.80	0.26	ppb v/v			10/31/14 00:40	1
1,3-Butadiene	ND		1.6	0.25	ppb v/v			10/31/14 00:40	1
1,3-Dichlorobenzene	ND		0.80	0.26	ppb v/v			10/31/14 00:40	1
1,4-Dichlorobenzene	ND		0.80	0.26	ppb v/v			10/31/14 00:40	1
1,4-Dioxane	ND		2.0	0.32	ppb v/v			10/31/14 00:40	1
2,2,4-Trimethylpentane	**0.17**	**J**	2.0	0.16	ppb v/v			10/31/14 00:40	1
2-Chlorotoluene	ND		1.6	0.25	ppb v/v			10/31/14 00:40	1
3-Chloropropene	ND		0.80	0.19	ppb v/v			10/31/14 00:40	1
4-Ethyltoluene	**0.54**	**J**	1.6	0.26	ppb v/v			10/31/14 00:40	1
4-Isopropyltoluene	ND		0.80	0.23	ppb v/v			10/31/14 00:40	1
Acetone	**8.5**	**J**	20	5.4	ppb v/v			10/31/14 00:40	1
Benzene	**0.52**	**J**	0.80	0.23	ppb v/v			10/31/14 00:40	1
Benzyl chloride	ND		1.6	0.31	ppb v/v			10/31/14 00:40	1
Bromodichloromethane	ND		0.80	0.18	ppb v/v			10/31/14 00:40	1
Bromoethene(Vinyl Bromide)	ND		0.80	0.14	ppb v/v			10/31/14 00:40	1
Bromoform	ND		0.80	0.19	ppb v/v			10/31/14 00:40	1
Bromomethane	ND		0.80	0.13	ppb v/v			10/31/14 00:40	1
Carbon disulfide	**1.0**	**J B**	2.0	0.12	ppb v/v			10/31/14 00:40	1
Carbon tetrachloride	ND		0.80	0.15	ppb v/v			10/31/14 00:40	1
Chlorobenzene	ND		0.80	0.20	ppb v/v			10/31/14 00:40	1

Client: AKRF Inc
Project/Site: 77 Commercial Street, Brooklyn, NY

TestAmerica Job ID: 140-2220-1

Client Sample ID: SV-2

Lab Sample ID: 140-2220-2

Date Collected: 10/24/14 13:20
Matrix: Air
Date Received: 10/27/14 09:10
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND		0.80	0.14	ppb v/v			10/31/14 00:40	1
Chloroform	ND		0.80	0.15	ppb v/v			10/31/14 00:40	1
Chloromethane	**0.95**	**J B**	2.0	0.64	ppb v/v			10/31/14 00:40	1
cis-1,2-Dichloroethene	ND		0.80	0.24	ppb v/v			10/31/14 00:40	1
cis-1,3-Dichloropropene	ND		0.80	0.29	ppb v/v			10/31/14 00:40	1
Cumene	ND		1.6	0.24	ppb v/v			10/31/14 00:40	1
Cyclohexane	**1.7**	**J**	2.0	0.16	ppb v/v			10/31/14 00:40	1
Dibromochloromethane	ND		0.80	0.17	ppb v/v			10/31/14 00:40	1
Dichlorodifluoromethane	**0.65**	**J**	0.80	0.27	ppb v/v			10/31/14 00:40	1
Ethylbenzene	**1.3**		0.80	0.27	ppb v/v			10/31/14 00:40	1
Freon 22	**0.63**	**J**	0.80	0.15	ppb v/v			10/31/14 00:40	1
Freon TF	ND		0.80	0.12	ppb v/v			10/31/14 00:40	1
Hexachlorobutadiene	ND		4.0	0.49	ppb v/v			10/31/14 00:40	1
Isopropyl alcohol	ND		8.0	0.94	ppb v/v			10/31/14 00:40	1
Methyl Butyl Ketone (2-Hexanone)	ND		2.0	0.23	ppb v/v			10/31/14 00:40	1
Methyl Ethyl Ketone	ND		4.0	0.80	ppb v/v			10/31/14 00:40	1
methyl isobutyl ketone	**24**		2.0	0.18	ppb v/v			10/31/14 00:40	1
Methyl methacrylate	ND		2.0	0.32	ppb v/v			10/31/14 00:40	1
Methyl tert-butyl ether	ND		4.0	0.68	ppb v/v			10/31/14 00:40	1
Methylene Chloride	**1.9**	**J B**	2.0	1.3	ppb v/v			10/31/14 00:40	1
m-Xylene & p-Xylene	**5.8**		0.80	0.53	ppb v/v			10/31/14 00:40	1
Naphthalene	ND		2.0	0.40	ppb v/v			10/31/14 00:40	1
n-Butane	**33**		1.6	0.73	ppb v/v			10/31/14 00:40	1
n-Butylbenzene	ND		1.6	0.18	ppb v/v			10/31/14 00:40	1
n-Heptane	**2.0**		2.0	0.19	ppb v/v			10/31/14 00:40	1
n-Hexane	**3.5**	**B**	2.0	0.13	ppb v/v			10/31/14 00:40	1
n-Propylbenzene	**0.26**	**J**	1.6	0.22	ppb v/v			10/31/14 00:40	1
o-Xylene	**2.3**		0.80	0.24	ppb v/v			10/31/14 00:40	1
sec-Butylbenzene	ND		1.6	0.25	ppb v/v			10/31/14 00:40	1
Styrene	ND		0.80	0.23	ppb v/v			10/31/14 00:40	1
tert-Butyl alcohol	**0.92**	**J**	8.0	0.15	ppb v/v			10/31/14 00:40	1
tert-Butylbenzene	ND		2.0	0.26	ppb v/v			10/31/14 00:40	1
Tetrachloroethene	**2.3**		0.80	0.16	ppb v/v			10/31/14 00:40	1
Tetrahydrofuran	ND		4.0	0.25	ppb v/v			10/31/14 00:40	1
Toluene	**4.7**		1.2	1.2	ppb v/v			10/31/14 00:40	1
trans-1,2-Dichloroethene	ND		0.80	0.20	ppb v/v			10/31/14 00:40	1
trans-1,3-Dichloropropene	ND		0.80	0.19	ppb v/v			10/31/14 00:40	1
Trichloroethene	ND		0.40	0.14	ppb v/v			10/31/14 00:40	1
Trichlorofluoromethane	**1.6**		0.80	0.10	ppb v/v			10/31/14 00:40	1
Vinyl chloride	ND		0.80	0.29	ppb v/v			10/31/14 00:40	1
Xylenes, Total	**8.1**		1.6	0.24	ppb v/v			10/31/14 00:40	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**0.87**	**J**	4.4	0.65	ug/m3			10/31/14 00:40	1
1,1,2,2-Tetrachloroethane	ND		5.5	1.6	ug/m3			10/31/14 00:40	1
1,1,2-Trichloroethane	ND		4.4	1.1	ug/m3			10/31/14 00:40	1
1,1-Dichloroethane	ND		3.2	0.40	ug/m3			10/31/14 00:40	1
1,1-Dichloroethene	ND		3.2	0.56	ug/m3			10/31/14 00:40	1
1,2,4-Trichlorobenzene	ND		30	2.9	ug/m3			10/31/14 00:40	1

Client: AKRF Inc
Project/Site: 77 Commercial Street, Brooklyn, NY

TestAmerica Job ID: 140-2220-1

Client Sample ID: SV-2
Date Collected: 10/24/14 13:20
Date Received: 10/27/14 09:10
Sample Container: Summa Canister 6L

Lab Sample ID: 140-2220-2
Matrix: Air

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	**8.2**		3.9	1.2	ug/m3			10/31/14 00:40	1
1,2-Dibromoethane (EDB)	ND		6.1	1.4	ug/m3			10/31/14 00:40	1
1,2-Dichlorobenzene	ND		4.8	1.7	ug/m3			10/31/14 00:40	1
1,2-Dichloroethane	ND		3.2	0.77	ug/m3			10/31/14 00:40	1
1,2-Dichloroethene, Total	ND		6.3	0.79	ug/m3			10/31/14 00:40	1
1,2-Dichloropropane	ND		3.7	0.97	ug/m3			10/31/14 00:40	1
1,2-Dichlorotetrafluoroethane	ND		5.6	0.91	ug/m3			10/31/14 00:40	1
1,3,5-Trimethylbenzene	**2.4**	**J**	3.9	1.3	ug/m3			10/31/14 00:40	1
1,3-Butadiene	ND		3.5	0.55	ug/m3			10/31/14 00:40	1
1,3-Dichlorobenzene	ND		4.8	1.6	ug/m3			10/31/14 00:40	1
1,4-Dichlorobenzene	ND		4.8	1.6	ug/m3			10/31/14 00:40	1
1,4-Dioxane	ND		7.2	1.2	ug/m3			10/31/14 00:40	1
2,2,4-Trimethylpentane	**0.80**	**J**	9.3	0.75	ug/m3			10/31/14 00:40	1
2-Chlorotoluene	ND		8.3	1.3	ug/m3			10/31/14 00:40	1
3-Chloropropene	ND		2.5	0.59	ug/m3			10/31/14 00:40	1
4-Ethyltoluene	**2.7**	**J**	7.9	1.3	ug/m3			10/31/14 00:40	1
4-Isopropyltoluene	ND		4.4	1.3	ug/m3			10/31/14 00:40	1
Acetone	**20**	**J**	48	13	ug/m3			10/31/14 00:40	1
Benzene	**1.7**	**J**	2.6	0.73	ug/m3			10/31/14 00:40	1
Benzyl chloride	ND		8.3	1.6	ug/m3			10/31/14 00:40	1
Bromodichloromethane	ND		5.4	1.2	ug/m3			10/31/14 00:40	1
Bromoethene(Vinyl Bromide)	ND		3.5	0.61	ug/m3			10/31/14 00:40	1
Bromoform	ND		8.3	2.0	ug/m3			10/31/14 00:40	1
Bromomethane	ND		3.1	0.50	ug/m3			10/31/14 00:40	1
Carbon disulfide	**3.2**	**J B**	6.2	0.37	ug/m3			10/31/14 00:40	1
Carbon tetrachloride	ND		5.0	0.94	ug/m3			10/31/14 00:40	1
Chlorobenzene	ND		3.7	0.92	ug/m3			10/31/14 00:40	1
Chloroethane	ND		2.1	0.37	ug/m3			10/31/14 00:40	1
Chloroform	ND		3.9	0.73	ug/m3			10/31/14 00:40	1
Chloromethane	**2.0**	**J B**	4.1	1.3	ug/m3			10/31/14 00:40	1
cis-1,2-Dichloroethene	ND		3.2	0.95	ug/m3			10/31/14 00:40	1
cis-1,3-Dichloropropene	ND		3.6	1.3	ug/m3			10/31/14 00:40	1
Cumene	ND		7.9	1.2	ug/m3			10/31/14 00:40	1
Cyclohexane	**5.8**	**J**	6.9	0.55	ug/m3			10/31/14 00:40	1
Dibromochloromethane	ND		6.8	1.4	ug/m3			10/31/14 00:40	1
Dichlorodifluoromethane	**3.2**	**J**	4.0	1.3	ug/m3			10/31/14 00:40	1
Ethylbenzene	**5.6**		3.5	1.2	ug/m3			10/31/14 00:40	1
Freon 22	**2.2**	**J**	2.8	0.53	ug/m3			10/31/14 00:40	1
Freon TF	ND		6.1	0.92	ug/m3			10/31/14 00:40	1
Hexachlorobutadiene	ND		43	5.2	ug/m3			10/31/14 00:40	1
Isopropyl alcohol	ND		20	2.3	ug/m3			10/31/14 00:40	1
Methyl Butyl Ketone (2-Hexanone)	ND		8.2	0.94	ug/m3			10/31/14 00:40	1
Methyl Ethyl Ketone	ND		12	2.4	ug/m3			10/31/14 00:40	1
methyl isobutyl ketone	**97**		8.2	0.74	ug/m3			10/31/14 00:40	1
Methyl methacrylate	ND		8.2	1.3	ug/m3			10/31/14 00:40	1
Methyl tert-butyl ether	ND		14	2.5	ug/m3			10/31/14 00:40	1
Methylene Chloride	**6.6**	**J B**	6.9	4.5	ug/m3			10/31/14 00:40	1
m-Xylene & p-Xylene	**25**		3.5	2.3	ug/m3			10/31/14 00:40	1

Client Sample ID: SV-2

Lab Sample ID: 140-2220-2

Date Collected: 10/24/14 13:20
Matrix: Air
Date Received: 10/27/14 09:10
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		10	2.1	ug/m3			10/31/14 00:40	1
n-Butane	**79**		3.8	1.7	ug/m3			10/31/14 00:40	1
n-Butylbenzene	ND		8.8	0.99	ug/m3			10/31/14 00:40	1
n-Heptane	**8.3**		8.2	0.78	ug/m3			10/31/14 00:40	1
n-Hexane	**12**	**B**	7.0	0.46	ug/m3			10/31/14 00:40	1
n-Propylbenzene	**1.3**	**J**	7.9	1.1	ug/m3			10/31/14 00:40	1
o-Xylene	**9.8**		3.5	1.0	ug/m3			10/31/14 00:40	1
sec-Butylbenzene	ND		8.8	1.4	ug/m3			10/31/14 00:40	1
Styrene	ND		3.4	0.98	ug/m3			10/31/14 00:40	1
tert-Butyl alcohol	**2.8**	**J**	24	0.45	ug/m3			10/31/14 00:40	1
tert-Butylbenzene	ND		11	1.4	ug/m3			10/31/14 00:40	1
Tetrachloroethene	**16**		5.4	1.1	ug/m3			10/31/14 00:40	1
Tetrahydrofuran	ND		12	0.74	ug/m3			10/31/14 00:40	1
Toluene	**18**		4.5	4.5	ug/m3			10/31/14 00:40	1
trans-1,2-Dichloroethene	ND		3.2	0.79	ug/m3			10/31/14 00:40	1
trans-1,3-Dichloropropene	ND		3.6	0.86	ug/m3			10/31/14 00:40	1
Trichloroethene	ND		2.1	0.75	ug/m3			10/31/14 00:40	1
Trichlorofluoromethane	**8.9**		4.5	0.56	ug/m3			10/31/14 00:40	1
Vinyl chloride	ND		2.0	0.74	ug/m3			10/31/14 00:40	1
Xylenes, Total	**35**		6.9	1.0	ug/m3			10/31/14 00:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*60 - 140*		*10/31/14 00:40*	*1*

Client Sample ID: SV-7

Lab Sample ID: 140-2220-3

Date Collected: 10/24/14 14:55
Matrix: Air
Date Received: 10/27/14 09:10
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**0.23**	**J**	0.80	0.12	ppb v/v			10/31/14 04:16	1
1,1,2,2-Tetrachloroethane	ND		0.80	0.24	ppb v/v			10/31/14 04:16	1
1,1,2-Trichloroethane	ND		0.80	0.21	ppb v/v			10/31/14 04:16	1
1,1-Dichloroethane	ND		0.80	0.10	ppb v/v			10/31/14 04:16	1
1,1-Dichloroethene	ND		0.80	0.14	ppb v/v			10/31/14 04:16	1
1,2,4-Trichlorobenzene	ND		4.0	0.39	ppb v/v			10/31/14 04:16	1
1,2,4-Trimethylbenzene	**4.8**		0.80	0.25	ppb v/v			10/31/14 04:16	1
1,2-Dibromoethane (EDB)	ND		0.80	0.18	ppb v/v			10/31/14 04:16	1
1,2-Dichlorobenzene	ND		0.80	0.28	ppb v/v			10/31/14 04:16	1
1,2-Dichloroethane	ND		0.80	0.19	ppb v/v			10/31/14 04:16	1
1,2-Dichloroethene, Total	ND		1.6	0.20	ppb v/v			10/31/14 04:16	1
1,2-Dichloropropane	ND		0.80	0.21	ppb v/v			10/31/14 04:16	1
1,2-Dichlorotetrafluoroethane	ND		0.80	0.13	ppb v/v			10/31/14 04:16	1
1,3,5-Trimethylbenzene	**1.3**		0.80	0.26	ppb v/v			10/31/14 04:16	1
1,3-Butadiene	**0.31**	**J**	1.6	0.25	ppb v/v			10/31/14 04:16	1
1,3-Dichlorobenzene	ND		0.80	0.26	ppb v/v			10/31/14 04:16	1
1,4-Dichlorobenzene	ND		0.80	0.26	ppb v/v			10/31/14 04:16	1
1,4-Dioxane	ND		2.0	0.32	ppb v/v			10/31/14 04:16	1

Client: AKRF Inc
Project/Site: 77 Commercial Street, Brooklyn, NY

TestAmerica Job ID: 140-2220-1

Client Sample ID: SV-7
Date Collected: 10/24/14 14:55
Date Received: 10/27/14 09:10
Sample Container: Summa Canister 6L

Lab Sample ID: 140-2220-3
Matrix: Air

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,2,4-Trimethylpentane	**0.52**	**J**	2.0	0.16	ppb v/v			10/31/14 04:16	1
2-Chlorotoluene	ND		1.6	0.25	ppb v/v			10/31/14 04:16	1
3-Chloropropene	ND		0.80	0.19	ppb v/v			10/31/14 04:16	1
4-Ethyltoluene	**1.2**	**J**	1.6	0.26	ppb v/v			10/31/14 04:16	1
4-Isopropyltoluene	ND		0.80	0.23	ppb v/v			10/31/14 04:16	1
Acetone	**21**		20	5.4	ppb v/v			10/31/14 04:16	1
Benzene	**1.4**		0.80	0.23	ppb v/v			10/31/14 04:16	1
Benzyl chloride	ND		1.6	0.31	ppb v/v			10/31/14 04:16	1
Bromodichloromethane	ND		0.80	0.18	ppb v/v			10/31/14 04:16	1
Bromoethene(Vinyl Bromide)	ND		0.80	0.14	ppb v/v			10/31/14 04:16	1
Bromoform	ND		0.80	0.19	ppb v/v			10/31/14 04:16	1
Bromomethane	ND		0.80	0.13	ppb v/v			10/31/14 04:16	1
Carbon disulfide	**6.4**	**B**	2.0	0.12	ppb v/v			10/31/14 04:16	1
Carbon tetrachloride	ND		0.80	0.15	ppb v/v			10/31/14 04:16	1
Chlorobenzene	ND		0.80	0.20	ppb v/v			10/31/14 04:16	1
Chloroethane	ND		0.80	0.14	ppb v/v			10/31/14 04:16	1
Chloroform	**0.16**	**J**	0.80	0.15	ppb v/v			10/31/14 04:16	1
Chloromethane	ND		2.0	0.64	ppb v/v			10/31/14 04:16	1
cis-1,2-Dichloroethene	ND		0.80	0.24	ppb v/v			10/31/14 04:16	1
cis-1,3-Dichloropropene	ND		0.80	0.29	ppb v/v			10/31/14 04:16	1
Cumene	**0.32**	**J**	1.6	0.24	ppb v/v			10/31/14 04:16	1
Cyclohexane	**0.87**	**J**	2.0	0.16	ppb v/v			10/31/14 04:16	1
Dibromochloromethane	ND		0.80	0.17	ppb v/v			10/31/14 04:16	1
Dichlorodifluoromethane	**0.66**	**J**	0.80	0.27	ppb v/v			10/31/14 04:16	1
Ethylbenzene	**3.2**		0.80	0.27	ppb v/v			10/31/14 04:16	1
Freon 22	ND		0.80	0.15	ppb v/v			10/31/14 04:16	1
Freon TF	ND		0.80	0.12	ppb v/v			10/31/14 04:16	1
Hexachlorobutadiene	ND		4.0	0.49	ppb v/v			10/31/14 04:16	1
Isopropyl alcohol	ND		8.0	0.94	ppb v/v			10/31/14 04:16	1
Methyl Butyl Ketone (2-Hexanone)	**0.31**	**J**	2.0	0.23	ppb v/v			10/31/14 04:16	1
Methyl Ethyl Ketone	**3.3**	**J**	4.0	0.80	ppb v/v			10/31/14 04:16	1
methyl isobutyl ketone	**9.2**		2.0	0.18	ppb v/v			10/31/14 04:16	1
Methyl methacrylate	ND		2.0	0.32	ppb v/v			10/31/14 04:16	1
Methyl tert-butyl ether	ND		4.0	0.68	ppb v/v			10/31/14 04:16	1
Methylene Chloride	ND		2.0	1.3	ppb v/v			10/31/14 04:16	1
m-Xylene & p-Xylene	**16**		0.80	0.53	ppb v/v			10/31/14 04:16	1
Naphthalene	ND		2.0	0.40	ppb v/v			10/31/14 04:16	1
n-Butane	**5.4**		1.6	0.73	ppb v/v			10/31/14 04:16	1
n-Butylbenzene	**0.33**	**J**	1.6	0.18	ppb v/v			10/31/14 04:16	1
n-Heptane	**1.7**	**J**	2.0	0.19	ppb v/v			10/31/14 04:16	1
n-Hexane	**2.3**	**B**	2.0	0.13	ppb v/v			10/31/14 04:16	1
n-Propylbenzene	**0.68**	**J**	1.6	0.22	ppb v/v			10/31/14 04:16	1
o-Xylene	**5.9**		0.80	0.24	ppb v/v			10/31/14 04:16	1
sec-Butylbenzene	ND		1.6	0.25	ppb v/v			10/31/14 04:16	1
Styrene	ND		0.80	0.23	ppb v/v			10/31/14 04:16	1
tert-Butyl alcohol	**1.5**	**J**	8.0	0.15	ppb v/v			10/31/14 04:16	1
tert-Butylbenzene	ND		2.0	0.26	ppb v/v			10/31/14 04:16	1
Tetrachloroethene	**5.8**		0.80	0.16	ppb v/v			10/31/14 04:16	1

Client: AKRF Inc
Project/Site: 77 Commercial Street, Brooklyn, NY

TestAmerica Job ID: 140-2220-1

Client Sample ID: SV-7
Date Collected: 10/24/14 14:55
Date Received: 10/27/14 09:10
Sample Container: Summa Canister 6L

Lab Sample ID: 140-2220-3
Matrix: Air

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrahydrofuran	**0.69**	**J**	4.0	0.25	ppb v/v			10/31/14 04:16	1
Toluene	**8.3**		1.2	1.2	ppb v/v			10/31/14 04:16	1
trans-1,2-Dichloroethene	ND		0.80	0.20	ppb v/v			10/31/14 04:16	1
trans-1,3-Dichloropropene	ND		0.80	0.19	ppb v/v			10/31/14 04:16	1
Trichloroethene	**17**		0.40	0.14	ppb v/v			10/31/14 04:16	1
Trichlorofluoromethane	**0.33**	**J**	0.80	0.10	ppb v/v			10/31/14 04:16	1
Vinyl chloride	ND		0.80	0.29	ppb v/v			10/31/14 04:16	1
Xylenes, Total	**22**		1.6	0.24	ppb v/v			10/31/14 04:16	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**1.2**	**J**	4.4	0.65	ug/m3			10/31/14 04:16	1
1,1,2,2-Tetrachloroethane	ND		5.5	1.6	ug/m3			10/31/14 04:16	1
1,1,2-Trichloroethane	ND		4.4	1.1	ug/m3			10/31/14 04:16	1
1,1-Dichloroethane	ND		3.2	0.40	ug/m3			10/31/14 04:16	1
1,1-Dichloroethene	ND		3.2	0.56	ug/m3			10/31/14 04:16	1
1,2,4-Trichlorobenzene	ND		30	2.9	ug/m3			10/31/14 04:16	1
1,2,4-Trimethylbenzene	**23**		3.9	1.2	ug/m3			10/31/14 04:16	1
1,2-Dibromoethane (EDB)	ND		6.1	1.4	ug/m3			10/31/14 04:16	1
1,2-Dichlorobenzene	ND		4.8	1.7	ug/m3			10/31/14 04:16	1
1,2-Dichloroethane	ND		3.2	0.77	ug/m3			10/31/14 04:16	1
1,2-Dichloroethene, Total	ND		6.3	0.79	ug/m3			10/31/14 04:16	1
1,2-Dichloropropane	ND		3.7	0.97	ug/m3			10/31/14 04:16	1
1,2-Dichlorotetrafluoroethane	ND		5.6	0.91	ug/m3			10/31/14 04:16	1
1,3,5-Trimethylbenzene	**6.5**		3.9	1.3	ug/m3			10/31/14 04:16	1
1,3-Butadiene	**0.68**	**J**	3.5	0.55	ug/m3			10/31/14 04:16	1
1,3-Dichlorobenzene	ND		4.8	1.6	ug/m3			10/31/14 04:16	1
1,4-Dichlorobenzene	ND		4.8	1.6	ug/m3			10/31/14 04:16	1
1,4-Dioxane	ND		7.2	1.2	ug/m3			10/31/14 04:16	1
2,2,4-Trimethylpentane	**2.4**	**J**	9.3	0.75	ug/m3			10/31/14 04:16	1
2-Chlorotoluene	ND		8.3	1.3	ug/m3			10/31/14 04:16	1
3-Chloropropene	ND		2.5	0.59	ug/m3			10/31/14 04:16	1
4-Ethyltoluene	**5.7**	**J**	7.9	1.3	ug/m3			10/31/14 04:16	1
4-Isopropyltoluene	ND		4.4	1.3	ug/m3			10/31/14 04:16	1
Acetone	**49**		48	13	ug/m3			10/31/14 04:16	1
Benzene	**4.4**		2.6	0.73	ug/m3			10/31/14 04:16	1
Benzyl chloride	ND		8.3	1.6	ug/m3			10/31/14 04:16	1
Bromodichloromethane	ND		5.4	1.2	ug/m3			10/31/14 04:16	1
Bromoethene(Vinyl Bromide)	ND		3.5	0.61	ug/m3			10/31/14 04:16	1
Bromoform	ND		8.3	2.0	ug/m3			10/31/14 04:16	1
Bromomethane	ND		3.1	0.50	ug/m3			10/31/14 04:16	1
Carbon disulfide	**20**	**B**	6.2	0.37	ug/m3			10/31/14 04:16	1
Carbon tetrachloride	ND		5.0	0.94	ug/m3			10/31/14 04:16	1
Chlorobenzene	ND		3.7	0.92	ug/m3			10/31/14 04:16	1
Chloroethane	ND		2.1	0.37	ug/m3			10/31/14 04:16	1
Chloroform	**0.80**	**J**	3.9	0.73	ug/m3			10/31/14 04:16	1
Chloromethane	ND		4.1	1.3	ug/m3			10/31/14 04:16	1
cis-1,2-Dichloroethene	ND		3.2	0.95	ug/m3			10/31/14 04:16	1
cis-1,3-Dichloropropene	ND		3.6	1.3	ug/m3			10/31/14 04:16	1
Cumene	**1.6**	**J**	7.9	1.2	ug/m3			10/31/14 04:16	1

Client: AKRF Inc
Project/Site: 77 Commercial Street, Brooklyn, NY

TestAmerica Job ID: 140-2220-1

Client Sample ID: SV-7

Lab Sample ID: 140-2220-3

Date Collected: 10/24/14 14:55
Matrix: Air
Date Received: 10/27/14 09:10
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyclohexane	**3.0**	**J**	6.9	0.55	ug/m3			10/31/14 04:16	1
Dibromochloromethane	ND		6.8	1.4	ug/m3			10/31/14 04:16	1
Dichlorodifluoromethane	**3.3**	**J**	4.0	1.3	ug/m3			10/31/14 04:16	1
Ethylbenzene	**14**		3.5	1.2	ug/m3			10/31/14 04:16	1
Freon 22	ND		2.8	0.53	ug/m3			10/31/14 04:16	1
Freon TF	ND		6.1	0.92	ug/m3			10/31/14 04:16	1
Hexachlorobutadiene	ND		43	5.2	ug/m3			10/31/14 04:16	1
Isopropyl alcohol	ND		20	2.3	ug/m3			10/31/14 04:16	1
Methyl Butyl Ketone (2-Hexanone)	**1.3**	**J**	8.2	0.94	ug/m3			10/31/14 04:16	1
Methyl Ethyl Ketone	**9.8**	**J**	12	2.4	ug/m3			10/31/14 04:16	1
methyl isobutyl ketone	**38**		8.2	0.74	ug/m3			10/31/14 04:16	1
Methyl methacrylate	ND		8.2	1.3	ug/m3			10/31/14 04:16	1
Methyl tert-butyl ether	ND		14	2.5	ug/m3			10/31/14 04:16	1
Methylene Chloride	ND		6.9	4.5	ug/m3			10/31/14 04:16	1
m-Xylene & p-Xylene	**69**		3.5	2.3	ug/m3			10/31/14 04:16	1
Naphthalene	ND		10	2.1	ug/m3			10/31/14 04:16	1
n-Butane	**13**		3.8	1.7	ug/m3			10/31/14 04:16	1
n-Butylbenzene	**1.8**	**J**	8.8	0.99	ug/m3			10/31/14 04:16	1
n-Heptane	**7.0**	**J**	8.2	0.78	ug/m3			10/31/14 04:16	1
n-Hexane	**8.1**	**B**	7.0	0.46	ug/m3			10/31/14 04:16	1
n-Propylbenzene	**3.4**	**J**	7.9	1.1	ug/m3			10/31/14 04:16	1
o-Xylene	**26**		3.5	1.0	ug/m3			10/31/14 04:16	1
sec-Butylbenzene	ND		8.8	1.4	ug/m3			10/31/14 04:16	1
Styrene	ND		3.4	0.98	ug/m3			10/31/14 04:16	1
tert-Butyl alcohol	**4.4**	**J**	24	0.45	ug/m3			10/31/14 04:16	1
tert-Butylbenzene	ND		11	1.4	ug/m3			10/31/14 04:16	1
Tetrachloroethene	**39**		5.4	1.1	ug/m3			10/31/14 04:16	1
Tetrahydrofuran	**2.0**	**J**	12	0.74	ug/m3			10/31/14 04:16	1
Toluene	**31**		4.5	4.5	ug/m3			10/31/14 04:16	1
trans-1,2-Dichloroethene	ND		3.2	0.79	ug/m3			10/31/14 04:16	1
trans-1,3-Dichloropropene	ND		3.6	0.86	ug/m3			10/31/14 04:16	1
Trichloroethene	**94**		2.1	0.75	ug/m3			10/31/14 04:16	1
Trichlorofluoromethane	**1.8**	**J**	4.5	0.56	ug/m3			10/31/14 04:16	1
Vinyl chloride	ND		2.0	0.74	ug/m3			10/31/14 04:16	1
Xylenes, Total	**95**		6.9	1.0	ug/m3			10/31/14 04:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*60 - 140*		*10/31/14 04:16*	*1*

Surrogate Summary

Client: AKRF Inc
Project/Site: 77 Commercial Street, Brooklyn, NY

TestAmerica Job ID: 140-2220-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Matrix: Air **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	**Client Sample ID**	**BFB (60-140)**							
140-2220-1	SV-1	99							
140-2220-2	SV-2	97							
140-2220-3	SV-7	100							
LCS 140-1876/1002	Lab Control Sample	106							
MB 140-1876/7	Method Blank	101							

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Lab Sample ID: MB 140-1876/7
Matrix: Air
Analysis Batch: 1876

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			10/30/14 16:54	1
1,1,2,2-Tetrachloroethane	ND		0.080	0.024	ppb v/v			10/30/14 16:54	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			10/30/14 16:54	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			10/30/14 16:54	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			10/30/14 16:54	1
1,2,4-Trichlorobenzene	ND		0.40	0.039	ppb v/v			10/30/14 16:54	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			10/30/14 16:54	1
1,2-Dibromoethane (EDB)	ND		0.080	0.018	ppb v/v			10/30/14 16:54	1
1,2-Dichlorobenzene	ND		0.080	0.028	ppb v/v			10/30/14 16:54	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			10/30/14 16:54	1
1,2-Dichloroethene, Total	ND		0.16	0.020	ppb v/v			10/30/14 16:54	1
1,2-Dichloropropane	ND		0.080	0.021	ppb v/v			10/30/14 16:54	1
1,2-Dichlorotetrafluoroethane	ND		0.080	0.013	ppb v/v			10/30/14 16:54	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			10/30/14 16:54	1
1,3-Butadiene	ND		0.16	0.025	ppb v/v			10/30/14 16:54	1
1,3-Dichlorobenzene	ND		0.080	0.026	ppb v/v			10/30/14 16:54	1
1,4-Dichlorobenzene	ND		0.080	0.026	ppb v/v			10/30/14 16:54	1
1,4-Dioxane	ND		0.20	0.032	ppb v/v			10/30/14 16:54	1
2,2,4-Trimethylpentane	ND		0.20	0.016	ppb v/v			10/30/14 16:54	1
2-Chlorotoluene	ND		0.16	0.025	ppb v/v			10/30/14 16:54	1
3-Chloropropene	ND		0.080	0.019	ppb v/v			10/30/14 16:54	1
4-Ethyltoluene	ND		0.16	0.026	ppb v/v			10/30/14 16:54	1
4-Isopropyltoluene	ND		0.080	0.023	ppb v/v			10/30/14 16:54	1
Acetone	ND		2.0	0.54	ppb v/v			10/30/14 16:54	1
Benzene	ND		0.080	0.023	ppb v/v			10/30/14 16:54	1
Benzyl chloride	ND		0.16	0.031	ppb v/v			10/30/14 16:54	1
Bromodichloromethane	ND		0.080	0.018	ppb v/v			10/30/14 16:54	1
Bromoethene(Vinyl Bromide)	ND		0.080	0.014	ppb v/v			10/30/14 16:54	1
Bromoform	ND		0.080	0.019	ppb v/v			10/30/14 16:54	1
Bromomethane	ND		0.080	0.013	ppb v/v			10/30/14 16:54	1
Carbon disulfide	0.0743	J	0.20	0.012	ppb v/v			10/30/14 16:54	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			10/30/14 16:54	1
Chlorobenzene	ND		0.080	0.020	ppb v/v			10/30/14 16:54	1
Chloroethane	ND		0.080	0.014	ppb v/v			10/30/14 16:54	1
Chloroform	ND		0.080	0.015	ppb v/v			10/30/14 16:54	1
Chloromethane	0.0676	J	0.20	0.064	ppb v/v			10/30/14 16:54	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			10/30/14 16:54	1
cis-1,3-Dichloropropene	ND		0.080	0.029	ppb v/v			10/30/14 16:54	1
Cumene	ND		0.16	0.024	ppb v/v			10/30/14 16:54	1
Cyclohexane	ND		0.20	0.016	ppb v/v			10/30/14 16:54	1
Dibromochloromethane	ND		0.080	0.017	ppb v/v			10/30/14 16:54	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			10/30/14 16:54	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			10/30/14 16:54	1
Freon 22	ND		0.080	0.015	ppb v/v			10/30/14 16:54	1
Freon TF	ND		0.080	0.012	ppb v/v			10/30/14 16:54	1
Hexachlorobutadiene	ND		0.40	0.049	ppb v/v			10/30/14 16:54	1
Isopropyl alcohol	ND		0.80	0.094	ppb v/v			10/30/14 16:54	1
Methyl Butyl Ketone (2-Hexanone)	ND		0.20	0.023	ppb v/v			10/30/14 16:54	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-1876/7
Matrix: Air
Analysis Batch: 1876

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Ethyl Ketone	ND		0.40	0.080	ppb v/v			10/30/14 16:54	1
methyl isobutyl ketone	ND		0.20	0.018	ppb v/v			10/30/14 16:54	1
Methyl methacrylate	ND		0.20	0.032	ppb v/v			10/30/14 16:54	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			10/30/14 16:54	1
Methylene Chloride	0.185	J	0.20	0.13	ppb v/v			10/30/14 16:54	1
m-Xylene & p-Xylene	ND		0.080	0.053	ppb v/v			10/30/14 16:54	1
Naphthalene	ND		0.20	0.040	ppb v/v			10/30/14 16:54	1
n-Butane	ND		0.16	0.073	ppb v/v			10/30/14 16:54	1
n-Butylbenzene	ND		0.16	0.018	ppb v/v			10/30/14 16:54	1
n-Heptane	ND		0.20	0.019	ppb v/v			10/30/14 16:54	1
n-Hexane	0.0262	J	0.20	0.013	ppb v/v			10/30/14 16:54	1
n-Propylbenzene	ND		0.16	0.022	ppb v/v			10/30/14 16:54	1
o-Xylene	ND		0.080	0.024	ppb v/v			10/30/14 16:54	1
sec-Butylbenzene	ND		0.16	0.025	ppb v/v			10/30/14 16:54	1
Styrene	ND		0.080	0.023	ppb v/v			10/30/14 16:54	1
tert-Butyl alcohol	ND		0.80	0.015	ppb v/v			10/30/14 16:54	1
tert-Butylbenzene	ND		0.20	0.026	ppb v/v			10/30/14 16:54	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			10/30/14 16:54	1
Tetrahydrofuran	ND		0.40	0.025	ppb v/v			10/30/14 16:54	1
Toluene	ND		0.12	0.12	ppb v/v			10/30/14 16:54	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			10/30/14 16:54	1
trans-1,3-Dichloropropene	ND		0.080	0.019	ppb v/v			10/30/14 16:54	1
Trichloroethene	ND		0.040	0.014	ppb v/v			10/30/14 16:54	1
Trichlorofluoromethane	ND		0.080	0.010	ppb v/v			10/30/14 16:54	1
Vinyl chloride	ND		0.080	0.029	ppb v/v			10/30/14 16:54	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			10/30/14 16:54	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			10/30/14 16:54	1
1,1,2,2-Tetrachloroethane	ND		0.55	0.16	ug/m3			10/30/14 16:54	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			10/30/14 16:54	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			10/30/14 16:54	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			10/30/14 16:54	1
1,2,4-Trichlorobenzene	ND		3.0	0.29	ug/m3			10/30/14 16:54	1
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			10/30/14 16:54	1
1,2-Dibromoethane (EDB)	ND		0.61	0.14	ug/m3			10/30/14 16:54	1
1,2-Dichlorobenzene	ND		0.48	0.17	ug/m3			10/30/14 16:54	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			10/30/14 16:54	1
1,2-Dichloroethene, Total	ND		0.63	0.079	ug/m3			10/30/14 16:54	1
1,2-Dichloropropane	ND		0.37	0.097	ug/m3			10/30/14 16:54	1
1,2-Dichlorotetrafluoroethane	ND		0.56	0.091	ug/m3			10/30/14 16:54	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			10/30/14 16:54	1
1,3-Butadiene	ND		0.35	0.055	ug/m3			10/30/14 16:54	1
1,3-Dichlorobenzene	ND		0.48	0.16	ug/m3			10/30/14 16:54	1
1,4-Dichlorobenzene	ND		0.48	0.16	ug/m3			10/30/14 16:54	1
1,4-Dioxane	ND		0.72	0.12	ug/m3			10/30/14 16:54	1
2,2,4-Trimethylpentane	ND		0.93	0.075	ug/m3			10/30/14 16:54	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-1876/7
Matrix: Air
Analysis Batch: 1876

