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January 24, 2014

New York City Office of Environmental Remediation
City Voluntary Cleanup Program
% Shaminder Chawla
100 Gold Street, 2nd Floor
New York, NY 10038

Re: 14CVCP191Q
E-Des # 14RHAN223Q
38-18 Union Street
Flushing Commons Phase 1 Project
Remedial Action Work Plan (RAWP) Stipulation List

Dear Mr. Chawla:

AKRF Engineering, PC hereby submits a Remedial Action Work Plan (RAWP) Stipulation List for the Site to the New York City Office of Environmental Remediation (OER) on behalf of Flushing Commons Property Owner, LLC. This letter serves as an addendum to the RAWP to stipulate additional content, requirements, and procedures that will be followed during the site remediation. The contents of this list are added to the RAWP and will supersede the content in the RAWP where there is a conflict in purpose or intent. The additional requirements/procedures include the following Stipulation List below:

1. The criterion attached in **Appendix 1** will be utilized if additional petroleum-containing tank or vessel is identified during the remedial action or subsequent redevelopment excavation activities. All petroleum spills will be reported to the NYSDEC hotline as required by applicable laws and regulations. This contingency plan is designed for heating oil tanks and other small or moderately sized storage vessels. If larger tanks, such as gasoline storage tanks are identified, OER will be notified before this criterion is utilized.
2. A pre-construction meeting is required prior to start of remedial excavation work at the Site. A pre-construction meeting will be held at the Site and will be attended by OER, the developer or developer representative, the consultant, excavation/general contractor, and if applicable, the soil broker.
3. A pre-approval letter from all disposal facilities will be provided to OER prior to any soil/fill material removal from the Site. Documentation specified in the RAWP -

Appendix 3 - Section 1.6 "Materials Disposal Off-Site" will be provided to OER. If a different disposal facility for the soil/fill material is selected, OER will be notified immediately.

4. Signage for the project will include a sturdy placard mounted in a publically accessible right-of-way to building and other permits signage will consist of the NYC VCP Information Sheet (attached as **Appendix 2**) announcing the remedial action. The Information sheet will be laminated and permanently affixed to the placard.
5. In the event that hazardous waste is identified during the remedial action or subsequent redevelopment excavation activities at this NYC VCP project, and removal and transportation of hazardous waste becomes necessary, the project may be subject to the New York State Department of Environmental Conservation's Special Assessment Tax (ECL 27-0923) and Hazardous Waste Regulatory Fees (ECL 72-00402). See DEC's website for more information: <http://www.dec.ny.gov/chemical/9099.html>.
6. Collection and analysis of three end-point samples from the bottom of the excavation will be collected to evaluate the performance of the remedy with respect to attainment of Track 1 SCOs. A map indicating end-point sampling locations is attached in **Appendix 3**. Samples will be analyzed for semi-volatile organic compounds (SVOCs) and metals that exceeded Track 1 Soil Cleanup Objectives (SCOs) in the 2006 Phase II and any additional compounds identified during the Remedial Investigation.
7. **Appendix 4** includes Vapor Barrier Pre-Certification letter from the Vapor Barrier manufacturer stating that the proposed vapor barrier system mitigates the contaminants of concern at the Site.
8. Daily reports will be provided during active excavation work. If no work is performed for an extended time period, daily report frequency will be reduced to a weekly basis. The daily report template is attached in **Appendix 5**.

