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January 13, 2017

Mr. Parag Amin
Project Manager, Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway, 11th Floor
Albany, NY 12233-7014

Re: Remedial Action Report
5140 Site Yorkville, New York

Dear Parag:

Enclosed please find a copy of the *Remedial Action Report* (RAR) for the 5140 Site in Yorkville, New York (formerly Brownfield Cleanup Program Site # C63307). The report documents the implementation of the recommended remedial alternative at the site, *Hot Spot Removal with Institutional and Engineering Controls*, as detailed in the *Alternatives Analysis Report and Remedial Action Work Plan*, dated October 2, 2015. The report also includes a revised version of the *Site Management Plan (SMP)* with the incumbent (generic) *Health and Safety Plan* and *Community Air Monitoring Plan*. These documents were updated to incorporate aspects of the remedial action that were not included in the draft SMP, dated February 23, 2016.

These documents are being provided to the Department as a courtesy outside of the Brownfield Cleanup Program regulatory structure. Additional copies of the RAR and the SMP are being provided to JM Door Company, Inc., of Utica, New York, the current owners of the site.

If you have questions concerning the content of these reports, please feel free to contact me at (774) 413-5109

Sincerely yours,

David P. Bouchard
Senior Project Director

DPB:paw
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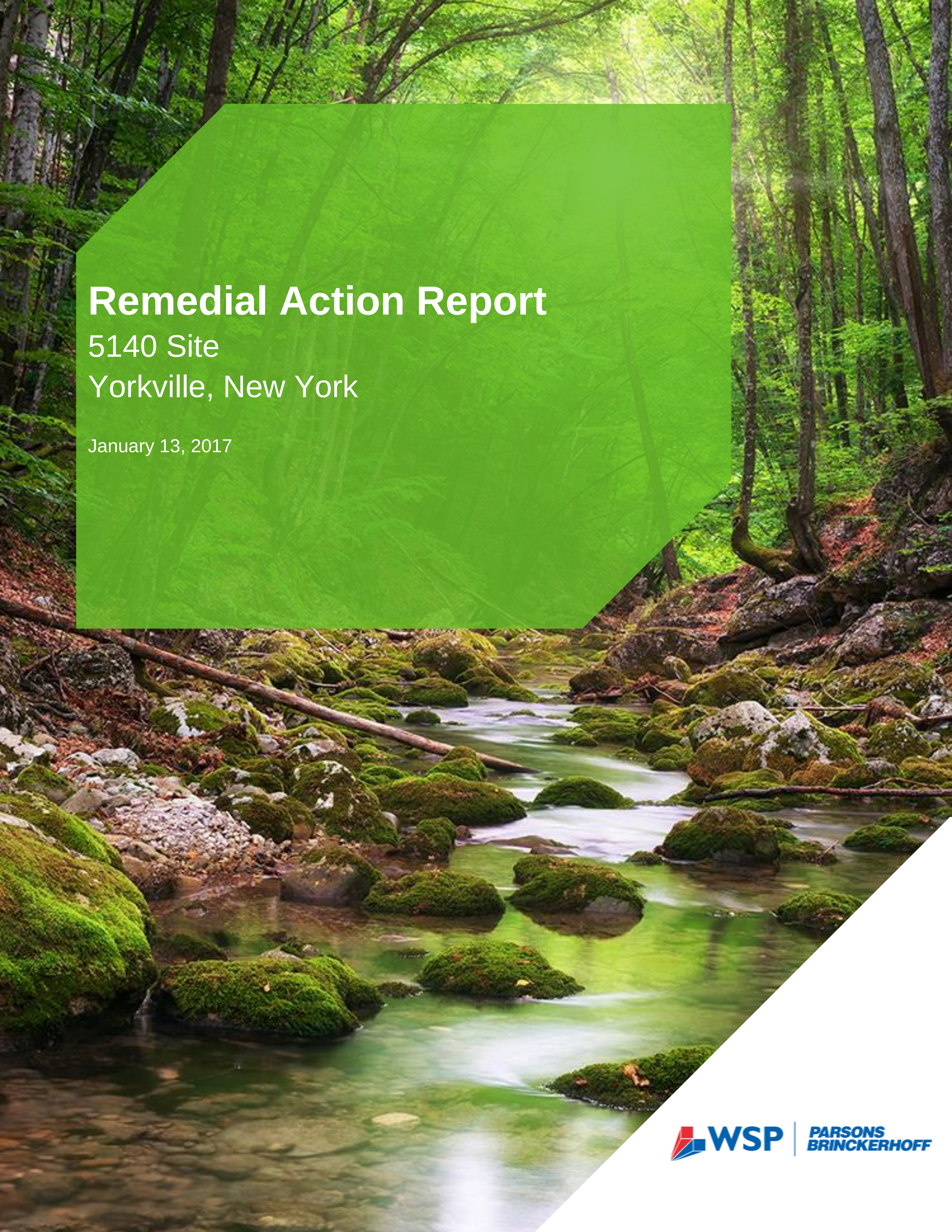
cc: Mr. Richard Sacco, JM Door Co. Inc.
Ms. Wendy Marsh, Hancock Estabrook, LLP



Remedial Action Report

5140 Site

Yorkville, New York

January 13, 2017

WSP | PARSONS BRINCKERHOFF

Remedial Action Report

5140 Site
Yorkville, New York

January 13, 2017

Consultant

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Certification

I, James Sobieraj, certify that I am currently a New York State-registered professional engineer (License No. 77394) and that this *Remedial Action Report* was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the New York State Department of Environmental Conservation's Technical Guidance for Site Investigation and Remediation (DER-10), dated May 2010.

Seal and Signature

1/13/17
Date

STATE OF NEW YORK
JAMES ALLEN SOBIERAJ
077394
LICENSED PROFESSIONAL ENGINEER

1 Introduction

WSP USA Corp, has prepared this *Remedial Action Report* for the 5140 Site at 5140 Commercial Drive in Yorkville, New York (Figure 1). The work, which was conducted in August 2016, included the excavation of residual polychlorinated biphenyl-impacted (PCB-impacted) soil from select locations identified south and east of the main building, and the emplacement of a soil cover system. The work is a follow-on to previous investigation and remediation at the site, including a soil excavation in 2013, performed as an interim remedial measure (IRM), and a 2014 remedial investigation (RI). The IRM focused on addressing contaminated soil with the greatest risk to human health and the environment. The excavations were successful at removing the majority of the PCB mass at the site; however, the subsequent RI identified several localized areas of PCB-affected surficial soils. While these areas were not part of a significant release, they nevertheless presented an ongoing concern for current and future workers at the facility. An alternative analysis was conducted in 2015 to evaluate remedial approaches and select a remedy for addressing the residual soil. This document details the implementation of the recommended remedial alternative for the site, as presented in the *Alternative Analysis Report and Remedial Action Work Plan* (AAR/RAWP), dated October 2, 2015.

Work conducted at the site between August 2013 and July 2016, including the IRM, the RI, and the AAR/RAWP, were conducted under a Brownfield Cleanup Agreement (BCA; Index No.:C633079-06-13), dated August 7, 2013, between 5140 Commercial Drive, LLC (5140), the former owners of the site, and the New York State Department of Environmental Conservation (NYSDEC). The proposed final remedy for the site, detailed in the AAR/RAWP, was reviewed by the Department; however, in the *Decision Document*, dated May 24, 2016, the NYSDEC, in consultation with the New York State Department of Health (NYSDOH), requested additional investigation as a condition of the approval (i.e., approval with modifications). The requested work included follow-up vapor investigation in the main building and groundwater investigation for non-site-specific compounds. In a letter dated July 6, 2016, 5140 chose to rescind the BCA and drop out of the Brownfield Cleanup Program (BCP). The additional investigation requested by the NYSDEC is not included in the scope of work detailed below.

WSP was retained to perform the remedial work described in this report comports with the NYSDEC-approved approach outlined in the AAR/RAWP and is consistent with the requirements for the BCP's *Final Engineering Report*. The document includes a summary of the previous investigations and the IRM (including the extent of remaining contamination); a description of the final remedial action, including the extents, volumes, and changes to the work plan; and the controls implemented as part of the remedial action. All of the work conforms to the applicable and relevant promulgated standards and criteria and was conducted in accordance with WSP's standard operating procedures (SOPs) and the quality assurance procedures outlined in the AAR/RAWP.

1.1 Report Organization

The content of this RAR is based on the NYSDEC's *Technical Guidance for Site Investigation and Remediation* (DER-10), dated May 2010, and the *Draft Brownfield Cleanup Program Guide*, dated May 2004, and is divided into 6 Sections, including this introduction (Section 1):

- Section 2 provides an overview of the site location and setting, the layout of the site facilities, and provides background on the previous investigations and remedial action;
- Section 3 describes the nature and extent of remaining affected media at the site, the potential exposure routes, and the remedial objectives;
- Section 4 details the scope of work for the remedial action, including the waste characterization methods, excavation procedures for the soil removal, and the site backfilling and restoration procedures;
- Section 5 presents a summary of the remedial action; and
- Section 6 lists the acronyms and abbreviations used throughout the report.

It is important to note that this report builds on investigation and remediation work previously performed at the site by WSP and other consultants. The primary documents used for reference in preparing the background sections of this report are:

- *Soil Excavation Work Plan*, dated August 1, 2011, prepared by the Palmerton Group Environmental Consulting Services of East Syracuse, New York
- *Soil Excavation Summary Report and Request for Spill Closure (Spill Number 1107657)*, dated October 18, 2011, prepared by the Palmerton Group
- *Interior PCB Cleaning and Encapsulation,* dated October 28, 2011, prepared by the Palmerton Group
- *Additional Investigation Report*, dated March 18, 2013, prepared by WSP
- *Construction Completion Report - Interim Remedial Measure*, dated May 23, 2014
- *Remedial Investigation Report,* dated February 13, 2015, prepared by WSP
- *Alternatives Analysis Report and Remedial Action Work Plan,* dated October 2, 2015, prepared by WSP

All of the documents prepared as part of the BCP application process (*Additional Investigation Report*) or the BCP itself (i.e., the *Construction Completion Report*, the RI, and AAR/RAWP) were submitted to the NYSDEC and are part of the public record. Relevant analytical results that were presented in the early (pre-BCP) reports and later summarized for the RI are presented on the figures in this report for reference, but are otherwise not included in tabular form. This includes sampling data for the area around the concrete pad, most of which was removed during the pad demolition and soil removal action performed as part of the 2014 IRM. Soil confirmation data from the IRM, where pertinent, are discussed in the relevant sections.

It is also important to note that the remedy, as proposed in the AAR/RAWP, included institutional and engineering controls designed to minimize the potential exposure to residually-impacted soil containing PCBs. An *Environmental Easement*[1], the instrument for ensuring compliance with the controls, was granted to the NYSDEC by the owner of the site and recorded with the Oneida County Clerk prior to the rescission of the BCA; however, the *Site Management Plan* (SMP), which details the ongoing maintenance and reporting obligations for the controls had not been finalized. A draft of the SMP, dated February 23, 2016, was submitted shortly after the AAR/RAWP was completed (as required by the NYSDEC), but that document did not include information regarding the final remedial action detailed in this report.

Because of its importance in managing and maintaining the controls, WSP updated the draft SMP to include the information regarding the actions described in this report. This revised version of the SMP is included in Appendix B for reference.

[1] The *Environmental Easement* for the site was recorded with Oneida County on October 14, 2015, and fully executed on November 6, 2015. A copy of the *Environmental Easement* is provided in Appendix A for reference.

2 Background

The 5140 site is situated on 1.9 acres in a commercial and industrial area along the Utica –Yorkville city limits in the eastern portion of Oneida County (Figures 1 and 2). Prominent site features are illustrated in Figure 3 and include:

- an 18,000-square-foot concrete block and sheet metal main warehouse-style building;
- an attached 5,000-square-foot single story concrete block office building (northeast corner); and
- a 50-foot-wide by 60-foot-long elevated concrete pad formerly located at the southeast corner of the main building (the concrete pad was removed as part of the IRM; see below).

A paved entranceway and parking area are present along the east side of the property with a gravel-covered drive extending around to the southern portion of the building to what was reportedly the loading dock and rail bay. The balance of the site is covered by grass and landscaped areas.

The site is located in a light industrial and commercially-zoned area and is adjoined to the west by Meelan's Carpet One Floor & Home, a residential flooring center (Figure 2). To the east, the site is bordered by two narrow (approximately 50 feet wide) strips of vacant land owned by DI Highway Sign & Structure, Inc., (directly adjacent) and the 5150 Corporation (further east), and beyond those properties, by Yorkville Battery, a discount battery retailer. The site is abutted to the south[2] and southwest by O.W. Hubbell & Sons, Inc., a metal galvanizer, and by DI Highway Sign & Structure. Portions of the Hubbell property also extend to the northwest fronting on commercial drive directly west of Meelan's Carpet. The site is bounded to the north by Commercial Drive and Route 5A and further to the north by Harbor Freight & Tools, a discount tool retailer. Sauquoit Creek, the nearest water body to the site, adjoins the Harbor Freight property to the north and west.

The property is sited in the Sauquoit Creek valley directly south of its confluence with the Mohawk River (Figure 1). The local relief is nearly flat with a slight dip to the north towards the Mohawk River parallel to the flow in Sauquoit Creek. Current and pre-construction topography (as depicted in historical maps, blueprints, and as-built diagrams reviewed as part to the BCP investigations detailed below) are consistent, with the majority of the site falling between 422 and 420 feet above mean sea level (amsl).

2.1 Development and Operational History

The site was originally constructed in 1957 for Westinghouse Electric Corporation for use as an electrical equipment repair facility. No first-hand information regarding the operations at the facility was available at the time of this report; however, a number of site plans were recovered from the current owner showing the general layout of the facility during Westinghouse's tenure. The majority of the operations appear to be associated with repairing, winding, and assembling coils for electrical transformers and other electrical equipment, most of which was performed in the northern and central portions of the production area of the building. The historical drawings also indicate testing facilities, a varnish and dip line, and two steam cleaning stations near sump pits 1 and 2 (Figure 3). Other prominent internal features include a rail bay in the southwest corner of the facility (the spur from which formerly connected to the railroad tracks south of the site); above grade overhead doors, presumably used as shipping and receiving docks, along the south and east walls of the facility; and a 15-foot-deep transformer detanking pit.

Westinghouse operated at the facility for 29 years, after which it was sold in 1986 to Eastern Electric Apparatus Repair Company. Eastern Apparatus repaired electric motors at the facility for 12 years selling the site to the Grand Eagle Motor Repair Company in 1998, who then sold the property 4 years later to 5140 Commercial Drive, LLC. K.J. Electric operated at the property from 2002 through 2009 for electric motor repairs. No additional information was available regarding the specific operations at the facility during these years.

Both the production and office space were vacant between 2009 and August 2015 when the facility was sold to JM Door Co., Inc., of Utica, New York, an overhead door service center. JM Door is using the former office portion of

[2] The property south of the site includes an unnamed 60-foot-wide parcel that was originally part of the 5140 Site, but was later sold to O. W. Hubbell & Sons, Inc.

the building as a residential and commercial showroom for overhead doors and hardware with the former production space used as a warehouse for their products. All shipping and receiving from the facility is conducted via a paved drive and overhead door along the east side of the building directly south of the office space (i.e., on the east side of the building north of the former concrete pad; Figure 3).

2.1.1 Previous Investigations and Remediation

The 5140 site has been the subject of several environmental investigations focused on PCBs that date back to the mid-1990s, including:

- a 1995 Phase I Environmental Assessment performed by GaiaTech, Inc., of Chicago, Illinois (1995 Phase I);
- a 2010 Phase I Environmental Assessment by Sanborn, Head, & Associates (SHA) of Concord, New Hampshire (2010 Phase I);
- a 2010 Phase II Environmental site Investigation conducted by Geoscience Technical Services, Inc., of Clinton, New York (2010 Phase II); and
- a 2011 expanded Phase II investigation performed by the Palmerton Group, of East Syracuse, New York (2011 Phase II).

GaiaTech's initial evaluation identified PCBs as a potential concern at the site and, during a limited follow-up investigation south of the main building, confirmed that PCBs were present in four soil samples[3] at concentrations ranging from 9 to 148 milligrams per kilogram (mg/kg) and in several wipe samples collected from the facility floor and other surfaces in the main building at concentrations between 19 and 162 micrograms per square centimeter (µg/cm^2). The report also indicated that "a (PCB) cleanup had been performed at the site but no documentation was found" and that the site had reportedly been listed under the NYSDEC's inactive hazardous waste program for "suspected PCB contamination" in1986. However, neither GaiaTech nor successive investigators (including WSP) were able to confirm the NYSDEC listing. GaiaTech speculated that the PCB cleanup may have resolved the listing.

As part of a potential sale of the property, SHA performed the 2010 Phase I and Geoscience performed the subsequent 2010 Phase II. The Phase II investigation confirmed PCBs were present in the soil in the southern portion of the site. The investigation included the installation of nine shallow (1.5 feet below ground surface [bgs]) soil borings, designated B-1 through B-9, south and east of the main building (Figure 4). The highest concentrations of PCBs, up to 2,930 mg/kg, were detected in soil samples collected directly north and south of the concrete pad where evidence of a surface release (i.e., staining) was noted in recovered soil. Significantly lower concentrations of PCBs, up to 13 mg/kg, were detected in samples south of the main building (including areas adjacent to the former AST pipes) with only trace PCB concentrations detected in samples collected from locations east of the main building (data from samples B-3 and B-4 south of the main building were used in support of the remedial actions; see below).

Geoscience's investigation also included the installation of four 1-inch-diameter shallow (15 feet bgs) groundwater monitoring wells: two along the southern property line (designated MW-1 and MW-2) and two along the northern property line (designated MW-3 and MW-4; Figure 4). Purge water collected from one of the two southern wells reportedly contained evidence of petroleum (oil as a separate phase visible in the purge water; see WSP's *Additional Investigation Report* for additional information). No information was available on the sampling methodology or the groundwater flow direction.

The Phase II work performed by the Palmerton Group in March and September 2011 expanded on the 2010 Phase II results revealing PCB-affected soil in the subsurface directly adjacent the concrete pad. Sixteen soil borings[4],

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[3] The results of the soil and wipe sampling conducted during the Gaia Tech investigation were reported in Appendix A of the *Soil Excavation Work Plan*, dated August 1, 2011, prepared by the Palmerton Group. The actual sample locations were not surveyed (the positions were shown in a hand sketch only) and, thus, are not shown on maps prepared for this report.

[4] The locations of soil borings GP-1 through GP-16, most of which were within the subsequent remedial excavation bounds, were omitted from Figure 4 for clarity. The test pit results performed during the remedial activities, and the follow-up soil investigation activities performed in 2012 are presented on the drawing. Additional information on the location of borings GP-1 through GP-16 is presented in *the Additional Investigation Report.*

designated GP-1 though GP-16, were installed to depths of up to 4 feet bgs north and south of the pad to delineate the extent of PCBs over the 25 mg/kg standard[5] used for screening (Figure 4). The sampling data showed total PCB concentrations in soil as high as 2,100 mg/kg near the south side of the pad. The results suggested that the extent of the impact was defined.

The Palmerton Group also collected a series of wipe samples within the main building to verify the interior surface sampling results reported during the previous investigations. The samples, designated Wipe 1 through Wipe 8, were collected in September from the floor and walls of sumps and pits in the facility (Figure 3). The results confirmed concentrations of PCBs (12 to 83 µg/100 cm^2), the highest concentrations of which were found on the floor near the southeast corner of the main building.

2.1.2 Remedial Activities

In response to the wipe sample results, the Palmerton Group contacted the U.S. Environmental Protection Agency (EPA) in September 2011 and began floor remediation and encapsulation activities in accordance with EPA regulations[6]. All surfaces where surface staining was observed were scraped clean of debris and double-washed using the PCB clean-up solvent CAPSUR®. The building floor and the floor and walls of the cleaned pits and sumps were then encapsulated with two coats of contrasting color (red, then grey) Sikgard-62® solvent-free, solvent-resistant epoxy. A total of 17,628 square feet of the main building was cleaned and encapsulated. No evidence of a release to the environment was noted during the cleanup activities.

The Palmerton Group also performed a remedial soil excavation north and south of the concrete pad in 2011 to address the affected soils detected during the earlier investigations, the approximate limits of which are depicted on Figure 4. Although delineation was deemed complete following the extensive soil boring program completed in March, visibly-stained soil was discovered during the excavations that locally extended below the vertical delineation limit of 4 feet bgs. The stained area reportedly was restricted to relatively narrow (up to 3-feet wide) bands of soil directly adjacent to the north and south sidewalls of the pad. Additional PCB-affected soil was removed from both the northern and southern excavations, which eventually exposed the footers of the concrete pad at approximately 5.5 feet bgs. Confirmation soil samples collected from the floor of the excavations, and test pits subsequently excavated adjacent to the north and south sides of the pad, indicated that soils containing concentrations as high as 5,800 mg/kg were still present at depths of 6 to 8 feet bgs. The PCB-affected soils were left in place due to concerns about the structural integrity of the pad and the adjacent building foundations. These affected soils were the subject of the 2014 IRM activities (described below).

2.1.3 Follow-up Investigation

The results of the 2010 and 2011 investigations and remedial work performed by SHA and the Palmerton Group indicated that PCBs remained a potential environmental concern east of the main building near the concrete pad. Soil containing PCB concentrations above the screening level were left in place around the footprint of the pad due to structural concerns and, because of the way the investigation and remedial excavation unfolded, the residual soils were undefined both horizontally and vertically (i.e., the excavation and test pits depths of 5.5 feet and 8 feet bgs exceeded the depth of the surrounding delineation points at 4 feet bgs). Moreover, the pre-excavation sampling did not evaluate the soils beneath or directly east of the pad, or characterize the soil berms along the southern portion of the property.

To address these data gaps, WSP conducted a series of investigations at the site in the summer and fall of 2012 designed to complete the PCB delineation around the concrete pad, characterize the soil berm along the southern property line (identified as a potential concern by the owner), and assess the potential impacts to groundwater. The concrete pad investigation included the installation of 20 direct-push soil borings, designated SB-1 through SB-20, directly north and south of the pad where the highest concentrations of PCBs were detected, in the area directly east of the pad, and beneath the pad itself (Figure 4). The results showed that the residual PCBs detected in soil at

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[5] The restricted use soil cleanup objectives (SCOs) contained in Title 6 of New York Codes, Rules, and Regulations (6 New York Codes, Rules, and Regulations [NYCRR]), Part 375, Table 375-6.8(b) was selected by Palmerton based on the intended future use of the property.
[6] As defined in Continued Use of Porous Surfaces Contaminated with PCBs Regulated for Disposal by Spills of Liquid PCBs (40 Code of Federal Regulations 761.30(p) and Subpart S.

the base of the former remedial excavations near the pad were confined to a discrete interval within the soil profile (above the water table) and did not extend horizontally beyond the bounds of the excavation. These data[7] were used to develop the IRM, which was designed to remove the remaining PCB-affected soil for offsite disposal.

The soil berm evaluation included the installation of four hand auger borings (HA-1 through HA-4) along the southern property line (Figure 4). The sample locations were positioned near the top of the triangular-shaped piles at roughly equidistant points along the long axis of the berm. The results of the investigation indicated only trace levels to moderate levels of PCBs below the 25 mg/kg industrial use soil cleanup objective (SCO) used for the pad excavation work. The soil piles were removed from the site for offsite disposal as part of the IRM activities.

The groundwater investigation was performed in two phases. The first phase included an inspection of the existing groundwater monitoring wells (designated MW-1 through MW-4) installed by Geoscience in 2010 to verify their integrity and potential usefulness for assessing the water quality at the site (Figure 4). The inspection results suggested that the wells were sufficient for determining the depth to groundwater, but were otherwise in poor condition (the annular space on one well, for example, was open to the surface). Moreover, the wells were not well positioned to evaluate the groundwater conditions near the concrete pad area where a release was known to have occurred. These wells were surveyed and gauged using an interface meter (to determine if light non-aqueous phase liquid [LNAPL] was present; no LNAPL was detected) and subsequently abandoned. The results of the gauging indicated a generally southwest to northeast groundwater flow direction.

To evaluate the groundwater quality at the site, WSP installed four additional groundwater monitoring wells, designated MW-5 through MW-8 (Figure 4). Two of the wells were installed directly adjacent to the remedial excavation bounds north (MW-5)[8] and south (MW-6) of the concrete pad with a third well (MW-7) installed northeast of the pad to evaluate the downgradient water quality. The remaining well, MW-8, was installed adjacent to former well MW-2 to monitor for the potential presence of LNAPL and dissolved PCBs reported during the earlier investigations. Samples for the analysis of PCBs were collected from each of the new wells using low flow sampling techniques. The results of the investigation did not reveal evidence of LNAPL in any of the wells, including MW-8. The analytical results indicated no dissolved concentrations of PCBs were present in any of the well samples collected from the site.

2.2 Brownfield Cleanup Program Activities

The results of the investigation and remedial activities performed at the site through 2012 indicated that the area around the concrete pad, and, to a lesser degree, the soil piles along the southern property line, were the only remaining environmental concerns at the site. Concentrations of PCBs in soil adjacent to the pad were two orders of magnitude above the industrial land use SCO of 25 mg/kg and, although they appeared to be restricted to a discrete interval in the soil profile above the water table, represented a potential source of PCBs to the underlying groundwater. The soil berms, although they contained concentrations below the industrial land use SCO were identified as an impediment to the restoration and redevelopment of the site.

The balance of the investigation data showed that the PCB impact to soil in areas outside of these two portions of the site was limited or otherwise mitigated. Samples collected from shallow soil borings installed south of the main building (i.e., outside the remedial excavation bounds) and east of the main building, for example, contained only trace to moderate (up to 13 mg/kg) concentrations of PCBs below the industrial land use SCO. The groundwater investigations indicated that there was no LNAPL or dissolved concentrations of PCBs and, while there were relatively low concentrations of PCBs on the concrete within the main building around the pits, these surface stains were removed and the entire floor was cleaned and encapsulated with epoxy coatings.

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[7] Discussion of the 2012 soil data, most of which was used to delineate the areas around the concrete pad, are presented on Figure 4, but are otherwise not detailed in this report for clarity. All of the affected soil detected in the borings was later removed as part of the IRM, which is discussed below. Additional information on the results of the soil sampling is presented in the 2013 *Additional Investigation Report*, which was submitted to the NYSDEC as part of the supporting information for the BCP application.

[8] Monitoring well MW-5, which was damaged during the IRM activities, was replaced as part of the scope of work for RI. See below.

Based on these data, WSP proposed a remedial excavation of the residual PCB-affected soil adjacent to the concrete pad and removal of the soil piles along the southern property line. These activities, which were proposed as the final remedy to restore the site to its intended (commercial/industrial) land use, were outlined under the direct-to-remediation approach in the March 2013 BCP application. The NYSDEC and the New York State Department of Health (NYSDOH), during their review of the application, agreed with the proposed remedial approach, but only as an IRM and not as the final remedy. The IRM would be prioritized given the concentrations detected and the potential risk to human health and the environment. WSP completed the IRM (described below) in March 2014.

The Departments also requested that additional investigation activities be performed to complete the characterization in portions of the site outside of the concrete pad and soil berm areas once the IRM had been implemented. These activities, which were outlined in a letter[9] to 5140, dated July 22, 2013, and later discussed in a post-application meeting[10] in the NYSDEC's office in Albany, NY, included:

- Additional soil sampling around the exterior of the main building, including the analysis PCBs and other organic and inorganic parameters
- An evaluation of the soil quality beneath the building
- Follow-up groundwater investigation, including the installation of additional wells and sampling of the new and existing wells
- A determination as to whether soil vapor intrusion is a concern at the site
- An evaluation of floor drains, sumps, utilities, and other subsurface structures within the building to determine the flow paths and drainage points (including sediment sampling, if necessary)
- An evaluation of the storm water drainage at the facility (including sediment sampling, if necessary)
- A visual inspection[11] of the interior surfaces (floors, walls, railings, etc.) to identify stained areas where PCBs may potentially be present

These requested activities later became the basis for the RI, which was completed in early 2015. A description of the RI scope of work and the findings are summarized below.

2.2.1 Interim Remedial Measure

WSP implemented the IRM in February and March 2014. The remediation goals for the action were established based on the projected future uses of the site (i.e., industrial), which is consistent with the local zoning and Title 6 of New York Codes, Rules, and Regulations (6 NYCRR) Part 375 industrial use classification (no recreational component on the site). The industrial use SCOs for total PCBs is 25 mg/kg; however, as a conservative measure, 5140 elected to adopt a more stringent site-specific SCO of 10 mg/kg as the remedial goal (RG) for all of the remedial activities at the site. This was done to provide an additional level of assurance that the areas targeted for remediation meet the relevant Part 375 criteria. These same criteria were used for the RI (detailed below) and were adopted for the remedial action discussed below.

The primary IRM excavation design was developed using the soil boring and test pit data from the 2011 investigation and remedial action, and the additional investigation data collected by WSP in 2012. The design included 50-foot-long by 18-foot-wide (at grade) remedial excavations both north and south of the pad and the demolition and removal of the concrete pad itself, which was necessary to access the affected soil identified below

[9] The additional investigation activities requested by the Departments were reiterated in a second letter from the NYSDEC to 5140, dated September 12, 2013, which memorialized the subsequent meeting with the NYSDEC on July 31, 2013. There were no changes in the requested scope of work for the RI in the September 12 letter.

[10] WSP and representatives from 5140 met with the NYSDEC at their headquarters in Albany, New York, on July 31, 2013, to discuss the application and the BCP process.

[11] WSP, based on a follow-up phone call with Mr. Paul Patel of the NYSDEC on May 30, 2014, understands that the visual inspection requested was for siting the subsurface soil borings and not part of an investigation of the surfaces themselves. The building surfaces were addressed by the previous investigation and remediation (floor cleaning and encapsulation) activities performed at the site.

its footers. The limits were V-shaped in cross-sectional view with approximate 1:1 sloped sidewalls between the base of the excavation and foundational soil beneath the pad (at grade) and the base of the previous remedial excavation (to prevent collapse). A slide-rail shoring system was installed between the building and the excavations to support the remaining building foundation (a perimeter strip footer foundation that was contiguous with the concrete pad) and the block wall allowing excavation to within a few feet of the building wall. The excavations were projected to extend to a maximum depth of approximately 10 feet bgs, however, in several instances the excavation was advanced deeper (and in one case, expanded horizontally beyond the design limits) to address visibly stained soils or affected soil detected in the confirmation soil samples. Affected soil detected beneath the concrete pad (detected during grid-based confirmation sampling for all of the exposed soil beneath the concrete pad) was also removed for offsite disposal. The final limits of the northern, southern and sub-slab IRM removal excavations are depicted on Figures 5, 6 and 7, respectively. A comprehensive presentation of the excavation methods and the confirmation soil sampling results are presented in the 2014 *Construction Completion Report – Interim Remedial Measure*.

The balance of the IRM work targeted the soil berm along the southern property line. While the 2012 follow-up investigation data indicated that the PCB concentrations in the berm were comparatively low (the PCB concentrations were three orders of magnitude below those near the pad), the soil nevertheless presented a potential human health risk due to the direct contact or inhalation exposure pathways, and a PCB migration concern, particularly as runoff. The soil piles were also identified as a nuisance (they encroach onto the paved surfaces south of the main building) and an obstacle to the redevelopment of the property.

The excavation approach (the soils were aboveground and, thus, did not require a formal design) was to remove only those portions of the berm on the 5140 site; however, after excavation began, it became clear that removal of the portions of the berm that extended onto the adjacent property would be necessary to prevent erosion and migration of the soils back onto the 5140 site. WSP coordinated with the adjacent landowner (Hubbell) and ultimately removed all of the soil berm along the southern property boundary.

The southern berm removal activities also included several *ad hoc* excavations that were performed to remove PCBs that were detected in confirmation soil samples collected from the native soil beneath the berm. The samples, collected from (25) 10-foot-square confirmation sampling grid cells aligned along the southern property line (i.e., within the footprint of the former berm), revealed PCB-affected soil above the site-specific SCO in 11 of the 25 grids, with the highest concentrations detected in the 8 grids directly south of the concrete pad area. The remaining three grids were located in the southwest corner of the property near the former rail line. An additional 1 foot of soil was removed over the entire 10-foot by 10-foot area from those cells where PCBs were detected in samples at concentrations above the site-specific SCO of 10 mg/kg but below 50 mg/kg, with two feet of soil removed from those cells where the confirmation samples contained PCBs above the Toxic Substances Control Act (TSCA) waste threshold of 50 mg/kg. Follow-up confirmation soil samples collected from the base and sidewalls of the *ad hoc* excavations indicated that all of the affected soil with concentrations above the site-specific SCO had been removed. The sampling grids and the as-built excavation limits for the *ad hoc* excavations performed for the IRM are depicted on Figures 8 and 9, respectively.

A total of 829 tons of nonhazardous waste soil and concrete with PCB concentrations up to 50 mg/kg were excavated and disposed of offsite at a NYSDEC-permitted facility, including 519 tons[12] of soil and debris generated from the southern soil berm and *ad hoc* sub-berm removals, 94 tons from the northern pad area excavation, and 211 tons of concrete from the pad itself. The removal activities also generated 944 tons of TSCA waste for disposal at a commercially-permitted TSCA waste disposal facility. The majority of the TSCA-regulated soil, with total PCB concentrations up to 6,500 mg/kg, was removed from the northern (358 tons) and southern (469 tons) pad area excavations. The balance of the TSCA-regulated soil was removed from beneath the soil berm (68 tons) and the concrete pad (49 tons). The maximum concentration of total PCBs in these soils was 212 mg/kg.

The excavations performed for the IRM achieved the overall objectives by removing the contaminated soil in and around the pad and remediating the areas to levels below the site-specific SCO. The result is a significant

[12] The nonhazardous wastes also included a minor volume of soil cuttings, three drums (165 gallons) of purge and development water, and approximately 5 tons of miscellaneous debris such as stockade fencing, wood, and other debris removed from the pad and the southern soil berm.

reduction in the PCB mass at the site. Most of the final confirmation soil samples collected from the northern and southern pad area excavations were not only below the site-specific SCO, but were below the protection to groundwater standard of 3.2 mg/kg. Similar results were obtained for the sub-berm soils along the southern property line, most of which appeared to be the result of minor surface spills due to poor housekeeping.

The only exception was a confirmation soil sample collected during the installation of the shoring system in the northern pad area. That sample (EXC60N-8E), which was collected from the western sidewall of shoring excavation at a depth of 14 feet bgs, contained total PCBs (6,500 mg/kg) well above the site-specific SCO (Figure 5). WSP removed as much of the visibly stained soil near the sample location as possible; however, because of the flooding in the shoring excavation and construction of the box itself (the metal panels of the shoring system could not be lifted, once installed, to reveal the sidewalls), no additional confirmation samples could be collected. Regardless, the extent of any residual PCBs[13] in the approximately 3 feet of soil between the excavation and main building foundation is likely to be limited and unlikely to pose a significant threat to human health (excavations in close proximity to the building are unlikely) or the environment.

2.2.2 Remedial Investigation

WSP, in response to the Department's request for additional investigation, developed a scope of work for the RI that included the following activities:

- a groundwater investigation
- a vapor intrusion investigation
- a soil investigation in and around the main building
- a contaminants migration pathway analysis

The work was performed in the fall of 2014 with follow-up activities (groundwater sampling and soil sampling associated with the contaminants migration pathway analysis) performed in early 2015. A summary of each phase of investigation and the findings, including a description of the site geology and hydrogeology, are presented below.

2.2.2.1 Groundwater Investigation

The Department's request for additional groundwater investigation included installing two monitoring wells: one well in the northwest corner of the property to aid in assessing the groundwater flow direction; and a second, deeper well to evaluate the water quality below the upper few feet of the water-bearing zone. WSP, in response, installed the two requested wells, designated MW-9 and MW-10, along with a third well, designated MW-5R, to replace monitoring well MW-5, which was damaged during the IRM activities (Figure 10). Well MW-10 was installed in the northwest corner of the property between the main building and Commercial Drive. The two remaining wells, MW-5R and MW-9, were installed as a co-located well pair northeast of the former concrete pad area to assess the water quality directly downgradient of the known release near the pad. Replacement well MW-5R was built consistent with the construction as MW-5 (i.e., with the screen set to straddle the water table, which was located at approximately 11 feet bgs; see below) with well MW-9 completed below the groundwater interface to assess the deeper water quality. All three wells, along with the existing wells (MW-6 through 9) were gauged and subsequently sampled using low flow groundwater sampling techniques (elevation and groundwater flow from the gauging activities are presented in the Geology and Hydrogeology section below).

None of the groundwater samples collected for the RI contained PCBs at concentrations above the ambient water quality standards[14]. This includes samples from those wells (MW-5R, MW-6, MW-7, and MW-9) located directly downgradient of IRM excavation area. These data are significant because they demonstrate that the PCBs released to the soil near the concrete pad area, some of which had concentrations greater than 5,000 mg/kg, did not result in an impact to groundwater. WSP concluded, based on these findings, that the likelihood of future

[13] PCB-affected soil that could not be removed during the excavation was designated as *Remaining Contamination*, for the purposes of the draft SMP (Appendix B). The volume of affected soil, which was estimated at 3 cubic feet, is depicted on the final extents figure discussed elsewhere in this report.

[14] *New York State Ambient Water Quality Standards or Guidance Value*s for Class GA groundwater provided in the *New York State Department of Environmental Conservation Division of Water Technical and Operational Guidance Series (1.1.1)*, dated June 1998.

groundwater impact from the residual PCBs in soil at the site, all of which are orders of magnitude lower, is minimal.

2.2.2.2 Vapor Investigation

The vapor intrusion investigation included collecting four co-located sub-slab soil gas and indoor air samples, designated SS-01/IA-01 through SS-04/IA-04, and one ambient (outdoor) air sample, designated OA-01 (Figure 11). Sample point SS-01/IA-01 was located in the northeast corner of the facility to characterize the sub-slab soil gas and indoor air quality in the former office space. The balance of the sample points, SS-02/IA-02 through SS-04/IA-04, were installed along a line oriented along the north-south axis of the building. These samples were used to assess the sub-slab soil gas and indoor air quality associated with the former production workspace. The final sample, OA-01, was positioned outside of the main building to evaluate potential background sources for volatile organic compounds (VOCs) in the outdoor air. All of the samples were collected in accordance with the NYSDOH's *Guidance for Evaluating Soil Vapor Intrusion in the State of New York,* dated October 2006.

The vapor sampling results revealed trace concentrations from a number of compounds, including the four chemical compounds with criteria established by the NYSDOH (tetrachloroethene, trichloroethene (TCE), 1,1,1 trichloroethane, and carbon tetrachloride). Only one of the four, TCE, was detected at concentrations that, when compared to NYSDOH's decision matrix, yield a recommended action of "Monitor;" however, WSP concluded (and the Departments ultimately agreed[15]) that, based on the lack of correlated soil detections and the conservative nature of the evaluation criteria (established for private residences) that the detections were not a concern.

2.2.2.3 Soil Investigation

The soil investigation included 28 soil borings, designated SB-21 through SB-48, at select locations around the perimeter of (borings SB-21 through SB-33) and within (SB-34 through SB-48) the main building (Figure 12). Exterior soil borings SB-21 through SB-27 were installed west of the main building to assess the soil quality in the landscaped areas west (SB 21 through SB-23) and north (SB-24 and SB-25) of the east (SB-26 and SB-27) of the main building. The balance of the exterior soil borings were installed south of the main building and were positioned to assess the soils south of the former rail bay (SB-29 and SB-30), the area near the former AST piping (SB-28 and SB-31), and the areas south of the former concrete pad area (SB-32 and SB-33). All of the exterior soil samples, collected 0 to 2 inches bgs and 0 to 12 inches bgs (as per the NYSDEC's request), were submitted for analysis of PCBs with select borings sampled for the additional compounds (VOCs, semivolatile organic compounds [SVOCs], pesticides and metals) requested by the Departments.

The interior soil borings were installed in a split-density grid positioned within the former production areas of the facility. Borings SB-34 through SB-38 were installed in a relatively low density sampling grid to evaluate the former assembly and electrical equipment repair areas in the northern portion of the facility, which did not include any sumps, pits, or other openings in the concrete floor (Figure 12). Interior soil borings SB-39 through SB-48 were installed in a higher density sampling grid in the southern portion of the building to evaluate the soil near a number of subgrade structures and other areas of potential concern, including a four-foot-deep sump formerly used to capture fluids below a steam cleaning station (i.e., sump # 1; SB-39) and the areas directly east of the IRM excavations (SB-40 through SB-42). The balance of the borings were drilled to evaluate soil beneath the former rail bay (SB-43 and SB-46), near the former detanking pit (SB-44) and the associated AST piping (SB-47), and the near the former paint storage area (SB-45) and sump pit #2 (SB-48). All of interior soil borings were sampled directly below the concrete floor (i.e., between 0 and 2 feet bgs) and in the 2-foot-thick interval above the water table (i.e., 13 to 15 feet or, for borings SB-43 and SB-46, which are at ground level, 10-12 feet bgs). Additional samples were collected from the 4 to 6 foot bgs depth interval to evaluate the soil near the base of the sumps (SB-39 and SB-48) or directly adjacent the buried AST piping (SB-47). All of the soil samples were analyzed for PCBs with select samples analyzed for the additional compounds (VOCs, SVOCs, pesticides, and metals) requested by the Departments.

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[15] The RI, including the vapor investigation findings were accepted by the Department; however, in the AAR/RAWP Decision Document, dated May 24, 2016, the Departments requested additional vapor intrusion investigation be conducted on the basis that the buildings had been reoccupied (the RI vapor investigation was conducted while the building was vacant). No additional vapor intrusion investigation was conducted prior to the rescission of the BCA in July 2016.

The soil sampling results did not reveal any appreciable[16] concentrations of metals or organic compounds, except for PCBs. The PCB Aroclor 1260 (12.7 to 24.1 mg/kg)[17], was detected at concentrations above the site-specific SCO of 10 mg/kg. The detections occurred in the shallow (0 to 0.17 foot bgs) soil collected from just two borings, SB-29 and SB-30, both of which are located in the southwest corner of the site (Figure 12). Soil samples collected from the deeper interval (i.e., from 0 to 1 foot) in both borings did not contain PCBs at concentrations above the site-specific SCO, indicating a limited vertical extent. These detections, which WSP concluded are likely the result of poor housekeeping (small spills and drips) possibly associated with equipment and materials (including dielectric fluids) transported on the former rail spur, are the basis (along with the PCBs detected in historical boring B-3) for the remedial hot spot excavation detailed below.

Trace levels of PCBs below the site-specific criteria but above 1 mg/kg were detected in several other locations of the site, including beneath the building (SB-39 and SB-47) and, most notably, in samples collected from borings south of the main building (i.e., SB-28 and SB-31 through SB-3; Figure 12). These detections (along with the PCB-affected soil detected in historical boring B-4; Figure 4), while technically below the level that would warrant remedial action (i.e., below the site-specific SCO), are, nevertheless, important in terms of the overall remedy (specifically, in respect to the clean cover requirements under a restricted use alternative). Additional discussion on these detections is presented in Section 3 below. The balance of the RI soil samples contained only trace or non-detectable concentrations below 1 mg/kg.

2.2.2.4 Utility and Storm Water Drainage Assessment

WSP, in response to the Departments' request to evaluate the floor drains, sumps, utilities, and other subsurface structures within the facility, and the storm water drainage systems outside of the main building, performed a comprehensive contaminant migration pathway analysis of the site. The analysis included a review of historical documents (Sanborn fire insurance maps, topographic maps, aerial photographs, site plans and blueprints), a reconnaissance of the site and surrounding area with local public works officials, and a review a review of federal and state regulatory databases (to identify past discharge permits or accidental releases). The purpose of the analysis was to identify (and sample, if necessary) any potential preferential pathways for constituents of concern (primarily PCBs) released via documented spills or poor housekeeping to be transported to offsite receptors.

The major findings included the following:

- Current and pre-construction topography are consistent, with the majority of the site falling between 422 and 420 feet amsl; no evidence of significant reworking of the site was noted
- No canals or natural drainage features (streams, creeks, etc.) are currently present or are apparent on the historical maps, photographs, or plans
- Storm water at the site is generally managed via overland flow: no municipal storm sewers are located onsite
- The facility's sanitary sewer line consists of a single main trunk line running the length of the building; flow in the trunk line is to the north towards a municipal sewer beneath Commercial Drive (Figure 13)
- The production area is serviced by three active (open) floor drains, two of which are connected to the sanitary sewer with the third discharging to the ground surface via a drain pipe that exits the eastern building foundation; (WSP is recommending that the drain be sealed; see Section 5 below); a fourth drain was formerly located in the paint storage room, but has since been sealed from the inside and the drain pipe (which appears to have discharge to the ground surface near the former concrete pad) was removed during the IRM
- A previously unknown dry well located at the northeast corner of the main building appears to receive runoff from the southern and eastern portions of the site; according to the Whitestown Department of Public Works Superintendent, the dry well is about 6 feet deep and was vacuumed out during a flooding event in 1999 or 2000

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[16] The soil samples revealed one SVOC, benzo(a)pyrene (1,840 to 3,150 micrograms per kilogram), and one metal, arsenic (18.7 mg/kg), at concentrations above their respective industrial land use SCOs of 1,100 mg/kg and 16 mg/kg; however, the SVOC was determined to be associated with the paved areas of the site and the arsenic, which was detected in a single sample, was at a concentration within the typical range of background levels for the eastern United States. Neither detection was considered indicative of a release at the facility and, thus, not a concern. See the *Remedial Investigation Report* for additional information.

[17] Aroclor 1260 was detected at a concentration of 24.1 mg/kg in sample SB-0914A (0 to 0.17), which was a duplicate of sample SB-30 (0 to 0.17). See Table 1 in the *Remedial Investigation Report*.

- A review of the environmental databases for the site did not reveal any accidental discharges of wastewater to the storm sewer system.

WSP, based on the results of the contaminant migration analysis, collected soil samples from two locations, designated SB-50 and SB-51, for analysis of PCBs (Figure 12). Soil boring SB-50 was drilled adjacent the main building to assess the soil directly beneath the floor drain outfall. The soil was sampled at the same depth intervals (0 to 2 inches and 0 to 12 inches bgs) and using the same equipment and techniques as those used for the soil. Boring SB-51 was drilled through the dry well located at the northeast corner of the site to evaluate the soil at the base of the structure. The soil sampler was advanced into the base of the structure using a direct-push drill rig with analytical samples collected from the native soil in the 0 to 2 foot depth interval (as measured from the base of the dry well below any debris that was present in the structure).

The sampling results revealed only trace concentrations of the PCB Aroclor 1260 (1.970 to 2.010 mg/kg) slightly above 1 mg/kg but below the site-specific SCO of 10 mg/kg in the samples collected from the area beneath the floor drain discharge line where it exits the eastern building foundation. Aroclor 1260 was also detected in the sample from the dry well, but at a trace concentration below 1 mg/kg.

2.2.2.5 Site Geology and Hydrogeology

A total of 33 borings were drilled at the 5140 site for the RI (including three borings that were subsequently converted to groundwater monitoring wells) to depths ranging between a few inches and 27 feet bgs. Soil descriptions from the borings indicate that the site is underlain by sand and gravel mixtures at the surface, a silt unit that extends as deep as 8 feet bgs, and an interval of gravelly silt or sand extending to a depth of between 15 and 18 feet bgs. The silt is typically light brown to brown, moderately dense, and appears to be locally reworked at the surface, particularly in those borings installed beneath the building (the floor of the facility is elevated above the surrounding grade and contains several feet of similar material as fill). The unit grades with depth to sandy silt, typically between 4 to 6 feet bgs. The underlying sandy gravel interval typically consists of brown fine to medium-grained sand and sub-rounded gravel with varying amounts of silt. The unit is medium-dense to dense. Groundwater was encountered within this lower gravelly silt interval at depths ranging between 11 and 14 feet bgs[18].

In two of the well borings, deeper well MW-9 and well MW-10, a relatively thin (0.5 to 2 feet) interval of grey clay was encountered between 15 and 18 feet bgs (Figure 10). The clay was massive with medium to high plasticity and was underlain by poorly-sorted sand and gravel similar to that encountered above the clay. Groundwater was present both above and below the clay interval and the clay itself was wet. The clay layer appears to be laterally discontinuous: it was not observed in other nearby deep borings, such as boring SB-17 (drilled to a depth of 17 feet bgs) or the boring for well MW-6 (drilled during a previous investigation phase to a depth of 18 feet bgs), although it may be an artifact of low recoveries during sampling (Figure 4). Soil boring SB-17 and two other relatively deep boreholes (i.e., MW-7, MW-8) were marked by color changes and gradational transitions (to finer fractions) in the sand or silt content at approximately the same depth interval, which may be acting (along with the intervals containing clay) as a low permeability unit. The 2014 water levels in monitoring well MW-9 (413.28 feet amsl), which is screened below the interval, are higher than those of co-located well MW-5R (413.01 feet amsl), suggesting an upward gradient (i.e., the lower unit is partially confined); however, the data are too few to determine the full extent of the hydraulic relationship. Moreover, deeper groundwater, if it is hydraulically distinct from the upper unit, does not appear to be (based on the analytical groundwater data) relevant to the environmental investigations at the site (i.e., no PCBs were detected in groundwater samples collected from the site; see above).

Groundwater elevations collected in October 2014 as part of the RI ranged from 413.51 feet amsl at well MW-8 in the southeast corner of the site to 413.01 feet amsl at well MW-7 along the eastern portion of the property (Figure 10). These elevations were between 2.08 and 2.45 feet lower than the groundwater elevations measured during the December 2012 gauging events performed in advance of the BCP application (i.e., those reported in the *Additional Investigation Report* included in the BCP application), most likely due to seasonal precipitation. The site

[18] Based on observations of the soil samples made during boring installation. See the boring logs presented in Appendix B of the *Remedial Investigation Report* for more information.

received nearly 4 inches of precipitation in the 30 days before the 2012 event, but only 2.26 inches of precipitation in the month before the October sampling event.

Despite the fluctuations, groundwater elevation contours generated from the October 2014 data (excluding deep well MW-9, discussed above) indicate that flow across the site is to the northeast towards Sauquoit Creek and the Mohawk River beyond as previously reported. The groundwater hydraulic gradient, as measured between MW-8 and MW7, is a relatively flat 0.004 feet/feet (Figure 10). These findings are consistent with the flow direction and hydraulic gradient measured in 2012 and are generally comparable to elevation and flow directions indicated in the historical reports.

2.2.3 Non-significant Threat Determination

The Departments, as part of the RI review process, evaluated the data with respect to the criteria listed in 6 NYCRR Part 375-2.7(a), to determine if the site posed a significant threat to human health or the environment. Specifically, the RI findings were reviewed to determine if the affected media posed a significant threat to:

- endangered species, threatened species, or species of concern
- protected streams and navigable waters, tidal wetlands, freshwater wetlands, or significant fish and wildlife habitat areas
- flora or fauna, via bioaccumulation of contaminants to a level that causes, or that materially contributes to, significant adverse ecotoxicological effects in flora or fauna or leads, or materially contributes, to the need to recommend that human consumption be limited
- fish, shellfish, crustacea, and wildlife (acute or chronic effects)
- the environment due to a fire, spill, explosion, or similar incident or a reaction that generates toxic gases, vapors, fumes, mists, or dusts;
- to public health, where the site is near residences, recreational facilities, public buildings or property, school facilities, places of work or worship, or other areas where individuals or water supplies may be present.

The Departments determined, based on these criteria and the data presented in the RI, that the 5140 Site does not pose a significant threat to human health or the environment, noting that no groundwater contamination (and, thus, no potential for offsite migration of affected groundwater) was detected at the site. The Departments findings were included in the RI FACT sheet, which was distributed to the nearby property owners (in accordance with the *Citizen's Participation Plan*, dated September 10, 2013) on July 23, 2015.