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chlorotoluene	ND		0.83	0.13	ug/m3			10/30/14 16:54	1
3-Chloropropene	ND		0.25	0.059	ug/m3			10/30/14 16:54	1
4-Ethyltoluene	ND		0.79	0.13	ug/m3			10/30/14 16:54	1
4-Isopropyltoluene	ND		0.44	0.13	ug/m3			10/30/14 16:54	1
Acetone	ND		4.8	1.3	ug/m3			10/30/14 16:54	1
Benzene	ND		0.26	0.073	ug/m3			10/30/14 16:54	1
Benzyl chloride	ND		0.83	0.16	ug/m3			10/30/14 16:54	1
Bromodichloromethane	ND		0.54	0.12	ug/m3			10/30/14 16:54	1
Bromoethene(Vinyl Bromide)	ND		0.35	0.061	ug/m3			10/30/14 16:54	1
Bromoform	ND		0.83	0.20	ug/m3			10/30/14 16:54	1
Bromomethane	ND		0.31	0.050	ug/m3			10/30/14 16:54	1
Carbon disulfide	0.231	J	0.62	0.037	ug/m3			10/30/14 16:54	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			10/30/14 16:54	1
Chlorobenzene	ND		0.37	0.092	ug/m3			10/30/14 16:54	1
Chloroethane	ND		0.21	0.037	ug/m3			10/30/14 16:54	1
Chloroform	ND		0.39	0.073	ug/m3			10/30/14 16:54	1
Chloromethane	0.140	J	0.41	0.13	ug/m3			10/30/14 16:54	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			10/30/14 16:54	1
cis-1,3-Dichloropropene	ND		0.36	0.13	ug/m3			10/30/14 16:54	1
Cumene	ND		0.79	0.12	ug/m3			10/30/14 16:54	1
Cyclohexane	ND		0.69	0.055	ug/m3			10/30/14 16:54	1
Dibromochloromethane	ND		0.68	0.14	ug/m3			10/30/14 16:54	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			10/30/14 16:54	1
Ethylbenzene	ND		0.35	0.12	ug/m3			10/30/14 16:54	1
Freon 22	ND		0.28	0.053	ug/m3			10/30/14 16:54	1
Freon TF	ND		0.61	0.092	ug/m3			10/30/14 16:54	1
Hexachlorobutadiene	ND		4.3	0.52	ug/m3			10/30/14 16:54	1
Isopropyl alcohol	ND		2.0	0.23	ug/m3			10/30/14 16:54	1
Methyl Butyl Ketone (2-Hexanone)	ND		0.82	0.094	ug/m3			10/30/14 16:54	1
Methyl Ethyl Ketone	ND		1.2	0.24	ug/m3			10/30/14 16:54	1
methyl isobutyl ketone	ND		0.82	0.074	ug/m3			10/30/14 16:54	1
Methyl methacrylate	ND		0.82	0.13	ug/m3			10/30/14 16:54	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			10/30/14 16:54	1
Methylene Chloride	0.643	J	0.69	0.45	ug/m3			10/30/14 16:54	1
m-Xylene & p-Xylene	ND		0.35	0.23	ug/m3			10/30/14 16:54	1
Naphthalene	ND		1.0	0.21	ug/m3			10/30/14 16:54	1
n-Butane	ND		0.38	0.17	ug/m3			10/30/14 16:54	1
n-Butylbenzene	ND		0.88	0.099	ug/m3			10/30/14 16:54	1
n-Heptane	ND		0.82	0.078	ug/m3			10/30/14 16:54	1
n-Hexane	0.0922	J	0.70	0.046	ug/m3			10/30/14 16:54	1
n-Propylbenzene	ND		0.79	0.11	ug/m3			10/30/14 16:54	1
o-Xylene	ND		0.35	0.10	ug/m3			10/30/14 16:54	1
sec-Butylbenzene	ND		0.88	0.14	ug/m3			10/30/14 16:54	1
Styrene	ND		0.34	0.098	ug/m3			10/30/14 16:54	1
tert-Butyl alcohol	ND		2.4	0.045	ug/m3			10/30/14 16:54	1
tert-Butylbenzene	ND		1.1	0.14	ug/m3			10/30/14 16:54	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			10/30/14 16:54	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-1876/7
Matrix: Air
Analysis Batch: 1876

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrahydrofuran	ND		1.2	0.074	ug/m3			10/30/14 16:54	1
Toluene	ND		0.45	0.45	ug/m3			10/30/14 16:54	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			10/30/14 16:54	1
trans-1,3-Dichloropropene	ND		0.36	0.086	ug/m3			10/30/14 16:54	1
Trichloroethene	ND		0.21	0.075	ug/m3			10/30/14 16:54	1
Trichlorofluoromethane	ND		0.45	0.056	ug/m3			10/30/14 16:54	1
Vinyl chloride	ND		0.20	0.074	ug/m3			10/30/14 16:54	1
Xylenes, Total	ND		0.69	0.10	ug/m3			10/30/14 16:54	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*60 - 140*		*10/30/14 16:54*	*1*

Lab Sample ID: LCS 140-1876/1002
Matrix: Air
Analysis Batch: 1876

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	2.00	1.88		ppb v/v		94	70 - 130
1,1,2,2-Tetrachloroethane	2.00	1.80		ppb v/v		90	70 - 130
1,1,2-Trichloroethane	2.00	1.75		ppb v/v		88	70 - 130
1,1-Dichloroethane	2.00	1.97		ppb v/v		98	70 - 130
1,1-Dichloroethene	2.00	2.05		ppb v/v		102	70 - 130
1,2,4-Trichlorobenzene	2.00	1.29		ppb v/v		64	60 - 140
1,2,4-Trimethylbenzene	2.00	1.79		ppb v/v		90	70 - 130
1,2-Dibromoethane (EDB)	2.00	1.66		ppb v/v		83	70 - 130
1,2-Dichlorobenzene	2.00	1.58		ppb v/v		79	70 - 130
1,2-Dichloroethane	2.00	1.92		ppb v/v		96	70 - 130
1,2-Dichloroethene, Total	4.00	3.84		ppb v/v		96	70 - 130
1,2-Dichloropropane	2.00	1.86		ppb v/v		93	70 - 130
1,2-Dichlorotetrafluoroethane	2.00	2.27		ppb v/v		113	60 - 140
1,3,5-Trimethylbenzene	2.00	1.73		ppb v/v		87	70 - 130
1,3-Butadiene	2.00	2.09		ppb v/v		104	60 - 140
1,3-Dichlorobenzene	2.00	1.49		ppb v/v		75	70 - 130
1,4-Dichlorobenzene	2.00	1.51		ppb v/v		76	70 - 130
1,4-Dioxane	2.00	2.09		ppb v/v		104	60 - 140
2,2,4-Trimethylpentane	2.00	1.86		ppb v/v		93	70 - 130
2-Chlorotoluene	2.00	1.65		ppb v/v		82	70 - 130
3-Chloropropene	2.00	1.83		ppb v/v		91	60 - 140
4-Ethyltoluene	2.00	1.80		ppb v/v		90	70 - 130
4-Isopropyltoluene	2.00	1.77		ppb v/v		89	70 - 130
Acetone	6.00	5.54		ppb v/v		92	60 - 140
Benzene	2.00	1.78		ppb v/v		89	70 - 130
Benzyl chloride	2.00	1.63		ppb v/v		81	70 - 130
Bromodichloromethane	2.00	1.88		ppb v/v		94	70 - 130
Bromoethene(Vinyl Bromide)	2.00	2.12		ppb v/v		106	60 - 140
Bromoform	2.00	1.68		ppb v/v		84	60 - 140
Bromomethane	2.00	2.07		ppb v/v		103	70 - 130

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-1876/1002
Matrix: Air
Analysis Batch: 1876

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon disulfide	2.00	2.13		ppb v/v		107	70 - 130
Carbon tetrachloride	2.00	2.06		ppb v/v		103	70 - 130
Chlorobenzene	2.00	1.66		ppb v/v		83	70 - 130
Chloroethane	2.00	2.07		ppb v/v		104	70 - 130
Chloroform	2.00	1.92		ppb v/v		96	70 - 130
Chloromethane	2.00	2.23		ppb v/v		112	60 - 140
cis-1,2-Dichloroethene	2.00	1.87		ppb v/v		94	70 - 130
cis-1,3-Dichloropropene	2.00	1.84		ppb v/v		92	70 - 130
Cumene	2.00	1.75		ppb v/v		87	70 - 130
Cyclohexane	2.00	1.86		ppb v/v		93	70 - 130
Dibromochloromethane	2.00	1.79		ppb v/v		89	70 - 130
Dichlorodifluoromethane	2.00	2.34		ppb v/v		117	60 - 140
Ethylbenzene	2.00	1.75		ppb v/v		87	70 - 130
Freon 22	2.00	2.16		ppb v/v		108	60 - 140
Freon TF	2.00	1.98		ppb v/v		99	70 - 130
Hexachlorobutadiene	2.00	1.44		ppb v/v		72	60 - 140
Isopropyl alcohol	6.00	6.40		ppb v/v		107	60 - 140
Methyl Butyl Ketone (2-Hexanone)	2.00	1.80		ppb v/v		90	60 - 140
Methyl Ethyl Ketone	2.00	1.99		ppb v/v		99	60 - 140
methyl isobutyl ketone	2.00	1.83		ppb v/v		91	60 - 140
Methyl methacrylate	2.00	1.99		ppb v/v		100	60 - 140
Methyl tert-butyl ether	2.00	2.04		ppb v/v		102	60 - 140
Methylene Chloride	2.00	1.87		ppb v/v		94	70 - 130
m-Xylene & p-Xylene	4.00	3.61		ppb v/v		90	70 - 130
Naphthalene	2.00	1.48		ppb v/v		74	40 - 140
n-Butane	2.00	2.07		ppb v/v		103	60 - 140
n-Butylbenzene	2.00	1.75		ppb v/v		88	60 - 140
n-Heptane	2.00	1.81		ppb v/v		90	70 - 130
n-Hexane	2.00	1.89		ppb v/v		94	70 - 130
n-Propylbenzene	2.00	1.73		ppb v/v		86	70 - 130
o-Xylene	2.00	1.77		ppb v/v		89	70 - 130
sec-Butylbenzene	2.00	1.79		ppb v/v		90	70 - 130
Styrene	2.00	1.70		ppb v/v		85	70 - 130
tert-Butyl alcohol	2.00	2.09		ppb v/v		105	60 - 140
tert-Butylbenzene	2.00	1.77		ppb v/v		88	70 - 130
Tetrachloroethene	2.00	1.67		ppb v/v		84	70 - 130
Tetrahydrofuran	2.00	2.08		ppb v/v		104	60 - 140
Toluene	2.00	1.73		ppb v/v		86	70 - 130
trans-1,2-Dichloroethene	2.00	1.97		ppb v/v		99	70 - 130
trans-1,3-Dichloropropene	2.00	1.76		ppb v/v		88	70 - 130
Trichloroethene	2.00	1.72		ppb v/v		86	70 - 130
Trichlorofluoromethane	2.00	2.17		ppb v/v		109	60 - 140
Vinyl chloride	2.00	2.16		ppb v/v		108	70 - 130
Xylenes, Total	6.00	5.38		ppb v/v		90	70 - 130

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-1876/1002
Matrix: Air
Analysis Batch: 1876

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	11	10.3		ug/m3		94	70 - 130
1,1,2,2-Tetrachloroethane	14	12.4		ug/m3		90	70 - 130
1,1,2-Trichloroethane	11	9.56		ug/m3		88	70 - 130
1,1-Dichloroethane	8.1	7.96		ug/m3		98	70 - 130
1,1-Dichloroethene	7.9	8.12		ug/m3		102	70 - 130
1,2,4-Trichlorobenzene	15	9.57		ug/m3		64	60 - 140
1,2,4-Trimethylbenzene	9.8	8.81		ug/m3		90	70 - 130
1,2-Dibromoethane (EDB)	15	12.7		ug/m3		83	70 - 130
1,2-Dichlorobenzene	12	9.52		ug/m3		79	70 - 130
1,2-Dichloroethane	8.1	7.76		ug/m3		96	70 - 130
1,2-Dichloroethene, Total	16	15.2		ug/m3		96	70 - 130
1,2-Dichloropropane	9.2	8.60		ug/m3		93	70 - 130
1,2-Dichlorotetrafluoroethane	14	15.8		ug/m3		113	60 - 140
1,3,5-Trimethylbenzene	9.8	8.53		ug/m3		87	70 - 130
1,3-Butadiene	4.4	4.62		ug/m3		104	60 - 140
1,3-Dichlorobenzene	12	8.98		ug/m3		75	70 - 130
1,4-Dichlorobenzene	12	9.09		ug/m3		76	70 - 130
1,4-Dioxane	7.2	7.53		ug/m3		104	60 - 140
2,2,4-Trimethylpentane	9.3	8.68		ug/m3		93	70 - 130
2-Chlorotoluene	10	8.53		ug/m3		82	70 - 130
3-Chloropropene	6.3	5.72		ug/m3		91	60 - 140
4-Ethyltoluene	9.8	8.86		ug/m3		90	70 - 130
4-Isopropyltoluene	11	9.74		ug/m3		89	70 - 130
Acetone	14	13.2		ug/m3		92	60 - 140
Benzene	6.4	5.69		ug/m3		89	70 - 130
Benzyl chloride	10	8.43		ug/m3		81	70 - 130
Bromodichloromethane	13	12.6		ug/m3		94	70 - 130
Bromoethene(Vinyl Bromide)	8.8	9.27		ug/m3		106	60 - 140
Bromoform	21	17.3		ug/m3		84	60 - 140
Bromomethane	7.8	8.03		ug/m3		103	70 - 130
Carbon disulfide	6.2	6.65		ug/m3		107	70 - 130
Carbon tetrachloride	13	12.9		ug/m3		103	70 - 130
Chlorobenzene	9.2	7.64		ug/m3		83	70 - 130
Chloroethane	5.3	5.47		ug/m3		104	70 - 130
Chloroform	9.8	9.36		ug/m3		96	70 - 130
Chloromethane	4.1	4.62		ug/m3		112	60 - 140
cis-1,2-Dichloroethene	7.9	7.42		ug/m3		94	70 - 130
cis-1,3-Dichloropropene	9.1	8.37		ug/m3		92	70 - 130
Cumene	9.8	8.60		ug/m3		87	70 - 130
Cyclohexane	6.9	6.39		ug/m3		93	70 - 130
Dibromochloromethane	17	15.2		ug/m3		89	70 - 130
Dichlorodifluoromethane	9.9	11.6		ug/m3		117	60 - 140
Ethylbenzene	8.7	7.58		ug/m3		87	70 - 130
Freon 22	7.1	7.64		ug/m3		108	60 - 140
Freon TF	15	15.2		ug/m3		99	70 - 130
Hexachlorobutadiene	21	15.3		ug/m3		72	60 - 140
Isopropyl alcohol	15	15.7		ug/m3		107	60 - 140

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-1876/1002
Matrix: Air
Analysis Batch: 1876

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl Butyl Ketone (2-Hexanone)	8.2	7.39		ug/m3		90	60 - 140
Methyl Ethyl Ketone	5.9	5.87		ug/m3		99	60 - 140
methyl isobutyl ketone	8.2	7.48		ug/m3		91	60 - 140
Methyl methacrylate	8.2	8.15		ug/m3		100	60 - 140
Methyl tert-butyl ether	7.2	7.35		ug/m3		102	60 - 140
Methylene Chloride	7.0	6.51		ug/m3		94	70 - 130
m-Xylene & p-Xylene	17	15.7		ug/m3		90	70 - 130
Naphthalene	10	7.77		ug/m3		74	40 - 140
n-Butane	4.8	4.92		ug/m3		103	60 - 140
n-Butylbenzene	11	9.63		ug/m3		88	60 - 140
n-Heptane	8.2	7.41		ug/m3		90	70 - 130
n-Hexane	7.1	6.66		ug/m3		94	70 - 130
n-Propylbenzene	9.8	8.50		ug/m3		86	70 - 130
o-Xylene	8.7	7.69		ug/m3		89	70 - 130
sec-Butylbenzene	11	9.84		ug/m3		90	70 - 130
Styrene	8.5	7.23		ug/m3		85	70 - 130
tert-Butyl alcohol	6.1	6.34		ug/m3		105	60 - 140
tert-Butylbenzene	11	9.70		ug/m3		88	70 - 130
Tetrachloroethene	14	11.3		ug/m3		84	70 - 130
Tetrahydrofuran	5.9	6.14		ug/m3		104	60 - 140
Toluene	7.5	6.52		ug/m3		86	70 - 130
trans-1,2-Dichloroethene	7.9	7.83		ug/m3		99	70 - 130
trans-1,3-Dichloropropene	9.1	7.98		ug/m3		88	70 - 130
Trichloroethene	11	9.22		ug/m3		86	70 - 130
Trichlorofluoromethane	11	12.2		ug/m3		109	60 - 140
Vinyl chloride	5.1	5.53		ug/m3		108	70 - 130
Xylenes, Total	26	23.4		ug/m3		90	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*60 - 140*

QC Association Summary

Client: AKRF Inc
Project/Site: 77 Commercial Street, Brooklyn, NY

TestAmerica Job ID: 140-2220-1

Air - GC/MS VOA

Analysis Batch: 1876

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-2220-1	SV-1	Total/NA	Air	TO 15 LL	
140-2220-2	SV-2	Total/NA	Air	TO 15 LL	
140-2220-3	SV-7	Total/NA	Air	TO 15 LL	
LCS 140-1876/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	
MB 140-1876/7	Method Blank	Total/NA	Air	TO 15 LL	

Lab Chronicle

Client: AKRF Inc
Project/Site: 77 Commercial Street, Brooklyn, NY

TestAmerica Job ID: 140-2220-1

Client Sample ID: SV-1 — Lab Sample ID: 140-2220-1

Date Collected: 10/24/14 14:45 — **Matrix: Air**
Date Received: 10/27/14 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	52 mL	500 mL	1876	10/30/14 23:45	HMT	TAL KNX
	Instrument ID: MJ									

Client Sample ID: SV-2 — Lab Sample ID: 140-2220-2

Date Collected: 10/24/14 13:20 — **Matrix: Air**
Date Received: 10/27/14 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	50 mL	500 mL	1876	10/31/14 00:40	HMT	TAL KNX
	Instrument ID: MJ									

Client Sample ID: SV-7 — Lab Sample ID: 140-2220-3

Date Collected: 10/24/14 14:55 — **Matrix: Air**
Date Received: 10/27/14 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	50 mL	500 mL	1876	10/31/14 04:16	HMT	TAL KNX
	Instrument ID: MJ									

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Certification Summary

Client: AKRF Inc
Project/Site: 77 Commercial Street, Brooklyn, NY

TestAmerica Job ID: 140-2220-1

Laboratory: TestAmerica Knoxville

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
New York	NELAP	2	10781	03-31-15

The following analytes are included in this report, but are not certified under this certification:

Analysis Method	Prep Method	Matrix	Analyte
TO 15 LL		Air	1,2,4-Trimethylbenzene
TO 15 LL		Air	1,2-Dichlorotetrafluoroethane
TO 15 LL		Air	1,3,5-Trimethylbenzene
TO 15 LL		Air	1,4-Dioxane
TO 15 LL		Air	2-Chlorotoluene
TO 15 LL		Air	3-Chloropropene
TO 15 LL		Air	Acetone
TO 15 LL		Air	Bromodichloromethane
TO 15 LL		Air	Cyclohexane
TO 15 LL		Air	Dibromochloromethane
TO 15 LL		Air	Dichlorodifluoromethane
TO 15 LL		Air	Freon TF
TO 15 LL		Air	Isopropyl alcohol
TO 15 LL		Air	Methyl methacrylate
TO 15 LL		Air	Naphthalene
TO 15 LL		Air	n-Heptane
TO 15 LL		Air	o-Xylene
TO 15 LL		Air	Trichlorofluoromethane

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
TO 15 LL		Air	1,2-Dichloroethene, Total
TO 15 LL		Air	4-Ethyltoluene
TO 15 LL		Air	4-Isopropyltoluene
TO 15 LL		Air	Freon 22
TO 15 LL		Air	Methyl Butyl Ketone (2-Hexanone)
TO 15 LL		Air	n-Butane
TO 15 LL		Air	n-Butylbenzene
TO 15 LL		Air	n-Propylbenzene
TO 15 LL		Air	sec-Butylbenzene
TO 15 LL		Air	tert-Butyl alcohol
TO 15 LL		Air	tert-Butylbenzene
TO 15 LL		Air	Tetrahydrofuran

Method Summary

Client: AKRF Inc
Project/Site: 77 Commercial Street, Brooklyn, NY

TestAmerica Job ID: 140-2220-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: AKRF Inc
Project/Site: 77 Commercial Street, Brooklyn, NY

TestAmerica Job ID: 140-2220-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-2220-1	SV-1	Air	10/24/14 14:45	10/27/14 09:10
140-2220-2	SV-2	Air	10/24/14 13:20	10/27/14 09:10
140-2220-3	SV-7	Air	10/24/14 14:55	10/27/14 09:10

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information
Company: AKRF Inc.
Address: 440 Park Ave S, 7th Fl
City/State/Zip New York, NY 10016
Phone: 631-574-3724
FAX:
Project Name: 77 Commercial St
Site/location: Brooklyn, NY
PO # 12015

Project Manager: Stephen Mulinowski
Phone: 631-574-3724
Site Contact: Mark Jepsen
TAL Contact:

Analysis Turnaround Time
Standard (Specify) X (7days, see quote)
Rush (Specify)

Sampled By: Mark Jepsen

1 of 1 COCs

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
SV-1	10/24/14	12:44	14:45	-30.0	-4.00	10631	09879	X									X		
SV-2		12:30	13:20	-30.0	-3.00	~~10303~~	10273	X									X		
SV-7		12:55	14:55	-30.0	-6.00	10597	10373	X									X		
SV-5		13:25	14:46	-30.2	-0.00	10619	10805	X									X		

Sampled by : Mark Jepsen

140-2220 Chain of Custody

Temperature (Fahrenheit)	Interior	Ambient
Start		
Stop		

Pressure (inches of Hg)	Interior	Ambient
Start		
Stop		

REC. @ AMBIENT
NO CUSTODY SEAL
1 BOX RH 10-27-14
UPS #1Z08395E4459922391
4 CANS / 4 FLOWS

Special Instructions/QC Requirements & Comments:

Canisters Shipped by:	Date/Time: 10/24/14 / 2000	Canisters Received by:
Samples Relinquished by: Mark Jepsen	Date/Time: 10/24/14 1615	Received by: 10/24/14 16:15
Relinquished by:	Date/Time:	Received by: Ryan Henry 10/27/14 0910

Login Sample Receipt Checklist

Client: AKRF Inc

Job Number: 140-2220-1

Login Number: 2220

List Source: TestAmerica Knoxville

List Number: 1

Creator: Dameron, Bryan K

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	N/A	
Cooler Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	N/A	CHECKED IN LAB
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	N/A	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	N/A	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

TestAmerica Knoxville - Air Canister Initial Pressure Check

Gauge ID: G1

Analyst	Date	Sample ID	6 L	1 L	Pressure @ Receipt (-in Hg or +psig)	Time	Comments
DDF	10/27/2014	140-2220-a-1	X		-2.3	1440	
DDF	10/27/2014	140-2220-a-2	X		0	1441	
DDF	10/27/2014	140-2220-a-3	X		-5.1	1442	
DDF	10/27/2014	140-2220-a-4	X		0	1443	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-2131-1
SDG No.:
Client Sample ID: 10124
Lab Sample ID: 140-2131-13
Matrix: Air
Lab File ID: 140-2131-a-13.D
Analysis Method: TO 15 LL
Date Collected: 10/10/2014 14:20
Sample wt/vol: 500(mL)
Date Analyzed: 10/11/2014 20:21
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 1795
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
74-83-9	Bromomethane	ND		0.080	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
67-66-3	Chloroform	ND		0.080	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
74-87-3	Chloromethane	ND	*	0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
75-71-8	Dichlorodifluoromethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
78-93-3	2-Butanone	ND		0.32	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
95-49-8	2-Chlorotoluene	ND		0.16	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
591-78-6	2-Hexanone	ND		0.20	
107-05-1	3-Chloroprene	ND		0.080	
100-41-4	Ethylbenzene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
75-69-4	Trichlorofluoromethane	ND		0.080	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		0.080	
67-64-1	Acetone	ND		2.0	
75-09-2	Methylene Chloride	ND		0.20	
75-05-8	Acetonitrile	ND		0.40	
100-42-5	Styrene	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-2131-1

SDG No.:

Client Sample ID: 10124 | Lab Sample ID: 140-2131-13

Matrix: Air | Lab File ID: 140-2131-a-13.D

Analysis Method: TO 15 LL | Date Collected: 10/10/2014 14:20

Sample wt/vol: 500(mL) | Date Analyzed: 10/11/2014 20:21

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 1795 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
107-02-8	Acrolein	ND		0.16	
107-13-1	Acrylonitrile	ND		0.80	
127-18-4	Tetrachloroethene	ND		0.040	
98-83-9	Alpha Methyl Styrene	ND		0.16	
108-88-3	Toluene	ND		0.12	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
75-27-4	Bromodichloromethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-97-8	Butane	ND	*	0.16	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
75-15-0	Carbon disulfide	ND		0.20	
75-01-4	Vinyl chloride	ND	*	0.040	
95-47-6	o-Xylene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
110-82-7	Cyclohexane	ND		0.20	
124-18-5	n-Decane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
112-40-3	n-Dodecane	ND	*	0.40	
64-17-5	Ethanol	ND		0.80	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
142-82-5	n-Heptane	ND		0.20	
110-54-3	Hexane	ND		0.20	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
91-20-3	Naphthalene	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-2131-1
SDG No.:
Client Sample ID: 10124
Lab Sample ID: 140-2131-13
Matrix: Air
Lab File ID: 140-2131-a-13.D
Analysis Method: TO 15 LL
Date Collected: 10/10/2014 14:20
Sample wt/vol: 500(mL)
Date Analyzed: 10/11/2014 20:21
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 1795
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
104-51-8	n-Butylbenzene	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
111-65-9	n-Octane	ND		0.16	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND	*	0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
98-06-6	tert-Butylbenzene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		0.40	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.080	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.080	
90-12-0	1-Methylnaphthalene	ND		1.0	
3074-71-3	2,3-Dimethylheptane	ND		0.080	
872-55-9	2-Ethylthiophene	ND		0.080	
554-14-3	2-Methylthiophene	ND		0.080	
91-57-6	2-Methylnaphthalene	ND		1.0	
616-44-4	3-Methylthiophene	ND		0.080	
95-15-8	Benzo(b)thiophene	ND		0.16	
110-02-1	Thiophene	ND		0.080	
1678-93-9	Butylcyclohexane	ND		0.080	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-78-4	2-Methylbutane	ND		0.20	
107-83-5	2-Methylpentane	ND		0.080	
75-07-0	Acetaldehyde	ND		4.0	
98-82-8	Cumene	ND		0.16	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	

FORM I TO 15 LL

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-2131-1

SDG No.:

Client Sample ID: 10124 Lab Sample ID: 140-2131-13

Matrix: Air Lab File ID: 140-2131-a-13.D

Analysis Method: TO 15 LL Date Collected: 10/10/2014 14:20

Sample wt/vol: 500(mL) Date Analyzed: 10/11/2014 20:21

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 1795 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-87-6	p-Cymene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
108-87-2	Methylcyclohexane	ND		0.080	
111-84-2	n-Nonane	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\KNXCHROM\ChromData\ME\20141010-1018.b\140-2131-a-13.D
Lims ID: 140-2131-A-13 Lab Sample ID: 140-2131-13
Client ID: 10124
Sample Type: Client
Inject. Date: 11-Oct-2014 20:21:30 ALS Bottle#: 15 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 10124
Misc. Info.: E101114,TO155,,140-0001018-006
Operator ID: 403648 Instrument ID: ME

Method: \\KNXCHROM\ChromData\ME\20141010-1018.b\ME_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 13-Oct-2014 11:10:06 Calib Date: 26-Sep-2014 02:12:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\KNXCHROM\ChromData\ME\20140925-978.b\EI25IC9x.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK049

First Level Reviewer: barlozhetskayaa Date: 13-Oct-2014 11:10:06

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.270	8.281	-0.011	93	262465	4.00	
* 2 1,4-Difluorobenzene	114	10.502	10.508	-0.006	97	1268119	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.323	15.323	0.000	96	1109519	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.973	16.973	0.000	77	925296	4.24	
31 Methylene Chloride	84	5.752	5.757	-0.005	94	5088	0.0804	
62 4-Methyl-2-pentanone (MIBK	43	12.487	12.470	0.017	93	3059	0.0233	

Reagents:

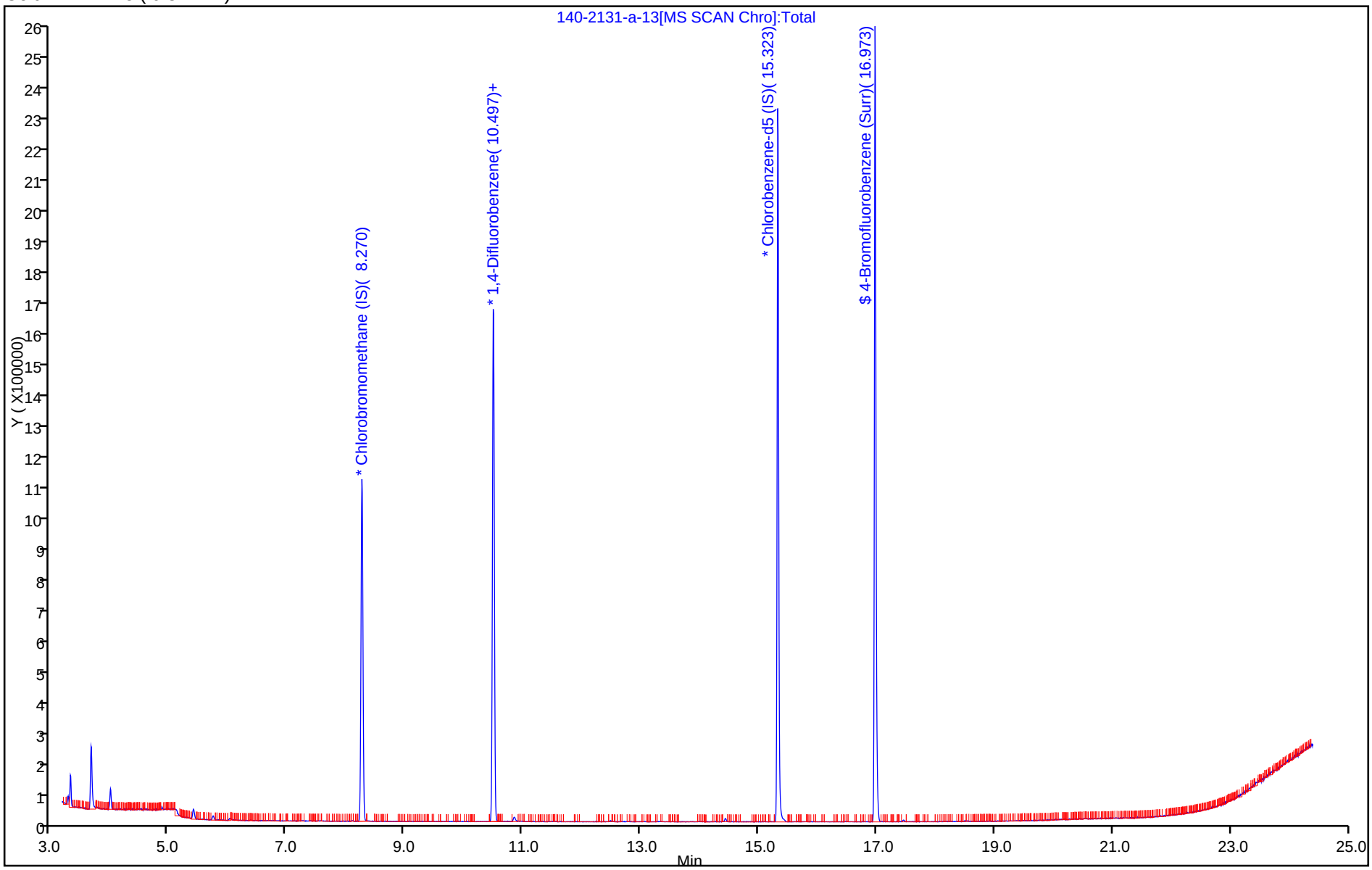
MAissur1_00002 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 13-Oct-2014 11:10:07 Chrom Revision: 2.2 18-Aug-2014 12:17:36

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\ME\20141010-1018.b\140-2131-a-13.D				
Injection Date:	11-Oct-2014 20:21:30	Instrument ID:	ME	Operator ID:	403648
Lims ID:	140-2131-A-13	Lab Sample ID:	140-2131-13	Worklist Smp#:	6
Client ID:	10124				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
Tel: (865)291-3000

TestAmerica Job ID: 140-2234-1
Client Project/Site: 77 Commercial Street, Brooklyn, NY

For:
AKRF Inc
440 Park Avenue South
7th Floor
New York, New York 10016

Attn: Stephen Malinowski

Authorized for release by:
11/7/2014 1:17:01 PM

Jamie McKinney, Senior Project Manager
(865)291-3000
jamie.mckinney@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: AKRF Inc
Project/Site: 77 Commercial Street, Brooklyn, NY

TestAmerica Job ID: 140-2234-1

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
E	Result exceeded calibration range.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 140-2234-1

Laboratory: TestAmerica Knoxville

Narrative

Job Narrative
140-2234-1

Comments
No additional comments.

Receipt
The samples were received on 10/29/2014 10:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice.

Air - GC/MS VOA
Method(s) TO 14A, TO 15 LL, TO-14A, TO-15: EPA methods TO-14A and TO-15 specify the use of humidified “zero air” as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of “zero air” by TestAmerica Knoxville.

Method(s) TO 15 LL, TO-15: The continuing calibration verification (CCV) associated with batch 1876 exhibited % difference of > 30% for the following analyte(s) 1.2.4-trichlorobenzene, however the results were within the LCS acceptance limits. The EPA method requires that all target analytes in the continuing calibration verification standard be within 30% difference from the initial calibration. According to the laboratory standard operating procedure, the continuing calibration is acceptable if it meets the laboratory control sample acceptance criteria.