Sincerely,



Stephen Malinowski, QEP
Technical Director



Michelle Lapin, P.E.
President

cc: SHolberton@dep.nyc.gov, ShaminderC@dep.nyc.gov

Appendix 1
Generic Procedures for Management of Underground Storage Tanks
Identified under the NYC VCP

Prior to Tank removal, the following procedures should be followed:

- Remove all fluid to its lowest draw-off point.
- Drain and flush piping into the tank.
- Vacuum out the “tank bottom” consisting of water product and sludge.
- Dig down to the top of the tank and expose the upper half.
- Remove the fill tube and disconnect the fill, gauge, product, vent lines and pumps. Cap and plug open ends of lines.
- Temporarily plug all tank openings, complete the excavation, remove the tank and place it in a secure location.
- Render the tank safe and check the tank atmosphere to ensure that petroleum vapors have been satisfactorily purged from the tank.
- Clean tank or remove to storage yard for cleaning.
- If the tank is to be moved, it must be transported by licensed waste transporter. Plug and cap all holes prior to transport leaving a 1/8 inch vent hole located at the top of the tank during transport.
- After cleaning, the tank must be made acceptable for disposal at a scrap yard, cleaning the tanks interior with a high pressure rinse and cutting the tank in several pieces.

During the tank and pipe line removal, the following field observations should be made and recorded:

- A description and photographic documentation of the tank and pipe line condition (pitting, holes, staining, leak points, evidence of repairs, etc.).
- Examination of the excavation floor and sidewalls for physical evidence of contamination (odor, staining, sheen, etc.).
- Periodic field screening (through bucket return) of the floor and sidewalls of the excavation, with a calibrated photoionization detector (PID).

Contaminated Soil Excavation Methods

Excavation of the contaminated soil will be performed following the removal of the existing tanks. Soil excavation will be performed in accordance with the procedures described under Section 5.5 of Draft DER-10 as follows:

- A description and photographic documentation of the excavation.
- Examination of the excavation floor and sidewalls for physical evidence of contamination (odor, staining, sheen, etc.).
- Periodic field screening (through bucket return) of the floor and sidewalls of the excavation, with calibrated photoionization detector (PID).

Final excavation depth, length, and width will be determined in the field, and will depend on the horizontal and vertical extent of contaminated soils as identified through physical examination (PID response, odor, staining,

etc.). Collection of verification samples will be performed to evaluate the success of the removal action as specified in this document.

The following procedure will be used for the excavation of contaminated soil (as necessary and appropriate):

- Wear appropriate health and safety equipment as outlined in the Health and Safety Plan.
- Prior to excavation, ensure that the area is clear of utility lines or other obstructions. Lay plastic sheeting on the ground next to the area to be excavated.
- Using a rubber-tired backhoe or track mounted excavator, remove overburden soils and stockpile, or dispose of, separate from the impacted soil.
- If additional UST's are discovered, the NYSDEC will be notified and the best course of action to remove the structure should be determined in the field. This may involve the continued trenching around the perimeter to minimize its disturbance.
- If physically contaminated soil is present (e.g., staining, odors, sheen, PID response, etc.) an attempt will be made to remove it, to the extent not limited by the site boundaries or the bedrock surface. If possible, physically impacted soil will be removed using the backhoe or excavator, segregated from clean soils and overburden, and staged on separated dedicated plastic sheeting or live loaded into trucks from the disposal facility. Removal of the impacted soils will continue until visibly clean material is encountered and monitoring instruments indicate that no contaminants are present.
- Excavated soils which are temporarily stockpiled on-site will be covered with tarp material while disposal options are determined. Tarp will be checked on a daily basis and replaced, repaired or adjusted as needed to provide full coverage. The sheeting will be shaped and secured in such a manner as to drain runoff and direct it toward the interior of the property.

Once the site representative and regulatory personnel are satisfied with the removal effort, verification of confirmatory samples will be collected from the excavation in accordance with DER-10.

Appendix 2
NYC VCP Signage



NYC Voluntary Cleanup Program

**38-18 Union Street
Site #: 14CVCP191Q**

This property is enrolled in the New York City Voluntary Cleanup Program for environmental remediation. This is a voluntary program administered by the NYC Office of Environmental Remediation.