3 Remedial Action

The findings of the RI indicated that low level residual PCBs in soil were the primary environmental concern remaining at the site. Polychlorinated biphenyls within the building were remediated and encapsulated, and the grossly-impacted soil associated with the former concrete pad (and the pad itself) were excavated for offsite disposal. No other significant concentrations of organic compounds (VOCs, SVOCs, or pesticides) or metals were detected in the soil and the RI investigations did not reveal any impacts to the site groundwater or vapor.

The remaining areas of concern, based on the findings of the RI and previous investigations, are south and east of the main building and, to a lesser extent, beneath the building itself. Borings installed within the former shipping and receiving areas (i.e., adjacent the former truck dock and rail spur), and in the area directly south of the former concrete pad revealed surficial soil containing PCBs at concentrations generally between 1 mg/kg and the site-specific SCO of 10 mg/kg. Surficial soil samples from borings SB-28, SB-31 through SB-33, and B-4, for example, contained PCBs at concentrations between 1.05 and 9.0 mg/kg (Figure 14). Similar concentrations were detected in the surficial soil sample from boring SB-50 directly beneath the floor drain discharge pipe, and in samples collected from borings SB-39 and SB-47 beneath the production areas of the main building. These low level impacts, which, south of the main building, were marked by several localized areas of PCBs with concentrations above the site-specific SCO (i.e., SB-29, SB-30 and B-3; designated as “hot spots” for the purposes of the remedy discussion below), were widespread, but limited in vertical extent. Affected soil was observed to decrease rapidly with depth, often to trace levels within the first foot of the soil profile. Concentrations of PCBs in samples from boring SB-29 and SB-30, for instance, decrease from 12.7 mg/kg and 24.1mg/kg, respectively in the upper 2 inches of soil to concentrations below the criteria (6.28 mg/kg and 2.42 mg/kg, respectively) in the composite samples collected from 0 to 1 foot bgs. These findings were consistent with those of the 2014 *ad hoc* remediation (performed during the IRM) where PCB-affected soil was restricted to the upper 1 to 2 feet of soil and pointed to small-scale, poor housekeeping-type releases rather than a large-scale spill.

These minimally-impacted soils, while minor in comparison to the release near the former concrete pad, nevertheless represented a potential open exposure pathway and risk to human health. Exposure to PCBs, because of their proximity to the surface, could occur via dermal contact with the affected soil, accidental ingestion of the material, or inhalation of dust-borne PCB particulates. The risk would likely be the same for future employees, transient workers (e.g., utility workers, construction crews, etc.), visitors or trespassers. The impacted soil, particularly in areas outside the footprint of the main building, also presented a potential migration risk, albeit minimal, via surface runoff to the neighboring properties or nearby Sauquoit Creek, where it could impact wildlife or other local (human) populations.

Addressing these outstanding concerns was necessary to complete the remedial efforts and the site and restore the property to its intended land (i.e., commercial/industrial use, as indicated in the 2013 BCP application).

3.1 Regulatory Approach

WSP conducted a remedial alternative analysis and developed remedial action objectives (RAOs) to mitigate the risk associated with the remaining PCBs in soil. The recommended alternative, designated as *Hot Spot Removal with Institutional and Engineering Controls* in the 2015 AAR/RAWP, was structured around the NYSDEC’s Restricted Use SCO for industrial settings under the BCP Track 4 criteria (see the description of the various BCP cleanup tracks in the AAR/RAWP). This approach allows the use of the generic soil cleanup objectives for the particular land use scenario or allows for the development of site-specific criteria. The specific *Restricted Use* SCO for the industrial/commercial land use scenario for total PCBs is 25 mg/kg; however, as with the IRM, a more stringent site-specific SCO of 10 mg/kg was adopted as the RG to provide an additional level of assurance that the areas targeted for active remediation (i.e., the hot spots; see Section 3.2 below) meet the relevant restricted use SCO.

The remedy also employed restrictions placed on the use of the property and groundwater, consistent with a Track 4 approach. The restrictions were implemented as institutional[19] and engineering controls designed to prevent exposure to PCBs in soil and other media. For commercial/industrial use, the top one foot of soil must meet the lowest of the respective *Restricted Use* criteria for protection of human health, groundwater or ecological resources, which, under 6 NYCRR Part 375, is 1 mg/kg for PCBs. The majority of the soil at the site has already been remediated to the 1 mg/kg standard or is otherwise not applicable. The only soil samples containing PCBs within the 1 mg/kg to 10 mg/kg range that were not addressed during the IRM (or as part of the hot spot removals associated with this remedial action) were collected from borings beneath the building (SB-39 and SB-47), directly south of the former concrete pad area (i.e., in samples from borings B-4, SB-28 and SB-31 through SB-33), and directly beneath the floor drain discharge pipe noted in the contaminant migration pathway analysis (i.e., in sample SB-50; Figures 12 and 14). These areas of the site would be addressed via engineered barrier systems (i.e., the facility floor and emplaced soil cover systems), as detailed in the design below.

3.2 Remedial Design

The *Hot Spot Excavation with Institutional/Engineering Controls* remedy, as detailed in the AAR/RAWP, included both active remediation (excavation for offsite disposal) and onsite controls to minimize the potential impact to the environment and human health. The remedial excavation portion of the proposed design centered on three borings where PCBs were detected in surficial soil samples at concentrations above the site-specific SCO of 10 mg/kg. Two of the borings, SB-29 and SB-30, were sampled during the RI with the third boring, B-3, sampled during the 2010 Geoscience investigation (Figures 12 and 14). The design was later modified during the implementation of the remedy to accommodate a fourth area of affected soil, designated WS-1, which was discovered during waste pre-characterization sampling (see Section 4.1). All four locations are directly south of the main building.

The hot spot excavation design was based on the *ad hoc* soil removal implemented during the IRM. Specifically, the design used a grid-based excavation approach with 10-foot-square cells centered on RI borings SB-29, SB-30, historical boring B-3, and WS-1 (Figure 14). Each cell was excavated to an initial depth of 3 feet bgs for soil containing PCBs below 50 mg/kg, and 2 feet bgs for soil containing PCBs above that threshold (i.e., WS-1). These starting depths were selected based on the results of the nearby IRM remediation's along the southern property line (the confirmation samples from which indicated most of the PCB mass was 2 feet deep or less). Additional soil was to be excavated if staining or confirmation soil sample results indicated that accessible PCB-affected soils extend beyond the proposed limits; however, no additional staining or other evidence was noted during the hot spot excavations and, as detailed below, none of the confirmation soil samples contained PCBs above the site-specific SCO of 10 mg/kg.

The proposed institutional and engineering controls included the implementation of barrier systems for the soil beneath the facility floor and areas south and east of the main building. The engineering control for soil beneath the building, the floor[20] itself, is already in place and required no further action, other than ongoing maintenance[21] to ensure its integrity. For the exterior portions of the site, the engineering control design was based on a 1 foot clean soil cover system, emplaced after removing the upper 1 foot of impacted soil, that extends beyond the hot spots to include most of the area south of the building (Figure 14). This conservative approach was adopted over isolated excavations (similar to the hot spots above) to address PCBs below the site-specific criteria of 10 mg/kg, but above the maximum PCB concentration of 1 mg/kg, in recognition that most of the soil south of the main building likely contains low levels of PCBs. The intent is to mitigate, to the extent possible, the potential for uncontrolled exposure to PCB-containing materials. Specifically, the cover design (in combination with the hot spot excavations) was intended to reduce, control, or eliminate unacceptable exposures via direct contact, accidental ingestion, or

[19] The institutional controls proposed as part of the remedy, including restrictions on the zoning, prohibitions on the use of groundwater and other activities at the site, and compliance with maintenance and reporting requirements, are detailed in the draft SMP.

[20] A floor also employs an encapsulation barrier, applied during a pre-BCP remedial action in 2011, which is designed to protect workers from residual PCBs within the concrete matrix (see Section 2.2.1 above). This barrier is an integral part of the remedial approach, as detailed in the AAR/RAWP and the draft SMP (Appendix B).

[21] As detailed in the *Engineering Controls* (Section 3.3) of the draft *Site Management Plan*, dated February 23, 2016.

inhalation of PCB-affected soil (human health RAO); and prevent future onsite and offsite overland migration of soil containing PCBs (protection of the environment RAO).

The specific procedures for the excavation, confirmation sampling, restoration, and offsite waste disposal activities are detailed below.

3.2.1 Floor Drain

WSP's remedial design also proposed sealing the interior floor drain that discharges to the ground surface. The drain not only represented a potential conduit to the environment for fluid wastes that could be released by future users of the facility, but could have required a State Pollution Discharge Elimination Permit. Moreover, drains that daylight and discharge to the ground surface are no longer consistent with the best practices for an industrial facility.

3.3 Deviations from the Remedial Action Work Plan

Remedial activities at the site were completed in accordance with the AAR/RAWP with the following exceptions:

- A fourth hot spot area, designated WS-1, was added to the remedial excavation work plan based on the results of the waste characterization sample of the same name, which contained the PCB Aroclor 1260 (69 mg/kg) at concentrations above the site-specific SCO of 10 mg/kg (Figure 14; see Sections 4.1 and 4.2 below). The remedial excavation design used the same 10-foot-square grid approach outlined for the previously identified hot spots, but with an initial excavation depth of 2 feet bgs instead of 3 feet bgs (to minimize the amount of TSCA-regulated waste generated at the site). The as-built limits of the WS-1 excavation are depicted on Figure 15.
- The conceptual soil cover emplacement area, which was depicted in the AAR/RAWP as extending over the entire southern property line, was modified to exclude those areas along the southern property line where affected soil had been previously addressed during the IRM. The limits were also adjusted to correct for an error in the site survey, which was not detected until after the AAR/RAWP was submitted. The changes reduced the overall footprint of the soil cover emplacement excavation from 13,250 square feet projected in the AAR/RAWP, to 11,810 square feet for the actual excavation bounds. The area depicted in this report (Figures 14 and 15) reflects the as-built extents of the soil cover emplacement excavations.
- A geotextile demarcation layer was installed at the base of the soil cover emplacement excavation (i.e., at 1 foot bgs) to mark the transition between the clean cover soil above and the potentially-affected underlying native soil, as required in DER-10 (the discussion of an appropriate demarcation layer was inadvertently omitted from the AAR/RAWP). A description of the demarcation layer is presented in Section 4.4 below.

4 Scope of Work

The remedial activities were conducted in several stages. The first phase of work, waste characterization sampling, was performed in July 2016 prior to the mobilization of the remedial excavation equipment. The purpose of the sampling was to characterize the in-place soil within the proposed limits of the soil cover excavation for waste disposal purposes in advance of any intrusive work at the site. Waste disposal profiles generated from these data would then be used to allow direct loading of the excavation spoils. This pre-characterization work, in additional to providing data for the waste profiles, lead to the discovery of the fourth hot spot south of the main building and the subsequent modifications to the work plan. The sampling procedures and the results of the pre-characterization work are presented in Section 4.1 below.

The waste characterization activities were followed by a pre-mobilization site survey. Richard M. Rybinski, a New York-licensed Land Surveyor with RMR Surveys in Manlius, New York, located and marked the hot spot and soil emplacement excavation limits in advance of the intrusive onsite work. The intent was to ensure accurate location of the excavation areas, particularly along the southern property line where the shape of the soil emplacement area is irregular due to previous remedial excavations. The corners of the hot spots (including WS-1) and each inflection point in the southern and eastern soil emplacement perimeters was surveyed (in State Plane Coordinates [NAD83]) for inclusion in this report and later incorporation in the SMP (Figure 14). No post excavation survey was conducted as there were no deviations from the design limits.

The third phase of work was performed between August 15 and 23, 2016, and included the bulk of the remedial activities. The specific tasks for these activities were as follows:

- **Site Preparation Activities** – site preparation activities consisted of locating public and private utilities; implementing erosion and sedimentation controls; establishing soil and equipment staging areas (including pre-positioning a lined roll-off container for the soil to be excavated from WS-1); and saw cutting the portion of the asphalt drive extending into the southern soil cover emplacement area (Figure 14).
- **Soil Removal Activities** – stepwise excavation of soil within the designated hot spot areas, followed by confirmation soil sampling, and the removal of the upper 1 foot of soil from the soil cover emplacement areas south and east of the main building (Section 4.2)
- **Backfilling and Soil Cover Emplacement** – backfilling of the hot spot areas followed by emplacement of the soil cover base and topsoil layers
- **Floor Drain Closure** – sealing of the interior floor drain and the discharge pipe exiting the building along the eastern foundation (Section 4.3).
- **Site Restoration** – grading and reseeding the soil cover emplacement areas

All of the work was performed in accordance with the *AAR/RAWP* (including the community air monitoring plan for dust and vapor control, and WSP's SOPs for field procedures), and *DER-10*, where applicable. Field quality assurance and control (QA/QC) procedures for the confirmation soil sampling activities included the collection and analysis of blind duplicate sample (along with matrix spike and matrix spike duplicates) in accordance with the AAR/RAWP. The blind duplicate samples were analyzed with the other samples to evaluate the reproducibility of the sample collection and analytical procedures. Since dedicated stainless steel spoons and bowls were used to collect all waste characterization and confirmation samples, equipment rinse blanks were not necessary.

No QA/QC samples were collected as part of the pre-mobilization waste characterization activities and the data were not tabulated for this report. A copy of the analytical data report for the waste characterization sampling is presented in Appendix C. Analytical data generated during the remediation, confirmation sampling results for the hot spot excavations, including WS-1, are presented in Table 1. Laboratory reports and the validation data usability summary reports (DUSRs) for the confirmation soil samples are included in Appendices D and E, respectively.

4.1 Waste Characterization Sampling and Analysis

WSP collected in-place characterization samples from the proposed soil cover emplacement areas on July 26, 2016, in advance of the planned excavation work. The samples, along with data from the RI, were used to develop waste disposal profiles for each potential waste stream to be generated. The specific analyses and sampling frequency required for the waste characterization were provided by the disposal facility selected for the work: Oneida-Herkimer Solid Waste Authority (OHSWA) facility in Ava, New York, a NYSDEC-permitted facility for the disposal of nonhazardous wastes; and, after concentrations above the TSCA threshold of 50 mg/kg were discovered, US Ecology, Inc.'s, Wayne Disposal Landfill (Site #2) in Belleville, MI, a commercially-permitted hazardous waste (including TSCA) disposal facility regulated by the U.S. Environmental Protection Agency (EPA) Region V.

The characterization sampling consisted of three samples, two surface soil samples, designated WS-1 and WS-2, and one asphalt sample, designed WA-1 (Figure 14[22]). The surface soil samples were collected from representative areas within the proposed soil cover emplacement bounds: WS-1 was located within the larger soil cover emplacement area directly south of the main building with WS-2 located in the smaller soil cover emplacement area east of the main building. Both samples were collected from a depth corresponding to approximately 6 inches bgs the using dedicated stainless steel spoons and trowels. Discrete samples for VOC analysis were collected first with aliquots of additional recovered soil placed into a dedicated stainless steel bowls for composting in accordance with WSP's SOP 6 (Appendix F). The asphalt sample was collected from the western edge of the paved surface by breaking off small fragments of the material using a decontaminated rock hammer. The fragments were later disaggregated at the laboratory immediately before the analytical analysis was performed rather than in the field to avoid the possibility of cross-contamination.

All of the samples collected for characterization were placed in laboratory-supplied glassware and submitted to Con-Test Analytical Laboratory of East Longmeadow, MA, for the following analyses using the Toxicity Characteristic Leaching Procedure (TCLP):

- TCLP VOCs by EPA Method 8260C;
- TCLP SVOCs by EPA Method 8270C;
- TCLP metals by method EPA Method 6010C-D and 7470A;
- Total PCBs EPA Method 8082A;
- Reactivity;
- Corrosivity;
- Ignitability by EPA Method 1030[23]; and
- pH by EPA Method 9045C

The characterizations samples were collected in accordance with WSP's SOPs 17 and handled in accordance with WSP's SOP 3 (Appendix F). Copies of the analytical reports for the characterization sampling are presented in Appendix C.

4.1.1 Waste Characterization Results

Based on the results from soil samples collected at location WS-2 and the soil data from the RI, excavation spoils for areas outside of WS-1 were classified as nonhazardous waste (Figure 14). The results from WS-1 contained the PCB Aroclor 1260 (69 mg/kg) at concentrations above the TSCA threshold of 50 mg/kg and, thus, would be classified as hazardous (TSCA-regulated) waste. The design of the remedial excavation was modified based on these results to address the area around WS-1 (see description below). Samples from WA-1 did not contain appreciable amounts of PCBs and, thus, asphalt removed from the site was disposed of as nonhazardous waste at the OHSWA facility.

[22] The location of waste characterization samples WA-1 and WS-2 are not depicted on Figure 14, for clarity.
[23] At the request of OHSWA, Flashpoint by EPA Method 1010A was substituted for Ignitability (specified on the chain-of custody) at the analytical laboratory. WSP included only the revised analytical report containing the Flashpoint results in Appendix C for clarity.

4.2 Soil Removal Activities

The excavation activities were conducted between August 15 and 17, 2016. The soils were removed using conventional earthmoving machinery including hydraulic excavators, loaders, and skid steer equipment operated by Paragon Environmental Construction Company (PEC) of Brewerton, New York. The 10-foot-sqaure hot spots, which were excavated first, were advanced from the ground surface to a depth of approximately 2 feet bgs for WS-1 and 3 feet bgs for remaining grid cells (Figure 14). Soil from each hot spot was removed in approximately 1-foot-thick lifts to allow visual and instrument (using a PID to determine if uncharacterized VOCs were present) screening for evidence of a release. No grossly contaminated soils were noted during any of the excavations. Spoils from hot spots SB-29, SB-30, and B-3 were then direct loaded into waiting trucks for offsite disposal as nonhazardous waste. Spoils recovered from the hot spot WS-1, which were characterized as hazardous, were placed in a lined roll-off box, which was staged at the site while final arrangements for disposal were completed. The box was covered and labeled once all of the material from the WS-1 hot spot had been excavated.

The soil cover emplacement activities were begun once the hot spot excavations and confirmation soil sampling (described below) were complete. The portion of the asphalt drive extending into the soil emplacement bounds, which was saw cut from the balance of the drive along the northern boundary in advance of the excavation activities, was broken up using excavation equipment and direct loaded into trucks for offsite disposal. The cover emplacement excavation was then advanced to a depth of approximately 1 foot bgs beneath the removed asphalt and the adjoining areas south of the main building, and in the second cover emplacement area (the 10-foot-square excavation beneath the area where the floor drain exits the main building foundation) east of the building. The excavated material was screened visually and using the PID in advance of direct loading into trucks for disposal (along with the asphalt debris) offsite. No signs of a release requiring additional excavation (beyond the design limits) were noted in any of the soil emplacement areas. No soil confirmation soil samples were collected from the emplacement excavations.

4.2.1 Confirmation Soil Sampling

Soil confirmation samples were collected from each sidewall of the hot spot excavations once the design limits had been achieved. A total of 26 samples, including those for QA/QC were collected from the sidewall and base of the four 10-foot square hot spot excavations (i.e., SB-29, SB-30, B-3, and WS-1; Figure 14). The sidewall samples[24], designated with the prefix EXC, the hot spot ID, a cardinal direction (i.e., N, S, E or W) and the “SW” suffix (e.g., EXC-SB30ESW), were collected from each vertical face at a depth half way to the base of the excavation (i.e., about 1 foot bgs for the WS-1 excavation and at approximately 1.5 feet bgs for the rest of the hot spot excavations). Two additional confirmation samples were collected from the bottom of each 10-foot square excavation. These samples, designated as above, but with the suffixes B1 and B2, were comprised of aliquots from two of the four quadrants within each cell. All of the samples were collected using dedicated stainless steel implements (in accordance with WSP’s SOP 6; Appendix F), placed into the appropriate laboratory-supplied glassware, and shipped to Con-Test for analysis of PCBs by EPA Method 8082 on an accelerated basis. The samples were handled in accordance with WSP’s SOP 3. Copies of the analytical reports and the DUSR are presented in Appendix E.

The results of the hot spot confirmation sampling, presented in Table 1, revealed only low or non-detectable PCBs at concentrations below the site-specific SCO of 10 mg/kg. No additional soil was removed from any of the four hot spots based on these results.

4.2.2 Final Excavation Volume and Extents

A total of approximately 638 tons of soil from the hot spot (53 tons; not including WS-1) and soil cover (585 tons[25]) emplacement excavations was transported offsite to OHSWA for disposal as nonhazardous waste. The shipments, each accompanied by a bill of lading, were made concurrent with the excavation activities (in 24 truckloads)

[24] The sidewall and base confirmation soil sample locations within each 10-foot-square hot spot area are not shown on Figure 14 for clarity.

[25] Includes an estimated 62 tons of asphalt debris, which was transported to the OHSWA facility with the nonhazardous soil in undifferentiated truckloads.

between August 15 and 16, 2016. Copies of the documentation, including the OHSWA scale receipts for each load accepted, are included in Appendix G.

The soil recovered from hot spot WS-1 was removed from the site on September 19, 2016, once the final arrangements for disposal were completed (Figure 14). A total of 15.5 tons was shipped in the lined and covered roll-off box to the Wayne Disposal Landfill facility in Belmont, MI, in a single delivery.

The extents of the hot spot (400 square feet) and soil cover excavations (11,810 square feet for the southern cover and 100 square feet for the eastern excavation) were not altered during the implementation of the remedy. The limits depicted on Figure 15, which were surveyed in advance of the work, are consistent with the revised bounds discussed in the alterations section above and accurately reflect the ground conditions at the site. Figure 15 includes the State Plane (NAD 83) coordinates for each corner of the soil cover system for reference.

4.3 Floor Drain Sealing

The interior floor drain was sealed by removing the flush-mounted steel protective grate and plugging the drain pipe using a small amount of expanding foam (to form a bridge in the pipe) and quick-set hydraulic cement. Hydraulic cement was also used to plug the drain line from outside the facility where the discharge pipe exited the building foundation. Once the hydraulic cement had set, the funnel-shaped interior drain opening was backfilled with concrete to match the surrounding concrete floor.

4.4 Backfilling, Soil Cover Emplacement, and Site Restoration

Backfilling was performed once all of the confirmation soil sampling results were received from the analytical laboratory. The backfill material, 374 tons of bank run gravel (well graded gravel, similar to onsite native material), was imported from Poland Sand and Gravel[26], LLC, in Poland, NY, a NYSDEC-permitted quarry (a copy of Poland's mining permit is presented in Appendix H.). The backfill material was placed in the hot spot excavations in 12-inch-thick loose lifts and compacted using a walk-behind vibratory plate compactor.

A demarcation layer marking the boundary between the soil cover and the underlying native soil was installed once the fill in the hot spots had been brought flush to the level of the soil emplacement excavations (i.e., 1 foot bgs). The layer, WINFAB 3150, an orange, high-tenacity polypropylene geotextile produced by Willacoochee Industrial Fabrics, Inc., of Willacoochee, Georgia, was rolled out in overlapping strips over the entire footprint of the soil emplacement excavations. The fabric was then cut and secured in place in advance of the soil cover emplacement. A copy of the WINFAB 3150 Product Data Sheet is presented in Appendix I.

The soil cover emplaced on top of the geotextile consisted of 6-inches of bank run gravel from Poland Sand and Gravel, which was first graded and then compacted using the vibratory compactors. This interval of soil was then topped with 459 tons of top soil obtained from a stockpile maintained by PEC at their Brewerton, New York, facility. Analytical data for the top soil, provided by PEC, did not reveal concentrations of any regulated compounds at concentrations above the lowest SCOs for commercial and industrial use, as set forth in 6 NYCRR 375-6.7(d) (Table 375-6.8(b)). A copy of the analytical reports for the topsoil is presented in Appendix J. The top soil was installed in a minimum 6-inch-thick loose lift over the entire extent of the soil cover areas. The final grading was performed using a bulldozer.

4.4.1 Site Restoration

The site restoration activities were performed during a remobilization to the site the week following the soil excavations, and included the seeding of the two soil cover areas at the site. Site restoration activities were originally to be conducted as soon as the excavations were backfilled; however, the work was suspended on August 19, 2016, due to an equipment malfunction. The seeding was completed on August 23 after the equipment had been repaired.

Grass seeds were distributed in a hydroseed slurry (i.e., containing the seed mixture, fertilizer, and mulch) by Brookside Landscaping of Madison, New York, using commercial hydroseeding equipment. The slurry contained a seed mixture of *Creeping Red Fescue*, at a rate of 20 pounds per acre, *Fescue* (tall; turf-type) at a rate of 20

[26] Poland Sand and Gravel is a NYSDEC-permitted quarry and, thus, no analytical was required for the backfill materials.

pounds per acre, and *Perennial Ryegrass* at a rate of 5 pounds per acre. All areas of the soil cover were seeded, including the area in the southeast corner of the property where asphalt was removed. This area of the site was no longer in use and, thus, did not require restoration of the paved surfaces.

The seeded areas were observed to have resulted in a healthy and robust population of grasses in the weeks following the hydroseeding application.

5 Summary

The remedial action conducted between July 26 and August 23, 2016, addressed the remaining PCBs in soil identified during the RI and previous investigations. The hot spot excavations removed a total of 53 tons of nonhazardous PCB waste with concentrations between 2.42 and 24.1 mg/kg and another 15.5 tons of hazardous soil containing PCBs above the 50 mg/kg TSCA threshold for offsite disposal. An additional 585 tons of asphalt and soil containing low levels (less than 10 mg/kg) of PCBs was excavated and replaced with a clean soil cover extending over nearly 12,000 square feet of the southern and eastern portions of the site. When combined with the IRM totals, approximately 1,467 tons of nonhazardous, 959.5 tons of TSCA-regulated waste, and more than 5 tons of other wastes and debris were removed for offsite disposal.

These combined actions have restored the property to commercial/industrial standards, consistent with the intended post-remediation use identified in the 2013 BCP application, and achieved the remedial objectives of protecting human health and the environment established for the site. All of the soil detected with concentrations of PCBs above the site-specific SCO, with the exception of one small, subsurface area adjacent to the building foundation footers, have been removed from the site. This includes the contaminated soils associated with the concrete pad (and the pad itself) that contained PCBs at concentrations up to two orders of magnitude above the evaluation criteria. Most of these soils were remediated to levels well below the site-specific SCO. The area of remaining contamination, which has a volume of approximately 3 cubic feet, is located more than 14 feet bgs directly adjacent to the main building foundation. These soils, due to their depth and position directly adjacent to the building foundation, are unlikely to be encountered during utility or other excavations at the site and, thus do not pose a significant threat to human health. Likewise, the affected soil is a *de minimis* concern for the environment, give its minimal volume and the immiscibility of PCBs. It is informative to recall that no groundwater contamination has been detected at the site. It is also important to note that the site received a non-significant threat designation from the Departments after the IRM was completed.

The remedial actions (and previous work conducted in 2011) also addressed potential exposure routes identified within and beneath the main building, and in the surficial soil at the site by establishing appropriate engineering controls. This includes the encapsulation barrier on the facility floor (implemented prior to enrollment in the BCP program); the facility floor itself, which is an engineered barrier separating workers within the facility from low levels of PCB-affected detected beneath the structure; and the cover areas, which, together with unaffected areas, ensure that PCBs above 1 mg/kg are not present in the upper 1 foot of the soil profile anywhere on the site. These measures isolate the known or potentially-impacted areas from human exposure at the site under typical (non-intrusive) conditions and have mitigated the potential for overland flow of PCB-containing soil or sediment. None of the open human or environmental exposure routes identified during the AAR/RAWP remain at the site.

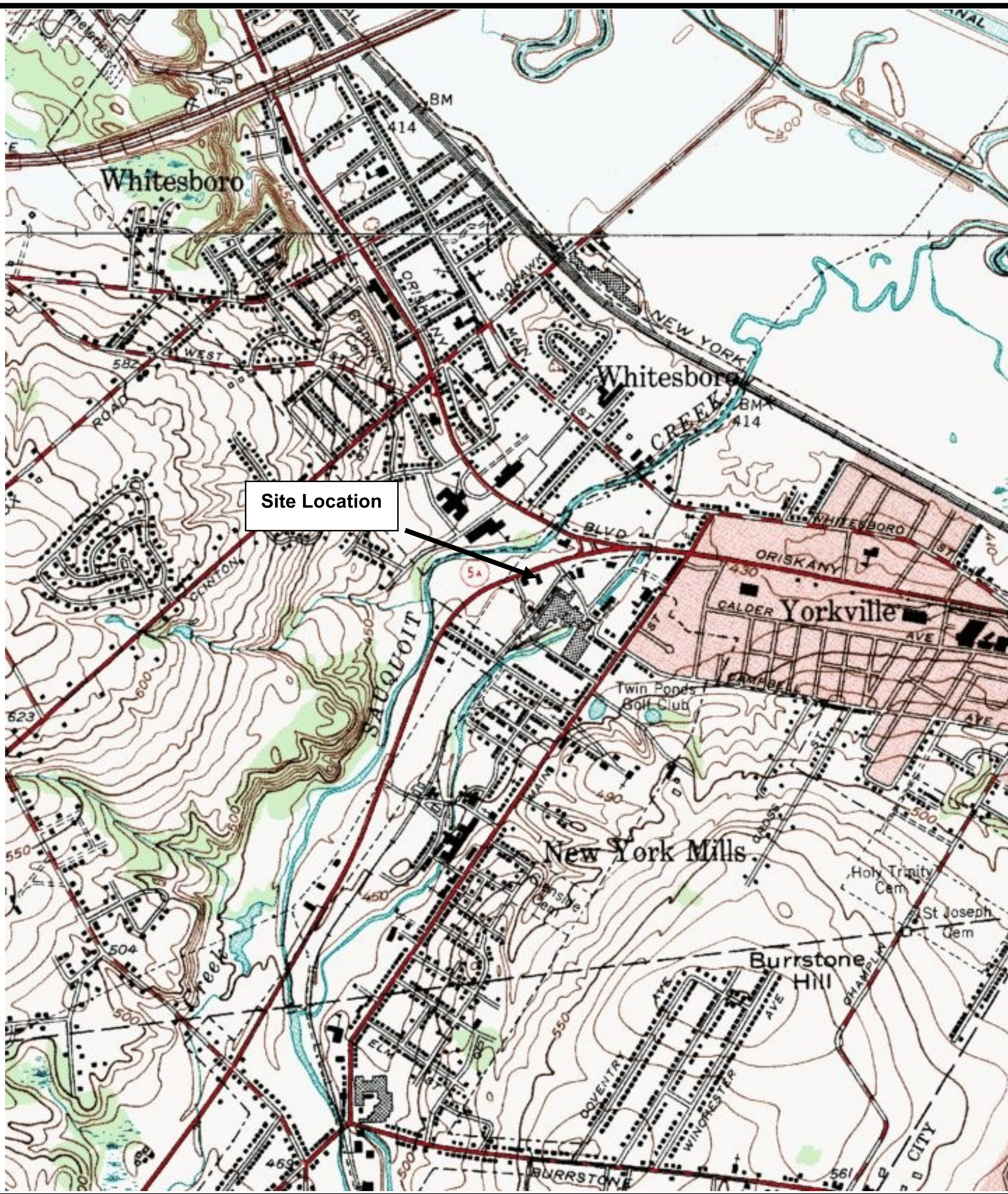
While the PCB mass has been reduced and the barriers are currently preventing exposure to residual PCBs, the long-term efficacy of the remediation is incumbent upon implementation of the associated institutional controls, as outlined in the *Environmental Easement and the* updated SMP (Appendix B). These include generic controls, such as prohibitions on the use of site groundwater and the planting of vegetable gardens, and more pertinent requirements for the inspection and maintenance of the barriers, and the procedures for protecting future workers from exposure (if, for example, a barrier must be breached or an excavation through the known area of remaining contamination is required). Compliance with these controls, which is compulsory under the *Environmental Easement*, will protect the environment and ensure that future employees, transient workers, or other (offsite) populations are protected from potential contact with residual PCBs.

6 Acronyms

AAR	alternatives analysis report
amsl	above mean sea level
AST	aboveground storage tank
BCA	Brownfield Cleanup Agreement
BCP	Brownfield Cleanup Program
bgs	below ground surface
CAMP	community air monitoring plan
CCR	construction completion report
DUSR	data usability study report
EPA	U.S. Environmental Protection Agency
FER	final engineering report
IRM	interim remedial measure
LNAPL	light non-aqueous phase liquid
mg/kg	milligrams per kilogram
NYCRR	New York Codes, Rules, and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
OHSWA	Oneida-Herkimer Solid Waste Authority
PCB	polychlorinated biphenyls
PID	photoionization detector
QA/QC	quality assurance/quality control
RAO	remedial action objective
RAWP	remedial action work plan
RG	remedial goal
RI	remedial investigation
SCO	soil cleanup objective
SMP	site management plan
SOP	standard operating procedure
SVOC	semivolatile organic compound
TCE	trichloroethene
TCL	target compound list
TCLP	Toxicity Characteristic Leaching Procedure
TSCA	Toxic Substances Control Act
$\mu g/cm^2$	micrograms per square centimeter

µg/l	micrograms per liter
VOC	volatile organic compound

Figures



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SCALE, FEET

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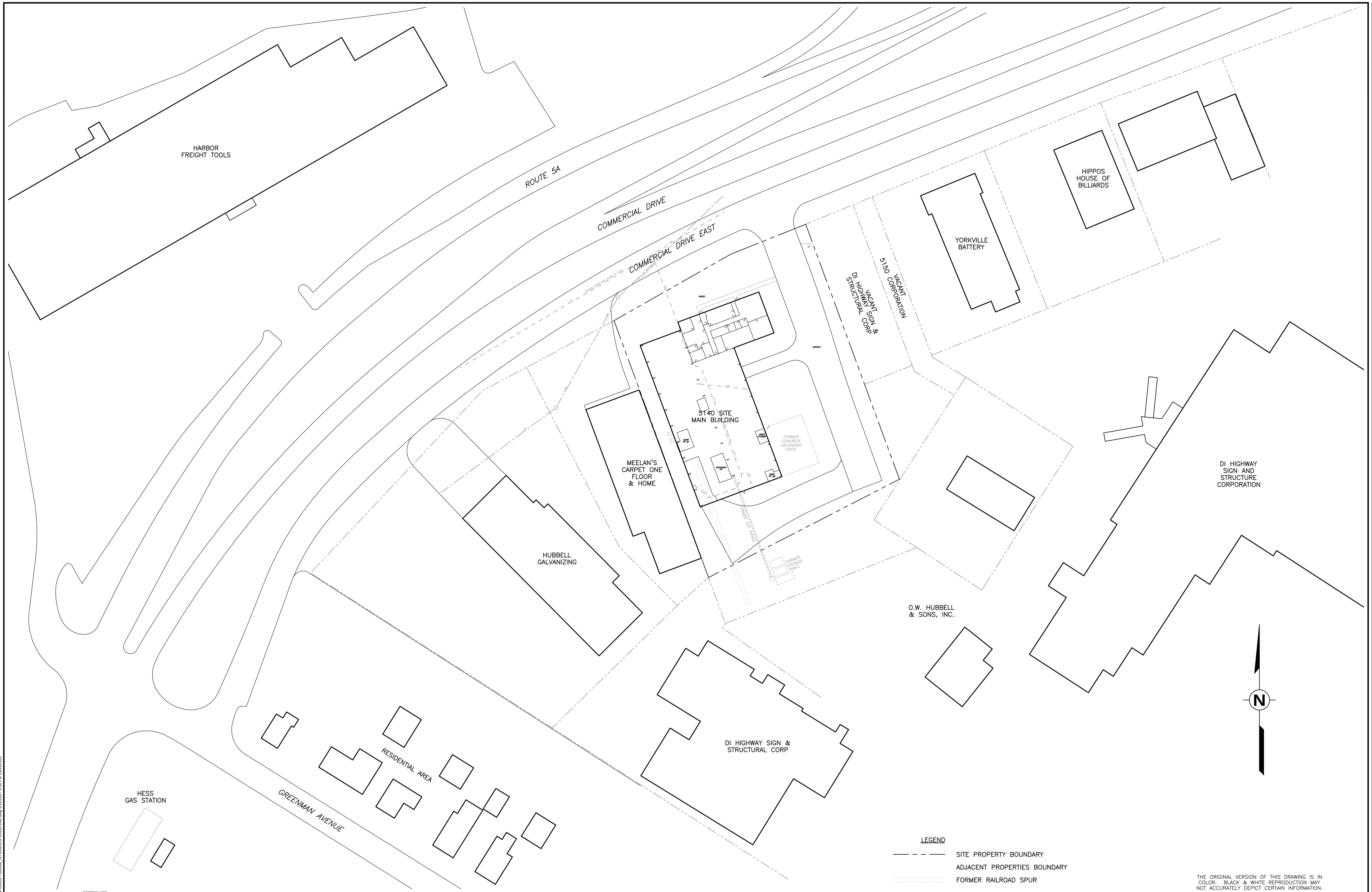
WSP USA Corp.
75 Arlington Street, 4th Floor,
Boston, MA 02116
(617) 426-7330

FIGURE 1

SITE LOCATION MAP

5140 COMMERCIAL DRIVE EAST
YORKVILLE, NEW YORK

DWG Name:
Checked:
Approved:
Drawn By:
A



LEGEND

SITE PROPERTY BOUNDARY

ADJACENT PROPERTIES BOUNDARY

FORMER RAILROAD SPUR

THE ORIGINAL VERSION OF THIS DRAWING IS IN COLOR. BLACK & WHITE REPRODUCTION MAY NOT ACCURATELY DEPICT CERTAIN INFORMATION.

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SCALE, FEET

SOME LOCATIONS ARE APPROXIMATE AND WERE TAKEN FROM THE DRAWINGS REFERENCED ON THIS SHEET.

REFERENCES:

1. PALMERTON GROUP FIGURE 3, TITLED EXCAVATION AREAS.

2. GOOGLE EARTH PRO, IMAGE DATED 7-21-2011.

3. BUILDING, WELLS, SOIL BORINGS, AND HAND AUGERS SURVEYED BY RICHARD RYBINSKI, L.S. AUGUST 3, 2012, DRAWING NUMBER YORK812F.DWG.

4. KUCERA AND ASSOCIATES, INC. DRAWING, TAX MAP NUMBER 305.18, TOWN OF WHITESTOWN, ONEIDA COUNTY, NEW YORK, REVISION 2 DATED 7/27/2009.

5. WESTINGHOUSE ELECTRIC CORPORATION M & R BUILDING DRAWINGS, JOB NUMBER 4395, DATED OCT. 10,1957. SHEET A-1, "SITE PLAN", REV. DATED JAN. 1958 - SHEET A-12, "GROUND FLOOR PLAN", REV. DATED JAN. 1958 - AND SHEET P-7, "SCHEMATIC LAYOUT OF TRANSFORMER OR PIPING". SCALES VARY.

6. RICHARD M. RYBINSKI, L.S. SURVEY, REVISION DATE: 8/30/15, NO.: YORK1015.dwg.

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ADJACENT PROPERTIES

5140 SITE
YORKVILLE, NEW YORK

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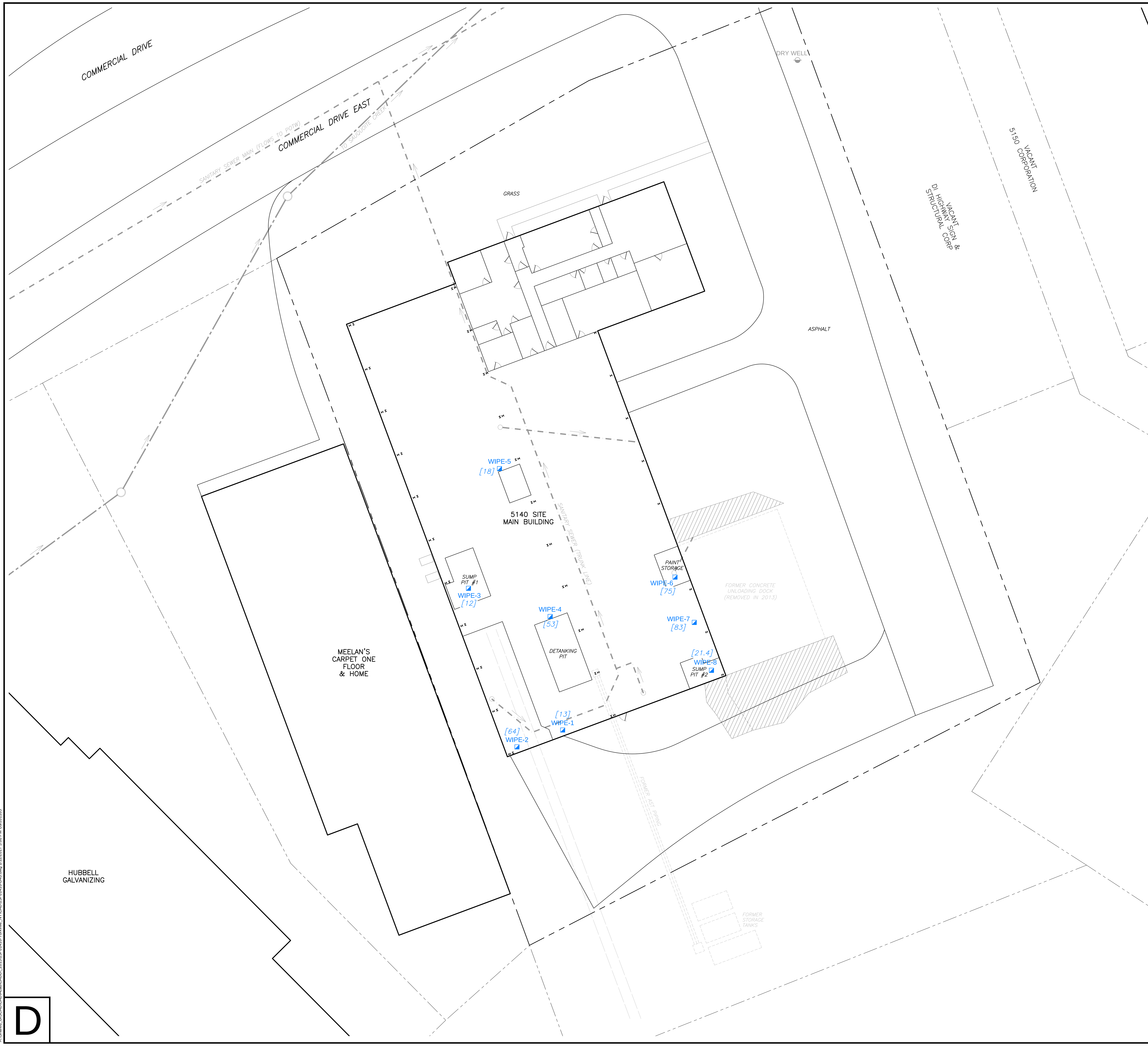
FIGURE 2

Drawing Number
15P01410-D42



LEGEND

- SITE PROPERTY BOUNDARY
- ADJACENT PROPERTIES BOUNDARY
- FORMER RAILROAD SPUR
- 2011 REMEDIAL EXCAVATION LIMITS
- DRY WELL
- FLOOR DRAIN
- SANITARY OR FLOOR DRAIN PIPE
- STORM SEWER DRAIN
- STORM SEWER
- FLOW DIRECTION
- WIPE-5 PCB WIPE SAMPLE (2011)
- [18] TOTAL PCB CONCENTRATION IN MICROGRAMS PER 100 SQUARE CENTIMETERS ($\mu g/cm^2$)

REFERENCES:

1. PALMERTON GROUP FIGURE 3, TITLED EXCAVATION AREAS.
2. GOOGLE EARTH PRO, IMAGE DATED 7-21-2011.
3. BUILDING, WELLS, SOIL BORINGS, AND HAND AUGERS SURVEYED BY RICHARD RYBINSKI, L.S. AUGUST 3, 2012, DRAWING NUMBER YORK812F.DWG.
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5. WESTINGHOUSE ELECTRIC CORPORATION M & R BUILDING DRAWINGS, JOB NUMBER 4395, DATED OCT. 10,1957. SHEET A-1, "SITE PLAN", REV. DATED JAN. 1958 - SHEET A-12, "GROUND FLOOR PLAN", REV. DATED JAN. 1958 - AND SHEET P-7, "SCHEMATIC LAYOUT OF TRANSFORMER OR PIPING". SCALES VARY.
6. RICHARD M. RYBINSKI, L.S. SURVEY, REVISION DATE: 8/30/15, NO.: YORK1015.dwg.

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REVISIONS

REV	DESCRIPTION		
	Revised:	Chkd:	Appr.:
	Revised:	Chkd:	Appr.:
	Revised:	Chkd:	Appr.:

SEAL

1/13/17

DATE

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CHECKED	
APPROVED	

SITE LAYOUT WITH HISTORICAL PCB WIPE SAMPLE RESULTS

5140 SITE
YORKVILLE, NEW YORK

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FIGURE 3

Drawing Number
15P01410-D43

LEGEND

SB-3 ●	SOIL BORING (2012)
HA-3	HAND AUGER LOCATION (2012)
MW-7	MONITORING WELL (NOV. 2012)
MW-4	MONITORING WELL (ABANDONED NOV. 2012)
MW-5	MONITORING WELL DAMAGED AND REMOVED DURING INTERIM REMEDIAL MEASURES (FEB. 2014)
GP-12	SOIL BORING (2011)
N-4 ◆	CONFIRMATION SOIL SAMPLE (2011)
N-6	TEST PIT (2011)
B-2	SOIL BORING (DEC. 2010)
DRY WELL	DRY WELL
	SITE PROPERTY BOUNDARY
	ADJACENT PROPERTIES BOUNDARY
	FORMER RAILROAD SPUR
	2011 REMEDIAL EXCAVATION LIMITS
9-11' 1.023	SAMPLE DEPTH (FEET BELOW GRADE SURFACE)
	TOTAL PCB CONCENTRATION IN MILLIGRAMS PER KILOGRAM (mg/kg)
	FLOOR DRAIN
	SANITARY OR FLOOR DRAIN PIPE
	STORM SEWER DRAIN
	STORM SEWER
	FLOW DIRECTION

REFERENCES:

1. PALMERTON GROUP FIGURE 3, TITLED EXCAVATION AREAS.
2. GOOGLE EARTH PRO, IMAGE DATED 7-21-2011.
3. BUILDING, WELLS, SOIL BORINGS, AND HAND AUGERS SURVEYED BY RICHARD RYBINSKI, L.S. AUGUST 3, 2012, DRAWING NUMBER YORK812F.DWG.
4. KUCERA AND ASSOCIATES, INC. DRAWING, TAX MAP NUMBER 305.18, TOWN OF WHITESTOWN, ONEIDA COUNTY, NEW YORK, REVISION 2 DATED 7/27/2009.
5. WESTINGHOUSE ELECTRIC CORPORATION M & R BUILDING DRAWINGS, JOB NUMBER 4395, DATED OCT. 10,1957. SHEET A-1, "SITE PLAN", REV. DATED JAN. 1958 – SHEET A-12, "GROUND FLOOR PLAN", REV. DATED JAN. 1958 – AND SHEET P-7, "SCHEMATIC LAYOUT OF TRANSFORMER OR PIPING". SCALES VARY.
6. RICHARD M. RYBINSKI, L.S. SURVEY, REVISION DATE: 8/30/15, NO.: YORK1015.dwg.

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20 10 0 20 40

SCALE, FEET

SOME LOCATIONS ARE APPROXIMATE AND WERE TAKEN FROM THE DRAWINGS REFERENCED ON THIS SHEET.

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HISTORICAL TOTAL PCB CONCENTRATIONS IN SOIL (PRE-INTERIM REMEDIAL MEASURE

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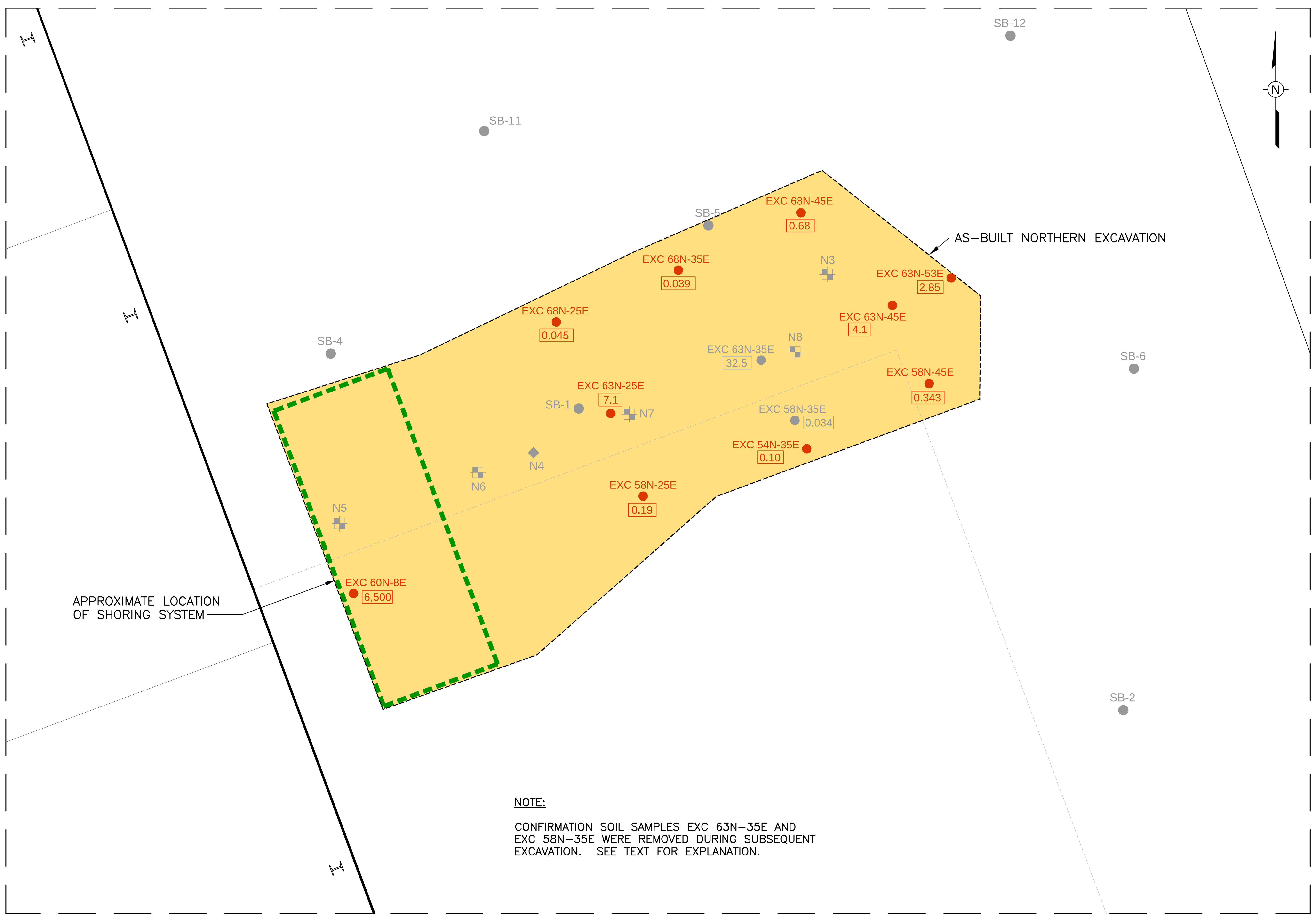
FIGURE 4

Drawing Number
15P01410-D44



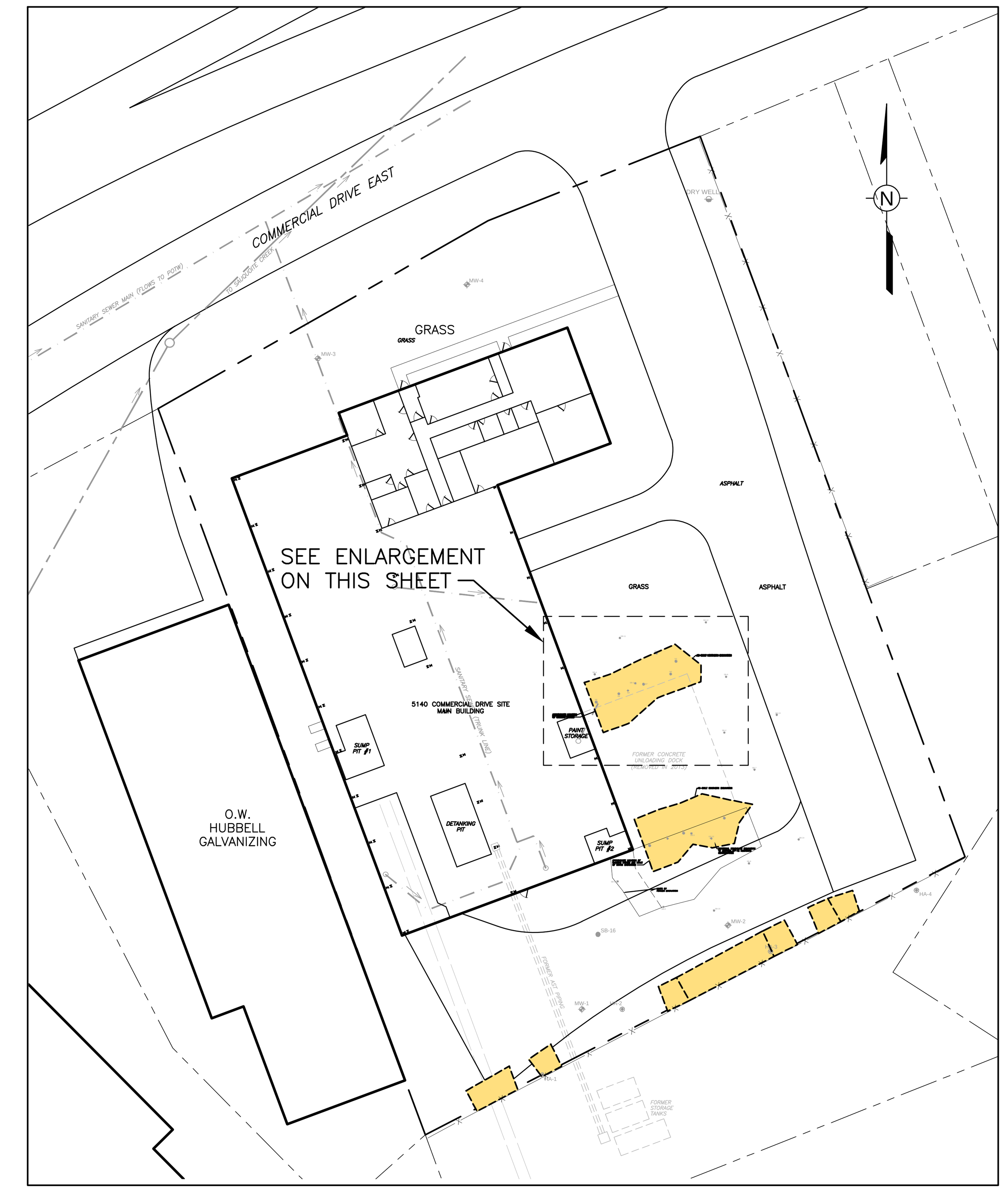
NOTE:

CONFIRMATION SOIL SAMPLES EXC 63N-35E AND EXC 58N-35E WERE REMOVED DURING SUBSEQUENT EXCAVATION. SEE TEXT FOR EXPLANATION.