Method(s) TO 15 LL, TO-15: Can Certification Comments:
Due to the large number of analytes in the CCV, there is a high probability that one or more analytes will recover outside acceptance limits. The laboratory's SOP allows for several analytes to recover outside criteria for this method when analyzing for a full list. The CCV associated with the can cleaning batches had analytes outside control limits. These results have been reported and qualified.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: AKRF Inc
Project/Site: 77 Commercial Street, Brooklyn, NY

TestAmerica Job ID: 140-2234-1

Client Sample ID: SV-5 — Lab Sample ID: 140-2234-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	0.70	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	2.4		0.80	0.25	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.57	J	0.80	0.26	ppb v/v	1		TO 15 LL	Total/NA
2,2,4-Trimethylpentane	0.46	J	2.0	0.16	ppb v/v	1		TO 15 LL	Total/NA
4-Ethyltoluene	0.62	J	1.6	0.26	ppb v/v	1		TO 15 LL	Total/NA
Acetone	210		20	5.4	ppb v/v	1		TO 15 LL	Total/NA
Benzene	1.4		0.80	0.23	ppb v/v	1		TO 15 LL	Total/NA
Carbon disulfide	2.0	B	2.0	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.16	J	0.80	0.15	ppb v/v	1		TO 15 LL	Total/NA
Chloromethane	1.0	J B	2.0	0.64	ppb v/v	1		TO 15 LL	Total/NA
Cyclohexane	2.6		2.0	0.16	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.55	J	0.80	0.27	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	1.6		0.80	0.27	ppb v/v	1		TO 15 LL	Total/NA
Isopropyl alcohol	4.6	J	8.0	0.94	ppb v/v	1		TO 15 LL	Total/NA
Methyl Butyl Ketone (2-Hexanone)	0.44	J	2.0	0.23	ppb v/v	1		TO 15 LL	Total/NA
Methyl Ethyl Ketone	6.2		4.0	0.80	ppb v/v	1		TO 15 LL	Total/NA
methyl isobutyl ketone	0.50	J	2.0	0.18	ppb v/v	1		TO 15 LL	Total/NA
m-Xylene & p-Xylene	7.4		0.80	0.53	ppb v/v	1		TO 15 LL	Total/NA
n-Butane	8.8		1.6	0.73	ppb v/v	1		TO 15 LL	Total/NA
n-Butylbenzene	0.18	J	1.6	0.18	ppb v/v	1		TO 15 LL	Total/NA
n-Heptane	3.4		2.0	0.19	ppb v/v	1		TO 15 LL	Total/NA
n-Hexane	3.6	B	2.0	0.13	ppb v/v	1		TO 15 LL	Total/NA
n-Propylbenzene	0.37	J	1.6	0.22	ppb v/v	1		TO 15 LL	Total/NA
o-Xylene	2.9		0.80	0.24	ppb v/v	1		TO 15 LL	Total/NA
tert-Butyl alcohol	200	E	8.0	0.15	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	4.7		0.80	0.16	ppb v/v	1		TO 15 LL	Total/NA
Toluene	5.2		1.2	1.2	ppb v/v	1		TO 15 LL	Total/NA
Trichlorofluoromethane	0.71	J	0.80	0.10	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	10		1.6	0.24	ppb v/v	1		TO 15 LL	Total/NA
tert-Butyl alcohol - DL	240		36	0.68	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	3.8	J	4.4	0.65	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	12		3.9	1.2	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	2.8	J	3.9	1.3	ug/m3	1		TO 15 LL	Total/NA
2,2,4-Trimethylpentane	2.2	J	9.3	0.75	ug/m3	1		TO 15 LL	Total/NA
4-Ethyltoluene	3.1	J	7.9	1.3	ug/m3	1		TO 15 LL	Total/NA
Acetone	490		48	13	ug/m3	1		TO 15 LL	Total/NA
Benzene	4.3		2.6	0.73	ug/m3	1		TO 15 LL	Total/NA
Carbon disulfide	6.3	B	6.2	0.37	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.80	J	3.9	0.73	ug/m3	1		TO 15 LL	Total/NA
Chloromethane	2.1	J B	4.1	1.3	ug/m3	1		TO 15 LL	Total/NA
Cyclohexane	9.0		6.9	0.55	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.7	J	4.0	1.3	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	7.1		3.5	1.2	ug/m3	1		TO 15 LL	Total/NA
Isopropyl alcohol	11	J	20	2.3	ug/m3	1		TO 15 LL	Total/NA
Methyl Butyl Ketone (2-Hexanone)	1.8	J	8.2	0.94	ug/m3	1		TO 15 LL	Total/NA
Methyl Ethyl Ketone	18		12	2.4	ug/m3	1		TO 15 LL	Total/NA
methyl isobutyl ketone	2.0	J	8.2	0.74	ug/m3	1		TO 15 LL	Total/NA
m-Xylene & p-Xylene	32		3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
n-Butane	21		3.8	1.7	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: AKRF Inc
Project/Site: 77 Commercial Street, Brooklyn, NY

TestAmerica Job ID: 140-2234-1

Client Sample ID: SV-5 (Continued)

Lab Sample ID: 140-2234-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
n-Butylbenzene	1.0	J	8.8	0.99	ug/m3	1		TO 15 LL	Total/NA
n-Heptane	14		8.2	0.78	ug/m3	1		TO 15 LL	Total/NA
n-Hexane	13	B	7.0	0.46	ug/m3	1		TO 15 LL	Total/NA
n-Propylbenzene	1.8	J	7.9	1.1	ug/m3	1		TO 15 LL	Total/NA
o-Xylene	12		3.5	1.0	ug/m3	1		TO 15 LL	Total/NA
tert-Butyl alcohol	600	E	24	0.45	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	32		5.4	1.1	ug/m3	1		TO 15 LL	Total/NA
Toluene	20		4.5	4.5	ug/m3	1		TO 15 LL	Total/NA
Trichlorofluoromethane	4.0	J	4.5	0.56	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	45		6.9	1.0	ug/m3	1		TO 15 LL	Total/NA
tert-Butyl alcohol - DL	720		110	2.1	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: AKRF Inc
Project/Site: 77 Commercial Street, Brooklyn, NY

TestAmerica Job ID: 140-2234-1

Client Sample ID: SV-5

Lab Sample ID: 140-2234-1

Date Collected: 10/28/14 11:42
Matrix: Air
Date Received: 10/29/14 10:15
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**0.70**	**J**	0.80	0.12	ppb v/v			10/31/14 06:59	1
1,1,2,2-Tetrachloroethane	ND		0.80	0.24	ppb v/v			10/31/14 06:59	1
1,1,2-Trichloroethane	ND		0.80	0.21	ppb v/v			10/31/14 06:59	1
1,1-Dichloroethane	ND		0.80	0.10	ppb v/v			10/31/14 06:59	1
1,1-Dichloroethene	ND		0.80	0.14	ppb v/v			10/31/14 06:59	1
1,2,4-Trichlorobenzene	ND		4.0	0.39	ppb v/v			10/31/14 06:59	1
1,2,4-Trimethylbenzene	**2.4**		0.80	0.25	ppb v/v			10/31/14 06:59	1
1,2-Dibromoethane (EDB)	ND		0.80	0.18	ppb v/v			10/31/14 06:59	1
1,2-Dichlorobenzene	ND		0.80	0.28	ppb v/v			10/31/14 06:59	1
1,2-Dichloroethane	ND		0.80	0.19	ppb v/v			10/31/14 06:59	1
1,2-Dichloroethene, Total	ND		1.6	0.20	ppb v/v			10/31/14 06:59	1
1,2-Dichloropropane	ND		0.80	0.21	ppb v/v			10/31/14 06:59	1
1,2-Dichlorotetrafluoroethane	ND		0.80	0.13	ppb v/v			10/31/14 06:59	1
1,3,5-Trimethylbenzene	**0.57**	**J**	0.80	0.26	ppb v/v			10/31/14 06:59	1
1,3-Butadiene	ND		1.6	0.25	ppb v/v			10/31/14 06:59	1
1,3-Dichlorobenzene	ND		0.80	0.26	ppb v/v			10/31/14 06:59	1
1,4-Dichlorobenzene	ND		0.80	0.26	ppb v/v			10/31/14 06:59	1
1,4-Dioxane	ND		2.0	0.32	ppb v/v			10/31/14 06:59	1
2,2,4-Trimethylpentane	**0.46**	**J**	2.0	0.16	ppb v/v			10/31/14 06:59	1
2-Chlorotoluene	ND		1.6	0.25	ppb v/v			10/31/14 06:59	1
3-Chloropropene	ND		0.80	0.19	ppb v/v			10/31/14 06:59	1
4-Ethyltoluene	**0.62**	**J**	1.6	0.26	ppb v/v			10/31/14 06:59	1
4-Isopropyltoluene	ND		0.80	0.23	ppb v/v			10/31/14 06:59	1
Acetone	**210**		20	5.4	ppb v/v			10/31/14 06:59	1
Benzene	**1.4**		0.80	0.23	ppb v/v			10/31/14 06:59	1
Benzyl chloride	ND		1.6	0.31	ppb v/v			10/31/14 06:59	1
Bromodichloromethane	ND		0.80	0.18	ppb v/v			10/31/14 06:59	1
Bromoethene(Vinyl Bromide)	ND		0.80	0.14	ppb v/v			10/31/14 06:59	1
Bromoform	ND		0.80	0.19	ppb v/v			10/31/14 06:59	1
Bromomethane	ND		0.80	0.13	ppb v/v			10/31/14 06:59	1
Carbon disulfide	**2.0**	**B**	2.0	0.12	ppb v/v			10/31/14 06:59	1
Carbon tetrachloride	ND		0.80	0.15	ppb v/v			10/31/14 06:59	1
Chlorobenzene	ND		0.80	0.20	ppb v/v			10/31/14 06:59	1
Chloroethane	ND		0.80	0.14	ppb v/v			10/31/14 06:59	1
Chloroform	**0.16**	**J**	0.80	0.15	ppb v/v			10/31/14 06:59	1
Chloromethane	**1.0**	**J B**	2.0	0.64	ppb v/v			10/31/14 06:59	1
cis-1,2-Dichloroethene	ND		0.80	0.24	ppb v/v			10/31/14 06:59	1
cis-1,3-Dichloropropene	ND		0.80	0.29	ppb v/v			10/31/14 06:59	1
Cumene	ND		1.6	0.24	ppb v/v			10/31/14 06:59	1
Cyclohexane	**2.6**		2.0	0.16	ppb v/v			10/31/14 06:59	1
Dibromochloromethane	ND		0.80	0.17	ppb v/v			10/31/14 06:59	1
Dichlorodifluoromethane	**0.55**	**J**	0.80	0.27	ppb v/v			10/31/14 06:59	1
Ethylbenzene	**1.6**		0.80	0.27	ppb v/v			10/31/14 06:59	1
Freon 22	ND		0.80	0.15	ppb v/v			10/31/14 06:59	1
Freon TF	ND		0.80	0.12	ppb v/v			10/31/14 06:59	1
Hexachlorobutadiene	ND		4.0	0.49	ppb v/v			10/31/14 06:59	1
Isopropyl alcohol	**4.6**	**J**	8.0	0.94	ppb v/v			10/31/14 06:59	1
Methyl Butyl Ketone (2-Hexanone)	**0.44**	**J**	2.0	0.23	ppb v/v			10/31/14 06:59	1

Client: AKRF Inc
Project/Site: 77 Commercial Street, Brooklyn, NY

TestAmerica Job ID: 140-2234-1

Client Sample ID: SV-5

Lab Sample ID: 140-2234-1

Date Collected: 10/28/14 11:42
Matrix: Air
Date Received: 10/29/14 10:15
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Ethyl Ketone	**6.2**		4.0	0.80	ppb v/v			10/31/14 06:59	1
methyl isobutyl ketone	**0.50**	**J**	2.0	0.18	ppb v/v			10/31/14 06:59	1
Methyl methacrylate	ND		2.0	0.32	ppb v/v			10/31/14 06:59	1
Methyl tert-butyl ether	ND		4.0	0.68	ppb v/v			10/31/14 06:59	1
Methylene Chloride	ND		2.0	1.3	ppb v/v			10/31/14 06:59	1
m-Xylene & p-Xylene	**7.4**		0.80	0.53	ppb v/v			10/31/14 06:59	1
Naphthalene	ND		2.0	0.40	ppb v/v			10/31/14 06:59	1
n-Butane	**8.8**		1.6	0.73	ppb v/v			10/31/14 06:59	1
n-Butylbenzene	**0.18**	**J**	1.6	0.18	ppb v/v			10/31/14 06:59	1
n-Heptane	**3.4**		2.0	0.19	ppb v/v			10/31/14 06:59	1
n-Hexane	**3.6**	**B**	2.0	0.13	ppb v/v			10/31/14 06:59	1
n-Propylbenzene	**0.37**	**J**	1.6	0.22	ppb v/v			10/31/14 06:59	1
o-Xylene	**2.9**		0.80	0.24	ppb v/v			10/31/14 06:59	1
sec-Butylbenzene	ND		1.6	0.25	ppb v/v			10/31/14 06:59	1
Styrene	ND		0.80	0.23	ppb v/v			10/31/14 06:59	1
tert-Butyl alcohol	**200**	**E**	8.0	0.15	ppb v/v			10/31/14 06:59	1
tert-Butylbenzene	ND		2.0	0.26	ppb v/v			10/31/14 06:59	1
Tetrachloroethene	**4.7**		0.80	0.16	ppb v/v			10/31/14 06:59	1
Tetrahydrofuran	ND		4.0	0.25	ppb v/v			10/31/14 06:59	1
Toluene	**5.2**		1.2	1.2	ppb v/v			10/31/14 06:59	1
trans-1,2-Dichloroethene	ND		0.80	0.20	ppb v/v			10/31/14 06:59	1
trans-1,3-Dichloropropene	ND		0.80	0.19	ppb v/v			10/31/14 06:59	1
Trichloroethene	ND		0.40	0.14	ppb v/v			10/31/14 06:59	1
Trichlorofluoromethane	**0.71**	**J**	0.80	0.10	ppb v/v			10/31/14 06:59	1
Vinyl chloride	ND		0.80	0.29	ppb v/v			10/31/14 06:59	1
Xylenes, Total	**10**		1.6	0.24	ppb v/v			10/31/14 06:59	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**3.8**	**J**	4.4	0.65	ug/m3			10/31/14 06:59	1
1,1,2,2-Tetrachloroethane	ND		5.5	1.6	ug/m3			10/31/14 06:59	1
1,1,2-Trichloroethane	ND		4.4	1.1	ug/m3			10/31/14 06:59	1
1,1-Dichloroethane	ND		3.2	0.40	ug/m3			10/31/14 06:59	1
1,1-Dichloroethene	ND		3.2	0.56	ug/m3			10/31/14 06:59	1
1,2,4-Trichlorobenzene	ND		30	2.9	ug/m3			10/31/14 06:59	1
1,2,4-Trimethylbenzene	**12**		3.9	1.2	ug/m3			10/31/14 06:59	1
1,2-Dibromoethane (EDB)	ND		6.1	1.4	ug/m3			10/31/14 06:59	1
1,2-Dichlorobenzene	ND		4.8	1.7	ug/m3			10/31/14 06:59	1
1,2-Dichloroethane	ND		3.2	0.77	ug/m3			10/31/14 06:59	1
1,2-Dichloroethene, Total	ND		6.3	0.79	ug/m3			10/31/14 06:59	1
1,2-Dichloropropane	ND		3.7	0.97	ug/m3			10/31/14 06:59	1
1,2-Dichlorotetrafluoroethane	ND		5.6	0.91	ug/m3			10/31/14 06:59	1
1,3,5-Trimethylbenzene	**2.8**	**J**	3.9	1.3	ug/m3			10/31/14 06:59	1
1,3-Butadiene	ND		3.5	0.55	ug/m3			10/31/14 06:59	1
1,3-Dichlorobenzene	ND		4.8	1.6	ug/m3			10/31/14 06:59	1
1,4-Dichlorobenzene	ND		4.8	1.6	ug/m3			10/31/14 06:59	1
1,4-Dioxane	ND		7.2	1.2	ug/m3			10/31/14 06:59	1
2,2,4-Trimethylpentane	**2.2**	**J**	9.3	0.75	ug/m3			10/31/14 06:59	1
2-Chlorotoluene	ND		8.3	1.3	ug/m3			10/31/14 06:59	1
3-Chloropropene	ND		2.5	0.59	ug/m3			10/31/14 06:59	1

Client: AKRF Inc
Project/Site: 77 Commercial Street, Brooklyn, NY

TestAmerica Job ID: 140-2234-1

Client Sample ID: SV-5
Date Collected: 10/28/14 11:42
Date Received: 10/29/14 10:15
Sample Container: Summa Canister 6L

Lab Sample ID: 140-2234-1
Matrix: Air

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Ethyltoluene	3.1	J	7.9	1.3	ug/m3			10/31/14 06:59	1
4-Isopropyltoluene	ND		4.4	1.3	ug/m3			10/31/14 06:59	1
Acetone	490		48	13	ug/m3			10/31/14 06:59	1
Benzene	4.3		2.6	0.73	ug/m3			10/31/14 06:59	1
Benzyl chloride	ND		8.3	1.6	ug/m3			10/31/14 06:59	1
Bromodichloromethane	ND		5.4	1.2	ug/m3			10/31/14 06:59	1
Bromoethene(Vinyl Bromide)	ND		3.5	0.61	ug/m3			10/31/14 06:59	1
Bromoform	ND		8.3	2.0	ug/m3			10/31/14 06:59	1
Bromomethane	ND		3.1	0.50	ug/m3			10/31/14 06:59	1
Carbon disulfide	6.3	B	6.2	0.37	ug/m3			10/31/14 06:59	1
Carbon tetrachloride	ND		5.0	0.94	ug/m3			10/31/14 06:59	1
Chlorobenzene	ND		3.7	0.92	ug/m3			10/31/14 06:59	1
Chloroethane	ND		2.1	0.37	ug/m3			10/31/14 06:59	1
Chloroform	0.80	J	3.9	0.73	ug/m3			10/31/14 06:59	1
Chloromethane	2.1	J B	4.1	1.3	ug/m3			10/31/14 06:59	1
cis-1,2-Dichloroethene	ND		3.2	0.95	ug/m3			10/31/14 06:59	1
cis-1,3-Dichloropropene	ND		3.6	1.3	ug/m3			10/31/14 06:59	1
Cumene	ND		7.9	1.2	ug/m3			10/31/14 06:59	1
Cyclohexane	9.0		6.9	0.55	ug/m3			10/31/14 06:59	1
Dibromochloromethane	ND		6.8	1.4	ug/m3			10/31/14 06:59	1
Dichlorodifluoromethane	2.7	J	4.0	1.3	ug/m3			10/31/14 06:59	1
Ethylbenzene	7.1		3.5	1.2	ug/m3			10/31/14 06:59	1
Freon 22	ND		2.8	0.53	ug/m3			10/31/14 06:59	1
Freon TF	ND		6.1	0.92	ug/m3			10/31/14 06:59	1
Hexachlorobutadiene	ND		43	5.2	ug/m3			10/31/14 06:59	1
Isopropyl alcohol	11	J	20	2.3	ug/m3			10/31/14 06:59	1
Methyl Butyl Ketone (2-Hexanone)	1.8	J	8.2	0.94	ug/m3			10/31/14 06:59	1
Methyl Ethyl Ketone	18		12	2.4	ug/m3			10/31/14 06:59	1
methyl isobutyl ketone	2.0	J	8.2	0.74	ug/m3			10/31/14 06:59	1
Methyl methacrylate	ND		8.2	1.3	ug/m3			10/31/14 06:59	1
Methyl tert-butyl ether	ND		14	2.5	ug/m3			10/31/14 06:59	1
Methylene Chloride	ND		6.9	4.5	ug/m3			10/31/14 06:59	1
m-Xylene & p-Xylene	32		3.5	2.3	ug/m3			10/31/14 06:59	1
Naphthalene	ND		10	2.1	ug/m3			10/31/14 06:59	1
n-Butane	21		3.8	1.7	ug/m3			10/31/14 06:59	1
n-Butylbenzene	1.0	J	8.8	0.99	ug/m3			10/31/14 06:59	1
n-Heptane	14		8.2	0.78	ug/m3			10/31/14 06:59	1
n-Hexane	13	B	7.0	0.46	ug/m3			10/31/14 06:59	1
n-Propylbenzene	1.8	J	7.9	1.1	ug/m3			10/31/14 06:59	1
o-Xylene	12		3.5	1.0	ug/m3			10/31/14 06:59	1
sec-Butylbenzene	ND		8.8	1.4	ug/m3			10/31/14 06:59	1
Styrene	ND		3.4	0.98	ug/m3			10/31/14 06:59	1
tert-Butyl alcohol	600	E	24	0.45	ug/m3			10/31/14 06:59	1
tert-Butylbenzene	ND		11	1.4	ug/m3			10/31/14 06:59	1
Tetrachloroethene	32		5.4	1.1	ug/m3			10/31/14 06:59	1
Tetrahydrofuran	ND		12	0.74	ug/m3			10/31/14 06:59	1
Toluene	20		4.5	4.5	ug/m3			10/31/14 06:59	1
trans-1,2-Dichloroethene	ND		3.2	0.79	ug/m3			10/31/14 06:59	1

Client: AKRF Inc
Project/Site: 77 Commercial Street, Brooklyn, NY

TestAmerica Job ID: 140-2234-1

Client Sample ID: SV-5
Date Collected: 10/28/14 11:42
Date Received: 10/29/14 10:15
Sample Container: Summa Canister 6L

Lab Sample ID: 140-2234-1
Matrix: Air

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		3.6	0.86	ug/m3			10/31/14 06:59	1
Trichloroethene	ND		2.1	0.75	ug/m3			10/31/14 06:59	1
Trichlorofluoromethane	**4.0**	**J**	4.5	0.56	ug/m3			10/31/14 06:59	1
Vinyl chloride	ND		2.0	0.74	ug/m3			10/31/14 06:59	1
Xylenes, Total	**45**		6.9	1.0	ug/m3			10/31/14 06:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*60 - 140*		*10/31/14 06:59*	*1*

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
tert-Butyl alcohol	**240**		36	0.68	ppb v/v			10/31/14 15:56	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
tert-Butyl alcohol	**720**		110	2.1	ug/m3			10/31/14 15:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*60 - 140*		*10/31/14 15:56*	*1*

Surrogate Summary

Client: AKRF Inc
Project/Site: 77 Commercial Street, Brooklyn, NY

TestAmerica Job ID: 140-2234-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Matrix: Air **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	**Client Sample ID**	**BFB (60-140)**							
140-2234-1	SV-5	100							
140-2234-1 - DL	SV-5	99							
LCS 140-1876/1002	Lab Control Sample	106							
LCS 140-1880/1002	Lab Control Sample	104							
MB 140-1876/7	Method Blank	101							
MB 140-1880/4	Method Blank	104							

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Lab Sample ID: MB 140-1876/7
Matrix: Air
Analysis Batch: 1876

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			10/30/14 16:54	1
1,1,2,2-Tetrachloroethane	ND		0.080	0.024	ppb v/v			10/30/14 16:54	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			10/30/14 16:54	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			10/30/14 16:54	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			10/30/14 16:54	1
1,2,4-Trichlorobenzene	ND		0.40	0.039	ppb v/v			10/30/14 16:54	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			10/30/14 16:54	1
1,2-Dibromoethane (EDB)	ND		0.080	0.018	ppb v/v			10/30/14 16:54	1
1,2-Dichlorobenzene	ND		0.080	0.028	ppb v/v			10/30/14 16:54	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			10/30/14 16:54	1
1,2-Dichloroethene, Total	ND		0.16	0.020	ppb v/v			10/30/14 16:54	1
1,2-Dichloropropane	ND		0.080	0.021	ppb v/v			10/30/14 16:54	1
1,2-Dichlorotetrafluoroethane	ND		0.080	0.013	ppb v/v			10/30/14 16:54	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			10/30/14 16:54	1
1,3-Butadiene	ND		0.16	0.025	ppb v/v			10/30/14 16:54	1
1,3-Dichlorobenzene	ND		0.080	0.026	ppb v/v			10/30/14 16:54	1
1,4-Dichlorobenzene	ND		0.080	0.026	ppb v/v			10/30/14 16:54	1
1,4-Dioxane	ND		0.20	0.032	ppb v/v			10/30/14 16:54	1
2,2,4-Trimethylpentane	ND		0.20	0.016	ppb v/v			10/30/14 16:54	1
2-Chlorotoluene	ND		0.16	0.025	ppb v/v			10/30/14 16:54	1
3-Chloropropene	ND		0.080	0.019	ppb v/v			10/30/14 16:54	1
4-Ethyltoluene	ND		0.16	0.026	ppb v/v			10/30/14 16:54	1
4-Isopropyltoluene	ND		0.080	0.023	ppb v/v			10/30/14 16:54	1
Acetone	ND		2.0	0.54	ppb v/v			10/30/14 16:54	1
Benzene	ND		0.080	0.023	ppb v/v			10/30/14 16:54	1
Benzyl chloride	ND		0.16	0.031	ppb v/v			10/30/14 16:54	1
Bromodichloromethane	ND		0.080	0.018	ppb v/v			10/30/14 16:54	1
Bromoethene(Vinyl Bromide)	ND		0.080	0.014	ppb v/v			10/30/14 16:54	1
Bromoform	ND		0.080	0.019	ppb v/v			10/30/14 16:54	1
Bromomethane	ND		0.080	0.013	ppb v/v			10/30/14 16:54	1
Carbon disulfide	0.0743	J	0.20	0.012	ppb v/v			10/30/14 16:54	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			10/30/14 16:54	1
Chlorobenzene	ND		0.080	0.020	ppb v/v			10/30/14 16:54	1
Chloroethane	ND		0.080	0.014	ppb v/v			10/30/14 16:54	1
Chloroform	ND		0.080	0.015	ppb v/v			10/30/14 16:54	1
Chloromethane	0.0676	J	0.20	0.064	ppb v/v			10/30/14 16:54	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			10/30/14 16:54	1
cis-1,3-Dichloropropene	ND		0.080	0.029	ppb v/v			10/30/14 16:54	1
Cumene	ND		0.16	0.024	ppb v/v			10/30/14 16:54	1
Cyclohexane	ND		0.20	0.016	ppb v/v			10/30/14 16:54	1
Dibromochloromethane	ND		0.080	0.017	ppb v/v			10/30/14 16:54	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			10/30/14 16:54	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			10/30/14 16:54	1
Freon 22	ND		0.080	0.015	ppb v/v			10/30/14 16:54	1
Freon TF	ND		0.080	0.012	ppb v/v			10/30/14 16:54	1
Hexachlorobutadiene	ND		0.40	0.049	ppb v/v			10/30/14 16:54	1
Isopropyl alcohol	ND		0.80	0.094	ppb v/v			10/30/14 16:54	1
Methyl Butyl Ketone (2-Hexanone)	ND		0.20	0.023	ppb v/v			10/30/14 16:54	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-1876/7
Matrix: Air
Analysis Batch: 1876

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Ethyl Ketone	ND		0.40	0.080	ppb v/v			10/30/14 16:54	1
methyl isobutyl ketone	ND		0.20	0.018	ppb v/v			10/30/14 16:54	1
Methyl methacrylate	ND		0.20	0.032	ppb v/v			10/30/14 16:54	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			10/30/14 16:54	1
Methylene Chloride	0.185	J	0.20	0.13	ppb v/v			10/30/14 16:54	1
m-Xylene & p-Xylene	ND		0.080	0.053	ppb v/v			10/30/14 16:54	1
Naphthalene	ND		0.20	0.040	ppb v/v			10/30/14 16:54	1
n-Butane	ND		0.16	0.073	ppb v/v			10/30/14 16:54	1
n-Butylbenzene	ND		0.16	0.018	ppb v/v			10/30/14 16:54	1
n-Heptane	ND		0.20	0.019	ppb v/v			10/30/14 16:54	1
n-Hexane	0.0262	J	0.20	0.013	ppb v/v			10/30/14 16:54	1
n-Propylbenzene	ND		0.16	0.022	ppb v/v			10/30/14 16:54	1
o-Xylene	ND		0.080	0.024	ppb v/v			10/30/14 16:54	1
sec-Butylbenzene	ND		0.16	0.025	ppb v/v			10/30/14 16:54	1
Styrene	ND		0.080	0.023	ppb v/v			10/30/14 16:54	1
tert-Butyl alcohol	ND		0.80	0.015	ppb v/v			10/30/14 16:54	1
tert-Butylbenzene	ND		0.20	0.026	ppb v/v			10/30/14 16:54	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			10/30/14 16:54	1
Tetrahydrofuran	ND		0.40	0.025	ppb v/v			10/30/14 16:54	1
Toluene	ND		0.12	0.12	ppb v/v			10/30/14 16:54	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			10/30/14 16:54	1
trans-1,3-Dichloropropene	ND		0.080	0.019	ppb v/v			10/30/14 16:54	1
Trichloroethene	ND		0.040	0.014	ppb v/v			10/30/14 16:54	1
Trichlorofluoromethane	ND		0.080	0.010	ppb v/v			10/30/14 16:54	1
Vinyl chloride	ND		0.080	0.029	ppb v/v			10/30/14 16:54	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			10/30/14 16:54	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			10/30/14 16:54	1
1,1,2,2-Tetrachloroethane	ND		0.55	0.16	ug/m3			10/30/14 16:54	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			10/30/14 16:54	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			10/30/14 16:54	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			10/30/14 16:54	1
1,2,4-Trichlorobenzene	ND		3.0	0.29	ug/m3			10/30/14 16:54	1
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			10/30/14 16:54	1
1,2-Dibromoethane (EDB)	ND		0.61	0.14	ug/m3			10/30/14 16:54	1
1,2-Dichlorobenzene	ND		0.48	0.17	ug/m3			10/30/14 16:54	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			10/30/14 16:54	1
1,2-Dichloroethene, Total	ND		0.63	0.079	ug/m3			10/30/14 16:54	1
1,2-Dichloropropane	ND		0.37	0.097	ug/m3			10/30/14 16:54	1
1,2-Dichlorotetrafluoroethane	ND		0.56	0.091	ug/m3			10/30/14 16:54	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			10/30/14 16:54	1
1,3-Butadiene	ND		0.35	0.055	ug/m3			10/30/14 16:54	1
1,3-Dichlorobenzene	ND		0.48	0.16	ug/m3			10/30/14 16:54	1
1,4-Dichlorobenzene	ND		0.48	0.16	ug/m3			10/30/14 16:54	1
1,4-Dioxane	ND		0.72	0.12	ug/m3			10/30/14 16:54	1
2,2,4-Trimethylpentane	ND		0.93	0.075	ug/m3			10/30/14 16:54	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-1876/7
Matrix: Air
Analysis Batch: 1876

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chlorotoluene	ND		0.83	0.13	ug/m3			10/30/14 16:54	1
3-Chloropropene	ND		0.25	0.059	ug/m3			10/30/14 16:54	1
4-Ethyltoluene	ND		0.79	0.13	ug/m3			10/30/14 16:54	1
4-Isopropyltoluene	ND		0.44	0.13	ug/m3			10/30/14 16:54	1
Acetone	ND		4.8	1.3	ug/m3			10/30/14 16:54	1
Benzene	ND		0.26	0.073	ug/m3			10/30/14 16:54	1
Benzyl chloride	ND		0.83	0.16	ug/m3			10/30/14 16:54	1
Bromodichloromethane	ND		0.54	0.12	ug/m3			10/30/14 16:54	1
Bromoethene(Vinyl Bromide)	ND		0.35	0.061	ug/m3			10/30/14 16:54	1
Bromoform	ND		0.83	0.20	ug/m3			10/30/14 16:54	1
Bromomethane	ND		0.31	0.050	ug/m3			10/30/14 16:54	1
Carbon disulfide	0.231	J	0.62	0.037	ug/m3			10/30/14 16:54	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			10/30/14 16:54	1
Chlorobenzene	ND		0.37	0.092	ug/m3			10/30/14 16:54	1
Chloroethane	ND		0.21	0.037	ug/m3			10/30/14 16:54	1
Chloroform	ND		0.39	0.073	ug/m3			10/30/14 16:54	1
Chloromethane	0.140	J	0.41	0.13	ug/m3			10/30/14 16:54	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			10/30/14 16:54	1
cis-1,3-Dichloropropene	ND		0.36	0.13	ug/m3			10/30/14 16:54	1
Cumene	ND		0.79	0.12	ug/m3			10/30/14 16:54	1
Cyclohexane	ND		0.69	0.055	ug/m3			10/30/14 16:54	1
Dibromochloromethane	ND		0.68	0.14	ug/m3			10/30/14 16:54	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			10/30/14 16:54	1
Ethylbenzene	ND		0.35	0.12	ug/m3			10/30/14 16:54	1
Freon 22	ND		0.28	0.053	ug/m3			10/30/14 16:54	1
Freon TF	ND		0.61	0.092	ug/m3			10/30/14 16:54	1
Hexachlorobutadiene	ND		4.3	0.52	ug/m3			10/30/14 16:54	1
Isopropyl alcohol	ND		2.0	0.23	ug/m3			10/30/14 16:54	1
Methyl Butyl Ketone (2-Hexanone)	ND		0.82	0.094	ug/m3			10/30/14 16:54	1
Methyl Ethyl Ketone	ND		1.2	0.24	ug/m3			10/30/14 16:54	1
methyl isobutyl ketone	ND		0.82	0.074	ug/m3			10/30/14 16:54	1
Methyl methacrylate	ND		0.82	0.13	ug/m3			10/30/14 16:54	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			10/30/14 16:54	1
Methylene Chloride	0.643	J	0.69	0.45	ug/m3			10/30/14 16:54	1
m-Xylene & p-Xylene	ND		0.35	0.23	ug/m3			10/30/14 16:54	1
Naphthalene	ND		1.0	0.21	ug/m3			10/30/14 16:54	1
n-Butane	ND		0.38	0.17	ug/m3			10/30/14 16:54	1
n-Butylbenzene	ND		0.88	0.099	ug/m3			10/30/14 16:54	1
n-Heptane	ND		0.82	0.078	ug/m3			10/30/14 16:54	1
n-Hexane	0.0922	J	0.70	0.046	ug/m3			10/30/14 16:54	1
n-Propylbenzene	ND		0.79	0.11	ug/m3			10/30/14 16:54	1
o-Xylene	ND		0.35	0.10	ug/m3			10/30/14 16:54	1
sec-Butylbenzene	ND		0.88	0.14	ug/m3			10/30/14 16:54	1
Styrene	ND		0.34	0.098	ug/m3			10/30/14 16:54	1
tert-Butyl alcohol	ND		2.4	0.045	ug/m3			10/30/14 16:54	1
tert-Butylbenzene	ND		1.1	0.14	ug/m3			10/30/14 16:54	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			10/30/14 16:54	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-1876/7
Matrix: Air
Analysis Batch: 1876

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrahydrofuran	ND		1.2	0.074	ug/m3			10/30/14 16:54	1
Toluene	ND		0.45	0.45	ug/m3			10/30/14 16:54	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			10/30/14 16:54	1
trans-1,3-Dichloropropene	ND		0.36	0.086	ug/m3			10/30/14 16:54	1
Trichloroethene	ND		0.21	0.075	ug/m3			10/30/14 16:54	1
Trichlorofluoromethane	ND		0.45	0.056	ug/m3			10/30/14 16:54	1
Vinyl chloride	ND		0.20	0.074	ug/m3			10/30/14 16:54	1
Xylenes, Total	ND		0.69	0.10	ug/m3			10/30/14 16:54	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*60 - 140*		*10/30/14 16:54*	*1*

Lab Sample ID: LCS 140-1876/1002
Matrix: Air
Analysis Batch: 1876

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	2.00	1.88		ppb v/v		94	70 - 130
1,1,2,2-Tetrachloroethane	2.00	1.80		ppb v/v		90	70 - 130
1,1,2-Trichloroethane	2.00	1.75		ppb v/v		88	70 - 130
1,1-Dichloroethane	2.00	1.97		ppb v/v		98	70 - 130
1,1-Dichloroethene	2.00	2.05		ppb v/v		102	70 - 130
1,2,4-Trichlorobenzene	2.00	1.29		ppb v/v		64	60 - 140
1,2,4-Trimethylbenzene	2.00	1.79		ppb v/v		90	70 - 130
1,2-Dibromoethane (EDB)	2.00	1.66		ppb v/v		83	70 - 130
1,2-Dichlorobenzene	2.00	1.58		ppb v/v		79	70 - 130
1,2-Dichloroethane	2.00	1.92		ppb v/v		96	70 - 130
1,2-Dichloroethene, Total	4.00	3.84		ppb v/v		96	70 - 130
1,2-Dichloropropane	2.00	1.86		ppb v/v		93	70 - 130
1,2-Dichlorotetrafluoroethane	2.00	2.27		ppb v/v		113	60 - 140
1,3,5-Trimethylbenzene	2.00	1.73		ppb v/v		87	70 - 130
1,3-Butadiene	2.00	2.09		ppb v/v		104	60 - 140
1,3-Dichlorobenzene	2.00	1.49		ppb v/v		75	70 - 130
1,4-Dichlorobenzene	2.00	1.51		ppb v/v		76	70 - 130
1,4-Dioxane	2.00	2.09		ppb v/v		104	60 - 140
2,2,4-Trimethylpentane	2.00	1.86		ppb v/v		93	70 - 130
2-Chlorotoluene	2.00	1.65		ppb v/v		82	70 - 130
3-Chloropropene	2.00	1.83		ppb v/v		91	60 - 140
4-Ethyltoluene	2.00	1.80		ppb v/v		90	70 - 130
4-Isopropyltoluene	2.00	1.77		ppb v/v		89	70 - 130
Acetone	6.00	5.54		ppb v/v		92	60 - 140
Benzene	2.00	1.78		ppb v/v		89	70 - 130
Benzyl chloride	2.00	1.63		ppb v/v		81	70 - 130
Bromodichloromethane	2.00	1.88		ppb v/v		94	70 - 130
Bromoethene(Vinyl Bromide)	2.00	2.12		ppb v/v		106	60 - 140
Bromoform	2.00	1.68		ppb v/v		84	60 - 140
Bromomethane	2.00	2.07		ppb v/v		103	70 - 130

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-1876/1002
Matrix: Air
Analysis Batch: 1876

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon disulfide	2.00	2.13		ppb v/v		107	70 - 130
Carbon tetrachloride	2.00	2.06		ppb v/v		103	70 - 130
Chlorobenzene	2.00	1.66		ppb v/v		83	70 - 130
Chloroethane	2.00	2.07		ppb v/v		104	70 - 130
Chloroform	2.00	1.92		ppb v/v		96	70 - 130
Chloromethane	2.00	2.23		ppb v/v		112	60 - 140
cis-1,2-Dichloroethene	2.00	1.87		ppb v/v		94	70 - 130
cis-1,3-Dichloropropene	2.00	1.84		ppb v/v		92	70 - 130
Cumene	2.00	1.75		ppb v/v		87	70 - 130
Cyclohexane	2.00	1.86		ppb v/v		93	70 - 130
Dibromochloromethane	2.00	1.79		ppb v/v		89	70 - 130
Dichlorodifluoromethane	2.00	2.34		ppb v/v		117	60 - 140
Ethylbenzene	2.00	1.75		ppb v/v		87	70 - 130
Freon 22	2.00	2.16		ppb v/v		108	60 - 140
Freon TF	2.00	1.98		ppb v/v		99	70 - 130
Hexachlorobutadiene	2.00	1.44		ppb v/v		72	60 - 140
Isopropyl alcohol	6.00	6.40		ppb v/v		107	60 - 140
Methyl Butyl Ketone (2-Hexanone)	2.00	1.80		ppb v/v		90	60 - 140
Methyl Ethyl Ketone	2.00	1.99		ppb v/v		99	60 - 140
methyl isobutyl ketone	2.00	1.83		ppb v/v		91	60 - 140
Methyl methacrylate	2.00	1.99		ppb v/v		100	60 - 140
Methyl tert-butyl ether	2.00	2.04		ppb v/v		102	60 - 140
Methylene Chloride	2.00	1.87		ppb v/v		94	70 - 130
m-Xylene & p-Xylene	4.00	3.61		ppb v/v		90	70 - 130
Naphthalene	2.00	1.48		ppb v/v		74	40 - 140
n-Butane	2.00	2.07		ppb v/v		103	60 - 140
n-Butylbenzene	2.00	1.75		ppb v/v		88	60 - 140
n-Heptane	2.00	1.81		ppb v/v		90	70 - 130
n-Hexane	2.00	1.89		ppb v/v		94	70 - 130
n-Propylbenzene	2.00	1.73		ppb v/v		86	70 - 130
o-Xylene	2.00	1.77		ppb v/v		89	70 - 130
sec-Butylbenzene	2.00	1.79		ppb v/v		90	70 - 130
Styrene	2.00	1.70		ppb v/v		85	70 - 130
tert-Butyl alcohol	2.00	2.09		ppb v/v		105	60 - 140
tert-Butylbenzene	2.00	1.77		ppb v/v		88	70 - 130
Tetrachloroethene	2.00	1.67		ppb v/v		84	70 - 130
Tetrahydrofuran	2.00	2.08		ppb v/v		104	60 - 140
Toluene	2.00	1.73		ppb v/v		86	70 - 130
trans-1,2-Dichloroethene	2.00	1.97		ppb v/v		99	70 - 130
trans-1,3-Dichloropropene	2.00	1.76		ppb v/v		88	70 - 130
Trichloroethene	2.00	1.72		ppb v/v		86	70 - 130
Trichlorofluoromethane	2.00	2.17		ppb v/v		109	60 - 140
Vinyl chloride	2.00	2.16		ppb v/v		108	70 - 130
Xylenes, Total	6.00	5.38		ppb v/v		90	70 - 130

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-1876/1002
Matrix: Air
Analysis Batch: 1876

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	11	10.3		ug/m3		94	70 - 130
1,1,2,2-Tetrachloroethane	14	12.4		ug/m3		90	70 - 130
1,1,2-Trichloroethane	11	9.56		ug/m3		88	70 - 130
1,1-Dichloroethane	8.1	7.96		ug/m3		98	70 - 130
1,1-Dichloroethene	7.9	8.12		ug/m3		102	70 - 130
1,2,4-Trichlorobenzene	15	9.57		ug/m3		64	60 - 140
1,2,4-Trimethylbenzene	9.8	8.81		ug/m3		90	70 - 130
1,2-Dibromoethane (EDB)	15	12.7		ug/m3		83	70 - 130
1,2-Dichlorobenzene	12	9.52		ug/m3		79	70 - 130
1,2-Dichloroethane	8.1	7.76		ug/m3		96	70 - 130
1,2-Dichloroethene, Total	16	15.2		ug/m3		96	70 - 130
1,2-Dichloropropane	9.2	8.60		ug/m3		93	70 - 130
1,2-Dichlorotetrafluoroethane	14	15.8		ug/m3		113	60 - 140
1,3,5-Trimethylbenzene	9.8	8.53		ug/m3		87	70 - 130
1,3-Butadiene	4.4	4.62		ug/m3		104	60 - 140
1,3-Dichlorobenzene	12	8.98		ug/m3		75	70 - 130
1,4-Dichlorobenzene	12	9.09		ug/m3		76	70 - 130
1,4-Dioxane	7.2	7.53		ug/m3		104	60 - 140
2,2,4-Trimethylpentane	9.3	8.68		ug/m3		93	70 - 130
2-Chlorotoluene	10	8.53		ug/m3		82	70 - 130
3-Chloropropene	6.3	5.72		ug/m3		91	60 - 140
4-Ethyltoluene	9.8	8.86		ug/m3		90	70 - 130
4-Isopropyltoluene	11	9.74		ug/m3		89	70 - 130
Acetone	14	13.2		ug/m3		92	60 - 140
Benzene	6.4	5.69		ug/m3		89	70 - 130
Benzyl chloride	10	8.43		ug/m3		81	70 - 130
Bromodichloromethane	13	12.6		ug/m3		94	70 - 130
Bromoethene(Vinyl Bromide)	8.8	9.27		ug/m3		106	60 - 140
Bromoform	21	17.3		ug/m3		84	60 - 140
Bromomethane	7.8	8.03		ug/m3		103	70 - 130
Carbon disulfide	6.2	6.65		ug/m3		107	70 - 130
Carbon tetrachloride	13	12.9		ug/m3		103	70 - 130
Chlorobenzene	9.2	7.64		ug/m3		83	70 - 130
Chloroethane	5.3	5.47		ug/m3		104	70 - 130
Chloroform	9.8	9.36		ug/m3		96	70 - 130
Chloromethane	4.1	4.62		ug/m3		112	60 - 140
cis-1,2-Dichloroethene	7.9	7.42		ug/m3		94	70 - 130
cis-1,3-Dichloropropene	9.1	8.37		ug/m3		92	70 - 130
Cumene	9.8	8.60		ug/m3		87	70 - 130
Cyclohexane	6.9	6.39		ug/m3		93	70 - 130
Dibromochloromethane	17	15.2		ug/m3		89	70 - 130
Dichlorodifluoromethane	9.9	11.6		ug/m3		117	60 - 140
Ethylbenzene	8.7	7.58		ug/m3		87	70 - 130
Freon 22	7.1	7.64		ug/m3		108	60 - 140
Freon TF	15	15.2		ug/m3		99	70 - 130
Hexachlorobutadiene	21	15.3		ug/m3		72	60 - 140
Isopropyl alcohol	15	15.7		ug/m3		107	60 - 140

