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January 5, 2011

Mr. Randy Hough
Project Manager
New York State Department of Environmental Conservation
625 Broadway
Albany, NY 12233-7013
Submitted via email: rshough@gw.dec.state.ny.us

Subject: Contract No.: D004435-15
Site Number: 9-15-105
Site Name: Depew Village Landfill
EEEPC Job Number: 002699.ID15.02
Pre-design Investigation Plan for Zurbrick Road Slope Soils, Cayuga Creek Sediments and the Depew Village Landfill Tip

Dear Mr. Hough:

Ecology and Environment Engineering, P.C. (EEEPC), under contract to the New York State Department of Environmental Conservation (NYSDEC), is tasked to perform a Pre-design Investigation (PDI) at the subject sites located in the Village of Depew, and Town of Cheektowaga, Erie County, New York.

This PDI plan has been prepared in accordance with the NYSDEC Technical Guidance for Site Investigation and Remediation DER-10, May 3, 2010, Section 5.2.b.

1.0 Introduction

Remedial investigations were performed at the sites by EEEPC between October 2005 and August 2006, and between August 2007 and February 2009.

Analytical data from samples collected during those previous investigations were screened to compare groundwater, surface water, soil, and sediment data to the NYSDEC Class GA and Class C Ambient Water Standards and Guidance Values (June 1998, with updates); the New York Code of Rules and Regulations (NYCRR) Part 375-6.8(b) Restricted Use Soil Cleanup Objectives (SCOs) for Protection of Public Health - Commercial Setting and Protection of Ecological Resources, (effective December 14, 2006), and the screening criteria presented in the NYSDEC Technical Guidance for Screening Contaminated Sediments (January 1999).

Lead was determined to be the primary contaminant of concern due to its prevalence and high concentration throughout the sites.

This PDI plan focuses on identifying the extent of the hazardous lead contamination in the Zurbrick Road soils to assist in the remedial design of its excavation and disposal management. The PDI results and analytical data will be presented as an appendix to the remedial design.

2.0 Design Investigation

This section identifies further field data needed to complete the design(s) and lists the number of samples to be collected, and what they will be analyzed for. All field sampling parameters, methods, techniques, and analysis have been detailed in the Technical Work Plan for the Remedial Investigation and Feasibility Study of Operable Unit 2 at the Depew Village Landfill, August 2007. Geotechnical design support will be provided by McMahon & Mann Consulting Engineers, P.C., and their recommendations will be included with the remedial design.

2.1 Remedial Area 1 - Zurbrick Road Slope Soils Design Investigation

A Remedial Investigation/Feasibility Study (RI/FS) of the Zurbrick Road slope soils was submitted to NYSDEC in June 2009. During that RI/FS, 15 soil samples were collected from the Zurbrick Road hillside surface. To help further define the vertical and horizontal extent of the hazardous contamination, additional soil samples will be collected.

As shown on figure 1, the Zurbrick Road slope will include seven sampling transects along the radius of the known contaminated soil. At each transect, there will be three separate sampling locations. At each sampling location, there will be three different sampling depths. The shallowest depth sample will be collected from zero to six inches. The intermediate depth sample will be collected at a two foot depth. The deepest sample will be collected as deep as is possible, up to four feet deep. Samples will be analyzed for total lead and TCLP – lead via EPA methods SW 846, 1311 and 6010. In total, 63 soil samples will be collected.

2.2 Remedial Area 2 - Landfill Tip Design Investigation

An RI/FS of the landfill was performed by EEEPC and submitted to NYSDEC in March 2007. During that RI/FS, nine soil samples were collected from the landfill. To help further define the vertical and horizontal extent of the hazardous contamination, additional soil samples will be collected.

Additional samples designated as LF-1 through LF-4 to be collected during this PDI are shown in Figure 1. They will be from four locations with two separate, discrete depths from each location. The shallowest depth sample will be collected at a two foot depth. The deepest sample will be collected at four foot below grade. Samples will be analyzed for total lead and TCLP – lead via EPA methods SW 846, 1311 and 6010. A total of eight samples will be collected.

Additional construction activities included in remedial area 2 are the shoreline vegetative rehabilitation. Detailed drawings and specifications of the rehabilitation will be presented in the remedial design and no further data is required to be collected during this PDI.