ENLARGEMENT

5 0 5 10

SCALE, FEET



LOCATION MAP

0 50 100

SCALE, FEET

LEGEND

- APPROXIMATE PROPERTY BOUNDARY
- CONFIRMATION SOIL SAMPLE (2011)
- TEST PIT (2011)
- SOIL BORING (2012)
- 59 CONFIRMATION SOIL SAMPLE RESULT–TOTAL PCB (mg/kg)
- 0.68 CONFIRMATION SOIL SAMPLE RESULT–TOTAL PCB (mg/kg) REMOVED DURING SUBSEQUENT EXCAVATION
- AS–BUILT IRM EXCAVATION LIMITS

REFERENCES:

1. PALMERTON GROUP FIGURE 3, TITLED EXCAVATION AREAS.
2. GOOGLE EARTH PRO, IMAGE DATED 7–21–2011.
3. BUILDING, WELLS, SOIL BORINGS, AND HAND AUGERS SURVEYED BY RICHARD RYBINSKI, L.S. AUGUST 3, 2012, DRAWING NUMBER YORK812F.DWG.
4. KUCERA AND ASSOCIATES, INC. DRAWING, TAX MAP NUMBER 305.18, TOWN OF WHITESTOWN, ONEIDA COUNTY, NEW YORK, REVISION 2 DATED 7/27/2009.
5. WESTINGHOUSE ELECTRIC CORPORATION M & R BUILDING DRAWINGS, JOB NUMBER 4395, DATED OCT. 10,1957. SHEET A–1, "SITE PLAN", REV. DATED JAN. 1958 – SHEET A–12, "GROUND FLOOR PLAN", REV. DATED JAN. 1958 – AND SHEET P–7, "SCHEMATIC LAYOUT OF TRANSFORMER OR PIPING". SCALES VARY.
6. RICHARD M. RYBINSKI, L.S. SURVEY, REVISION DATE: 8/30/15, NO.: YORK1015.dwg.

REFERENCES:

1. PALMERTON GROUP FIGURE 3, TITLED EXCAVATION AREAS.
2. GOOGLE EARTH PRO, IMAGE DATED 7–21–2011.
3. BUILDING, WELLS, SOIL BORINGS, AND HAND AUGERS SURVEYED BY RICHARD RYBINSKI, L.S. AUGUST 3, 2012, DRAWING NUMBER YORK812F.DWG.

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NORTHERN PAD AREA EXCAVATION AND CONFIRMATION SAMPLE LOCATIONS INTERIM REMEDIAL MEASURE

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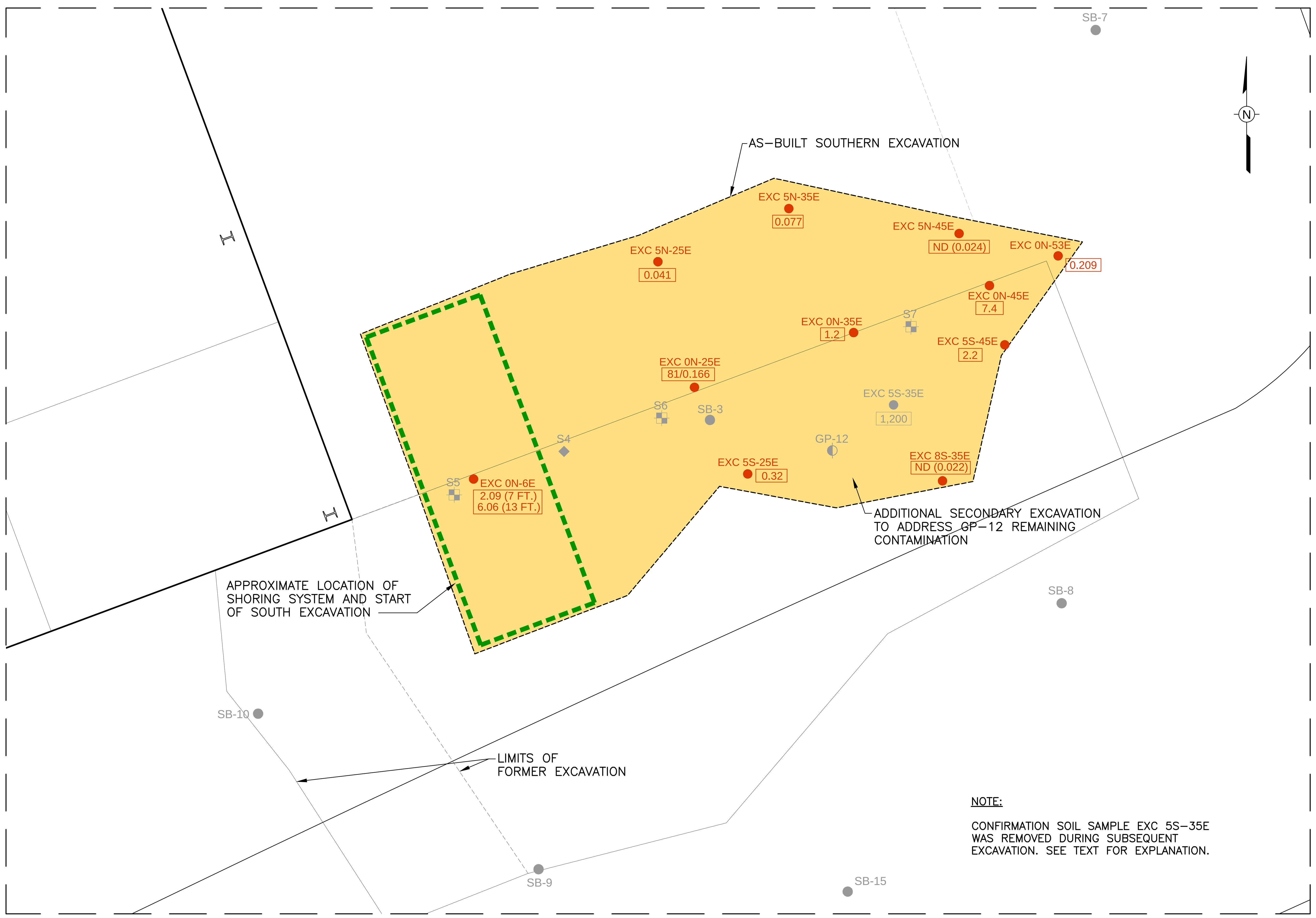
FIGURE 5

Drawing Number

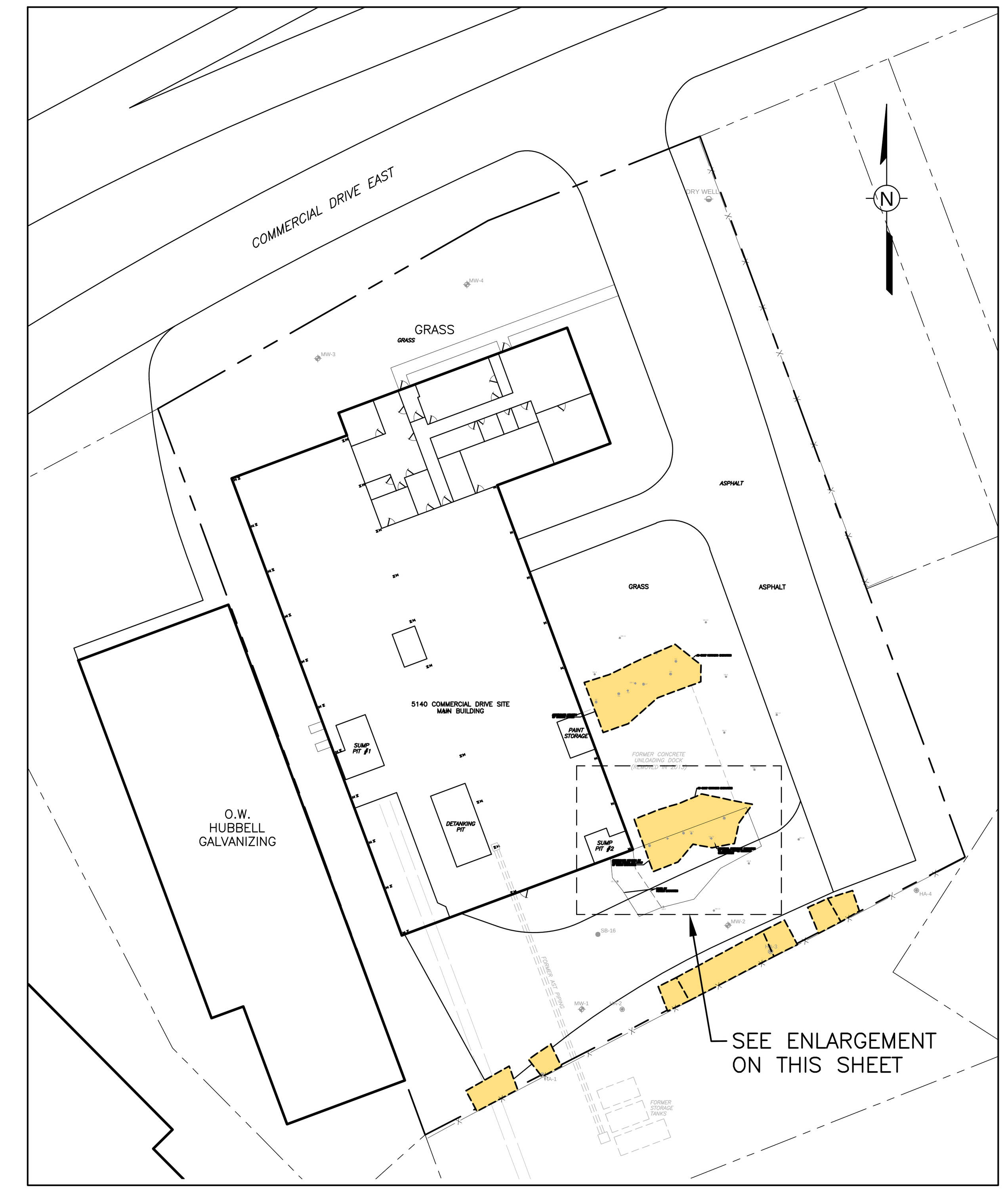
15P01410–D45

D



ENLARGEMENT

SCALE, FEET



LOCATION MAP

SCALE, FEET

LEGEND

- APPROXIMATE PROPERTY BOUNDARY
- SOIL BORING (2011)
- CONFIRMATION SOIL SAMPLE (2011)
- TEST PIT (2011)
- SOIL BORING (2012)
- 59/0.039 CONFIRMATION SOIL SAMPLE RESULT–TOTAL PCB (mg/kg)
- 0.68 CONFIRMATION SOIL SAMPLE RESULT–TOTAL PCB (mg/kg) REMOVED DURING SUBSEQUENT EXCAVATION
- AS–BUILT IRM EXCAVATION LIMITS

REFERENCES:

1. PALMERTON GROUP FIGURE 3, TITLED EXCAVATION AREAS.
2. GOOGLE EARTH PRO, IMAGE DATED 7–21–2011.
3. BUILDING, WELLS, SOIL BORINGS, AND HAND AUGERS SURVEYED BY RICHARD RYBINSKI, L.S. AUGUST 3, 2012, DRAWING NUMBER YORK812F.DWG.
4. KUCERA AND ASSOCIATES, INC. DRAWING, TAX MAP NUMBER 305.18, TOWN OF WHITESTOWN, ONEIDA COUNTY, NEW YORK, REVISION 2 DATED 7/27/2009.
5. WESTINGHOUSE ELECTRIC CORPORATION M & R BUILDING DRAWINGS, JOB NUMBER 4395, DATED OCT. 10,1957. SHEET A–1, "SITE PLAN", REV. DATED JAN. 1958 – SHEET A–12, "GROUND FLOOR PLAN", REV. DATED JAN. 1958 – AND SHEET P–7, "SCHEMATIC LAYOUT OF TRANSFORMER OR PIPING". SCALES VARY.
6. RICHARD M. RYBINSKI, L.S. SURVEY, REVISION DATE: 8/30/15, NO.: YORK1015.dwg.

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SOUTHERN PAD AREA EXCAVATION AND CONFIRMATION SAMPLE LOCATIONS INTERIM REMEDIAL MEASURE

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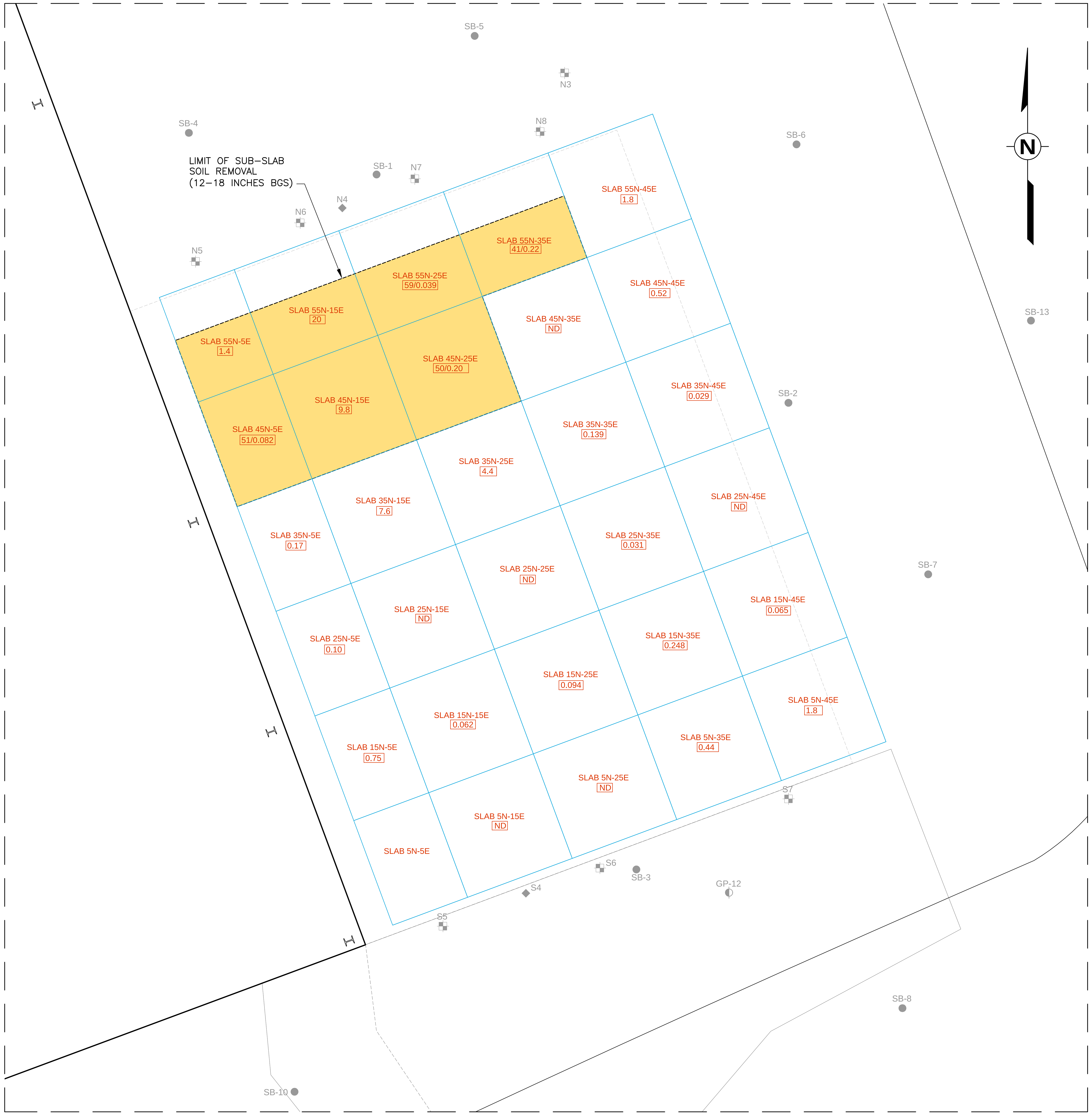
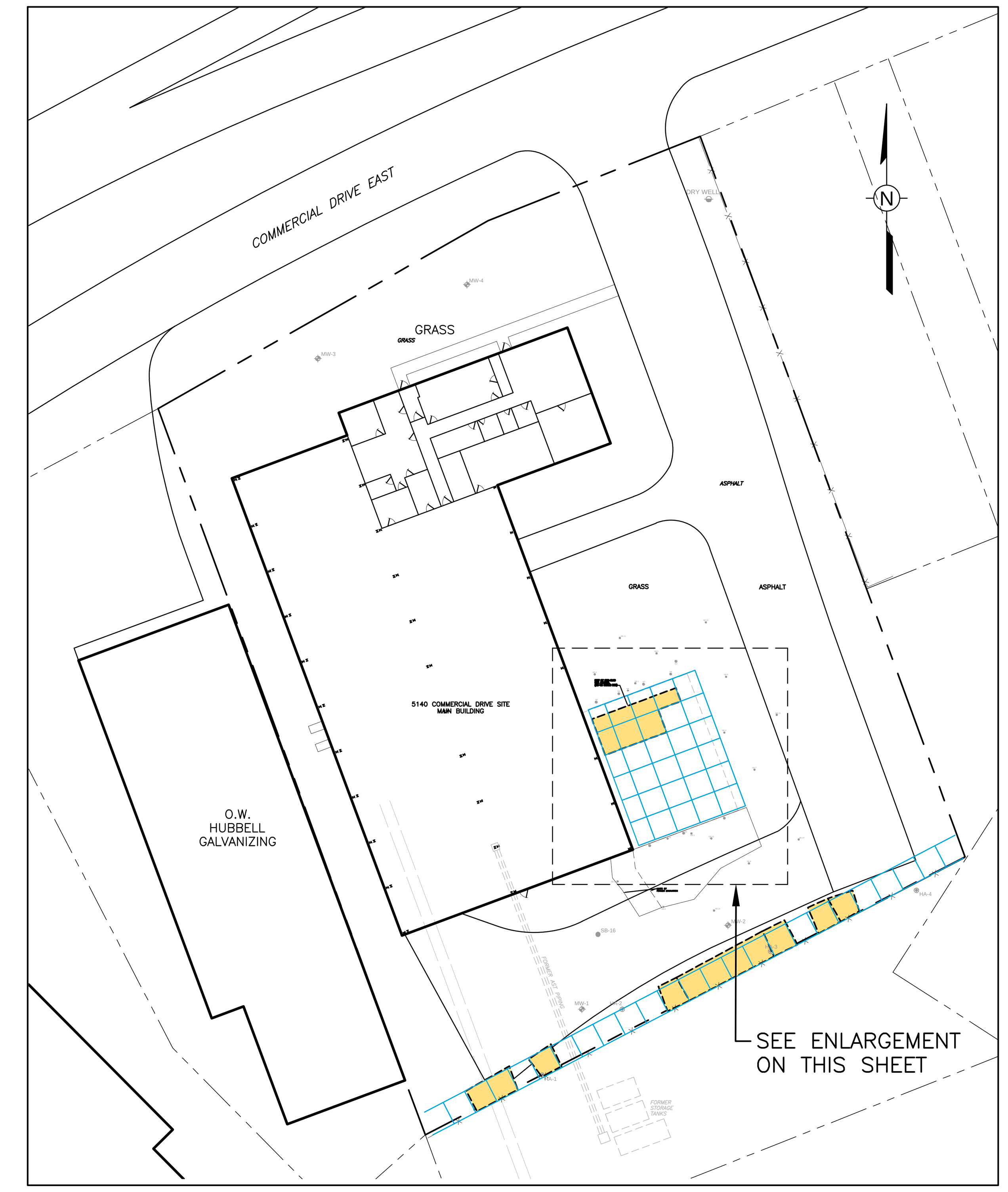
FIGURE 6

Drawing Number
15P01410–D46

D



ENLARGEMENT



LOCATION MAP

LEGEND

APPROXIMATE PROPERTY BOUNDARY
SOIL BORING (2011)
CONFIRMATION SOIL SAMPLE (2011)
TEST PIT (2011)
SOIL BORING (2012)
AS-BUILT IRM EXCAVATION LIMITS
SOIL CONFIRMATION SAMPLING GRID
59/0.039 INITIAL/FINAL CONFIRMATION SOIL SAMPLE RESULT-TOTAL PCB (mg/kg)

NOTE:

1. CONFIRMATION SOIL SAMPLES WERE COMPOSITED FROM ALIQUOTS COLLECTED FROM THE FOUR QUADRANTS OF EACH GRID CELL. ALIQUOT LOCATIONS WITHIN EACH CELL ARE NOT SHOWN FOR CLARITY.
2. GRID CELLS SLAB 5N-5E AND SLAB 55N-15E WERE EXCAVATED AS PART OF THE SHORING INSTALLATION AND, THUS, WERE NOT SAMPLED (SLAB 5N-5E) OR RE-SAMPLED (SLAB 55N-15E). SEE TEXT FOR EXPLANATION.

REFERENCES:

1. PALMERTON GROUP FIGURE 3, TITLED EXCAVATION AREAS.
2. GOOGLE EARTH PRO, IMAGE DATED 7-21-2011.
3. BUILDING, WELLS, SOIL BORINGS, AND HAND AUGERS SURVEYED BY RICHARD RYBINSKI, L.S. AUGUST 3, 2012, DRAWING NUMBER YORK812F.DWG.
4. KUCERA AND ASSOCIATES, INC. DRAWING, TAX MAP NUMBER 305.18, TOWN OF WHITESTOWN, ONEIDA COUNTY, NEW YORK, REVISION 2 DATED 7/27/2009.
5. WESTINGHOUSE ELECTRIC CORPORATION M & R BUILDING DRAWINGS, JOB NUMBER 4395, DATED OCT. 10,1957. SHEET A-1, "SITE PLAN", REV. DATED JAN. 1958 - SHEET A-12, "GROUND FLOOR PLAN", REV. DATED JAN. 1958 - AND SHEET P-7, "SCHEMATIC LAYOUT OF TRANSFORMER OR PIPING". SCALES VARY.
6. RICHARD M. RYBINSKI, L.S. SURVEY, REVISION DATE: 8/30/15, NO.: YORK1015.dwg.

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SUB-SLAB EXCAVATION AREA AND CONFIRMATION SAMPLE LOCATIONS INTERIM REMEDIAL MEASURE

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FIGURE 7

Drawing Number
15P01410-D47

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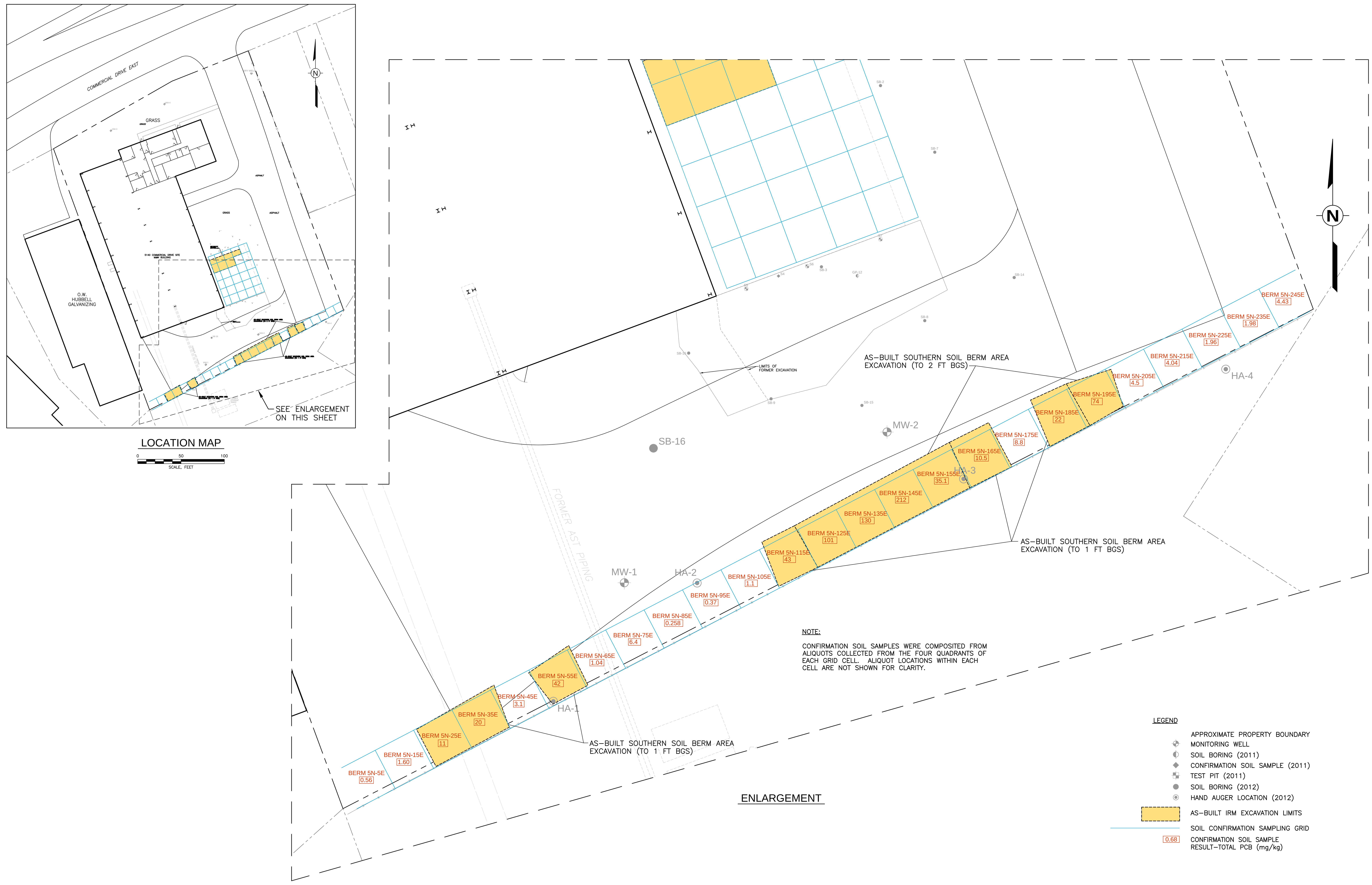

NOTE:

CONFIRMATION SOIL SAMPLES WERE COMPOSITED FROM ALIQUOTS COLLECTED FROM THE FOUR QUADRANTS OF EACH GRID CELL. ALIQUOT LOCATIONS WITHIN EACH CELL ARE NOT SHOWN FOR CLARITY.

LEGEND

- APPROXIMATE PROPERTY BOUNDARY
- MONITORING WELL
- SOIL BORING (2011)
- CONFIRMATION SOIL SAMPLE (2011)
- TEST PIT (2011)
- SOIL BORING (2012)
- HAND AUGER LOCATION (2012)
- AS-BUILT IRM EXCAVATION LIMITS
- SOIL CONFIRMATION SAMPLING GRID
- 0.68 CONFIRMATION SOIL SAMPLE RESULT-TOTAL PCB (mg/kg)

REFERENCES:

1. PALMERTON GROUP FIGURE 3, TITLED EXCAVATION AREAS.
2. GOOGLE EARTH PRO, IMAGE DATED 7-21-2011.
3. BUILDING, WELLS, SOIL BORINGS, AND HAND AUGERS SURVEYED BY RICHARD RYBINSKI, L.S. AUGUST 3, 2012, DRAWING NUMBER YORK812F.DWG.
4. KUCERA AND ASSOCIATES, INC. DRAWING, TAX MAP NUMBER 305.18, TOWN OF WHITESTOWN, ONEIDA COUNTY, NEW YORK, REVISION 2 DATED 7/27/2009.
5. WESTINGHOUSE ELECTRIC CORPORATION M & R BUILDING DRAWINGS, JOB NUMBER 4395, DATED OCT. 10,1957. SHEET A-1, "SITE PLAN", REV. DATED JAN. 1958 - SHEET A-12, "GROUND FLOOR PLAN", REV. DATED JAN. 1958 - AND SHEET P-7, "SCHEMATIC LAYOUT OF TRANSFORMER OR PIPING". SCALES VARY.
6. RICHARD M. RYBINSKI, L.S. SURVEY, REVISION DATE: 8/30/15, NO.: YORK1015.dwg.

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SOUTHERN SOIL BERM CONFIRMATION SAMPLE LOCATIONS INTERIM REMEDIAL MEASURE

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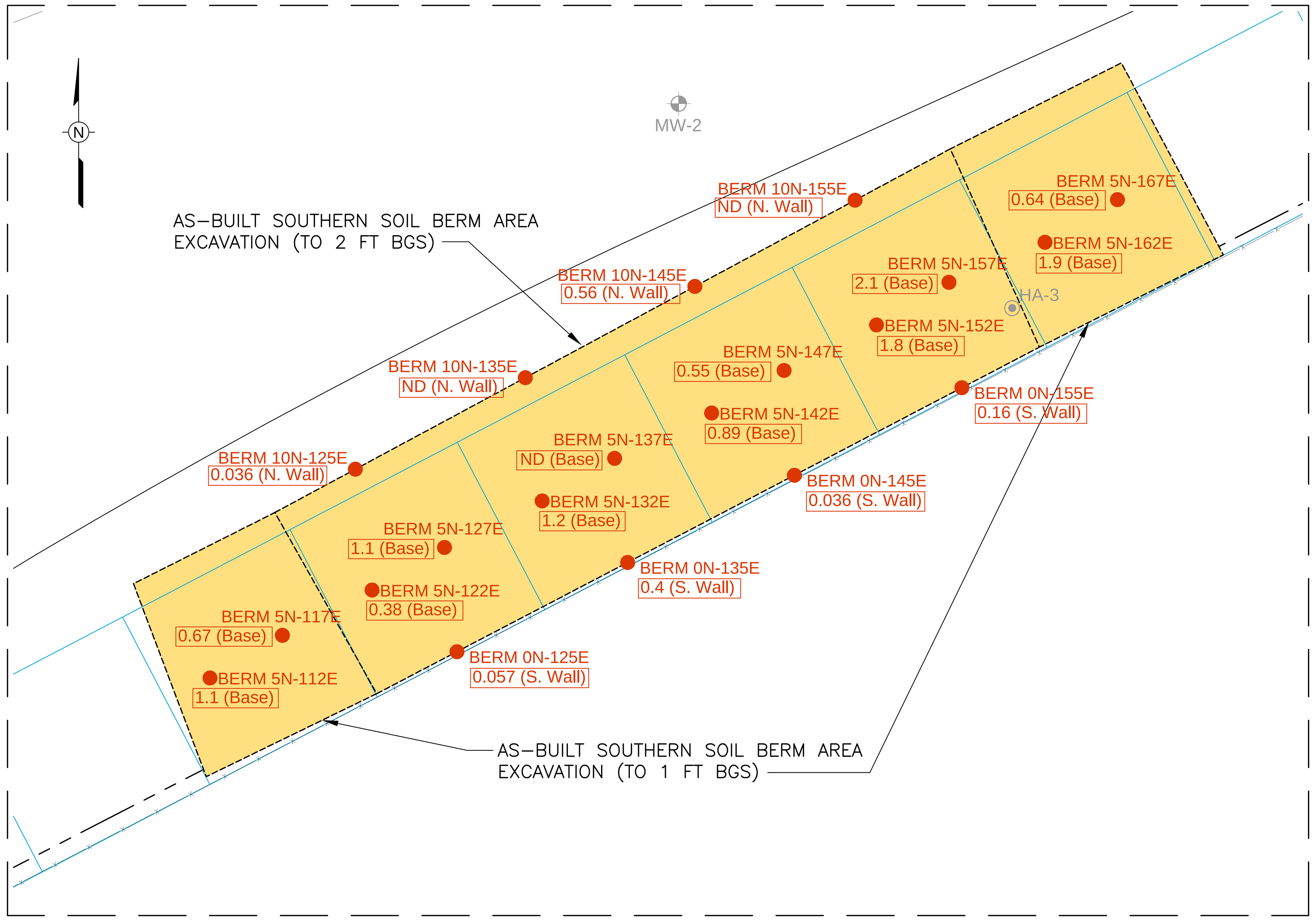
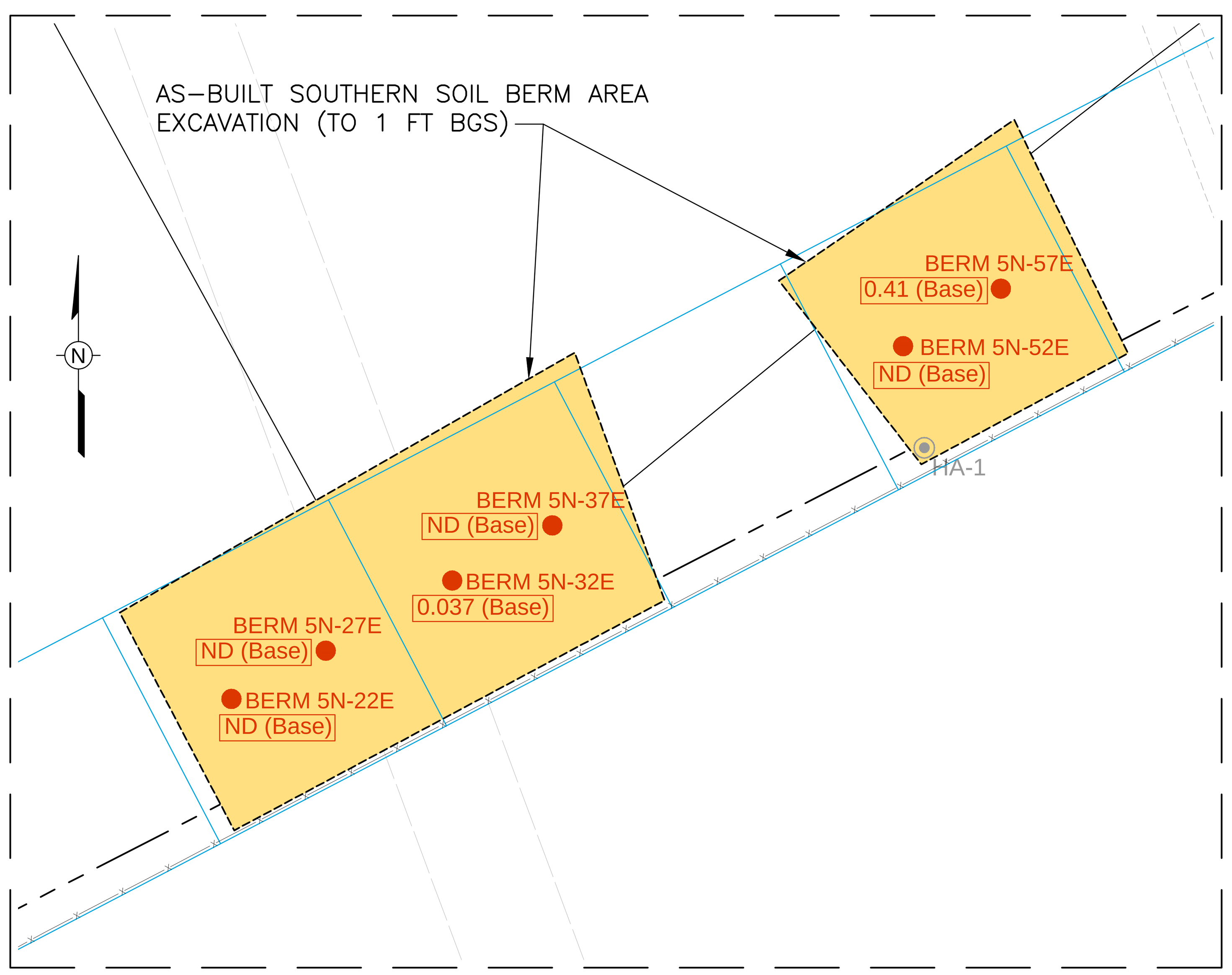
FIGURE 8

Drawing Number
15P01410-D48



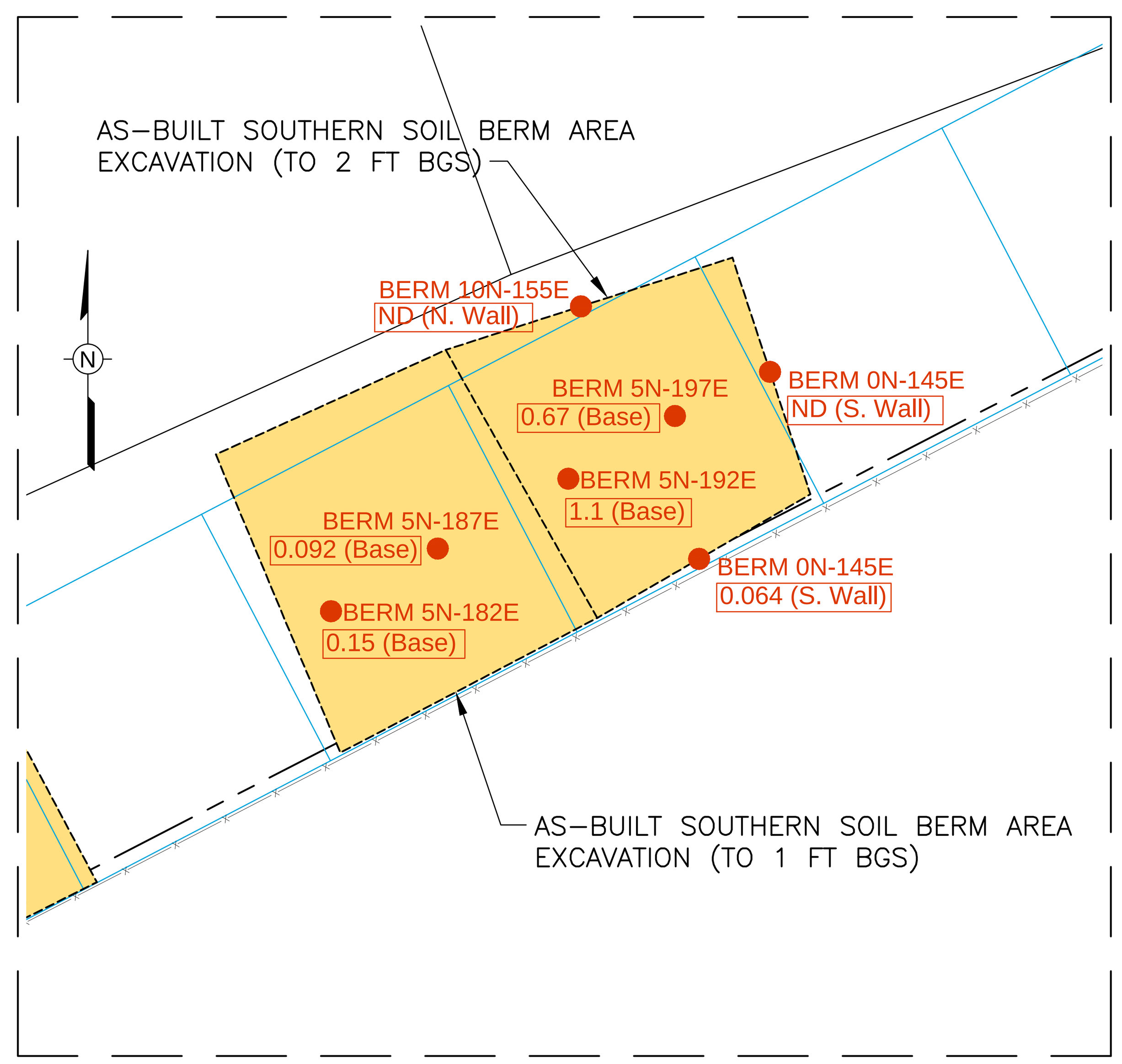
DETAIL B

0 5 10
SCALE, FEET



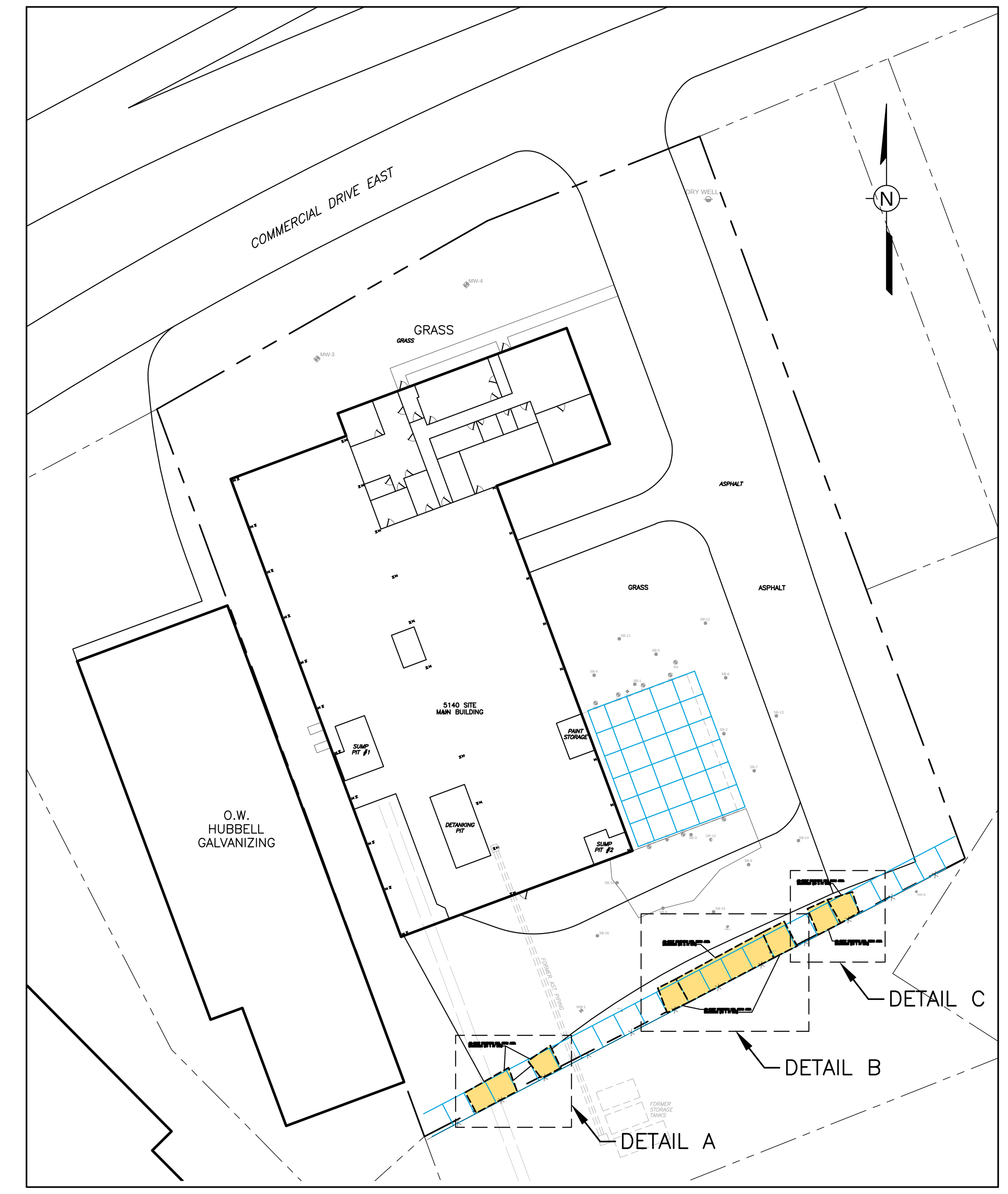
DETAIL A

0 5 10
SCALE, FEET



DETAIL C

0 5 10
SCALE, FEET



LOCATION MAP

0 50 100
SCALE, FEET

LEGEND

APPROXIMATE PROPERTY BOUNDARY
MONITORING WELL
HAND AUGER LOCATION (2012)
AS–BUILT IRM EXCAVATION LIMITS
SOIL CONFIRMATION SAMPLING GRID
SOIL CONFIRMATION SOIL SAMPLE LOCATION
0.38 (Base) FINAL CONFIRMATION SOIL SAMPLE RESULT–TOTAL PCB (mg/kg)

NOTE:

SIDEWALL SOIL SAMPLE LOCATIONS ARE APPROXIMATE. BASE SOIL CONFIRMATION SAMPLES WERE COMPOSITED FROM ALIQUOTS COLLECTED FROM THE EASTERNMOST (i.e., NORTHEAST AND SOUTHEAST) AND WESTERNMOST (i.e., NORTHWEST AND SOUTHWEST) QUADRANTS IN EACH GRID CELL. BASE SAMPLE LOCATIONS ARE DEPICTED IN THEIR RESPECTIVE HALVES OF EACH GRID CELL FOR ILLUSTRATION PURPOSES ONLY.

REFERENCES:

1. PALMERTON GROUP FIGURE 3, TITLED EXCAVATION AREAS.
2. GOOGLE EARTH PRO, IMAGE DATED 7–21–2011.
3. BUILDING, WELLS, SOIL BORINGS, AND HAND AUGERS SURVEYED BY RICHARD RYBINSKI, L.S. AUGUST 3, 2012, DRAWING NUMBER YORK812F.DWG.
4. KUCERA AND ASSOCIATES, INC. DRAWING, TAX MAP NUMBER 305.18, TOWN OF WHITESTOWN, ONEIDA COUNTY, NEW YORK, REVISION 2 DATED 7/27/2009.
5. WESTINGHOUSE ELECTRIC CORPORATION M & R BUILDING DRAWINGS, JOB NUMBER 4395, DATED OCT. 10,1957. SHEET A–1, ''SITE PLAN'', REV. DATED JAN. 1958 – SHEET A–12, ''GROUND FLOOR PLAN'', REV. DATED JAN. 1958 – AND SHEET P–7, ''SCHEMATIC LAYOUT OF TRANSFORMER OR PIPING''. SCALES VARY.
6. RICHARD M. RYBINSKI, L.S. SURVEY, REVISION DATE: 8/30/15, NO.: YORK1015.dwg.

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SOUTHERN SOIL BERM EXCAVATION AREAS CONFIRMATION SAMPLE LOCATIONS INTERIM REMEDIAL MEASURE

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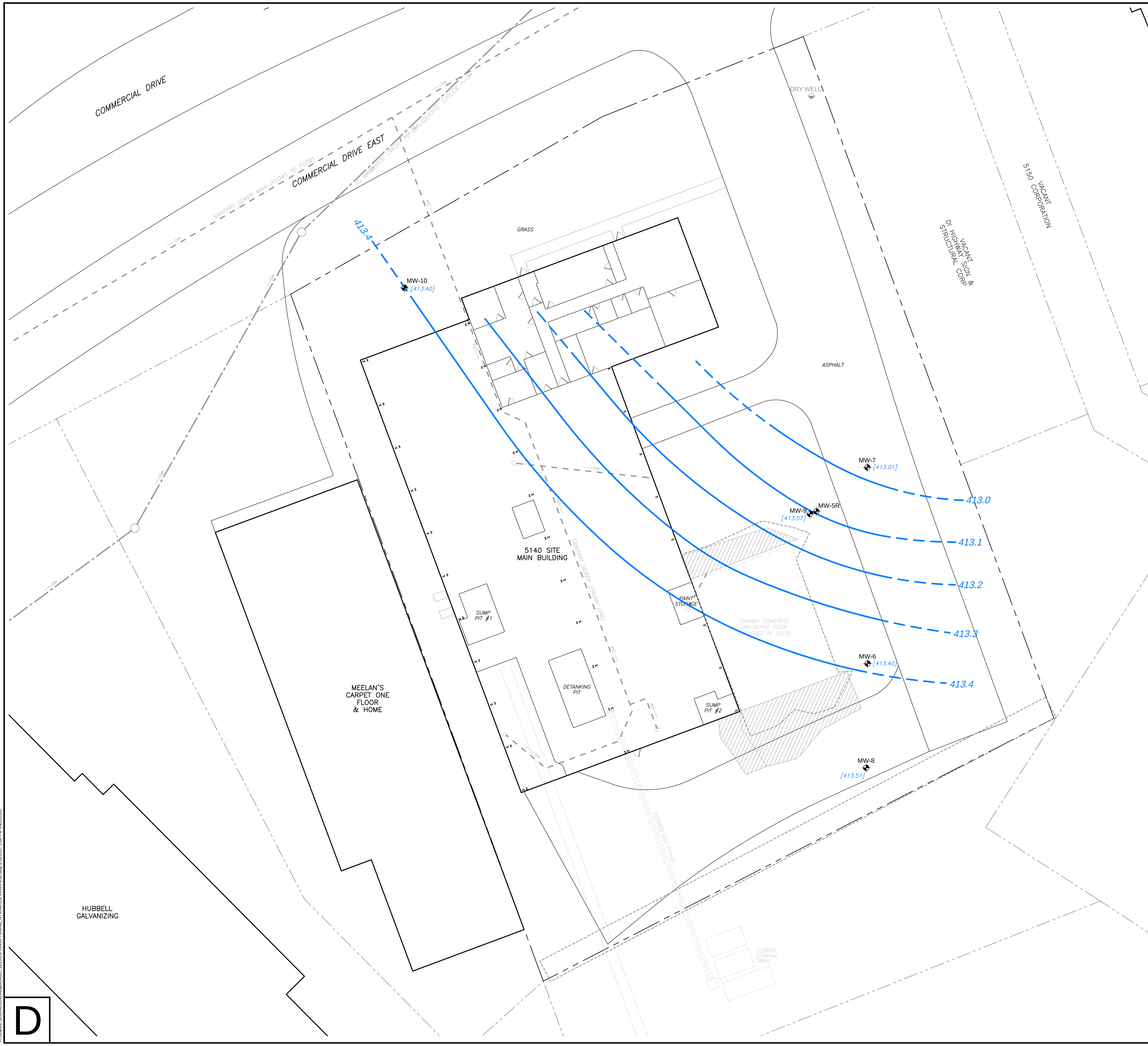
FIGURE 9

Drawing Number
15P01410–D49



N

LEGEND

- SITE PROPERTY BOUNDARY
- ADJACENT PROPERTIES BOUNDARY
- FORMER RAILROAD SPUR
- 2011 REMEDIAL EXCAVATION LIMITS
- MW-7 MONITORING WELL (NOV. 2012 & SEP. 2014)
- DRY WELL
- FLOOR DRAIN
- SANITARY OR FLOOR DRAIN PIPE
- STORM SEWER DRAIN
- STORM SEWER
- FLOW DIRECTION
- IRM EXCAVATION LIMITS
- [413.51] GROUNDWATER ELEVATION
- 413.4 GROUNDWATER CONTOUR

NOTE:

THE GROUNDWATER ELEVATION FROM MW–9 WAS OMITTED FROM THE CONTOUR ANALYSIS. SEE TEXT FOR EXPLANATION.

