

Engineering, Scientific, Planning and Management Consultants Project No. 1012163.

P.O. Box 4696 27 Congress Street Portsmouth, NH 63801 June 6, 2008

Bus 803 431 4869 Fax 803 431 5982 Mr. Edward R. Wiederkehr Consolidated Edison Company of New York, Inc. 30-01 20th Avenue, Bldg 136, 2nd Floor Long Island City, NY 11105-2048

www.leegueswhitford.com

Re: Remedial Excavation Work Plan - Addendum

For Residential Yards and Fence Line Soil Contamination

Former Maspeth Substation Site

Queens, New York

Dear Mr. Wiederkehr:

Jacques Whitford Engineering Group, Inc., P.C. (Jacques Whitford) has provided the attached Remedial Excavation Work Plan - Addendum for the former Maspeth Substation Site to the Consolidated Edison Company of New York, Inc. (Con Edison) for your review and comment prior to your submittal of the document to the New York State Department of Environmental Conservation (NYSDEC). This Work Plan Addendum addresses the removal of impacted soils, which exceed the NYSDEC Technical and Administrative Guidance Memorandum (TAGM) No. 4046 Recommended Soil Cleanup Objectives (RSCO), under the northern fence line concrete footer and on one off-site property located north of the former Maspeth Substation Site.

Con Edison has received an excavation plan and supporting calculations that have been reviewed by a registered New York State Professional Engineer and has provided that plan to Jacques Whitford. Jacques Whitford's role in this remedial effort is to develop an Addendum to the original Work Plan that addresses the remaining soil that exceeds regulatory standards. The means and methods to remove that soil without causing damage to the adjacent buildings are the sole responsibility of the Contractor and their geotechnical consultant (who sealed the subject excavation plan). Jacques Whitford has, however, reviewed the Contractor's proposed approach and finds that their overall concept for the excavation and removal procedures appears reasonable.

Jacques Whitford

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> (Remedial_Excavation_WP_Addendum_6-6-08.doc © Jacques Whitford 2008



We are pleased to be of continued service to Con Edison on this project. As always, please contact us with any questions.

Sincerely,

JACQUES WHITFORD ENGINEERING GROUP, INC., P.C.

Craig R. Gendron, P.G., P.E. NYS Professional Engineer License No. 074002-1



CC: B. Cohen

U. Samuel

G. DeiMastro

D. Hill



REMEDIAL EXCAVATION WORK PLAN - ADDENDUM FOR RESIDENTIAL YARD AND FENCE LINE SOIL CONTAMINATION FORMER MASPETH SUBSTATION - JUNE 2008

This Remedial Excavation Work Plan Addendum (Work Plan - Addendum) outlines the proposed scope of work to remove PCB-impacted soil from one remaining discrete area located underneath the fence line concrete footer and from one residential backyard adjacent to the former Maspeth Substation Site, located at 57-77 Rust Street, Queens, New York (Site).

During the course of remedial excavation within the former Maspeth Substation Site, elevated levels of PCB contamination were discovered on-site in October 2005 along the backyard property boundary behind the 57-42 57th Drive residence. Two of the end-point samples collected under the fence line, and below the fence footing (~ 6 feet below land surface (bls)), confirmed PCB contamination with concentrations of 334 ppm and 762 ppm.

As a result of this finding, Con Edison conducted subsurface soil sampling via Geoprobe® rig in November and December 2005. These 2005 soil samples were collected on the Site (or south) side of the fence that abuts the residential properties to the north, as close to the fence as was possible. The reported laboratory results indicated exceedances of NYSDEC TAGM 4046 RSCOs for PCBs at three locations. Based upon these results, Con Edison determined that additional sampling was required on the residential side of the north fence. The purpose of this additional sampling was to determine whether there were any off-site impacts to soils on the abutting properties.

In May and June 2007, Con Edison conducted this additional soil sampling. Samples were collected by hand (at the surface) and by Geoprobe rig (at depth) from each of the backyards abutting the Site. Sample depth intervals were identical to the 2005 borings except that the final depth was thirty feet bis rather than the previously completed 18 foot bis depths. The analytical results from this sampling event reported Total PCBs at concentrations below the laboratories Method Detection Limit (MDL) in the majority of the samples with three samples having reported concentrations of Total PCBs above the Residential Cleanup Standard of 1 ppm. These three samples were located in the surface soils (from 2-inches to 2-feet) in the back yards of #57-40, #57-42, and #57-48, respectively. Results of this sampling work were presented in Jacques Whitford's letter report Results of Residential Soil Sampling, Former Maspeth Substation, Maspeth, New York, dated July 18, 2007.