2.3 Remedial Area 3 - Cayuga Creek Sediments Design Investigation

An RI/FS of the Cayuga Creek sediment deposits was performed by EEEPC and

submitted to NYSDEC in June 2009. During that RI/FS, 140 sediment samples were collected from the Cayuga Creek bed. To help define the volume and location of contaminated sediments on the creek bed, the sediment islands on the east side of the landfill and around the landfill tip will be visually measured and mapped during the PDI.

3.0 Design Scope

This section describes the remedial actions that will be performed at each site.

3.1 Remedial Area 1 - Design Scope for Zurbrick Road Slope Soils

For the Zurbrick Road slope soils, approximately 4,500 cubic yards of contaminated soil will be excavated and disposed of offsite or in the Depew Landfill.

The current EEEPC design scope is being conducted independently of the Village of Depew, the Town of Cheektowaga, or the USACE, and as such, the design of the Zurbrick Road slope will be completed to provide natural erosion protection and to provide for the re-establishment of the riparian habitat. Bank stabilization and restoration will be designed to protect the streambank without reducing flood water conveyance consistent with 6 NYCRR Part 608.

3.2 Remedial Area 2 - Design Scope for Landfill Tip Design Investigation

Excavation in remedial area 2 must be performed because the Zurbrick Road slope soils remediation as identified in remedial area 1, dictates that the slope soil redesign will encroach on the existing creek. In order to maintain similar hydraulic flow characteristics as the creek currently exhibits, the geometry of the landfill toe requires modification. Estimates of volumes and excavation area dimensions will be calculated during the remedial design. Excavated soils will be moved to the upland part of the landfill site.

Streambank stabilization and restoration measures will be performed in the construction area to provide natural erosion protection and to provide for the re-establishment of the riparian habitat. Bank stabilization and restoration would be designed to protect the streambank without reducing flood water conveyance consistent with 6 NYCRR Part 608.

Various types of erosion controls will be designed and installed along areas of the stream shoreline as part of the bank stabilization and restoration efforts. Erosion control measures may include combinations of non-structural measures (slope grading and re-vegetating), bioengineering (brush matting, tree root wads), and biotechnical (erosion control mats, vegetated structures) features where applicable.

3.3 Remedial Area 3 - Design Scope for Cayuga Creek Sediments

This design plan involves the removal of contaminated sediments above the Lowest Effect Level from the area on the east side of the landfill and including around the landfill tip. Standard excavation techniques, including high-vacuum extraction via a vacuum truck would be used to remove the sediments and soils and these would be disposed of according to their waste characterization.

To the extent practical, the sediments would be screened using a mobile soil screening process to isolate the sand, silt, and clay fractions with lead contamination. Stream deposits that are fine gravel size and larger would be returned to the stream. After the

remaining sediments are screened, they would be disposed of accordingly to their waste characterization. All work within the stream would be in accordance with 6 NYCRR Part 608.

4.0 Permits or Other Authorizations

EEEPC is currently identifying the permits and construction easements that are required to perform the remedial construction activities. That information, along with the identification of the municipalities who need to be coordinated in this project, will be presented in the remedial design report.

5.0 Schedule

The field work to collect the data required to complete the design is to be conducted weather permitting and is tentatively scheduled as follows:

- Zurbrick Road slope soils samples and landfill tip samples to be collected starting January 11, 2011. It is expected to take four to five days.

Additional background information, site data, and previous investigations can be found in the following sources:

New York State Department of Environmental Conservation, Record of Decision, Depew Village Landfill Site Operable Unit 2, Village of Depew, Erie County, New York, Site Number 91505, December 2009.

Ecology and Environment Engineering, P.C., Remedial Investigation and Feasibility Study for Operable Unit 2 of the Depew Village Landfill Site, Site No.9-15-105, Depew, New York, June 2009.

New York State Department of Environmental Conservation, Decision Document, Proposed Interim Remedial Measure, Depew Village Landfill Project (915105), OU-2, Village of Depew, Erie County, April 21, 2009.

Ecology and Environment Engineering, P.C., Draft Additional Remedial Investigation Work Plan Amendment, Depew Village Landfill, NYSDEC Site No.: 9-15-105, Operable Unit 2, Depew, New York, Work Assignment Number: D004435-21, April 21, 2008.

New York State Department of Environmental Conservation, Record of Decision, Depew Village Landfill Site Operable Unit 1, Village of Depew, Erie County, New York, Site Number 91505, March 2008.