REFERENCES:

1. PALMERTON GROUP FIGURE 3, TITLED EXCAVATION AREAS.

2. GOOGLE EARTH PRO, IMAGE DATED 7–21–2011.

3. BUILDING, WELLS, SOIL BORINGS, AND HAND AUGERS SURVEYED BY RICHARD RYBINSKI, L.S. AUGUST 3, 2012, DRAWING NUMBER YORK812F.DWG.

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6. RICHARD M. RYBINSKI, L.S. SURVEY, REVISION DATE: 8/30/15, NO.: YORK1015.dwg.

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20 10 0 20 40

SCALE, FEET

SOME LOCATIONS ARE APPROXIMATE AND WERE TAKEN FROM THE DRAWINGS REFERENCED ON THIS SHEET.

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GROUNDWATER ELEVATION MAP
OCTOBER 2014

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FIGURE 10

Drawing Number
15P01410–D50

N

LEGEND

SS-04/IA-04	SUB-SLAB AND INDOOR AIR SAMPLE
OA-01	OUTDOOR AIR SAMPLE
	SITE PROPERTY BOUNDARY
	ADJACENT PROPERTIES BOUNDARY
	FORMER RAILROAD SPUR
	IRM EXCAVATION LIMITS
	2011 REMEDIAL EXCAVATION LIMITS
MW-7	MONITORING WELL (NOV. 2012 & SEP. 2014)
	DRY WELL
	FLOOR DRAIN
	SANITARY OR FLOOR DRAIN PIPE
	STORM SEWER DRAIN
	STORM SEWER
	FLOW DIRECTION

REFERENCES:

1. PALMERTON GROUP FIGURE 3, TITLED EXCAVATION AREAS.

2. GOOGLE EARTH PRO, IMAGE DATED 7–21–2011.

3. BUILDING, WELLS, SOIL BORINGS, AND HAND AUGERS SURVEYED BY RICHARD RYBINSKI, L.S. AUGUST 3, 2012, DRAWING NUMBER YORK812F.DWG.

4. KUCERA AND ASSOCIATES, INC. DRAWING, TAX MAP NUMBER 305.18, TOWN OF WHITESTOWN, ONEIDA COUNTY, NEW YORK, REVISION 2 DATED 7/27/2009.

5. WESTINGHOUSE ELECTRIC CORPORATION M & R BUILDING DRAWINGS, JOB NUMBER 4395, DATED OCT. 10,1957. SHEET A–1, "SITE PLAN", REV. DATED JAN. 1958 – SHEET A–12, "GROUND FLOOR PLAN", REV. DATED JAN. 1958 – AND SHEET P–7, "SCHEMATIC LAYOUT OF TRANSFORMER OR PIPING". SCALES VARY.

6. RICHARD M. RYBINSKI, L.S. SURVEY, REVISION DATE: 8/30/15, NO.: YORK1015.dwg.

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20 10 0 20 40

SCALE, FEET

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SUB–SLAB, INDOOR AIR, AND OUTDOOR AIR SAMPLING LOCATIONS

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FIGURE 11

Drawing Number
15P01410–D51

LEGEND

SB-21	SOIL BORING (2014)
SB-3	SOIL BORING (2012)
HA-3	HAND AUGER LOCATION (2012)
MW-4	MONITORING WELL (ABANDONED NOV. 2012)
MW-5	MONITORING WELL DAMAGED AND REMOVED DURING INTERIM REMEDIAL MEASURES (FEB. 2014)
GP-12	SOIL BORING (2011)
N-4	CONFIRMATION SOIL SAMPLE (2011)
N-6	TEST PIT (2011)
B-2	SOIL BORING (DEC. 2010)
	SITE PROPERTY BOUNDARY
	ADJACENT PROPERTIES BOUNDARY
	FORMER RAILROAD SPUR
	IRM EXCAVATION LIMITS
	2011 REMEDIAL EXCAVATION LIMITS
	DRY WELL
	FLOOR DRAIN
	SANITARY OR FLOOR DRAIN PIPE
	STORM SEWER DRAIN
	STORM SEWER
	FLOW DIRECTION
0-0.17 / 0-1.0	SAMPLE DEPTH (FEET BELOW GRADE SURFACE)
3.57 / 0.0563 U	TOTAL PCB CONCENTRATION IN MILLIGRAMS PER KILOGRAM (mg/kg)

REFERENCES:

1. PALMERTON GROUP FIGURE 3, TITLED EXCAVATION AREAS.
2. GOOGLE EARTH PRO, IMAGE DATED 7-21-2011.
3. BUILDING, WELLS, SOIL BORINGS, AND HAND AUGERS SURVEYED BY RICHARD RYBINSKI, L.S. AUGUST 3, 2012, DRAWING NUMBER YORK812F.DWG.
4. KUCERA AND ASSOCIATES, INC. DRAWING, TAX MAP NUMBER 305.18, TOWN OF WHITESTOWN, ONEIDA COUNTY, NEW YORK, REVISION 2 DATED 7/27/2009.
5. WESTINGHOUSE ELECTRIC CORPORATION M & R BUILDING DRAWINGS, JOB NUMBER 4395, DATED OCT. 10,1957. SHEET A-1, "SITE PLAN", REV. DATED JAN. 1958 - SHEET A-12, "GROUND FLOOR PLAN", REV. DATED JAN. 1958 - AND SHEET P-7, "SCHEMATIC LAYOUT OF TRANSFORMER OR PIPING". SCALES VARY.
6. RICHARD M. RYBINSKI, L.S. SURVEY, REVISION DATE: 8/30/15, NO.: YORK1015.dwg.

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20 10 0 20 40

SCALE, FEET

SOME LOCATIONS ARE APPROXIMATE AND WERE TAKEN FROM THE DRAWINGS REFERENCED ON THIS SHEET.

REV	DESCRIPTION	
		Revised: Chkd: Appr:
		Revised: Chkd: Appr:
		Revised: Chkd: Appr:

REVISIONS

SEAL

1/13/17

DATE

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CHECKED	
APPROVED	

TOTAL PCB CONCENTRATIONS IN SOIL

5140 SITE
YORKVILLE, NEW YORK

WSP | PARSONS BRINCKERHOFF
WSP USA Corp.
75 Arlington Street, 4th Floor
Boston, Massachusetts 02116
(617) 426-7330
www.wspgroup.com/usa

FIGURE 12

Drawing Number
15P01410-D52

D

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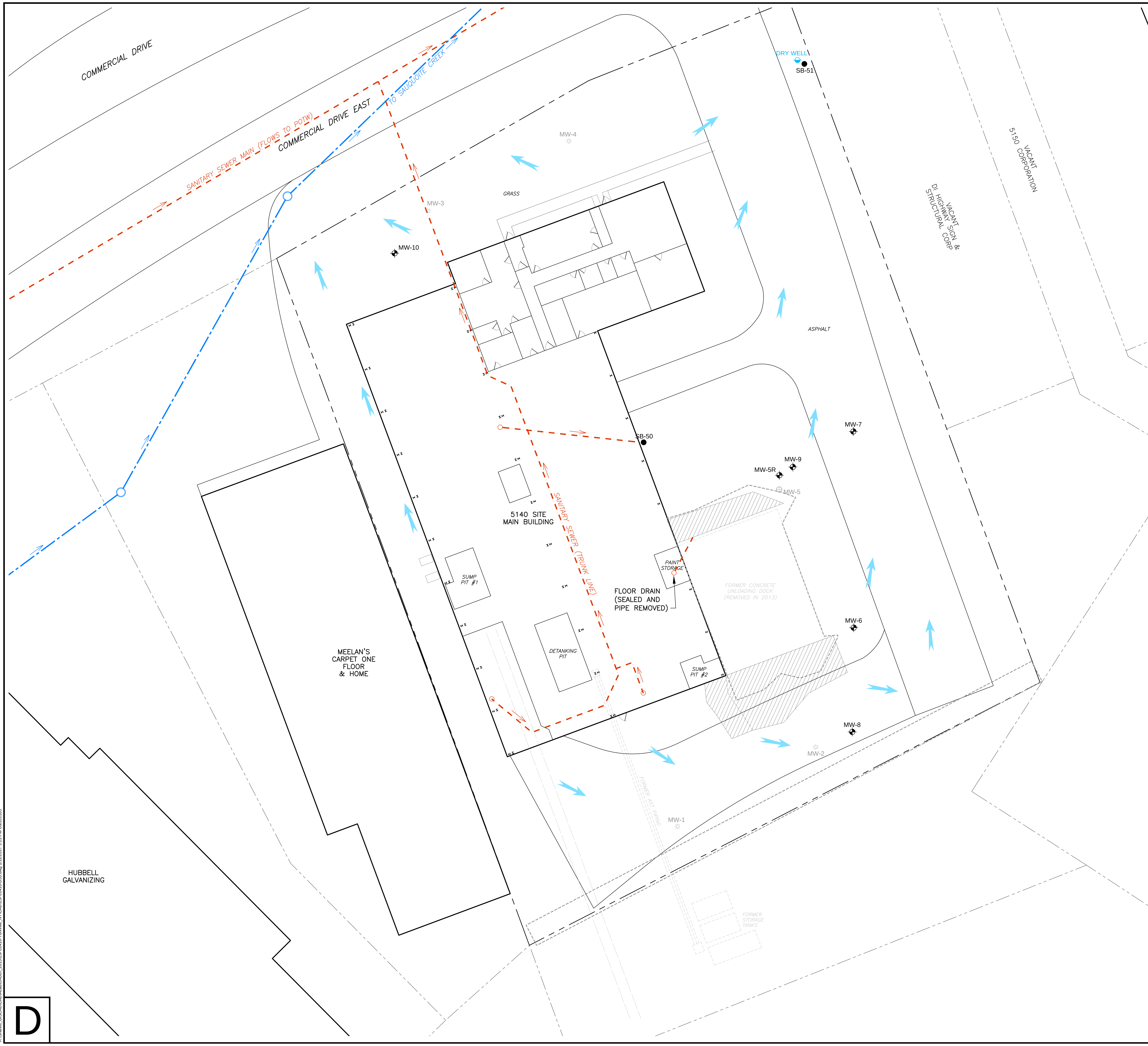

LEGEND

MW-7	MONITORING WELL (2012 AND 2014)
MW-4	MONITORING WELL (ABANDONED NOV. 2012)
MW-5	MONITORING WELL DAMAGED AND REMOVED DURING INTERIM REMEDIAL MEASURES (FEB. 2014)
SB-21	SOIL BORING (2014)
	SITE PROPERTY BOUNDARY
	ADJACENT PROPERTIES BOUNDARY
	FORMER RAILROAD SPUR
	IRM EXCAVATION LIMITS
	2011 REMEDIAL EXCAVATION LIMITS
	DRY WELL
	FLOOR DRAIN
	SANITARY OR FLOOR DRAIN PIPE
	STORM SEWER DRAIN
	STORM SEWER
	FLOW DIRECTION
	RUNOFF DIRECTION

REFERENCES:

1. PALMERTON GROUP FIGURE 3, TITLED EXCAVATION AREAS.
2. GOOGLE EARTH PRO, IMAGE DATED 7–21–2011.
3. BUILDING, WELLS, SOIL BORINGS, AND HAND AUGERS SURVEYED BY RICHARD RYBINSKI, L.S. AUGUST 3, 2012, DRAWING NUMBER YORK812F.DWG.
4. KUCERA AND ASSOCIATES, INC. DRAWING, TAX MAP NUMBER 305.18, TOWN OF WHITESTOWN, ONEIDA COUNTY, NEW YORK, REVISION 2 DATED 7/27/2009.
5. WESTINGHOUSE ELECTRIC CORPORATION M & R BUILDING DRAWINGS, JOB NUMBER 4395, DATED OCT. 10,1957. SHEET A–1, "SITE PLAN", REV. DATED JAN. 1958 – SHEET A–12, "GROUND FLOOR PLAN", REV. DATED JAN. 1958 – AND SHEET P–7, "SCHEMATIC LAYOUT OF TRANSFORMER OR PIPING". SCALES VARY.
6. RICHARD M. RYBINSKI, L.S. SURVEY, REVISION DATE: 8/30/15, NO.: YORK1015.dwg.

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20 10 0 20 40

SCALE, FEET

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REVISIONS

REV	DESCRIPTION
	Revised: Chkd: Appr.:
	Revised: Chkd: Appr.:
	Revised: Chkd: Appr.:

SEAL

1/13/17

DATE

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CHECKED

APPROVED

STORM AND SANITARY SEWER LAYOUT WITH RUNOFF FLOW DIRECTION

5140 SITE
YORKVILLE, NEW YORK

WSP | PARSONS BRINCKERHOFF

WSP USA Corp.
75 Arlington Street, 4th Floor
Boston, Massachusetts 02116
(617) 426-7330
www.wspgroup.com/usa

FIGURE 13

Drawing Number
15P01410–D53

LEGEND

	HOT SPOT EXCAVATION
EXCSS-45E	CONFIRMATION SOIL SAMPLE (2014)
SB-3	SOIL BORING (2012)
HA-3	HAND AUGER LOCATION (2012)
MW-7	MONITORING WELL (NOV. 2012)
MW-4	MONITORING WELL (ABANDONED NOV. 2012)
MW-5	MONITORING WELL DAMAGED AND REMOVED DURING INTERIM REMEDIAL MEASURES (FEB. 2014)
GP-12	SOIL BORING (2011)
N-4	CONFIRMATION SOIL SAMPLE (2011)
N-6	TEST PIT (2011)
B-2	SOIL BORING (DEC. 2010)
DRY WELL	DRY WELL
WS-1	WASTE CHARACTERIZATION SOIL BORING (2016)
	SITE PROPERTY BOUNDARY
	ADJACENT PROPERTIES BOUNDARY
	FORMER RAILROAD SPUR
	IRM EXCAVATION LIMITS
	2011 REMEDIAL EXCAVATION LIMITS
	SOIL COVER LIMITS
9-11 | 1.023	SAMPLE DEPTH (FEET BELOW GRADE SURFACE); TOTAL PCB CONCENTRATION IN MILLIGRAMS PER KILOGRAM (mg/kg)
	FLOOR DRAIN
	SANITARY OR FLOOR DRAIN PIPE
	STORM SEWER DRAIN
	STORM SEWER
	FLOW DIRECTION

REFERENCES:

1. PALMERTON GROUP FIGURE 3, TITLED EXCAVATION AREAS.
2. GOOGLE EARTH PRO, IMAGE DATED 7-21-2011.
3. BUILDING, WELLS, SOIL BORINGS, AND HAND AUGERS SURVEYED BY RICHARD RYBINSKI, L.S. AUGUST 3, 2012, DRAWING NUMBER YORK812F.DWG.
4. KUCERA AND ASSOCIATES, INC. DRAWING, TAX MAP NUMBER 305.18, TOWN OF WHITESTOWN, ONEIDA COUNTY, NEW YORK, REVISION 2 DATED 7/27/2009.
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6. RICHARD M. RYBINSKI, L.S. SURVEY, REVISION DATE: 8/30/15, NO.: YORK1015.dwg.

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SCALE, FEET

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REVISIONS

REV	DESCRIPTION		
	Revised:	Chkd:	Appr.:
	Revised:	Chkd:	Appr.:
	Revised:	Chkd:	Appr.:

SEAL

1/13/17

DATE

DRAWN BY RZ 11/29/2016

CHECKED

APPROVED

HOT SPOT AND SOIL COVER EXCAVATIONS

5140 SITE
YORKVILLE, NEW YORK

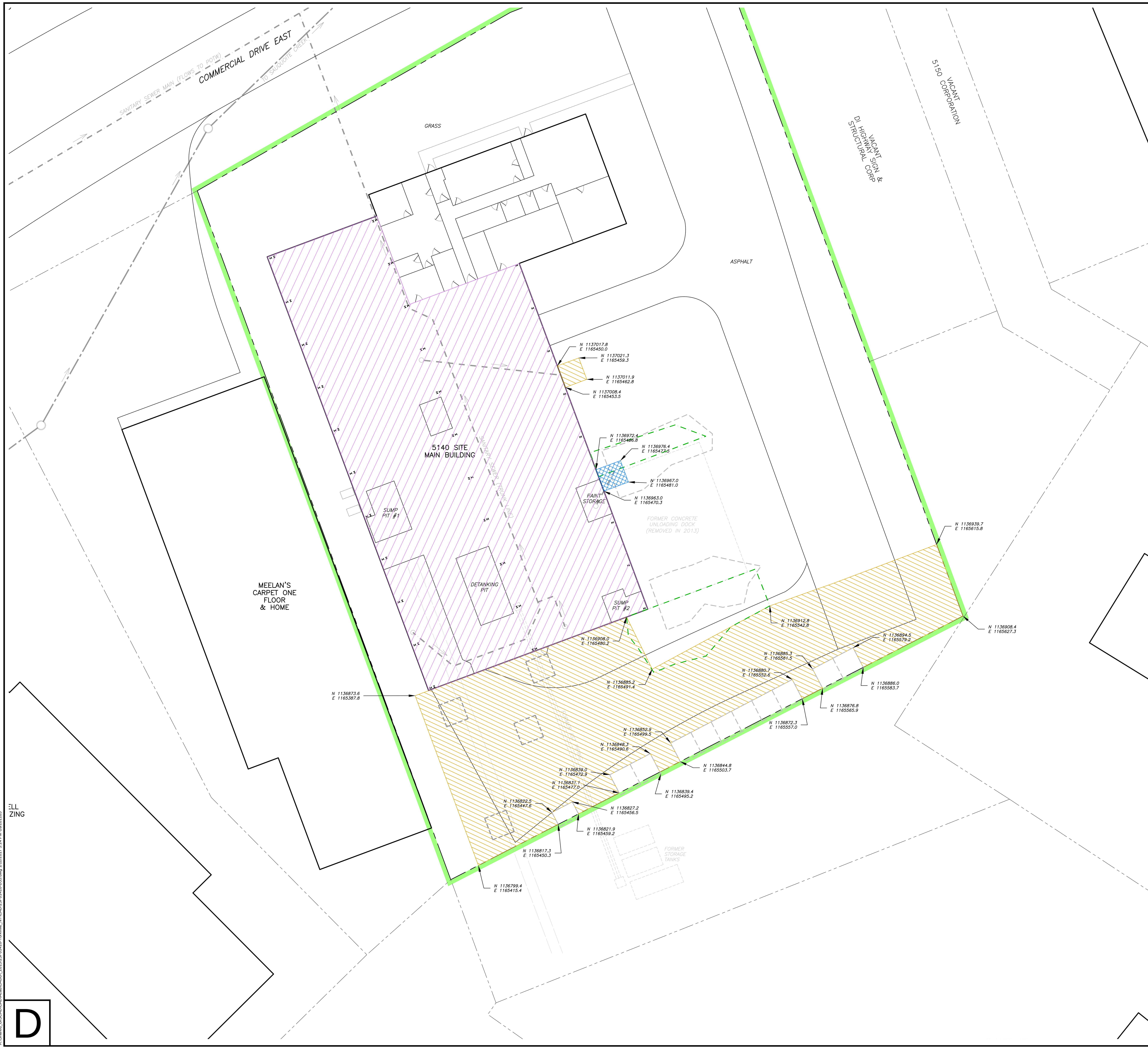
WSP | PARSONS BRINCKERHOFF

WSP USA Corp.
75 Arlington Street, 4th Floor
Boston, Massachusetts 02116
(617) 426-7330
www.wspgroup.com/usa

FIGURE 14

Drawing Number
15P01410-D54

D



LEGEND

- DRY WELL
- SITE PROPERTY BOUNDARY
- ADJACENT PROPERTIES BOUNDARY
- FORMER RAILROAD SPUR
- FLOOR DRAIN
- SANITARY OR FLOOR DRAIN PIPE
- STORM SEWER DRAIN
- STORM SEWER
- FLOW DIRECTION
- SOIL COVER LIMITS
- ENGINEERED AND ENCAPSULATION BARRIERS
- IRM EXCAVATION LIMITS (2014)
- REMEDIAL EXCAVATION LIMITS (2011)
- INSTITUTIONAL CONTROL BOUNDARY
- REMAINING CONTAMINATION (GREATER THAN 1 FOOT BELOW GROUND SURFACE)
- SURFICIAL HOT SPOT EXCAVATION (2016)

REFERENCES:

1. PALMERTON GROUP FIGURE 3, TITLED EXCAVATION AREAS.
2. GOOGLE EARTH PRO, IMAGE DATED 7–21–2011.
3. BUILDING, WELLS, SOIL BORINGS, AND HAND AUGERS SURVEYED BY RICHARD RYBINSKI, L.S. AUGUST 3, 2012, DRAWING NUMBER YORK812F.DWG.
4. KUCERA AND ASSOCIATES, INC. DRAWING, TAX MAP NUMBER 305.18, TOWN OF WHITESTOWN, ONEIDA COUNTY, NEW YORK, REVISION 2 DATED 7/27/2009.
5. WESTINGHOUSE ELECTRIC CORPORATION M & R BUILDING DRAWINGS, JOB NUMBER 4395, DATED OCT. 10,1957. SHEET A–1, "SITE PLAN", REV. DATED JAN. 1958 – SHEET A–12, "GROUND FLOOR PLAN", REV. DATED JAN. 1958 – AND SHEET P–7, "SCHEMATIC LAYOUT OF TRANSFORMER OR PIPING". SCALES VARY.
6. RICHARD M. RYBINSKI, L.S. SURVEY, REVISION DATE: 8/30/15, NO.: YORK1015.dwg.

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20 10 0 20 40
SCALE, FEET

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REVISIONS

REV	DESCRIPTION

SEAL

1/13/17
DATE

DRAWN BY RA 11/29/2016
CHECKED
APPROVED

REMAINING CONTAMINATION, BARRIER SYSTEMS, AND INSTITUTIONAL CONTROL BOUNDARY

5140 SITE
YORKVILLE, NEW YORK

WSP | PARSONS BRINCKERHOFF
WSP USA Corp.
75 Arlington Street, 4th Floor
Boston, Massachusetts 02116
(617) 426-7330
www.wspgroup.com/usa

FIGURE 15

Drawing Number
15P01410–D55

D

Tables

Table 1

Confirmation Soil Sampling Results - Polychlorinated Biphenyls
5140 Site
Yorkville, New York (a)

Sample ID (Depth):	Evaluation Criteria	EXC-WS1NSW (1.0)	EXC-WS1ESW (1.0)	EXC-WS1SSW (1.0)	EXC-WS1WSW (1.0)	EXC-WS1B1 (2.0)	EXC-WS1B2 (2.0)
Date:	(b)	8/15/16	8/15/16	8/15/16	8/15/16	8/15/16	8/15/16
PCBs (mg/kg)							
Aroclor-1016	-	0.073 U	0.14 U	0.7 U	0.072 U	0.069 U	0.067 U
Aroclor-1221	-	0.079 U	0.15 U	0.75 U	0.079 U	0.075 U	0.072 U
Aroclor-1232	-	0.055 U	0.11 U	0.52 U	0.054 U	0.052 U	0.05 U
Aroclor-1242	-	0.061 U	0.12 U	0.58 U	0.06 U	0.057 U	0.056 U
Aroclor-1248	-	0.073 U	0.14 U	0.7 U	0.072 U	0.069 U	0.067 U
Aroclor-1254	-	0.08 U	0.15 U	0.75 U	0.079 U	0.075 U	0.072 U
Aroclor-1260	-	0.52 J	1.70 J	5.0 J	0.33 J	0.29 J	0.32 J
Aroclor-1262	-	0.061 U	0.12 U	0.580 U	0.06 U	0.057 U	0.056 U
Aroclor-1268	-	0.049 U	0.093 U	0.460 U	0.048 U	0.046 U	0.044 U
Total PCBs	10	0.52 J	1.7 J	5.0 J	0.33 J	0.29 J	0.32 J

Sample ID (Depth):	Evaluation Criteria	EXC-SB29NSW (1.5)	EXC-SB29ESW (1.5	EXC-SB29SSW (1.5)	EXC-SB29WSW (1.5)	EXC-SB29B1 (3.0)	EXC-SB29B2 (3.0)
Date:	(b)	8/15/16	8/15/16	8/15/16	8/15/16	8/15/16	8/15/16
PCBs (mg/kg)							
Aroclor-1016	-	0.069 U	0.07 U	0.075 U	0.072 U	0.067 U	0.069 U
Aroclor-1221	-	0.075 U	0.075 U	0.081 U	0.078 U	0.072 U	0.075 U
Aroclor-1232	-	0.052 U	0.052 U	0.056 U	0.054 U	0.05 U	0.052 U
Aroclor-1242	-	0.058 U	0.058 U	0.062 U	0.06 U	0.056 U	0.057 U
Aroclor-1248	-	0.069 U	0.07 U	0.59 J	0.072 U	0.067 U	0.069 U
Aroclor-1254	-	0.075 U	0.075 U	0.59 J	0.078 U	0.072 U	0.075 U
Aroclor-1260	-	0.081 U	0.081 U	0.49 J	0.084 U	0.180 J	0.080 U
Aroclor-1262		0.058 U	0.058 U	0.062 U	0.060 U	0.056 U	0.057 U
Aroclor-1268		0.046 U	0.046 U	0.05 U	0.048 U	0.044 U	0.046 U
Total PCBs	10	0.081 U	0.081 U	1.67 J	0.084 U	0.180 J	0.080 U

Table 1

Confirmation Soil Sampling Results - Polychlorinated Biphenyls
5140 Site
Yorkville, New York (a)

Sample ID (Depth): / Date:	Evaluation Criteria (b)	EXC-SB30NSW (1.5) 8/16/17	EXC-SB30ESW (1.5) 8/16/17	EXC-SB30SSW (1.5) 8/16/17	EXC-SB30WSW (1.5) 8/16/17	EXC-SB30B1 (3.0) 8/16/17	EXC-SB30B2 (3.0) 8/16/17
PCBs (mg/kg)							
Aroclor-1016	-	0.075 U	0.067 U	0.068 U	0.071 U	0.068 U	0.069 U
Aroclor-1221	-	0.081 U	0.073 U	0.074 U	0.077 U	0.073 U	0.074 U
Aroclor-1232	-	0.056 U	0.050 U	0.051 U	0.053 U	0.051 U	0.051 U
Aroclor-1242	-	0.062 U	0.056 U	0.057 U	0.059 U	0.056 U	0.057 U
Aroclor-1248	-	0.075 U	0.067 U	0.068 U	0.071 U	0.068 U	0.069 U
Aroclor-1254	-	0.081 U	0.073 U	0.074 U	0.077 U	0.073 U	0.074 U
Aroclor-1260	-	0.087 U	0.078 U	0.080 U	0.440 J	0.280 J	0.520 J
Aroclor-1262	-	0.062 U	0.056 U	0.057 U	0.059 U	0.056 U	0.057 U
Aroclor-1268	-	0.050 U	0.045 U	0.046 U	0.047 U	0.045 U	0.046 U
Total PCBs	10	0.087 U	0.078 U	0.080 U	0.440 J	0.280 J	0.520 J

Sample ID (Depth): / Date:	Evaluation Criteria (b)	EXC-B3NSW (1.5) 8/16/17	EXC-B3ESW (1.5) 8/16/17	EXC-B3SSW (1.5) 8/16/17	EXC-B3WSW (1.5) 8/16/17	EXC-081616A Duplicate [EXC-B3WSW (1.5)]	EXC-B3B1 (3.0) 8/16/17	EXC-081616B Duplicate [EXC-B3B1 (3.0)]	EXC-B3B2 (3.0) 8/16/2016
PCBs (mg/kg)									
Aroclor-1016	-	0.069 U	0.066 U	0.066 U	0.067 U	0.065 U	0.068 U	0.067 U	0.067 U
Aroclor-1221	-	0.075 U	0.072 U	0.072 U	0.072 U	0.070 U	0.074 U	0.073 U	0.073 U
Aroclor-1232	-	0.052 U	0.05 U	0.05 U	0.05 U	0.049 U	0.051 U	0.051 U	0.05 U
Aroclor-1242	-	0.058 U	0.055 U	0.055 U	0.056 U	0.054 U	0.057 U	0.056 U	0.056 U
Aroclor-1248	-	0.069 U	0.066 U	0.066 U	0.067 U	0.065 U	0.068 U	0.067 U	0.067 U
Aroclor-1254	-	0.075 U	0.072 U	0.072 U	0.072 U	0.070 U	0.074 U	0.073 U	0.0730 U
Aroclor-1260	-	0.081 U	0.077 U	0.077 U	0.078 U	0.076 U	0.079 U	0.079 U	0.078 U
Aroclor-1262	-	0.058 U	0.055 U	0.055 U	0.056 U	0.054 U	0.057 U	0.056 U	0.056 U
Aroclor-1268	-	0.046 U	0.044 U	0.044 U	0.045 U	0.043 U	0.045 U	0.045 U	0.045 U
Total PCBs	10	0.081 U	0.077 U	0.770 U	0.078 U	0.076 U	0.079 U	0.079 U	0.078 U

a/ PCBs = polychlorinated biphenyls; NA = not analyzed; mg/kg = milligrams per kilogram; U = analyte not detected above reporting limit; J = reported value may not be accurate or precise; UJ = analyte not detected above reporting limit, quantitation limit may be inaccurate or imprecise.
b/ Site-specific Soil Cleanup Objective. See text for further explanation.

Appendix A – Environmental Easement

ENVIRONMENTAL EASEMENT GRANTED PURSUANT TO ARTICLE 71, TITLE 36 OF THE NEW YORK STATE ENVIRONMENTAL CONSERVATION LAW

THIS INDENTURE made this 6th day of November 2015 between Owner(s) TSB Group, LLC, having an office at 5140 Commercial Drive, Yorkville, New York 13495, County of Oneida, State of New York (the "Grantor"), and The People of the State of New York (the "Grantee."), acting through their Commissioner of the Department of Environmental Conservation (the "Commissioner", or "NYSDEC" or "Department" as the context requires) with its headquarters located at 625 Broadway, Albany, New York 12233,

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to encourage the remediation of abandoned and likely contaminated properties ("sites") that threaten the health and vitality of the communities they burden while at the same time ensuring the protection of public health and the environment; and

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to establish within the Department a statutory environmental remediation program that includes the use of Environmental Easements as an enforceable means of ensuring the performance of operation, maintenance, and/or monitoring requirements and the restriction of future uses of the land, when an environmental remediation project leaves residual contamination at levels that have been determined to be safe for a specific use, but not all uses, or which includes engineered structures that must be maintained or protected against damage to perform properly and be effective, or which requires groundwater use or soil management restrictions; and

WHEREAS, the Legislature of the State of New York has declared that Environmental Easement shall mean an interest in real property, created under and subject to the provisions of Article 71, Title 36 of the New York State Environmental Conservation Law ("ECL") which contains a use restriction and/or a prohibition on the use of land in a manner inconsistent with engineering controls which are intended to ensure the long term effectiveness of a site remedial program or eliminate potential exposure pathways to hazardous waste or petroleum; and

WHEREAS, Grantor, is the owner of real property located at the address of 5140 Commercial Drive in the Town of Whitestown, County of Oneida and State of New York, known and designated on the tax map of the County Clerk of Oneida as tax map parcel numbers: Section 305.018 Block 3 Lot 31, being the same as that property conveyed to Grantor by deed dated July 24, 2015 and recorded in the Oneida County Clerk's Office in Instrument No. 2015-010254. The property subject to this Environmental Easement (the "Controlled Property") comprises approximately 1.858 +/- acres, and is hereinafter more fully described in the Land Title Survey dated August 3, 2012 and last revised August 30, 2015 prepared by Richard M. Rybinski, L.S., which will be attached to the Site Management Plan. The Controlled Property description is set forth in and attached hereto as Schedule A; and

WHEREAS, the Department accepts this Environmental Easement in order to ensure the protection of public health and the environment and to achieve the requirements for remediation established for the Controlled Property until such time as this Environmental Easement is extinguished pursuant to ECL Article 71, Title 36; and

NOW THEREFORE, in consideration of the mutual covenants contained herein and the terms and conditions of Brownfield Cleanup Agreement Index Number: C633079, Grantor conveys to Grantee a permanent Environmental Easement pursuant to ECL Article 71, Title 36 in, on, over, under, and upon the Controlled Property as more fully described herein ("Environmental Easement").

1. Purposes. Grantor and Grantee acknowledge that the Purposes of this Environmental Easement are: to convey to Grantee real property rights and interests that will run with the land in perpetuity in order to provide an effective and enforceable means of encouraging the reuse and redevelopment of this Controlled Property at a level that has been determined to be safe for a specific use while ensuring the performance of operation, maintenance, and/or monitoring requirements; and to ensure the restriction of future uses of the land that are inconsistent with the above-stated purpose.

2. Institutional and Engineering Controls. The controls and requirements listed in the Department approved Site Management Plan ("SMP") including any and all Department approved amendments to the SMP are incorporated into and made part of this Environmental Easement. These controls and requirements apply to the use of the Controlled Property, run with the land, are binding on the Grantor and the Grantor's successors and assigns, and are enforceable in law or equity against any owner of the Controlled Property, any lessees and any person using the Controlled Property.

A. (1) The Controlled Property may be used for:

Commercial as described in 6 NYCRR Part 375-1.8(g)(2)(iii) and Industrial as described in 6 NYCRR Part 375-1.8(g)(2)(iv)

(2) All Engineering Controls must be operated and maintained as specified in the Site Management Plan (SMP);

(3) All Engineering Controls must be inspected at a frequency and in a manner defined in the SMP;

(4) The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Oneida County Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department;

(5) Groundwater and other environmental or public health monitoring must be performed as defined in the SMP;

(6) Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in the SMP;

(7) All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with the SMP;

(8) Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP;

(9) Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical components of the remedy shall be performed as defined in the SMP;

(10) Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by this Environmental Easement.

B. The Controlled Property shall not be used for Choose the correct list of inapplicable uses., and the above-stated engineering controls may not be discontinued without an amendment or extinguishment of this Environmental Easement.

C. The SMP describes obligations that the Grantor assumes on behalf of Grantor, its successors and assigns. The Grantor's assumption of the obligations contained in the SMP which may include sampling, monitoring, and/or operating a treatment system, and providing certified reports to the NYSDEC, is and remains a fundamental element of the Department's determination that the Controlled Property is safe for a specific use, but not all uses. The SMP may be modified in accordance with the Department's statutory and regulatory authority. The Grantor and all successors and assigns, assume the burden of complying with the SMP and obtaining an up-to-date version of the SMP from:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, New York 12233
Phone: (518) 402-9553

D. Grantor must provide all persons who acquire any interest in the Controlled Property a true and complete copy of the SMP that the Department approves for the Controlled Property and all Department-approved amendments to that SMP.

E. Grantor covenants and agrees that until such time as the Environmental Easement is extinguished in accordance with the requirements of ECL Article 71, Title 36 of the ECL, the property deed and all subsequent instruments of conveyance relating to the Controlled Property shall state in at least fifteen-point bold-faced type:

This property is subject to an Environmental Easement held by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of the Environmental Conservation

Law.

F. Grantor covenants and agrees that this Environmental Easement shall be incorporated in full or by reference in any leases, licenses, or other instruments granting a right to use the Controlled Property.

G. Grantor covenants and agrees that it shall, at such time as NYSDEC may require, submit to NYSDEC a written statement by an expert the NYSDEC may find acceptable certifying under penalty of perjury, in such form and manner as the Department may require, that:

(1) the inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under the direction of the individual set forth at 6 NYCRR Part 375-1.8(h)(3).

(2) the institutional controls and/or engineering controls employed at such site:

(i) are in-place;

(ii) are unchanged from the previous certification, or that any identified changes to the controls employed were approved by the NYSDEC and that all controls are in the Department-approved format; and

(iii) that nothing has occurred that would impair the ability of such control to protect the public health and environment;

(3) the owner will continue to allow access to such real property to evaluate the continued maintenance of such controls;

(4) nothing has occurred that would constitute a violation or failure to comply with any site management plan for such controls;

(5) the report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

(6) to the best of his/her knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and

(7) the information presented is accurate and complete.

3. Right to Enter and Inspect. Grantee, its agents, employees, or other representatives of the State may enter and inspect the Controlled Property in a reasonable manner and at reasonable times to assure compliance with the above-stated restrictions.

4. Reserved Grantor's Rights. Grantor reserves for itself, its assigns, representatives, and successors in interest with respect to the Property, all rights as fee owner of the Property, including:

A. Use of the Controlled Property for all purposes not inconsistent with, or limited by the terms of this Environmental Easement;

B. The right to give, sell, assign, or otherwise transfer part or all of the underlying fee interest to the Controlled Property, subject and subordinate to this Environmental Easement;

5. Enforcement

A. This Environmental Easement is enforceable in law or equity in perpetuity by Grantor, Grantee, or any affected local government, as defined in ECL Section 71-3603, against the owner of the Property, any lessees, and any person using the land. Enforcement shall not be defeated because of any subsequent adverse possession, laches, estoppel, or waiver. It is not a defense in any action to enforce this Environmental Easement that: it is not appurtenant to an interest in real property; it is not of a character that has been recognized traditionally at common law; it imposes a negative burden; it imposes affirmative obligations upon the owner of any interest in the burdened property; the benefit does not touch or concern real property; there is no privity of estate or of contract; or it imposes an unreasonable restraint on alienation.

B. If any person violates this Environmental Easement, the Grantee may revoke the Certificate of Completion with respect to the Controlled Property.

C. Grantee shall notify Grantor of a breach or suspected breach of any of the terms of this Environmental Easement. Such notice shall set forth how Grantor can cure such breach or suspected breach and give Grantor a reasonable amount of time from the date of receipt of notice in which to cure. At the expiration of such period of time to cure, or any extensions granted by Grantee, the Grantee shall notify Grantor of any failure to adequately cure the breach or suspected breach, and Grantee may take any other appropriate action reasonably necessary to remedy any breach of this Environmental Easement, including the commencement of any proceedings in accordance with applicable law.

D. The failure of Grantee to enforce any of the terms contained herein shall not be deemed a waiver of any such term nor bar any enforcement rights.

6. Notice. Whenever notice to the Grantee (other than the annual certification) or approval from the Grantee is required, the Party providing such notice or seeking such approval shall identify the Controlled Property by referencing the following information:

County, NYSDEC Site Number, NYSDEC Brownfield Cleanup Agreement, State Assistance Contract or Order Number, and the County tax map number or the Liber and Page or computerized system identification number.

Parties shall address correspondence to:

Site Number: C633079
Office of General Counsel
NYSDEC
625 Broadway
Albany New York 12233-5500

With a copy to:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, NY 12233

All notices and correspondence shall be delivered by hand, by registered mail or by Certified mail and return receipt requested. The Parties may provide for other means of receiving and communicating notices and responses to requests for approval.

7. Recordation. Grantor shall record this instrument, within thirty (30) days of execution of this instrument by the Commissioner or her/his authorized representative in the office of the

recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

8. Amendment. Any amendment to this Environmental Easement may only be executed by the Commissioner of the New York State Department of Environmental Conservation or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

9. Extinguishment. This Environmental Easement may be extinguished only by a release by the Commissioner of the New York State Department of Environmental Conservation, or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

10. Joint Obligation. If there are two or more parties identified as Grantor herein, the obligations imposed by this instrument upon them shall be joint and several.

Remainder of Page Intentionally Left Blank

IN WITNESS WHEREOF, Grantor has caused this instrument to be signed in its name.

TSB Group, LLC:

By: ______________________

Print Name: Paul Sacco

Title: Pres Date: 10/14/2015

Grantor's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF ONEIDA)

On the 14th day of October, in the year 20 15, before me, the undersigned, personally appeared Paul Sacco, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name 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 upon behalf of which the individual(s) acted, executed the instrument.

Sharon R Henderson
Notary Public - State of New York

SHARON R. HENDERSON
Notary Public, State of New York
No. 01HE5088801
Qualified in Oneida County
Commission Expires November 24, 2017

THIS ENVIRONMENTAL EASEMENT IS HEREBY ACCEPTED BY THE PEOPLE OF THE STATE OF NEW YORK, Acting By and Through the Department of Environmental Conservation as Designee of the Commissioner,

By: ____________________________
Robert W. Schick, Director
Division of Environmental Remediation

Grantee's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF ALBANY)

On the 6th day of November, in the year 2015, before me, the undersigned, personally appeared Robert W. Schick, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/ executed the same in his/her/ capacity as Designee of the Commissioner of the State of New York Department of Environmental Conservation, and that by his/her/ signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

____
Notary Public - State of New York

David J. Chiusano
Notary Public, State of New York
No. 01CH5032146
Qualified in Schenectady County
Commission Expires August 22, 2018

SCHEDULE "A" PROPERTY DESCRIPTION

Legal Description and Environmental Easement
5140 Commercial Drive, Yorkville, NY

All that tract or parcel of land situate in the Town of Whitestown, County of Oneida and State of New York, situate on the south side of Commercial Drive East also known as Truck Route 5A and State Highway No. 8484; said point being bounded and described as follows:

Beginning at an iron pin at an angle point on the south street line of Commercial Drive East, said pin being 0.31 feet east of an existing stone monument as shown as shown on a map titled "Environmental Easement 5140 Commercial Drive, LLC, 5140 Site, Site ID # C633079", Sheet 1 of 2 prepared by Richard M. Rybinski, L.S. dated August 30, 2015; thence N. 68°16'13" E. a distance of 94.65 feet along the southerly line of Commercial Drive East to a point at the northwest corner of Sarah's Bridge Rail Corp.; thence S. 20°11'04" E. a distance of 200.00 feet along the west line of Sarah's Bridge Rail Corp. to an iron pin at said Sarah's Bridge southwest corner and the northwest corner of 5150 Corp.; thence S. 20°11'04" E. a distance of 118.50 feet along the west line of said 5150 Corp. to a point; thence S. 62°45'43" W. a distance of 251.80 feet along on the north line of said 5150 Corp. to the southeast corner of S. Joseph and Susan D. Meelan; thence N. 20°11'47" W. a distance of 320.93 feet along on the east line of said Meelan to the northeast corner of said Meelan and south street line of said Commercial Drive; thence N. 60°20'13" E. a distance of 157.50 feet along the southerly line of Commercial Drive East to the point of beginning; being 1.858 acres more or less.

Together with a non-exclusive right of way 25.01 feet in width, granted by the New York central Railroad to Westinghouse Electric by deed dated and recorded August 24, 1954 in the Oneida County Clerk's Office in Book of Deeds 1447 at Page 559.

Bearings refer to North American Datum (NAD) 1983, New York State Plane Central Zone.

TP-584 (4/13)

New York State Department of Taxation and Finance

Combined Real Estate Transfer Tax Return, Credit Line Mortgage Certificate, and Certification of Exemption from the Payment of Estimated Personal Income Tax

Recording office time stamp

See Form TP-584-I, Instructions for Form TP-584, *before completing this form. Print or type.*

Schedule A – Information relating to conveyance

Grantor/Transferor		
☐ Individual	Name *(if individual, last, first, middle initial)* (☐ *check if more than one grantor)* TSB Group, LLC	Social security number
☐ Corporation ☐ Partnership	Mailing address 129 Gilbert Road	Social security number
☐ Estate/Trust ☐ Single member LLC	City: New Hartford State: NY ZIP code: 13413	Federal EIN 45-2918966
☒ Other	Single member's name if grantor is a single member LLC *(see instructions)*	Single member EIN or SSN

Grantee/Transferee		
☐ Individual	Name *(if individual, last, first, middle initial)* (☐ *check if more than one grantee)* The Department of Environmental Conservation	Social security number
☐ Corporation ☐ Partnership	Mailing address 625 Broadway, 11th Floor	Social security number
☐ Estate/Trust ☐ Single member LLC	City: Albany State: NY ZIP code: 12233-7014	Federal EIN 14-6013200
☒ Other	Single member's name if grantee is a single member LLC *(see instructions)*	Single member EIN or SSN

Location and description of property conveyed

Tax map designation – Section, block & lot *(include dots and dashes)*	SWIS code (six digits)	Street address	City, town, or village	County
305.018-3-31	307089	5140 Commercial Drive	Whitestown	Oneida

Type of property conveyed *(check applicable box)*

1 ☐ One- to three-family house
2 ☐ Residential cooperative
3 ☐ Residential condominium
4 ☐ Vacant land
5 ☒ Commercial/Industrial
6 ☐ Apartment building
7 ☐ Office building
8 ☐ Other ______________

Date of conveyance: 11 / 06 / 2015 (month / day / year)

Percentage of real property conveyed which is residential real property 0% *(see instructions)*

Condition of conveyance *(check all that apply)*

a. ☐ Conveyance of fee interest

b. ☐ Acquisition of a controlling interest (state percentage acquired ________%)

c. ☐ Transfer of a controlling interest (state percentage transferred ________%)

d. ☐ Conveyance to cooperative housing corporation

e. ☐ Conveyance pursuant to or in lieu of foreclosure or enforcement of security interest *(attach Form TP-584.1, Schedule E)*

f. ☐ Conveyance which consists of a mere change of identity or form of ownership or organization *(attach Form TP-584.1, Schedule F)*

g. ☐ Conveyance for which credit for tax previously paid will be claimed *(attach Form TP-584.1, Schedule G)*

h. ☐ Conveyance of cooperative apartment(s)

i. ☐ Syndication

j. ☐ Conveyance of air rights or development rights

k. ☐ Contract assignment

l. ☐ Option assignment or surrender

m. ☐ Leasehold assignment or surrender

n. ☐ Leasehold grant

o. ☒ Conveyance of an easement

p. ☐ Conveyance for which exemption from transfer tax claimed *(complete Schedule B, Part III)*

q. ☐ Conveyance of property partly within and partly outside the state

r. ☐ Conveyance pursuant to divorce or separation

s. ☐ Other *(describe)* ______________

For recording officer's use	Amount received	Date received	Transaction number
	Schedule B., Part I $ Schedule B., Part II $		

Schedule B — Real estate transfer tax return (Tax Law, Article 31)

Part I – Computation of tax due

1 Enter amount of consideration for the conveyance *(If you are claiming a total exemption from tax, check the exemption claimed box, enter consideration and proceed to Part III)* ☒ **Exemption claimed**	1.	0
2 Continuing lien deduction *(see instructions if property is taken subject to mortgage or lien)*	2.	
3 Taxable consideration *(subtract line 2 from line 1)*	3.	
4 Tax: $2 for each $500, or fractional part thereof, of consideration on line 3	4.	
5 Amount of credit claimed for tax previously paid *(see instructions and attach Form TP-584.1, Schedule G)*	5.	
6 Total tax due* *(subtract line 5 from line 4)*	6.	

Part II – Computation of additional tax due on the conveyance of residential real property for $1 million or more

1 Enter amount of consideration for conveyance *(from Part I, line 1)*	1.	
2 Taxable consideration *(multiply line 1 by the percentage of the premises which is residential real property, as shown in Schedule A)*	2.	
3 Total additional transfer tax due* *(multiply line 2 by 1% (.01))*	3.	

Part III – Explanation of exemption claimed on Part I, line 1 *(check any boxes that apply)*

The conveyance of real property is exempt from the real estate transfer tax for the following reason:

a. Conveyance is to the United Nations, the United States of America, the state of New York, or any of their instrumentalities, agencies, or political subdivisions (or any public corporation, including a public corporation created pursuant to agreement or compact with another state or Canada) .... a ☒

b. Conveyance is to secure a debt or other obligation .... b ☐

c. Conveyance is without additional consideration to confirm, correct, modify, or supplement a prior conveyance .... c ☐

d. Conveyance of real property is without consideration and not in connection with a sale, including conveyances conveying realty as bona fide gifts .... d ☐

e. Conveyance is given in connection with a tax sale .... e ☐

f. Conveyance is a mere change of identity or form of ownership or organization where there is no change in beneficial ownership. (This exemption cannot be claimed for a conveyance to a cooperative housing corporation of real property comprising the cooperative dwelling or dwellings.) Attach Form TP-584.1, Schedule F .... f ☐

g. Conveyance consists of deed of partition .... g ☐

h. Conveyance is given pursuant to the federal Bankruptcy Act .... h ☐

i. Conveyance consists of the execution of a contract to sell real property, without the use or occupancy of such property, or the granting of an option to purchase real property, without the use or occupancy of such property .... i ☐

j. Conveyance of an option or contract to purchase real property with the use or occupancy of such property where the consideration is less than $200,000 and such property was used solely by the grantor as the grantor's personal residence and consists of a one-, two-, or three-family house, an individual residential condominium unit, or the sale of stock in a cooperative housing corporation in connection with the grant or transfer of a proprietary leasehold covering an individual residential cooperative apartment .... j ☐

k. Conveyance is not a conveyance within the meaning of Tax Law, Article 31, section 1401(e) *(attach documents supporting such claim)* .... k ☐

*The total tax (from Part I, line 6 and Part II, line 3 above) is due within 15 days from the date conveyance. Please make check(s) payable to the county clerk where the recording is to take place. If the recording is to take place in the New York City boroughs of Manhattan, Bronx, Brooklyn, or Queens, make check(s) payable to the ***NYC Department of Finance.*** If a recording is not required, send this return and your check(s) made payable to the ***NYS Department of Taxation and Finance***, directly to the NYS Tax Department, RETT Return Processing, PO Box 5045, Albany NY 12205-5045.

Schedule C — Credit Line Mortgage Certificate (Tax Law, Article 11)

Complete the following only if the interest being transferred is a fee simple interest.
I (we) certify that: *(check the appropriate box)*

1. ☒ The real property being sold or transferred is not subject to an outstanding credit line mortgage.

2. ☐ The real property being sold or transferred is subject to an outstanding credit line mortgage. However, an exemption from the tax is claimed for the following reason:

   ☐ The transfer of real property is a transfer of a fee simple interest to a person or persons who held a fee simple interest in the real property (whether as a joint tenant, a tenant in common or otherwise) immediately before the transfer.

   ☐ The transfer of real property is (A) to a person or persons related by blood, marriage or adoption to the original obligor or to one or more of the original obligors or (B) to a person or entity where 50% or more of the beneficial interest in such real property after the transfer is held by the transferor or such related person or persons (as in the case of a transfer to a trustee for the benefit of a minor or the transfer to a trust for the benefit of the transferor).

   ☐ The transfer of real property is a transfer to a trustee in bankruptcy, a receiver, assignee, or other officer of a court.