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-1876/1002
Matrix: Air
Analysis Batch: 1876

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl Butyl Ketone (2-Hexanone)	8.2	7.39		ug/m3		90	60 - 140
Methyl Ethyl Ketone	5.9	5.87		ug/m3		99	60 - 140
methyl isobutyl ketone	8.2	7.48		ug/m3		91	60 - 140
Methyl methacrylate	8.2	8.15		ug/m3		100	60 - 140
Methyl tert-butyl ether	7.2	7.35		ug/m3		102	60 - 140
Methylene Chloride	7.0	6.51		ug/m3		94	70 - 130
m-Xylene & p-Xylene	17	15.7		ug/m3		90	70 - 130
Naphthalene	10	7.77		ug/m3		74	40 - 140
n-Butane	4.8	4.92		ug/m3		103	60 - 140
n-Butylbenzene	11	9.63		ug/m3		88	60 - 140
n-Heptane	8.2	7.41		ug/m3		90	70 - 130
n-Hexane	7.1	6.66		ug/m3		94	70 - 130
n-Propylbenzene	9.8	8.50		ug/m3		86	70 - 130
o-Xylene	8.7	7.69		ug/m3		89	70 - 130
sec-Butylbenzene	11	9.84		ug/m3		90	70 - 130
Styrene	8.5	7.23		ug/m3		85	70 - 130
tert-Butyl alcohol	6.1	6.34		ug/m3		105	60 - 140
tert-Butylbenzene	11	9.70		ug/m3		88	70 - 130
Tetrachloroethene	14	11.3		ug/m3		84	70 - 130
Tetrahydrofuran	5.9	6.14		ug/m3		104	60 - 140
Toluene	7.5	6.52		ug/m3		86	70 - 130
trans-1,2-Dichloroethene	7.9	7.83		ug/m3		99	70 - 130
trans-1,3-Dichloropropene	9.1	7.98		ug/m3		88	70 - 130
Trichloroethene	11	9.22		ug/m3		86	70 - 130
Trichlorofluoromethane	11	12.2		ug/m3		109	60 - 140
Vinyl chloride	5.1	5.53		ug/m3		108	70 - 130
Xylenes, Total	26	23.4		ug/m3		90	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*60 - 140*

Lab Sample ID: MB 140-1880/4
Matrix: Air
Analysis Batch: 1880

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
tert-Butyl alcohol	ND		0.80	0.015	ppb v/v			10/31/14 13:05	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
tert-Butyl alcohol	ND		2.4	0.045	ug/m3			10/31/14 13:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*60 - 140*		*10/31/14 13:05*	*1*

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-1880/1002
Matrix: Air
Analysis Batch: 1880

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
tert-Butyl alcohol			5.00	4.09		ppb v/v		82	60 - 140		

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
tert-Butyl alcohol			15	12.4		ug/m3		82	60 - 140		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*60 - 140*

QC Association Summary

Client: AKRF Inc
Project/Site: 77 Commercial Street, Brooklyn, NY

TestAmerica Job ID: 140-2234-1

Air - GC/MS VOA

Analysis Batch: 1876

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-2234-1	SV-5	Total/NA	Air	TO 15 LL	
LCS 140-1876/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	
MB 140-1876/7	Method Blank	Total/NA	Air	TO 15 LL	

Analysis Batch: 1880

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-2234-1 - DL	SV-5	Total/NA	Air	TO 15 LL	
LCS 140-1880/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	
MB 140-1880/4	Method Blank	Total/NA	Air	TO 15 LL	

Lab Chronicle

Client: AKRF Inc
Project/Site: 77 Commercial Street, Brooklyn, NY

TestAmerica Job ID: 140-2234-1

Client Sample ID: SV-5

Lab Sample ID: 140-2234-1

Date Collected: 10/28/14 11:42

Matrix: Air

Date Received: 10/29/14 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL	DL	1	11 mL	500 mL	1880	10/31/14 15:56	AFB	TAL KNX
	Instrument ID: MG									
Total/NA	Analysis	TO 15 LL		1	50 mL	500 mL	1876	10/31/14 06:59	HMT	TAL KNX
	Instrument ID: MJ									

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Certification Summary

Client: AKRF Inc
Project/Site: 77 Commercial Street, Brooklyn, NY

TestAmerica Job ID: 140-2234-1

Laboratory: TestAmerica Knoxville

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
New York	NELAP	2	10781	03-31-15

The following analytes are included in this report, but are not certified under this certification:

Analysis Method	Prep Method	Matrix	Analyte
TO 15 LL		Air	1,2,4-Trimethylbenzene
TO 15 LL		Air	1,2-Dichlorotetrafluoroethane
TO 15 LL		Air	1,3,5-Trimethylbenzene
TO 15 LL		Air	1,4-Dioxane
TO 15 LL		Air	2-Chlorotoluene
TO 15 LL		Air	3-Chloropropene
TO 15 LL		Air	Acetone
TO 15 LL		Air	Bromodichloromethane
TO 15 LL		Air	Cyclohexane
TO 15 LL		Air	Dibromochloromethane
TO 15 LL		Air	Dichlorodifluoromethane
TO 15 LL		Air	Freon TF
TO 15 LL		Air	Isopropyl alcohol
TO 15 LL		Air	Methyl methacrylate
TO 15 LL		Air	Naphthalene
TO 15 LL		Air	n-Heptane
TO 15 LL		Air	o-Xylene
TO 15 LL		Air	Trichlorofluoromethane

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
TO 15 LL		Air	1,2-Dichloroethene, Total
TO 15 LL		Air	4-Ethyltoluene
TO 15 LL		Air	4-Isopropyltoluene
TO 15 LL		Air	Freon 22
TO 15 LL		Air	Methyl Butyl Ketone (2-Hexanone)
TO 15 LL		Air	n-Butane
TO 15 LL		Air	n-Butylbenzene
TO 15 LL		Air	n-Propylbenzene
TO 15 LL		Air	sec-Butylbenzene
TO 15 LL		Air	tert-Butyl alcohol
TO 15 LL		Air	tert-Butylbenzene
TO 15 LL		Air	Tetrahydrofuran

Method Summary

Client: AKRF Inc
Project/Site: 77 Commercial Street, Brooklyn, NY

TestAmerica Job ID: 140-2234-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: AKRF Inc
Project/Site: 77 Commercial Street, Brooklyn, NY

TestAmerica Job ID: 140-2234-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-2234-1	SV-5	Air	10/28/14 11:42	10/29/14 10:15

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information
Company: AKRF, Inc.
Address: 440 Park Ave S. 7th Fl
City/State/Zip New York, NY. 10016
Phone: 631 - 574 - 3724
FAX:
Project Name: 77 Commercial St.
Site/location: Brooklyn, NY
PO # 12015

Project Manager: Stephen Malinowski
Phone:
Site Contact: mark Jepsen
TAL Contact:

Analysis Turnaround Time
Standard (Specify) X (7days)
Rush (Specify)

Sampled By: MJ

1 of 1 COCs

140-2234 Chain of Custody

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
SV-5	10/28/14	9:51	11:42	-30.0	-6.00	10052	10687	X									X		

Sampled by : Mark Jepsen

Temperature (Fahrenheit)	Interior	Ambient
Start		
Stop		

Pressure (inches of Hg)	Interior	Ambient
Start		
Stop		

Received @ ambient / box
No custody seal, 7 d TAT
UPS NDA, trk# 1Z 083 9SE 01 5979 5985
KL 10/29/14

Special Instructions/QC Requirements & Comments:
See quote for TAT.

Canisters Shipped by:	Date/Time: 10/28/14 / 18:00	Canisters Received by: KL 10/29/14 1015	3 Cans 3 flow 3 CC
Samples Relinquished by: Mark Jepsen	Date/Time: 10/28/14 14:00	Received by: 10/28/14 14:00	
Relinquished by:	Date/Time:	Received by:	

Login Sample Receipt Checklist

Client: AKRF Inc

Job Number: 140-2234-1

Login Number: 2234
List Number: 1
Creator: Wilson, Ken

List Source: TestAmerica Knoxville

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	N/A	
Cooler Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	N/A	This is checked in the lab.
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	N/A	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	N/A	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

TestAmerica Knoxville - Air Canister Initial Pressure Check

Gauge ID: G1

Analyst	Date	Sample ID	6 L	1 L	Pressure @ Receipt (-in Hg or +psig)	Time	Comments
DDF	10/29/2014	140-2234-a-1	X		-4.4	1317	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-2174-1
SDG No.:
Client Sample ID: 10526
Lab Sample ID: 140-2174-1
Matrix: Air
Lab File ID: 140-2174-a-1.D
Analysis Method: TO 15 LL
Date Collected: 10/17/2014 15:20
Sample wt/vol: 500(mL)
Date Analyzed: 10/21/2014 11:58
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 1818
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
74-83-9	Bromomethane	ND		0.080	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
67-66-3	Chloroform	ND		0.080	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
74-87-3	Chloromethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
75-71-8	Dichlorodifluoromethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
78-93-3	2-Butanone	ND		0.32	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
95-49-8	2-Chlorotoluene	ND		0.16	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
591-78-6	2-Hexanone	ND		0.20	
107-05-1	3-Chloroprene	ND		0.080	
100-41-4	Ethylbenzene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
75-69-4	Trichlorofluoromethane	ND		0.080	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		0.080	
67-64-1	Acetone	ND		2.0	
75-09-2	Methylene Chloride	ND		0.20	
75-05-8	Acetonitrile	ND		0.40	
100-42-5	Styrene	ND		0.080	

FORM I TO 15 LL

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-2174-1
SDG No.:
Client Sample ID: 10526
Lab Sample ID: 140-2174-1
Matrix: Air
Lab File ID: 140-2174-a-1.D
Analysis Method: TO 15 LL
Date Collected: 10/17/2014 15:20
Sample wt/vol: 500(mL)
Date Analyzed: 10/21/2014 11:58
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 1818
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
79-34-5	1,1,2,2-Tetrachloroethane	ND	*	0.080	
107-02-8	Acrolein	ND		0.16	
107-13-1	Acrylonitrile	ND		0.80	
127-18-4	Tetrachloroethene	ND		0.040	
98-83-9	Alpha Methyl Styrene	ND		0.16	
108-88-3	Toluene	ND		0.12	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
75-27-4	Bromodichloromethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-97-8	Butane	ND		0.16	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
75-15-0	Carbon disulfide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.040	
95-47-6	o-Xylene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
110-82-7	Cyclohexane	ND		0.20	
124-18-5	n-Decane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
112-40-3	n-Dodecane	ND		0.40	
64-17-5	Ethanol	ND		0.80	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
142-82-5	n-Heptane	ND		0.20	
110-54-3	Hexane	ND		0.20	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
91-20-3	Naphthalene	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-2174-1
SDG No.:
Client Sample ID: 10526
Lab Sample ID: 140-2174-1
Matrix: Air
Lab File ID: 140-2174-a-1.D
Analysis Method: TO 15 LL
Date Collected: 10/17/2014 15:20
Sample wt/vol: 500(mL)
Date Analyzed: 10/21/2014 11:58
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 1818
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
104-51-8	n-Butylbenzene	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
111-65-9	n-Octane	ND		0.16	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
98-06-6	tert-Butylbenzene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		0.40	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.080	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.080	
90-12-0	1-Methylnaphthalene	ND		1.0	
3074-71-3	2,3-Dimethylheptane	ND		0.080	
872-55-9	2-Ethylthiophene	ND		0.080	
554-14-3	2-Methylthiophene	ND		0.080	
91-57-6	2-Methylnaphthalene	ND		1.0	
616-44-4	3-Methylthiophene	ND		0.080	
95-15-8	Benzo(b)thiophene	ND		0.16	
110-02-1	Thiophene	ND		0.080	
1678-93-9	Butylcyclohexane	ND		0.080	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-78-4	2-Methylbutane	ND		0.20	
107-83-5	2-Methylpentane	ND		0.080	
75-07-0	Acetaldehyde	ND		4.0	
98-82-8	Cumene	ND		0.16	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	

FORM I TO 15 LL

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-2174-1

SDG No.:

Client Sample ID: 10526 Lab Sample ID: 140-2174-1

Matrix: Air Lab File ID: 140-2174-a-1.D

Analysis Method: TO 15 LL Date Collected: 10/17/2014 15:20

Sample wt/vol: 500(mL) Date Analyzed: 10/21/2014 11:58

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 1818 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-87-6	p-Cymene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
108-87-2	Methylcyclohexane	ND		0.080	
111-84-2	n-Nonane	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\KNXCHROM\ChromData\MJ\20141017-1033.b\140-2174-a-1.D
Lims ID: 140-2174-A-1 Lab Sample ID: 140-2174-1
Client ID: 10526
Sample Type: Client
Inject. Date: 21-Oct-2014 11:58:30 ALS Bottle#: 5 Worklist Smp#: 24
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 10526
Misc. Info.: J102014,TO15,,140-0001033-024
Operator ID: 403648 Instrument ID: MJ

Method: \\KNXCHROM\ChromData\MJ\20141017-1033.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 21-Oct-2014 12:45:10 Calib Date: 01-Jul-2014 23:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\KNXCHROM\ChromData\MJ\20140701-793.b\ic l9.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK016

First Level Reviewer: tajh Date: 21-Oct-2014 12:45:10

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.115	9.118	-0.003	92	383085	4.00	
* 2 1,4-Difluorobenzene	114	11.278	11.281	-0.003	96	1781608	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.985	15.988	-0.003	90	1552291	4.00	
$ 5 4-Bromofluorobenzene (Surr	95	17.620	17.623	-0.003	82	1119592	3.92	
31 Methylene Chloride	84	6.571	6.574	-0.003	93	7679	0.0670	

Reagents:

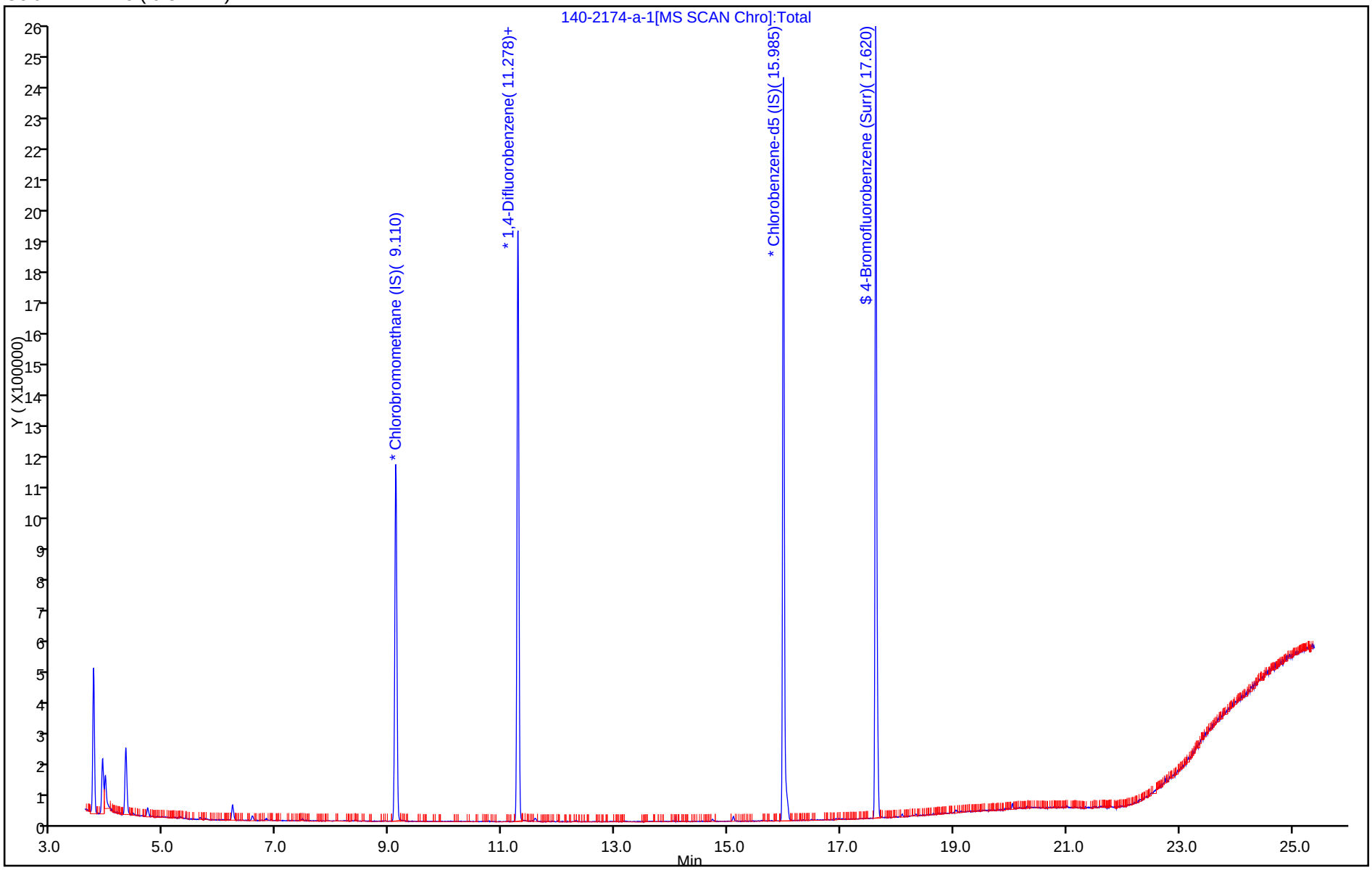
MAissur1_00002 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 21-Oct-2014 12:45:11 Chrom Revision: 2.2 18-Aug-2014 12:17:36

TestAmerica Knoxville

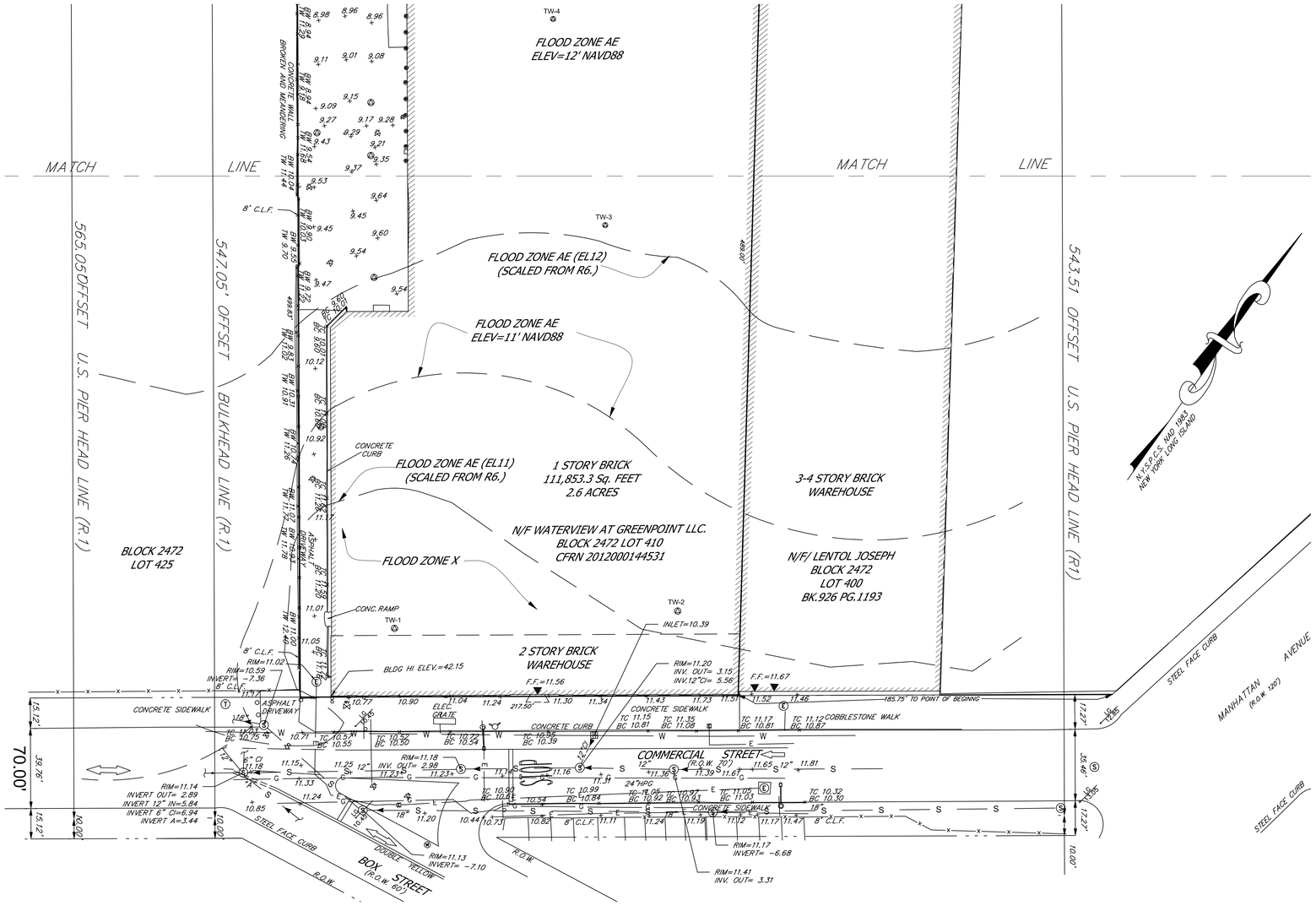
Data File:	\\KNXCHROM\ChromData\MJ\20141017-1033.b\140-2174-a-1.D				
Injection Date:	21-Oct-2014 11:58:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	140-2174-A-1	Lab Sample ID:	140-2174-1	Worklist Smp#:	24
Client ID:	10526				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

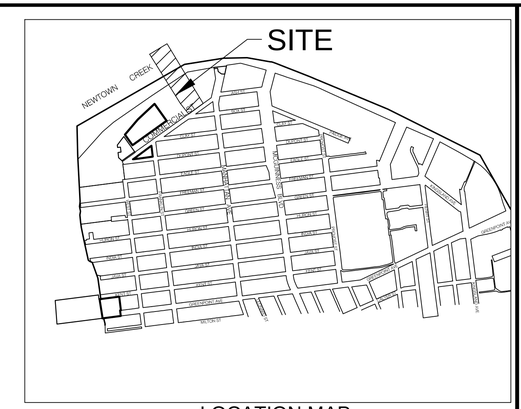
Column: RTX-5 (0.32 mm)



APPENDIX J

HYDROGRAPHIC, TOPOGRAPHIC AND BOUNDARY SURVEY





LOCATION MAP

SCALE: 1"=1000'

LEGEND

- PROPERTY LINE
- ADJOINING PROPERTY LINE
- CONTOUR LINE
- INDEX CONTOUR LINE
- TRAFFIC PAINT
- EDGE OF PAVEMENT
- BULKHEAD LINE
- U.S. PIERHEAD LINE
- CHAIN LINK FENCE
- CURB LINE
- EDGE OF CONCRETE
- OHW — OVERHEAD WIRES
- E — UNDERGROUND ELECTRIC LINE
- FW — UNDERGROUND FIRE WATER LINE
- G — UNDERGROUND GAS LINE
- S — UNDERGROUND SANITARY SEWER
- UNDERGROUND STORM PIPE
- W — UNDERGROUND WATER LINE
- FLOOD ZONING AE
- STRUCTURE
- 123.10 TC 123.10 BC 123.10 TW 123.10 BW 123.10 — SPOT EL./TOP-BOT. CURB/TOP-BOT. WALL
- UTILITY POLE
- CATCH BASIN
- MANHOLE
- MANHOLE (DRAINAGE)
- MANHOLE (ELECTRIC)
- MANHOLE (SANITARY SEWER)
- MANHOLE (TELEPHONE)
- MANHOLE (WATER)
- GAS VALVE
- WATER VALVE
- UNKNOWN VALVE
- HYDRANT
- SIGN
- TRAFFIC DIRECTION
- CLEANOUT
- MONITERING WELL
- IRON PIPE FOUND
- IRON ROD FOUND
- STREET LIGHT
- BOLLARD
- ELECTRIC BOX
- LEGAL GRADE
- F.O.D. — FULL OF DEBRIS

NOTES:

1. LANDMETRICS ENGINEERING AND LAND SURVEYING P.C., PERFORMED A BOUNDARY, TOPOGRAPHIC & HYDROGRAPHIC SURVEY ON THE ABOVE MENTIONED PARCEL DURING 08/15/14.
2. HORIZONTAL DATUM: N.Y.S.P.C.S. NAD 1983 NY LONG ISLAND 3101.
3. VERTICAL DATUM: N.A.V.D. 88 ESTABLISHED USING RTK/GPS ON 08/15/14.
4. LOCATION OF UNDERGROUND UTILITIES ARE APPROXIMATE. UTILITIES SHOWN ARE QUALITY LEVEL "A, B, C, & D" AS PER CI/ASCE 38-02, "STANDARD GUIDELINE FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA". LOCATIONS AND SIZES ARE BASED ON ABOVE GROUND STRUCTURES THAT WERE VISIBLE & ACCESSIBLE IN THE FIELD AND FROM PLANS AND MAPS LISTED IN THE REFERENCES AVAILABLE AT THE TIME OF THE SURVEY. AVAILABLE AS-BUILT PLANS AND DEPICTION OF SURFACE UTILITY STRUCTURES DOES NOT ENSURE MAPPING OF ALL UNDERGROUND UTILITIES AND STRUCTURES. BEFORE ANY EXCAVATION IS TO BEGIN ALL UNDERGROUND UTILITIES SHOULD BE VERIFIED AS TO THEIR LOCATION, SIZE AND TYPE BY THE PROPER UTILITY COMPANIES. LANDMETRICS ENGINEERING AND LAND SURVEYING P.C. DOES NOT GUARANTEE THE UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED.
5. SUBJECT TO ABOVE AND/OR UNDERGROUND INSTALLATIONS EXISTING OR AS OF RECORD.
6. THIS SURVEY WAS PERFORMED WITHOUT BENEFIT OF AN ABSTRACT OF TITLE AND/OR A TITLE REPORT AND SUBJECT TO ANY FINDINGS EXISTING OR AS OF RECORD.
7. BUILDING DIMENSIONS AND/OR OFFSETS ARE SHOWN FOR REFERENCE ONLY AND ARE NOT TO BE USED FOR CONSTRUCTION OF ANY TYPE.
8. BLOCK AND LOT NUMBERS, STREET NAMES AND R.O.W. WIDTHS AS PER CURRENT TAX MAP INFORMATION.
9. SAID GUARANTEES AND/OR CERTIFICATIONS SHALL RUN ONLY TO THE PERSON FOR WHOM THE SURVEY IS PREPARED AND SUCH GUARANTEES AND/OR CERTIFICATIONS ARE NOT TRANSFERABLE TO ADDITIONAL OR SUBSEQUENT OWNERS.

REFERENCES:

1. A MAP ENTITILED "001 ACCESS SYSTEMS" RECORD DRAWING ON FILE WITH THE OFFICE OF THE BROOKLYN BOROUGH PRESIDENT, CITY OF NEW YORK, UPDATED 08/28/2014.
2. DEED: CRFN 201000144531
3. DEED:BOOK 4752 PAGE 2213
4. DEED:BOOK 926 PAGE 1193
5. TAX MAPS BLOCK 2472, LOTS 350-425.
6. PER NYC LL 96, APPENDIX G OF THE NEW YORK CITY BUILDING CODE WAS AMENDED AS FOLLOWS: "G102.21 PRELIMINARY FLOOD INSURANCE STUDY AND RATE MAPS. UNTIL SUCH TIME THAT THE DEPARTMENT BY RULE ADOPTS REVISED FIS 360497 AND FEMA FIRMS 360497 WITH A FINAL EFFECTIVE DATE LATER THAN MAY 1, 2014, THE FOLLOWING FLOOD HAZARD MAPS AND SUPPORTING DATA ARE ADOPTED AS A REFERENCED STANDARD AND DECLARED A PART OF THIS APPENDIX.1.FEMA PFIS 360497, 2.FEMA PFIRMS 360497."
7. A FEDERAL EMERGENCY MANAGEMENT AGENCY MAP ENTITLED "NATIONAL FLOOD INSURANCE PROGRAM, FLOOD INSURANCE MAP RATE. CITY OF, NEW YORK NEW YORK; BRONX, RICHMOND, NEW YORK, QUEENS AND KINGS COUNTIES. PANEL 202 OF 457. MAP NUMBER 3604970202G." PRELIMINARY DATED DECEMBER 5TH, 2013.

NOTES:

1. LANDMETRICS ENGINEERING AND LAND SURVEYING P.C., PERFORMED A HYDROGRAPHIC SURVEY ON 8/15/2014 USING 23' CAROLINA SKIFF, A TRIMBLE R-8 REAL TIME KINEMATIC GLOBAL POSITIONING SATELLITE SYSTEM, A HYDROLITE-TM SONARMITE 200KHZ ECHO SOUNDER, & PROCESSED WITH HYPACK 2014 AND CARLSON 2014 SOFTWARE.
2. HORIZONTAL DATUM: N.Y.S.P.C.S. NAD 1983 NEW YORK LONG ISLAND 3101.
3. VERTICAL DATUM: N.A.V.D. 88 ESTABLISHED USING RTK/GPS ON 8/15/2014.
4. SUPERVISING HYDROGRAPHER ON DUTY BRIAN J. OSBORNE.

DATUM TABLE

DESCRIPTION	NAVD 88	NOAA MLLW
FEMA 100 YR	AE 12.0'	14.74'
FEMA 100 YR	AE 11.0'	13.74'
MHHW	2.16'	4.90'
MHW	1.82'	4.56'
NAVD '88	0.00'	2.74'
MSL	-0.26'	2.48'
NGVD '29	-1.09'	1.65'
MLW	-2.51'	0.23'
MLLW	-2.74'	0.00'

NOTES:

1. "WATER ELEVATIONS ARE BASED ON NOAA VDATUM V 3.3 "NEW JERSEY/NEW YORK/CONNECTICUT - NORTH NJ, NY HARBOR, WESTERN LONG ISLAND SOUND, VERSION 3 WITH RELEASE OF MAY 9, 2014.
2. ALL ELEVATIONS SHOWN IN FEET.

WARNING - IT IS A VIOLATION OF NEW YORK STATE EDUCATIONAL LAW, SECTION 7209.2, FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR, TO ALTER THIS DOCUMENT IN ANY WAY. IF ALTERED, THE ALTERING PERSON SHALL COMPLY WITH THE REQUIREMENTS OF NEW YORK EDUCATIONAL LAW, SECTION 7209.2

I, DONALD O. WELF, P.L.S. (NYS LS # 050454) THAT THIS MAP WAS PREPARED FROM A FIELD SURVEY PERFORMED UNDER MY DIRECTION DURING SEPTEMBER 2014.

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McLaren ENGINEERING GROUP applied ingenuity
M. G. McLAREN, P.C.
100 Snake Hill Road, West Nyack, NY 10994
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Land Metrics ENGINEERING & LAND SURVEYING, PC
100 Snake Hill Road, West Nyack, NY 10994
A DIVISION OF THE McLAREN ENGINEERING GROUP

NO.	DATE	REVISION	BY

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ONLY COPIES FROM THE ORIGINAL OF THIS SURVEY MARKED WITH AN ORIGINAL OF THE LAND SURVEYOR'S EMBOSSED SEAL SHALL BE CONSIDERED TO BE VALID TRUE COPIES.

PROJECT

HYDROGRAPHIC, TOPOGRAPHIC & BOUNDARY SURVEY OF 77 COMMERCIAL STREET

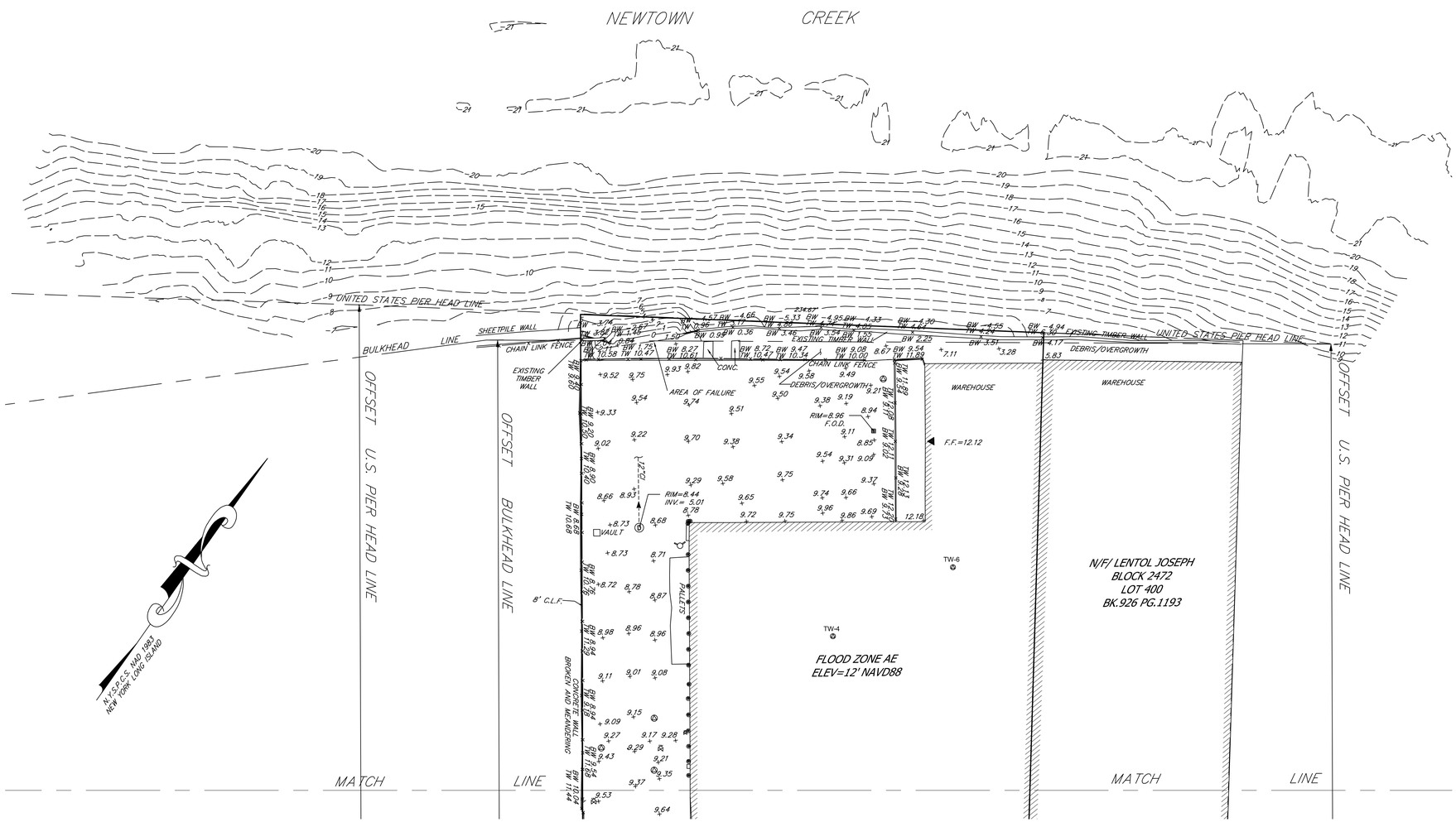
BROOKLYN N.Y.

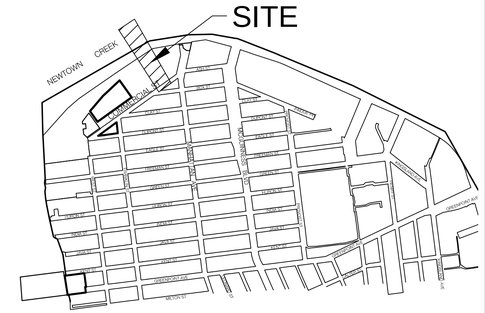
SEAL

DONALD O. WELF P.L.S. 050454

PROJECT NO.	140563
SCALE	1"=30'
DATE	11/20/2014
DRAWN BY	BJO/JED
CHECKED BY	DOV
ORIGINAL DRAWING SIZE	24"x36"

1 OF 2 SHTS





LEGEND

	PROPERTY LINE
	ADJOINING PROPERTY LINE
	CONTOUR LINE
	INDEX CONTOUR LINE
	TRAFFIC PAINT
	EDGE OF PAVEMENT
	BULKHEAD LINE
	U.S. PIERHEAD LINE
	CHAIN LINK FENCE
	CURB LINE
	EDGE OF CONCRETE
OHW	OVERHEAD WIRES
E	UNDERGROUND ELECTRIC LINE
FW	UNDERGROUND FIRE WATER LINE
G	UNDERGROUND GAS LINE
S S	UNDERGROUND SANITARY SEWER
	UNDERGROUND STORM PIPE
W	UNDERGROUND WATER LINE
	FLOOD ZONING AE
	STRUCTURE
123.10 TC 123.10 BC 123.10 TW 123.10 BW 123.10	SPOT EL./TOP-BOT. CURB/TOP-BOT. WALL
	UTILITY POLE
	CATCH BASIN
	MANHOLE
D	MANHOLE (DRAINAGE)
E	MANHOLE (ELECTRIC)
S	MANHOLE (SANITARY SEWER)
T	MANHOLE (TELEPHONE)
W	MANHOLE (WATER)
	GAS VALVE
	WATER VALVE
	UNKNOWN VALVE
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	MONITERING WELL
	IRON PIPE FOUND
	IRON ROD FOUND
	STREET LIGHT
	BOLLARD
	ELECTRIC BOX
	LEGAL GRADE
F.O.D.	FULL OF DEBRIS

NOTES:
1. LANDMETRICS ENGINEERING AND LAND SURVEYING P.C., PERFORMED A BOUNDARY, TOPOGRAPHIC & HYDROGRAPHIC SURVEY ON THE ABOVE MENTIONED PARCEL DURING 08/15/14.
2. HORIZONTAL DATUM: N.Y.S.P.C.S. NAD 1983 NY LONG ISLAND 3101.
3. VERTICAL DATUM: N.A.V.D. 88 ESTABLISHED USING RTK/GPS ON 08/15/14.
4. LOCATION OF UNDERGROUND UTILITIES ARE APPROXIMATE. UTILITIES SHOWN ARE QUALITY LEVEL "A, B, C, & D" AS PER CI/ASCE 38-02, "STANDARD GUIDELINE FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA". LOCATIONS AND SIZES ARE BASED ON ABOVE GROUND STRUCTURES THAT WERE VISIBLE & ACCESSIBLE IN THE FIELD AND FROM PLANS AND MAPS LISTED IN THE REFERENCES AVAILABLE AT THE TIME OF THE SURVEY. AVAILABLE AS-BUILT PLANS AND DEPICTION OF SURFACE UTILITY STRUCTURES DOES NOT ENSURE MAPPING OF ALL UNDERGROUND UTILITIES AND STRUCTURES. BEFORE ANY EXCAVATION IS TO BEGIN ALL UNDERGROUND UTILITIES SHOULD BE VERIFIED AS TO THEIR LOCATION, SIZE AND TYPE BY THE PROPER UTILITY COMPANIES. LANDMETRICS ENGINEERING AND LAND SURVEYING P.C. DOES NOT GUARANTEE THE UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED.
5. SUBJECT TO ABOVE AND/OR UNDERGROUND INSTALLATIONS EXISTING OR AS OF RECORD.
6. THIS SURVEY WAS PERFORMED WITHOUT BENEFIT OF AN ABSTRACT OF TITLE AND/OR A TITLE REPORT AND SUBJECT TO ANY FINDINGS EXISTING OR AS OF RECORD.
7. BUILDING DIMENSIONS AND/OR OFFSETS ARE SHOWN FOR REFERENCE ONLY AND ARE NOT TO BE USED FOR CONSTRUCTION OF ANY TYPE.
8. BLOCK AND LOT NUMBERS, STREET NAMES AND ROW WIDTHS AS PER CURRENT TAX MAP INFORMATION.
9. SAID GUARANTEES AND/OR CERTIFICATIONS SHALL RUN ONLY TO THE PERSON FOR WHOM THE SURVEY IS PREPARED AND SUCH GUARANTEES AND/OR CERTIFICATIONS ARE NOT TRANSFERABLE TO ADDITIONAL OR SUBSEQUENT OWNERS.