Based on the 2005 and 2007 results, Con Edison prepared a Remedial Excavation Work Plan For Residential Yards and Fence Line Soil Contamination, dated July 30, 2007 for NYSDEC review. That Work Plan presented remedial excavation activities for removing PCB impacted soils from underneath the concrete fence footer and from the three residential backyards. That Work Plan was subsequently accepted by NYSDEC in a letter to Con Edison dated August 9, 2007.

The remedial excavation activities along the northern boundary of the Site, described in the July 30, 2007 Work Plan, were undertaken in October through December 2007. Surficial soils in the three residential backyards were excavated using hand tools and vacuumed and contained into a Vactron® unit for proper off-site disposal. Post-excavation confirmatory soil samples indicated clean closure of surficial soils in these backyards. Impacted soils at depth from under the concrete footer were removed via a slide rail trench box excavation technique. However, post-excavation confirmatory soil samples at depth, collected from behind 57-42 and 57-44 on

November 27, 2007 had reported Total PCBs at concentrations greater than 1 ppm. On December 5 and 6, 2007, additional smaller excavations were conducted under the concrete footer and additional post-excavation samples were collected. Results for one sample, identified as MA-SSB-55.5,64 (9.0 ft), reported Total PCBs at 9.64 ppm. These smaller excavation areas were subsequently backfilled with concrete.

Based on the excavation work conducted to that point, Con Edison determined not to continue to excavate without an understanding of the vertical and lateral extent of PCB contaminated soils remaining in this area and without an engineering design in place to support the various structures during subsequent remedial excavation work. Con Edison then requested the vertical and lateral extent of PCB contaminated soils remaining in this area of the Site be delineated prior to remobilizing for excavating purposes.

From January 2 to 4, 2008, additional soil samples from underneath the concrete footer, from the backyard of 57-42, and from underneath the foundation of 57-44 were collected with a Geoprobe® rig drilling at various angles and with a hand driven Geoprobe® sampling unit and submitted for laboratory analysis for PCBs. Based on the soil analytical results from this sampling event as well from the soil samples collected in November to December 2007, the two remaining hot spot areas have been delineated.

This Work Plan - Addendum, therefore, addresses the removal of PCB-impacted soil remaining underneath the concrete fence footer behind 57-44 57th Drive and in the backyard of 57-42 57th Drive. The scope of work presented herein will be completed by a Contractor retained by Con Edison using various excavation/removal methods. Groundwater is not anticipated to be encountered during these excavation activities. All elevations reference an assumed benchmark of El. 0 (approximate on-site pre-remediation site grade). The objective of these activities will be to obtain access to the subsurface soils, remove the impacted material, backfill the excavations, and restore the sites to their pre-excavation conditions.

Analytical Results

The extent of the two remaining hot spot areas are illustrated on the attached Sampling Location Plan and Profiles One through Three. The analytical data are presented in Table 1.

A total of two sampling locations remain on Site that require the removal of PCB-impacted soil. The two sampling locations include:

Northern Site

Fence Line:

Location MA-SW-55.5,64 (9.0 ft bgs) 9.64 ppm PCBs

Off-site:

Location 57-42 57th Drive.

MA-SW-58,66 (6 ft bgs) 2.032 ppm MA-SW-58,66 (7.5 ft bgs) 2.210 ppm

Consistent with previous remedial activities conducted at this Site, the target soil cleanup objective at all areas and depths is 1 ppm PCBs.

Protection of Existing Structures

Earthwork operations will be controlled by Con Edison's Contractor in an effort to protect the adjacent residential buildings from damages caused by loss of bearing soils and/or construction vibrations as a direct result of the procedures outlined in this Work Plan - Addendum. The Contractor will be implementing monitoring as outlined in the July 30, 2007 Work Plan.

Northern Site Fence Line Soil Excavation

A slide-rail trench-shield excavation technique will be used to access the area of impacted soils under the concrete fence footer in the northern portion of the Site (see location MA-SW-55.5,64 (9.0 ft) on the attached Sampling Location Plan, Profiles One and Three). The trench shield will be set up on the southern side (M&A Linens' property) to allow controlled, discrete soil removal to a depth of El. -8 feet. The fence and concrete footing along the length of this area will be temporarily removed to facilitate removal of the PCB-impacted soils. Considering that the horizontal and lateral extent of PCB impacted soils has been identified, as discussed above, post excavation sidewall and bottom samples will not be collected.