   ☐ The maximum principal amount secured by the credit line mortgage is $3,000,000 or more, and the real property being sold or transferred is **not** principally improved nor will it be improved by a one- to six-family owner-occupied residence or dwelling.

   Please note: for purposes of determining whether the maximum principal amount secured is $3,000,000 or more as described above, the amounts secured by two or more credit line mortgages may be aggregated under certain circumstances. See TSB-M-96(6)-R for more information regarding these aggregation requirements.

   ☐ Other *(attach detailed explanation)*.

3. ☐ The real property being transferred is presently subject to an outstanding credit line mortgage. However, no tax is due for the following reason:

   ☐ A certificate of discharge of the credit line mortgage is being offered at the time of recording the deed.

   ☐ A check has been drawn payable for transmission to the credit line mortgagee or his agent for the balance due, and a satisfaction of such mortgage will be recorded as soon as it is available.

4. ☐ The real property being transferred is subject to an outstanding credit line mortgage recorded in __________ (insert liber and page or reel or other identification of the mortgage). The maximum principal amount of debt or obligation secured by the mortgage is __________. No exemption from tax is claimed and the tax of __________ is being paid herewith. *(Make check payable to county clerk where deed will be recorded or, if the recording is to take place in New York City but not in Richmond County, make check payable to the* ***NYC Department of Finance****.)*

Signature (both the grantor(s) and grantee(s) must sign)

The undersigned certify that the above information contained in schedules A, B, and C, including any return, certification, schedule, or attachment, is to the best of his/her knowledge, true and complete, and authorize the person(s) submitting such form on their behalf to receive a copy for purposes of recording the deed or other instrument effecting the conveyance.

Paul Sacco	Member	Andrew Guglielmi	Assistant
Grantor signature	Title	Grantee signature	Title

Andrew Guglielmi, Esq.
NYSDEC

Grantor signature	Title	Grantee signature	Title

Reminder: Did you complete all of the required information in Schedules A, B, and C? Are you required to complete Schedule D? If you checked *e*, *f*, or *g* in Schedule A, did you complete Form TP-584.1? Have you attached your check(s) made payable to the county clerk where recording will take place or, if the recording is in the New York City boroughs of Manhattan, Bronx, Brooklyn, or Queens, to the ***NYC Department of Finance***? If no recording is required, send your check(s), made payable to the ***Department of Taxation and Finance***, directly to the NYS Tax Department, RETT Return Processing, PO Box 5045, Albany NY 12205-5045.

Schedule D - Certification of exemption from the payment of estimated personal income tax (Tax Law, Article 22, section 663)

Complete the following only if a fee simple interest or a cooperative unit is being transferred by an individual or estate or trust.

If the property is being conveyed by a referee pursuant to a foreclosure proceeding, proceed to Part II, and check the second box under *Exemptions for nonresident transferor(s)/seller(s)* and sign at bottom.

Part I - New York State residents

If you are a New York State resident transferor(s)/seller(s) listed in Schedule A of Form TP-584 (or an attachment to Form TP-584), you must sign the certification below. If one or more transferors/sellers of the real property or cooperative unit is a resident of New York State, **each** resident transferor/seller must sign in the space provided. If more space is needed, please photocopy this Schedule D and submit as many schedules as necessary to accommodate all resident transferors/sellers.

Certification of resident transferor(s)/seller(s)

This is to certify that at the time of the sale or transfer of the real property or cooperative unit, the transferor(s)/seller(s) as signed below was a resident of New York State, and therefore is not required to pay estimated personal income tax under Tax Law, section 663(a) upon the sale or transfer of this real property or cooperative unit.

Signature	Print full name	Date
Signature	Print full name	Date
Signature	Print full name	Date
Signature	Print full name	Date

Note: A resident of New York State may still be required to pay estimated tax under Tax Law, section 685(c), but not as a condition of recording a deed.

Part II - Nonresidents of New York State

If you are a nonresident of New York State listed as a transferor/seller in Schedule A of Form TP-584 (or an attachment to Form TP-584) but are not required to pay estimated personal income tax because one of the exemptions below applies under Tax Law, section 663(c), check the box of the appropriate exemption below. If any one of the exemptions below applies to the transferor(s)/seller(s), that transferor(s)/seller(s) is not required to pay estimated personal income tax to New York State under Tax Law, section 663. **Each** nonresident transferor/seller who qualifies under one of the exemptions below must sign in the space provided. If more space is needed, please photocopy this Schedule D and submit as many schedules as necessary to accommodate all nonresident transferors/sellers.

If none of these exemption statements apply, you must complete Form IT-2663, *Nonresident Real Property Estimated Income Tax Payment Form*, or Form IT-2664, *Nonresident Cooperative Unit Estimated Income Tax Payment Form*. For more information, see *Payment of estimated personal income tax*, on page 1 of Form TP-584-I.

Exemption for nonresident transferor(s)/seller(s)

This is to certify that at the time of the sale or transfer of the real property or cooperative unit, the transferor(s)/seller(s) (grantor) of this real property or cooperative unit was a nonresident of New York State, but is not required to pay estimated personal income tax under Tax Law, section 663 due to one of the following exemptions:

☐ The real property or cooperative unit being sold or transferred qualifies in total as the transferor's/seller's principal residence (within the meaning of Internal Revenue Code, section 121) from ________ (Date) to ________ (Date) *(see instructions)*.

☐ The transferor/seller is a mortgagor conveying the mortgaged property to a mortgagee in foreclosure, or in lieu of foreclosure with no additional consideration.

☐ The transferor or transferee is an agency or authority of the United States of America, an agency or authority of the state of New York, the Federal National Mortgage Association, the Federal Home Loan Mortgage Corporation, the Government National Mortgage Association, or a private mortgage insurance company.

Signature	Print full name	Date
Signature	Print full name	Date
Signature	Print full name	Date
Signature	Print full name	Date

Appendix B – Site Management Plan

Appendix B
Site Management Plan

5140 Site

Yorkville, New York

January 13, 2017

WSP | PARSONS BRINCKERHOFF

Appendix B
Site Management Plan

5140 Site
Oneida County
Yorkville, New York

January 13, 2017

Consultant

WSP | Parsons Brinckerhoff
75 Arlington Street, 4th Floor, Boston, MA 02116
Direct: +1-774-413-5109
Main: +1-617-426-7330

WSP Contacts

David P. Bouchard
dave.bouchard@wspgroup.com

Revisions to Final Approved Site Management Plan:

Revision No.	Date Submitted	Summary of Revision	NYSDEC Approval Date

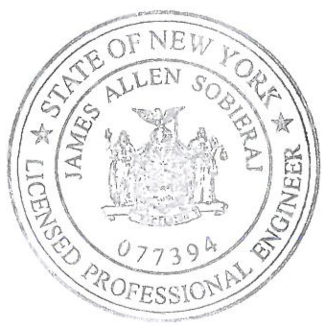
JANUARY 2017

CERTIFICATION STATEMENT

I James Sobieraj, certify that I am currently a NYS registered professional engineer and that this Site Management Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

077394 P.E.

1/13/17 DATE



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Appendices

Executive Summary

The following provides a brief summary of the controls implemented for the Site, as well as the inspections, monitoring, maintenance and reporting activities required by this Site Management Plan (SMP):

Site Identification:	**5140 Site** (Formerly New York State Department of Environmental Conservation [NYSDEC] Site # C633079; See Introduction Section below) 5140 Commercial Drive Yorkville, New York
Institutional Controls:	1. The property within the institutional control boundary may only be used for Commercial/Industrial purposes.
	2. The following specific controls have been implemented: ■ Compliance with the Environmental Easement and this SMP by the Remedial Party and the Remedial Party's successors and assigns. ■ All ECs must be operated and maintained as specified in this SMP. ■ All ECs on the property must be inspected at a frequency and in a manner specified in the SMP. ■ Data and information pertinent to site management of the property must be reported at the frequency and in a manner specified in this SMP. ■ The property may only be used for commercial uses provided that the long-term ECs/ICs included in this SMP are employed. ■ Only land uses specified in the environmental easement are permitted. ■ All future activities on the property that will disturb soils or concrete with *Remaining Contamination*, soils that are suspected of having *Discovered Contamination*, or the soil cover or engineered barrier systems must be conducted in accordance with this SMP, including the EWP in Appendix D. ■ The use of the groundwater underlying the property is prohibited without treatment rendering it safe for its intended use and pre-approval by NYSDEC. ■ Vegetable gardens and farming are prohibited, unless otherwise approved by NYSDEC. ■ The site owner will submit to NYSDEC a written statement that certifies, under penalty of perjury, that: (1) controls employed at the property are unchanged from the previous certification or that any changes to the controls were approved by the NYSDEC; 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. This certification shall be submitted annually using the attached inspection reporting form (Appendix E) and will be made by a qualified environmental professional, as defined in 6 NYCRR 375-1.2(ak). The NYSDEC retains the right to access the property in order to evaluate the continued maintenance of any and all controls.

Site Identification:	**5140 Site** (Formerly New York State Department of Environmental Conservation [NYSDEC] Site # C633079; See Introduction Section below) 5140 Commercial Drive Yorkville, New York	
Engineering Controls:	1. The engineering controls for the 5140 Site include a soil cover and engineered barrier to limit exposure soils that may contain relatively low concentrations of PCBs in near surface soil, and an encapsulation barrier for the production floor of the facility to limit exposure to PCBs that may be in the matrix of the concrete.	

Inspections:	Frequency
1. Soil Cover, Engineered & Encapsulation Barriers	Annually
Monitoring:	
1. No Monitoring	-
Maintenance:	
1. Encapsulation Barrier	As needed
Reporting:	
1. Soil Cover, Engineered & Encapsulation Barriers	Annual
2. Periodic Review Report	Every 5 years

Further descriptions of the above requirements are provided in detail in the latter sections of this SMP.

1 Introduction

In July and August 2016, WSP USA Corp., implemented a remedial action at the 5140 Site in Yorkville, New York. The action, which included excavations for offsite disposal of polychlorinated biphenyl-affected (PCB-affected) soil and the emplacement of a cover system, was the culmination of work begun in 2013 under a Brownfield Cleanup Agreement (BCA; Index No.:C633079-06-13), dated August 7, 2013, between 5140 Commercial Drive, LLC (5140), the former owners of the site, and the New York State Department of Environmental Conservation (NYSDEC). That work included an interim remedial measure (IRM), a Remedial Investigation (RI) to characterize the balance of the property not addressed by the IRM, and an alternative analysis to evaluate and select a remedial alternative to address the remaining PCBs at the site. The proposed final remedy for the site, detailed in the *Alternative Analysis Report and Remedial Action Work Plan* (AAR/RAWP), dated October 2, 2015, was reviewed by the Department; however, in the Decision Document, dated May 24, 2016, the NYSDEC, in consultation with the New York State Department of Health (NYSDOH), requested additional investigation as a condition of the approval (i.e., approval with modifications). The requested work included follow-up vapor investigation in the main building and groundwater investigation for non-site-specific compounds. In a letter dated July 6, 2016, 5140 chose to rescind the BCA and drop out of the Brownfield Cleanup Program (BCP).

The remedy, as proposed in the AAR/RAWP and implemented in August 2016, included institutional and engineering controls designed to minimize the potential exposure to residually-impacted soil containing PCBs. An *Environmental Easement*[1], the instrument for ensuring compliance with the controls, was granted to the NYSDEC by the owner of the site and recorded with the Oneida County Clerk prior to the rescission of the BCA; however, the *Site Management Plan* (SMP), which details the ongoing maintenance and reporting obligations for the controls had not been finalized. A draft of the SMP, dated February 23, 2016, was submitted shortly after the AAR/RAWP was completed (as required by the NYSDEC), but that document did not include information regarding the final remedial action.

Given the critical importance in managing and maintaining the site controls (to prevent uncontrolled exposure to residual PCBs), the draft SMP was updated for inclusion as an appendix to the *Remedial Action Report* (RAR). The intent is to provide a self-contained, current document that can be used by the site owners to verify the integrity of the site controls and ensure that employees and others who may be onsite are not inadvertently exposed to the residual PCBs, regardless of the regulatory status of the site. This SMP also provides the framework for extra-regulatory discussions between the site owners and the NYSDEC regarding the inspection, maintenance, and reporting requirements for the controls.

The revised SMP presented below follows the template and guidelines provided by the NYSDEC and is largely unaltered as compared to the pre-approval copy submitted in February 2016. Only sections relevant to the final remedy (as detailed in the RAR) or the current regulatory status have been updated in both the SMP itself and the accompanying documents (e.g., the generic Health and Safety Plan). Language specifying notification, inspection, and reporting frequencies have been left intact to facilitate understanding of the obligations that would otherwise be in place had the BCP been completed, and aid in developing a revised copy of the SMP once the regulatory status of the site has been resolved.

1.1 General

This SMP is a required element of the remedial program for the 5140 Site in Yorkville, New York (hereinafter referred to as the “Site”; Figure 1). A drawing showing the site location and boundaries is provided in Figure 2. The boundaries of the site are more fully described in the metes and bounds site description that is part of the Environmental Easement provided in Appendix A.

[1] The *Environmental Easement* for the site was recorded with Oneida County on October 14, 2015, and fully executed on November 6, 2015. A copy of the *Environmental Easement* is provided in Appendix A of the *Remedial Action Report* for reference.

After completion of the remedial work, some contamination was left at this site, which is hereafter referred to as "*Remaining Contamination*." Institutional and Engineering Controls (ICs and ECs) have been incorporated into the site remedy to control exposure to *Remaining Contamination* to ensure protection of public health and the environment. An Environmental Easement granted to the NYSDEC and recorded with the Oneida County Clerk, requires compliance with this SMP and all ECs and ICs placed on the site.

This SMP was prepared to manage *Remaining Contamination* at the site until the Environmental Easement is extinguished in accordance with Environmental Conservation Law Article 71, Title 36. This plan has been approved by the NYSDEC, and compliance with this plan is required by the grantor of the Environmental Easement and the grantor's successors and assigns. This SMP may only be revised with the approval of the NYSDEC.

It is important to note that:

- This SMP details the site-specific implementation procedures that are required by the Environmental Easement. Failure to properly implement the SMP is a violation of the Environmental Easement, which is grounds for revocation of the Certificate of Completion;
- Failure to comply with this SMP is also a violation of Environmental Conservation Law, Title 6 New York Codes, Rules, and regulations (NYCRR) Part 375 and the Order on Consent for the site, and thereby subject to applicable penalties.

All reports associated with the site can be viewed by contacting the NYSDEC or its successor agency managing environmental issues in New York State. A list of contacts for persons involved with the site is provided in Appendix B of this SMP.

This SMP was prepared by WSP USA Corp., in accordance with the requirements of the NYSDEC's *DER-10 Technical Guidance for Site Investigation and Remediation*, dated May 2010, and the guidelines provided by the NYSDEC. This SMP addresses the means for implementing the ICs and/or ECs that are required by the Environmental Easement for the site.

1.2 Revisions

Revisions to this plan will be proposed in writing to the NYSDEC's project manager. Revisions will be necessary upon, but not limited to, the following occurring: a change in media monitoring requirements, upgrades to or shut-down of a remedial system, post-remedial removal of contaminated sediment or soil, or other significant change to the site conditions. In accordance with the Environmental Easement for the site, the NYSDEC will provide a notice of any approved changes to the SMP, and append these notices to the SMP that is retained in its files.

1.3 Notifications

Notifications will be submitted by the property owner to the NYSDEC, as needed, in accordance with NYSDEC's DER-10 for the following reasons:

- 60-day advance notice of any proposed changes in site use that are required under the terms of the BCA, 6 NYCRR Part 375 and/or Environmental Conservation Law.
- 7-day advance notice of any field activity associated with the remedial program.
- 15-day advance notice of any proposed ground-intrusive activity pursuant to the Excavation Work Plan.

- Notice within 48-hours of any damage or defect to the foundation, structures or EC that reduces or has the potential to reduce the effectiveness of an EC, and likewise, any action to be taken to mitigate the damage or defect.
- Verbal notice by noon of the following day of any emergency, such as a fire; flood; or earthquake that reduces or has the potential to reduce the effectiveness of ECs in place at the site, with written confirmation within 7 days that includes a summary of actions taken, or to be taken, and the potential impact to the environment and the public.
- Follow-up status reports on actions taken to respond to any emergency event requiring ongoing responsive action submitted to the NYSDEC within 45 days describing and documenting actions taken to restore the effectiveness of the ECs.

Any change in the ownership of the site or the responsibility for implementing this SMP will include the following notifications:

- At least 60 days prior to the change, the NYSDEC will be notified in writing of the proposed change. This will include a certification that the prospective purchaser/Remedial Party has been provided with a copy of the Order on Consent and all approved work plans and reports, including this SMP.
- Within 15 days after the transfer of all or part of the site, the new owner's name, contact representative, and contact information will be confirmed in writing to the NYSDEC.

Table 1-1 on the following page includes contact information for the above notification. The information on this table will be updated as necessary to provide accurate contact information. A full listing of site-related contact information is provided in Appendix B.

Table 1.1: Notifications*

Name	Contact Information
Parag Amin, (Former) Project Manager	(518) 402-9662; parag.amin@dec.ny.gov
David Crosby	(518) 402-9642; david.crosby@dec.ny.gov

* Note: Notifications are subject to change and will be updated as necessary.

2 Summary of Previous Investigations and Remedial Actions

2.1 Site Location and Description

The Site is located at 5140 Commercial Drive in the City of Yorkville, Oneida County, New York, in a commercial and industrial area along the Utica –Yorkville city limits in the eastern portion of Oneida County (Figure 1). The site is an approximately 1.9-acre area and is bounded to the west by Meelan's Carpet One Floor & Home, a residential flooring center (Figure 2). To the east, the site is bordered by two narrow (approximately 50 feet wide) strips of vacant land owned by DI Highway Sign & Structure, Inc., (directly adjacent) and the 5150 Corporation (further east), and beyond those properties, by Yorkville Battery, a discount battery retailer. The site is abutted to the south and southwest by O.W. Hubbell & Sons, Inc., a metal galvanizer, and by DI Highway Sign & Structure. Portions of the Hubbell property also extend to the northwest fronting on commercial drive directly west of Meelan's Carpet. The site is bounded to the north by Commercial Drive and Route 5A and further to the north by Harbor Freight & Tools, a discount tool retailer.

The boundaries of the site, including the metes and bounds, are more fully described in Appendix C. The owner of the site parcel at the time of issuance of this SMP is TSB Group, LLC, of New Hartford, New York.

2.2 Physical Setting

2.2.1 Land Use

The Site consists of an 18,000-square-foot concrete block and sheet metal main warehouse-style building with an attached 5,000-square-foot single story concrete block office building (northeast corner) surrounded by landscaped and hardscape areas (Figure 3). Prior to 2013, the Site also included a 50-foot-wide by 60-foot-long elevated concrete pad that was located at the southeast corner of the main building (the concrete pad was removed as part of the Interim Remedial Measure detailed below). A paved entranceway and parking area are present along the east side of the property with the paved drive extending around to the southern portion of the building to what was formerly the loading dock and rail bay for the facility. The balance of the site is covered by grass and landscaped areas.

The site was originally constructed in 1957 for Westinghouse Electric Corporation for use as an electrical equipment repair facility. Westinghouse operated at the facility for 29 years, after which it was sold in 1986 to Eastern Electric Apparatus Repair Company. Eastern Apparatus repaired electric motors at the facility for 12 years selling the site to the Grand Eagle Motor Repair Company in 1998, who then sold the property 4 years later to 5140 Commercial Drive, LLC. K.J. Electric operated at the property from 2002 through 2009 for electric motor repairs.

Both the production and office space were vacant between 2009 and July 2015 when the facility was sold to TSB Group and subsequently occupied by JM Door Co., Inc., of Utica, New York, an overhead door service center. JM Door uses the former office portion of the building as a residential and commercial showroom for overhead doors and hardware with the former production space used as a warehouse for their products. All shipping and receiving from the facility will be conducted via a paved drive and overhead door along the east side of the building directly south of the office space (i.e., on the east side of the building north of the former concrete pad; Figure 3).

The properties adjoining the Site include commercial and industrial facilities along Commercial Drive East and the adjacent Route 5 (Figure 2). The closest residential area is approximately 350 feet southwest of the Site along Greenman Avenue.

2.2.2 Geology

Soil borings and monitoring wells installed at the Site revealed sand and gravel mixtures at the surface, a silt unit that extends as deep as 8 feet below ground surface (bgs), and an interval of gravelly silt or sand extending to a depth of between 15 and 18 feet bgs. The silt is typically light brown to brown, moderately dense, and appears to be locally reworked at the surface, particularly in those borings installed beneath the building (the floor of the facility is elevated above the surrounding grade and contains several feet of similar material as fill). The unit grades with depth to sandy silt, typically between 4 to 6 feet bgs. The underlying sandy gravel interval typically consists of brown fine to medium-grained sand and sub-rounded gravel with varying amounts of silt. The unit is medium-dense to dense.

The soils are generally consistent with the descriptions of the surficial soils for the Utica region.

2.2.3 Hydrogeology

Groundwater was encountered within the lower gravelly silt interval at depths ranging between 11 and 14 feet bgs. Groundwater elevations collected in October 2014 as part of the Remedial Investigation (RI) ranged from 413.51 feet above mean seal level (amsl) in the southeast corner of the site to 413.01 feet amsl along the eastern portion of the property. The groundwater flow direction and gradient, based on these data, is to the northwest (consistent with the regional flow) with a relatively flat gradient of approximately 0.004 feet/feet. Figure 4 includes the elevations measured during the RI and the interpreted groundwater elevation contours.

2.3 Investigation and Remedial History

Polychlorinated biphenyls were first identified as a potential concern at the site during a 1995 Phase I environmental assessment performed by Gaia Tech, Inc. The compounds were present in soil samples collected south of the main building at concentrations ranging from 9 to 148 milligrams per kilogram (mg/kg), and in several wipe samples collected from the facility floor and other surfaces in the main building at concentrations between 19 and 162 micrograms per 100 square centimeter (µg/100 cm^2). A second Phase I assessment, performed in 2010 by Sanborn, Head, & Associates (SHA), and a 1996 follow-up Phase II investigation performed by Geoscience Technical Services, refined the extent of PCBs in soil. The highest concentrations, up to 2,930 mg/kg, were detected in soil samples collected directly north and south of a concrete pad attached to the southeast corner of the main building where evidence of a surface release (i.e., staining) was noted. Significantly lower concentrations of PCBs were detected in soil samples south (up to 13 mg/kg) and east (trace concentrations) of the main building. Geoscience also performed a preliminary groundwater investigation, the results of which revealed 141 micrograms per liter (µg/l) of PCBs dissolved in the groundwater. Subsequent sampling has shown this was likely a false positive resulting from improper sampling techniques.

Expanded Phase II investigations were performed by The Palmerton Group in March and September 2011, the results of which led to two phases of remedial action. The first, conducted in September 2011, was performed to address PCBs detected in wipe samples collected by Palmerton from interior surfaces within the former production areas of the facility. Polychlorinated biphenyls were detected at concentrations ranging between 12 and 83 micrograms per 100 square centimeters (µg/100 cm^2), which were above the U.S. Environmental Protection

Agency's (EPA's) 10 µg/100 cm^2 evaluation criterion. The action included cleaning of the surfaces using the PCB clean-up solvent CAPSUR® followed, for the concrete floor, by two coats (a red base layer with a grey topcoat) of Sikgard-62® solvent-free, solvent-resistant epoxy. A total of 17,628 square feet of the main building was cleaned and encapsulated.

The Palmerton Group also performed a remedial soil excavation north and south of the concrete pad in 2011 to address the affected soils detected during the earlier investigation. During the excavation, a relatively narrow (up to 3-feet-wide) area of visibly-stained soil was discovered extending below the vertical limit of the delineation (about 4 feet bgs) directly adjacent to the north and south sidewalls of the pad. Additional PCB-affected soil was removed from both the northern and southern excavations, which eventually exposed the footers of the concrete pad at approximately 5.5 feet bgs. Confirmation soil samples collected from the floor of the excavations, and test pits subsequently excavated adjacent to the north and south sides of the pad, indicated that soils containing concentrations as high as 5,800 mg/kg were still present at depths of 6 to 8 feet bgs. The PCB-affected soils were left in place due to concerns about the structural integrity of the pad and the adjacent building foundations. These affected soils were the subject of the 2014 IRM activities (described below).

2.3.1 Follow-up Investigation

WSP conducted a series of investigations at the site in the summer and fall of 2012 designed to complete the PCB delineation around the concrete pad (the post-remediation PCB-affected soil was undefined), characterize a soil berm along the southern property line (identified as a potential concern by the owner), and assess the potential impacts to groundwater. The concrete pad investigation showed that the residual PCBs detected in soil at the base of the former remedial excavations near the pad were confined to a discrete interval within the soil profile (above the water table) and did not extend horizontally beyond the bounds of the excavation. The results of the soil berm evaluation indicated only trace levels to moderate levels of PCBs below the 25 mg/kg industrial use soil cleanup objective (SCO) used for the pad excavation work. These results, along with the existing data, were used to develop the IRM, which was designed to remove (for offsite disposal) PCB-affected soil near the concrete pad and from the southern property line[2].

The groundwater investigation included the installation and sampling of four new groundwater monitoring wells in select locations around the site. The integrity of the previously-installed wells was compromised and, thus, they could not be used for the evaluation. Samples for the analysis of PCBs were collected from each of the new wells using low flow sampling techniques. The results of the investigation did not reveal evidence of light non-aqueous phase liquid (LNAPL) in any of the wells, including MW-8. The analytical results indicated no dissolved concentrations of PCBs were present in any of the well samples collected from the site.

2.3.2 Brownfield Cleanup Program Activities

Based on the follow-up investigations, WSP proposed a remedial excavation of the residual PCB-affected soil adjacent to the concrete pad and removal of the soil berm along the southern property line. These activities, which were proposed as the final remedy for the site, were outlined under the direct-to-remediation approach in the March 2013 BCP application for the site. The NYSDEC and the New York State Department of Health (NYSDOH), during their review of the application, agreed with the proposed remedial approach, but only as an IRM and not as the final remedy. The IRM would be prioritized given the concentrations detected and the potential risk to human health and the environment. WSP completed the IRM (described below) in March 2014.

[2] While the 2012 follow-up investigation data indicated that the PCB concentrations in the berm were comparatively low (the PCB concentrations were three orders of magnitude below those near the pad), the soil nevertheless presented a potential human health risk due to the direct contact or inhalation exposure pathways, and a PCB migration concern, particularly as runoff. The soil piles were also identified as a nuisance (they encroach onto the paved surfaces south of the main building) and an obstacle to the redevelopment of the property.

The Departments also requested that additional investigation activities be performed to complete the characterization in portions of the site outside of the concrete pad and soil berm areas once the IRM was complete. These activities included:

- Additional soil sampling around the exterior of the main building, including the analysis of other parameters in addition to PCBs
- An evaluation of the soil quality beneath the building
- Additional groundwater investigation
- A determination as to whether soil vapor intrusion is a concern at the site
- An evaluation of floor drains, sumps, utilities, and other subsurface structures within the building to determine the flow paths and drainage points (including sediment sampling, if necessary)
- An evaluation of the storm water drainage at the facility (including sediment sampling, if necessary)
- A visual inspection of the interior surfaces (floors, walls, railings, etc.) to identify stained areas where PCBs may potentially be present

These requested activities later became the basis for the RI, which was completed in early 2015 (i.e., after the IRM). A description of the RI scope of work and the findings are summarized below.

2.3.2.1 Interim Remedial Measure

WSP implemented the IRM in February and March 2014. The remediation goals (RGs) for the action were established based on the project future uses of the site (i.e., industrial), which is consistent with the local zoning and Title 6 of New York Codes, Rules, and Regulations (6 NYCRR) Part 375 industrial use classification (no recreational component on the site). The industrial use SCOs for total PCBs is 25 mg/kg; however, as a conservative measure, 5140 elected to adopt a more stringent site-specific SCO of 10 mg/kg for all of the remedial activities at the site. These same criteria were used for the RI (detailed below) and the supplemental remedial work conducted at the site.

The primary IRM design included 50-foot-long by 18-foot-wide (at grade) shored (using a slide-rail shoring system) remedial excavations both north and south of the pad and the demolition and removal of the concrete pad itself, which was necessary to access the affected soil identified below its footers. Affected soil detected beneath the concrete pad was also removed for offsite disposal on an *ad hoc* basis. The balance of the IRM work targeted the aboveground soil berm along the southern property line and the underlying native soil (based on confirmation soil samples collected from within the berm footprint once it was removed). A total of 829 tons of non-hazardous waste soil and concrete with PCB concentrations up to 50 mg/kg was excavated and disposed of offsite at a NYSDEC-permitted facility with an additional 944 tons of Toxic Substances Control Act (TSCA) waste with PCB concentrations above 50 mg/kg excavated for disposal at a commercially-permitted TSCA waste disposal facility. A comprehensive presentation of the excavation methods and the confirmation soil sampling results are presented in the 2014 *Construction Completion Report – Interim Remedial Measure*.

The IRM achieved the overall objectives by removing the contaminated soil in and around the pad and remediating the areas to levels below the industrial-use SCO significantly reducing the PCB mass at the site. Similar results were obtained for the sub-berm soils along the southern property line, most of which appeared to be the result of minor surface spills due to poor housekeeping. The only exception was a confirmation soil sample collected during the installation of the shoring system in the northern pad area. That sample (EXC60N-8E), which was collected from the western sidewall of shoring excavation at a depth of 14 feet bgs, contained total PCBs (6,500 mg/kg) well above the site-specific SCO (Figure 5). WSP removed as much of the visibly stained soil near the sample location as possible; however, because of flooding in the shoring excavation and the construction of the box itself (the metal panels of the shoring system could not be lifted, once installed, to reveal the sidewalls), no additional confirmation samples could be collected. This area of *Remaining Contamination* is described in Section 2.5 below.

2.3.2.2 Remedial Investigation

WSP, in response to the Department's request for additional investigation, developed a scope of work for the RI that included the following activities:

- a groundwater investigation
- a vapor intrusion investigation
- a contaminants migration pathway analysis
- a soil investigation in and around the main building

The work was performed in the fall of 2014 with follow-up activities (groundwater sampling and soil sampling associated with the contaminants migration pathway analysis) performed in early 2015.

The results of the groundwater investigation, which included the installation and low flow sampling of three new groundwater monitoring wells (along with the existing wells), did not reveal any dissolved PCBs at concentrations above the ambient water quality standards. This includes samples from wells located directly downgradient of IRM excavation area. These data were considered significant because they demonstrated that the PCBs released to the soil near the concrete pad area, some of which had concentrations greater than 5,000 mg/kg, did not result in an impact to groundwater.

The vapor intrusion investigation included collecting four co-located sub-slab soil gas and indoor air samples and one ambient (outdoor) air sample[3]. The results revealed trace concentrations from a number of compounds, including the four chemical compounds with criteria established by the NYSDOH (tetrachloroethene, trichloroethene (TCE), 1,1,1 trichloroethane, and carbon tetrachloride). Only one of the four, TCE, was detected at concentrations that, when compared to NYSDOH's vapor intrusion decision matrix, yield a recommended action of "Monitor;" however, WSP concluded (and the Departments ultimately agreed) that, based on the lack of correlated soil detections and the conservative nature of the evaluation criteria (established for private residences) that the detections were not a concern.

A total of thirty soil borings, including two borings added as part of the contaminant migration pathway analysis, were drilled at select locations around the perimeter of and within the main building as part of the soil investigation. All of the exterior soil samples, collected 0 to 2 inches bgs and 0 to 12 inches bgs as per the NYSDEC's request. All of interior soil borings were sampled directly below the concrete floor and in the 2-foot-thick interval above the water table with additional samples collected at several locations within the facility. Soil samples were analyzed for PCBs with select samples analyzed for the additional compounds (VOCs, SVOCs, pesticides, and metals) requested by the Departments.

The soil sampling results did not reveal any appreciable concentrations of metals or organic compounds, except for PCBs. The PCB Aroclor 1260 (12.7 to 24.1 mg/kg), was detected at concentrations above the site-specific SCO of 10 mg/kg. The detections occurred in the shallow (0 to 0.17 foot bgs) soil collected from just two borings, both of which are located in the southwest corner of the site. Soil samples collected from the deeper interval (i.e., from 0 to 1 foot) in both borings did not contain PCBs at concentrations above the site-specific SCO, indicating a limited vertical extent. WSP concluded, based on these findings and the historical soil data for locations south of the main building, that the affected soil is likely the result of poor housekeeping (small spills and drips) possibly associated with equipment and materials (including dielectric fluids) transported on the former rail spur. These areas of affected soil form the basis (along with two other similar detections from other investigations) for the final remedial action detailed in Section 2.3.3.

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[3] All of the samples were collected in accordance with the NYSDOH's Guidance for Evaluating Soil Vapor Intrusion in the State of New York, dated October 2006.

Trace levels of PCBs below the site-specific criteria, but above 1 mg/kg were detected in several other locations of the site, including beneath the building, from the area beneath the floor drain discharge line (identified during the contaminants migration pathway analysis), and, most notably, in samples collected from borings south of the main building. These detections (along with the PCB-affected soil detected in one of the historical borings), while technically below the level that would warrant remedial action (i.e., below the site-specific SCO), are, nevertheless, important in terms of the overall remedy (specifically, in respect to the clean cover requirements under a restricted use alternative, as detailed in Section 2.3.3 below). The balance of the RI soil samples contained only trace or non-detectable concentrations below 1 mg/kg.

2.3.3 Final Remediation

The final remedy for the Site, designated as *Hot Spot Excavation with Institutional/Engineering Controls*[4,5], was implemented in July and August 2016 and included both active remediation (excavation for offsite disposal) and onsite controls to minimize the potential impact to the environment and human health. The remedial excavation portion of the design centered on three borings where PCBs were detected in surficial soil samples at concentrations above the remediation goal established during the IRM (i.e., the site-specific SCO of 10 mg/kg). Two of the borings were sampled during the RI with the third boring sampled during the 2010 Geoscience investigation. The design was later modified during the implementation of the remedy to accommodate a fourth area of affected soil, which was discovered during waste pre-characterization sampling. All four locations are directly south of the main building.

The hot spot excavation design used a grid-based excavation approach with 10-foot-square cells centered on borings containing PCBs above the site-specific SCO (i.e., the RG, as defined during the IRM). Each cell was excavated to an initial depth of 2 to 3 feet bgs. Additional soil was to be excavated if staining or confirmation soil sample results indicated that accessible PCB-affected soils extend beyond the proposed limits; however, no additional staining or other evidence was noted during the hot spot excavations and none of the confirmation soil samples contained PCBs above the site-specific SCO of 10 mg/kg. All four hot spots were excavated to the design limits.

The institutional and engineering controls included the implementation of barrier systems for the soil beneath the facility floor and areas south and east of the main building. The engineering control for soil beneath the building, the floor[6] itself, was already in place and required no further action, other than ongoing maintenance to ensure its integrity (as detailed in this SMP; See below). For the exterior portions of the site, the engineering control design was based on a 1 foot clean soil cover system, emplaced after removing the upper 1 foot of impacted soil, that extends beyond the hot spots to include most of the area south of the building (Figure 5). This approach was adopted to address PCBs below the site-specific criteria of 10 mg/kg, but above the maximum PCB concentration of 1 mg/kg, in recognition that most of the soil south of the main building likely contains low levels of PCBs.

The hot spot excavations removed a total of 53 tons of nonhazardous PCB waste concentrations between 2.42 and 24.1 mg/kg and another 15.5 tons of hazardous soil containing PCBs above the 50 mg/kg TSCA threshold for offsite disposal at NYSDEC-permitted and commercially-permitted TSCA waste disposal facilities, respectively. An additional 585 tons of asphalt and soil containing low levels (less than 10 mg/kg) of PCBs were excavated and replaced with a clean soil cover extending over nearly 12,000 square feet of the southern and eastern portions of the site. When combined with the IRM totals, approximately 1,467 tons of nonhazardous, 959.5 tons of TSCA-regulated waste, and more than 5 tons of other wastes and debris were removed for offsite disposal.

[4] As detailed in the *Alternative Analysis Report and Remedial Action Work Plan*, dated October 2, 2015.

[5] The final remedy also included sealing an interior floor drain that discharges to the ground surface (identified during the RI). The drain not only represented a potential conduit to the environment for fluid wastes that could be released by future users of the facility, but could have required a State Pollution Discharge Elimination Permit. Moreover, drains that daylight and discharge to the ground surface are no longer consistent with the best practices for an industrial facility.

[6] A floor also employs an encapsulation barrier, applied during a pre-BCP remedial action in 2011, which is designed to protect workers from residual PCBs within the concrete matrix. See Section 3.3.3 below.

These combined actions restored the property to commercial/industrial standards, consistent with the intended post-remediation use identified in the 2013 BCP application, and achieved the remedial objectives of protecting human health and the environment established for the site (See Section 2.4 below). All of the soil detected with concentrations of PCBs above the site-specific SCO, with the exception of one small, subsurface area (detailed in Section 2.5 below), have been removed from the site. This includes the contaminated soils associated with the concrete pad (and the pad itself) that contained PCBs at concentrations up to two orders of magnitude above the evaluation criteria.

The remedial actions (and previous remedial work conducted in 2011) also addressed potential exposure routes identified within and beneath the main building, and in the surficial soil at the site by establishing appropriate engineering controls. This includes the encapsulation barrier on the facility floor (implemented prior to enrollment in the BCP program); the facility floor itself, which is an engineered barrier separating workers within the facility from low levels of PCB-affected detected beneath the structure; and the cover areas, which, together with unaffected areas, ensure that PCBs above 1 mg/kg are not present in the upper 1 foot of the soil profile anywhere on the site. These measures isolate the known or potentially-impacted areas from human exposure at the site under typical (non-intrusive) conditions and have mitigated the potential for overland flow of PCB-containing soil or sediment. None of the open human or environmental exposure routes identified during the AAR/RAWP remain at the site.

2.4 Remedial Action Objectives

The Remediation Action Objectives (RAOs) for the Site as presented in the *AAR/RAWP*, dated October 2, 2015, are as follows:

Soil

RAOs for Public Health Protection

- Reduce, control, or eliminate unacceptable exposures via ingestion and direct contact with soil containing PCBs.
- Reduce, control, or eliminate unacceptable inhalation exposures of PCB-affected soil.

RAOs for Environment

- Prevent future overland migration of soil containing PCBs onsite and offsite.

No other open exposure routes were identified during the RI exposure assessment and, thus, no RAOs were developed for groundwater, surface water, sediment, or soil vapor.

2.5 Remaining Contamination

The remedial activities performed at the site removed the majority of the soil identified as containing PCBs at concentrations above the site-specific SCO of 10 mg/kg. Only one area known to contain soil with concentrations of PCBs above the site-specific SCO was not removed due to structural concerns for the nearby building. This area of *Remaining Contamination* is described below. No other areas of affected soil containing concentrations of PCBs above the site-specific SCO were identified.

The only other PCBs at concentrations potentially above the relevant evaluation criteria were detected on the surface of the concrete floor within the production space of the main building. The stained areas on the surface of the concrete were remediated to the extent possible with any remaining compounds present in the concrete matrix encapsulated using a two layer epoxy coating. The details regarding the installation and the extent of the encapsulation barrier are presented below. Maintenance of the encapsulated barrier is discussed in the Engineering Controls section below.

2.5.1 Soil

WSP conducted a remedial excavation at the site in 2014 as an IRM to address PCB-affected soil detected adjacent and beneath an exterior concrete pad formerly located near the southeast corner of the main building. Confirmation soil sampling performed during the excavation indicated that all of the PCB-affected soil with concentrations above the site-specific SCO of 10 mg/kg was removed for offsite disposal, except for one location. Confirmation sample EXC 60N-8E, which was collected from the western sidewall of shoring excavation at a depth of 14 feet bgs, contained total PCBs at a concentration of 6,500 mg/kg. Additional visibly stained soil near the sample location was removed after the sample was collected; however, because of flooding in the shoring excavation and the construction of the box itself (the metal panels of the shoring system could not be lifted, once installed, to reveal the sidewalls), no additional confirmation samples could be collected.

The *Remaining Contamination*, based on the visual observations made during the remedial excavation, is present in a 3-foot-wide horizontal (north to south) interval approximately 8 feet east of the building foundation below what was formerly the footer of the concrete pad. Visibly stained soil associated with this interval was observed from approximate 11 feet bgs to a depth of approximately 12 feet bgs at the top of the underlying water table. Affected soil is conservatively assumed, for the purposes of this SMP, to exist within a 10 foot wide (north-south) horizontal interval centered on EXC 60N-8E between 11 and 12 feet bgs and extending from a point approximately 5 feet east of EXC 60N-8E excavation 13 feet to the building foundation, yielding an approximate volume (10 feet wide by 1 foot thick by 13 feet long) of 130 cubic feet. No demarcation layers or other subsurface identifiers were installed due to the placement of the shoring box. Figure 5 depicts the extent of the *Remaining Contamination* in soil at the site.

2.5.2 Concrete

Concentrations of PCBs were detected in wipe samples collected from the floor and other surfaces within the main building during a pre-BCP investigation conducted in 2011. The wipe samples revealed concentrations of PCBs ranging between 12 and 83 µg/100 cm^2, which were above the EPA's 10 µg/100 cm^2 evaluation criterion. All visibly stained areas of the floor were scraped clean of debris and double-washed using the PCB clean-up solvent CAPSUR®. The contaminated building floor and the floor and walls of the cleaned pits[7] and sumps were then encapsulated with two coats of contrasting color (red, then grey) Sikgard-62® solvent-free, solvent-resistant epoxy. A total of 17,628 square feet, of the main building (i.e., all of the former production space) was cleaned and encapsulated.

2.5.3 Sediment

No sediment was identified at the site.

2.5.4 Groundwater

Polychlorinated biphenyls were not detected in groundwater samples collected during the RI at concentrations above the ambient water quality standards, and, thus, are not a concern at the site.

2.5.5 Surface Water

No surface water bodies were identified at the site.

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[7] The walls and floor of the former de-tanking pit (a confined space) were not cleaned using the PCB clean-up solvent CAPSUR® or coated with Sikgard-62®. Wipe samples collected from the walls and floor of the pit did not reveal any detectable concentrations of PCBs. See the Interior PCB Cleaning and Encapsulation Report, dated October 28, 2011, for additional information.

2.5.6 Soil Vapor

An evaluation of soil vapor (for volatiles) did not reveal any compounds of concern.

3 Institutional and Engineering Control Plan

3.1 General

Since *Remaining Contamination* exists at the site, Institutional Controls (ICs) and Engineering Controls (ECs) are required to protect human health and the environment. This IC/EC Plan describes the procedures for the implementation and management of all IC/ECs at the site. The IC/EC Plan is one component of the SMP and is subject to revision by the NYSDEC.

This plan provides:

- A description of all IC/ECs on the site;
- The basic implementation and intended role of each IC/EC;
- A description of the key components of the ICs set forth in the Environmental Easement;
- A description of the controls to be evaluated during each required inspection and periodic review;
- A description of plans and procedures to be followed for implementation of IC/ECs, such as the implementation of the Excavation Work Plan (EWP; as provided in Appendix D) for the proper handling of *Remaining Contamination* that may be disturbed during maintenance or redevelopment work on the site; and
- Any other provisions necessary to identify or establish methods for implementing the IC/ECs required by the site remedy, as determined by the NYSDEC.

3.2 Institutional Controls

A series of ICs has been developed for the site to: (1) implement, maintain, and monitor EC systems; (2) manage future disturbance of the *Remaining Contamination* and, if identified, *Discovered Contamination* (i.e., soil that may be discovered during the course of site activities that exhibits evidence of suspected contamination, or is confirmed by testing to exceed the relevant SCOs) at the site by providing instructions to follow in the event these areas are excavated; and (3) limit the use and development of the site to commercial uses only, as defined by 6 NYCRR Part 375-1.8(g)(2). Adherence to these ICs on the site is required by the Environmental Easement and will be implemented under this SMP. The IC boundaries are shown on Figure 5. These ICs are:

- Compliance with the Environmental Easement and this SMP by the Remedial Party and the Remedial Party's successors and assigns.
- All ECs must be operated and maintained as specified in this SMP.
- All ECs on the property must be inspected at a frequency and in a manner specified in the SMP.
- Data and information pertinent to site management of the property must be reported at the frequency and in a manner specified in this SMP.
- The property may only be used for commercial uses provided that the long-term ECs/ICs included in this SMP are employed.
- Only land uses specified in the environmental easement are permitted.

- All future activities on the property that will disturb soils or concrete with *Remaining Contamination*, soils that are suspected of having *Discovered Contamination,* or the soil cover or engineered barrier systems must be conducted in accordance with this SMP, including the EWP in Appendix D.
- The use of the groundwater underlying the property is prohibited without treatment rendering it safe for its intended use and pre-approval by NYSDEC.
- Vegetable gardens and farming are prohibited, unless otherwise approved by NYSDEC.
- The site owner will submit to NYSDEC a written statement that certifies, under penalty of perjury, that: (1) controls employed at the property are unchanged from the previous certification or that any changes to the controls were approved by the NYSDEC; 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. This certification shall be submitted annually using the attached inspection reporting form (Appendix E) and will be made by a qualified environmental professional, as defined in 6 NYCRR 375-1.2(ak). The NYSDEC retains the right to access the property in order to evaluate the continued maintenance of any and all controls.

Institutional Controls identified in the Environmental Easement may not be discontinued without an amendment to or extinguishment of the Environmental Easement.

3.3 Engineering Controls

The purpose of the engineering controls is to protect workers who may contact contaminated soil or other media and to ensure that affected media is properly characterized, managed, and, if warranted, disposed of in accordance with applicable regulations. The engineering controls for the 5140 Site include a soil cover and engineered barrier to limit exposure soils that may contain relatively low concentrations of PCBs in near surface soil, and an encapsulation barrier for the production floor of the facility to limit exposure to PCBs that may be in the matrix of the concrete. Details regarding each system is provided below. Engineering controls for groundwater, based on these findings, are not necessary. Likewise, vapor intrusion was not identified as a concern at the site and, thus, controls are not required.

Management of excavated or potentially impacted concrete debris soil is addressed in the Excavation Work Plan (EWP), which is presented in Appendix D. All work conducted pursuant to the EWP must also be conducted in accordance with the procedures set forth in a Health and Safety Plan (HASP) and Community Air Monitoring Plan (CAMP) prepared for the site. The HASP must be prepared in current compliance with DER-10, and 29 Code of Federal Regulations (CFR) 1910, 29 CFR 1926, and other applicable federal, state, and local regulations. At a minimum, these regulations require the following elements applicable to the 5140 SMP to be included in the HASPs prepared for the site:

1) Organizational Structure
2) Job Hazard Analysis
3) Site Control
4) Training Program
5) Medical Surveillance Requirements
6) Personal Protective Equipment
7) Exposure Monitoring
8) Thermal Stress
9) Spill Containment Program

10) Decontamination Program

11) Emergency Response Plan

12) Standard Operating Procedures

The HASP must also specify that the Site Health and Safety Officer is responsible for ensuring that the plan is adhered to by all field personnel under his or her direction. He/she will ensure there is a “competent person” overseeing the excavation, as defined by the Occupational Safety and Health Administration (OSHA) regulations (29 CFR 1926.32(f)). If there is any question whether OSHA applies or a CAMP is required, the NYSDEC should be contacted for guidance.

Based on future changes to state and federal health and safety requirements, and specific methods employed by future contractors, the HASP and CAMP will be submitted with the notification provided in Section D-1 of the EWP. Any intrusive construction work in areas of *Remaining Contamination*, Dis*covered Contamination*, or any work that breaches one of the barrier systems will be performed in compliance with the EWP, HASP, and CAMP, and will be included in the inspection and certification reports submitted under this SMP (Section 6). Areas outside designated *Remaining Contamination*, *Discovered Contamination*, or barriers do not need to comply with the EWP, HASP, and CAMP. In other words, only areas with known or suspected contamination need to comply with these various work plans.

The site owner and associated parties preparing the remedial documents submitted to the state, and parties performing this work, are responsible for the safe performance of all intrusive work, the structural integrity of excavations, proper disposal of any removed and contaminated media, control of storm water runoff from excavated areas, and for structures that may be affected by excavations (such as building foundations). The site owner will ensure that future site development activities will not interfere with, or otherwise impair or compromise, the engineering controls described in this SMP.

3.3.1 Soil Cover System

The remedial approach under the BCP Track 4 requires that the upper 1 foot of soil at the site meet the unrestricted SCO, which, in the case of the 5140 site, is 1 mg/kg of total PCBs. Soil in several areas of the site were identified as potentially containing PCBs below the site-specific SCO of 10 mg/kg but above the unrestricted SCO of 1 mg/kg. While not defined as *Remaining Contamination* (i.e., those soils containing PCBs at concentrations above the site-specific SCO of 10 mg/kg), ECs are nonetheless required as part of the remedy to minimize the potential exposure of workers to PCBs above the unrestricted levels.

The cover system at the 5140 Site is comprised of a minimum of 12 inches of clean soil for areas south and east of the main building, and an engineered barrier formed by the concrete slab (floor) for areas of affected soil located beneath the main building. The emplaced soil cover south of the main building extends from the western property line eastward and covers the majority of areas that were formerly used for shipping and receiving materials used at the facility. The cover has an area of 11,810 square feet, as depicted on Figure 5. A second smaller (100 square feet) area of soil cover was emplaced east of the main building where a former floor drain discharged to the ground surface. It is important to note that soils with residual concentrations of PCBs between the site-specific SCO and the unrestricted SCO are also present in the area where the former concrete pad was located; however, the affected soil in this portion of the site is deeper than the minimum requirements for an engineered surface cap or cover (12 inches), as defined in DER-10 and, thus, no specific maintenance or monitoring requirements are warranted.

3.3.2 Engineered Barrier System

The engineered barrier at the site is formed by the concrete floor of the facility, which physically separates workers within the facility from localized areas of affected soil beneath the slab containing PCBs above the unrestricted SCO of 1 mg/kg but below the site-specific SCO of 10 mg/kg. The extent of these areas is limited, based on the RI data; however, the historical information regarding the operation of the facility indicates that transformers with PCB-containing dielectric fluid and their components were repaired in various locations within the production space (PCBs were detected on the concrete surface throughout the facility; see below). Thus, the entire production floor (i.e., those spaces outside of the office area of the main building) is included as part of the physical barrier. The extent of the engineered barrier coincides with the encapsulation barrier for the surface of the concrete, which is discussed below. Figure 5 depicts the extent of the engineered barrier designation.

3.3.3 Encapsulation System

Concentrations of PCBs were also detected in wipe samples collected from the facility floor during a pre-BCP investigation in March 2011. The PCBs on the surface of the concrete were remediated to the extent possible with any remaining PCBs within the concrete matrix encapsulated using a two-layer (red underlayer, gray topcoat) epoxy coating (Sikagaurd-62®). The two-level epoxy system forms physical barrier between workers in the facility and any residual PCBs that may be contained in the concrete floor of the main building. A total of 17,628 square feet of the facility (i.e., all of the production space) was coated with the epoxy encapsulation material. Figure 5 shows the extent of the encapsulated floor.

3.3.4 Criteria for Completion of Remediation/Termination of Remedial Systems

The soil cover, concrete floor, and its epoxy coating are integral components of a barrier system designed to protect against exposure to PCBs, as detailed above. All three systems are considered permanent controls and the quality and integrity of this system will be inspected at defined, regular intervals in accordance with this SMP in perpetuity.

4 Monitoring and Sampling Plan

The remedy implemented for the 5140 Site does not include any active remediation measures or engineering controls that require sampling or performance monitoring. The groundwater was found to be free of impacts from the release of PCBs and vapor intrusion was not identified as a concern at the site. The only remaining impacted media at the site include affected soil, both outside and beneath the footprint of the main building, and the concrete forming the facility floor. Although passive, these systems (and the corresponding ICs) are subject to periodic inspections and reporting requirements to ensure their integrity and verify compliance with the requirements of this SMP and the Environmental Easement. The inspection and notification requirements are detailed below.