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3. DEED:BOOK 4752 PAGE 2213
4. DEED:BOOK 926 PAGE 1193
5. TAX MAPS BLOCK 2472, LOTS 350-425.
6. A FEDERAL EMERGENCY MANAGEMENT AGENCY MAP ENTITLED "NATIONAL FLOOD INSURANCE PROGRAM, FLOOD INSURANCE MAP RATE. CITY OF, NEW YORK NEW YORK; BRONX, RICHMOND, NEW YORK, QUEENS AND KINGS COUNTIES. PANEL 202 OF 457. MAP NUMBER 3604970202G."PRELIMINARY DATED DECEMBER 5TH, 2013.

NOTES:
1. LANDMETRICS ENGINEERING AND LAND SURVEYING P.C., PERFORMED A HYDROGRAPHIC SURVEY ON 8/15/2014 USING 23' CAROLINA SKIFF, A TRIMBLE R-8 REAL TIME KINEMATIC GLOBAL POSITIONING SATELLITE SYSTEM, A HYDROLITE-TM SONARMITE 200KHZ ECHO SOUNDER, & PROCESSED WITH HYPACK 2014 AND CARLSON 2014 SOFTWARE.
2. HORIZONTAL DATUM: N.Y.S.P.C.S. NAD 1983 NEW YORK LONG ISLAND.
3. VERTICAL DATUM: N.A.V.D. 88 ESTABLISHED USING RTK/GPS ON 8/15/2014.
4. SUPERVISING HYDROGRAPHER ON DUTY BRIAN J. OSBORNE.

DATUM TABLE

DESCRIPTION	NAVD 88	NOAA MLLW
FEMA 100 YR	AE 12.0'	14.74'
FEMA 100 YR	AE 11.0'	13.74'
MHHW	2.16'	4.90'
MHW	1.82'	4.56'
NAVD '88	0.00'	2.74'
MSL	-0.26'	2.48'
NGVD '29	-1.09'	1.65'
MLW	-2.51'	0.23'
MLLW	-2.74'	0.00'

NOTES:
1. "WATER ELEVATIONS ARE BASED ON NOAA VDATUM V 3.3 "NEW JERSEY/NEW YORK/CONNECTICUT - NORTH NJ, NY HARBOR, WESTERN LONG ISLAND SOUND, VERSION 3 WITH RELEASE OF MAY 9, 2014.
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McLaren ENGINEERING GROUP
applied ingenuity
M. G. McLAREN, P.C.
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Tel: (845) 353-6400 Fax: (845) 353-6509 www.mgmclaren.com

Land Metrics ENGINEERING & LAND SURVEYING,PC
100 Snake Hill Road, West Nyack, NY 10994
A DIVISION OF THE McLAREN ENGINEERING GROUP

NO.	DATE	REVISION	BY

PROJECT

HYDROGRAPHIC, TOPOGRAPHIC & BOUNDARY SURVEY OF 77 COMMERCIAL STREET

BROOKLYN N.Y.

SEAL

DONALD O. WELE P.L.S. 050454

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ONLY COPIES FROM THE ORIGINAL OF THIS SURVEY MARKED WITH AN ORIGINAL OF THE LAND SURVEYOR'S EMBOSSED SEAL SHALL BE CONSIDERED TO BE VALID TRUE COPIES.

I, DONALD O. WELE, PLS (NYS LS # 050454) THAT THIS MAP WAS PREPARED FROM A FIELD SURVEY PERFORMED UNDER MY DIRECTION DURING SEPTEMBER 2014.

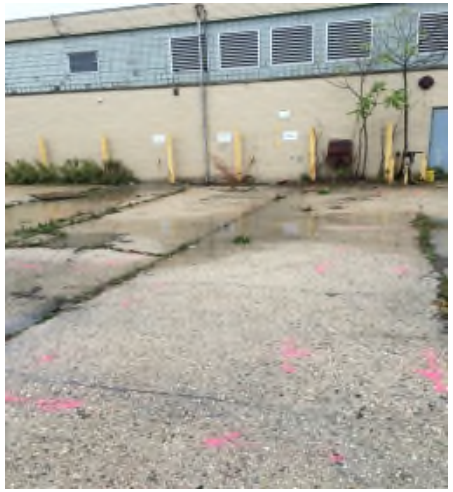
PROJECT NO.	140563
SCALE	1"=30'
DATE	11/20/2014
DRAWN BY	BJO/JED
CHECKED BY	DOV
ORIGINAL DRAWING SIZE	24"x36"

2 OF 2 SHTS

APPENDIX K
SITE PHOTOGRAPHS

Photograph 1. GPR mark-out along the driveway of 77 Commercial Street.

Photograph 2. Middle interior of 77 Commercial Street.



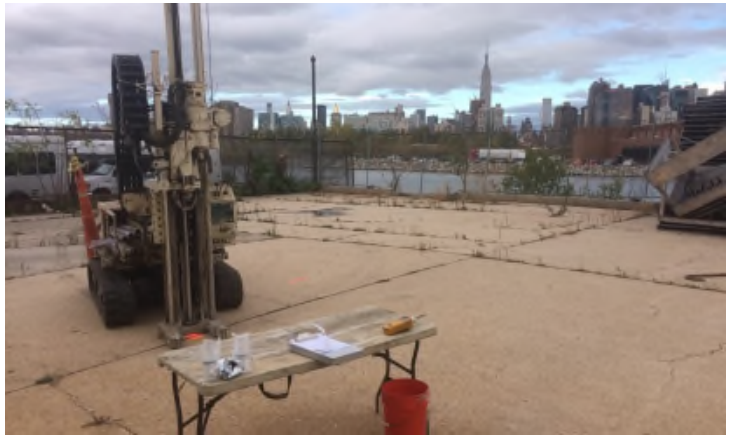
Photograph 3. GPR mark-outs of suspect UST locations in the western exterior yard of the Site.

Photograph 4. Drilling at the location of SB-13.

Photograph 5. Soil cores from boring SB-18.

Photograph 6. Dark colored wood displaying odors in soil boring SB-4.

Photograph 7. Seal testing at SV-4 prior to 2-hr flow controlled soil vapor sampling.



Photograph 8. Drill rig location at SB-5/TW-5.

APPENDIX 3

CITIZEN PARTICIPATION PLAN

CITIZEN PARTICIPATION PLAN

The NYC Office of Environmental Remediation and Waterview at Greenpoint LLC have established this Citizen Participation Plan because the opportunity for citizen participation is an important component of the NYC Voluntary Cleanup Program. This Citizen Participation Plan describes how information about the project will be disseminated to the Community during the remedial process. As part of its obligations under the NYC VCP, Waterview at Greenpoint LLC will maintain a repository for project documents and provide public notice at specified times throughout the remedial program. This Plan also takes into account potential environmental justice concerns in the community that surrounds the project Site. Under this Citizen Participation Plan, project documents and work plans are made available to the public in a timely manner. Public comment on work plans is strongly encouraged during public comment periods. Work plans are not approved by the NYC Office of Environmental Remediation (OER) until public comment periods have expired and all comments are formally reviewed. An explanation of cleanup plans in the form of a public meeting or informational session is available upon request to OER's project manager assigned to this Site, Zachariah Schreiber , who can be contacted about these issues or any others questions, comments or concerns that arise during the remedial process at (212) 788-8841.

Project Contact List: OER has established a Site Contact List for this project to provide public notices in the form of fact sheets to interested members of the Community. Communications will include updates on important information relating to the progress of the cleanup program at the Site as well as to request public comments on the cleanup plan. The Project Contact List includes owners and occupants of adjacent buildings and homes, principal administrators of nearby schools, hospitals and day care centers, the public water supplier that serves the area, established document repositories, the representative Community Board, City Council members, other elected representatives and any local Brownfield Opportunity Area (BOA) grantee organizations. Any member of the public or organization will be added to the Site Contact List on request. A copy of the Site Contact List is maintained by OER's project manager. If you would like to be added to the Project Contact List, contact NYC OER at (212) 788-8841 or by email at brownfields@cityhall.nyc.gov.

Repositories A document repository is maintained online. Internet access to view OER's document repositories is available at public libraries. This document repository is intended to house, for community review, all principal documents generated during the cleanup program including Remedial Investigation plans and reports, Remedial Action work plans and reports, and all public notices and fact sheets produced during the lifetime of the remedial project. The library nearest the Site is:

Branch: Greenpoint Library
Address: 107 Norman Avenue, Brooklyn, New York 11222
Telephone: (718) 349-8504

Hours of Operation:
10:00 AM – 6:00 PM (Monday, Friday)
10:00 AM – 8:00 PM (Tuesday, Wednesday, Thursday)
10:00 AM – 5:00 PM (Saturday)
Closed (Sunday)

Digital Documentation: NYC OER strongly encourages the use of digital documents in repositories as a means of minimizing paper use while also increasing convenience in access and ease of use.

Identify Issues of Public Concern: Members of the community surrounding the subject site have expressed concerns about the subject project, as well as construction and cleanup projects throughout the neighborhood. Concerns have been raised about dust, vibrations and noise from demolition, cleanup and construction; historic uses of the property that may result in specific types of contamination, extended work hours at the site; truck traffic; on-going environmental work, etc. These concerns will be addressed

by the implementation of CAMP during excavation and the implementation of dust suppression techniques to control dust on an as-needed basis. During excavation the soil will be screened for evidence of contamination from potential historic property use or others sources. Any hot spots identified will be segregated for testing and proper off-site disposal and OER will be promptly notified. The project work hours will comply with the DOB work permit. Trucks traveling to and from the Site will be routed to avoid or limit travel through residential streets until a commercial roadway is reached.

Public Notice and Public Comment: Public notice to all members of the Project Contact List is required at three major steps during the performance of the cleanup program (listed below) and at other points that may be required by OER. Notices will include Fact Sheets with descriptive project summaries, updates on recent and upcoming project activities, repository information, and important phone and email contact information. All notices will be prepared by Waterview at Greenpoint LLC, reviewed and approved by OER prior to distribution and mailed by Waterview at Greenpoint LLC. Public comment is solicited in public notices for all work plans developed under the NYC Voluntary Cleanup Program. Final review of all work plans by OER will consider all public comments. Approval will not be granted until the public comment period has been completed.

Citizen Participation Milestones: Public notice and public comment activities occur at several steps during a typical NYC VCP project. See flow chart on the following page, which identifies when during the NYC VCP public notices are issued: These steps include:

- **Public Notice of the availability of the Remedial Investigation Report and Remedial Action Work Plan and a 30-day public comment period on the Remedial Action Work Plan.**

Public notice in the form of a Fact Sheet is sent to all parties listed on the Site Contact List announcing the availability of the Remedial Investigation Report and Remedial Action Work Plan and the initiation of a 30-day public comment period on the Remedial Action Work Plan. The Fact Sheet summarizes the findings of the RIR and provides details of the RAWP. The public comment period will be extended an additional 15 days upon public request. A public meeting or informational session will be conducted by OER upon request.

- **Public Notice announcing the approval of the RAWP and the start of remediation**

Public notice in the form of a Fact Sheet is sent to all parties listed on the Site Contact List announcing the approval of the RAWP and the start of remediation.

- **Public Notice announcing the completion of remediation, designation of Institutional and Engineering Controls and issuance of the Notice of Completion**

Public notice in the form of a Fact Sheet is sent to all parties listed on the Site Contact List announcing the completion of remediation, providing a list of all Institutional and Engineering Controls implemented for to the Site and announcing the issuance of the Notice of Completion.

APPENDIX 4

SUSTAINABILITY STATEMENT

SUSTAINABILITY STATEMENT

This Sustainability Statement documents sustainable activities and green remediation efforts planned under this remedial action.

Reuse of Clean, Recyclable Materials**:** Reuse of clean, locally-derived recyclable materials reduces consumption of non-renewable virgin resources and can provide energy savings and greenhouse gas reduction.

If possible, Waterview at Greenpoint LLC will reuse clean non-virgin materials; the results of which will be quantified and reported in the RAR.

Reduce Consumption of Virgin and Non-Renewable Resources**:** Reduced consumption of virgin and non-renewable resources lowers the overall environmental impact of the project on the region by conserving these resources.

Best efforts will be made to quantify energy efficiencies achieved during the remediation and will be reported in the RAR. Where energy savings cannot be easily quantified, a gross indicator of the amount of energy saved or the means by which energy savings was achieved will be reported.

Reduced Energy Consumption and Promotion of Greater Energy Efficiency**:** Reduced energy consumption lowers greenhouse gas emissions, improves local air quality, lessens in-city power generation requirements, can lower traffic congestion, and provides substantial cost savings.

Best efforts will be made to quantify energy efficiencies achieved during the remediation and will be reported in the Remedial Action Report (RAR). Where energy savings cannot be easily quantified, a gross indicator of the amount of energy saved or the means by which energy savings was achieved will be reported.

Conversion to Clean Fuels**:** Use of clean fuel improves NYC's air quality by reducing harmful emissions.

An estimate of the volume of clean fuels used during remedial activities will be quantified and reported in the RAR.

Recontamination Control**:** Recontamination after cleanup and redevelopment is completed undermines the value of work performed, may result in a property that is less protective of public health or the environment, and may necessitate additional cleanup work later or impede future redevelopment. Recontamination can arise from future releases that occur within the property or by influx of contamination from off-Site.

An estimate of the area of the Site that utilizes recontamination controls under this plan will be reported in the RAR in square feet.

Stormwater Retention: Stormwater retention improves water quality by lowering the rate of combined stormwater and sewer discharges to NYC's sewage treatment plants during periods of precipitation, and reduces the volume of untreated influent to local surface waters.

An estimate of the enhanced stormwater retention capability of the redevelopment project will be included in the RAR.

Linkage with Green Building**:** Green buildings provide a multitude of benefits to the city across a broad range of areas, such as reduction of energy consumption, conservation of resources, and reduction in toxic materials use.

The number of Green Buildings that are associated with this brownfield redevelopment property will be reported in the RAR. The total square footage of green building space created as a function of this brownfield redevelopment will be quantified for residential, commercial and industrial/manufacturing uses.

Paperless Brownfield Cleanup Program: Waterview at Greenpoint LLC is participating in OER's Paperless Brownfield Cleanup Program. Under this program, submission of electronic documents will replace submission of hard copies for the review of project documents, communications and milestone reports.

Low-Energy Project Management Program: Waterview at Greenpoint LLC is participating in OER's low-energy project management program. Under this program, whenever possible, meetings are held using remote communication technologies, such as videoconferencing and teleconferencing to reduce energy consumption and traffic congestion associated with personal transportation.

Trees and Plantings**:** Trees and other plantings provide habitat and add to NYC's environmental quality in a wide variety of ways. Native plant species and native habitat provide optimal support to local fauna, promote local biodiversity, and require less maintenance.

An estimate of the land area that will be vegetated, including the number of trees planted or preserved, will be reported in square feet in the RAR.

APPENDIX 5

SOIL/MATERIALS MANAGEMENT PLAN

1.0 SOIL/MATERIALS MANAGEMENT PLAN

1.1 SOIL SCREENING METHODS

Visual, olfactory and PID soil screening and assessment will be performed under the supervision of a Qualified Environmental Professional and will be reported in the RAR. Soil screening will be performed during invasive work performed during the remedy and development phases prior to issuance of the Notice of Completion.

1.2 STOCKPILE METHODS

Excavated soil from suspected areas of contamination (e.g., hot spots, USTs, drains, etc.) will be stockpiled separately and will be segregated from clean soil and construction materials. Stockpiles will be used only when necessary and will be removed as soon as practicable. While stockpiles are in place, they will be inspected daily, and before and after every storm event. Results of inspections will be recorded in a logbook and maintained at the Site and available for inspection by OER. Excavated soils will be stockpiled on, at minimum, double layers of 8-mil minimum sheeting, will be kept covered at all times with appropriately anchored plastic tarps, and will be routinely inspected. Broken or ripped tarps will be promptly replaced.

All stockpile activities will be compliant with applicable laws and regulations. Soil stockpile areas will be appropriately graded to control run-off in accordance with applicable laws and regulations. Stockpiles of excavated soils and other materials shall be located at least of 50 feet from the property boundaries, where possible. Hay bales or equivalent will surround soil stockpiles except for areas where access by equipment is required. Silt fencing and hay bales will be used as needed near catch basins, surface waters and other discharge points.

1.3 CHARACTERIZATION OF EXCAVATED MATERIALS

Soil/fill or other excavated media that is transported off-site for disposal will be sampled in a manner required by the receiving facility, and in compliance with applicable laws and regulations. Soils proposed for reuse on-Site will be managed as defined in this plan.

1.4 MATERIALS EXCAVATION, LOAD-OUT, AND DEPARTURE

The PE/QEP overseeing the remedial action will:

- Oversee remedial work and the excavation and load-out of excavated material;
- Ensure that there is a party responsible for the safe execution of invasive and other work performed under this work plan;
- Ensure that Site development activities and development-related grading cuts will not interfere with, or otherwise impair or compromise the remedial activities proposed in this RAWP;
- Ensure that the presence of utilities and easements on the Site has been investigated and that any identified risks from work proposed under this plan are properly addressed by appropriate parties;
- Ensure that all loaded outbound trucks are inspected and cleaned if necessary before leaving the Site;
- Ensure that all egress points for truck and equipment transport from the Site will be kept clean of Site-derived materials during Site remediation.

Locations where vehicles exit the Site shall be inspected daily for evidence of soil tracking off premises. Cleaning of the adjacent streets will be performed as needed to maintain a clean condition with respect to Site-derived materials.

Open and uncontrolled mechanical processing of historical fill and contaminated soil on-Site will not be performed without prior OER approval.

1.5 OFF-SITE MATERIALS TRANSPORT

Loaded vehicles leaving the Site will comply with all applicable materials transportation requirements (including appropriate covering, manifests, and placards) in accordance with applicable laws and regulations, including use of licensed haulers in accordance with 6 NYCRR Part 364. If loads contain wet material capable of causing leakage from trucks, truck liners will be used. Queuing of trucks will be performed on-Site, when possible in order to minimize off Site disturbance. Off-Site queuing will be minimized.

Outbound truck transport routes will be established and reported to OER prior to the start of remedial work at the Site. This routing takes into account the following factors: (a) limiting transport through residential areas and past sensitive sites; (b) use of mapped truck routes; (c) minimizing off-Site queuing of trucks entering the facility; (d) limiting total distance to major highways; (e) promoting safety in access to highways; and (f) overall safety in transport. To the extent possible, all trucks loaded with Site materials will travel from the Site using these truck routes. Trucks will not stop or idle in the neighborhood after leaving the project Site.

1.6 MATERIALS DISPOSAL OFF-SITE

The following documentation will be established and reported by the PE/QEP for each disposal destination used in this project to document that the disposal of regulated material exported from the Site conforms with applicable laws and regulations: (1) a letter from the PE/QEP or Enrollee to each disposal facility describing the material to be disposed and requesting written acceptance of the material. This letter will state that material to be disposed is regulated material generated at an environmental remediation Site in Brooklyn, New York under a governmental remediation program. The letter will provide the project identity and the name and phone number of the PE/QEP or Enrollee. The letter will include as an attachment a summary of all chemical data for the material being transported; and (2) a letter from each disposal facility stating it is in receipt of the correspondence (1, above) and is approved to accept the material. These documents will be included in the RAR.

The Remedial Action Report will include an itemized account of the destination of all material removed from the Site during this remedial action. Documentation associated with disposal of all material will include records and approvals for receipt of the material. This information will be presented in the RAR.

All impacted soil/fill or other waste excavated and removed from the Site will be managed as regulated material and will be disposed in accordance with applicable laws and regulations. Historic fill and contaminated soils taken off-Site will be handled as solid waste and will not be disposed at a Part 360-16 Registration Facility (also known as a Soil Recycling Facility).

Waste characterization will be performed for off-Site disposal in a manner required by the receiving facility and in conformance with its applicable permits. Waste characterization sampling and analytical methods, sampling frequency, analytical results and QA/QC will be reported in the RAR. A manifest system for off-Site transportation of exported materials will be employed. Manifest information will be reported in the RAR. Hazardous wastes derived from on-Site will be stored, transported, and disposed of in compliance with applicable laws and regulations.

If disposal of soil/fill from this Site is proposed for unregulated disposal (i.e., clean soil removed for development purposes), including transport to a Part 360-16 Registration Facility, a formal request will be

made for approval by OER with an associated plan compliant with 6NYCRR Part 360-16. This request and plan will include the location, volume and a description of the material to be recycled, including verification that the material is not impacted by site uses and that the material complies with receipt requirements for recycling under 6NYCRR Part 360. This material will be appropriately handled on-Site to prevent mixing with impacted material.

1.7 MATERIALS REUSE ON-SITE

Soil and fill that is derived from the property that meets the Soil Cleanup Objectives (SCOs) established in this plan may be reused on-Site. The SCOs for on-Site reuse are Track 2 Restricted Residential as modified by the Track 4 Site-Specific SCOs listed Section 4.2. 'Reuse on-site' means material that is excavated during the remedy or development, does not leave the property, and is relocated within the same property and on comparable soil/fill material, and addressed pursuant to the NYC VCP agreement subject to Engineering and Institutional Controls. The PE/QEP will ensure that reused materials are segregated from other materials to be exported from the Site and that procedures defined for material reuse in this RAWP are followed.

Organic matter (wood, roots, stumps, etc.) or other waste derived from clearing and grubbing of the Site will not be buried on-Site. Soil or fill excavated from the site for grading or other purposes will not be reused within a cover soil layer or within landscaping berms.

1.8 DEMARCATION

After completion of hotspot removal and any other invasive remedial activities, and prior to backfilling, the top of the residual soil/fill will be defined by one of three methods: (1) placement of a demarcation layer. The demarcation layer will consist of geosynthetic fencing or equivalent material to be placed on the surface of residual soil/fill to provide an observable reference layer. A description or map of the approximate depth of the demarcation layer will be provided in the SMP; or (2) a land survey of the top elevation of residual soil/fill before the placement of cover soils, pavement and associated sub-soils, or other materials or structures or, (3) all materials beneath the approved cover will be considered impacted and subject to site management after the remedy is complete. Demarcation may be established by one or any combination of these three methods. As appropriate, a map showing the method of demarcation for the Site and all associated documentation will be presented in the RAR.

This demarcation will constitute the top of the site management horizon. Materials within this horizon require adherence to special conditions during future invasive activities as defined in the Site Management Plan.

1.9 IMPORT OF BACKFILL SOIL FROM OFF-SITE SOURCES

This Section presents the requirements for imported fill materials to be used below the cover layer and within the clean soil cover layer. All imported soils will meet OER-approved backfill and cover soil quality objectives for this Site. The backfill and cover soil quality objectives are listed in Section 4.2.

A process will be established to evaluate sources of backfill and cover soil to be imported to the Site, and will include an examination of source location, current and historical use(s), and any applicable documentation. Material from industrial sites, spill sites, environmental remediation sites or other potentially contaminated sites will not be imported to the Site.

The following potential sources may be used pending attainment of backfill and cover soil quality objectives:

- Clean soil from construction projects at non-industrial sites in compliance with applicable laws and regulations;

- Clean soil from roadway or other transportation-related projects in compliance with applicable laws and regulations;
- Clean recycled concrete aggregate (RCA) from facilities permitted or registered by the regulations of NYS DEC.

All materials received for import to the Site will be approved by a PE/QEP and will be in compliance with provisions in this RAWP. The RAR will report the source of the fill, evidence that an inspection was performed on the source, chemical sampling results, frequency of testing, and a Site map indicating the locations where backfill or soil cover was placed.

Source Screening and Testing

Inspection of imported fill material will include visual, olfactory and PID screening for evidence of contamination. Materials imported to the Site will be subject to inspection, as follows:

- Trucks with imported fill material will be in compliance with applicable laws and regulations and will enter the Site at designated locations;
- The PE/QEP is responsible to ensure that every truck load of imported material is inspected for evidence of contamination; and
- Fill material will be free of solid waste including pavement materials, debris, stumps, roots, and other organic matter, as well as ashes, oil, perishables or foreign matter.

Composite samples of imported material will be taken at a minimum frequency of one sample for every 500 cubic yards of material. Once it is determined that the fill material meets imported backfill or cover soil chemical requirements and is non-hazardous, and lacks petroleum contamination, the material will be loaded onto trucks for delivery to the Site.

Recycled concrete aggregate (RCA) will be imported from facilities permitted or registered by NYSDEC. Facilities will be identified in the RAR. A PE/QEP is responsible to ensure that the facility is compliant with 6NYCRR Part 360 registration and permitting requirements for the period of acquisition of RCA. RCA imported from compliant facilities will not require additional testing, unless required by NYSDEC under its terms for operation of the facility. RCA imported to the Site must be derived from recognizable and uncontaminated concrete. RCA material is not acceptable for, and will not be used as cover material.

1.10 FLUIDS MANAGEMENT

All liquids to be removed from the Site, including dewatering fluids, will be handled, transported and disposed in accordance with applicable laws and regulations. Liquids discharged into the New York City sewer system will receive prior approval by New York City Department of Environmental Protection (NYC DEP). The NYC DEP regulates discharges to the New York City sewers under Title 15, Rules of the City of New York Chapter 19. Discharge to the New York City sewer system will require an authorization and sampling data demonstrating that the groundwater meets the City's discharge criteria. The dewatering fluid will be pretreated as necessary to meet the NYC DEP discharge criteria. If discharge to the City sewer system is not appropriate, the dewatering fluids will be managed by transportation and disposal at an off-Site treatment facility.

Discharge of water generated during remedial construction to surface waters (i.e. a stream or river) is prohibited without a SPDES permit issued by New York State Department of Environmental Conservation.

1.11 STORMWATER POLLUTION PREVENTION

Applicable laws and regulations pertaining to stormwater pollution prevention will be addressed during the remedial program. Erosion and sediment control measures identified in this RAWP (silt fences and barriers, and hay bale checks) will be installed around the entire perimeter of the remedial construction area and inspected once a week and after every storm event to ensure that they are operating appropriately. Discharge locations will be inspected to determine whether erosion control measures are effective in preventing significant impacts to receptors. Results of inspections will be recorded in a logbook and maintained at the Site and available for inspection by OER. All necessary repairs shall be made immediately. Accumulated sediments will be removed as required to keep the barrier and hay bale check functional. Undercutting or erosion of the silt fence toe anchor will be repaired immediately with appropriate backfill materials. Manufacturer's recommendations will be followed for replacing silt fencing damaged due to weathering.

1.12 CONTINGENCY PLAN

This contingency plan is developed for the remedial construction to address the discovery of unknown structures or contaminated media during excavation. Identification of unknown contamination source areas during invasive Site work will be promptly communicated to OER's Project Manager. Petroleum spills will be reported to the NYS DEC Spill Hotline. These findings will be included in the daily report. If previously unidentified contaminant sources are found during on-Site remedial excavation or development-related excavation, sampling will be performed on contaminated source material and surrounding soils and reported to OER. Chemical analytical testing will be performed for TAL metals, TCL volatiles and semi-volatiles, TCL pesticides and PCBs, as appropriate.

1.13 ODOR, DUST, AND NUISANCE CONTROL

Odor Control

All necessary means will be employed to prevent on- and off-site odor nuisances. At a minimum, procedures will include: (a) limiting the area of open excavations; (b) shrouding open excavations with tarps and other covers; and (c) use of foams to cover exposed odorous soils. If odors develop and cannot otherwise be controlled, additional means to eliminate odor nuisances will include: (d) direct load-out of soils to trucks for off-Site disposal; and (e) use of chemical odorants in spray or misting systems.

This odor control plan is capable of controlling emissions of nuisance odors. If nuisance odors are identified, work will be halted and the source of odors will be identified and corrected. Work will not resume until all nuisance odors have been abated. OER will be notified of all odor complaint events. Implementation of all odor controls, including halt of work, will be the responsibility of the PE/QEP's certifying the Remedial Action Report.

Dust Control

Dust management during invasive on-Site work will include, at a minimum:

- Use of a dedicated water spray methodology for roads, excavation areas and stockpiles.
- Use of properly anchored tarps to cover stockpiles.
- Exercise extra care during dry and high-wind periods.
- Use of gravel or recycled concrete aggregate on egress and other roadways to provide a clean and dust-free road surface.

This dust control plan is capable of controlling emissions of dust. If nuisance dust emissions are identified, work will be halted and the source of dusts will be identified and corrected. Work will not resume until all nuisance dust emissions have been abated. OER will be notified of all dust complaint events. Implementation of all dust controls, including halt of work, will be the responsibility of the PE/QEP's responsible for certifying the Remedial Action Report.

Other Nuisances

Noise control will be exercised during the remedial program. All remedial work will conform, at a minimum, to NYC noise control standards.

Rodent control will be provided, during Site clearing and grubbing, and during the remedial program, as necessary, to prevent nuisances.

1.14 IMPORT OF CLEAN COVER

The current redevelopment plan includes the importation of a clean soil cover along the western and northern portions of the Site in landscaped areas and beneath paved walkways. Soil scheduled for import to the Site will be evaluated at the source location prior to import. Material from industrial sites, spill sites, environmental remediation sites or other potentially contaminated sites will not be imported to the Site. All imported soil will be uncontaminated, clean soil that meets the lesser of the appropriate NYSDEC 6 NYCRR Part 375-6.8(a) Restricted Residential Use SCOs and the NYSDEC 6 NYCRR Part 375-6.8 Groundwater Protection SCOs.

The imported uncontaminated, clean soil cover will be from an approved source/facility and will be evaluated by the PE/QEP to ensure:

1) That a segregated stockpile for number tons (number cubic yards) is properly maintained at the source and will not be comingled with any other material prior to importing and grading the clean soil material at the Site;
2) That the material does not include any solid waste, including construction and demolition material, as it is prohibited;
3) That screening for evidence of contamination by visual, olfactory and PID soil screening practices prior to testing at the source as well as upon importing to the Site for grading is completed; and
4) That a maximum five-part composite sample will be collected from the segregated stockpile at the source at a minimum frequency of one sample per 250 cubic yards and analyzed for the following Full List parameters:
    - VOCs by EPA Method 8260C (rev. 2006)
    - SVOCs by EPA Method 8270D (rev. 2007)
    - Pesticides by EPA Method 8081B (rev. 2000)
    - PCBs by EPA Method 8082A (rev. 2000)
    - TAL Metals by EPA Method 6010C (rev. 2007)

Upon receipt of the segregated stockpile analytical results collected at the source, a Clean Soil Sampling Report will be submitted to OER for review/approval prior to importing. The report will include the following:

1) Summary of number of samples collected and analyzed, tabulated data and comparison to the selected Site Use SCOs;
2) Analytical data sheets and chain of custody documentation;
3) Summary of number tons (number cubic yards);
4) Photographs from the segregated stockpile at the source with sample point locations identified;
5) An affidavit from the source/facility on company letterhead stating that the segregated stockpile for number tons (number cubic yards) has been properly maintained at the source and complies with the requirements listed above; and
6) A copy of source/facility NYSDEC permit;

A highly visible demarcation barrier (i.e., orange geo-synthetic material or equivalent) will be installed beneath the clean soil/fill surface cover. Upon importing and grading the OER-approved clean soil cover for number tons (number cubic yards) on top of a highly visible demarcation barrier, the following documentation will be presented in the Final RCR:

1. Copies of purchase invoices;
2. Truck transportation slips from the source to the Site;
3. Confirmation of number tons (number cubic yards) of OER approved clean soil cover material imported and graded at the site on top of highly visible demarcation barrier;
4. Site plan depicting all areas where the OER approved clean soil cover has been placed; and
5. Photographs documenting the importing and grading of the OER approved clean soil cover across the site with the underlying highly visible demarcation barrier (i.e., orange geo-synthetic material or equivalent).

APPENDIX 6

MANUFACTURER SPECIFICATIONS FOR WATERPROOFING / VAPOR BARRIER

Mark A. Franciosi
Technical Service Manager – North America

T 617-498-4303

mark.a.franciosi@grace.com

W. R. Grace & Co.-Conn.
62 Whittemore Avenue
Cambridge, MA 02140

February 16th, 2015

Stephen Malinowski
AKRF, Inc.
3900 Veterans Memorial Highway, Suite 331
Bohemia, NY 11716

Project: 77 Commercial Street Brooklyn, New York - OER Project Number 15EHAN033K, Block 729, Lot 50

Mr. Malinowski,

I have reviewed Analytical Data referenced in Tables 1-12, provided by your office for the above referenced project.

The identified contaminants at the levels reported will not have an adverse effect on the waterproofing or vapor barrier properties of Preprufe® 300R, Preprufe® 160R, and Bituthene® 3000/4000 systems along with all system accessories, provided standard design and application procedures are followed.

Standard installation instructions and details can be found on our website at www.graceconstruction.com.

If you have any questions, please feel free to call me at the number above.

Sincerely,

Mark Franciosi

Mark Franciosi

Technical Services Manager

cc: J. Ridgeway

GRACE

PREPRUFE® 300R & 160R

Pre-applied waterproofing membranes that bond integrally to poured concrete for use below slabs or behind basement walls on confined sites

Description

Preprufe® 300R & 160R membranes are unique composite sheets comprising a thick HDPE film, an aggressive pressure sensitive adhesive and a weather resistant protective coating.

Unlike conventional non-adhering membranes, which are vulnerable to water ingress tracking between the unbonded membrane and structure, the unique Preprufe bond to concrete prevents ingress or migration of water around the structure.

The Preprufe R System includes:

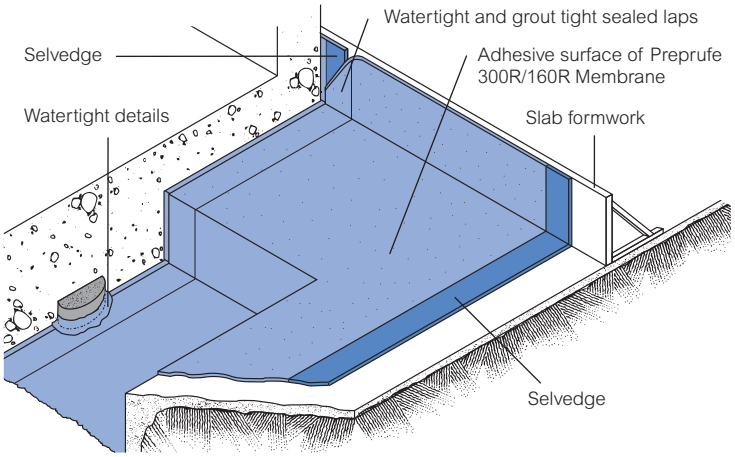
- **Preprufe 300R**—heavy-duty grade for use below slabs and on rafts (i.e. mud slabs). Designed to accept the placing of heavy reinforcement using conventional concrete spacers.
- **Preprufe 160R**—thinner grade for blindside, zero property line applications against soil retention systems.
- **Preprufe Tape LT**—for covering cut edges, roll ends, penetrations and detailing (temperatures between 25°F (-4°C) and 86°F (+30°C)).
- **Preprufe Tape HC**—as above for use in Hot Climates (minimum 50°F (10°C)).
- **Bituthene® Liquid Membrane**—for sealing around penetrations, etc.
- **Adcor™ ES**—waterstop for joints in concrete walls and floors
- **Preprufe Tieback Covers**—preformed cover for soil retention wall tieback heads
- **Preprufe Preformed Corners**—preformed inside and outside corners

Preprufe 300R & 160R membranes are applied either horizontally to smooth prepared concrete, carton forms or well rolled and compacted earth or crushed stone substrate; or vertically to permanent formwork or adjoining structures. Concrete is then cast directly against the adhesive side of the membranes. The specially developed Preprufe adhesive layers work together to form a continuous and integral seal to the structure.

Preprufe can be returned up the inside face of slab formwork but is not recommended for conventional twin-sided formwork on walls, etc. Use Bituthene self-adhesive membrane or Procor® fluid applied membrane to walls after removal of formwork for a fully bonded system to all structural surfaces.

Advantages

- **Forms a unique continuous adhesive bond to concrete poured against it**—prevents water migration and makes it unaffected by ground settlement beneath slabs
- **Fully-adhered watertight laps** and detailing
- **Provides a barrier to water, moisture and gas**—physically isolates the structure from the surrounding ground
- **BBA Certified** for basement Grades 2, 3, & 4 to BS 8102:1990
- **Zero permeance** to moisture
- **Solar reflective**—reduced temperature gain
- **Simple and quick to install**—requiring no priming or fillets
- **Can be applied to permanent formwork**—allows maximum use of confined sites
- **Self protecting**—can be trafficked immediately after application and ready for immediate placing of reinforcement
- **Unaffected by wet conditions**—cannot activate prematurely
- **Inherently waterproof, non-reactive system:**
  - not reliant on confining pressures or hydration
  - unaffected by freeze/thaw, wet/dry cycling
- **Chemical resistant**—effective in most types of soils and waters, protects structure from salt or sulphate attack



Drawings are for illustration purposes only.
Please refer to graceconstruction.com for specific application details.

BBA BRITISH BOARD OF AGREMENT CERTIFICATE No. 97/3325

Installation

The most current application instructions, detail drawings and technical letters can be viewed at graceconstruction.com. For other technical information contact your local Grace representative.

Preprufe 300R & 160R membranes are supplied in rolls 4 ft (1.2 m) wide, with a selvedge on one side to provide self-adhered laps for continuity between rolls. The rolls of Preprufe Membrane and Preprufe Tape are interwound with a disposable plastic release liner which must be removed before placing reinforcement and concrete.

Substrate Preparation

All surfaces—It is essential to create a sound and solid substrate to eliminate movement during the concrete pour. Substrates must be regular and smooth with no gaps or voids greater than 0.5 in. (12 mm). Grout around all penetrations such as utility conduits, etc. for stability (see Figure 1).

Horizontal—The substrate must be free of loose aggregate and sharp protrusions. Avoid curved or rounded substrates. When installing over earth or crushed stone, ensure substrate is well compacted to avoid displacement of substrate due to traffic or concrete pour. The surface does not need to be dry, but standing water must be removed.

Vertical—Use concrete, plywood, insulation or other approved facing to sheet piling to provide support to the membrane. Board systems such as timber lagging must be close butted to provide support and not more than 0.5 in. (12 mm) out of alignment.

Membrane Installation

Preprufe can be applied at temperatures of 25°F (-4°C) or above. When installing Preprufe in cold or marginal weather conditions 55°F (<13°C) the use of Preprufe Tape LT is recommended at all laps and detailing. Preprufe Tape LT should be applied to clean, dry surfaces and the release liner must be removed immediately after application. Alternatively, Preprufe Low Temperature (LT) is available for low temperature condition applications. Refer to Preprufe LT data sheet for more information.

Horizontal substrates—Place the membrane HDPE film side to the substrate with the clear plastic release liner facing towards the concrete pour. End laps should be staggered to avoid a build up of layers. Leave plastic release liner in position until overlap procedure is completed (see Figure 2).