Ecology and Environment Engineering, P.C., Technical Work Plan for the Remedial Investigation and Feasibility Study of Operable Unit 2 at the Depew Village Landfill, Site No. 9-15-105, Depew, New York, August 2007.

Ecology and Environment Engineering, P.C., Remedial Investigation Report for the Depew Village Landfill Site No.: 9-15-105, Depew, New York, Volume I and II, March 2007.

Kindly review this document and provide comments at your earliest convenience. Please contact me at cschifferli@ene.com or 716-684-8060.

Thank you.

Sincerely,

ECOLOGY AND ENVIRONMENT ENGINEERING, P.C.

Chris Schifferli, PE
Senior Engineer

F:\DEPEW LANDFILL\2010 DESIGN\PDI FIGURE\proposed sample locs_revised 12-20-10.dwg

PROPOSED SAMPLE LOCATIONS		
Description	Northing	Easting
Z-1	1055154.30	1115284.98
Z-2	1055145.80	1115276.43
Z-3	1055129.42	1115259.98
Z-4	1055106.02	1115344.69
Z-5	1055096.70	1115337.91
Z-6	1055077.28	1115323.66
Z-7	1055077.72	1115411.28
Z-8	1055064.79	1115408.63
Z-9	1055041.91	1115403.94
Z-10	1055062.29	1115490.27
Z-11	1055051.74	1115487.48
Z-12	1055026.70	1115480.86
Z-13	1055058.66	1115562.82
Z-14	1055045.56	1115563.91
Z-15	1055017.26	1115566.29
Z-16	1055064.77	1115638.81
Z-17	1055048.50	1115642.78
Z-18	1055014.97	1115650.97
Z-19	1055096.09	1115709.73
Z-20	1055075.00	1115717.64
Z-21	1055033.98	1115733.02
LF-1	1055307.17	1115340.44
LF-2	1055284.34	1115420.48
LF-3	1055267.44	1115513.25
LF-4	1055267.44	1115583.84

NOTES

1. HORIZONTAL LOCATIONS SHOWN HEREON ARE BASED ON THE NEW YORK STATE PLANE COORDINATE SYSTEM, NAD83/96 WEST ZONE. A COMBINED SCALE FACTOR OF 0.99990788 WAS COMPUTED FOR THIS PROJECT.
2. VERTICAL LOCATIONS SHOWN HEREON ARE REFERRED TO THE NORTH AMERICAN DATUM OF 1988 (NAVD88).
3. SURVEY INFORMATION ABOVE THE NORTHERN EDGE OF WATER AT CAYUGA CREEK PROVIDED BY POPLI CONSULTING ENGINEERS AND SURVEYORS (DRAWING 3276.03 DATED APRIL 2006).
4. SURVEY INFORMATION BELOW THE NORTHERN EDGE OF WATER AT CAYUGA CREEK PROVIDED BY THE ARMY CORP OF ENGINEERS (DRAWING LRB-ZUR110-C-103.dgn DATED 2010).
5. ZURBRICK ROAD SAMPLE LOCATIONS WILL BE SAMPLED AT 3 DEPTHS (0 – 6" BGS, 2' BGS, AND 4' BGS).
6. LANDFILL SAMPLE LOCATIONS WILL BE SAMPLED AT 2 DEPTHS (2' BGS AND 4' BGS).
7. ALL SAMPLES TO BE ANALYZED FOR TOTAL LEAD AND TCLP LEAD.

LEGEND

Z-30	PROPOSED ZURBRICK ROAD SAMPLE LOCATION
LF-1	PROPOSED LANDFILL SAMPLE LOCATION
MW-03	MONITORING WELL LOCATION FROM PREVIOUS INVESTIGATION(S)
HA-I4	AUGER LOCATION FROM PREVIOUS INVESTIGATION(S)
SW-04	SURFACE WATER LOCATION FROM PREVIOUS INVESTIGATION(S)
TP-05	TEST PIT LOCATION FROM PREVIOUS INVESTIGATION(S)
DL2-TUB	ZURBRICK ROAD HILLSIDE DATAPOINT FROM PREVIOUS INVESTIGATION(S)
BHG03	COREHOLE LOCATION FROM PREVIOUS INVESTIGATION(S)

SCALE IN FEET

0 60 120 180

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FIGURE 1 PROPOSED SAMPLE LOCATIONS (JANUARY 2011)
DEPEW LANDFILL SITE, REMEDIAL PRE-DESIGN INVESTIGATION
DEPEW, NEW YORK