4.1 Inspections and Notifications

The soil cover and concrete floor barriers, including the epoxy encapsulation coating, are the only components of the Engineering and Institutional Control Plan requiring inspection. The soil cover and barrier inspections are planned to coincide with the required site-wide annual inspections detailed below. The inspections will determine and document that:

- visible breaches in the concrete floor or the soil cover areas are identified and repaired
- excessive wear (as indicated by the red demarcation coating) or breaches in the concrete epoxy encapsulation system are identified and sealed
- the site conditions comply with requirements of this SMP and the Environmental Easement
- any changes or modifications needed or completed for the barrier system(s) are identified

Inspections associated with the soil cover, concrete barrier, or encapsulation systems will be conducted in accordance with the Operations and Maintenance Plan (Section 5.0). The annual reporting and other reporting requirements are outlined in Section 3.1 above, and in Section 7 below.

4.1.1 Site-wide Inspection

Site-wide inspections will be performed at a minimum of once a year. Modification to the frequency or duration of the inspections will require approval from the NYSDEC. Site-wide inspections will also be performed after all severe weather conditions that may affect ECs. During these inspections, an inspection form will be completed as provided in Appendix E – Site Management Plan Annual Reporting Form. The form will compile sufficient information to assess the following:

- compliance with all ICs, including site usage;
- an evaluation of the condition and continued effectiveness of ECs;
- the general site conditions at the time of the inspection, including the areas where contamination remains;
- the site management activities being conducted including, where appropriate, confirmation sampling and a health and safety inspection;
- confirm that site records are up to date; and
- compliance with permits and schedules included in the Operation and Maintenance Plan.

Inspections of all remedial components installed at the site will be conducted. A comprehensive site-wide inspection will be conducted and documented according to the SMP schedule, regardless of the frequency of the Periodic Review Report. The inspections will determine and document the following:

- whether ECs continue to perform as designed;
- if these controls continue to be protective of human health and the environment;
- compliance with requirements of this SMP and the Environmental Easement;
- achievement of remedial performance criteria (if appropriate); and
- if site records are complete and up to date.

Reporting requirements are outlined in Section 7.0 of this plan.

Inspections will also be performed in the event of an emergency. If an emergency, such as a natural disaster or an unforeseen failure of any of the ECs occurs that reduces or has the potential to reduce the effectiveness of ECs in place at the site, verbal notice to the NYSDEC must be given by noon of the following day. In addition, an inspection of the site will be conducted within 5 days of the event to verify the effectiveness of the IC/ECs implemented at the site by a qualified environmental professional, as determined by the NYSDEC. Written confirmation must be provided to the NYSDEC within 7 days of the event that includes a summary of actions taken, or to be taken, and the potential impact to the environment and the public.

5 Operations and Maintenance Plan

The site remedy does not rely on any mechanical systems, such as groundwater treatment, sub-slab depressurization or air sparge/soil vapor extraction systems to protect public health and the environment. The remedy does rely, however, on soil cover, engineered barrier, and encapsulation systems that are designed to minimize the potential exposure of site workers to residual concentrations of PCBs at the site. The soil cover system outside of the building footprint, under normal conditions, should not require any operation or maintenance activities. The cover was graded and seeded to stabilize the material and, given the relatively flat nature of the site, is unlikely eroded or incised under typical weather conditions. Likewise, the concrete comprising the physical (engineered) barrier within the main building is relatively maintenance free; the structure is unlikely to wear under normal use.

The only component of the barrier systems that is likely to require operation and maintenance is the encapsulation barrier. The coatings were likely applied at a thickness of between 4 and 7 thousands of an inch-thick (mils; as per the manufacturers guidelines) and, while durable, are subject to wear from foot and vehicle traffic within the building. This Operation and Maintenance Plan provides a brief description of the measures necessary to monitor, and maintain this barrier.

The encapsulation barrier will be inspected annually and maintenance will be performed, as appropriate, to ensure that the system continues to operate as designed. During each visit, the following routine activities will be conducted:

- A visual inspection of the exposed portions of the encapsulation barrier to identify any areas flaking, chipping, cracks, shrinkage (from walls) or any other signs of excessive wear (as indicated by bare concrete or exposure of the underlying red demarcation layer)
- Any routine maintenance needs that are identified will be performed, and any issues that are identified in these inspections will be promptly corrected.

Non-routine maintenance activities may be required based on a report from a property owner or occupant. Such an event may include the following:

- The barrier is damaged during routine operations in the facility
- The building undergoes renovations that may require cutting or otherwise modifying the facility floor.

System components requiring repair work will be identified during the inspection and addressed as soon as possible based on contractor availability. Any significant maintenance or repair activities requiring modifications to the electrical wiring will be conducted by a licensed electrician. All inspections and maintenance performed on the system will be recorded on the inspection form presented in Appendix E.

6 Periodic Assessments/Evaluations

6.1 Climate Change Vulnerability Assessment

Increases in both the severity and frequency of storms/weather events, an increase in sea level elevations along with accompanying flooding impacts, shifting precipitation patterns and wide temperature fluctuation, resulting from global climactic change and instability, have the potential to significantly impact the performance, effectiveness, and protectiveness of a given site and associated remedial systems. Vulnerability assessments provide information so that the site and associated remedial systems are prepared for the impacts of the increasing frequency and intensity of severe storms/weather events and associated flooding.

The following criteria were considered in assessing the vulnerability of the Site remedial systems/controls to climate change:

- Proximity to flood plains
- Potential damage from poor drainage and storm water management
- Susceptibility to erosion
- Susceptibility to high winds
- Susceptibility to spills and releases.
- Susceptibility to power outages

The assessment did not identify any climate change-related susceptibilities. The property is not within or near an existing floodplain and future development will include a drainage and storm water management plan that will minimize potential damage arising from precipitation events. All of the passive barriers at the site operate without power or liquid fuels and, thus, the potential vulnerability (and possible exposure) due to prolonged damage to the grid or a spill is minimal.

6.2 Green Remediation Evaluation

NYSDEC's DER-31 Green Remediation requires that green remediation concepts and techniques be considered during all stages of the remedial program including site management, with the goal of improving the sustainability of the cleanup and summarizing the net environmental benefit of any implemented green technology. This section of the SMP provides a summary of any green remediation evaluations to be completed for the site during site management, and as reported in the Periodic Review Report (PRR).

Soil cover and concrete barrier systems are the only engineering controls to be implemented at the 5140 Site as part of this SMP. The systems are passive, relatively maintenance-free, require no electricity, and yield minimal discharges to the atmosphere other than negligible off gassing that may occur during re-application of the epoxy coatings (as needed). No opportunities for remedial system optimization were identified.

7 Reporting Requirements

Compliance with this SMP requires the submission of both interim site management reports and periodic review reports, both of which detail the inspection and monitoring activities described above. The interim report is submitted to the NYSDEC on an annual basis with the periodic review report, effectively a summary of the preceding interim site management reports, submitted every 5 years. The general requirements for each report are presented below. An annual site management form, which has been tailored to the specific inspection and monitoring requirements for this SMP, is presented in Appendix E.

7.1 Site Management Reports

All site management inspection, maintenance and monitoring activities or special events (e.g., an emergency) will be recorded on the appropriate site management forms provided in Appendix E. These forms are subject to NYSDEC revision.

All applicable inspection forms and other records, including media sampling data and system maintenance reports, generated for the site during the reporting period will be provided in electronic format to the NYSDEC in accordance with the requirements of Table 7-1 and summarized in the Periodic Review Report.

Table 7-1: Schedule of Interim Monitoring/Inspection Reports

Task/Report	Reporting Frequency*
Inspection Report	Annually
Periodic Review Report	Five-year intervals, or as otherwise determined by the Department

* The frequency of events will be conducted as specified until otherwise approved by the NYSDEC.

The interim monitoring or inspection report forms must include, at a minimum:

- Date of event or reporting period;
- Name, company, and position of person(s) conducting monitoring/inspection activities;
- Description of the activities performed;
- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents noted (included either on the checklist/form or on an attached sheet);
- Type of samples collected (e.g., sub-slab vapor, indoor air, outdoor air, etc.);
- Copies of all field forms completed (e.g., well sampling logs, chain-of-custody documentation, etc.);
- Sampling results in comparison to appropriate standards/criteria;
- A figure illustrating sample type and sampling locations;
- Copies of all laboratory data sheets and the required laboratory data deliverables required for all points sampled (to be submitted electronically in the NYSDEC-identified format);

- Any observations, conclusions, or recommendations; and
- A determination as to whether contaminant conditions have changed since the last reporting event.

Routine maintenance event reporting forms will include, at a minimum:

- Date of event;
- Name, company, and position of person(s) conducting maintenance activities;
- Description of maintenance activities performed;
- Any modifications to the system;
- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents noted (included either on the checklist/form or on an attached sheet); and,
- Other documentation such as copies of invoices for maintenance work, receipts for replacement equipment, etc., (attached to the checklist/form).

Non-routine maintenance event reporting forms will include, at a minimum:

- Date of event;
- Name, company, and position of person(s) conducting non-routine maintenance/repair activities;
- Description of non-routine activities performed;
- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents (included either on the form or on an attached sheet); and
- Other documentation such as copies of invoices for repair work, receipts for replacement equipment, etc. (attached to the checklist/form).

All applicable inspection forms and other records, including media sampling data and system maintenance reports, generated for the site during the reporting period will be provided in electronic format to the NYSDEC in accordance with the requirements of Table 7-1 and summarized in the Periodic Review Report. Currently, data are to be supplied electronically and submitted to the NYSDEC EQuIS™ database in accordance with the requirements found at this link http://www.dec.ny.gov/chemical/62440.html.

7.2 Periodic Review Report

A Periodic Review Report will be submitted to the Department every fifth year, beginning 16 months after the Environmental Easement has been recorded. The report will be prepared in accordance with NYSDEC DER-10 and submitted within 30 days of the end of each certification period (every fifth year). Media sampling results will also be incorporated into the Periodic Review Report, if applicable. The report will include:

- Identification, assessment, and certification of all ECs/ICs required by the remedy for the site.
- Results of the required annual site inspections and severe condition inspections, if applicable.
- All applicable site management forms and other records generated for the site during the reporting period in the NYSDEC-approved electronic format, if not previously submitted.

- A summary of any discharge monitoring data and/or information generated during the reporting period, with comments and conclusions.
- Data summary tables and graphical representations of chemicals of concern by media (groundwater, soil vapor, etc.), which include a listing of all compounds analyzed, along with the applicable standards, with all exceedances highlighted. These will include a presentation of past data as part of an evaluation of contaminant concentration trends.
- Results of all analyses, copies of all laboratory data sheets, and the required laboratory data deliverables for all samples collected during the reporting period will be submitted in digital format as determined by the NYSDEC. Currently, data is supplied electronically and submitted to the NYSDEC EQuISTM database in accordance with the requirements found at this link: http://www.dec.ny.gov/chemical/62440.html.
- A site evaluation, which includes the following:
  - The compliance of the remedy with the requirements of the site-specific RA/RD Work Plan, ROD or Decision Document;
  - The operation and the effectiveness of all treatment units, etc., including identification of any needed repairs or modifications;
  - Any new conclusions or observations regarding site contamination based on inspections or data generated by the Monitoring and Sampling Plan for the media being monitored;
  - Recommendations regarding any necessary changes to the remedy and/or Monitoring and Sampling Plan; and,
  - Trends in contaminant levels in the affected media will be evaluated to determine if the remedy continues to be effective in achieving remedial goals as specified by the Decision Document.
  - The overall performance and effectiveness of the remedy.

The Periodic Review Report will be submitted to the NYSDEC Central Office and Regional Office in which the site is located, and in electronic format to NYSDEC Central Office, Regional Office, and the NYSDOH Bureau of Environmental Exposure Investigation.

7.3 Certification of Institutional and Engineering Controls

Following the last inspection of the reporting period, a Professional Engineer licensed to practice in New York State will prepare, and include in the Periodic Review Report, the following certification as per the requirements of NYSDEC DER-10:

For each institutional or engineering control identified for the site, I certify that all of the following statements are true:

- The site inspections performed over the previous 5 years confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under my direction.
- The institutional control and/or engineering control employed at this site is unchanged from the date the control was put in place, or last approved by the Department.
- Nothing has occurred that would impair the ability of the control to protect the public health and environment.

- Nothing has occurred that would constitute a violation or failure to comply with any site management plan for this control.
- Access to the site will continue to be provided to the Department to evaluate the remedy, including access to evaluate the continued maintenance of this control.
- If a financial assurance mechanism is required under the oversight document for the site, the mechanism remains valid and sufficient for the intended purpose under the document.
- Use of the site is compliant with the environmental easement.
- The engineering control systems are performing as designed and are effective.
- To the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program (and generally accepted engineering practices).
- The information presented in this report is accurate and complete.
- I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class “A” misdemeanor, pursuant to Section 210.45 of the Penal Law. I, [name], of [business address], am certifying as [Owner or Owner’s Designated Site Representative] (and if the site consists of multiple properties): [I have been authorized and designated by all site owners to sign this certification] for the site.

7.4 Corrective Measures Plan

If any component of the remedy is found to have failed, or if the periodic certification cannot be provided due to the failure of an institutional or engineering control, a corrective measures plan will be submitted to the NYSDEC for approval. This plan will explain the failure and provide the details and schedule for performing work necessary to correct the failure. Unless an emergency condition exists, no work will be performed pursuant to the corrective measures plan until it is approved by the NYSDEC.

8 Acronym List

µg/l	micrograms per liter
bgs	below ground surface
CAMP	Community Air Monitoring Plan
CFR	Code of Federal Regulations
EWP	Excavation Work Plan
HASP	Health and Safety Plan
IC/EC	Institutional or Engineering Control
mg/kg	milligrams per kilogram
NAD	North American Datum
NYCRR	New York Code of Rules and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYSDOT	New York State Department of Transportation
OSHA	Occupational Safety and Health Administration
PCB	polychlorinated biphenyls
PRR	Periodic Review Report
RAO	remedial action objective
SCO	soil cleanup objective
SMP	Site Management Plan
SVOC	semi-volatile organic compound
SWPPP	storm water pollution prevention plan
TAL	target analyte list
TCE	trichloroethene
TCL	target compound list
VOC	volatile organic compound

Figures

DWG Name:

Checked:

Approved:

Drawn By:

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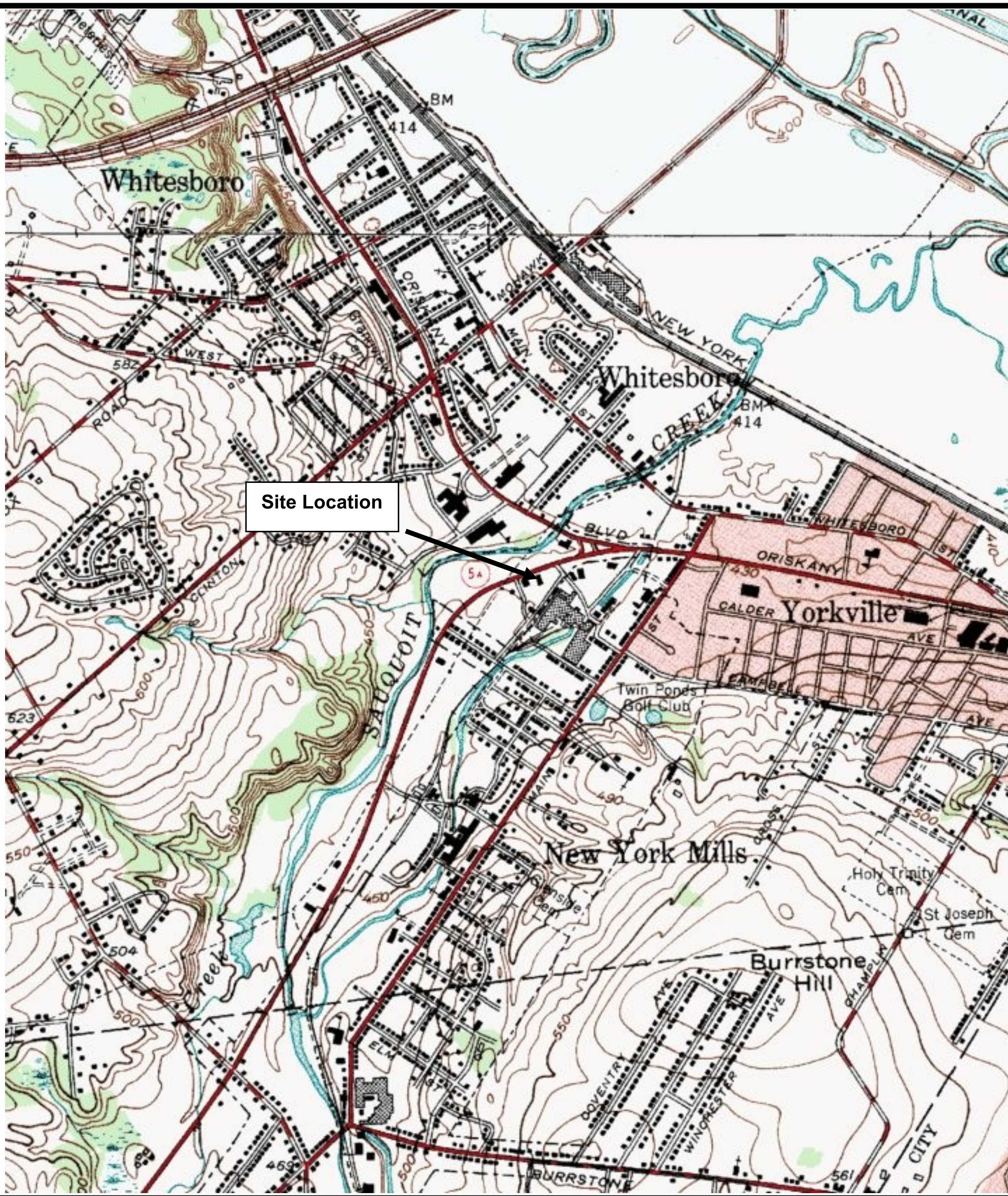

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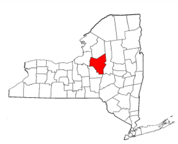

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Boston, MA 02116
(617) 426-7330

FIGURE 1

SITE LOCATION MAP

5140 COMMERCIAL DRIVE EAST
YORKVILLE, NEW YORK

LEGEND

SITE PROPERTY BOUNDARY

ADJACENT PROPERTIES BOUNDARY

FORMER RAILROAD SPUR

REFERENCES:

1. PALMERTON GROUP FIGURE 3, TITLED EXCAVATION AREAS.

2. GOOGLE EARTH PRO, IMAGE DATED 7-21-2011.

3. BUILDING, WELLS, SOIL BORINGS, AND HAND AUGERS SURVEYED BY RICHARD RYBINSKI, L.S. AUGUST 3, 2012, DRAWING NUMBER YORK812F.DWG.

4. KUCERA AND ASSOCIATES, INC. DRAWING, TAX MAP NUMBER 305.18, TOWN OF WHITESTOWN, ONEIDA COUNTY, NEW YORK, REVISION 2 DATED 7/27/2009.

5. WESTINGHOUSE ELECTRIC CORPORATION M & R BUILDING DRAWINGS, JOB NUMBER 4395, DATED OCT. 10,1957. SHEET A-1, "SITE PLAN", REV. DATED JAN. 1958 – SHEET A-12, "GROUND FLOOR PLAN", REV. DATED JAN. 1958 – AND SHEET P-7, "SCHEMATIC LAYOUT OF TRANSFORMER OR PIPING". SCALES VARY.

6. GOOGLE EARTH IMAGE DATED 5/13/2015.

7. RICHARD M. RYBINSKI, L.S. SURVEY, REVISION DATE: 8/30/15, NO.: YORK1015.dwg.

THE ORIGINAL VERSION OF THIS DRAWING IS IN COLOR. BLACK & WHITE REPRODUCTION MAY NOT ACCURATELY DEPICT CERTAIN INFORMATION.

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SOME LOCATIONS ARE APPROXIMATE AND WERE TAKEN FROM THE DRAWINGS REFERENCED ON THIS SHEET.

D

REVISIONS

REV	DESCRIPTION
	Revised: Chkd: Appr.:
	Revised: Chkd: Appr.:
	Revised: Chkd: Appr.:

SEAL

1/13/17

DATE

DRAWN BY RA 02022016

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ADJACENT PROPERTIES

5140 SITE

YORKVILLE, NEW YORK

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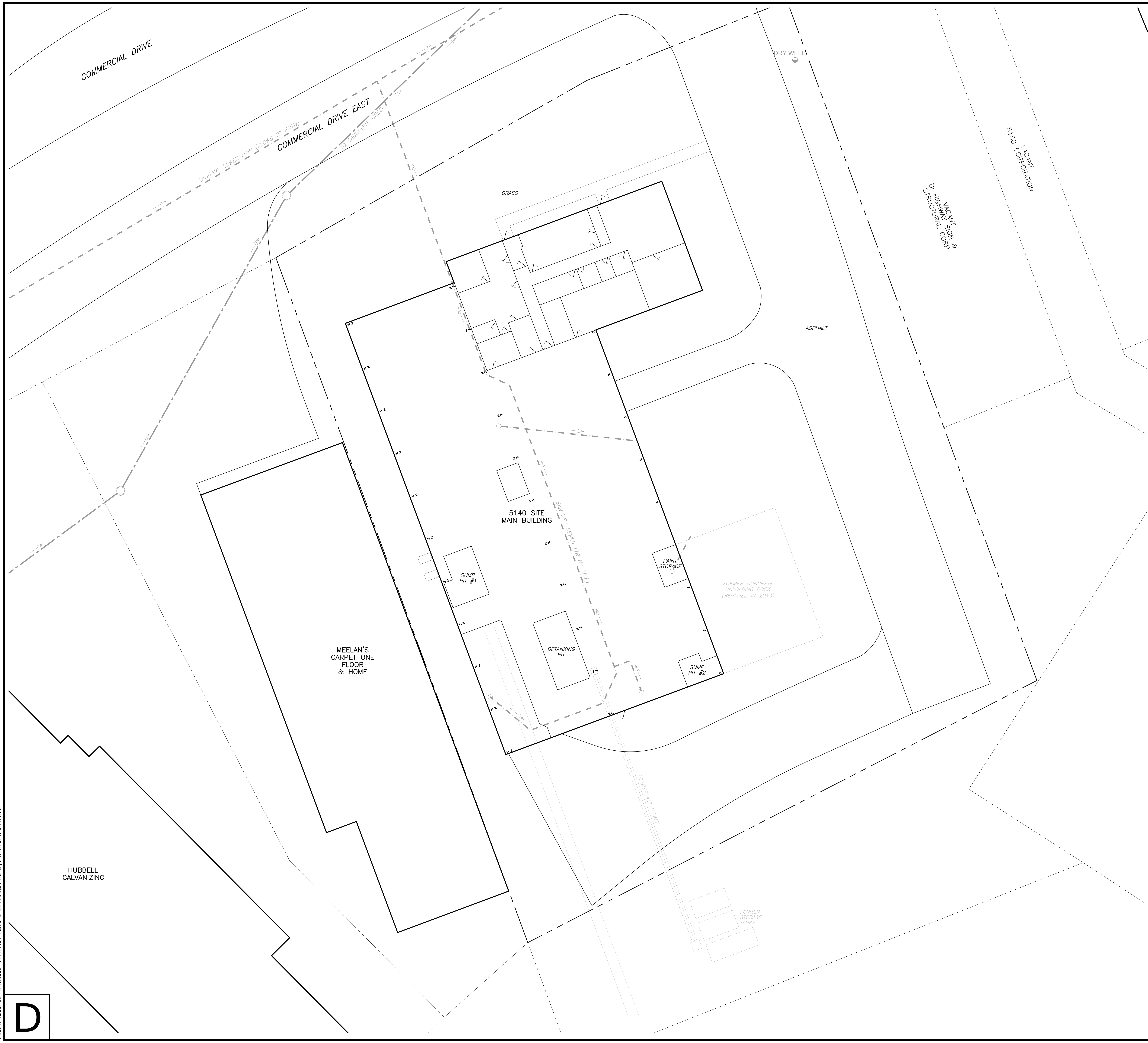
FIGURE 2

Drawing Number

15P01410-D32



LEGEND

- SITE PROPERTY BOUNDARY
- ADJACENT PROPERTIES BOUNDARY
- FORMER RAILROAD SPUR
- DRY WELL
- FLOOR DRAIN
- SANITARY OR FLOOR DRAIN PIPE
- STORM SEWER DRAIN
- STORM SEWER
- FLOW DIRECTION

REFERENCES:

1. PALMERTON GROUP FIGURE 3, TITLED EXCAVATION AREAS.

2. GOOGLE EARTH PRO, IMAGE DATED 7-21-2011.

3. BUILDING, WELLS, SOIL BORINGS, AND HAND AUGERS SURVEYED BY RICHARD RYBINSKI, L.S. AUGUST 3, 2012, DRAWING NUMBER YORK812F.DWG.

4. KUCERA AND ASSOCIATES, INC. DRAWING, TAX MAP NUMBER 305.18, TOWN OF WHITESTOWN, ONEIDA COUNTY, NEW YORK, REVISION 2 DATED 7/27/2009.

5.WESTINGHOUSE ELECTRIC CORPORATION M & R BUILDING DRAWINGS, JOB NUMBER 4395, DATED OCT. 10,1957. SHEET A-1, "SITE PLAN", REV. DATED JAN. 1958 – SHEET A-12, "GROUND FLOOR PLAN", REV. DATED JAN. 1958 – AND SHEET P-7, "SCHEMATIC LAYOUT OF TRANSFORMER OR PIPING". SCALES VARY.

3. GOOGLE EARTH IMAGE DATED 5/13/2015.

THE ORIGINAL VERSION OF THIS DRAWING IS IN COLOR. BLACK & WHITE REPRODUCTION MAY NOT ACCURATELY DEPICT CERTAIN INFORMATION.

20 10 0 20 40

SCALE, FEET

SOME LOCATIONS ARE APPROXIMATE AND WERE TAKEN FROM THE DRAWINGS REFERENCED ON THIS SHEET.

REV	DESCRIPTION
Revised:	Chkd: Appr.:
Revised:	Chkd: Appr.:
Revised:	Chkd: Appr.:

REVISIONS

SEAL

1/13/17

DATE

DRAWN BY	RA 01/02/2016
CHECKED	
APPROVED	

SITE PLAN

5140 SITE

YORKVILLE, NEW YORK

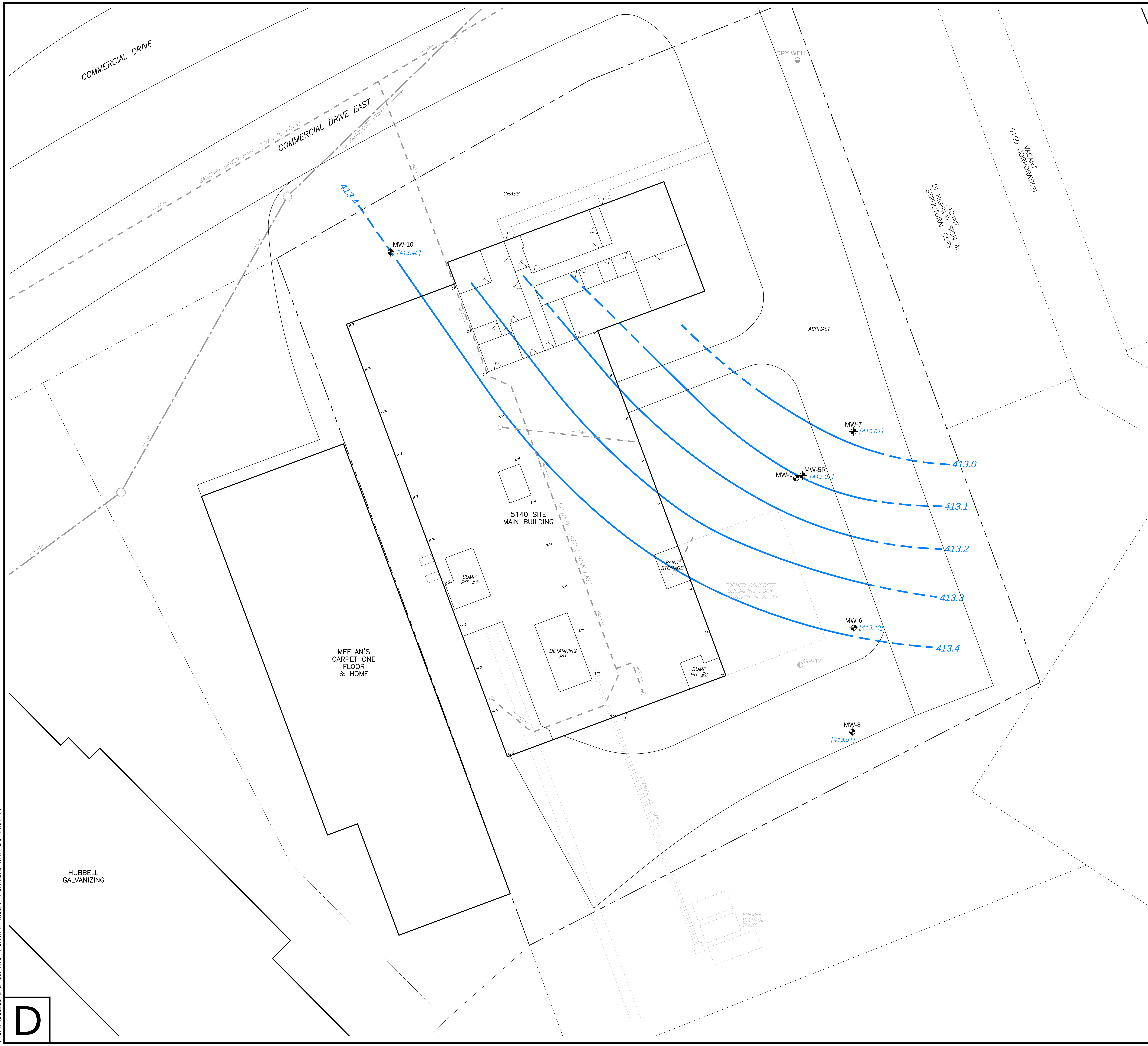
WSP | PARSONS BRINCKERHOFF

WSP USA Corp.
75 Arlington Street, 4th Floor
Boston, Massachusetts 02116
(617) 426-7330
www.wspgroup.com/usa

FIGURE 3

Drawing Number

15P01410-D33



LEGEND

- SITE PROPERTY BOUNDARY
- ADJACENT PROPERTIES BOUNDARY
- FORMER RAILROAD SPUR
- MW-7 MONITORING WELL (NOV. 2012 & SEP. 2014)
- DRY WELL
- GP-12 FLOOR DRAIN
- SANITARY OR FLOOR DRAIN PIPE
- STORM SEWER DRAIN
- STORM SEWER
- FLOW DIRECTION
- [413.51] GROUNDWATER ELEVATION
- 413.4 GROUNDWATER CONTOUR

NOTE:

THE GROUNDWATER ELEVATION FROM MW-9 WAS OMITTED FROM THE CONTOUR ANALYSIS.

REFERENCES:

1. PALMERTON GROUP FIGURE 3, TITLED EXCAVATION AREAS.
2. GOOGLE EARTH PRO, IMAGE DATED 7-21-2011.
3. BUILDING, WELLS, SOIL BORINGS, AND HAND AUGERS SURVEYED BY RICHARD RYBINSKI, L.S. AUGUST 3, 2012, DRAWING NUMBER YORK812F.DWG.
4. KUCERA AND ASSOCIATES, INC. DRAWING, TAX MAP NUMBER 305.18, TOWN OF WHITESTOWN, ONEIDA COUNTY, NEW YORK, REVISION 2 DATED 7/27/2009.
5. WESTINGHOUSE ELECTRIC CORPORATION M & R BUILDING DRAWINGS, JOB NUMBER 4395, DATED OCT. 10,1957. SHEET A-1, "SITE PLAN", REV. DATED JAN. 1958 - SHEET A-12, "GROUND FLOOR PLAN", REV. DATED JAN. 1958 - AND SHEET P-7, "SCHEMATIC LAYOUT OF TRANSFORMER OR PIPING". SCALES VARY.
6. GOOGLE EARTH IMAGE DATED 5/13/2015.

THE ORIGINAL VERSION OF THIS DRAWING IS IN COLOR. BLACK & WHITE REPRODUCTION MAY NOT ACCURATELY DEPICT CERTAIN INFORMATION.

20 10 0 20 40

SCALE, FEET

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REVISIONS

REV	DESCRIPTION
	Revised: Chkd: Appr.:
	Revised: Chkd: Appr.:
	Revised: Chkd: Appr.:

SEAL

1/13/17

DATE

DRAWN BY RA 02022016

CHECKED

APPROVED

PROPERTY OF WSP USA CORP.

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NOTICE: THIS DRAWING HAS BEEN PREPARED UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IT IS A VIOLATION OF STATE LAW FOR ANY PERSONS, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT IN ANY WAY.

GROUNDWATER ELEVATION MAP
OCTOBER 2014

5140 SITE
YORKVILLE, NEW YORK

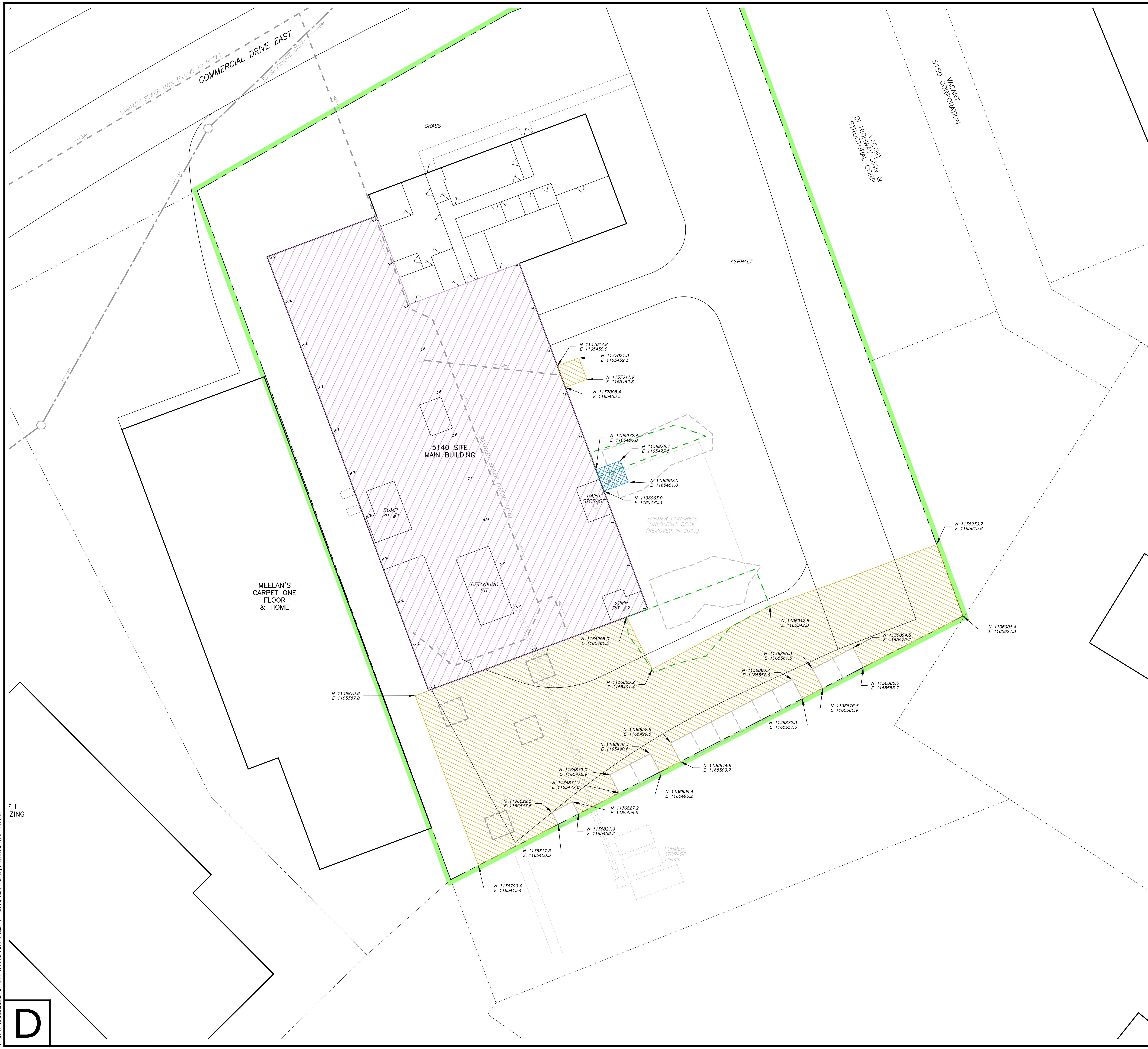
WSP | PARSONS BRINCKERHOFF

WSP USA Corp.
75 Arlington Street, 4th Floor
Boston, Massachusetts 02116
(617) 426-7330
www.wspgroup.com/usa

FIGURE 4

Drawing Number

15P01410-D34



LEGEND

- DRY WELL
- SITE PROPERTY BOUNDARY
- ADJACENT PROPERTIES BOUNDARY
- FORMER RAILROAD SPUR
- FLOOR DRAIN
- SANITARY OR FLOOR DRAIN PIPE
- STORM SEWER DRAIN
- STORM SEWER
- FLOW DIRECTION
- SOIL COVER LIMITS
- ENGINEERED AND ENCAPSULATION BARRIERS
- IRM EXCAVATION LIMITS (2014)
- REMEDIAL EXCAVATION LIMITS (2011)
- INSTITUTIONAL CONTROL BOUNDARY
- REMAINING CONTAMINATION (GREATER THAN 1 FOOT BELOW GROUND SURFACE)
- SURFICIAL HOT SPOT EXCAVATION (2016)

REFERENCES:

1. PALMERTON GROUP FIGURE 3, TITLED EXCAVATION AREAS.
2. GOOGLE EARTH PRO, IMAGE DATED 7-21-2011.
3. BUILDING, WELLS, SOIL BORINGS, AND HAND AUGERS SURVEYED BY RICHARD RYBINSKI, L.S. AUGUST 3, 2012, DRAWING NUMBER YORK812F.DWG.
4. KUCERA AND ASSOCIATES, INC. DRAWING, TAX MAP NUMBER 305.18, TOWN OF WHITESTOWN, ONEIDA COUNTY, NEW YORK, REVISION 2 DATED 7/27/2009.
5. WESTINGHOUSE ELECTRIC CORPORATION M & R BUILDING DRAWINGS, JOB NUMBER 4395, DATED OCT. 10,1957. SHEET A-1, "SITE PLAN", REV. DATED JAN. 1958 – SHEET A-12, "GROUND FLOOR PLAN", REV. DATED JAN. 1958 – AND SHEET P-7, "SCHEMATIC LAYOUT OF TRANSFORMER OR PIPING". SCALES VARY.
6. RICHARD M. RYBINSKI, L.S. SURVEY, REVISION DATE: 8/30/15, NO.: YORK1015.dwg.

THE ORIGINAL VERSION OF THIS DRAWING IS IN COLOR. BLACK & WHITE REPRODUCTION MAY NOT ACCURATELY DEPICT CERTAIN INFORMATION.

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SCALE, FEET

SOME LOCATIONS ARE APPROXIMATE AND WERE TAKEN FROM THE DRAWINGS REFERENCED ON THIS SHEET.

REVISIONS

REV	DESCRIPTION

SEAL

1/13/17

DATE

DRAWN BY RZ 12072016

CHECKED

APPROVED

REMAINING CONTAMINATION, BARRIER SYSTEMS, AND INSTITUTIONAL CONTROL BOUNDARY

5140 SITE
YORKVILLE, NEW YORK

WSP | PARSONS BRINCKERHOFF
WSP USA Corp.
75 Arlington Street, 4th Floor
Boston, Massachusetts 02116
(617) 426-7330
www.wspgroup.com/usa

FIGURE 5

Drawing Number
15P01410-D56

Appendix A – Environmental Easement

ENVIRONMENTAL EASEMENT GRANTED PURSUANT TO ARTICLE 71, TITLE 36 OF THE NEW YORK STATE ENVIRONMENTAL CONSERVATION LAW

THIS INDENTURE made this 6th day of November 20 15 between Owner(s) TSB Group, LLC, having an office at 5140 Commercial Drive, Yorkville, New York 13495, County of Oneida, State of New York (the "Grantor"), and The People of the State of New York (the "Grantee."), acting through their Commissioner of the Department of Environmental Conservation (the "Commissioner", or "NYSDEC" or "Department" as the context requires) with its headquarters located at 625 Broadway, Albany, New York 12233,

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to encourage the remediation of abandoned and likely contaminated properties ("sites") that threaten the health and vitality of the communities they burden while at the same time ensuring the protection of public health and the environment; and

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to establish within the Department a statutory environmental remediation program that includes the use of Environmental Easements as an enforceable means of ensuring the performance of operation, maintenance, and/or monitoring requirements and the restriction of future uses of the land, when an environmental remediation project leaves residual contamination at levels that have been determined to be safe for a specific use, but not all uses, or which includes engineered structures that must be maintained or protected against damage to perform properly and be effective, or which requires groundwater use or soil management restrictions; and

WHEREAS, the Legislature of the State of New York has declared that Environmental Easement shall mean an interest in real property, created under and subject to the provisions of Article 71, Title 36 of the New York State Environmental Conservation Law ("ECL") which contains a use restriction and/or a prohibition on the use of land in a manner inconsistent with engineering controls which are intended to ensure the long term effectiveness of a site remedial program or eliminate potential exposure pathways to hazardous waste or petroleum; and

WHEREAS, Grantor, is the owner of real property located at the address of 5140 Commercial Drive in the Town of Whitestown, County of Oneida and State of New York, known and designated on the tax map of the County Clerk of Oneida as tax map parcel numbers: Section 305.018 Block 3 Lot 31, being the same as that property conveyed to Grantor by deed dated July 24, 2015 and recorded in the Oneida County Clerk's Office in Instrument No. 2015-010254. The property subject to this Environmental Easement (the "Controlled Property") comprises approximately 1.858 +/- acres, and is hereinafter more fully described in the Land Title Survey dated August 3, 2012 and last revised August 30, 2015 prepared by Richard M. Rybinski, L.S., which will be attached to the Site Management Plan. The Controlled Property description is set forth in and attached hereto as Schedule A; and

WHEREAS, the Department accepts this Environmental Easement in order to ensure the protection of public health and the environment and to achieve the requirements for remediation established for the Controlled Property until such time as this Environmental Easement is extinguished pursuant to ECL Article 71, Title 36; and

NOW THEREFORE, in consideration of the mutual covenants contained herein and the terms and conditions of Brownfield Cleanup Agreement Index Number: C633079, Grantor conveys to Grantee a permanent Environmental Easement pursuant to ECL Article 71, Title 36 in, on, over, under, and upon the Controlled Property as more fully described herein ("Environmental Easement").

1. Purposes. Grantor and Grantee acknowledge that the Purposes of this Environmental Easement are: to convey to Grantee real property rights and interests that will run with the land in perpetuity in order to provide an effective and enforceable means of encouraging the reuse and redevelopment of this Controlled Property at a level that has been determined to be safe for a specific use while ensuring the performance of operation, maintenance, and/or monitoring requirements; and to ensure the restriction of future uses of the land that are inconsistent with the above-stated purpose.

2. Institutional and Engineering Controls. The controls and requirements listed in the Department approved Site Management Plan ("SMP") including any and all Department approved amendments to the SMP are incorporated into and made part of this Environmental Easement. These controls and requirements apply to the use of the Controlled Property, run with the land, are binding on the Grantor and the Grantor's successors and assigns, and are enforceable in law or equity against any owner of the Controlled Property, any lessees and any person using the Controlled Property.

A. (1) The Controlled Property may be used for:

Commercial as described in 6 NYCRR Part 375-1.8(g)(2)(iii) and Industrial as described in 6 NYCRR Part 375-1.8(g)(2)(iv)

(2) All Engineering Controls must be operated and maintained as specified in the Site Management Plan (SMP);

(3) All Engineering Controls must be inspected at a frequency and in a manner defined in the SMP;

(4) The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Oneida County Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department;

(5) Groundwater and other environmental or public health monitoring must be performed as defined in the SMP;

(6) Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in the SMP;

(7) All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with the SMP;

(8) Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP;

(9) Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical components of the remedy shall be performed as defined in the SMP;

(10) Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by this Environmental Easement.

B. The Controlled Property shall not be used for Choose the correct list of inapplicable uses., and the above-stated engineering controls may not be discontinued without an amendment or extinguishment of this Environmental Easement.

C. The SMP describes obligations that the Grantor assumes on behalf of Grantor, its successors and assigns. The Grantor's assumption of the obligations contained in the SMP which may include sampling, monitoring, and/or operating a treatment system, and providing certified reports to the NYSDEC, is and remains a fundamental element of the Department's determination that the Controlled Property is safe for a specific use, but not all uses. The SMP may be modified in accordance with the Department's statutory and regulatory authority. The Grantor and all successors and assigns, assume the burden of complying with the SMP and obtaining an up-to-date version of the SMP from:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, New York 12233
Phone: (518) 402-9553

D. Grantor must provide all persons who acquire any interest in the Controlled Property a true and complete copy of the SMP that the Department approves for the Controlled Property and all Department-approved amendments to that SMP.

E. Grantor covenants and agrees that until such time as the Environmental Easement is extinguished in accordance with the requirements of ECL Article 71, Title 36 of the ECL, the property deed and all subsequent instruments of conveyance relating to the Controlled Property shall state in at least fifteen-point bold-faced type:

This property is subject to an Environmental Easement held by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of the Environmental Conservation

Law.

F. Grantor covenants and agrees that this Environmental Easement shall be incorporated in full or by reference in any leases, licenses, or other instruments granting a right to use the Controlled Property.

G. Grantor covenants and agrees that it shall, at such time as NYSDEC may require, submit to NYSDEC a written statement by an expert the NYSDEC may find acceptable certifying under penalty of perjury, in such form and manner as the Department may require, that:

(1) the inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under the direction of the individual set forth at 6 NYCRR Part 375-1.8(h)(3).

(2) the institutional controls and/or engineering controls employed at such site:

(i) are in-place;

(ii) are unchanged from the previous certification, or that any identified changes to the controls employed were approved by the NYSDEC and that all controls are in the Department-approved format; and

(iii) that nothing has occurred that would impair the ability of such control to protect the public health and environment;

(3) the owner will continue to allow access to such real property to evaluate the continued maintenance of such controls;

(4) nothing has occurred that would constitute a violation or failure to comply with any site management plan for such controls;

(5) the report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

(6) to the best of his/her knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and

(7) the information presented is accurate and complete.

3. Right to Enter and Inspect. Grantee, its agents, employees, or other representatives of the State may enter and inspect the Controlled Property in a reasonable manner and at reasonable times to assure compliance with the above-stated restrictions.

4. Reserved Grantor's Rights. Grantor reserves for itself, its assigns, representatives, and successors in interest with respect to the Property, all rights as fee owner of the Property, including:

A. Use of the Controlled Property for all purposes not inconsistent with, or limited by the terms of this Environmental Easement;

B. The right to give, sell, assign, or otherwise transfer part or all of the underlying fee interest to the Controlled Property, subject and subordinate to this Environmental Easement;

5. Enforcement

A. This Environmental Easement is enforceable in law or equity in perpetuity by Grantor, Grantee, or any affected local government, as defined in ECL Section 71-3603, against the owner of the Property, any lessees, and any person using the land. Enforcement shall not be defeated because of any subsequent adverse possession, laches, estoppel, or waiver. It is not a defense in any action to enforce this Environmental Easement that: it is not appurtenant to an interest in real property; it is not of a character that has been recognized traditionally at common law; it imposes a negative burden; it imposes affirmative obligations upon the owner of any interest in the burdened property; the benefit does not touch or concern real property; there is no privity of estate or of contract; or it imposes an unreasonable restraint on alienation.

B. If any person violates this Environmental Easement, the Grantee may revoke the Certificate of Completion with respect to the Controlled Property.

C. Grantee shall notify Grantor of a breach or suspected breach of any of the terms of this Environmental Easement. Such notice shall set forth how Grantor can cure such breach or suspected breach and give Grantor a reasonable amount of time from the date of receipt of notice in which to cure. At the expiration of such period of time to cure, or any extensions granted by Grantee, the Grantee shall notify Grantor of any failure to adequately cure the breach or suspected breach, and Grantee may take any other appropriate action reasonably necessary to remedy any breach of this Environmental Easement, including the commencement of any proceedings in accordance with applicable law.

D. The failure of Grantee to enforce any of the terms contained herein shall not be deemed a waiver of any such term nor bar any enforcement rights.

6. Notice. Whenever notice to the Grantee (other than the annual certification) or approval from the Grantee is required, the Party providing such notice or seeking such approval shall identify the Controlled Property by referencing the following information:

County, NYSDEC Site Number, NYSDEC Brownfield Cleanup Agreement, State Assistance Contract or Order Number, and the County tax map number or the Liber and Page or computerized system identification number.

Parties shall address correspondence to:

Site Number: C633079
Office of General Counsel
NYSDEC
625 Broadway
Albany New York 12233-5500

With a copy to:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, NY 12233

All notices and correspondence shall be delivered by hand, by registered mail or by Certified mail and return receipt requested. The Parties may provide for other means of receiving and communicating notices and responses to requests for approval.

7. Recordation. Grantor shall record this instrument, within thirty (30) days of execution of this instrument by the Commissioner or her/his authorized representative in the office of the

recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

8. Amendment. Any amendment to this Environmental Easement may only be executed by the Commissioner of the New York State Department of Environmental Conservation or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

9. Extinguishment. This Environmental Easement may be extinguished only by a release by the Commissioner of the New York State Department of Environmental Conservation, or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

10. Joint Obligation. If there are two or more parties identified as Grantor herein, the obligations imposed by this instrument upon them shall be joint and several.

Remainder of Page Intentionally Left Blank

IN WITNESS WHEREOF, Grantor has caused this instrument to be signed in its name.

TSB Group, LLC:

By: Paul Sacco

Print Name: Paul Sacco

Title: Pres Date: 10/14/2015

Grantor's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF ONEIDA)

On the 14th day of October, in the year 20 15, before me, the undersigned, personally appeared Paul Sacco, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name 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 upon behalf of which the individual(s) acted, executed the instrument.

Sharon R Henderson
Notary Public - State of New York

SHARON R. HENDERSON
Notary Public, State of New York
No. 01HE5088801
Qualified in Oneida County
Commission Expires November 24, 2017

THIS ENVIRONMENTAL EASEMENT IS HEREBY ACCEPTED BY THE PEOPLE OF THE STATE OF NEW YORK, Acting By and Through the Department of Environmental Conservation as Designee of the Commissioner,

By: ______________________________
Robert W. Schick, Director
Division of Environmental Remediation

Grantee's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF ALBANY)

On the 6th day of November, in the year 2015, before me, the undersigned, personally appeared Robert W. Schick, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/ executed the same in his/her/ capacity as Designee of the Commissioner of the State of New York Department of Environmental Conservation, and that by his/her/ signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

____
Notary Public - State of New York

David J. Chiusano
Notary Public, State of New York
No. 01CH5032146
Qualified in Schenectady County
Commission Expires August 22, 2018

SCHEDULE "A" PROPERTY DESCRIPTION

Legal Description and Environmental Easement
5140 Commercial Drive, Yorkville, NY

All that tract or parcel of land situate in the Town of Whitestown, County of Oneida and State of New York, situate on the south side of Commercial Drive East also known as Truck Route 5A and State Highway No. 8484; said point being bounded and described as follows:

Beginning at an iron pin at an angle point on the south street line of Commercial Drive East, said pin being 0.31 feet east of an existing stone monument as shown as shown on a map titled "Environmental Easement 5140 Commercial Drive, LLC, 5140 Site, Site ID # C633079", Sheet 1 of 2 prepared by Richard M. Rybinski, L.S. dated August 30, 2015; thence N. 68°16'13" E. a distance of 94.65 feet along the southerly line of Commercial Drive East to a point at the northwest corner of Sarah's Bridge Rail Corp.; thence S. 20°11'04" E. a distance of 200.00 feet along the west line of Sarah's Bridge Rail Corp. to an iron pin at said Sarah's Bridge southwest corner and the northwest corner of 5150 Corp.; thence S. 20°11'04" E. a distance of 118.50 feet along the west line of said 5150 Corp. to a point; thence S. 62°45'43" W. a distance of 251.80 feet along on the north line of said 5150 Corp. to the southeast corner of S. Joseph and Susan D. Meelan; thence N. 20°11'47" W. a distance of 320.93 feet along on the east line of said Meelan to the northeast corner of said Meelan and south street line of said Commercial Drive; thence N. 60°20'13" E. a distance of 157.50 feet along the southerly line of Commercial Drive East to the point of beginning; being 1.858 acres more or less.