Accurately position succeeding sheets to overlap the previous sheet 3 in. (75 mm) along the marked selvedge. Ensure the underside of the succeeding sheet is clean, dry and free from contamination before attempting to overlap. Peel back the plastic release liner from between the overlaps as the two layers are bonded together. Ensure a continuous bond is achieved without creases and roll firmly with a heavy roller. Completely remove the plastic liner to expose the protective coating. Any initial tack will quickly disappear.

Refer to Grace Tech Letter 15 for information on suitable rebar chairs for Preprufe.

Vertical substrates—Mechanically fasten the membrane vertically using fasteners appropriate to the substrate with the the clear plastic release liner facing towards the concrete pour. The membrane may be installed in any convenient length. Fastening can be made through the selvedge using a small and low profile head fastener so that the membrane lays flat and allows firmly rolled overlaps. Immediately remove the plastic release liner.

Ensure the underside of the succeeding sheet is clean, dry and free from contamination before attempting to overlap. Roll firmly to ensure a watertight seal.

Roll ends and cut edges—Overlap all roll ends and cut edges by a minimum 3 in. (75 mm) and ensure the area is clean and free from contamination, wiping with a damp cloth if necessary. Allow to dry and apply Preprufe Tape LT (or HC in hot climates) centered over the lap edges and roll firmly (see Figure 3). Immediately remove printed plastic release liner from the tape.

Details

Refer to Preprufe Field Application Manual, Section V Application Instructions or visit graceconstruction.com. This manual gives comprehensive guidance and standard details.

Membrane Repair

Inspect the membrane before installation of reinforcement steel, formwork and final placement of concrete. The membrane can be easily cleaned by power washing if required. Repair damage by wiping the area with a damp cloth to ensure the area is clean and free from dust, and allow to dry. Repair small punctures (0.5 in. (12 mm) or less) and slices by applying Preprufe Tape centered over the damaged area and roll firmly. Remove the release liner from the tape. Repair holes and large punctures by applying a patch of Preprufe membrane, which extends 6 in. (150 mm) beyond the damaged area. Seal all edges of the patch with Preprufe Tape, remove the release liner from the tape and roll firmly. Any areas of damaged adhesive should be covered with Preprufe Tape. Remove printed plastic release liner from tape. Where exposed selvedge has lost adhesion or laps have not been sealed, ensure the area is clean and dry and cover with fresh Preprufe Tape, rolling firmly. Alternatively, use a hot air gun or similar to activate adhesive and firmly roll lap to achieve continuity.

Pouring of Concrete

Ensure the plastic release liner is removed from all areas of Preprufe membrane and tape.

It is recommended that concrete be poured within 56 days (42 days in hot climates) of application of the membrane. Following proper ACI guidelines, concrete must be placed carefully and consolidated properly to avoid damage to the membrane. Never use a sharp object to consolidate the concrete.

Removal of Formwork

Preprufe membranes can be applied to removable formwork, such as slab perimeters, elevator and lift pits, etc. Once the concrete is poured the formwork must remain in place until the concrete has gained sufficient compressive strength to develop the surface bond. Preprufe membranes are not recommended for conventional twin-sided wall forming systems.

A minimum concrete compressive strength of 1500 psi (10 N/mm^2) is recommended prior to stripping formwork supporting Preprufe membranes. Premature stripping may result in displacement of the membrane and/or spalling of the concrete.

Refer to Grace Tech Letter 17 for information on removal of formwork for Preprufe.

Figure 1

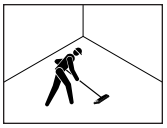


Figure 2

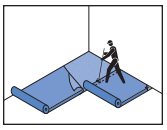
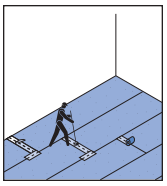
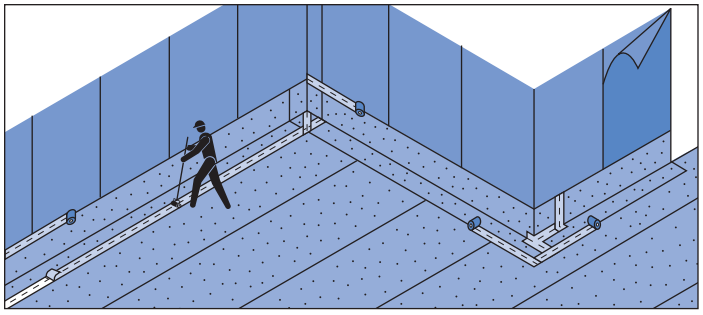


Figure 3

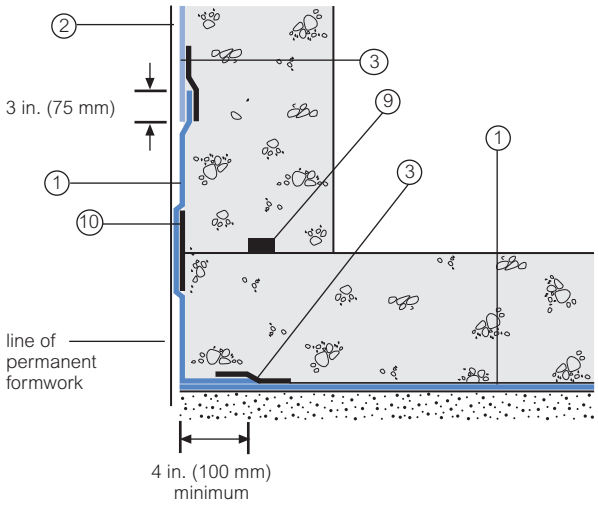




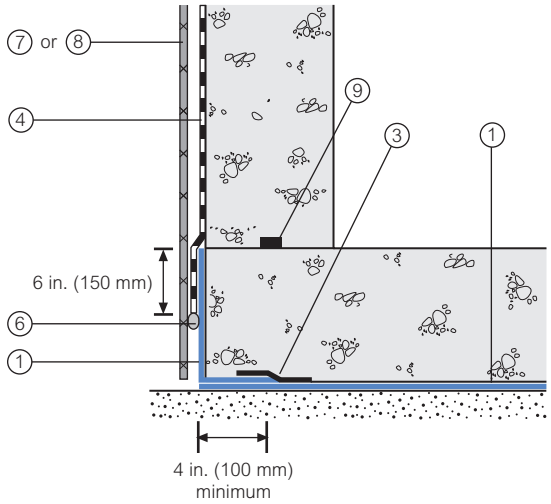
Detail Drawings

Details shown are typical illustrations and not working details. For a list of the most current details, visit us at graceconstruction.com. For technical assistance with detailing and problem solving please call toll free at 866-333-3SBM (3726).

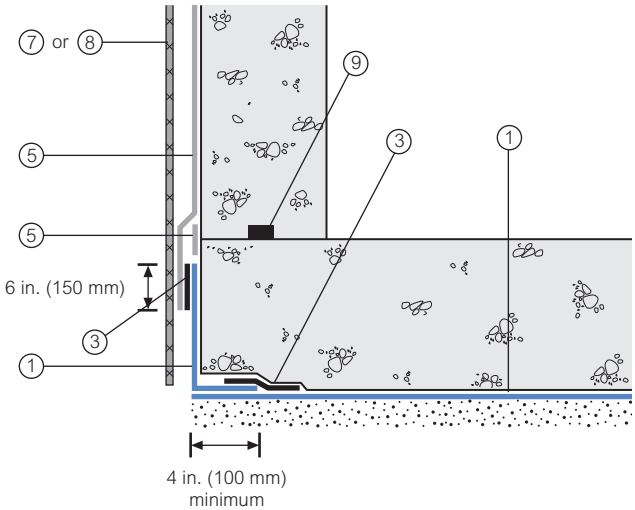
Wall base detail against permanent shutter



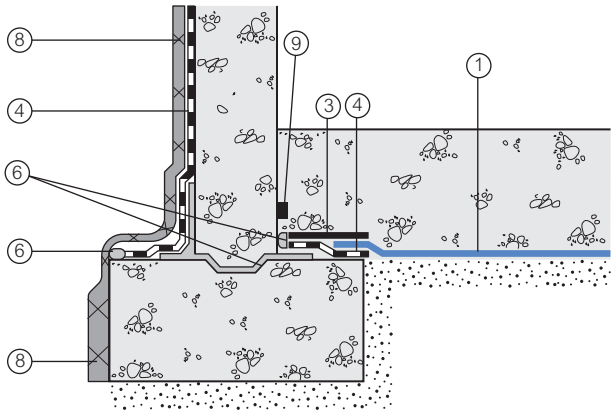
Bituthene wall base detail (Option 1)



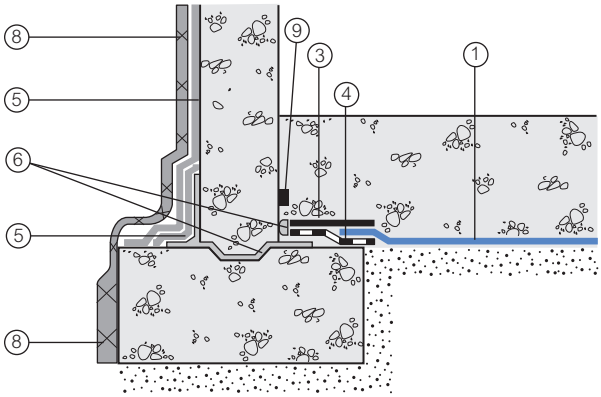
Procor wall base detail (Option 1)



Bituthene wall base detail (Option 2)



Procor wall base detail (Option 2)



1 **Preprufe 300R**
2 **Preprufe 160R**
3 **Preprufe Tape**
4 **Bituthene**
5 **Procor**
6 **Bituthene Liquid Membrane**
7 **Protection**
8 **Hydroduct®**
9 **Adcor ES**
10 **Preprufe CJ Tape**

Supply

Dimensions (Nominal)	Preprufe 300R Membrane	Preprufe 160R Membrane	Preprufe Tape (LT or HC*)
Thickness	0.046 in. (1.2 mm)	0.032 in. (0.8 mm)	
Roll size	4 ft x 98 ft (1.2 m x 30 m)	4 ft x 115 ft (1.2 m x 35 m)	4 in. x 49 ft (100 mm x 15 m)
Roll area	392 ft^2 (36 m^2)	460 ft^2 (42 m^2)	
Roll weight	108 lbs (50 kg)	92 lbs (42 kg)	4.3 lbs (2 kg)
Minimum side/end laps	3 in. (75 mm)	3 in. (75 mm)	3 in. (75 mm)
* LT denotes Low Temperature (between 25°F (-4°C) and 86°F (+30°C)) HC denotes Hot Climate (50°F (>+10°C))			
Ancillary Products			
Bituthene Liquid Membrane—1.5 US gal (5.7 liter) or 4 US gal (15.1 liter)			

Physical Properties

Property	Typical Value 300R	Typical Value 160R	Test Method
Color	white	white	
Thickness	0.046 in. (1.2 mm)	0.032 in. (0.8 mm)	ASTM D3767
Lateral Water Migration Resistance	Pass at 231 ft (71 m) of hydrostatic head pressure	Pass at 231 ft (71 m) of hydrostatic head pressure	ASTM D5385, modified[1]
Low temperature flexibility	Unaffected at -20°F (-29°C)	Unaffected at -20°F (-29°C)	ASTM D1970
Resistance to hydrostatic head	231 ft (71 m)	231 ft (71 m)	ASTM D5385, modified[2]
Elongation	660%	580%	ASTM D412, modified[3]
Tensile strength	4000 psi (27.6 MPa)	4000 psi (27.6 MPa)	ASTM D412
Crack cycling at -9.4°F (-23°C), 100 cycles	Unaffected, Pass	Unaffected, Pass	ASTM C836
Puncture resistance	221 lbs (990 N)	100 lbs (445 N)	ASTM E154
Peel adhesion to concrete	5 lbs/in. (880 N/m)	5 lbs/in. (880 N/m)	ASTM D903, modified[4]
Lap peel adhesion	5 lbs/in. (880 N/m)	5 lbs/in. (880 N/m)	ASTM D1876, modified[5]
Permeance to water vapor transmission	0.01 perms (0.6 ng/(Pa x s x m^2))	0.01 perms (0.6 ng/(Pa x s x m^2))	ASTM E96, method B
Water absorption	0.5%	0.5%	ASTM D570

Footnotes:

1. Lateral water migration resistance is tested by casting concrete against membrane with a hole and subjecting the membrane to hydrostatic head pressure with water. The test measures the resistance of lateral water migration between the concrete and the membrane.
2. Hydrostatic head tests of Preprufe Membranes are performed by casting concrete against the membrane with a lap. Before the concrete cures, a 0.125 in. (3 mm) spacer is inserted perpendicular to the membrane to create a gap. The cured block is placed in a chamber where water is introduced to the membrane surface up to the head indicated.
3. Elongation of membrane is run at a rate of 2 in. (50 mm) per minute.
4. Concrete is cast against the protective coating surface of the membrane and allowed to properly dry (7 days minimum). Peel adhesion of membrane to concrete is measured at a rate of 2 in. (50 mm) per minute at room temperature.
5. The test is conducted 15 minutes after the lap is formed (per Grace published recommendations) and run at a rate of 2 in. (50 mm) per minute.

Specification Clauses

Preprufe 300R or 160R shall be applied with its adhesive face presented to receive fresh concrete to which it will integrally bond. Only Grace Construction Products approved membranes shall be bonded to Preprufe 300R/160R. All Preprufe 300R/160R system materials shall be supplied by Grace Construction Products, and applied strictly in accordance with their instructions. Specimen performance and formatted clauses are also available.

NOTE: Use Preprufe Tape to tie-in Procor with Preprufe.

Health and Safety

Refer to relevant Material Safety data sheet. Complete rolls should be handled by a minimum of two persons.

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For technical assistance call toll free at 866-333-3SBM (3726)

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Chemical Resistance
Technical Letter 4

Several series of tests have been conducted to define the chemical resistance of Preprufe® and Bituthene® waterproofing membranes. Both Preprufe and Bituthene membranes are highly resistant to normal ground water conditions which range from alkaline to acidic. In addition, Preprufe and Bituthene waterproofing membranes are unaffected by exposure to salt water.

Occasionally Preprufe and Bituthene may be used in applications which will be subjected to intermittent or even continuous exposure to chemicals. The following guidelines can be used to evaluate the applicability of the Preprufe and Bituthene membrane system.

NOTE: Most solvents and fuels will not significantly affect polyethylene film but may soften or dissolve the adhesive compounds exposed at the edge laps. Detailed information on the type of exposure is necessary to make recommendations.

For below slab and blind side applications, a concrete mud-slab or continuous soil retention system will reduce the exposure of the Preprufe membrane laps. For Bituthene wall applications, the use of Bituthene Edgeguard®, or a solvent resistant tape, should be used over the membrane edges to protect the rubberized asphalt from prolonged exposure.

Exposure Conditions	Preprufe and Bituthene Membrane Resistance Rating
Sea water, de-icing salt	Excellent
Acids in solution e.g. sulfuric, acetic, hydrochloric and nitric acid	Excellent
Alkalis e.g. Sodium hydroxide, ammonium hydroxide	Excellent
Alcohols	Very Good
Organic or fuel oils, solvents	Variable (See note.)

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High Density Polyethylene Long-Term Durability
Technical Letter 29

High Density Polyethylene (HDPE) sheet is a major component of the Bituthene® and Preprufe® membranes. The functions of the HDPE are to 1) provide a portion of the waterproofing protection for the structure and 2) provide increased resistance of the waterproofing adhesive from environmental exposure and backfill.

HDPE was chosen for this purpose because it has excellent mechanical properties required for this application including high puncture, tear, and tensile strengths as well as good elongation for bridging any post-formed cracks in the structure. The other advantage of HDPE is that it is extremely resistant to attack and degradation from most chemicals. Consequently, it is typically a leading candidate for use in geomembranes including landfills containment systems, pond liners, and holding tanks for waste liquids.

Below grade waterproofing membranes, such as Preprufe, are often exposed to a variety of soil contaminants in addition to water. These could include alkaline and acidic environments, petroleum-based hydrocarbons, and chlorinated hydrocarbons. A number of studies have been conducted on various materials on the long-term durability of HDPE after exposure to contaminants. The general conclusion of various studies is that HDPE is one of the more inert materials used in geomembrane systems. A 1990 publication by the American Society of Testing and Materials [1] based on an extensive survey of case study testing concluded that the service life of base polymers, such as HDPE, in flexible membrane liners (FML) used in geotextiles should last hundreds of years without premature failure. However, the study also stated that inappropriate applications or installations, such as excessive exposure to UV, heat, and ozone, could lead to degradation and shorter life expectancy. In summary, the major component of Preprufe, HDPE, provides the necessary mechanical properties for waterproofing and excellent chemical resistance provided the HDPE is protected from excessive exposure to UV, heat, and ozone.

Reference:

1. Landreth, R. E., Service Life of Geosynthetics in Hazardous Waste Management Facilities, in Geosynthetics: Microstructure and Performance, ASTM ATP 1076, I. D. Peggs, editor, American Society for Testing and Materials, Philadelphia (1990) p. 26.

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Preprufe® Tape

DESCRIPTION

Preprufe® Tape is a specially formulated two sided, reinforced pressure sensitive tape. The bottom side of the tape has a highly aggressive pressure sensitive adhesive which is designed to adhere to penetrations, protrusions and Bituthene® membranes. The top side has another layer of adhesive and a protective coating. The protective coating protects the tape from the weather and UV light for up to 30 days after application. A thin flexible film is sandwiched between the two layers of pressure sensitive adhesive. The tape develops a continuous mechanical bond with the concrete that is cast against it.

Preprufe Tape is supplied in rolls and is interwound with a silicone coated release liner.

USE

Preprufe Tape is used in detail areas including end laps, penetrations and various tie-ins. It is also used to patch damaged areas in the Preprufe membranes. The tape is a critical component of the Preprufe system since it is designed to develop a continuous mechanical bond to concrete that is cast against it.

APPLICATION

Apply Preprufe Tape when ambient temperatures are -4°C (25°F) or above.

Wipe Preprufe membranes clean to remove any dirt, dust or moisture. Clean the surface of penetrations or protrusions with a wire brush to remove dirt, dust, rust and loose particles.

Unroll the tape and adhere the exposed pressure sensitive adhesive surface to the membrane or penetration. The protective coating surface of the tape should face toward the concrete to be cast.

Use heavy hand pressure or a hand roller to maximize adhesion. Remove the release liner during application. Cast concrete or apply shotcrete within 30 days of application of the tape.

For Technical Assistance call us at 800-444-6459 (Option 3).

Visit our web site at: www.graceconstruction.com **printed on recycled paper**

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GRACE Construction Products

APPENDIX 7

CONSTRUCTION HEALTH AND SAFETY PLAN

77 Commercial Street

BROOKLYN, NEW YORK

Construction Health and Safety Plan

OER Project Number: 15EHAN033K

CEQR Number 14DCP010K

E-Designation Number E-318

Prepared for:

Waterview at Greenpoint, LLC
4611 12th Avenue
Brooklyn, NY 11219

Prepared by:

AKRF, Inc.
440 Park Avenue South, 7th Floor
New York, NY 10016
212-696-0670

MARCH 2015

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FIGURES

Figure 1 - Hospital Location Map

APPENDICES

Appendix A - Potential Health Effects from On-site Contaminants
Appendix B - Report Forms
Appendix C - Emergency Hand Signals

1.0 PURPOSE

The purpose of this Construction Phase Environmental Health and Safety Plan (CHASP) is to assign responsibilities, establish personnel protection standards and mandatory safety practices and procedures, and provide for contingencies that may arise during construction at the project Site. The CHASP is intended to minimize health and safety risks resulting from the known and potential presence of hazardous materials on the Site.

This plan is not designed to address potential geotechnical, mechanical, or structural safety concerns, nor to supersede or replace any OSHA regulation and/or local and state construction codes or regulations.

2.0 APPLICABILITY

Work subject to this CHASP includes activities that disturb the existing soil or groundwater on-site. The contractors and their subcontractors involved in the construction project will provide a copy of this CHASP to their employees whose work involves any potential exposure to the on-site chemical hazards, and will complete all work in accordance with this CHASP. All work outlined within the CHASP is subject to the Remedial Action Work Plan (RAWP) developed for the Site.

3.0 SITE DESCRIPTION

3.1 General Information

The 77 Commercial Street Site is located southeast-adjacent to Newtown Creek in the Greenpoint Section of Brooklyn, NY and is identified as Block 729, Lot 50 on the New York City Tax Map. The Site is 110,519 square feet and currently contains an approximately 84,200-square foot vacant warehouse that is being prepared for demolition. The Site is abutted to the east-northeast by a four-story mixed commercial/residential building complex, to the south-southeast by Commercial Street, to the west-southwest by MTA Office of Emergency Response, and to the north-northwest by Newtown Creek.

The proposed development plan consists of a mixed-use commercial/residential development with three connecting mixed use buildings: a two- to seven-story base building (Base Building - Building 1), a 30-story residential tower (South Tower - Building 2), and a 40-story residential tower (North Tower – Building 3). Architectural drawings of the proposed redevelopment are included in Appendix 1 of the RAWP.

Excavation of soil for the new building foundation will be completed to depths of 10 to 29.5 feet below grade. It is estimated that approximately 90,000 tons of soil will require excavation and off-site disposal during the foundation excavation. It is anticipated that at least a portion of the excavation will be advanced into the water table, which is approximately 5 to 11 feet below grade surface.

3.2 Hazard Potential

A Remedial Investigation (RI) was performed by AKRF, Inc. (AKRF) and a Phase I Environmental Site Assessment was performed previously by others at the Site to compile and evaluate data and information necessary to develop this CHASP. Significant findings of the RI which are pertinent to the development activities proposed for the Site include the following:

- Soil/fill samples collected during the RI were compared to the Part 375 Unrestricted Use Soil Cleanup Objectives (USCOs) and Part 375 Restricted Residential Soil Cleanup Objectives (RRSCOs). A review of the soil/fill analytical results showed that volatile organic compounds (VOCs) were detected in 21 of the 39 soil samples analyzed with acetone being the only VOC detected above the New York State Department of Environmental Conservation's (NYSDEC's) Unrestricted Use Soil Cleanup Objective (UUSCO). Acetone is a common laboratory contaminant and was also detected in the laboratory method blank; therefore, the presence of acetone does not appear to be representative of Site conditions. Twenty-four semivolatile organic compounds (SVOCs) were detected in one or more of the soil samples analyzed at concentrations ranging from an estimated concentration of 10 micrograms per kilogram (µg/Kg) to 20,000 µg/Kg. Three SVOCs (4-methylphenol, benzo(k)fluoranthene, and chrysene) were detected in at least one soil sample at concentrations above their respective UUSCOs but below their respective Restricted Residential Soil Cleanup Objectives (RRSCOs). Benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenz(a,h)anthracene, and/or 8indeno(1,2,3-cd)pyrene were detected above their respective RRSCOs in 18 of the 39 samples collected during the field investigation at concentrations ranging from 470 µg/Kg to 20,000 µg/Kg. The SVOC exceedances were polycyclic aromatic hydrocarbons (PAHs), which are a class of compounds found in some petroleum products, coal ash, and in other combustion products that are commonly found in historic fill.
- Twenty-two metals were detected in one or more of the soil samples analyzed ranging from 0.02 milligrams per kilogram (mg/Kg) to 145,000 mg/Kg. The metals arsenic (maximum of 33.9 mg/Kg), barium (maximum of 566 mg/Kg), chromium (maximum 117 mg/Kg), copper (maximum 115 mg/Kg), lead (maximum 2,300 mg/Kg), mercury (maximum 26 mg/Kg), nickel (maximum 182 mg/Kg), selenium (maximum 4.8 ppm), and/or zinc (maximum 277 mg/Kg) were detected above their respective UUSCOs and/or RRSCOs in 232 of the 38 soil samples. The metals concentrations are most likely attributable to historic fill materials, which often contain highly variable concentrations of metals.
- The polychlorinated biphenyl (PCB) Aroclor 1262 was detected in soil sample SB-9(1-2') at a concentration of 1,000 µg/Kg, above its UUSCO of 100 µg/Kg and equal to its RRSCO of 1,000 µg/Kg. Aroclor 1262 was also detected in soil samples SB-5(1-2') and SB-7(1-2') at estimated concentrations below its UUSCO. No other PCBs were detected in any of the soil samples. The presence of PCB Aroclor 1262 is most likely attributable to the presence of historic fill material in the upper two feet where the samples with PCB detections were collected at the Site, and is not indicative of a spill or a release.
- No pesticides were not detected in any of the soil samples collected during the RI.
- Groundwater samples collected during the RI were compared to NYSDEC Class GA Ambient Water Quality Standards (AWQS). Groundwater samples collected during the RI showed that no VOCs were detected in any of the groundwater samples above their respective NYSDEC AWQS. Two SVOCs, benzo[b]fluoranthene and benzo[k]fluoranthene were detected in groundwater sample TW-5 at concentrations ranging between an estimated 0.24 micrograms per liter (µg/L) and 0.55 µg/L, above their respective AWQS. The presence of the SVOCs in the groundwater sample is likely attributable to sediment entrained in the water sample and not indicative of Site conditions. No other SVOCs were detected in the six groundwater samples above their respective Class GA standards.
- Nineteen metals were detected in both the unfiltered groundwater samples (total metals analysis) and filtered samples (dissolved metals analysis). Twelve metals (arsenic, barium, beryllium, chromium, copper, iron, manganese, lead, nickel, sodium, zinc, and mercury) were

detected above the Class GA standards in one or more of the total groundwater samples. Four of these metals, which naturally occur in groundwater (magnesium, iron, manganese, and sodium), were detected above the Class GA standards in one or more of the dissolved groundwater samples. The presence of remaining six metals in the dissolved groundwater are typical of groundwater quality in Brooklyn, and does not appear to be related to a spill or release at the Site.

- No PCBs or pesticides were detected in any of the groundwater samples.
- Soil vapor samples collected during the RI were compared to the New York State Department of Health Air Guideline Values (AGVs). Soil vapor sample analytical results identified 37 VOCs detected in the 7 samples. VOCs associated with petroleum [including benzene, toluene, ethylbenzene, xylenes (collectively referred to as BTEX), 1,2,4- and 1,3,5-trimethylbenzene, cyclohexane, heptane, hexane, methyl ethyl ketone (MEK), 4-ethyltoluene, and 2,2,4-trimethylpentane] were detected at concentrations from 0.95 micrograms per cubic meter ($\mu g/m^3$) to 830 $\mu g/m^3$. Solvent-related VOCs [including acetone, chloroform, tetrachloroethene (PCE), and trichloroethene (TCE)], were detected at concentrations up to 490 $\mu g/m^3$. PCE (maximum 40 $\mu g/m^3$) was detected in SV-1, SV-5, SV-6, and SV-7 at concentrations above its AGV of 30 $\mu g/m^3$. PCE was detected at 30 $\mu g/m^3$ in groundwater sample TW-3. TCE was detected in sample SV-7 at a concentration of 94 $\mu g/m^3$, above its AGV of 5 $\mu g/m^3$.

3.3 Hazard Evaluation

The most likely routes of exposure are breathing of volatile and semi-volatile compounds or particulate-laden air released during soil disturbing activities, dermal contact, and accidental ingestion. Appendix A includes specific health effects from chemicals present or potentially present on-site. Although some of the chemicals of concern listed in the sections below were not detected during the subsurface investigations, they are included here as a precaution. The remaining sections of this CHASP address procedures (including training, air monitoring, work practices and emergency response) to reduce the potential for unnecessary and unacceptable exposure to these contaminants.

The potential adverse health effects from these contaminants are diverse. Many of these compounds are known or suspected to result in chronic illness from long-term exposures. However, due to the limited nature of the proposed construction, only acute effects are a potential concern.

This CHASP addresses potential environmental hazards from the presence of hazardous materials. It is not intended to address the normal hazards of construction work, which are separately covered by OSHA regulations and/or local and state construction codes and regulations.

3.3.1 Hazards of Concern

Check all that apply		
(x) Organic Chemicals	(x) Inorganic Chemicals	( ) Radiological
( ) Biological	( ) Explosive/Flammable	( ) Oxygen Deficient Atm.
(x) Heat Stress	(x) Cold Stress	( ) Other
Comments: No personnel are permitted to enter permit confined spaces		

3.3.2 Physical Characteristics

Check all that apply		
(x) Liquid	(x) Solid	( ) Sludge
(x) Vapors	( ) Unknown	( ) Other

3.3.3 Hazardous Materials

Check all that apply					
Chemicals	**Solids**	**Sludges**	**Solvents**	**Oils**	**Other**
( ) Acids	( ) Ash	( ) Paints	( ) Halogens	( ) Transformer	( ) Lab
( ) Caustics	( ) Asbestos	( ) Metals	(x) Petroleum	( ) Other DF	( ) Pharm.
(x) Pesticides	( ) Tailings	( ) POTW	( ) Other	( ) Motor or Hydraulic Oil	( ) Hospital
( ) Petroleum	(x) Other: Fill Material	( ) Other – Tars & Other NAPL		( ) Gasoline	( ) Rad.
( ) Inks				(x) Fuel Oil	( ) MGP
( ) PCBs					( ) Mold
(x) Metals					( ) Cyanide
(x) Other: VOCs & SVOCs					

3.3.4 Known and Suspect Chemicals of Concern

Chemicals	REL/PEL/STEL (ppm)	Health Hazards
Arsenic	REL = 0.02 mg/m^3 PEL = 0.01 mg/m^3	Ulceration of nasal septum, dermatitis, gastrointestinal disturbances, peripheral neuropathy, resp irritation, hyperpigmentation of skin, [potential occupational carcinogen].
Barium	REL = 0.5 mg/m^3 PEL = 0.5 mg/m^3	Irritation eyes, skin, upper respiratory system; skin burns; gastroenteritis; muscle spasm; slow pulse, extrasystoles; hypokalemia.
Chromium	REL = 0.5 mg/m^3 PEL = 1 mg/m^3	Irritation eyes, skin; lung fibrosis (histologic).
Copper	REL = 1 mg/m^3 PEL = 1 mg/m^3	Irritation eyes, nose, pharynx; nasal septum perforation; metallic taste; dermatitis; in animals: lung, liver, kidney damage; anemia.
Fuel Oil	REL = 350 mg/m^3 PEL = 400 ppm	Nausea, irritation – eyes, hypertension, headache, light-headedness, loss of appetite, poor coordination; long-term exposure – kidney damage, blood clotting problems; potential carcinogen.
Lead	REL = 0.05 mg/m^3 PEL = 0.05 mg/m^3	Lassitude (weakness, exhaustion), insomnia; facial pallor; anorexia, weight loss, malnutrition; constipation, abdominal pain, colic; anemia; gingival lead line; tremor; paralysis wrist, ankles; encephalopathy; kidney disease; irritation eyes; hypertension.
Magnesium	REL = 1 mg/m^3 PEL = 15 mg/m^3	Irritation eyes, nose; metal fume fever: cough, chest pain, flu-like fever.
Manganese	REL = 0.05 mg/m^3 PEL = 0.05 mg/m^3	Manganism; asthenia, insomnia, mental confusion; metal fume fever: dry throat, cough, chest tightness, dyspnea (breathing difficulty), rales, flu-like fever; low-back pain; vomiting; malaise (vague feeling of discomfort); lassitude (weakness, exhaustion); kidney damage.
Mercury	REL = 0.1 mg/m^3 PEL = 0.05 mg/m^3	Irritation eyes, skin; cough, chest pain, dyspnea (breathing difficulty), bronchitis, pneumonitis; tremor, insomnia, irritability, indecision, headache, lassitude (weakness, exhaustion); stomatitis, salivation; gastrointestinal disturbance, anorexia, weight loss; proteinuria.
Nickel	REL = 0.015 mg/m^3 PEL = 1 mg/m^3	Sensitization dermatitis, allergic asthma, pneumonitis; [potential occupational carcinogen].
Polycyclic Aromatic Hydrocarbons (PAHs)	PEL = 5 mg/m^3	Harmful effects to skin, bodily fluids, and ability to fight disease, reproductive problems; potential carcinogen.
Tetrachloroethene (PCE)	PEL = 100 ppm STEL = 200 ppm	Irritation eyes, skin, nose, throat, respiratory system; nausea; flush face, neck; dizziness, poor coordination; headache, drowsiness; skin erythema (skin redness); liver damage; potential occupational carcinogen
Trichloroethene (TCE)	REL = 25 ppm PEL = 100 ppm	Irritation eyes, skin; headache, visual disturbance, lassitude (weakness, exhaustion), dizziness, tremor, drowsiness, nausea, vomiting; dermatitis; cardiac arrhythmias, paresthesia; liver injury; [potential occupational carcinogen].
Zinc	REL = 5 mg/m^3 PEL = 5 mg/m^3	Metal fume fever: chills, muscle ache, nausea, fever, dry throat, cough; lassitude (weakness, exhaustion); metallic taste; headache; blurred vision; low back pain; vomiting; malaise (vague feeling of discomfort); chest tightness; dyspnea (breathing difficulty), rales, decreased pulmonary function.
Particulate	PEL = 15 mg/m^3 (total) PEL = 5 mg/m^3 (respirable)	Irritation eyes, skin, throat, upper respiratory system.

Comments:
REL = National Institute for Occupational Safety and Health (NIOSH) Recommended Exposure Limit
PEL = OSHA Permissible Exposure Limit
STEL = OSHA Short Term Exposure Limit
ppm = parts per million
mg/m^3 = milligrams per cubic meter

4.0 HEALTH AND SAFETY OFFICER

The contractor or engineer will designate one of its personnel as the Site Safety Officer (SSO). The SSO will be a competent person responsible for the implementation of this plan. The SSO will have completed a 40-hour training course (up-dated by an annual refresher) that meets OSHA requirements of 29 CFR Part 1910, Occupational Safety and Health Standards. The SSO has stop-work authorization, which he/she will execute on his/her determination of an imminent safety hazard, emergency situation, or other potentially dangerous situation. If the SSO must be absent from the site, he/she will designate a suitably qualified replacement that is familiar with the CHASP. If work is stopped for any reason, the NYC OER would be notified immediately.

5.0 TRAINING

All those who enter the work area while intrusive activities are being performed must recognize and understand the potential hazards to health and safety. All construction personnel upon entering the site must attend a brief training meeting, its purpose being to:

- Make workers aware of the potential hazards they may encounter;
- Instruct workers on how to identify potential hazards,
- Provide the knowledge and skills necessary for them to perform the work with minimal risk to health and safety;
- Make workers aware of the purpose and limitations of safety equipment; and
- Ensure that they can safely avoid or escape from emergencies.

Each member of the construction crew will be instructed in these objectives before he/she goes onto the site. Construction personnel will be responsible for identifying potential hazards in the work zone. The SSO or other suitably trained individual will be responsible for conducting the training program. Others who enter the Site must be accompanied by a suitably-trained construction worker.

6.0 GENERAL WORK PRACTICES

To protect the health and safety of the field personnel, all field personnel will adhere to the guidelines listed below during activities involving subsurface disturbance in contaminated areas.

- Eating, drinking, chewing gum or tobacco, and smoking are prohibited, except in designated areas on the Site. These areas will be designated by the SSO.
- Workers must wash their hands and face thoroughly on leaving the work area and before eating, drinking, or any other such activity. The workers should shower as soon as possible after leaving the Site.
- Contact with contaminated or suspected surfaces should be avoided.
- The buddy system should always be used; each buddy should watch for signs of fatigue, exposure, and heat stress.

7.0 PERSONAL PROTECTIVE EQUIPMENT & AIR MONITORING

7.1 Personal Protective Equipment

The personal protection equipment required for various kinds of site investigation tasks are based on 29 CFR 1910.120, Hazardous Waste Operations and Emergency Response, Appendix B, "General Description and Discussion of the Levels of Protection and Protective Gear."

AKRF field personnel and other site personnel will wear, at a minimum, Level D personal protective equipment. The protection will be based on the air monitoring described in Section 7.2.

Level of Protection Summary

LEVEL OF PROTECTION & PPE		**Excavation and Other Earth Moving Activities**
Level D (x) Steel Toe Shoes (x) Hard Hat (within 25 ft of excavator) (x) Work Gloves	(x) Safety Glasses ( ) Face Shield (x) Ear Plugs (within 25 ft of excavator or jackhammer) ( ) Latex Gloves	Yes
Level D – Modified ***(in addition to Level D)*** (x) Tyvek Coveralls	(x) Nitrile Gloves ( ) Overboots ( ) Saranex Coveralls	As necessary
Level C *(in addition to Level D – Modified)* (x) Half-Face Respirator ( ) Full Face Respirator ( ) Full-Face PAPR	( ) Particulate Cartridge ( ) Organic Cartridge (x) Dual Organic/Particulate Cartridge	If PID > 10 ppm or particulate > 5 mg/m^3 (in breathing zone)
Comments: Cartridges to be changed out at least once per shift unless warranted beforehand (e.g., more difficult to breath or any odors detected).		

7.2 Work Zone Air Monitoring and Community Air Monitoring

As outlined in the RAWP, real time air monitoring will be performed with a photoionization detector (PID) and with a particulate air monitor during sampling and excavation work in areas where petroleum or other contamination is encountered. Community air monitoring will be conducted during all intrusive site activities. The air monitoring protocols, action levels and required responses are provided in the March 2015 RAWP prepared for the Site.

Real time air monitoring will be performed with a photoionization detector (PID) and with a particulate air monitor during sampling and excavation work required for Site development. Measurements would be taken prior to commencement of work and continuously during the work as outlined in the following table. Measurements will be made as close to the workers as practicable and at the breathing height of the workers. The SSO will set up the equipment and confirm that it is working properly. His/her designee may oversee the air measurements during the day. The initial measurement for the day will be performed before the start of work and will establish the background level for that day. The final measurement for the day will be performed after the end of work. The action levels and required responses are listed in the following table.

Action Levels and Required Safety Response Actions

Instrument	Task to be Monitored	Action Level	Response Action
PID (OVM 580B or equivalent)	All Soil Movement Activities	Less than 10 ppm in breathing zone.	Level D or D-Modified
		Between 10 and 50 ppm	Level C
		More than 50 ppm	Stop work. Resume work when readings are less than 50 ppm.
Particulate monitor (Dustrak, MIE 1000 Personal DataRam or equivalent)	All Soil Movement Activities	Less than 5 mg/m^3	Level D
		Between 5 mg/m^3 and 125 mg/m^3	Level C. Apply dust suppression measures. If < 2.5 mg/m^3, resume work using Level D. Otherwise, use Level C.
		Above 125 mg/m^3	Stop work. Apply additional dust suppression measures. Resume work when less than 125 mg/m^3.

Field personnel will be trained in the proper operation of all field instruments at the start of the field program. Instruction manuals for the equipment will be on file at the site for referencing proper operation, maintenance and calibration procedures.

The equipment will be calibrated according to manufacturer specifications at the start of each day of fieldwork. If an instrument fails calibration, the project manager will be contacted immediately to obtain a replacement instrument and arrange for repairs. A calibration log will be maintained to record the date of each calibration, any failure to calibrate and corrective actions taken. The PID will be calibrated each day using 100 parts per million (ppm) isobutylene standard gas.

8.0 DECONTAMINATION PROCEDURES

8.1 Personnel Decontamination

Personnel decontamination (decon), if deemed necessary by the SSO, will take place in a designated decontamination area. This area will be delineated during each stage of work. Personnel decontamination will consist of the following steps:

- Soap and potable water wash and potable water rinse of gloves;
- Coverall removal (if applicable);
- Glove removal;
- Disposable clothing removal; and
- Field wash hands and face.