Or scan with smart phone:



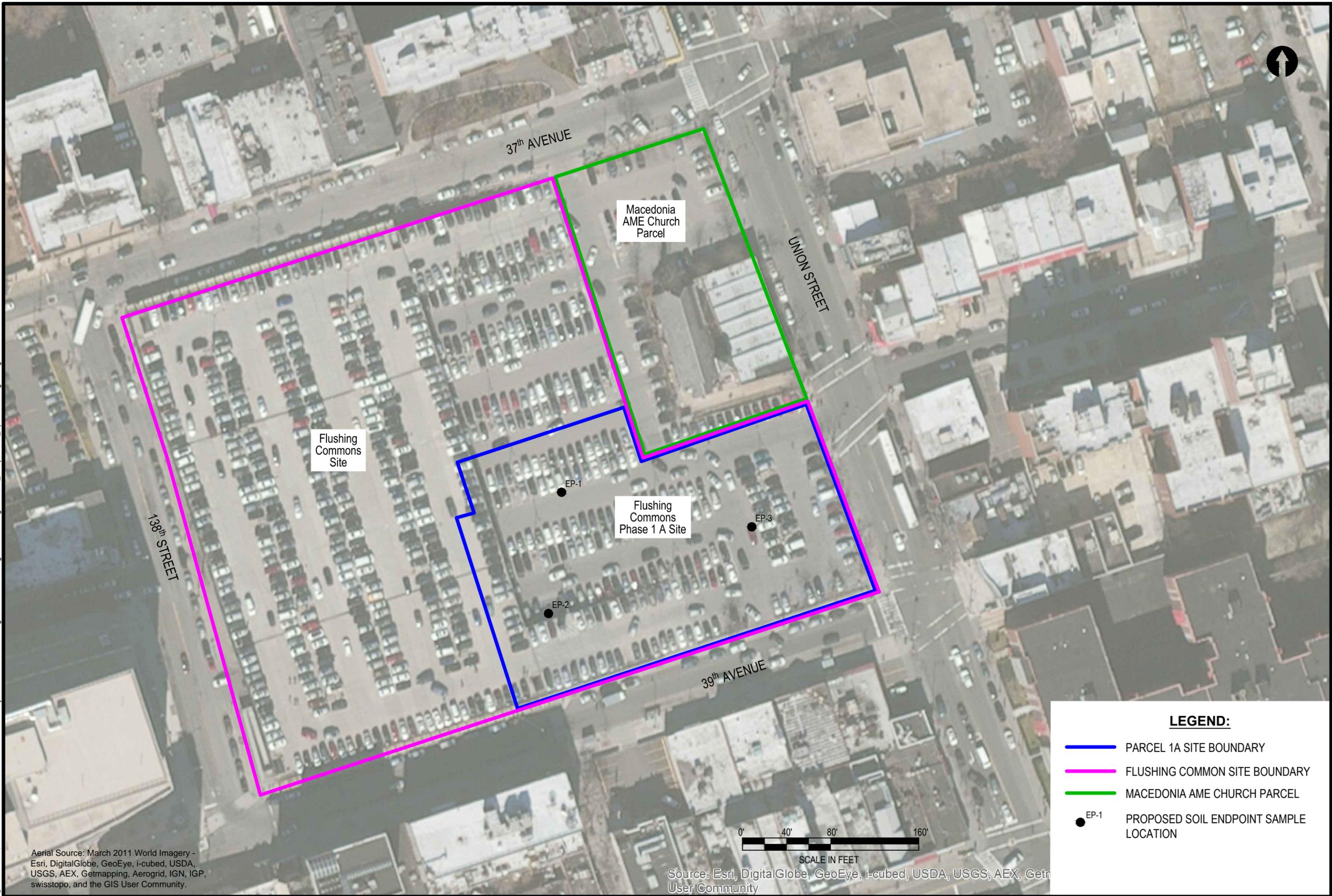
For more information,
log on to: www.nyc.gov/oer

If you have questions or would like more information,
please contact:

Shaminder Chawla at (212) 442-3007
or email us at brownfields@cityhall.nyc.gov

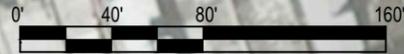
Appendix 3
End-Point Sampling Map

© 2013 AKRF, Inc. Environmental Consultants M:\AKRF Project Files\10677 - Flushing Commons\2013 Figures\10677 Fig Site Plan_Sample Locs_alphanumeric grid.dwg



Aerial Source: March 2011 World Imagery - Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community.

Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



LEGEND:

- PARCEL 1A SITE BOUNDARY
- FLUSHING COMMON SITE BOUNDARY
- MACEDONIA AME CHURCH PARCEL
- EP-1 PROPOSED SOIL ENDPOINT SAMPLE LOCATION

DATE
12.17.2013

PROJECT NO.
10677

SCALE
as shown

FIGURE
1

Appendix 4
Vapor Barrier Pre-Certification letter

GRACE

Construction Products

Mark A. Franciosi
Technical Service Engineer - Americas

T 617-498-4303

mark.a.franciosi@grace.com

W. R. Grace & Co.-Conn.
62 Whittemore Avenue
Cambridge, MA 02140

January 14th, 2014

Steve Malinowski, QEP
Technical Director
AKRF
3900 Veterans Memorial Highway, Suite 331
Bohemia, NY 11716
212.696.0670

Project: 38-18 Union Street Flushing, NY – Flushing Commons Phase 1A
OER project number - 14CVCP191Q

Mr. Malinowski,

I have reviewed the Remedial Action Work Plan prepared by AKRF, dated November 2013 (pages1-274) and the Subsurface Phase II Investigation report prepared by AKRF, dated May 2006 (pages1-279) 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

Technical Services Engineer - Americas

cc: J. Ridgeway

Appendix 5
Daily Report Template

Generic Template for Daily Status Report

Instructions

The Daily Status Report submitted to OER should adhere to the following conventions:

- Remove this cover sheet prior to editing.
- Remove all the **red text** and replace with site-specific information.
- Submit the final version as a Word or PDF file.

Daily Status Reports

Daily status 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;
- 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.

DAILY STATUS REPORT

Prepared By: Enter Your Name Here

WEATHER	Snow		Rain		Overcast		Partly Cloudy	X	Bright Sun	
TEMP.	< 32		32-50		50-70	X	70-85		>85	

VCP Project No.:	13CVCP000M	E-Number:	13EHAN000M	Date:	01/01/2013
Project Name:	Name or Address				

Consultant: Person(s) Name and Company Name	Safety Officer: Person(s) Name and Company Name
--	--

General Contractor: Person(s) Name and Company Name	Site Manager/ Supervisor: Person(s) Name and Company Name
--	--

Work Activities Performed (Since Last Report):
Provide details about the work activities performed.

Working In Grid #: A1, B1, C1

Samples Collected (Since Last Report):
No samples collected or provide details

Air Monitoring (Since Last Report):
No air monitoring performed or provide details

Problems Encountered:
No problems encountered or provide details

Planned Activities for the Next Day/ Week:
Provide details about the work activities planned for the next day/ week.

									Example:	
Facility # Name/ Location Type of Waste Solid <u>Or</u> Liquid	Facility # Name Location Type of Waste Solid <u>Or</u> Liquid		##### Clean Earth Carteret, NJ petroleum soils Solid							
(Trucks, Cu.Yds. <u>Or</u> Gallons)	Trucks	Cu. Yds. <u>Or</u> Gallons	Trucks	Cu. Yds.						
Today									5	120
Total									25	600

NYC Clean Soil Bank		Receiving Facility: Name/ Address (Approved by OER)			
Tracking No.:	13CCSB000				
Today	Trucks 5	Cu. Yds. 25	Total	Trucks 120	Cu. Yds. 600

Site Grid Map
 Insert the site grid map here

Photo Log

<p>Photo 1 – provide a caption</p>	<p>Insert Photo Here – Photo of the entire site</p>
<p>Photo 2 – provide a caption</p>	<p>Insert Photo Here – Photo of the work activities performed</p>
<p>Photo 3 – provide a caption</p>	<p>Insert Photo Here – Photo of the work activities performed</p>