Together with a non-exclusive right of way 25.01 feet in width, granted by the New York central Railroad to Westinghouse Electric by deed dated and recorded August 24, 1954 in the Oneida County Clerk's Office in Book of Deeds 1447 at Page 559.

Bearings refer to North American Datum (NAD) 1983, New York State Plane Central Zone.

TP-584 (4/13)

New York State Department of Taxation and Finance

Combined Real Estate Transfer Tax Return, Credit Line Mortgage Certificate, and Certification of Exemption from the Payment of Estimated Personal Income Tax

Recording office time stamp

See Form TP-584-I, Instructions for Form TP-584, *before completing this form. Print or type.*

Schedule A – Information relating to conveyance

Grantor/Transferor		
☐ Individual ☐ Corporation ☐ Partnership ☐ Estate/Trust ☐ Single member LLC ☒ Other	Name *(if individual, last, first, middle initial)* (☐ *check if more than one grantor)*: TSB Group, LLC Mailing address: 129 Gilbert Road City: New Hartford State: NY ZIP code: 13413 Single member's name if grantor is a single member LLC *(see instructions)*:	Social security number: Social security number: Federal EIN: 45-2918966 Single member EIN or SSN:

Grantee/Transferee		
☐ Individual ☐ Corporation ☐ Partnership ☐ Estate/Trust ☐ Single member LLC ☒ Other	Name *(if individual, last, first, middle initial)* (☐ *check if more than one grantee)*: The Department of Environmental Conservation Mailing address: 625 Broadway, 11th Floor City: Albany State: NY ZIP code: 12233-7014 Single member's name if grantee is a single member LLC *(see instructions)*:	Social security number: Social security number: Federal EIN: 14-6013200 Single member EIN or SSN:

Location and description of property conveyed

Tax map designation – Section, block & lot *(include dots and dashes)*	SWIS code (six digits)	Street address	City, town, or village	County
305.018-3-31	307089	5140 Commercial Drive	Whitestown	Oneida

Type of property conveyed *(check applicable box)*

1 ☐ One- to three-family house
2 ☐ Residential cooperative
3 ☐ Residential condominium
4 ☐ Vacant land
5 ☒ Commercial/Industrial
6 ☐ Apartment building
7 ☐ Office building
8 ☐ Other ______________

Date of conveyance: 11 / 06 / 2015 (month, day, year)

Percentage of real property conveyed which is residential real property 0 % *(see instructions)*

Condition of conveyance *(check all that apply)*

a. ☐ Conveyance of fee interest

b. ☐ Acquisition of a controlling interest (state percentage acquired ________ %)

c. ☐ Transfer of a controlling interest (state percentage transferred ________ %)

d. ☐ Conveyance to cooperative housing corporation

e. ☐ Conveyance pursuant to or in lieu of foreclosure or enforcement of security interest *(attach Form TP-584.1, Schedule E)*

f. ☐ Conveyance which consists of a mere change of identity or form of ownership or organization *(attach Form TP-584.1, Schedule F)*

g. ☐ Conveyance for which credit for tax previously paid will be claimed *(attach Form TP-584.1, Schedule G)*

h. ☐ Conveyance of cooperative apartment(s)

i. ☐ Syndication

j. ☐ Conveyance of air rights or development rights

k. ☐ Contract assignment

l. ☐ Option assignment or surrender

m. ☐ Leasehold assignment or surrender

n. ☐ Leasehold grant

o. ☒ Conveyance of an easement

p. ☐ Conveyance for which exemption from transfer tax claimed *(complete Schedule B, Part III)*

q. ☐ Conveyance of property partly within and partly outside the state

r. ☐ Conveyance pursuant to divorce or separation

s. ☐ Other *(describe)* ______________

For recording officer's use	Amount received	Date received	Transaction number
	Schedule B., Part I $ Schedule B., Part II $		

Schedule B — Real estate transfer tax return (Tax Law, Article 31)

Part I – Computation of tax due

1 Enter amount of consideration for the conveyance *(If you are claiming a total exemption from tax, check the exemption claimed box, enter consideration and proceed to Part III)* ☒ **Exemption claimed**	1.	0	
2 Continuing lien deduction *(see instructions if property is taken subject to mortgage or lien)*	2.		
3 Taxable consideration *(subtract line 2 from line 1)*	3.		
4 Tax: $2 for each $500, or fractional part thereof, of consideration on line 3	4.		
5 Amount of credit claimed for tax previously paid *(see instructions and attach Form TP-584.1, Schedule G)*	5.		
6 Total tax due* *(subtract line 5 from line 4)*	6.		

Part II – Computation of additional tax due on the conveyance of residential real property for $1 million or more

1 Enter amount of consideration for conveyance *(from Part I, line 1)*	1.		
2 Taxable consideration *(multiply line 1 by the percentage of the premises which is residential real property, as shown in Schedule A)*	2.		
3 Total additional transfer tax due* *(multiply line 2 by 1% (.01))*	3.		

Part III – Explanation of exemption claimed on Part I, line 1 *(check any boxes that apply)*

The conveyance of real property is exempt from the real estate transfer tax for the following reason:

a. Conveyance is to the United Nations, the United States of America, the state of New York, or any of their instrumentalities, agencies, or political subdivisions (or any public corporation, including a public corporation created pursuant to agreement or compact with another state or Canada) ..... a ☒

b. Conveyance is to secure a debt or other obligation ..... b ☐

c. Conveyance is without additional consideration to confirm, correct, modify, or supplement a prior conveyance ..... c ☐

d. Conveyance of real property is without consideration and not in connection with a sale, including conveyances conveying realty as bona fide gifts ..... d ☐

e. Conveyance is given in connection with a tax sale ..... e ☐

f. Conveyance is a mere change of identity or form of ownership or organization where there is no change in beneficial ownership. (This exemption cannot be claimed for a conveyance to a cooperative housing corporation of real property comprising the cooperative dwelling or dwellings.) Attach Form TP-584.1, Schedule F ..... f ☐

g. Conveyance consists of deed of partition ..... g ☐

h. Conveyance is given pursuant to the federal Bankruptcy Act ..... h ☐

i. Conveyance consists of the execution of a contract to sell real property, without the use or occupancy of such property, or the granting of an option to purchase real property, without the use or occupancy of such property ..... i ☐

j. Conveyance of an option or contract to purchase real property with the use or occupancy of such property where the consideration is less than $200,000 and such property was used solely by the grantor as the grantor's personal residence and consists of a one-, two-, or three-family house, an individual residential condominium unit, or the sale of stock in a cooperative housing corporation in connection with the grant or transfer of a proprietary leasehold covering an individual residential cooperative apartment ..... j ☐

k. Conveyance is not a conveyance within the meaning of Tax Law, Article 31, section 1401(e) *(attach documents supporting such claim)* ..... k ☐

*The total tax (from Part I, line 6 and Part II, line 3 above) is due within 15 days from the date conveyance. Please make check(s) payable to the county clerk where the recording is to take place. If the recording is to take place in the New York City boroughs of Manhattan, Bronx, Brooklyn, or Queens, make check(s) payable to the ***NYC Department of Finance.*** If a recording is not required, send this return and your check(s) made payable to the ***NYS Department of Taxation and Finance***, directly to the NYS Tax Department, RETT Return Processing, PO Box 5045, Albany NY 12205-5045.

Schedule C — Credit Line Mortgage Certificate (Tax Law, Article 11)

Complete the following only if the interest being transferred is a fee simple interest.
I (we) certify that: *(check the appropriate box)*

1. ☒ The real property being sold or transferred is not subject to an outstanding credit line mortgage.

2. ☐ The real property being sold or transferred is subject to an outstanding credit line mortgage. However, an exemption from the tax is claimed for the following reason:

   ☐ The transfer of real property is a transfer of a fee simple interest to a person or persons who held a fee simple interest in the real property (whether as a joint tenant, a tenant in common or otherwise) immediately before the transfer.

   ☐ The transfer of real property is (A) to a person or persons related by blood, marriage or adoption to the original obligor or to one or more of the original obligors or (B) to a person or entity where 50% or more of the beneficial interest in such real property after the transfer is held by the transferor or such related person or persons (as in the case of a transfer to a trustee for the benefit of a minor or the transfer to a trust for the benefit of the transferor).

   ☐ The transfer of real property is a transfer to a trustee in bankruptcy, a receiver, assignee, or other officer of a court.

   ☐ The maximum principal amount secured by the credit line mortgage is $3,000,000 or more, and the real property being sold or transferred is **not** principally improved nor will it be improved by a one- to six-family owner-occupied residence or dwelling.

   Please note: for purposes of determining whether the maximum principal amount secured is $3,000,000 or more as described above, the amounts secured by two or more credit line mortgages may be aggregated under certain circumstances. See TSB-M-96(6)-R for more information regarding these aggregation requirements.

   ☐ Other *(attach detailed explanation)*.

3. ☐ The real property being transferred is presently subject to an outstanding credit line mortgage. However, no tax is due for the following reason:

   ☐ A certificate of discharge of the credit line mortgage is being offered at the time of recording the deed.

   ☐ A check has been drawn payable for transmission to the credit line mortgagee or his agent for the balance due, and a satisfaction of such mortgage will be recorded as soon as it is available.

4. ☐ The real property being transferred is subject to an outstanding credit line mortgage recorded in ____________ (insert liber and page or reel or other identification of the mortgage). The maximum principal amount of debt or obligation secured by the mortgage is ____________. No exemption from tax is claimed and the tax of ____________ is being paid herewith. *(Make check payable to county clerk where deed will be recorded or, if the recording is to take place in New York City but not in Richmond County, make check payable to the **NYC Department of Finance**.)*

Signature (both the grantor(s) and grantee(s) must sign)

The undersigned certify that the above information contained in schedules A, B, and C, including any return, certification, schedule, or attachment, is to the best of his/her knowledge, true and complete, and authorize the person(s) submitting such form on their behalf to receive a copy for purposes of recording the deed or other instrument effecting the conveyance.

Paul Stacey	Member	Andrew Guglielmi	Attorney
Grantor signature	Title	Grantee signature	Title
		Andrew Guglielmi, Esq. NYSDEC	
Grantor signature	Title	Grantee signature	Title

Reminder: Did you complete all of the required information in Schedules A, B, and C? Are you required to complete Schedule D? If you checked *e*, *f*, or *g* in Schedule A, did you complete Form TP-584.1? Have you attached your check(s) made payable to the county clerk where recording will take place or, if the recording is in the New York City boroughs of Manhattan, Bronx, Brooklyn, or Queens, to the ***NYC Department of Finance***? If no recording is required, send your check(s), made payable to the ***Department of Taxation and Finance***, directly to the NYS Tax Department, RETT Return Processing, PO Box 5045, Albany NY 12205-5045.

Schedule D - Certification of exemption from the payment of estimated personal income tax (Tax Law, Article 22, section 663)

Complete the following only if a fee simple interest or a cooperative unit is being transferred by an individual or estate or trust.

If the property is being conveyed by a referee pursuant to a foreclosure proceeding, proceed to Part II, and check the second box under *Exemptions for nonresident transferor(s)/seller(s)* and sign at bottom.

Part I - New York State residents

If you are a New York State resident transferor(s)/seller(s) listed in Schedule A of Form TP-584 (or an attachment to Form TP-584), you must sign the certification below. If one or more transferors/sellers of the real property or cooperative unit is a resident of New York State, **each** resident transferor/seller must sign in the space provided. If more space is needed, please photocopy this Schedule D and submit as many schedules as necessary to accommodate all resident transferors/sellers.

Certification of resident transferor(s)/seller(s)

This is to certify that at the time of the sale or transfer of the real property or cooperative unit, the transferor(s)/seller(s) as signed below was a resident of New York State, and therefore is not required to pay estimated personal income tax under Tax Law, section 663(a) upon the sale or transfer of this real property or cooperative unit.

Signature	Print full name	Date
Signature	Print full name	Date
Signature	Print full name	Date
Signature	Print full name	Date

Note: A resident of New York State may still be required to pay estimated tax under Tax Law, section 685(c), but not as a condition of recording a deed.

Part II - Nonresidents of New York State

If you are a nonresident of New York State listed as a transferor/seller in Schedule A of Form TP-584 (or an attachment to Form TP-584) but are not required to pay estimated personal income tax because one of the exemptions below applies under Tax Law, section 663(c), check the box of the appropriate exemption below. If any one of the exemptions below applies to the transferor(s)/seller(s), that transferor(s)/seller(s) is not required to pay estimated personal income tax to New York State under Tax Law, section 663. **Each** nonresident transferor/seller who qualifies under one of the exemptions below must sign in the space provided. If more space is needed, please photocopy this Schedule D and submit as many schedules as necessary to accommodate all nonresident transferors/sellers.

If none of these exemption statements apply, you must complete Form IT-2663, *Nonresident Real Property Estimated Income Tax Payment Form*, or Form IT-2664, *Nonresident Cooperative Unit Estimated Income Tax Payment Form*. For more information, see *Payment of estimated personal income tax*, on page 1 of Form TP-584-I.

Exemption for nonresident transferor(s)/seller(s)

This is to certify that at the time of the sale or transfer of the real property or cooperative unit, the transferor(s)/seller(s) (grantor) of this real property or cooperative unit was a nonresident of New York State, but is not required to pay estimated personal income tax under Tax Law, section 663 due to one of the following exemptions:

☐ The real property or cooperative unit being sold or transferred qualifies in total as the transferor's/seller's principal residence (within the meaning of Internal Revenue Code, section 121) from ________ (Date) to ________ (Date) *(see instructions)*.

☐ The transferor/seller is a mortgagor conveying the mortgaged property to a mortgagee in foreclosure, or in lieu of foreclosure with no additional consideration.

☐ The transferor or transferee is an agency or authority of the United States of America, an agency or authority of the state of New York, the Federal National Mortgage Association, the Federal Home Loan Mortgage Corporation, the Government National Mortgage Association, or a private mortgage insurance company.

Signature	Print full name	Date
Signature	Print full name	Date
Signature	Print full name	Date
Signature	Print full name	Date

Appendix B – List of Site Contacts

Name	**Phone/Email Address**
Paul F. Sacco (President, JM Door Company, Inc.)	(315) 735-5577; pfs@jmdoor.net
Anthony G. Hallak, Esquire (Felt Evans, LLP)	973.602.1025; ahallak@felt-evans.com
Mr. Parag Amin (NYSDEC)	(518) 402-8801; anand.patel@dec.ny.gov

Appendix C – Site Legal Description

Legal Description

5140 Commercial Drive, Yorkville, NY

All that tract or parcel of land situate in the Town of Whitestown, County of Oneida and State of New York, situate on the south side of Commercial Drive East also known as Truck Route 5A and State Highway No. 8484; said point being bounded and described as follows:

Beginning at an iron pin at an angle point on the south street line of Commercial Drive East, said pin being 0.31 feet east of an existing stone monument as shown as shown on a map titled “Environmental Easement 5140 Commercial Drive, LLC, 5140 Site, Site ID # C633079”, Sheet 1 of 2 prepared by Richard M. Rybinski, L.S. dated August 30, 2015; thence N. 68°16’13” E. a distance of 94.65 feet along the southerly line of Commercial Drive East to a point at the northwest corner of Sarah’s Bridge Rail Corp.; thence S. 20°11’04” E. a distance of 200.00 feet along the west line of Sarah’s Bridge Rail Corp. to an iron pin at said Sarah’s Bridge southwest corner and the northwest corner of 5150 Corp.; thence S. 20°11’04” E. a distance of 118.50 feet along the west line of said 5150 Corp. to a point; thence S. 62°45’43” W. a distance of 251.80 feet along on the north line of said 5150 Corp. to the southeast corner of S. Joseph and Susan D. Meelan; thence N. 20°11’47” W. a distance of 320.93 feet along on the east line of said Meelan to the northeast corner of said Meelan and south street line of said Commercial Drive; thence N. 60°20’13” E. a distance of 157.50 feet along the southerly line of Commercial Drive East to the point of beginning; being 1.858 acres more or less.

Together with a non-exclusive right of way 25.01 feet in width, granted by the New York central Railroad to Westinghouse Electric by deed dated and recorded August 24, 1954 in the Oneida County Clerk’s Office in Book of Deeds 1447 at Page 559.

Bearings refer to North American Datum (NAD) 1983, New York State Plane Central Zone.

Appendix D – Excavation Work Plan

APPENDIX D – EXCAVATION WORK PLAN

INTRODUCTION

This Excavation Work Plan (EWP) has been prepared as an appendix to the Site Management Plan (SMP) for the 5140 Site in Yorkville, New York. Detailed discussions of the 5140 Site and the need for this EWP are provided in the SMP. The EWP does not provide a complete listing of all requirements that may be applicable to the work. In particular, local, state, and federal requirements for sediment and erosion control, construction site dust control, and air monitoring may apply to the work in addition to the requirements outlined in this document.

The EWP must be implemented in all instances where excavation is to occur in areas with *Remaining Contamination* or Discovered Contamination as defined below:

- *Remaining Contamination* refers to the management of soil within either designated area that contain concentrations of chemicals of concern greater than the site-specific SCOs (Section 2.2.2 and Figure 5 of the SMP); and,

- *Discovered Contamination* refers to the management of soil that may be discovered during the course of site activities that exhibits evidence of suspected contamination, or is confirmed by testing to exceed the site-specific SCO for total PCBs of 10 mg/kg. Section D-11 addresses the contingency procedures that are to be followed when *Discovered Contamination* is encountered.

The EWP must also be implemented if the soil cover or concrete floor of the facility (i.e., the engineered barrier) is breeched.

The EWP is not required if soil that meets the site-specific soil cleanup objective (SCO) is disturbed (however, if removed from the site, this soil must be managed in accordance with Section C-4 and C-5 of this EWP). Similarly, a Community Air Monitoring Plan (CAMP) is not required for activities that are not covered under this EWP, unless work is being performed to address a new spill or release that is unrelated to the historical site conditions.

D-1 NOTIFICATION

At least 5 business days prior to the start of any activity that is anticipated to disturb Remaining Contamination (as defined in the SMP) the site owner or their representative will notify the New York State Department of Environmental Conservation (NYSDEC). For *Discovered Contamination*, the site owner or their representative will notify NYSDEC within 5 business days of identifying *Discovered Contamination*. Currently, this notification will be made to:

Mr. Parag Amin, Project Manager
New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway, 11th Floor
Albany, NY 12233-7014
Phone: (518) 402-9662
parag.amin@dec.ny.gov

This notification will include:

- A detailed description of the work to be performed, including the location and areal extent, plans for site re-grading, intrusive elements or utilities to be installed, estimated volumes of contaminated soil to be excavated (and the identity of the qualified individual who will be making the volumetric determinations), and any work that may impact an engineering control.

- A summary of environmental conditions anticipated in the work areas, including the nature and concentrations of chemicals of concern, potential presence of grossly contaminated media, and plans for any pre-construction sampling.
- A schedule for the work, detailing the start and completion of all intrusive work.
- A summary of the applicable components of this EWP including the CAMP (simple excavations may only require compliance with a portion of the EWP).
- If deemed necessary for the work activity, a copy of the CAMP. If a CAMP is deemed not to be necessary, then the rationale for this decision must be included with the notification.
- A statement that the work will be performed in compliance with this EWP, the SMP, and 29 Code of Federal Regulations (CFR) 1910.120.
- A copy of the contractor's health and safety plan (HASP).
- Identification of disposal facilities for potential waste streams.
- Identification of sources of any anticipated backfill, along with certification from the fill site owner or operator that the material is not from an industrial source and there is no knowledge or evidence of chemical contamination.

D-2 SOIL SCREENING METHODS

Visual, olfactory, and instrument-based soil screening will be performed by a qualified environmental professional during all remedial and development excavations in areas where there is known or potentially contaminated material (i.e., Remaining Contamination or Discovered Contamination), or in areas beneath the soil cover or engineered barrier.

Excavated soils will be segregated based on previous environmental data and screening results into (1) material that requires offsite disposal (*Remaining Contamination* areas), (2) material that requires testing (*Discovered Contamination* areas), or (3) material that can be reused at the site (areas outside of [1] and [2] because soil is not suspected or known to contain chemical constituents above the relevant SCOs), including soil comprising the soil cover system.

D-3 STOCKPILE METHODS

Soil stockpiles will be continuously encircled with a berm and/or silt fence. Hay bales will be used as needed near catch basins, surface water receptors, and other discharge points.

When not being accessed, the stockpiles will be kept covered with appropriately anchored tarps and will be routinely inspected (at a minimum once each week) and after every storm event. Damaged tarp covers will be promptly replaced.

Results of inspections will be recorded in a logbook and maintained at the site and available for inspection by NYSDEC.

D-4 MATERIALS EXCAVATION AND LOAD OUT

A qualified environmental professional or person under their supervision will oversee all invasive work covered by this plan and the excavation and load-out of all excavated material.

The owner of the property and its contractors are solely responsible for safe execution of all invasive and other work performed under the EWP.

The presence of utilities will be investigated by the site owner, the site owner's contractor, or the qualified environmental professional. It will be determined whether a risk or impediment to the planned work under this SMP is posed by utilities or easements on the site.

Loaded vehicles leaving the site will be appropriately lined, tarped, securely covered, manifested, and placarded in accordance with appropriate federal, state, local, and New York State Department of Transportation (NYSDOT) requirements (and all other applicable transportation requirements).

A truck wash will be operated onsite, as appropriate. The qualified environmental professional will be responsible for ensuring that all outbound trucks will be washed at the truck wash before leaving the site until the activities performed under this section are complete. Truck wash waters will be collected and disposed of offsite in an appropriate manner in compliance with applicable local, state, and federal laws and regulations.

Locations where vehicles enter or exit the site shall be inspected daily for evidence of offsite soil tracking. The qualified environmental professional will be responsible for ensuring that all egress points for truck and equipment transport from the site are clean of dirt and other materials derived from the site during intrusive excavation activities. Cleaning of the adjacent streets will be performed as needed to maintain a clean condition with respect to site-derived materials.

D-5 MATERIALS TRANSPORT OFFSITE

All transport of contaminated soil will be performed by licensed haulers in accordance with appropriate local, state, and federal regulations, including 6 New York Code of Rules and Regulations (NYCRR) Part 364. Haulers will be appropriately licensed and trucks properly placarded.

Material transported by trucks exiting the site will be secured with tight-fitting covers. Loose-fitting canvas-type truck covers will be prohibited. If loads contain wet material capable of producing free liquid, truck liners will be used. Loaded vehicles leaving the site will be manifested and placarded in accordance with appropriate federal, state, local requirements including NYSDOT requirements. If required, soil and waste management and transportation shall be performed in accordance with the federal Resource Conservation and Recovery Act and associated NYSDEC regulations pertaining to hazardous waste manifests.

Truck transport routes will satisfy local codes and weight restrictions. All trucks loaded with site materials will exit the vicinity of the site using only these approved truck routes. The truck routes will take into account: (a) limiting transport through residential areas and past sensitive sites; (b) use of city mapped truck routes; (c) prohibiting offsite queuing of trucks entering the facility; (d) limiting total distance to major highways; (e) promoting safety in access to highways; (f) overall safety in transport; and (g) obtaining community input, where necessary.

Trucks will be prohibited from stopping and idling in the neighborhood outside the project site.

Queuing of trucks will be performed onsite in order to minimize offsite disturbance. Offsite queuing will be prohibited.

D-6 MATERIALS DISPOSAL OFFSITE

Soil/fill/solid waste excavated and removed from the site that is deemed to contain chemicals of concern above the Unrestricted SCOs will be treated as contaminated and regulated material. As appropriate, this material will be transported and disposed in accordance with all local, state, and federal regulations. If disposal of material from this site is proposed for unregulated offsite disposal (i.e. clean soil removed for development purposes), a formal request with an associated plan will be made to the NYSDEC. Unregulated offsite management of materials from this site will not occur without formal NYSDEC approval.

Offsite disposal locations for excavated soils deemed to contain chemicals of concern above Unrestricted SCOs will be identified in the pre-excavation notification. This will include estimated quantities and a breakdown by class of disposal facility if appropriate (i.e., hazardous waste disposal facility, solid waste landfill, petroleum treatment facility, construction and debris recycling facility, etc.). Actual disposal quantities and associated documentation will be reported to the NYSDEC as part of the Periodic Review Report. This documentation will include: waste profiles, test results, facility acceptance letters, manifests, bills of lading, and facility receipts.

D-7 MATERIALS REUSE ONSITE

"Reuse onsite" means reuse onsite of material that originates at the site and does not leave the site during the excavation. Reuse of soil from the areas of Remaining Contamination will not be allowed. If this material is excavated for development purposes, the material shall be disposed of offsite in accordance with Section D-6 above.

Soil that is suspected of being Discovered Contamination that is later characterized to not contain chemicals of concern above the site-specific SCOs can be reused onsite. Soil originally used as part of the soil cover material can be reused onsite if properly segregated from other excavated soil at the site.

D-8 FLUIDS MANAGEMENT

All liquids to be removed from the site, including excavation dewatering, and groundwater monitoring well purge and development waters (if applicable), will be handled, transported and disposed of in accordance with applicable local, state, and federal regulations. Dewatering, purge, and development fluids will not be recharged back to the land surface or subsurface of the site, but will be managed offsite, unless prior written approval is received from NYSDEC. Discharge of water generated during large-scale construction activities to surface waters (i.e. a local pond, stream, or river) may be performed under a SPDES permit.

D-9 COVER SYSTEM RESTORATION

After the completion of soil removal and any other invasive activities the cover system will be restored in a manner that complies with the BCP Decision Document. The existing cover system is comprised of a minimum of 12 inches of clean soil for select areas outside the footprint of the main building and the concrete floor for areas beneath the main building. The demarcation layer, consisting of a geotextile beneath the soil cover system (no demarcation layer is present beneath the main building floor), will be replaced to provide a visual reference to the top of the underlying native soil, which requires adherence to special conditions for disturbance defined in this SMP. If the type of cover system changes from that which exists prior to the excavation (i.e., a soil cover is replaced by asphalt), this will constitute a modification of the cover element of the remedy and the upper surface of the remaining contamination. A figure showing the modified surface will be included in the subsequent Periodic Review Report and in an updated SMP.

D-10 BACKFILL FROM OFFSITE SOURCES

All imported soils used to backfill areas of *Remaining Contamination* or *Discovered Contamination* will meet the backfill and cover soil quality standards established in 6 NYCRR 375-6.7(d), as follows:

The backfill brought to the site for use as a cover will be comprised of soil or other unregulated material as set forth in 6 NYCRR Part 360. The imported soil will not exceed the applicable soil cleanup objectives for the use of the site, as set forth in 6 NYCRR Part 375-6.8(b), and this SMP. For residential and restricted-residential use, the lower of the protection of groundwater or the protection of public health soil cleanup objectives is the regulatory guidance value. For each source of backfill that is imported to the site, one of the following will be completed prior to importing the backfill:

1. Documentation will be provided to NYSDEC as to the source of the material and the consistency of the material in accordance with the exemption for not chemical testing listed in DER-10, Section 5.4(e)(5); or

2. Chemical testing will be completed in accordance with Table 5.4(e)10 of DER-10.

In the event that laboratory analytical testing is conducted, the results for each new source of fill must meet the values provided in Appendix 5 of DER-10 for restricted residential use.

Materials proposed for import onto the site, will be approved by a qualified environmental professional, and will be in compliance with provisions in this EWP and the SMP prior to receipt at the site. Material from industrial sites, spill sites, or other environmental remediation sites or potentially contaminated sites will not be imported to the site. Solid waste will not be imported onto the site.

Trucks entering the site with imported soils will be securely covered with tight fitting covers. Imported soils will be stockpiled separately from excavated materials.

D-11 STORM WATER POLLUTION PREVENTION

All work at the site shall comply with the requirements of New York State Standards and Specifications for Erosion and Sediment Control, August 2005 (or recent revision). At a minimum, barriers, hay bale checks, and other erosion control measures will be installed around the perimeter of the excavation and inspected once a week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the site and available for inspection by NYSDEC. All necessary repairs shall be made immediately. Accumulated sediments will be removed as required to keep the barrier and hay bale check functional. For larger excavations, procedures for storm water pollution prevention should be specified, including a storm water pollution prevention plan (SWPPP).[8] The required SWPPP contents, current as of the date of this plan, are provided in Table 1.

All undercutting or erosion of the silt fence toe anchor shall be repaired immediately with appropriate backfill materials. Manufacturer's recommendations will be followed for replacing silt fencing damaged due to weathering. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters.

D-12 CONTINGENCY PLAN FOR SOIL SUSPECTED OF CONTAINING CONTAMINATION

If soil suspected of containing Discovered Contamination is identified during post-remedial subsurface excavations or development related construction, excavation activities will be suspended until the soil is characterized.

The soil characterization will involve collecting samples to determine if the material warrants management as a waste. Initially, chemical analysis will be performed for a full list of analytes (i.e., Target Analyte List [TAL] metals; Target Compound List [TCL] volatiles and semi-volatiles, TCL pesticides, and polychlorinated biphenyls [PCBs]), unless the site history and previous sampling results provide a sufficient justification to limit the list of analytes. In this case, a reduced list of analytes will be proposed to the NYSDEC for approval prior to sampling. The characterization data will be compared to the relevant SCOs to evaluate whether the soil meets the definition of *Discovered Contamination*. The sampling and analytical methods presented in *DER-10 - Technical Guidance for Site Investigation and Remediation* must be followed during the characterization process.

Identification of unknown or unexpected contaminated media identified either by visual observation, instrument screening, or chemical analysis, during invasive site work will be promptly communicated by phone to NYSDEC's Project Manager. In addition, the exposed *Discovered Contamination* will be securely covered, and the notification process outlined in Section D-1 will be implemented. Reportable quantities of petroleum product will also be reported to the NYSDEC spills hotline. These findings will be also included in the Periodic Review Report prepared pursuant to the SMP.

[8] Under the SPDES General Permit for Storm Water Discharges from Construction Activities Permit No. GP-0-10-001, a storm water pollution prevention plan (SWPPP) that conforms to the requirements of NYSDEC Division of Water guidelines and NYS regulation is required for soil disturbance areas that total 1 acre in size, or greater.

D-13 SOIL CONFIRMATION SAMPLING

Confirmation soil samples following the excavation will be collected following the guidance provided in Section 5.4(b)(5) of DER-10. The analytical parameters will be limited to those chemicals that exceeded the relevant SCOs. If the analytical data for the confirmation samples are below the relevant SCOs, the excavated area will be backfilled in accordance with Section D-7. If the data indicate residual chemical concentrations above the relevant SCOs, then additional soil will be excavated from the impacted area and the area re-sampled. This process will be repeated until the relevant SCOs are achieved. Analytical data submitted to the NYSDEC will be managed in accordance with the NYSDEC's Electronic Data Deliverable Manual (version 3, January 11, 2013 or, if superseded, the most recent version of this document). At a minimum, this guidance requires data to be formatted to NYSDEC specifications, sample locations be located by survey, GPS, or other approved method, and specific sample identification nomenclature.

D-14 COMMUNITY AIR MONITORING PLAN

A CAMP will be implemented during all management activities associated with *Remaining Contamination* or *Discovered Contamination*, as appropriate. The plan will follow the guidance provided in Appendix 1A of *DER-10 - Technical Guidance for Site Investigation and Remediation*, Generic Community Air Monitoring Plan.

D-15 ODOR CONTROL PLAN

Based on extensive experience at this site, odors are not expected during excavation activities. However, in the event that odors are noted, this control plan, which is designed to control emissions of nuisance odors both onsite (if there are residents or tenants on the property) and offsite, will be implemented. Specific odor control methods to be used on a routine basis will include dust suppression, foam application, or other appropriate method. If nuisance odors are identified at the site boundary or if odor complaints are received, 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. The NYSDEC and New York State Department of Health (NYSDOH) will be notified of all odor events and of any other complaints about the project. Implementation of all odor controls, including the slowing or suspension of work (if necessary), is the responsibility of the property owner's qualified environmental professional or remediation contractor. Any odor control measures that are implemented will be submitted to NYSDEC as part of the Periodic Review Report.

All necessary means will be employed to prevent on and offsite nuisances. At a minimum, these measures will include: (a) limiting the area of open excavations and size of soil stockpiles; (b) shrouding open excavations with tarps and other covers; and (c) using foams or other means to cover exposed odorous soils. If odors develop and cannot be otherwise controlled, additional means to eliminate odor nuisances will include: (d) direct load-out of soils to trucks for offsite disposal; (e) use of chemical odorants in spray or misting systems; and, (f) use of staff to monitor odors in surrounding neighborhoods.

D-16 DUST CONTROL PLAN

In the areas where soil containing *Remaining Contamination* or *Discovered Contamination* is to be excavated, a dust suppression plan that addresses dust management during invasive onsite work will be implemented, if necessary. The plan will include, at a minimum, the items listed below:

- Dust suppression will be achieved through the use of a dedicated onsite water truck for road wetting. The truck will be equipped with water cannon capable of spraying water directly onto off-road areas including excavations and stockpiles.
- Onsite roads will be limited in total area to minimize the area required for water truck sprinkling.

D-17 OTHER NUISANCES

The contractor shall utilize best work practices in order to minimize other nuisances, including noise. The contractor will ensure compliance with local ordinances, scheduling restrictions (limits on daily work duration, working weekends and holidays, etc.), and noise control ordinances, during any remedial work.

Table 1

Storm Water Pollution Prevention Plan Content Requirements

Note: *Under the SPDES General Permit for Storm Water Discharges from Construction Activities Permit No. GP-0-10-001, a storm water pollution prevention plan (SWPPP) that conforms to the requirements of NYSDEC Division of Water guidelines and NYS regulation is required for soil disturbance areas that* *<u>total 1 acre in size, or greater</u>* *(the 5140 Site is only 1.9 acres in size and is unlikely to require a SWPPP).*

The NYSDEC General Permit for Storm water Discharges from Construction Activities (Permit No. GP-0-10-001) sets forth the following requirements for SWPPPs:

1. Erosion and sediment control component - All SWPPPs prepared pursuant to this permit shall include erosion and sediment control practices designed in conformance with the most current version of the technical standard, New York State Standards and Specifications for Erosion and Sediment Control. Where erosion and sediment control practices are not designed in conformance with this technical standard, the owner or operator must demonstrate equivalence to the technical standard. At a minimum, the erosion and sediment control component of the SWPPP shall include the following:

a. Background information about the scope of the project, including the location, type and size of project;

b. A site map/construction drawing(s) for the project, including a general location map. At a minimum, the site map shall show the total site area; all improvements; areas of disturbance; areas that will not be disturbed; existing vegetation; onsite and adjacent offsite surface water(s), wetlands and drainage patterns that could be affected by the construction activity; existing and final slopes; locations of different soil types with boundaries; material, waste, borrow or equipment storage areas located on adjacent properties; and location(s) of the storm water discharge(s);

c. A description of the soil(s) present at the site, including an identification of the Hydrologic Soil Group (HSG);

d. A construction phasing plan and sequence of operations describing the intended order of construction activities, including clearing and grubbing, excavation and grading, utility and infrastructure installation and any other activity at the site that results in soil disturbance;

e. A description of the minimum erosion and sediment control practices to be installed or implemented for each construction activity that will result in soil disturbance. Include a schedule that identifies the timing of initial placement or implementation of each erosion and sediment control practice and the minimum time frames that each practice should remain in place or be implemented;

f. A temporary and permanent soil stabilization plan that meets the requirements of the most current version of the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, for each stage of the project, including initial land clearing and grubbing to project completion and achievement of final stabilization;

g. A site map/construction drawing(s) showing the specific location(s), size(s), and length(s) of each erosion and sediment control practice;

h. The dimensions, material specifications, installation details, and operation and maintenance requirements for all erosion and sediment control practices. Include the location and sizing of any temporary sediment basins and structural practices that will be used to divert flows from exposed soils;

i. A maintenance inspection schedule for the contractor(s) identified in Part III.A.6., to ensure continuous and effective operation of the erosion and sediment control practices. The maintenance inspection schedule shall be in accordance with the requirements in the most current version of the technical standard, New York State Standards and Specifications for Erosion and Sediment Control;

j. A description of the pollution prevention measures that will be used to control litter, construction chemicals and construction debris from becoming a pollutant source in the storm water discharges;

k. A description and location of any storm water discharges associated with industrial activity other than construction at the site, including, but not limited to, storm water discharges from asphalt plants and concrete plants located on the construction site; and

l. Identification of any elements of the design that are not in conformance with the requirements in the most current version of the technical standard, New York State Standards and Specifications for Erosion and Sediment Control. Include the reason for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is equivalent to the technical standards.

Appendix E - Site Management Plan Annual Reporting Form

Site Management Plan Annual Reporting Form
5140 Site
Yorkville, New York

A copy of this completed annual reporting form must be mailed to:

Parag Amin, Project Manager (or currently assigned Project Manager)
New York State Department of Environmental Conservation
625 Broadway, 11th Floor
Albany, NY 12233-7015
Phone: (518) 402-9662
parag.aminl@dec.ny.gov

Information contained in this form must be summarized in the Periodic Review Report (see Section 7.2 of the Site Management Plan [SMP]), which is submitted to the Department every 5 years.

Site Street Address:______________________________

Inspector:______________________ Affiliation:______________________

Inspector Address:______________________________

Phone Number:______________________ Date:______________________

Arrival Time:______________________ Departure Time:______________________

Weather Conditions:______________________

Type of Report: ☐ Routine (annual) ☐ Non-routine/Emergency

Event Type (if non-routine or emergency): ______________________________

Section 1 – Institutional Controls

1. Institutional Controls are recorded on the property deed that prohibits:
   a. vegetable gardens and farming
   b. the use of the groundwater underlying the property (without treatment rendering it safe for its intended use and pre-approval by the New York State Department of Environmental Conservation [NYSDEC])
   c. the use of the land for purposes other than commercial/industrial (as specified in the Environmental Easement)
      - Are vegetable gardens or other farm activities present? Yes ☐ No ☐
      - Is the underlying groundwater in use? Yes ☐ No ☐
      - Is the property being used for purposes other than Commercial/Industrial (e.g., residential)? Yes ☐ No ☐

   If the answer to either of the above questions is yes, notify NYSDEC immediately.

2. During the past year, was soil excavated in the area designated as having *Remaining Contamination1*? (See the SMP figures for location and depth of the *Remaining Contamination*.)

   Yes ☐ No ☐

   Were any areas of *Discovered Contamination*[2] identified?

   Yes ☐ No ☐

   If yes, describe nature of contamination: ____
   ____

   Attach description of waste characterization sampling and data, if appropriate.

   a. If the answer to <u>any</u> of the above questions is yes, please provide the following information:

      - Was NYSDEC notified: Yes ☐ No ☐

        If yes, please provide date: ___________________

      - Were the procedures outlined in the Excavation Work Plan (Appendix xx in the SMP) followed? Yes ☐ No ☐
      - Was soil characterized as a non-hazardous waste? Yes ☐ No ☐

        hazardous waste? Yes ☐ No ☐

      - Provide dates of excavation: ____
      - Provide volume of excavated soil: ____

   Attach figure and color photographs (if appropriate) showing excavation location and verification sample locations

   Attach post-excavation verification sample data with comparison to appropriate standards/criteria

   Attach copies of all laboratory data sheets and the required laboratory data deliverables required for all points sampled (to be submitted electronically in the NYSDEC-identified format)

Section 2 – Engineering Controls

1. <u>Soil Cover System</u>

   - Please describe the general condition of the soil cover systems emplaced at the facility (See SMP for extent of soil cover at facility).

     ____
     ____
     ____

   - Were any excavations or other breeches of the soil cover system during the reporting period?

[1] "*Remaining Contamination*" is defined as soil within the designated area that contains concentrations of polychlorinated biphenyls (PCBs) greater than the relevant soil cleanup objective (SCO). The *Remaining Contamination* is present at the depths shown on the attached figure.

[2] "*Discovered Contamination*" is soil that may be discovered during the course of site activities that exhibits visible, olfactory, or other evidence of contamination. *Discovered Contamination* must be characterized following the procedures outlined in the Site Management Plan.

Yes ☐ No ☐

If yes, please describe the excavation or breech:

____
____
____
____

Date of excavation or breech: ________________

Was the NYSDEC notified? Yes ☐ No ☐

- Are there any areas of erosion, loss of vegetative cover, or other damages to the soil cover (including exposure of the underlying demarcation layer) that could compromise its effectiveness as an engineering control?

  Yes ☐ No ☐

  If yes, please describe:

  ____
  ____
  ____
  ____

  Note: The NYSDEC must be notified within 48 hours of identifying any damage or defect to the foundation, structures or Engineering Control that reduces or has the potential to reduce the effectiveness of an Engineering Control, and likewise, any action to be taken to mitigate the damage or defect.

  Was the NYSDEC notified? Yes ☐ No ☐

  Note: A corrective action plan must be submitted and approved (unless and emergency condition exists) in advance of any corrective action to repair the engineering control; the NYSDEC must be notified when the corrective action is completed (see Sections 1.3 and 7.4 of the SMP).

2. Engineered Barrier (concrete floor – production space only)

- Please describe the general condition of the facility's concrete production floor.

____
____
____

- Were any openings or repair(s) made to the facility floor (production space only) during the reporting period?

  Yes ☐ No ☐

  If yes, please describe the openings/repair(s):

  ____
  ____

Date of openings/repairs: ________________

Was the NYSDEC notified? Yes ☐ No ☐

- Are there any visible cracks, fissures, or other damages to the concrete floor in the facility's production area that could compromise its effectiveness as an engineered barrier?

  Yes ☐ No ☐

  If yes, please describe:

  Note: The NYSDEC must be notified within 48 hours of identifying any damage or defect to the foundation, structures or Engineering Control that reduces or has the potential to reduce the effectiveness of an Engineering Control, and likewise, any action to be taken to mitigate the damage or defect.

  Was the NYSDEC notified? Yes ☐ No ☐

  Note: A corrective action plan must be submitted and approved (unless and emergency condition exists) in advance of any corrective action to repair the engineering control; the NYSDEC must be notified when the corrective action is completed (see Sections 1.3 and 7.4 of the SMP).

3. Encapsulation Barrier (polychlorinated biphenyls [PCB]s)

- Please describe the general condition of the encapsulation barrier on the facility's production floor.

- Were any floor openings or repair(s) during the reporting period that breeched the encapsulation barrier?

  Yes ☐ No ☐

  If yes, please describe the openings/repair(s):

  Date of openings/repairs: ________________

  Was the NYSDEC notified? Yes ☐ No ☐

- Are there any cracks, areas of flaking paint, or indications of excessive wear of the grey topcoat (as evidenced by observation of the red indicator undercoat) within the facility?

  Yes ☐ No ☐

  If yes, please describe:

  ____
  ____
  ____
  ____

  Note: The NYSDEC must be notified within 48 hours of identifying any damage or defect to the foundation, structures or Engineering Control that reduces or has the potential to reduce the effectiveness of an Engineering Control, and likewise, any action to be taken to mitigate the damage or defect.

  Was the NYSDEC notified? Yes ☐ No ☐

  Note: A corrective action plan must be submitted and approved (unless and emergency condition exists) in advance of any corrective action to repair the engineering control; the NYSDEC must be notified when the corrective action is completed (see Sections 1.3 and 7.4 of the SMP).

Section 4 - Certification

For each institutional or engineering control identified for the site, I certify that all of the following statements are true:

- The inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under my direction.
- The institutional control and/or engineering control employed at this site is unchanged from the date the control was put in place, or last approved by the Department.
- Nothing has occurred that would impair the ability of the control to protect the public health and environment.
- Nothing has occurred that would constitute a violation or failure to comply with any site management plan for this control.
- Access to the site will continue to be provided to the Department to evaluate the remedy, including access to evaluate the continued maintenance of this control.
- Use of the site is compliant with the environmental easement.
- To the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program.
- I am a qualified environmental professional as defined by 6 NYCRR Part 375-1.2(ak).
- The information presented in this report is accurate and complete.

I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class “A” misdemeanor, pursuant to Section 210.45 of the Penal Law. I, [name], of [business address], am certifying as [Owner or Owner’s Designated Site Representative] (and if the site consists of multiple properties): [I have been authorized and designated by all site owners to sign this certification] for the site.

______________________________	________________________	___________
Signature	Printed Name	Date

Appendix F – Site-Specific Health and Safety Plan

Appendix F

Site-Specific Health and Safety Plan

Site Name: 5140 Site

Site Location:

Street Address: 5140 Commercial Drive

City: Yorkville

Province/Country: New York

Site Representative/Owner: ______

Phone Number: ______

Start Date of Site Work: ______

Projected End Date of Site Work: Ongoing

HASP Prepared by: ______

HASP Reviewed by: ______

Personnel	**Responsibilities**

Appendix F
Site-specific Health and Safety Plan
5140 Site
Yorkville, New York

January 13, 2017

Consultant

WSP | Parsons Brinckerhoff
75 Arlington Street, 4th Floor, Boston, MA
02116
Direct: +1-774-413-5109
Main: +1-617-426-7330

WSP Contacts

David P. Bouchard
dave.bouchard@wspgroup.com

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Appendices

1 Introduction

This site-specific Health and Safety Plan (HASP) was prepared by WSP USA Corp for use at the 5140 Site in Yorkville, New York (Figure 1). The HASP, which is part of an overall Site Management Plan (SMP), is designed to protect future workers at the site from exposure to polychlorinated biphenyls (PCBs) that were released to the environment during the historical operation of the facility. The PCBs were the subject of remedial excavations performed at the site; however, not all of the PCBs identified in soil at the site were removed due to structural concerns that either prevented or limited the extent of excavation. The extent of the residual PCB-impacted soil (designated as *Remaining Contamination*), which is contained within one area at the site, is defined in the SMP. This area is directly adjacent the main building and, although it contains relatively high concentrations of PCBs, is limited in extent, and is unlikely to be excavated typical utility or other work at the site. Relatively low levels of PCBs were also detected on the production floor surface (i.e., those areas outside of the offices), in shallow soil beneath the main building, and in the southern portion of the site. These residual PCBs were addressed by an encapsulation barrier, an engineered barrier (the facility floor), and a soil cover system, respectively. Polychlorinated biphenyls were not detected in groundwater at the site.

This HASP outlines the health and safety objectives, project organization, and specific procedures that will be required for all activities conducted during any intrusive work. This includes the health effects and standards for known contaminants and the measures designed to account for the potential for exposure to these substances. Consideration was given during development of the document to current safety standards as defined by the U.S. Environmental Protection Agency (EPA), the Occupational Safety and Health Administration (OSHA), and the National Institute of Occupational Safety and Health (NIOSH). Specifically, the following references were consulted:

- OSHA Title 29 of the Code of Federal Regulations Part (CFR) 1910 and 29 CFR 1926;
- OSHA/NIOSH/EPA Occupational Health and Safety Guidelines for Activities at Hazardous Waste Sites;
- NIOSH Pocket Guide to Chemical Hazards;
- American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values;
- Quick Selection Guide to Chemical Protective Clothing; and the
- Ansell Edmont Industrial Chemical Degradation Guide for Gloves and Protective Clothing

The HASP was prepared in accordance with New York State Department of Environmental Conservation’s (NYSDEC’s) DER-10 Technical Guidance for Site Investigation and Remediation, dated May 2010. A concurrently-prepared Community Air Monitoring Plan (CAMP), which provides specific air monitoring protocols, is included as an appendix to the SMP (in Appendix G of the SMP) and is referenced in this plan, as appropriate.

The anticipated work covered by this HASP includes excavation of soils in areas of *Remaining Contamination* and *Discovered Contamination*, as defined in SMP. Therefore, the hazard analysis is focused on chemical and physical hazards that could arise from disturbing the unsaturated soil at the site. Activities that could potentially include contact with the groundwater were not included (PCBs were not detected as a dissolved compound at the site). Private water wells are precluded by local ordinance and the controls outlined in the SMP.

It is important to note that, while this document provides specific information regarding the known hazards at the site, it is not a substitute for individual contractor HASPs and company safety programs. It is the responsibility of each contractor to conduct their own job/task hazard analyses and prepare individual site-specific HASPs that reflect each company’s health and safety programs, policies, and procedures. This HASP will provide the baseline information necessary to prepare contractor plans.

2 Site Description and Background

The Site is located at 5140 Commercial Drive in the City of Yorkville, Oneida County, New York, in a commercial and industrial area along the Utica –Yorkville city limits in the eastern portion of Oneida County (Figure 1). The site is an approximately 1.9-acre area and is bounded to the west by Meelan's Carpet One Floor & Home, a residential flooring center (Figure 2). To the east, the site is bordered by two narrow (approximately 50 feet wide) strips of vacant land owned by DI Highway Sign & Structure, Inc., (directly adjacent) and the 5150 Corporation (further east), and beyond those properties, by Yorkville Battery, a discount battery retailer. The site is abutted to the south and southwest by O.W. Hubbell & Sons, Inc., a metal galvanizer, and by DI Highway Sign & Structure. Portions of the Hubbell property also extend to the northwest fronting on commercial drive directly west of Meelan's Carpet. The site is bounded to the north by Commercial Drive and Route 5A and further to the north by Harbor Freight & Tools, a discount tool retailer.

Onsite features include an 18,000-square-foot concrete block and sheet metal main warehouse-style building with an attached 5,000-square-foot single story concrete block office building (northeast corner) surrounded by landscaped and hardscape areas (Figure 3). Prior to 2013, the Site also included a 50-foot-wide by 60-foot-long elevated concrete pad that was located at the southeast corner of the main building (the concrete pad was removed as part of the Interim Remedial Measure [IRM] detailed below). A paved entranceway and parking area are present along the east side of the property with the paved drive extending around to the southern portion of the building to what was formerly the loading dock and rail bay for the facility. The balance of the site is covered by grass and landscaped areas.

The site is relatively flat and is easily accessible via road (Commercial Drive and Route 5A) and, if necessary, by air (suitable helicopter landing areas are available on the adjacent O.W. Hubbell property).

2.1 Operational History

The site was originally constructed in 1957 for Westinghouse Electric Corporation for use as an electrical equipment repair facility. Westinghouse operated at the facility for 29 years, after which it was sold in 1986 to Eastern Electric Apparatus Repair Company. Eastern Apparatus repaired electric motors at the facility for 12 years selling the site to the Grand Eagle Motor Repair Company in 1998, who then sold the property 4 years later to 5140 Commercial Drive, LLC. K.J. Electric operated at the property from 2002 through 2009 for electric motor repairs.

Both the production and office space were vacant between 2009 and July 2015 when the facility was sold to TSB Group and subsequently occupied by JM Door Co., Inc., of Utica, New York, an overhead door service center. JM Door is currently renovating the facility and will be using the former office portion of the building as a residential and commercial showroom for overhead doors and hardware with the former production space used as a warehouse for their products.