Once the area grades have been established at El. -8, a cased over-drilling technique will be used to remove the impacted soils to a depth corresponding to El. -12 feet. This elevation was selected as it is the horizon at which the lowest "clean" confirmatory sample was obtained during delineation activities. Successive overlapping of the over-drill technique is necessary to remove all soil within the designated areas as shown on the attached plan-view sketch provided by Moretrench and Sevenson, the excavation and general contractors selected by Con Edison. A 24-inch diameter steel casing will be slowly rotated into the ground to a depth of El. -12 feet. The soils within the casing will then be augered out and placed on plastic sheeting for immediate removal and off-site transportation and disposal.

Upon removal to El. -12 feet, each over-drill technique will be tremie-grouted with flowable fill (a.k.a. Controlled Low Strength Material, or CLSM), from the bottom to the top of the casing. The process of over-drilling will then continue in an overlapping method until the required volume of contaminated soil is removed. In this manner, no support of the house foundation will be required.

The removed soils will be loaded into lined and tarped trucks to contain the suspected PCB-impacted soils. The trucks will transport the soils off-site to a Con Edison approved disposal facility. All of the soil excavated from the hot spot location MA-SW-55.5,64 will be managed as non-hazardous waste.

Northern Site Fence Line Backfill/Grade

Following the soil removal operations in this area, the concrete fence footer and fence will be repaired/replaced. The remaining excavated area (from El. -8 to 0) will be backfilled to its pre-excavation elevations per the Remedial Action Work Plan (RAWP, Dated 10/04). The new backfill material (e.g., Item No. 4, or equivalent) will first be chemically tested in accordance with the parameters outlined in the NYSDEC-approved RAWP prior to use on-site. The backfill material (Item No. 4, or equivalent) will be placed in 1-foot lifts and will be compacted with hand held vibratory compactors. Compaction testing will be conducted to achieve the requirements specified in the RAWP.

Off-site Soil Excavation

Based on the analytical soil data, subsurface soils will be removed from one off-site property: MA-SW-58,66 (6 and 7.5 ft) at 57-42 57th Drive (see attached Sampling Location Ptan and Profile 2) utilizing the slide-rail trench-shield excavation and over-drilling technique as described above. At this location, the over-drilling will continue to a depth of El. -13, as this is the location or depth of a confirmatory sample collected in January 2008 that exhibited non-detect levels of PCBs.

The trench-shield excavation technique will be employed to remove the concrete fence footer and soils in the backyard of 57-42 in the vicinity of location MA-SW-58,66 to a depth of El. -8 feet. The over-drill technique will then commence as described above from this platform elevation to El. -13 ft. Again, by employing this overlapping over-drill technique, no support of the house foundation will be required.

Contaminated soils from each cased and augered excavation will be placed on plastic sheeting and then loaded into lined and tarped trucks to contain the suspected PCB-impacted soils. The trucks will transport the soils off-site to a Con Edison approved disposal facility. All of the soil excavated from the hot spot location MA-SW-58,66 will be managed as non-hazardous waste.

Off-site Backfill/Grades

Following the soil removal operations in this backyard, the concrete fence footer and fence will be repaired/replaced and backfill material (e.g., Item No. 4, or equivalent) with a top layer of loam and seed will be replaced to original grade at the residential property. Compaction testing will be conducted to achieve the requirements specified in the RAWP. Prior to backfilling, the fill material will be tested in accordance with the parameters outlined in the NYSDEC-approved RAWP. Once backfill materials are in-place, any landscaping items, such as decks or steps will be returned to their pre-excavation condition.

Reporting

During implementation of this Work Plan - Addendum, weekly progress reports will continue to be submitted to the NYSDEC. Following the completion of the scope of work contained in this Work Plan- Addendum, the information generated from the Northern Site fence line concrete footer excavation will be included in the Final Engineering Report for the Site and a separate Off-site Soil Removal Report will be prepared to address remediation activities completed in the residential off-site property. The Off-site Soil Removal Report will contain the scope of work performed at all adjacent residences, modifications, if any, to the scope of work, a figure illustrating the sampling and excavation locations, tabulated analytical data, certification of the fill material, photographs, and manifests/bills-of-lading for the impacted soil disposal.