8.2 Sampling Equipment Decontamination

Any non-disposable sampling equipment for confirmatory sampling or other equipment that is in contact with contaminated materials will be decontaminated in accordance with the following procedure:

- Double wash with solution of Simple Green® and clean tap water;

- Double rinse with clean tap water;
- Rinse with clean distilled water; and
- Allow equipment to air dry.

8.3 Heavy Equipment Decontamination

If heavy equipment comes in contact with contaminated materials, it will be decontaminated prior to being relocated to a clean area or leaving the Site. A designated decontamination pad will be constructed, where soil, dust, or oil will be washed off the exterior, undercarriage, and wheels or tracks of the equipment.

9.0 EMERGENCY RESPONSE

9.1 Emergency Procedures

In the event that an emergency develops on-site, the procedures delineated herein are to be immediately followed. Emergency conditions are considered to exist if:

- Any member of the field crew is involved in an accident or experiences any adverse effects or symptoms of exposure while on-site; and
- A condition is discovered that suggests the existence of a situation more hazardous than anticipated.
- A spill of oil or other hazardous materials.

General emergency procedures, and specific procedures for personal injury, chemical exposure and radiation exposure, are described below. In the event of an accident or emergency, an Incident Report form should be filled out and placed in the project file. An example Weekly Safety Report Form and Incident Report Form are provided in Appendix B. Information on emergency hand signals are provided in Appendix C.

9.1.1 Chemical Exposure

If a member of the field crew demonstrates symptoms of chemical exposure the procedures outlined below should be followed:

- Another team member (buddy) should remove the individual from the immediate area of contamination. The buddy should communicate to the SSO (via voice and hand signals) of the chemical exposure. The SSO should contact the appropriate emergency response agency.
- Precautions should be taken to avoid exposure of other individuals to the chemical.
- If the chemical is on the individual's clothing, the chemical should be neutralized or removed if it is safe to do so.
- If the chemical has contacted the skin, the skin should be washed with copious amounts of water.
- In case of eye contact, an emergency eye wash should be used. Eyes should be washed for at least 15 minutes.
- All chemical exposure incidents must be reported in writing to the SSO. The SSO is responsible for completing the Incident Report Form.

9.1.2 Personal Injury

In case of personal injury at the site, the following procedures should be followed:

- Another team member (buddy) should signal the SSO that an injury has occurred.
- A field team member trained in first aid can administer treatment to an injured worker.
- If deemed necessary, the victim should then be transported to the nearest hospital or medical center. If necessary, an ambulance should be called to transport the victim.
- The SSO is responsible for making certain that an Incident Report Form is completed. This form is to be submitted to the SSO. Follow-up action should be taken to correct the situation that caused the accident.
- Any incident (near miss, property damage, first aid, medical treatment, etc.) must be reported.

A first-aid kit and eye-wash kit will be kept on-site during the field activities.

9.1.3 Evacuation Procedures

- The SSO will initiate evacuation procedures by signaling to leave the site or containment structure.
- All personnel in the work area should evacuate the area and meet in the common designated area.
- All personnel suspected to be in or near the contract work area should be accounted for and the whereabouts or missing persons determined immediately.
- The SSO will then give further instruction.

9.1.4 Procedures Implemented in the Event of a Major Fire, Explosion, or Emergency

- Notify the paramedics and/or fire department, as necessary;
- Signal the evacuation procedure previously outlined and implement the entire procedure;
- Isolate the area;
- Stay upwind of any fire;
- Keep the area surrounding the problem source clear after the incident occurs; and
- Complete accident report for and distribute to appropriate personnel.

9.1.5 Spill Response

All personnel must take every precaution to minimize the potential for spills during site operations. Any spill will be reported immediately to the SSO. The SSO will then determine and report any required spills to the NYCDEP and/or NYSDEC Hotlines.

Spill control apparatus (sorbent materials) will be located on-site. All materials used for the clean up of spills will be containerized and labeled separately from other wastes. The SSO, in consultation with AKRF's Project Manager, will determine if additional spill response measures are required.

9.2 Hospital Directions

The location of the nearest hospital, as shown on Figure 1, is **Woodhull Medical Center**. The address of the hospital is 760 Broadway. Directions to the hospital are provided below.

Hospital Information and Directions

Hospital Name:	Woodhull Medical Center
Phone Number:	(718) 963-8000
Address/Location:	708-764 Flushing Avenue, Brooklyn, NY 11206
Directions:	Head southwest on Commercial Street toward Box Street Turn LEFT onto Clay Street Take the SECOND RIGHT onto McGuinness Blvd. Continue onto Humboldt Street Turn RIGHT on Flushing Avenue The emergency room is on the left, between Broadway and Throop Avenue.

9.3 CHASP Contact Information

AKRF Project Director – Marc Godick……..... . (914) 922-2356 (office)

AKRF Project Manager – Stephen Malinowski ..... (631) 574-3724 (office)

Site Safety Officer (SSO) – Amy Jordan .....(610) 405-2847 (cell)

Alternate Site Safety Officer (SSO) – Mark Jepsen .....(614) 560-5425 (cell)

Client– Mark Moseson..... (212) 228-1682 (office)

OER Project Manager – Zachariah Schreiber..... (212)788-3056 (office)

Ambulance, Fire and Police Departments..... 911

Local Poison Control ..... (212) 764-7667

pm/weekend (212) 340-4494

NYCDEC Spill Response Team ..... (800) 457-7362

NYCDEP Hotline .....(718) DEP-HELP

10.0 APPROVAL & ACKNOWLEDGMENTS OF CHASP

APPROVAL

Signed: _____ Date: _____

Project Manager

Signed: _____ Date: _____

Health and Safety Officer

Below is an affidavit that must be signed by all workers who enter the site. A copy of the CHASP must be on-site at all times and will be kept by the SSO.

AFFIDAVIT

I,_____(name), of_____(company name), have read the Construction Health and Safety Plan for the 77 Commercial Street site in Brooklyn, New York. I agree to conduct all on-site work in accordance with the requirements set forth in this HASP and understand that failure to comply with this CHASP could lead to my removal from the site.

Signed: _____ Company: _____ Date: _____
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FIGURES

Legend

- Property Location
- Route to Hospital
- Hospital Location

0 0.5 1 Miles

77 Commercial Street Brooklyn, New York	AKRF	DATE **12/18/2014**
		PROJECT No. **12015**
HOSPITAL LOCATION MAP	Environmental Consultants 440 Park Avenue South, New York, N.Y. 10016	FIGURE **1**

© 2013 AKRF, Inc. Environmental Consultants O:\Projects\12015 - 77 COMMERCIAL ST\hazmat\12015 Hospital Loc Map.mxd

APPENDIX A

POTENTIAL HEALTH EFFECTS FROM ON-SITE CONTAMINANTS

ATSDR
AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY

ARSENIC
CAS # 7440-38-2

Division of Toxicology ToxFAQs™ December 2003

This fact sheet answers the most frequently asked health questions (FAQs) about arsenic. For more information, call the ATSDR Information Center at 1-888-422-8737. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It's important you understand this information because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Exposure to higher than average levels of arsenic occurs mostly in the workplace, near hazardous waste sites, or in areas with high natural levels. At high levels, inorganic arsenic can cause death. Exposure to lower levels for a long time can cause a discoloration of the skin and the appearance of small corns or warts. Arsenic has been found at 1,014 of the 1,598 National Priority List sites identified by the Environmental Protection Agency (EPA).

What is arsenic?

Arsenic is a naturally occurring element widely distributed in the earth's crust. In the environment, arsenic is combined with oxygen, chlorine, and sulfur to form inorganic arsenic compounds. Arsenic in animals and plants combines with carbon and hydrogen to form organic arsenic compounds.

Inorganic arsenic compounds are mainly used to preserve wood. Organic arsenic compounds are used as pesticides, primarily on cotton plants.

What happens to arsenic when it enters the environment?

- ❑ Arsenic cannot be destroyed in the environment. It can only change its form.
- ❑ Arsenic in air will settle to the ground or is washed out of the air by rain.
- ❑ Many arsenic compounds can dissolve in water.
- ❑ Fish and shellfish can accumulate arsenic, but the arsenic in fish is mostly in a form that is not harmful.

How might I be exposed to arsenic?

- ❑ Eating food, drinking water, or breathing air containing arsenic.
- ❑ Breathing contaminated workplace air.
- ❑ Breathing sawdust or burning smoke from wood treated with arsenic.
- ❑ Living near uncontrolled hazardous waste sites containing arsenic.
- ❑ Living in areas with unusually high natural levels of arsenic in rock.

How can arsenic affect my health?

Breathing high levels of inorganic arsenic can give you a sore throat or irritated lungs. Ingesting high levels of inorganic arsenic can result in death. Lower levels of arsenic can cause nausea and vomiting, decreased production of red and white blood cells, abnormal heart rhythm, damage to blood vessels, and a sensation of "pins and needles" in hands and feet.

Ingesting or breathing low levels of inorganic arsenic for a long time can cause a darkening of the skin and the

appearance of small "corns" or "warts" on the palms, soles, and torso.

Skin contact with inorganic arsenic may cause redness and swelling.

Organic arsenic compounds are less toxic than inorganic arsenic compounds. Exposure to high levels of some organic arsenic compounds may cause similar effects as inorganic arsenic.

How likely is arsenic to cause cancer?

Several studies have shown that inorganic arsenic can increase the risk of lung cancer, skin cancer, bladder cancer, liver cancer, kidney cancer, and prostate cancer. The World Health Organization (WHO), the Department of Health and Human Services (DHHS), and the EPA have determined that inorganic arsenic is a human carcinogen.

How can arsenic affect children?

We do not know if exposure to arsenic will result in birth defects or other developmental effects in people. Birth defects have been observed in animals exposed to inorganic arsenic.

It is likely that health effects seen in children exposed to high amounts of arsenic will be similar to the effects seen in adults.

How can families reduce the risk of exposure to arsenic?

❑ If you use arsenic-treated wood in home projects, you should wear dust masks, gloves, and protective clothing to decrease exposure to sawdust.
❑ If you live in an area with high levels of arsenic in water or soil, you should use cleaner sources of water and limit contact with soil.

Is there a medical test to show whether I've been exposed to arsenic?

There are tests to measure the level of arsenic in blood, urine, hair, or fingernails. The urine test is the most reliable test for arsenic exposure within the last few days. Tests on hair and fingernails can measure exposure to high levels or arsenic over the past 6-12 months. These tests can determine if you have been exposed to above-average levels of arsenic. They cannot predict how the arsenic levels in your body will affect your health.

Has the federal government made recommendations to protect human health?

EPA has set limits on the amount of arsenic that industrial sources can release to the environment and has restricted or canceled many uses of arsenic in pesticides. EPA has set a limit of 0.01 parts per million (ppm) for arsenic in drinking water.

The Occupational Safety and Health Administration has set limits of 10 μg arsenic per cubic meter of workplace air (10 $\mu g/m^3$) for 8 hour shifts and 40 hour work weeks.

Source of Information

Agency for Toxic Substances and Disease Registry (ATSDR). 2000. Toxicological Profile for Arsenic. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.

Where can I get more information? For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology, 1600 Clifton Road NE, Mailstop F-32, Atlanta, GA 30333. Phone: 1-888-422-8737, FAX: 770-488-4178. ToxFAQs™ Internet address is http://www.atsdr.cdc.gov/toxfaq.html . ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.

ATSDR
AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY

BARIUM AND COMPOUNDS

CAS # 7440-39-3

Division of Toxicology and Environmental Medicine ToxFAQs™ August 2007

This fact sheet answers the most frequently asked health questions (FAQs) about barium and barium compounds. For more information, call the ATSDR Information Center at 1-800-232-4636. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It is important you understand this information because these substances may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Exposure to barium occurs mostly in the workplace or from drinking contaminated water. Ingesting drinking water containing levels of barium above the EPA drinking water guidelines for relatively short periods of time can cause gastrointestinal disturbances and muscle weakness. Ingesting high levels for a long time can damage the kidneys. Barium and barium compounds have been found in at least 798 of the 1,684 National Priority List sites identified by the Environmental Protection Agency (EPA).

What is barium?

Barium is a silvery-white metal which exists in nature only in ores containing mixtures of elements. It combines with other chemicals such as sulfur or carbon and oxygen to form barium compounds.

Barium compounds are used by the oil and gas industries to make drilling muds. Drilling muds make it easier to drill through rock by keeping the drill bit lubricated. They are also used to make paint, bricks, ceramics, glass, and rubber.

Barium sulfate is sometimes used by doctors to perform medical tests and to take x-rays of the gastrointestinal tract.

What happens to barium when it enters the environment?

❑ Barium gets into the air during the mining, refining, and production of barium compounds, and from the burning of coal and oil.
❑ The length of time that barium will last in air, land, water, or sediments depends on the form of barium released.
❑ Barium compounds, such as barium sulfate and barium carbonate, which do not dissolve well in water, can last a long time in the environment.
❑ Barium compounds, such as barium chloride, barium nitrate, or barium hydroxide, that dissolve easily in water usually do not last in these forms for a long time in the environment. The barium in these compounds that is dissolved in water quickly combines with sulfate or carbonate that are naturally found in water and become the longer lasting forms (barium sulfate and barium carbonate).
❑ Fish and aquatic organisms can accumulate barium.

How might I be exposed to barium?

❑ Ingesting small amounts present in your food and water or breathing air containing very low levels of barium.
❑ Living in areas with unusually high natural levels of barium in the drinking water.
❑ Working in a job that involves barium production or use.
❑ Living or working near waste sites where barium has been disposed of.

How can barium affect my health?

The health effects of the different barium compounds depend on how well the compound dissolves in water or in the stomach contents. Barium compounds that do not dissolve well, such as barium sulfate, are not generally harmful.

Barium has been found to potentially cause gastrointestinal disturbances and muscular weakness when people are exposed to it at levels above the EPA drinking water standards for relatively short periods of time. Some people who eat or drink amounts of barium above background levels found in food and water for a short period may experience vomiting, abdominal cramps, diarrhea, difficulties in breathing, increased or decreased blood pressure, numbness around the face, and muscle weakness. Eating or drinking very large amounts of barium compounds that easily dissolve can cause changes in heart rhythm or paralysis and possibly death. Animals that drank barium over long periods had damage to the kidneys, decreases in body weight, and some died.

How likely is barium to cause cancer?

The Department of Health and Human Services (DHHS) and the International Agency for Research on Cancer (IARC) have not classified barium as to its carcinogenicity. The EPA has determined that barium is not likely to be carcinogenic to humans following ingestion and that there is insufficient information to determine whether it will be carcinogenic to humans following inhalation exposure.

How can barium affect children?

We do not know whether children will be more or less sensitive than adults to barium toxicity. A study in rats that swallowed barium found a decrease in newborn body weight; we do not know if a similar effect would be seen in humans.

How can families reduce the risks of exposure to barium?

The greatest potential source of barium exposure is through food and drinking water. However, the amount of barium in foods and drinking water are typically too low to be of concern.

Is there a medical test to determine whether I've been exposed to barium?

There is no routine medical test to determine whether you have been exposed to barium. Doctors can measure barium in body tissues and fluids, such as bones, blood, urine, and feces, using very complex instruments. These tests cannot be used to predict the extent of the exposure or potential health effects.

The geometric mean barium level measured in the U.S. general population aged 6 and older is reported by the Centers for Disease Control and Prevention (CDC) as 1.44 μg/g creatinine (measured in urine).

Has the federal government made recommendations to protect human health?

The EPA has set a limit of 2.0 milligrams of barium per liter of drinking water (2.0 mg/L), which is the same as 2 ppm.

The Occupational Safety and Health Administration (OSHA) has set Permissible Exposure Limits (PELs) of 0.5 milligrams of soluble barium compounds per cubic meter of workplace air (0.5 mg/m^3) for 8 hour shifts and 40 hour work weeks. The OSHA limits for barium sulfate dust are 15 mg/m^3 of total dust and 5 mg/m^3 for respirable fraction.

The National Institute for Occupational Safety and Health (NIOSH) has set Recommended Exposure Limits (RELs) of 0.5 mg/m^3 for soluble barium compounds. The NIOSH has set RELs of 10 mg/m^3 (total dust) for barium sulfate and 5 mg/m^3 (respirable fraction).

References

Agency for Toxic Substances and Disease Registry (ATSDR). 2007. Toxicological Profile for Barium and Compounds (Update). Atlanta, GA: U.S. Department of Public Health and Human Services, Public Health Service.

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CHROMIUM

CAS # 7440-47-3

Division of Toxicology and Environmental Medicine ToxFAQs™ September 2008

This fact sheet answers the most frequently asked health questions (FAQs) about chromium. For more information, call the ATSDR Information Center at 1-800-232-4636. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It is important you understand this information because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Exposure to chromium occurs from ingesting contaminated food or drinking water or breathing contaminated workplace air. Chromium(VI) at high levels can damage the nose and cause cancer. Ingesting high levels of chromium(VI) may result in anemia or damage to the stomach or intestines. Chromium(III) is an essential nutrient. Chromium has been found in at least 1,127 of the 1,669 National Priorities List sites identified by the Environmental Protection Agency (EPA).

What is chromium?

Chromium is a naturally occurring element found in rocks, animals, plants, and soil. It can exist in several different forms. Depending on the form it takes, it can be a liquid, solid, or gas. The most common forms are chromium(0), chromium(III), and chromium(VI). No taste or odor is associated with chromium compounds.

The metal chromium, which is the chromium(0) form, is used for making steel. Chromium(VI) and chromium(III) are used for chrome plating, dyes and pigments, leather tanning, and wood preserving.

What happens to chromium when it enters the environment?

❏ Chromium can be found in air, soil, and water after release from the manufacture, use, and disposal of chromium-based products, and during the manufacturing process.
❏ Chromium does not usually remain in the atmosphere, but is deposited into the soil and water .
❏ Chromium can easily change from one form to another in water and soil, depending on the conditions present.
❏ Fish do not accumulate much chromium in their bodies from water.

How might I be exposed to chromium?

❏ Eating food containing chromium(III).
❏ Breathing contaminated workplace air or skin contact during use in the workplace.
❏ Drinking contaminated well water .
❏ Living near uncontrolled hazardous waste sites containing chromium or industries that use chromium.

How can chromium affect my health?

Chromium(III) is an essential nutrient that helps the body use sugar, protein, and fat.

Breathing high levels of chromium(VI) can cause irritation to the lining of the nose, nose ulcers, runny nose, and breathing problems, such as asthma, cough, shortness of breath, or wheezing. The concentrations of chromium in air that can cause these effects may be different for different types of chromium compounds, with effects occurring at much lower concentrations for chromium(VI) compared to chromium(III).

The main health problems seen in animals following ingestion of chromium(VI) compounds are irritation and ulcers in the stomach and small intestine and anemia. Chromium(III) compounds are much less toxic and do not appear to cause these problems.

Sperm damage and damage to the male reproductive system have also been seen in laboratory animals exposed to chromium(VI).

Skin contact with certain chromium(VI) compounds can cause skin ulcers. Some people are extremely sensitive to chromium(VI) or chromium(III). Allergic reactions consisting of severe redness and swelling of the skin have been noted.

How likely is chromium to cause cancer?

The Department of Health and Human Services (DHHS), the International Agency for Reseach on Cancer (IARC), and the EPA have determined that chromium(VI) compounds are known human carcinogens. In workers, inhalation of chromium(VI) has been shown to cause lung cancer. Chromium(VI) also causes lung cancer in animals. An increase in stomach tumors was observed in humans and animals exposed to chromium(VI) in drinking water.

How can chromium affect children?

It is likely that health effects seen in children exposed to high amounts of chromium will be similar to the effects seen in adults.

We do not know if exposure to chromium will result in birth defects or other developmental effects in people. Some developmental effects have been observed in animals exposed to chromium(VI).

How can families reduce the risks of exposure to chromium?

❏ Children should avoid playing in soils near uncontrolled hazardous waste sites where chromium may have been discarded.

❏ Chromium is a component of tobacco smoke. Avoid smoking in enclosed spaces like inside the home or car in order to limit exposure to children and other family members.

❏ Although chromium(III) is an essential nutrient, you should avoid excessive use of dietary supplements containing chromium.

Is there a medical test to determine whether I've been exposed to chromium?

Since chromium(III) is an essential element and naturally occurs in food, there will always be some level of chromium in your body. Chromium can be measured in hair, urine, and blood.

Higher than normal levels of chromium in blood or urine may indicate that a person has been exposed to chromium. However, increases in blood and urine chromium levels cannot be used to predict the kind of health effects that might develop from that exposure.

Has the federal government made recommendations to protect human health?

The EPA has determined that exposure to chromium in drinking water at concentrations of 1 mg/L for up to 10 days is not expected to cause any adverse effects in a child.

The FDA has determined that the chromium concentration in bottled drinking water should not exceed 1 mg/L.

The Occupational Health and Safety Administration (OSHA) has limited workers' exposure to an average of 0.0005 mg/m^3 chromium(VI), 0.5 mg/m^3 chromium(III), and 1.0 mg/m^3 chromium(0) for an 8-hour workday, 40-hour workweek.

References

Agency for Toxic Substances and Disease Registry (ATSDR). 2008. Toxicological Profile for Chromium (Draft for Public Comment). Atlanta, GA: U.S. Department of Public Health and Human Services, Public Health Service.

Where can I get more information? For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology and Environmental Medicine, 1600 Clifton Road NE, Mailstop F-32, Atlanta, GA 30333. Phone: 1-800-232-4636, FAX: 770-488-4178. ToxFAQs Internet address via WWW is http://www.atsdr.cdc.gov/toxfaq.html. ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.

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COPPER

CAS # 7440-50-8

Division of Toxicology ToxFAQs™ September 2002

This fact sheet answers the most frequently asked health questions (FAQs) about copper. For more information, call the ATSDR Information Center at 1-888-422-8737. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It is important you understand this information because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Copper is a reddish metal that occurs naturally in the environment. It also occurs naturally in plants and animals. Low levels of copper are essential for maintaining good health. High levels can cause harmful effects such as irritation of the nose, mouth and eyes, vomiting, diarrhea, stomach crumps, and nausea. Copper has been found in at least 884 of the 1,613 National Priorities List sites identified by the Environmental Protection Agency (EPA).

What is copper?

Copper is a reddish metal that occurs naturally in rocks, soil, water, and air. Copper also occurs naturally in plants and animals.

Metallic copper can be easily molded or shaped. Metallic copper can be found in the U.S. penny, electrical wiring, and some water pipes. Metallic copper is also found in mixtures (called alloys) with other metals such as brass and bronze. Copper is also found as part of other compounds forming salts. Copper salts occur naturally, but are also manufactured. The most common copper salt is copper sulfate. Most copper compounds are blue-green in color. Copper compounds are commonly used in agriculture to treat plant diseases like mildew, for water treatment and, as preservatives for wood, leather, and fabrics.

What happens to copper when it enters the environment?

❑ Copper can enter the environment from the mining of copper and other metals and from factories that make or use metallic copper or copper compounds.

❑ It can also enter the environment through domestic waste water, combustion of fossil fuels and wastes, wood production, phosphate fertilizer production, and natural sources (e.g., windblown dust from soils, volcanoes, decaying vegetation, forest fires, and sea spray).

❑ Copper in soil strongly attaches to organic material and minerals.

❑ Copper that dissolves in water becomes rapidly bound to particles suspended in the water.

❑ Copper does not typically enter groundwater.

❑ Copper carried by particles emitted from smelters and ore processing plants is carried back to the ground by gravity or in rain or snow.

❑ Copper does not break down in the environment.

How might I be exposed to copper?

❑ Breathing air, drinking water, eating food, and by skin contact with soil, water, or other copper-containing substances.

❑ Some copper in the environment can be taken up by plants and animals.

❑ Higher exposure may occur if your water is corrosive and you have copper plumbing and brass water fixtures. ❑ You may be exposed to higher amounts of copper if you drink water or swim in lakes or reservoirs recently treated with copper to control algae or receive cooling water from a power plant that may have high amounts of dissolved copper.

❑ Using some garden products (e.g., fungicides) to control plant diseases.

❑ Living near bronze and brass production facilities may expose you to higher copper levels in soil.

❑ You may breathe copper-containing dust or have skin contact if you work in the industry of mining copper or

processing the ore. You may breathe high levels if you grind or weld copper metal.

How can copper affect my health?

Copper is essential for good health, but high amounts can be harmful. Long-term exposure to copper dust can irritate your nose, mouth, and eyes, and cause headaches, dizziness, nausea, and diarrhea.

Drinking water with higher than normal levels of copper may cause vomiting, diarrhea, stomach cramps, and nausea. Intentionally high intakes of copper can cause liver and kidney damage and even death.

How likely is copper to cause cancer?

We do not know whether copper can cause cancer in humans. The EPA has determined that copper is not classifiable as to carcinogenicity.

How can copper affect children?

Exposure to high levels of copper will result in the same type of effects in children and adults. Studies in animals suggest that the young children may have more severe effects than adults; we do not know if this would also be true in humans. There is a very small percentage of infants and children who are unusually sensitive to copper.

We do not know if copper can cause birth defects or other developmental effects in humans. Studies in animals suggest that ingestion of high levels of copper may cause a decrease in fetal growth.

How can families reduce the risk of exposure to copper?

❑ The greatest potential source of copper exposure is through drinking water, especially in water that is first drawn in the morning after sitting in copper pipes and brass faucets overnight.

❑ To reduce exposure, run the water for at least 15-30 seconds before using it.

❑ If you are exposed to copper at work, you may carry copper home on your skin, clothes, or tools. You can avoid this by showering, and changing clothing before leaving work, and your work clothes should be kept separate from other clothes and laundered separately.

Is there a medical test to show whether I've been exposed to copper?

Copper is normally found in all tissues of the body, blood, urine, feces, hair, and nails. High levels of copper in these samples can show that you have been exposed to higher than normal levels of copper. Tests to measure copper levels in the body are not routinely available at the doctor's office because they require special equipment. These tests cannot tell the extent of exposure or whether you will experience harmful effects.

Has the federal government made recommendations to protect human health?

The EPA has determined that drinking water should not contain more than 1.3 milligrams of copper per liter of water (1.3 mg/L).

The Occupational Safety and Health Administration (OSHA) has set a limit of 0.1 mg per cubic meter (0.1 mg/m^3) of copper fumes (vapor generated from heating copper) and 1 mg/m^3 of copper dusts (fine metallic copper particles) and mists (aerosol of soluble copper) in workroom air during an 8-hour work shift, 40-hour workweek.

The Food and Nutrition Board of the Institute of Medicine recommends dietary allowances (RDAs) of 340 micrograms (340 μg) of copper per day for children aged 1-3 years, 440 μg/day for children aged 4-8 years, 700 μg/day for children aged 9-13 years, 890 μg/day for children aged 14-18 years, and 900 μg/day for adults.

References

Agency for Toxic Substances and Disease Registry (ATSDR). 2002. Toxicological Profile for Copper (Draft for Public Comment). Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.

Where can I get more information? For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology, 1600 Clifton Road NE, Mailstop F-32, Atlanta, GA 30333. Phone: 1-888-422-8737, FAX: 770-488-4178. ToxFAQs Internet address via WWW is http://www.atsdr.cdc.gov/toxfaq.html. ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.

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FUEL OILS

CAS # 8008-20-6, 70892-10-3, 68476-30-2, 68476-34-6, 68476-31-3

Agency for Toxic Substances and Disease Registry ToxFAQs September 1996

This fact sheet answers the most frequently asked health questions (FAQs) about fuel oils. For more information, call the ATSDR Information Center at 1-888-422-8737. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It's important you understand this information because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

SUMMARY: Fuel oils are liquid mixtures produced from petroleum, and their use mostly involves burning them as fuels. Drinking or breathing fuel oils may cause nausea or nervous system effects. However, exposure under normal use conditions is not likely to be harmful. Fuel oils have been found in at least 26 of the 1,430 National Priorities List sites identified by the Environmental Protection Agency (EPA).

What are fuel oils?

(Pronounced fyōō′əl oilz)

Fuel oils are a variety of yellowish to light brown liquid mixtures that come from crude petroleum. Some chemicals found in fuel oils may evaporate easily, while others may more easily dissolve in water.

Fuel oils are produced by different petroleum refining processes, depending on their intended uses. Fuel oils may be used as fuel for engines, lamps, heaters, furnaces, and stoves, or as solvents.

Some commonly found fuel oils include kerosene, diesel fuel, jet fuel, range oil, and home heating oil. These fuel oils differ from one another by their hydrocarbon compositions, boiling point ranges, chemical additives, and uses.

What happens to fuel oils when they enter the environment?

- Some chemicals found in fuel oils may evaporate into the air from open containers or contaminated soil or water.
- Some chemicals found in fuel oils may dissolve in water after spills to surface waters or leaks from underground storage tanks.
- Some chemicals found in fuel oils may stick to particles in water, which will eventually cause them to settle to the bottom sediment.
- Some of the chemicals found in fuel oils may be broken down slowly in air, water, and soil by sunlight or small organisms.
- Some of the chemicals found in fuel oils may build up significantly in plants and animals.

How might I be exposed to fuel oils?

- Using a home kerosene heater or stove, or using fuel oils at work.
- Breathing air in home or building basements that has been contaminated with fuel oil vapors entering from the soil.
- Drinking or swimming in water that has been contaminated with fuel oils from a spill or a leaking underground storage tank.
- Touching soil contaminated with fuel oils.
- Using fuel oils to wash paint or grease from skin or equipment.

How can fuel oils affect my health?

Little information is available about the health effects that may be caused by fuel oils. People who use kerosene

stoves for cooking do not seem to have any health problems related to their exposure.

Breathing some fuel oils for short periods may cause nausea, eye irritation, increased blood pressure, headache, lightheadedness, loss of appetite, poor coordination, and difficulty concentrating. Breathing diesel fuel vapors for long periods may cause kidney damage and lower your blood's ability to clot.

Drinking small amounts of kerosene may cause vomiting, diarrhea, coughing, stomach swelling and cramps, drowsiness, restlessness, painful breathing, irritability, and unconsciousness. Drinking large amounts of kerosene may cause convulsions, coma, or death. Skin contact with kerosene for short periods may cause itchy, red, sore, or peeling skin.

How likely are fuel oils to cause cancer?

The International Agency for Research on Cancer (IARC) has determined that some fuel oils (heavy) may possibly cause cancer in humans, but for other fuel oils (light) there is not enough information to make a determination. IARC has also determined that occupational exposures to fuel oils during petroleum refining are probably carcinogenic in humans.

Some studies with mice have suggested that repeated contact with fuel oils may cause liver or skin cancer. However, other mouse studies have found this not to be the case. No studies are available in other animals or in people on the carcinogenic effects of fuel oils.

Is there a medical test to show whether I've been exposed to fuel oils?

There is no medical test that shows if you have been exposed to fuel oils. Tests are available to determine if some of the chemicals commonly found in fuel oils are in your blood. However, the presence of these chemicals in blood may not necessarily mean that you have been exposed to fuel oils.

Has the federal government made recommendations to protect human health?

The Occupational Safety and Health Administration (OSHA) and the Air Force Office of Safety and Health (AFOSH) have set a permissible exposure level (PEL) of 400 parts of petroleum distillates per million parts of air (400 ppm) for an 8-hour workday, 40-hour workweek.

The National Institute for Occupational Safety and Health (NIOSH) recommends that average workplace air levels not exceed 350 milligrams of petroleum distillates per cubic meter of air (350 mg/m^3) for a 40-hour workweek.

The Department of Transportation (DOT) lists fuel oils as hazardous materials and, therefore, regulates their transportation.

Glossary

Carcinogenic: Able to cause cancer.

CAS: Chemical Abstracts Service.

Evaporate: To change into a vapor or a gas.

Hydrocarbon: Any compound made up of hydrogen and carbon.

Milligram (mg): One thousandth of a gram.

ppm: Parts per million.

Sediment: Mud and debris that have settled to the bottom of a body of water.

References

Agency for Toxic Substances and Disease Registry (ATSDR). 1995. Toxicological profile for fuel oils. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.

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LEAD

CAS # 7439-92-1

Division of Toxicology and Environmental Medicine ToxFAQs™ August 2007

This fact sheet answers the most frequently asked health questions (FAQs) about lead. For more information, call the ATSDR Information Center at 1-800-232-4636. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It is important you understand this information because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Exposure to lead can happen from breathing workplace air or dust, eating contaminated foods, or drinking contaminated water. Children can be exposed from eating lead-based paint chips or playing in contaminated soil. Lead can damage the nervous system, kidneys, and reproductive system. Lead has been found in at least 1,272 of the 1,684 National Priority List sites identified by the Environmental Protection Agency (EPA).

What is lead?

Lead is a naturally occurring bluish-gray metal found in small amounts in the earth's crust. Lead can be found in all parts of our environment. Much of it comes from human activities including burning fossil fuels, mining, and manufacturing.

Lead has many different uses. It is used in the production of batteries, ammunition, metal products (solder and pipes), and devices to shield X-rays. Because of health concerns, lead from paints and ceramic products, caulking, and pipe solder has been dramatically reduced in recent years. The use of lead as an additive to gasoline was banned in 1996 in the United States.

What happens to lead when it enters the environment?

❏ Lead itself does not break down, but lead compounds are changed by sunlight, air, and water.

❏ When lead is released to the air, it may travel long distances before settling to the ground.

❏ Once lead falls onto soil, it usually sticks to soil particles.

❏ Movement of lead from soil into groundwater will depend on the type of lead compound and the characteristics of the soil.

How might I be exposed to lead?

❏ Eating food or drinking water that contains lead. Water pipes in some older homes may contain lead solder. Lead can leach out into the water.

❏ Spending time in areas where lead-based paints have been used and are deteriorating. Deteriorating lead paint can contribute to lead dust.

❏ Working in a job where lead is used or engaging in certain hobbies in which lead is used, such as making stained glass.

❏ Using health-care products or folk remedies that contain lead.

How can lead affect my health?

The effects of lead are the same whether it enters the body through breathing or swallowing. Lead can affect almost every organ and system in your body. The main target for lead toxicity is the nervous system, both in adults and children. Long-term exposure of adults can result in decreased performance in some tests that measure functions of the nervous system. It may also cause weakness in fingers, wrists, or ankles. Lead exposure also causes small increases in blood pressure, particularly in middle-aged and older people and can cause anemia. Exposure to high lead levels can severely damage the brain and kidneys in adults or children and ultimately cause death. In pregnant women, high levels of exposure to lead may cause miscarriage. High-level exposure in men can damage the organs responsible for sperm production.

How likely is lead to cause cancer?

We have no conclusive proof that lead causes cancer in humans. Kidney tumors have developed in rats and mice that had been given large doses of some kind of lead compounds. The Department of Health and Human Services

(DHHS) has determined that lead and lead compounds are reasonably anticipated to be human carcinogens and the EPA has determined that lead is a probable human carcinogen. The International Agency for Research on Cancer (IARC) has determined that inorganic lead is probably carcinogenic to humans and that there is insufficient information to determine whether organic lead compounds will cause cancer in humans.

How can lead affect children?

Small children can be exposed by eating lead-based paint chips, chewing on objects painted with lead-based paint, or swallowing house dust or soil that contains lead.

Children are more vulnerable to lead poisoning than adults. A child who swallows large amounts of lead may develop blood anemia, severe stomachache, muscle weakness, and brain damage. If a child swallows smaller amounts of lead, much less severe effects on blood and brain function may occur. Even at much lower levels of exposure, lead can affect a child's mental and physical growth.

Exposure to lead is more dangerous for young and unborn children. Unborn children can be exposed to lead through their mothers. Harmful effects include premature births, smaller babies, decreased mental ability in the infant, learning difficulties, and reduced growth in young children. These effects are more common if the mother or baby was exposed to high levels of lead. Some of these effects may persist beyond childhood.

How can families reduce the risks of exposure to lead?

❏ Avoid exposure to sources of lead.

❏ Do not allow children to chew or mouth surfaces that may have been painted with lead-based paint.

❏ If you have a water lead problem, run or flush water that has been standing overnight before drinking or cooking with it.

❏ Some types of paints and pigments that are used as make-up or hair coloring contain lead. Keep these kinds of products away from children

❏ If your home contains lead-based paint or you live in an area contaminated with lead, wash children's hands and faces often to remove lead dusts and soil, and regularly clean the house of dust and tracked in soil.

Is there a medical test to determine whether I've been exposed to lead?

A blood test is available to measure the amount of lead in your blood and to estimate the amount of your recent exposure to lead. Blood tests are commonly used to screen children for lead poisoning. Lead in teeth or bones can be measured by X-ray techniques, but these methods are not widely available. Exposure to lead also can be evaluated by measuring erythrocyte protoporphyrin (EP) in blood samples. EP is a part of red blood cells known to increase when the amount of lead in the blood is high. However, the EP level is not sensitive enough to identify children with elevated blood lead levels below about 25 micrograms per deciliter (μg/dL). These tests usually require special analytical equipment that is not available in a doctor's office. However, your doctor can draw blood samples and send them to appropriate laboratories for analysis.

Has the federal government made recommendations to protect human health?

The Centers for Disease Control and Prevention (CDC) recommends that states test children at ages 1 and 2 years. Children should be tested at ages 3–6 years if they have never been tested for lead, if they receive services from public assistance programs for the poor such as Medicaid or the Supplemental Food Program for Women, Infants, and Children, if they live in a building or frequently visit a house built before 1950; if they visit a home (house or apartment) built before 1978 that has been recently remodeled; and/or if they have a brother, sister, or playmate who has had lead poisoning. CDC considers a blood lead level of 10 μg/dL to be a level of concern for children.

EPA limits lead in drinking water to 15 μg per liter.

References

Agency for Toxic Substances and Disease Registry (ATSDR). 2007. Toxicological Profile for lead (Update). Atlanta, GA: U.S. Department of Public Health and Human Services, Public Health Service.

Where can I get more information? For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology and Environmental Medicine, 1600 Clifton Road NE, Mailstop F-32, Atlanta, GA 30333. Phone: 1-800-232-4636, FAX: 770-488-4178. ToxFAQs Internet address via WWW is http://www.atsdr.cdc.gov/toxfaq.html. ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.

ATSDR
AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY

MANGANESE

CAS # 7439-96-5

Division of Toxicology and Environmental Medicine ToxFAQs™ September 2008

This fact sheet answers the most frequently asked health questions (FAQs) about manganese. For more information, call the ATSDR Information Center at 1-800-232-4636. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It is important you understand this information because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Manganese is a trace element and eating a small amount from food or water is needed to stay healthy. Exposure to excess levels of manganese may occur from breathing air, particularly where manganese is used in manufacturing, and from drinking water and eating food. At high levels, it can cause damage to the brain. Manganese has been found in at least 869 of the 1,669 National Priorities List sites identified by the Environmental Protection Agency (EPA).

What is manganese?

Manganese is a naturally occurring metal that is found in many types of rocks. Pure manganese is silver-colored, but does not occur naturally. It combines with other substances such as oxygen, sulfur, or chlorine. Manganese occurs naturally in most foods and may be added to some foods.

Manganese is used principally in steel production to improve hardness, stiffness, and strength. It may also be used as an additive in gasoline to improve the octane rating of the gas.

What happens to manganese when it enters the environment?

❑ Manganese can be released to the air, soil, and water from the manufacture, use, and disposal of manganese-based products.

❑ Manganese cannot break down in the environment. It can only change its form or become attached to or separated from particles.

❑ In water, manganese tends to attach to particles in the water or settle into the sediment.

❑ The chemical state of manganese and the type of soil determine how fast it moves through the soil and how much is retained in the soil.