TABLE 1
Former Maspeth Substation
Soil Sample Summary: Vicinity of 57-40, 57-42, and 57-44 57th Street

Sample Location	Sample Date	Sample Type	Depth (feet bis) *	Analytes	Chain of Custody	TOTAL PCBs (ppm)
144 CON 64 60 (E)	11/11/2005	Grab	5	PCBs, TPH	0511278	0.13
MA-SW-51,62 (5)			5	PCBs, TPH, VOCs, SVOCs	0511278	0.2
MA-SW-51,64 (5)	11/11/2005	Grab		PCBs, TPH	0511278	0.3
MA-SW-51,64 (9)	11/11/2005	Grab	9	PCBs	0512118	< 0.0073
MA-SW-51,65 (14)	12/2/2005	Vibratory GP	14			< 0.0073
MA-SW-51,84 (18)	12/2/2005	Geoprobe	18	PCBs	0512096	~ U.UU08
MA-SW-53.5,64 (10.5)	1/2/2008	Geoprobe	10.5	PCBS	SA 72884	< 0.0340
MA-SW-54,64 (7.5)	12/6/2007	Grab	7.5	PCBs	SA 71943	0.142
MA-\$\$8-55.5,64 (9.0)	12/6/2007	Grab	9.0	PCBs	SA 71943	9.64/12.6
MA-SSB-55.5,64 (12)	1/2/2006	Geoprobe	12	PCBS	SA 72884	< 0.0310
MA-338-30.5,04 (12)	11212000	Geopioce		1,000		
MA-SW-55.5,65 (7.5)	12/6/2007	Grab	7.5	PCBs	SA 71943	0.0811
MA-SW-55.5,65 (10.5)	1/2/2008	Geoprobe	10.5	PCBS	SA 72884	< 0.0327
	4 10 10 000	0	44	PCBS	SA 73370	< 0.0321
MA-SW-55.5,66 (11)	1/2/2008	Geoprobe	11	PCBS	SA 73370	< 0.0321
MA-SW-55.5,66 (14)	1/2/2008	Geoprobe	14	PUBS	SA /33/U	<u> </u>
MA-SW-55.5,67 (11.5)	1/2/2008	Geoprobe	11.5	PCBS	SA 73370	< 0.0332
MA-SSB-58,65 (12)	1/3/2008	Geoprobe	12	PCBS	SA 72884	< 0.0310
MA-330-36,03 (12)	1/3/2000	Cocyacous				
MA-SSB-58,65.5 (10.5)	1/4/2008	Geoprobe	10.5	PCBS	SA 72957	< 0.0309
MA-SSB-58,66 (6)	1/4/2008	Hand Geoprobe	6	PCBS	SA 72957	2.032
MA-SSB-58,66 (7.5)	4/7/2008	Hand Geoprobe	7.5	PCBS	SA 76891	2.210
MA-SS8-58,66 (13)	1/3/2008	Geoprobe	13	PCBS	SA 73370	< 0.0290
MA-SSB-58,67 (7.5)	4/7/2008	Hand Geoprobe	7.5	PCBS	SA 76891	0.0455
	10/5/0007	Conh	7.5	PCBs	SA 71906	0.340
MA-SW-59,85.5 (7.5)	12/5/2007	Grab	7.0	robs	GK 71000	0.010
MA-GP-59,67 (6.0-6.5)	8/27/2007	Geoprobe	6.0-6.5	PCBS	SA 67320	0.592
MA-SSB-59.5,64.5 (9.2)	12/5/2007	Grab	9.2	PCBs	SA 71906	0.484
114 00D 04 C+ /0 5\	11/27/2007	Grab	8.5	PCBs	SA 71514	0.293
MA-SSB-61,64 (8.5)	11/2//2007	Grab	0.3	FODS	G/(1/014	0.200
MA-GP-62,67.5 (2-6)	5/7/2007	Vibratory GP	2-6	PCBS	SA 61721	0.0188
MA-GP-62.67.5 (6-10)	5/8/2007	Geoprobe	6-10	PC8S	SA 61792	< 0.0318
MA-GP-62.67.5 (10-14)	5/8/2007	Geogrape	10-14	PCBS	SA 61792	< 0.0304
MA-GP-62,67.5 (14-18)	5/8/2007	Geoprobe	14-18	PCBS	SA 61792	< 0.0318
MA-GP-62,67.5 (14-16)	5/8/2007	Geoprobe	18-22	PCBS	SA 61792	0.950
MA-GP-82,67.5 (16-22)	5/10/2007	Geoprobe	22-26	PCBS	SA 61922	< 0.0302
MA-GP-62,67.5 (22-26) MA-GP-62,67.5 (26-30)	5/10/2007	Geoprobe	26-30	PCBS	SA 61922	< 0.0304
				8070	04 74050	4 0 0004
MA-SW-65,67 (7.5)	11/14/2007	Grab	7.5	PCBS	SA 71058	< 0.0331
MA-SSB-66,64 (7.5)	11/9/2007	Grab	7.5	PCBS	SA 70810	< 0.0309
MA CCD 87 84 (7 5)	11/14/2007	Grab	7.5	PCBS	SA 71058	0,737
MA-SSB-67,64 (7.5) MA-SW-67,64 (9)	11/11/2005	Grab	9	PC8s, TPH	0511278	0.4
(8) PO, 10-11C-11N	10/1/2000	<u> </u>		1		
MA-SSB-68,67 (7.5)	11/20/2007	Grab	7.5	PCBS	SA 71357	< 0.0333
MA-SSB-69,71 (3)	11/7/2007	Grab	0.5	PCBS	SA 70711	0.0255

TABLE 1
Former Maspeth Substation
Soil Sample Summary: Vicinity of 57-40, 87-42, and 57-44 57th Street

Sample Location	Sample Date	Sample Type	Depth (feet bis) *	Analytes	Chain of Custody	TOTAL PCBs (ppm)
(A-SSB-70,64 (8.5)	11/26/2007	Grab	8.5	PCBS	SA 71454	< 0.0325
F- 00D-10,0-1 (0.0)	1112012001	0,00				
IA-GP-71,68 (2-6)	5/9/2007	Geoprobe	2-6	PCBS	SA 61870	< 0.0372
(A-GP-71,68 (10-14)	5/10/2007	Geoprobe	10-14	PCBS	SA 61922	< 0.0324
M-GP-71.68 (14-18)	5/10/2007	Geoprobe	14-18	PCBS	SA 61922	< 0.0314
IA-GP-71,68 (18-22)	5/10/2007	Geoprobe	18-22	PCBS	SA 61922	0.138
IA-GP-71,68 (22-26)	5/10/2007	Geoprobe	22-26	PCBS	SA 61922	< 0.0306
IA-GP-71,68 (26-30)	5/10/2007	Geoprobe	26-30	PCBS	SA 61922	< 0.0316
(A-SW-73,65.5 (7.5)	11/26/2007	Grab	7.5	PCBS	SA 71454	< 0.0307
IA-SW-73,70.5 (8.5)	11/26/2007	Grab	8.5	PCBS	SA 71454	< 0.0309
IA-SW-74,64 (7.5)	11/26/2007	Grab	7.5	PCBS	SA 71454	< 0.0346
M-SW-81,63 (2)	11/30/2005	Grab	2	PCBs	0512032	0.067
A-SW-81,63 (6)	12/1/2005	Vibratory GP	6	PCBs	0512096	0.4
IA-SW-81,63 (10)	12/2/2005	Vibratory GP	10	PCBs	0512096	0.069
IA-SW-81,63 (14)	12/2/2005	Vibratory GP	14	PCBs	0512096	< 0.0070
IA-SW-81,63 (18)	12/2/2005	Geoprobe	18	PCBs	0512118	0.073
IA-SW-81,63 (21)	12/2/2005	Geoprobe	21	PCBs	0512118	< 0.0071

^{*} bis = Depth below the established grade of the M&A Linens property, referenced to as elevation *0.0*.

MORETRENCH

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MORETRENCH

MORETRENCH CONTRACT # PROJECT: DATE 05-06-08 LOCATION: SUBJECT: HOUSE EVEL

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The contaminated soil excavation method shown here-in represents a reasonable remediation approach consistent with industry standards. Certification is limited to the method only. This drawing is based upon contaminated soil test results and defined limits of excavation which have been provided by and which are the responsibility of Others. Lawful handling and disposal of all contaminated soil and certification that all contaminated soil has been removed is the responsibility of Others.