❑ The manganese-containing gasoline additive may degrade in the environment quickly when exposed to sunlight, releasing manganese.

How might I be exposed to manganese?

❑ The primary way you can be exposed to manganese is by eating food or manganese-containing nutritional supplements. Vegetarians who consume foods rich in manganese such as grains, beans and nuts, as well as heavy tea drinkers, may have a higher intake of manganese than the average person.

❑ Certain occupations like welding or working in a factory where steel is made may increase your chances of being exposed to high levels of manganese.

❑ Manganese is routinely contained in groundwater, drinking water, and soil at low levels. Drinking water containing manganese or swimming or bathing in water containing manganese may expose you to low levels of this chemical.

How can manganese affect my health?

Manganese is an essential nutrient, and eating a small amount of it each day is important to stay healthy.

The most common health problems in workers exposed to high levels of manganese involve the nervous system. These health effects include behavioral changes and other nervous system effects, which include movements that may become slow and clumsy. This combination of symptoms when sufficiently severe is referred to as "manganism". Other less severe nervous system effects such as slowed hand movements have been observed in

some workers exposed to lower concentrations in the work place.

Nervous system and reproductive effects have been observed in animals after high oral doses of manganese.

How likely is manganese to cause cancer?

The EPA concluded that existing scientific information cannot determine whether or not excess manganese can cause cancer.

How can manganese affect children?

Studies in children have suggested that extremely high levels of manganese exposure may produce undesirable effects on brain development, including changes in behavior and decreases in the ability to learn and remember. We do not know for certain that these changes were caused by manganese alone. We do not know if these changes are temporary or permanent. We do not know whether children are more sensitive than adults to the effects of manganese, but there is some indication from experiments in laboratory animals that they may be.

Studies of manganese workers have not found increases in birth defects or low birth weight in their offspring. No birth defects were observed in animals exposed to manganese.

How can families reduce the risks of exposure to manganese?

❏ Children are not likely to be exposed to harmful amounts of manganese in the diet. However, higher-than-usual amounts of manganese may be absorbed if their diet is low in iron. It is important to provide your child with a well-balanced diet.

❏ Workers exposed to high levels of airborne manganese in certain occupational settings may accumulate manganese dust on their work clothes. Manganese-contaminated work clothing should be removed before getting into your car or entering your home to help reduce the exposure hazard for yourself and your family.

Is there a medical test to determine whether I've been exposed to manganese?

Several tests are available to measure manganese in blood, urine, hair, or feces. Because manganese is normally present in our body, some is always found in tissues or fluids.

Because excess manganese is usually removed from the body within a few days, past exposures are difficult to measure with common laboratory tests.

Has the federal government made recommendations to protect human health?

The EPA has determined that exposure to manganese in drinking water at concentrations of 1 mg/L for up to 10 days is not expected to cause any adverse effects in a child.

The EPA has established that lifetime exposure to 0.3 mg/L manganese is not expected to cause any adverse effects.

The FDA has determined that the manganese concentration in bottled drinking water should not exceed 0.05 mg/L.

The Occupational Health and Safety Administration (OSHA) has established a ceiling limit (concentration that should not be exceeded at any time during exposure) of 5 mg/m^3 for manganese in workplace air.

References

Agency for Toxic Substances and Disease Registry (ATSDR). 2008. Toxicological Profile for Manganese (Draft for Public Comment). Atlanta, GA: U.S. Department of Public Health and Human Services, Public Health Service.

Where can I get more information? For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology and Environmental Medicine, 1600 Clifton Road NE, Mailstop F-32, Atlanta, GA 30333. Phone: 1-800-232-4636, FAX: 770-488-4178. ToxFAQs Internet address via WWW is http://www.atsdr.cdc.gov/toxfaq.html. ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.

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MERCURY
CAS # 7439-97-6

Agency for Toxic Substances and Disease Registry ToxFAQs April 1999

This fact sheet answers the most frequently asked health questions (FAQs) about mercury. For more information, call the ATSDR Information Center at 1-888-422-8737. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It's important you understand this information because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Exposure to mercury occurs from breathing contaminated air, ingesting contaminated water and food, and having dental and medical treatments. Mercury, at high levels, may damage the brain, kidneys, and developing fetus. This chemical has been found in at least 714 of 1,467 National Priorities List sites identified by the Environmental Protection Agency.

What is mercury?
(Pronounced mŭr′kyə-rē)

Mercury is a naturally occurring metal which has several forms. The metallic mercury is a shiny, silver-white, odorless liquid. If heated, it is a colorless, odorless gas.

Mercury combines with other elements, such as chlorine, sulfur, or oxygen, to form inorganic mercury compounds or "salts," which are usually white powders or crystals. Mercury also combines with carbon to make organic mercury compounds. The most common one, methylmercury, is produced mainly by microscopic organisms in the water and soil. More mercury in the environment can increase the amounts of methylmercury that these small organisms make.

Metallic mercury is used to produce chlorine gas and caustic soda, and is also used in thermometers, dental fillings, and batteries. Mercury salts are sometimes used in skin lightening creams and as antiseptic creams and ointments.

What happens to mercury when it enters the environment?

- Inorganic mercury (metallic mercury and inorganic mercury compounds) enters the air from mining ore deposits, burning coal and waste, and from manufacturing plants.
- It enters the water or soil from natural deposits, disposal of wastes, and volcanic activity.
- Methylmercury may be formed in water and soil by small organisms called bacteria.
- Methylmercury builds up in the tissues of fish. Larger and older fish tend to have the highest levels of mercury.

How might I be exposed to mercury?

- Eating fish or shellfish contaminated with methylmercury.
- Breathing vapors in air from spills, incinerators, and industries that burn mercury-containing fuels.
- Release of mercury from dental work and medical treatments.
- Breathing contaminated workplace air or skin contact during use in the workplace (dental, health services, chemical, and other industries that use mercury).
- Practicing rituals that include mercury.

How can mercury affect my health?

The nervous system is very sensitive to all forms of mercury. Methylmercury and metallic mercury vapors are more harmful than other forms, because more mercury in these forms reaches the brain. Exposure to high levels of metallic, inorganic, or organic mercury can permanently damage the brain, kidneys, and developing fetus. Effects on brain functioning may result in irritability, shyness, tremors, changes in vision or hearing, and memory problems.

Short-term exposure to high levels of metallic mercury vapors may cause effects including lung damage, nausea,

vomiting, diarrhea, increases in blood pressure or heart rate, skin rashes, and eye irritation.

How likely is mercury to cause cancer?

There are inadequate human cancer data available for all forms of mercury. Mercuric chloride has caused increases in several types of tumors in rats and mice, and methylmercury has caused kidney tumors in male mice. The EPA has determined that mercuric chloride and methylmercury are possible human carcinogens.

How can mercury affect children?

Very young children are more sensitive to mercury than adults. Mercury in the mother's body passes to the fetus and may accumulate there. It can also can pass to a nursing infant through breast milk. However, the benefits of breast feeding may be greater than the possible adverse effects of mercury in breast milk.

Mercury's harmful effects that may be passed from the mother to the fetus include brain damage, mental retardation, incoordination, blindness, seizures, and inability to speak. Children poisoned by mercury may develop problems of their nervous and digestive systems, and kidney damage.

How can families reduce the risk of exposure to mercury?

Carefully handle and dispose of products that contain mercury, such as thermometers or fluorescent light bulbs. Do not vacuum up spilled mercury, because it will vaporize and increase exposure. If a large amount of mercury has been spilled, contact your health department. Teach children not to play with shiny, silver liquids.

Properly dispose of older medicines that contain mercury. Keep all mercury-containing medicines away from children.

Pregnant women and children should keep away from rooms where liquid mercury has been used.

Learn about wildlife and fish advisories in your area from your public health or natural resources department.

Is there a medical test to show whether I've been exposed to mercury?

Tests are available to measure mercury levels in the body. Blood or urine samples are used to test for exposure to metallic mercury and to inorganic forms of mercury. Mercury in whole blood or in scalp hair is measured to determine exposure to methylmercury. Your doctor can take samples and send them to a testing laboratory.

Has the federal government made recommendations to protect human health?

The EPA has set a limit of 2 parts of mercury per billion parts of drinking water (2 ppb).

The Food and Drug Administration (FDA) has set a maximum permissible level of 1 part of methylmercury in a million parts of seafood (1 ppm).

The Occupational Safety and Health Administration (OSHA) has set limits of 0.1 milligram of organic mercury per cubic meter of workplace air (0.1 mg/m^3) and 0.05 mg/m^3 of metallic mercury vapor for 8-hour shifts and 40-hour work weeks.

References

Agency for Toxic Substances and Disease Registry (ATSDR). 1999. Toxicological profile for mercury. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.

Where can I get more information? For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology, 1600 Clifton Road NE, Mailstop F-32, Atlanta, GA 30333. Phone: 1-888-422-8737, FAX: 770-488-4178. ToxFAQs Internet address via WWW is http://www.atsdr.cdc.gov/toxfaq.html ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.

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NICKEL
CAS # 7440-02-0

Agency for Toxic Substances and Disease Registry ToxFAQs September 1997

This fact sheet answers the most frequently asked health questions (FAQs) about nickel. For more information, call the ATSDR Information Center at 1-888-422-8737. This fact sheet is one in a series of summaries about hazardous substances and their health effects. This information is important because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Nickel is a hard, silvery-white metal used to make stainless steel and other metal alloys. Skin effects are the most common effects in people who are sensitive to nickel. Workers who breathed very large amounts of nickel compounds have developed lung and nasal sinus cancers. Nickel has been found in at least 709 of the 1,430 National Priorities List sites identified by the Environmental Protection Agency (EPA).

What is nickel?

(Pronounced nĭk′əl)

Nickel is a very abundant element. In the environment, it is found primarily combined with oxygen (oxides) or sulfur (sulfides). It is found in all soils and is emitted from volcanos.

Pure nickel is a hard, silvery-white metal that is combined with other metals to form mixtures called alloys. Some of the metals that nickel can be alloyed with are iron, copper, chromium, and zinc. These alloys are used in the making of metal coins and jewelry and in industry for making metal items.

Nickel compounds are also used for nickel plating, to color ceramics, to make some batteries, and as substances known as catalysts that increase the rate of chemical reactions. Nickel and its compounds have no characteristic odor or taste.

What happens to nickel when it enters the environment?

- Small nickel particles in the air settle to the ground or are taken out of the air in rain.
- Much of the nickel in the environment is found with soil and sediments because nickel attaches to particles that contain iron or manganese, which are often present in soil and sediments.
- Nickel does not appear to collect in fish, plants, or animals used for food.

How might I be exposed to nickel?

- By breathing air or smoking tobacco containing nickel.
- By eating food containing nickel, which is the major source of exposure for most people.
- By drinking water which contains small amounts of nickel.
- By handling coins and touching other metals containing nickel, such as jewelry.

How can nickel affect my health?

Nickel is required to maintain health in animals. A small amount of nickel is probably essential for humans, although a lack of nickel has not been found to affect the health of humans.

The most common adverse health effect of nickel in humans is an allergic reaction. People can become sensitive to nickel when jewelry or other things containing it are in direct contact with the skin. Once a person is sensitized to nickel, further contact with it will produce a reaction. The most common reaction is a skin rash at the site of contact.

Less frequently, some people who are sensitive to nickel

have asthma attacks following exposure to nickel. People who are sensitive to nickel have reactions when it is in contact with the skin, and some sensitized persons react when they eat nickel in food, drink it in water, or breathe dust containing it.

Lung effects, including chronic bronchitis and reduced lung function, have been observed in workers who breathed large amounts of nickel. Current levels of nickel in workplace air are much lower than in the past, and today few workers show symptoms of nickel exposure.

People who are not sensitive to it must eat very large amounts of nickel to show adverse health effects. Workers who accidently drank water containing very high levels of nickel (100,000 times more than in normal drinking water) had stomachaches and effects on their blood and kidneys.

Animal studies show that breathing high levels of nickel compounds may result in inflammation of the respiratory tract. Eating or drinking large amounts of nickel has been reported to cause lung disease in dogs and rats and to affect the stomach, blood, liver, kidneys, immune system, and reproduction and development in rats and mice.

How likely is nickel to cause cancer?

The Department of Health and Human Services (DHHS) has determined that nickel and certain nickel compounds may reasonably be anticipated to be carcinogens. Cancers of the lung and nasal sinus have resulted when workers breathed dust containing high levels of nickel compounds while working in nickel refineries or nickel processing plants.

When rats and mice breathed nickel compounds for a lifetime, nickel compounds that were hard to dissolve caused cancer, while a soluble nickel compound did not cause cancer.

Is there a medical test to show whether I've been exposed to nickel?

Measurements of the amount of nickel in your blood, feces, and urine can be used to estimate your exposure to nickel. These measurements are most useful if the type of nickel compound you have been exposed to is known. However, these tests cannot predict whether you will experience any health effects.

Has the federal government made recommendations to protect human health?

The EPA recommends that children drink water containing no more than 0.04 milligrams of nickel per liter of water (0.04 mg/L) for 1-10 days of exposure.

The Occupational Safety and Health Administration (OSHA) has set an occupational exposure limit of 1 milligram of nickel per cubic meter of air (l mg/m^3) for an 8-hour workday, 40-hour workweek.

Glossary

Carcinogen: A substance with the ability to cause cancer.

CAS: Chemical Abstracts Service.

Milligram (mg): One thousandth of a gram.

Sediments: Mud and debris that have settled to the bottom of a body of water.

Soluble: Dissolves in water.

References

This ToxFAQs information is taken from the 1997 Toxicological Profile for Nickel (update) produced by the Agency for Toxic Substances and Disease Registry, Public Health Service, U.S. Department of Health and Human Services, Public Health Service in Atlanta, GA.

Where can I get more information? For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology, 1600 Clifton Road NE, Mailstop F-32, Atlanta, GA 30333. Phone: 1-888-422-8737, FAX: 770-488-4178. ToxFAQs Internet address via WWW is http://www.atsdr.cdc.gov/toxfaq.html ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.

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POLYCYCLIC AROMATIC HYDROCARBONS (PAHs)

Agency for Toxic Substances and Disease Registry ToxFAQs September 1996

This fact sheet answers the most frequently asked health questions (FAQs) about polycyclic aromatic hydrocarbons (PAHs). For more information, call the ATSDR Information Center at 1-888-422-8737. This fact sheet is one in a series of summaries about hazardous substances and their health effects. This information is important because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

SUMMARY: Exposure to polycyclic aromatic hydrocarbons usually occurs by breathing air contaminated by wild fires or coal tar, or by eating foods that have been grilled. PAHs have been found in at least 600 of the 1,430 National Priorities List sites identified by the Environmental Protection Agency (EPA).

What are polycyclic aromatic hydrocarbons?

(Pronounced pŏl′ĭ-sī′klĭk ăr′ə-măt′ĭk hī′drə-kar′bənz)

Polycyclic aromatic hydrocarbons (PAHs) are a group of over 100 different chemicals that are formed during the incomplete burning of coal, oil and gas, garbage, or other organic substances like tobacco or charbroiled meat. PAHs are usually found as a mixture containing two or more of these compounds, such as soot.

Some PAHs are manufactured. These pure PAHs usually exist as colorless, white, or pale yellow-green solids. PAHs are found in coal tar, crude oil, creosote, and roofing tar, but a few are used in medicines or to make dyes, plastics, and pesticides.

What happens to PAHs when they enter the environment?

- PAHs enter the air mostly as releases from volcanoes, forest fires, burning coal, and automobile exhaust.
- PAHs can occur in air attached to dust particles.
- Some PAH particles can readily evaporate into the air from soil or surface waters.
- PAHs can break down by reacting with sunlight and other chemicals in the air, over a period of days to weeks.
- PAHs enter water through discharges from industrial and wastewater treatment plants.
- Most PAHs do not dissolve easily in water. They stick to solid particles and settle to the bottoms of lakes or rivers.
- Microorganisms can break down PAHs in soil or water after a period of weeks to months.
- In soils, PAHs are most likely to stick tightly to particles; certain PAHs move through soil to contaminate underground water.
- PAH contents of plants and animals may be much higher than PAH contents of soil or water in which they live.

How might I be exposed to PAHs?

- Breathing air containing PAHs in the workplace of coking, coal-tar, and asphalt production plants; smokehouses; and municipal trash incineration facilities.
- Breathing air containing PAHs from cigarette smoke, wood smoke, vehicle exhausts, asphalt roads, or agricultural burn smoke.
- Coming in contact with air, water, or soil near hazardous waste sites.
- Eating grilled or charred meats; contaminated cereals, flour, bread, vegetables, fruits, meats; and processed or pickled foods.
- Drinking contaminated water or cow's milk.

- Nursing infants of mothers living near hazardous waste sites may be exposed to PAHs through their mother's milk.

How can PAHs affect my health?

Mice that were fed high levels of one PAH during pregnancy had difficulty reproducing and so did their offspring. These offspring also had higher rates of birth defects and lower body weights. It is not known whether these effects occur in people.

Animal studies have also shown that PAHs can cause harmful effects on the skin, body fluids, and ability to fight disease after both short- and long-term exposure. But these effects have not been seen in people.

How likely are PAHs to cause cancer?

The Department of Health and Human Services (DHHS) has determined that some PAHs may reasonably be expected to be carcinogens.

Some people who have breathed or touched mixtures of PAHs and other chemicals for long periods of time have developed cancer. Some PAHs have caused cancer in laboratory animals when they breathed air containing them (lung cancer), ingested them in food (stomach cancer), or had them applied to their skin (skin cancer).

Is there a medical test to show whether I've been exposed to PAHs?

In the body, PAHs are changed into chemicals that can attach to substances within the body. There are special tests that can detect PAHs attached to these substances in body tissues or blood. However, these tests cannot tell whether any health effects will occur or find out the extent or source of your exposure to the PAHs. The tests aren't usually available in your doctor's office because special equipment is needed to conduct them.

Has the federal government made recommendations to protect human health?

The Occupational Safety and Health Administration (OSHA) has set a limit of 0.2 milligrams of PAHs per cubic meter of air (0.2 mg/m^3). The OSHA Permissible Exposure Limit (PEL) for mineral oil mist that contains PAHs is 5 mg/m^3 averaged over an 8-hour exposure period.

The National Institute for Occupational Safety and Health (NIOSH) recommends that the average workplace air levels for coal tar products not exceed 0.1 mg/m^3 for a 10-hour workday, within a 40-hour workweek. There are other limits for workplace exposure for things that contain PAHs, such as coal, coal tar, and mineral oil.

Glossary

Carcinogen: A substance that can cause cancer.

Ingest: Take food or drink into your body.

References

Agency for Toxic Substances and Disease Registry (ATSDR). 1995. Toxicological profile for polycyclic aromatic hydrocarbons. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.

Where can I get more information? For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology, 1600 Clifton Road NE, Mailstop F-32, Atlanta, GA 30333. Phone: 1-888-422-8737, FAX: 770-488-4178. ToxFAQs Internet address via WWW is http://www.atsdr.cdc.gov/toxfaq.html ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.

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AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY

TRICHLOROETHYLENE

CAS # 79-01-6

Division of Toxicology ToxFAQs™ July 2003

This fact sheet answers the most frequently asked health questions (FAQs) about trichloroethylene. For more information, call the ATSDR Information Center at 1-888-422-8737. This fact sheet is one in a series of summaries about hazardous substances and their health effects. This information is important because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Trichloroethylene is a colorless liquid which is used as a solvent for cleaning metal parts. Drinking or breathing high levels of trichloroethylene may cause nervous system effects, liver and lung damage, abnormal heartbeat, coma, and possibly death. Trichloroethylene has been found in at least 852 of the 1,430 National Priorities List sites identified by the Environmental Protection Agency (EPA).

What is trichloroethylene?

Trichloroethylene (TCE) is a nonflammable, colorless liquid with a somewhat sweet odor and a sweet, burning taste. It is used mainly as a solvent to remove grease from metal parts, but it is also an ingredient in adhesives, paint removers, typewriter correction fluids, and spot removers.

Trichloroethylene is not thought to occur naturally in the environment. However, it has been found in underground water sources and many surface waters as a result of the manufacture, use, and disposal of the chemical.

What happens to trichloroethylene when it enters the environment?

- Trichloroethylene dissolves a little in water, but it can remain in ground water for a long time.
- Trichloroethylene quickly evaporates from surface water, so it is commonly found as a vapor in the air.
- Trichloroethylene evaporates less easily from the soil than from surface water. It may stick to particles and remain for a long time.
- Trichloroethylene may stick to particles in water, which will cause it to eventually settle to the bottom sediment.
- Trichloroethylene does not build up significantly in plants and animals.

How might I be exposed to trichloroethylene?

- Breathing air in and around the home which has been contaminated with trichloroethylene vapors from shower water or household products such as spot removers and typewriter correction fluid.
- Drinking, swimming, or showering in water that has been contaminated with trichloroethylene.
- Contact with soil contaminated with trichloroethylene, such as near a hazardous waste site.
- Contact with the skin or breathing contaminated air while manufacturing trichloroethylene or using it at work to wash paint or grease from skin or equipment.

How can trichloroethylene affect my health?

Breathing small amounts may cause headaches, lung irritation, dizziness, poor coordination, and difficulty concentrating.

Breathing large amounts of trichloroethylene may cause impaired heart function, unconsciousness, and death. Breathing it for long periods may cause nerve, kidney, and liver damage.

Drinking large amounts of trichloroethylene may cause nausea, liver damage, unconsciousness, impaired heart function, or death.

Drinking small amounts of trichloroethylene for long periods may cause liver and kidney damage, impaired immune system function, and impaired fetal development in pregnant women, although the extent of some of these effects is not yet clear.

Skin contact with trichloroethylene for short periods may cause skin rashes.

How likely is trichloroethylene to cause cancer?

Some studies with mice and rats have suggested that high levels of trichloroethylene may cause liver, kidney, or lung cancer. Some studies of people exposed over long periods to high levels of trichloroethylene in drinking water or in workplace air have found evidence of increased cancer. Although, there are some concerns about the studies of people who were exposed to trichloroethylene, some of the effects found in people were similar to effects in animals.

In its 9th Report on Carcinogens, the National Toxicology Program (NTP) determined that trichloroethylene is "reasonably anticipated to be a human carcinogen." The International Agency for Research on Cancer (IARC) has determined that trichloroethylene is "probably carcinogenic to humans."

Is there a medical test to show whether I've been exposed to trichloroethylene?

If you have recently been exposed to trichloroethylene, it can be detected in your breath, blood, or urine. The breath test, if it is performed soon after exposure, can tell if you have been exposed to even a small amount of trichloroethylene.

Exposure to larger amounts is assessed by blood and urine tests, which can detect trichloroethylene and many of its breakdown products for up to a week after exposure. However, exposure to other similar chemicals can produce the same breakdown products, so their detection is not absolute proof of exposure to trichloroethylene. This test isn't available at most doctors' offices, but can be done at special laboratories that have the right equipment.

Has the federal government made recommendations to protect human health?

The EPA has set a maximum contaminant level for trichloroethylene in drinking water at 0.005 milligrams per liter (0.005 mg/L) or 5 parts of TCE per billion parts water.

The EPA has also developed regulations for the handling and disposal of trichloroethylene.

The Occupational Safety and Health Administration (OSHA) has set an exposure limit of 100 parts of trichloroethylene per million parts of air (100 ppm) for an 8-hour workday, 40-hour workweek.

Glossary

Carcinogenicity: The ability of a substance to cause cancer.
CAS: Chemical Abstracts Service.
Evaporate: To change into a vapor or gas.
Milligram (mg): One thousandth of a gram.
Nonflammable: Will not burn.
ppm: Parts per million.
Sediment: Mud and debris that have settled to the bottom of a body of water.
Solvent: A chemical that dissolves other substances.

References

This ToxFAQs information is taken from the 1997 Toxicological Profile for Trichloroethylene (update) produced by the Agency for Toxic Substances and Disease Registry, Public Health Service, U.S. Department of Health and Human Services, Public Health Service in Atlanta, GA.

Where can I get more information? For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology, 1600 Clifton Road NE, Mailstop F-32, Atlanta, GA 30333. Phone: 1-888-422-8737, FAX: 770-488-4178. ToxFAQs™ Internet address is http://www.atsdr.cdc.gov/toxfaq.html . ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.

ATSDR
AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY

TETRACHLOROETHYLENE
CAS # 127-18-4

Agency for Toxic Substances and Disease Registry ToxFAQs September 1997

This fact sheet answers the most frequently asked health questions (FAQs) about tetrachloroethylene. For more information, call the ATSDR Information Center at 1-888-422-8737. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It's important you understand this information because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Tetrachloroethylene is a manufactured chemical used for dry cleaning and metal degreasing. Exposure to very high concentrations of tetrachloroethylene can cause dizziness, headaches, sleepiness, confusion, nausea, difficulty in speaking and walking, unconsciousness, and death. Tetrachloroethylene has been found in at least 771 of the 1,430 National Priorities List sites identified by the Environmental Protection Agency (EPA).

What is tetrachloroethylene?

(Pronounced tĕt′rə-klôr′ ō-ĕth′ə-lēn′)

Tetrachloroethylene is a manufactured chemical that is widely used for dry cleaning of fabrics and for metal-degreasing. It is also used to make other chemicals and is used in some consumer products.

Other names for tetrachloroethylene include perchloroethylene, PCE, and tetrachloroethene. It is a nonflammable liquid at room temperature. It evaporates easily into the air and has a sharp, sweet odor. Most people can smell tetrachloroethylene when it is present in the air at a level of 1 part tetrachloroethylene per million parts of air (1 ppm) or more, although some can smell it at even lower levels.

What happens to tetrachloroethylene when it enters the environment?

- Much of the tetrachloroethylene that gets into water or soil evaporates into the air.
- Microorganisms can break down some of the tetrachloroethylene in soil or underground water.
- In the air, it is broken down by sunlight into other chemicals or brought back to the soil and water by rain.
- It does not appear to collect in fish or other animals that live in water.

How might I be exposed to tetrachloroethylene?

- When you bring clothes from the dry cleaners, they will release small amounts of tetrachloroethylene into the air.
- When you drink water containing tetrachloroethylene, you are exposed to it.

How can tetrachloroethylene affect my health?

High concentrations of tetrachloroethylene (particularly in closed, poorly ventilated areas) can cause dizziness, headache, sleepiness, confusion, nausea, difficulty in speaking and walking, unconsciousness, and death.

Irritation may result from repeated or extended skin contact with it. These symptoms occur almost entirely in work (or hobby) environments when people have been accidentally exposed to high concentrations or have intentionally used tetrachloroethylene to get a "high."

In industry, most workers are exposed to levels lower than those causing obvious nervous system effects. The health effects of breathing in air or drinking water with low levels of tetrachloroethylene are not known.

Results from some studies suggest that women who work in dry cleaning industries where exposures to tetrachloroethyl-

ene can be quite high may have more menstrual problems and spontaneous abortions than women who are not exposed. However, it is not known if tetrachloroethylene was responsible for these problems because other possible causes were not considered.

Results of animal studies, conducted with amounts much higher than those that most people are exposed to, show that tetrachloroethylene can cause liver and kidney damage. Exposure to very high levels of tetrachloroethylene can be toxic to the unborn pups of pregnant rats and mice. Changes in behavior were observed in the offspring of rats that breathed high levels of the chemical while they were pregnant.

How likely is tetrachloroethylene to cause cancer?

The Department of Health and Human Services (DHHS) has determined that tetrachloroethylene may reasonably be anticipated to be a carcinogen. Tetrachloroethylene has been shown to cause liver tumors in mice and kidney tumors in male rats.

Is there a medical test to show whether I've been exposed to tetrachloroethylene?

One way of testing for tetrachloroethylene exposure is to measure the amount of the chemical in the breath, much the same way breath-alcohol measurements are used to determine the amount of alcohol in the blood.

Because it is stored in the body's fat and slowly released into the bloodstream, tetrachloroethylene can be detected in the breath for weeks following a heavy exposure.

Tetrachloroethylene and trichloroacetic acid (TCA), a breakdown product of tetrachloroethylene, can be detected in the blood. These tests are relatively simple to perform. These tests aren't available at most doctors' offices, but can be performed at special laboratories that have the right equipment.

Because exposure to other chemicals can produce the same breakdown products in the urine and blood, the tests for breakdown products cannot determine if you have been exposed to tetrachloroethylene or the other chemicals.

Has the federal government made recommendations to protect human health?

The EPA maximum contaminant level for the amount of tetrachloroethylene that can be in drinking water is 0.005 milligrams tetrachloroethylene per liter of water (0.005 mg/L).

The Occupational Safety and Health Administration (OSHA) has set a limit of 100 ppm for an 8-hour workday over a 40-hour workweek.

The National Institute for Occupational Safety and Health (NIOSH) recommends that tetrachloroethylene be handled as a potential carcinogen and recommends that levels in workplace air should be as low as possible.

Glossary

Carcinogen: A substance with the ability to cause cancer.

CAS: Chemical Abstracts Service.

Milligram (mg): One thousandth of a gram.

Nonflammable: Will not burn.

References

This ToxFAQs information is taken from the 1997 Toxicological Profile for Tetrachloroethylene (update) produced by the Agency for Toxic Substances and Disease Registry, Public Health Service, U.S. Department of Health and Human Services, Public Health Service in Atlanta, GA.

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ATSDR
AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY

ZINC
CAS # 7440-66-6

Agency for Toxic Substances and Disease Registry ToxFAQs September 1995

This fact sheet answers the most frequently asked health questions (FAQs) about zinc. For more information, call the ATSDR Information Center at 1-888-422-8737. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It's important you understand this information because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

SUMMARY: Exposure to high levels of zinc occurs mostly from eating food, drinking water, or breathing workplace air that is contaminated. Exposure to large amounts of zinc can be harmful. However, zinc is an essential element for our bodies, so too little zinc can also be harmful. This chemical has been found in at least 801 of 1,416 National Priorities List sites identified by the Environmental Protection Agency.

What is zinc?

(Pronounced zĭngk)

Zinc is one of the most common elements in the earth's crust. It's found in air, soil, and water, and is present in all foods. Pure zinc is a bluish-white shiny metal.

Zinc has many commercial uses as coatings to prevent rust, in dry cell batteries, and mixed with other metals to make alloys like brass and bronze. A zinc and copper alloy is used to make pennies in the United States.

Zinc combines with other elements to form zinc compounds. Common zinc compounds found at hazardous waste sites include zinc chloride, zinc oxide, zinc sulfate, and zinc sulfide. Zinc compounds are widely used in industry to make paint, rubber, dye, wood preservatives, and ointments.

What happens to zinc when it enters the environment?

- Some is released into the environment by natural processes, but most comes from activities of people like mining, steel production, coal burning, and burning of waste.
- It attaches to soil, sediments, and dust particles in the air.
- Rain and snow remove zinc dust particles from the air.
- Zinc compounds can move into the groundwater and into lakes, streams, and rivers.
- Most of the zinc in soil stays bound to soil particles.
- It builds up in fish and other organisms, but it doesn't build up in plants.

How might I be exposed to zinc?

- Ingesting small amounts present in your food and water.
- Drinking contaminated water near manufacturing or waste sites.
- Drinking contaminated water or a beverage that has been stored in metal containers or flows through pipes that have been coated with zinc to resist rust.
- Eating too many dietary supplements that contain zinc.
- Breathing zinc particles in the air at manufacturing sites.

How can zinc affect my health?

Zinc is an essential element in our diet. **Too** little zinc can cause health problems, but too much zinc is also harmful.

The recommended dietary allowance (RDA) for zinc is 15 milligrams a day for men (15 mg/day); 12 mg/day for women; 10 mg/day for children; and 5 mg/day for infants. Not enough zinc in your diet can result in a loss of appetite, a decreased sense of taste and smell, slow wound healing and

skin sores, or a damaged immune system. Young men who don't get enough zinc may have poorly developed sex organs and slow growth. If a pregnant woman doesn't get enough zinc, her babies may have growth retardation.

Too much zinc, however, can also be damaging to your health. Harmful health effects generally begin at levels from 10-15 times the RDA (in the 100 to 250 mg/day range). Eating large amounts of zinc, even for a short time, can cause stomach cramps, nausea, and vomiting. Taken longer, it can cause anemia, pancreas damage, and lower levels of high density lipoprotein cholesterol (the good form of cholesterol).

Breathing large amounts of zinc (as dust or fumes) can cause a specific short-term disease called metal fume fever. This is believed to be an immune response affecting the lungs and body temperature. We do not know the long-term effects of breathing high levels of zinc.

It is not known if high levels of zinc affect human reproduction or cause birth defects. Rats that were fed large amounts of zinc became infertile or had smaller babies. Irritation was also observed on the skin of rabbits, guinea pigs, and mice when exposed to some zinc compounds. Skin irritation will probably occur in people.

How likely is zinc to cause cancer?

The Department of Health and Human Services, the International Agency for Research on Cancer, and the Environmental Protection Agency (EPA) have not classified zinc for carcinogenicity.

Is there a medical test to show whether I've been exposed to zinc?

Zinc can be measured in your blood or feces. This can tell you how much zinc you have been exposed to. Zinc can also be measured in urine, saliva, and hair. The amount of zinc in your hair tells us something about long-term exposure, but the relationship between levels in your hair and the amount that you were exposed to is not clear. These tests are not routinely performed at doctors' offices, but your doctor can take samples and send them to a testing laboratory.

Has the federal government made recommendations to protect human health?

EPA recommends that there be no more than 5 parts of zinc in 1 million parts of drinking water (5 ppm) because of taste. EPA also requires that releases of more than 1,000 (or in some cases 5,000) pounds of zinc or its compounds into the environment be reported.

The Occupational Safety and Health Administration (OSHA) has set a maximum concentration limit for zinc chloride fumes in workplace air of 1 milligram of zinc per cubic meter of air (1 mg/m^3) for an 8-hour workday over a 40-hour work week and 5 mg/m^3 for zinc oxide fumes. The National Institute for Occupational Safety and Health (NIOSH) has set the same standards for up to a 10-hour workday over a 40-hour workweek.

Glossary

Anemia: A decreased ability of the blood to transport oxygen.

Carcinogenicity: Ability to cause cancer.

Milligram (mg): One thousandth of a gram.

References

Agency for Toxic Substances and Disease Registry (ATSDR). 1994. Toxicological profile for zinc. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.

Where can I get more information? For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology, 1600 Clifton Road NE, Mailstop F-32, Atlanta, GA 30333. Phone:1-888-422-8737, FAX: 770-488-4178. ToxFAQs Internet address via WWW is http://www.atsdr.cdc.gov/toxfaq.html ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.

APPENDIX B

REPORT FORMS

WEEKLY SAFETY REPORT FORM

Week Ending: _____ Project Name/Number: _____

Report Date: _____ Project Manager Name: _____

Summary of any violations of procedures occurring that week:

_____

_____

_____

Summary of any job related injuries, illnesses, or near misses that week:

_____

_____

_____

_____

Summary of air monitoring data that week (include and sample analyses, action levels exceeded, and actions taken):

_____

_____

_____

Comments:

_____

_____

_____

Name: _____ Company: _____

Signature: _____ Title: _____

INCIDENT REPORT FORM

Date of Report: _____

Injured: _____

Employer: _____

Site: _____ Site Location: _____

Report Prepared By: _____ _____
Signature Title

ACCIDENT/INCIDENT CATEGORY (check all that applies)

___Injury	___ Illness	___ Near Miss
__ Property Damage	___ Fire	___ Chemical Exposure
__ On-site Equipment	___ Motor Vehicle	___ Electrical
__ Mechanical	___ Spill	___ Other

DATE AND TIME OF ACCIDENT/INCIDENT: Narrative report of Accident/Incident: Identify: 1) actions leading to or contributing to the accident/incident; 2) the accident/incident occurrence; and 3) actions following the accident/incident.

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

WITNESS TO ACCIDENT/INCIDENT:

Name:	_____	Company:	_____
Address:	_____	Address:	_____
Phone No.:	_____	Phone No.:	_____
Name:	_____	Company:	_____
Address:	_____	Address:	_____
Phone No.:	_____	Phone No.:	_____

INJURED - ILL:

Name: _____ SSN: _____

Address: _____ Age: _____

Length of Service: _____ Time on Present Job: _____

Time/Classification: _____

SEVERITY OF INJURY OR ILLNESS:

____ Disabling ___ Non-disabling ___ Fatality

____ Medical Treatment ___ First Aid Only

ESTIMATED NUMBER OF DAYS AWAY FROM JOB: _____

NATURE OF INJURY OR ILLNESS: _____

_____

_____

_____

CLASSIFICATION OF INJURY:

__ Abrasions	_____ Dislocations	____ Punctures
__ Bites	_____ Faint/Dizziness	____ Radiation Burns
__ Blisters	_____ Fractures	____ Respiratory Allergy
__ Bruises	_____ Frostbite	____ Sprains
__ Chemical Burns	_____ Heat Burns	____ Toxic Resp. Exposure
__ Cold Exposure	_____ Heat Exhaustion	____ Toxic Ingestion
__ Concussion	_____ Heat Stroke	____ Dermal Allergy
__ Lacerations		

Part of Body Affected: _____

Degree of Disability: _____

Date Medical Care was Received: _____

Where Medical Care was Received: _____

Address (if off-site): _____

(If two or more injuries, record on separate sheets)

PROPERTY DAMAGE:

Description of Damage: _____

_____

Cost of Damage: $ _____

ACCIDENT/INCIDENT LOCATION: _____

ACCIDENT/INCIDENT ANALYSIS: Causative agent most directly related to accident/incident (Object, substance, material, machinery, equipment, conditions)

_____

_____

_____

_____

Was weather a factor?:_____

_____

Unsafe mechanical/physical/environmental condition at time of accident/incident (Be specific):

_____

_____

_____

Personal factors (Attitude, knowledge or skill, reaction time, fatigue):

_____

_____

ON-SITE ACCIDENTS/INCIDENTS:

Level of personal protection equipment required in Site Safety Plan:

_____

_____

Modifications:

_____

Was injured using required equipment?:

_____

_____

If not, how did actual equipment use differ from plan?:

_____

_____

ACTION TAKEN TO PREVENT RECURRENCE: (Be specific. What has or will be done? When will it be done? Who is the responsible party to insure that the correction is made?

_____

_____

_____

_____

_____

ACCIDENT/INCIDENT REPORT REVIEWED BY:

_____ _____

SSO Name Printed SSO Signature

OTHERS PARTICIPATING IN INVESTIGATION:

_____ _____

Signature Title

_____ _____

Signature Title

_____ _____

Signature Title

ACCIDENT/INCIDENT FOLLOW-UP: Date: _____

Outcome of accident/incident: _____

_____

_____

_____

Physician's recommendations: _____

_____

_____

_____

Date injured returned to work: _____

Follow-up performed by:

_____ _____

Signature Title

ATTACH ANY ADDITIONAL INFORMATION TO THIS FORM

APPENDIX C

EMERGENCY HAND SIGNALS

EMERGENCY SIGNALS

In most cases, field personnel will carry portable radios for communication. If this is the case, a transmission that indicates an emergency will take priority over all other transmissions. All other site radios will yield the frequency to the emergency transmissions.

Where radio communications is not available, the following air-horn and/or hand signals will be used:

EMERGENCY HAND SIGNALS

OUT OF AIR, CAN'T BREATHE!

Hand gripping throat

LEAVE AREA IMMEDIATELY, NO DEBATE!

(No Picture) Grip partner's wrist or place both hands around waist

NEED ASSISTANCE!

Hands on top of head

OKAY! – I'M ALL RIGHT!

- I UNDERSTAND!

Thumbs up

NO! - NEGATIVE!

Thumbs down