2.2 Previous Investigations and Remediation

Polychlorinated biphenyls were first identified as a potential concern at the site during a 1995 Phase I environmental assessment performed by Gaia Tech, Inc. The compounds were present in soil samples collected south of the main building at concentrations ranging from 9 to 148 milligrams per kilogram (mg/kg), and in several wipe samples collected from the facility floor and other surfaces in the main building at concentrations between 19 and 162 micrograms per 100 square centimeter (µg/100 cm^2). A second Phase I assessment, performed in 2010 by Sanborn, Head, & Associates (SHA), and a 1996 follow-up Phase II investigation performed by Geoscience Technical Services, refined the extent of PCBs in soil. The highest concentrations, up to 2,930 mg/kg, were detected in soil samples collected directly north and south of a concrete pad attached to the southeast corner of the main building where evidence of a surface release (i.e., staining) was noted. Significantly lower concentrations of PCBs were detected in soil samples south (up to 13 mg/kg) and east (trace concentrations) of the main building. Geoscience also performed a preliminary groundwater investigation, the results of which revealed 141 micrograms per liter (µg/l) of PCBs dissolved in the groundwater. Subsequent sampling has shown this was likely a false positive resulting from improper sampling techniques.

Expanded Phase II investigations were performed by The Palmerton Group in March and September 2011, the results of which led to two phases of remedial action. The first, conducted in September 2011, was performed to address PCBs detected in wipe samples collected by Palmerton from interior surfaces within the former production areas of the facility. Polychlorinated biphenyls were detected at concentrations ranging between 12 and 83 micrograms per 100 square centimeters (µg/100 cm^2), which were above the U.S. Environmental Protection Agency's (EPA's) 10 µg/100 cm^2 evaluation criterion. The action included cleaning of the surfaces using the PCB clean-up solvent CAPSUR® followed, for the concrete floor, by two coats (a red base layer with a grey topcoat) of Sikgard-62® solvent-free, solvent-resistant epoxy. A total of 17,628 square feet of the main building was cleaned and encapsulated.

The Palmerton Group also performed a remedial soil excavation north and south of the concrete pad in 2011 to address the affected soils detected during the earlier investigation. Although delineation was deemed complete following an extensive soil boring program completed in March, visibly-stained soil was discovered during the excavations that locally extended below 4 feet bgs (the vertical limit of the delineation). The stained area reportedly was restricted to relatively narrow (up to 3-feet wide) bands of soil directly adjacent to the north and south sidewalls of the pad. Additional PCB-affected soil was removed from both the northern and southern excavations, which eventually exposed the footers of the concrete pad at approximately 5.5 feet bgs. Confirmation soil samples collected from the floor of the excavations, and test pits subsequently excavated adjacent to the north and south sides of the pad, indicated that soils containing concentrations as high as 5,800 mg/kg were still present at depths of 6 to 8 feet bgs. The PCB-affected soils were left in place due to concerns about the structural integrity of the pad and the adjacent building foundations. These affected soils were the subject of the 2014 IRM activities (described below).

2.2.1 Follow-up Investigation

WSP conducted a series of investigations at the site in the summer and fall of 2012 designed to complete the PCB delineation around the concrete pad (the post-remediation PCB-affected soil was undefined), characterize a soil berm along the southern property line (identified as a potential concern by the owner), and assess the potential impacts to groundwater. The concrete pad investigation showed that the residual PCBs detected in soil at the base of the former remedial excavations near the pad were confined to a discrete interval within the soil profile (above the water table) and did not extend horizontally beyond the bounds of the excavation. The results of the soil berm evaluation indicated only trace levels to moderate levels of PCBs below the 25 mg/kg industrial use soil cleanup objective (SCO) used for the pad excavation work. These results, along with the existing data, were used to develop the IRM, which was designed to remove (for offsite disposal) PCB-affected soil near the concrete pad and from the southern property line[1].

The groundwater investigation included the installation and sampling of four new groundwater monitoring wells in select locations around the site. The integrity of the previously-installed wells was compromised and, thus, they could not be used for the evaluation. Samples for the analysis of PCBs were collected from each of the new wells using low flow sampling techniques. The results of the investigation did not reveal evidence of light non-aqueous phase liquid (LNAPL) in any of the wells, including MW-8. The analytical results indicated no dissolved concentrations of PCBs were present in any of the well samples collected from the site.

[1] While the 2012 follow-up investigation data indicated that the PCB concentrations in the berm were comparatively low (the PCB concentrations were three orders of magnitude below those near the pad), the soil nevertheless presented a potential human health risk due to the direct contact or inhalation exposure pathways, and a PCB migration concern, particularly as runoff. The soil piles were also identified as a nuisance (they encroach onto the paved surfaces south of the main building) and an obstacle to the redevelopment of the property.

2.2.2 Brownfield Cleanup Program Activities

Based on the follow-up investigations, WSP proposed a remedial excavation of the residual PCB-affected soil adjacent to the concrete pad and removal of the soil berm along the southern property line. These activities, which were proposed as the final remedy for the site, were outlined under the direct-to-remediation approach in the March 2013 BCP application for the site. The NYSDEC and the New York State Department of Health (NYSDOH), during their review of the application, agreed with the proposed remedial approach, but only as an IRM and not as the final remedy. The IRM would be prioritized given the concentrations detected and the potential risk to human health and the environment. WSP completed the IRM (described below) in March 2014.

The Departments also requested that additional investigation activities be performed to complete the characterization in portions of the site outside of the concrete pad and soil berm areas once the IRM was complete. These activities included:

- Additional soil sampling around the exterior of the main building, including the analysis of other parameters in addition to PCBs
- An evaluation of the soil quality beneath the building
- Additional groundwater investigation, including the installation of additional wells and sampling of the new and existing wells
- A determination as to whether soil vapor intrusion is a concern at the site
- An evaluation of floor drains, sumps, utilities, and other subsurface structures within the building to determine the flow paths and drainage points (including sediment sampling, if necessary)
- An evaluation of the storm water drainage at the facility (including sediment sampling, if necessary)
- A visual inspection of the interior surfaces (floors, walls, railings, etc.) to identify stained areas where PCBs may potentially be present

These requested activities later became the basis for the RI, which was completed in early 2015 (i.e., after the IRM). A description of the RI scope of work and the findings are summarized below.

2.2.2.1 Interim Remedial Measure

WSP implemented the IRM in February and March 2014. The remediation goals for the action were established based on the project future uses of the site (i.e., industrial), which is consistent with the local zoning and Title 6 of New York Codes, Rules, and Regulations (6 NYCRR) Part 375 industrial use classification (no recreational component on the site). The industrial use SCOs for total PCBs is 25 mg/kg; however, as a conservative measure, 5140 elected to adopt a more stringent site-specific SCO of 10 mg/kg for all of the remedial activities at the site. These same criteria were used for the RI (detailed below) and the supplemental remedial work conducted at the site.

The primary IRM design included 50-foot-long by 18-foot-wide (at grade) shored (using a slide-rail shoring system) remedial excavations both north and south of the pad and the demolition and removal of the concrete pad itself, which was necessary to access the affected soil identified below its footers. Affected soil detected beneath the concrete pad was also removed for offsite disposal. The balance of the IRM work targeted the aboveground soil berm along the southern property line and the underlying native soil (based on confirmation soil samples collected from within the berm footprint once it was removed). A total of 829 tons of non-hazardous waste soil and concrete with PCB concentrations up to 50 mg/kg was excavated and disposed of offsite at a NYSDEC-permitted facility with an additional 944 tons of Toxic Substances Control Act (TSCA) waste with PCB concentrations above 50 mg/kg excavated for disposal at a commercially-permitted TSCA waste disposal facility. A comprehensive presentation of the excavation methods and the confirmation soil sampling results are presented in the 2014 *Construction Completion Report – Interim Remedial Measure*.

The IRM achieved the overall objectives by removing the contaminated soil in and around the pad and remediating the areas to levels below the industrial-use SCO significantly reducing the PCB mass at the site. Most of the final confirmation soil samples collected from the northern and southern pad area excavations were not only below the site-specific SCO, but were below the protection to groundwater standard of 3.2 mg/kg. Similar results were obtained for the sub-berm soils along the southern property line.

The only exception was a confirmation soil sample collected during the installation of the shoring system in the northern pad area. That sample (EXC60N-8E), which was collected from the shoring excavation at a depth of 14 feet bgs, contained total PCBs (6,500 mg/kg) well above the site-specific SCO (Figure 4). WSP removed as much of the visibly stained soil near the sample location as possible; however, because of flooding in the shoring excavation and the construction of the box itself (the metal panels of the shoring system could not be lifted, once installed, to reveal the sidewalls), no additional confirmation samples could be collected. This area of *Remaining Contamination* is described in Section 2.5 below.

2.2.2.2 Remedial Investigation

WSP, in response to the Department's request for additional investigation, developed a scope of work for the RI that included the following activities:

- a groundwater investigation
- a vapor intrusion investigation
- a contaminants migration pathway analysis
- a soil investigation in and around the main building

The work was performed in the fall of 2014 with follow-up activities (groundwater sampling and soil sampling associated with the contaminants migration pathway analysis) performed in early 2015.

The results of the groundwater investigation, which included the installation and low flow sampling of three new groundwater monitoring wells (along with the existing wells), did not reveal any dissolved PCBs at concentrations above the ambient water quality standards. This includes samples from wells located directly downgradient of IRM excavation area. These data were considered significant because they demonstrated that the PCBs released to the soil near the concrete pad area, some of which had concentrations greater than 5,000 mg/kg, did not result in an impact to groundwater.

The vapor intrusion investigation included collecting four co-located sub-slab soil gas and indoor air samples and one ambient (outdoor) air sample[2]. The results revealed trace concentrations from a number of compounds, including the four chemical compounds with criteria established by the NYSDOH (tetrachloroethene, trichloroethene (TCE), 1,1,1 trichloroethane, and carbon tetrachloride). Only one of the four, TCE, was detected at concentrations that, when compared to NYSDOH's vapor intrusion decision matrix, yield a recommended action of "Monitor;" however, WSP concluded (and the Departments ultimately agreed) that, based on the lack of correlated soil detections and the conservative nature of the evaluation criteria (established for private residences) that the detections were not a concern.

A total of thirty soil borings, including two borings added as part of the contaminant migration pathway analysis, were drilled at select locations around the perimeter of and within the main building as part of the soil investigation. All of the exterior soil samples, collected 0 to 2 inches bgs and 0 to 12 inches bgs as per the NYSDEC's request. All of interior soil borings were sampled directly below the concrete floor and in the 2-foot-thick interval above the water table with additional samples collected at several locations within the facility. Soil samples were analyzed for PCBs with select samples analyzed for the additional compounds (VOCs, SVOCs, pesticides, and metals) requested by the Departments.

The soil sampling results did not reveal any appreciable concentrations of metals or organic compounds, except for PCBs. The PCB Aroclor 1260 (12.7 to 24.1 mg/kg), was detected at concentrations above the site-specific SCO of 10 mg/kg. The detections occurred in the shallow (0 to 0.17 foot bgs) soil collected from just two borings, both of which are located in the southwest corner of the site. Soil samples collected from the deeper interval (i.e., from 0 to 1 foot) in both borings did not contain PCBs at concentrations above the site-specific SCO, indicating a limited

[2] All of the samples were collected in accordance with the NYSDOH's Guidance for Evaluating Soil Vapor Intrusion in the State of New York, dated October 2006.

vertical extent. WSP concluded, based on these findings and the historical soil data for locations south of the main building, that the affected soil is likely the result of poor housekeeping (small spills and drips) possibly associated with equipment and materials (including dielectric fluids) transported on the former rail spur.

Trace levels of PCBs below the site-specific criteria, but above 1 mg/kg were detected in several other locations of the site, including beneath the building, from the area beneath the floor drain discharge line (identified during the contaminants migration pathway analysis), and, most notably, in samples collected from borings south of the main building. These detections (along with the PCB-affected soil detected in one of the historical borings), while technically below the level that would warrant remedial action (i.e., below the site-specific SCO), are, nevertheless, important in terms of the overall remedy (specifically, in respect to the clean cover requirements under a restricted use alternative). Additional discussion on these detections is presented in Section 4 below. The balance of the RI soil samples contained only trace or non-detectable concentrations below 1 mg/kg.

2.2.3 Final Remediation

The final remedy for the Site, designated as *Hot Spot Excavation with Institutional/Engineering Controls*[3,4], was implemented in July and August 2016 and included both active remediation (excavation for offsite disposal) and onsite controls to minimize the potential impact to the environment and human health. The remedial excavation portion of the design centered on three borings where PCBs were detected in surficial soil samples at concentrations above the remediation goal established during the IRM (i.e., the site-specific SCO of 10 mg/kg). Two of the borings were sampled during the RI with the third boring sampled during the 2010 Geoscience investigation. The design was later modified during the implementation of the remedy to accommodate a fourth area of affected soil, which was discovered during waste pre-characterization sampling. All four locations are directly south of the main building.

The hot spot excavation design used a grid-based excavation approach with 10-foot-square cells centered on borings containing PCBs above the site-specific SCO (i.e., the RG, as defined during the IRM). Each cell was excavated to an initial depth of 2 to 3 feet bgs. Additional soil was to be excavated if staining or confirmation soil sample results indicated that accessible PCB-affected soils extend beyond the proposed limits; however, no additional staining or other evidence was noted during the hot spot excavations and none of the confirmation soil samples contained PCBs above the site-specific SCO of 10 mg/kg. All four hot spots were excavated to the design limits.

The institutional and engineering controls included the implementation of barrier systems for the soil beneath the facility floor and areas south and east of the main building. The engineering control for soil beneath the building, the floor[5] itself, was already in place and required no further action, other than ongoing maintenance to ensure its integrity (as detailed in the SMP). For the exterior portions of the site, the engineering control design was based on a 1 foot clean soil cover system, emplaced after removing the upper 1 foot of impacted soil, that extends beyond the hot spots to include most of the area south of the building (Figure 4). This approach was adopted to address PCBs below the site-specific criteria of 10 mg/kg, but above the maximum PCB concentration of 1 mg/kg, in recognition that most of the soil south of the main building likely contains low levels of PCBs.

The hot spot excavations removed a total of 53 tons of nonhazardous PCB waste concentrations between 2.42 and 24.1 mg/kg and another 15.5 tons of hazardous soil containing PCBs above the 50 mg/kg TSCA threshold for offsite disposal at NYSDEC-permitted and commercially-permitted TSCA waste disposal facilities, respectively. An additional 585 tons of asphalt and soil containing low levels (less than 10 mg/kg) of PCBs were excavated and

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[3] As detailed in the *Alternative Analysis Report and Remedial Action Work Plan*, dated October 2, 2015.

[4] The final remedy also included sealing an interior floor drain that discharges to the ground surface (identified during the RI). The drain not only represented a potential conduit to the environment for fluid wastes that could be released by future users of the facility, but could have required a State Pollution Discharge Elimination Permit. Moreover, drains that daylight and discharge to the ground surface are no longer consistent with the best practices for an industrial facility.

[5] A floor also employs an encapsulation barrier, applied during a pre-BCP remedial action in 2011, which is designed to protect workers from residual PCBs within the concrete matrix.

replaced with a clean soil cover extending over nearly 12,000 square feet of the southern and eastern portions of the site. When combined with the IRM totals, approximately 1,467 tons of nonhazardous, 959.5 tons of TSCA-regulated waste, and more than 5 tons of other wastes and debris were removed for offsite disposal.

These combined actions restored the property to commercial/industrial standards, consistent with the intended post-remediation use identified in the 2013 BCP application, and achieved the remedial objectives of protecting human health and the environment established for the site. All of the soil detected with concentrations of PCBs above the site-specific SCO, with the exception of one small, subsurface area (detailed in Section 2.5 of the SMP), have been removed from the site. This includes the contaminated soils associated with the concrete pad (and the pad itself) that contained PCBs at concentrations up to two orders of magnitude above the evaluation criteria.

The remedial actions (and previous remedial work conducted in 2011) also addressed potential exposure routes identified within and beneath the main building, and in the surficial soil at the site by establishing appropriate engineering controls. This includes the encapsulation barrier on the facility floor (implemented prior to enrollment in the BCP program); the facility floor itself, which is an engineered barrier separating workers within the facility from low levels of PCB-affected detected beneath the structure; and the cover areas, which, together with unaffected areas, ensure that PCBs above 1 mg/kg are not present in the upper 1 foot of the soil profile anywhere on the site. These measures isolate the known or potentially-impacted areas from human exposure at the site under typical (non-intrusive) conditions and have mitigated the potential for overland flow of PCB-containing soil or sediment. None of the open human or environmental exposure routes identified during the *Alternative Analysis Report and Remedial Action Work Plan*, dated October 2, 2015, remain at the site.

3 Organization Structure for Onsite Personnel

The appropriate technical and Contractor personnel will be organized into a project team to efficiently and safely carry out any intrusive work. The successful achievement of the project goals can only be accomplished through the use of appropriate management techniques and personnel. This section provides a general structure by which lines of communication, lines of responsibility, and lines of authority will be determined.

3.1 General Site Supervisor

All intrusive activities that may result in exposure of employees to hazardous chemicals above any appropriate exposure limit will be conducted under the overall supervision of the General Site Supervisor. The General Site Supervisor's responsibilities include, but are not limited to, overall project coordination and implementation and review of all project documentation. The General Site Supervisor has the authority to commit a company's resources to accomplish the project objectives and procure necessary health and safety-related clothing and equipment. The General Site Supervisor has ultimate responsibility for implementation of any intrusive work plan. The General Site Supervisor will also address questions and concerns raised by regulatory agencies, neighboring property owners, and/or tenants during the excavation.

3.2 Health and Safety Officer

The Health and Safety Officer is responsible for ensuring that the HASP is prepared according to applicable regulations and company protocols and that it is provided to all personnel/contractors/subcontractors conducting the intrusive work. The Health and Safety Officer should be a health and safety professional with knowledge of site conditions and experience predicting, identifying, and controlling potential and expected hazards onsite. The Health and Safety Officer will ensure that any intrusive work is assessed for any predicable hazards and that the HASP provides information on how to perform the work in a safe manner while eliminating hazards to onsite personnel, contractors, site visitors, and adjacent properties. The Health and Safety Officer will coordinate with the General Site Supervisor, Site Health and Safety Coordinators, and Contractors regarding all procedures related to health and safety. The Health and Safety Officer will report directly to the General Site Supervisor and review this HASP, modifications to the HASP, and injury reports for site personnel, as required.

3.3 Field Technician/Operator

Field technicians and operators are responsible for the conducting the work as described in any intrusive work plan and as directed by the General Site Supervisor or their designee. Responsibilities include, but are not limited to organization of field activities, compliance with the provisions of the site work plan, field work, equipment operation, decontamination of equipment and personnel, field documentation and record keeping, quality control of field activities, and communication with the General Site Supervisor or their designated contact. The field team, along with the site health and safety coordinator, must assist in complying with the HASP.

3.4 Site Health and Safety Coordinator

The Site Health and Safety Coordinator is responsible for ensuring that the HASP is properly implemented and that work is conducted in a safe manner. Responsibilities also include monitoring the daily activities onsite and ensuring that all onsite employees are using assigned PPE, conducting appropriate surveillance, and reviewing decontamination procedures. Additionally, the Site Health and Safety Coordinator may perform or assign a field technician to perform personal air monitoring (screening), observing activities conducted by site employees and contractors, and maintaining notes concerning site activities in relation to personnel safety (e.g., air monitoring results, excavation activities), and ensuring effective decontamination procedures are implemented. In the event that unsafe acts are observed, the Site Health and Safety Coordinator will inform the person/persons affected by the unsafe act and (if applicable), the General Site Supervisor, and the field team members of the event. If the unsafe act or condition is not remedied the Site Health and Safety Coordinator will inform the Health and Safety Officer and General Site Supervisor, as well as stop all onsite activities until the unsafe act or condition is satisfactorily remedied.

3.5 Field Team Size

The size of any field team is determined by the nature of the field activities, the characteristics and hazards of the area of the site where work is planned, and the prescribed levels of safety protection. The field team must be large enough to ensure onsite activities are conducted safely, but not too large to sacrifice efficiency.

Depending on specific tasks, an individual or a two-person team may be adequate to monitor the implementation of the remedial action. All field activities are expected to begin in a modified Level D-type protection (Section 9) unless site-specific monitoring indicates that conditions warrant a higher level of personal protection.

The field team may be larger during periods when multiple field activities are being conducted or when visitors and other personnel are present for observations.

All personnel arriving or departing the site will log in and out with the field team leader. This information will be documented in a field log book. All activities and personnel must be cleared by the General Site Supervisor.

4 Description of Anticipated Onsite Activity Hazards

The work covered by this HASP is related to the excavation of soils in areas of *Remaining Contamination* (known residual soil contamination with concentrations above the site-specific SCO), *Discovered Contamination* (i.e., soil that may be discovered during the course of site activities that exhibits evidence of suspected contamination, or is confirmed by testing to exceed the relevant evaluation criteria), or in areas of where engineered controls have been implemented (i.e., excavations that breech the encapsulation layer/facility floor or the soil cover system; Figure 4). The physical and chemical hazards associated with these anticipated activities, which may include, but is not limited to, confined spaces; unstable excavation walls; the generation of dust containing compounds that could present concerns for inhalation or accidental ingestion; or dermal contact are encompassed in the analysis.

4.1 General Activities

It is anticipated that the onsite work covered by this HASP could include the following general tasks:

- planning and locating of excavated areas (i.e., documenting why the excavation is necessary in areas of Discovered Contamination)
- review of previous environmental reports for information regarding excavation location
- utility location/clearance
- equipment selection and mobilization to the site
- excavation activities (including potential saw cutting or coring activities within the main building)
- potential disposal of affected soil
- construction of structure or installation of utility for which the excavation was conducted
- backfill and compaction of backfill material
- resurfacing
- decontamination of equipment contacting impacted soil

Responsibilities of onsite personnel include traffic control, site/excavation control, equipment operation, review of excavation safety (i.e., competent person role), sheeting and shoring of excavated sides (if appropriate), refueling of equipment, decontamination of equipment, and recordkeeping. Generally, excavations will be conducted using hydraulically-driven excavators or back-hoes (or, in the case of well installations, a drill rig) operated by qualified personnel. Proper qualification of these personnel must be the responsibility of their employer and will not be discussed further in this document.

Any work conducted under this HASP will require a valid “Dig-Safe” ticket. Intrusive work may only begin after the legal dig-date (provided by the “Dig-Safe” organization) and all utilities have been cleared or located.

All excavation work covered by this HASP will be observed by an individual that meets the competent person requirement as set forth in OSHA’s excavation standard 29 CFR 1926 Subpart P (specifically 29 CFR 1926.650(b)). The competent person will review the intended horizontal and vertical extent of the excavated areas and determine the most appropriate means of excavation. The competent person will work closely with the General Site Supervisor to ensure that project goals are safely met. In addition to safe excavation practices, physical hazards such as working in close proximity to heavy equipment; vehicular traffic; and slips, trips, and falls can cause injuries to site workers.

Intrusive activities may be conducted in *Remaining Contamination* and *Discovered Contamination* areas of the site (Figure 4). In addition, the potential for exposure to PCBs if the encapsulation layer/facility floor or the soil cover system are breeched. Potential exposure to PCBs may occur through inhalation, dermal contact, and accidental ingestion. Hazards associated with oversight activities will be anticipated and avoided by following the safety rules and personal hygiene outlined in Appendix A.

Excavations that have restricted means for entry or exit shall be treated as a confined space in accordance with 29 CFR 1926.Suppart AA. The condition of the excavation will be reviewed by the competent person at all stages of the project. No employee may enter a space deemed to be a permit-required confined space by the Site Health and Safety Coordinator, Health and Safety Officer, Competent Person, or any other knowledgeable person without the proper training, equipment, and permitting required by the standard.

5 Exposure to Toxic Substances

The primary organic constituents of concern at the Site are PCBs in soil, which were detected above the site-specific soil cleanup objective (SCO) of 10 mg/kg in several locations around the site. Remedial excavations were performed at the site in 2014 and again in 2016 to remove as much of the PCB-affected soil as possible; however, one area of *Remaining Contamination* could not be addressed due to structural concerns associated with the main building. Confirmation soil samples collected from this area indicated a PCB concentration of 6,500 mg/kg. This area is limited in extent and is more than 10 feet below the ground surface. Excavations in this area are considered unlikely due to the depth and proximity to the foundation of the main building.

Polychlorinated biphenyls were also detected in the soil beneath the facility floor and in a large area south of the main building. Concentrations of the PCBs in these areas, which were below the site-specific SCO of 10 mg/kg, but generally above the unrestricted SCO of 1 mg/kg, were addressed by the implementation of an engineered barrier (the concrete floor beneath the production space of the facility) and a soil cover system. The extent of these barrier systems is depicted in the SMP and in Figure 4. Concentrations of PCBs were also detected on the surface of the concrete floor of the facility. The PCBs on the floor were remediated to the extent practical with any remaining PCBs (in the concrete itself) encapsulated using a two-layer epoxy coating. The encapsulation barrier is present in all areas of the former production floor of the facility.

Polychlorinated biphenyls were not present in groundwater and no other significant concentrations of organic or inorganic compounds were detected at the Site.

Based on these data, the action levels for potential exposure to compounds of concern will be based on PCBs. An aerosol particulate monitor will be used to screen for dust levels (PCBs are generally non-volatile, but can adhere to dust particles) that may present a health concern. NIOSH Pocket Guide to Chemical Hazards for the above listed chemicals of concern can be found in Appendix B.

Potential chemical exposures routes could be through inhalation of particulates containing PCBs (including those generated during any saw cutting, coring, or other concrete penetration activities within the main building), dermal contact with soil or concrete debris containing PCBs, and accidental ingestion. Engineering controls (e.g., dust suppression; see the Excavation Work Plan in the SMP) will be established to minimize these exposures. Direct contact exposures will be reduced by strict adherence to personal protective equipment requirements and established work zones, which includes exclusion zones, contaminant reduction zones, and support zones. Potential exposure risks will be reduced by establishing and implementing health and safety procedures, including use of PPE, and personnel and equipment decontamination.

6 Hazard Assessment

6.1 Chemical Hazards

A literature review was conducted to identify potential health effects, exposure limits, and concentrations that are immediately dangerous to life and health (IDLH) for PCBs (as represented by Aroclor 1254; Appendix B). Generally, exposure limit data are expressed as time weighted averages (TWAs). Exposure limits promulgated in the OSHA regulations are referred to as permissible exposure limits (PELs), which are legally enforceable. Exposure limits established by NIOSH are recommended exposure limits (RELs). The American Conference of Governmental Industrial Hygienists (ACGIH) adopts values for exposure limits referred to as threshold limit values (TLVs). ACGIH further divides some TLVs into ceiling limits, and short-term exposure limits. Lastly, the National Institute for Occupational Safety and Health publishes recommended exposure limits (RELs) for a relatively small number of compounds.

Based on previous investigations, PCBs and their available exposure limits and IDLH concentrations at the property are included in presented in Appendix B. This does not preclude the chance of encountering other constituents while onsite. All activities and associated levels of protection described herein are subject to actual field conditions and, thus, may change during the field activities.

Exposure limits and IDLH values are used to establish which monitoring instruments will be needed. For example, collection methods and laboratory analysis methods vary according to the constituent(s) of concern. A document review has been conducted to ensure approved scientific methods are followed for all worker protection-related sampling.

These data are also used to establish action levels for upgrading to higher levels of PPE and are needed to select the appropriate types of outer garments, gloves, and respirator cartridges. Action levels for respiratory protection upgrade are calculated by adjusting the PEL or TLV of a substance by a safety factor and NIOSH-recommended respirator protection factor. The safety factor is based on various factors, including waste mix, site conditions, synergistic effects, monitoring equipment efficiency, and warning properties such as odor. When readings on the monitoring instruments exceed the specified action levels, adjustments to the next highest level of protection will be implemented.

Action levels triggering an upgrade from Level D to Level C are established by examining exposure limit data to select the compound with the lowest PEL, REL, or TLV as a reference compound. All breathing zone readings are then compared to the reference compound. In all cases, the action level will be established at one-half of the lowest exposure level (i.e., PEL, REL, or TLV). Monitoring for PCBs on airborne particulate will be conducted using an aerosol particulate monitor. The basis for the monitoring at the site will be the ACGIH TLV of 0.5 milligrams per cubic meter (mg/m^3). The deployment and monitoring frequency of additional aerosol monitors (i.e., beyond those used for onsite monitoring) is covered in the CAMP, which is appended to the SMP (Appendix G of the SMP).

High-Efficiency Particulate Air (HEPA/P-100) or HEPA-organic vapor (HEPA/OV) cartridges (NIOSH-approved) will be worn as necessary for respiratory protection.

6.1.1 Monitoring and Action Levels

Concentrations of PCBs have been detected in soil samples during previous investigations at this property. Polychlorinated biphenyls can enter the body by inhalation (via dust particles), ingestion, eye and skin contact, and absorption through the skin. Exposure pathways and short-term effects such as eye and skin irritations can be identified promptly; however, long-term effects such as liver damage or reproductive effects may not easily be detected until chronic damage has occurred (see Appendix B). It is important that all personnel involved in field activities adhere to the recommended personal protective procedures advised by the site health and safety coordinator to reduce the potential for exposure. Any excavation activities performed on the property will be initiated in Level D protection (Section 9). The worker breathing zone will be monitored using an aerosol particulate monitor.

Respiratory protection upgrades for generally non-volatile constituents, such as PCBs, are typically determined by calculating a surrogate dust exposure limit. This yields an action level PCB-contaminated dust that can be easily monitored using aerosol particulate monitors. The surrogate dust level is calculated using the maximum concentration of the constituent detected to obtain the most conservative action level; however, in the case of the 5140 Site, the maximum concentration detected at the site, 6,500 mg/kg results in a relatively high surrogate dust action level[6] of 38 mg/m^3. This calculated surrogate value exceeds the action level for nuisance dust of 5 mg/m^3, which, because it is lower than the surrogate value, effectively becomes the action level for the site.

6.2 Physical Hazards

The potential for injuries inherent to working near operating heavy equipment and climatic variables represent additional hazards, especially because equipment operators may be wearing restrictive clothing. Potential injuries may also result from slip, trip, and fall hazards, which are present on any worksite. Aboveground and underground piping, electrical systems, and other utilities will be located before the commencement of any intrusive work at the site.

Onsite personnel are not permitted to enter any excavation that is not properly sloped or shored to prevent collapse and verified by a competent person. In the event that the excavations extend to depths deeper than 5 feet, a professional engineer may be needed to evaluate shoring requirements and design shoring systems to prevent collapse during excavation excursions. Drawings showing the planned excavations must be present onsite at all times for review.

A competent person should determine if properly sloped and/or shored excavations are confined spaces or permit-required confined spaces. The determination will be based on general site conditions such as:

- conditions of the excavation have been reviewed by a competent person as defined by OSHA
- sides and edges are protected from collapse as the regulations require
- groundwater or surface water is not present
- there is no atmospheric hazard or other predictable hazard within the excavation cavity

A person with appropriate training and experience, who will be onsite during all aspects of excavation activities, should serve as the competent person as defined by OSHA 29 CFR 1926.650(b) for excavation safety. In this role, oversight personnel will have reviewed OSHA regulations for excavations and become familiar with the soil types present at the site.

Before entering any excavation, the competent person shall:

- inform the General Site Supervisor and Site Health and Safety Coordinator of the intent to enter the excavation
- inspect the side slopes and offsets for compliance with the structural engineer’s plans
- monitor breathing space with the appropriate monitoring device (before and during entry)

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[6] The action level for dust-borne PCBs was calculated as follows:

$$([TLV_{PCB} / Concentration_{PCB}] \times 1\ E06)/2 = \text{Action Level } (mg/m^3)$$

Where:
TLV_{PCB} = TLV for PCBs (inhalation; 0.5 mg/m^3)
$Concentration_{PCB}$ = concentration of chromium detected in soil at the site (100 mg/kg)

- assure that equipment and excavation spoils are at least 2 feet away from the edge of excavations
- remove any materials capable of rolling or falling
- have a buddy present at the top of the excavated slope
- be cognizant of unforeseen conditions

If any condition is present that poses actual or perceived risk to the sampling or oversight personnel, no entry should be permitted.

Onsite work may occur during periods of extreme hot or cold weather. Site personnel must be aware of hazards associated with heat and cold stress while conducting sampling activities in PPE. Appendix C provides further details for recognizing heat stress and Appendix D provides further details for recognizing cold stress.

If an accident occurs, the nearest medical assistance will be sought as specified in Section 12.

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7 Site Controls and Decontamination

The following section defines the measures and procedures for maintaining site control. Site control is an essential component in the implementation of the site health and safety program.

7.1 Site Entry

The property can only be accessed via Commercial Drive, which is a local service road that parallels a portion of Route 5A. No gate or fencing is currently present at the intersection of this road and the driveway east of the main building. Access to the rest of the site is generally limited by fencing (along the southern property line, a stand of trees along the eastern property line, and the main building along the western property line.

To further restrict access during field operations and to protect third parties not involved with the site work covered by this HASP, an exclusion zone will be established for work areas. Caution tape will be utilized to identify each exclusion zone. To maintain a safe working environment, each person who enters the site work zone shall have the required hazard communication, personal protective equipment, and materials handling and storage training as required by the following OSHA standards:

- 29 CFR 1926 Subpart C – General H&S Provisions
- 29 CFR 1926 Subpart E – PPE and Life Saving Equipment
- 29 CFR 1926 Subpart H – Materials Handling and Storage
- 29 CFR 1926.59 – Hazard Communication
- additional task-specific requirements outlined in this HASP

Additional training may be required depending on the type of work and the location of the work onsite. Individual contractors are responsible for ensuring that their employees receive the appropriate training based on their assigned tasks. Access to the site shall be provided at reasonable times to contractors, agents, and consultants, after verifying that they have sufficient training and experience, for the purposes of inspections and work monitoring.

7.2 Work Zone Definition

Work zones will be established at the site during intrusive tasks that may expose remediation workers to contaminants (e.g., excavation activities). A description of these work zones is presented below:

- The Exclusion Zone (EZ) is the area where contamination is either known or likely to be present, and because of a planned activity, will provide a potential to cause harm to personnel. Entry into the EZ requires the use of PPE. An EZ will be established around each intrusive activity. The EZ will be monitored using an aerosol particulate monitor. Barriers for activity isolation will be based on the location and the hazard potential of the activity. Personnel in this area will be required to have a respirator available and will wear protective clothing as specified by the Site Health and Safety Coordinator for the activity. Frequent air monitoring (using the devices listed above) will be conducted at the boundary of the EZ and in the breathing zone. The EZ boundary may be modified to ensure no unprotected persons are exposed to unacceptable levels of air contaminants. For this project, the EZ will encompass a 20-foot zone around all excavation areas. Permission to enter the EZ will only be granted to authorized individuals, including visitors, after they have received the information listed in this section.
- The Contamination Reduction Zone (CRZ) is the area where remediation personnel conduct personal and equipment decontamination. It is essentially a buffer zone between contaminated and clean areas. Activities to be conducted in this zone will require site specific training and PPE.

- The Support Zone (SZ) is situated in clean areas where the chance to encounter hazardous constituents or conditions is minimal. PPE is therefore not required. Health and safety sampling equipment will be stored in the support zone.

When work zones are established, only those visitors who are authorized by the health and safety officer or coordinator will be allowed to enter the CRZ or EZ. All visitors who enter the CRZ or EZ at the site must first:

- submit documentation demonstrating current OSHA-required training
- submit documentation demonstrating current medical clearance for work using respirators including an valid fit test.
- review the site HASP
- agree to follow the procedures and requirements specified in the HASP
- sign the Site Safety Certification

In addition, visitors who enter a CRZ or EZ must follow all OSHA requirements including medical monitoring, training, and respiratory protection procedures. An example medical monitoring program is included in Appendix E. Any visitor who does not comply with the HASP will be requested to leave the site. All violations of the HASP will be recorded in the site log by the site health and safety coordinator.

Remediation personnel leaving the EZ will undergo the decontamination procedures outlined in Section 7 and in Appendix F while in the CRZ. Lined garbage cans, buckets, wash basins, non-phosphate soap solutions, rinse water, and scrub brushes will be provided as needed.

7.3 Site Communication

Successful communications between remediation field personnel is essential. The following hand signals will be used:

- Hand gripping throat – out of air, can't breath
- grip partner's wrist or both hands around waist – Leave area immediately
- hands on top of head – Need assistance
- thumbs up – Okay, I am all right, I understand
- thumbs down – No, negative

In addition, a series of three extended car horn blasts will be the emergency signal to indicate that all personnel must evacuate the work area.

7.4 Decontamination

Decontamination is the process of removing or neutralizing contaminants that accumulated on personnel and equipment during site activities. Decontamination protects workers from hazardous substances that may contaminate and eventually permeate the protective clothing, respiratory equipment, sampling equipment, vehicles, and other equipment used onsite. Proper decontamination protects all site personnel by preventing the transfer of harmful materials into clean areas, the mixing of incompatible materials, and the uncontrolled transportation of contaminants from the site. Decontamination at the site will take two forms: equipment and personnel.

7.4.1 Equipment Decontamination

Decontamination of equipment will prevent the removal of hazardous chemicals from the site to offsite areas and prevent cross-contamination from dirty to clean areas of the site. Equipment to be decontaminated includes all excavation equipment and tools which may come into contact with the potentially contaminated media and reusable sampling equipment. No equipment decontamination will be required unless the excavation or sampling activities are within *Remaining* or *Discovered Contamination* areas.

As necessary, a bermed decontamination pad will be installed at the site. The pad will consist of polyethylene sheeting, or equivalent impermeable material, and a collection sump. Large equipment and vehicles, which require decontamination, will be cleaned inside the decontamination area. Rinsate water derived from decontamination of sampling, excavation, and construction equipment will be pumped into Department of Transportation-compliant (DOT-compliant) 55-gallon steel drums. The rinsate will be handled appropriately for treatment and disposal.

7.4.2 Personnel Decontamination

The health and safety plan specifies the correct level of personal protection to be worn based on the conditions and potential for exposure. Personal decontamination procedures are provided in Appendix F. These procedures need only be followed if the work performed is located within the area of contaminants. Work performed in areas outside the contaminated area will not require that workers decontaminate their PPE. Determinations of contaminated areas will be made by the Site Health and Safety Coordinator and approved by the General Site Supervisor or designated person. No personnel decontamination will be required unless the excavation or sampling activities are within Remaining or Discovered Contamination areas.

7.5 Disposal of Impacted Materials

Various waste streams may be generated during excavation activities at the site. These streams may include:

- rinsate from decontamination of equipment
- disposable personal protective and sampling equipment
- disposable barriers (e.g., plastic sheeting)

The decontamination rinsate will be placed in DOT-compliant 55-gallon drums by the Contractor. After completion of the site activities, the water will be sampled and disposed of accordingly. Any excess soil removed during the excavation activities will be characterized and reused, recycled, or disposed of in accordance with the SMP.

PPE used in areas outside the contaminated areas will be disposed as solid waste. PPE used during the construction activities will be decontaminated and disposed of as solid waste. If the PPE cannot be decontaminated, it will be properly disposed.

8 Excavation Requirements

The earthwork contractor is responsible for complying with applicable excavation requirements in accordance with 29 CFR 1926.651. If necessary, the contractor shall stipulate specific excavation requirements for the work to be performed at the site in their health and safety plan. At a minimum, the contractor's plan should address the following:

- competent person requirements
- surface encumbrances
- underground installations (including any legacy cesspools or leach pools)
- access and egress
- exposure to vehicular traffic
- exposure to falling loads
- warning system for mobile equipment
- hazardous atmospheres
- emergency rescue equipment
- standing water and water accumulation
- stability of adjacent structures
- protection from loose rock or soil
- inspections
- fall protection
- protection from overhead power lines
- protective systems
- confined space entry
- respirator use and fit testing

The specific procedures for handling potentially-impacted soil or concrete at the site are governed in the excavation work plan included in the SMP.

9 Level of Protection

All site personnel responsible for the implementation of onsite activities will have completed all necessary safety training based on their assigned tasks. Before personnel arrive onsite, each contractor will be responsible for certifying that their employees meet the OSHA training requirements, and that a site-specific health and safety plan has been prepared for the work to be conducted. Each employee will provide documentation certifying dates and types of training. In addition, personnel must also present documentation of the annual 8-hour refresher training.

The majority of site activities are expected to be performed in Level D PPE. Modifications of this level is permitted and routinely employed during site activities to maximize efficiency. Levels of protection are selected based on the following:

- type and concentration of the chemical substances in the ambient atmosphere and their toxicity
- potential for exposure to substances in air, liquids, or other materials personnel may come into contact with during the work
- knowledge of chemicals onsite along with their properties such as toxicity, route of exposure, and contaminant matrix

In situations where the type of chemicals, chemical concentrations, or possibilities of contact are not known, the appropriate level of protection will be selected based on professional experience and judgment until the hazards can be better identified.

The current PPE assessment was based on the anticipated hazards of work activities using existing site characterization data. Proper modifications to the level of PPE to be used will be made as necessary as determined by the Site Health and Safety Coordinator or Health and Safety Officer. The types of sampling that may be performed include instantaneous organic vapor monitoring, analyte specific colorimetric analysis, and OSHA and NIOSH reference method sampling. This monitoring will be performed at a frequency and duration to adequately assess potential hazards at the site.

10 Personal Protective Equipment

At a minimum, Level D will consist of the following equipment:

- hard hat and hearing protection, as needed, around heavy equipment
- steel-toe work boots
- safety glasses
- polyvinyl chloride surgical or latex gloves, if contacting impacted soil
- high visibility vest or clothing
- Tyvek® or Saranex®-coated Tyvek® coveralls (if deemed necessary by health and safety personnel)

Level C may consist of the following equipment:

- all level D PPE
- dual-cartridge full-face or half face air-purifying respirator (NIOSH approved)
- organics and dust respirator cartridges
- Tyvek® or Saranex®-coated Tyvek® coveralls (if deemed necessary by health and safety personnel)
- outer latex booties
- inner polyvinyl chloride, nitrile, or latex surgical gloves
- outer nitrile, viton, neoprene, or butyl gloves
- goggles, or face shields as dictated by washing activities

Respirators will be available but not worn unless vapors and/or PM exceed established action levels. Employers will provide PPE for their employees.

The fit of the face piece-to-face seal of the respirator affects its performance. The site health and safety coordinator will be responsible for ensuring that a good seal is maintained. After each day's use, the respirator will be inspected, cleaned, and stored.

Damaged PPE will be replaced immediately. Backup equipment will be kept onsite for replacement as necessary.

The following protective equipment will be discarded and replaced daily or sooner if damaged or inadequate:

- respirator cartridges
- Tyvek® coveralls
- outer booties
- inner surgical gloves
- outer gloves

Procedures for putting on PPE are given in Appendix F. Item 15 in Appendix F outlines procedures for containerizing PPE and personal decontamination wastes.

The level of protection provided by PPE selection may be upgraded or downgraded by the site health and safety coordinator based on changes in site conditions or findings of investigations. When a significant change occurs, the hazards will be reassessed. Some indicators of the need for reassessment are as follows:

- the start of a new work phase, such as the start of work on a different portion of the site
- a change in job tasks during a work phase
- a change of weather

- encountering contaminants other than those previously identified
- a change in ambient levels of contaminants
- a change in work scope that affects the degree of contact with contaminants

10.1 Inspection

Proper inspection of PPE features several sequences of inspection depending on specific articles of PPE and its frequency of use. The different levels of inspection are as follows:

- inspection and operational testing of equipment received from the factory or distributor
- inspection of equipment as it is issued to workers
- inspection after use or training
- periodic inspection of stored equipment
- periodic inspection when a question arises concerning the appropriateness of the selected equipment or when problems with similar equipment arise

The primary inspection of PPE in use for activities at the site will occur before use and will be conducted by the user. This ensures that the device or article has been checked out by the user and the user is familiar with its use.

11 Onsite Safety Equipment

Several pieces of safety equipment will be provided near the work area. A PID and colorimetric indicator tubes will be used to detect organic vapors in the breathing zone of the workers upwind and downwind of each excavation areas. It will also be used to measure background air concentrations before the start of work. If necessary, personal air monitoring pumps will be used to collect breathing zone air samples. A first aid kit will be kept onsite near the work area. The kit must include, at a minimum:

- 1 Absorbent compress, 32 sq. in. (81.3 sq. cm.) with no side smaller than 4 in. (10 cm)
- 16 Adhesive bandages, 1 in. x 3 in. (2.5 cm x 7.5 cm)
- 1 Adhesive tape, 5 yd. (457.2 cm) total
- 10 Antiseptic, 0.5g (0.14 fl oz.) applications
- 6 Burn treatment, 0.5 g (0.14 fl. oz.) applications
- 4 Sterile pads, 3 in. x 3 in. (7.5 x 7.5 cm)
- 1 Triangular bandage, 40 in. x 40 in. x 56 in. (101 cmx 101 cm x 142 cm)

Awareness of the location of the nearest telephone, water supply, and sanitary facility at each field activity location will be acknowledged by all appropriate personnel.

12 Contingency Plan and Emergency Procedures

During the daily site briefings, all employees will be trained in and reminded of provisions outlined in the emergency response plan, communication systems, and evacuation routes. This plan will be reviewed and revised, if necessary, on a regular basis by the site health and safety coordinator. This will ensure that the plan is adequate and consistent with prevailing site conditions.

12.1 Personnel Roles and Lines of Authority

The Site Health and Safety Coordinator has primary responsibility for responding to and correcting emergency situations. Possible actions may involve evacuation of personnel from the site. All employers are responsible for addressing any emergencies resulting from their work, establishing the proper incident command structure, and implementing any intrusive work, as necessary.

12.2 Evacuation Routes and Procedures

It is possible that a site emergency could necessitate evacuating all personnel from the site. If such a situation should arise, the Site Health and Safety Coordinator will notify the field team and other onsite personnel, if present, of this event and the appropriate series of car horn blasts will be given for site evacuation. It is the responsibility of these individuals to evacuate personnel in a calm, controlled fashion.

All available vehicles located outside of the work area will be used in the evacuation. All personnel will exit the site, making sure to be upwind of smoke, vapors, or spill location, and meet at a rendezvous point selected by the site health and safety coordinator. The rendezvous point will be chosen based on wind direction, severity, and type of incident. The site health and safety coordinator will conduct a head count to ensure all personnel have been evacuated safely.

The site log of onsite personnel will be used to ensure that all individuals have safely exited the site. If someone is missing, the site health and safety coordinator will alert the appropriate onsite and county emergency response personnel.

12.2.1 Emergency Contact and Notification System

To obtain medical assistance as soon as possible in case of an emergency, the following telephone numbers, addresses, and directions for the nearest medical treatment facilities will be posted in each on-site vehicle:

Ambulance Company: 911

Hospital	**St. Elizabeth Hospital** 2209 Genesee Street, Utica, NY 13501 (315) 798-8100
Police:	911
Fire Department:	911
State Poison Control:	(800) 222-1222

Directions to the St. Elizabeth Hospital:

- Head northeast on Commercial Drive toward Main Street
  1 min (0.4 mi)
- Turn right onto Main Street
  59 s (0.2 mi)
- Turn left onto Campbell Ave
  2 min (0.9 mi)
- Continue on Champlin Ave to Utica
  5 min (2.1 mi)
- Continue on Sunset Ave to Genesee Street
  2 min (0.6 mi)
- Turn right onto Genesee Street, the destination will be on the left.

A map showing the route from the site to the hospital is presented in Appendix G. The estimated distance is approximately 4.4 miles.

In an emergency situation, all personnel will take direction from the Site Health and Safety Coordinator or the incident commander.

12.3 Emergency Medical Treatment Procedures

In an emergency, the primary concern is to prevent the loss of life or severe injury to site personnel. If immediate medical treatment is required, decontamination will be delayed until the condition of the victim has stabilized. If decontamination can be performed without interfering with first aid or if a worker has been contaminated with an extremely toxic or corrosive material that could cause severe injury, decontamination will be performed immediately. If an emergency caused by a heat-related illness develops, protective clothing will be removed from the victim as soon as possible to reduce heat stress.

The following standard emergency procedures will be used by onsite personnel. The site health and safety coordinator shall be notified of any onsite emergencies and be responsible for ensuring that the appropriate procedures are followed. These procedures shall be rehearsed regularly as part of the overall program for the site.

- **Minor injuries:** If the injury or illness is minor, full decontamination should be completed and first aid administered before the injured is transported to St. Elizabeth Hospital.
- **Major injuries:** If the patient's condition is serious, call 911 for ambulance and paramedic support. At least partial decontamination should be completed. (i.e., complete disrobing of the victim and redressing in clean coveralls or wrapping in a blanket). First aid should be administered while awaiting an ambulance or paramedics. The choice of hospital shall be made by the ambulance personnel.

Any person being transported to a clinic or hospital for treatment should take with them information of the chemical or chemicals they have been exposed to at the site.

12.4 Medical Emergencies

Four medical emergencies have been identified as requiring implementation of emergency procedures. These emergencies are cardio-pulmonary emergencies, physical injuries, heat-related injuries, cold-related injuries, and chemical exposures. Heat-related injuries are discussed in Appendix C and cold-related injuries are discussed in Appendix D.

12.4.1 Cardio-Pulmonary Emergencies

Cardio-pulmonary emergencies are life-threatening situations requiring immediate response of trained individuals to prevent death. At no time will these emergencies be considered less than life-threatening. These emergencies include heart attack, cardiac arrest, or respiratory arrest. Response and emergency treatment will be rendered without regard to protective equipment or decontamination procedures. As a precaution, and if necessary, a representative from the site will accompany the worker to the hospital in order to advise on matters of decontamination.

12.4.2 Physical Injuries

Physical injuries can range from minor sprains, to internal injuries, to an open compound fracture. Depending on the severity of the injury, treatment may be delayed for decontamination procedures to be performed. The level of decontamination will be directly related to the seriousness of the injury and will be determined by the site health and safety coordinator or his/her designee.

The outside garments can be removed (depending on the weather) if they do not cause delays, interfere with treatment, or aggravate the injury. Respiratory masks and chemically-resistant clothing should be removed from the injured person if conditions allow (e.g., injured persons are outside of the work zone). If the outer contaminated garments cannot be safely removed, the individual should be wrapped in blankets to help prevent contaminating the inside of the ambulance or medical personnel. Outside garments are then removed at the medical facility. One exception would be if it is known that the individual has been contaminated with an extremely toxic or corrosive material which could also cause severe injury of loss or life.

If an employee working in a contaminated area is physically injured, appropriate first aid procedures will be followed. Depending on the severity of the injury, emergency medical response may be sought. If the employee can be moved, he/she will be taken to the edge of the work area (on a stretcher, if needed) where contaminated clothing will be removed, additional emergency first aid will be administered, and transportation to a local emergency medical facility will be arranged.

12.4.3 Chemical Exposure

Exposure to chemicals can be divided into two categories:

- injuries from direct contact, such as acid burns or inhalation of toxic chemicals
- potential injury due to gross contamination on clothing or equipment

For the inhaled contaminant, treatment can only be provided by qualified physicians. If the contaminant is on the skin or in the eyes, immediate measures must be taken to counteract the substance's effect. First aid treatment usually is flooding the affected area with water for a minimum of 15 minutes; however, for a select few chemicals, water may cause more severe problems.

When protective clothing is grossly contaminated, the constituents may be transferred to treatment personnel or the wearer and cause injuries. Unless severe medical problems have occurred simultaneously with splashes, the protective clothing should be washed off as rapidly as possible and carefully removed. Portable eye washes will be available to provide a means of flushing and washing such contamination.

If the injury to the worker results from a chemical splash or uncontrolled release, the following first aid procedures are to be instituted:

- Eye Exposure - If contaminated solids or liquids get into the eyes, wash eyes immediately at the emergency eyewash station using large amounts of water and lifting the lower and upper lids occasionally. Obtain medical attention immediately. Contact lenses will not be worn when working onsite.

- Skin Exposure - If contaminated solids or liquids get on the skin, promptly wash the contaminated skin using soap or mild detergent and water. Obtain medical attention immediately when exposed to concentrated solids or liquids.
- Breathing - If a person breathes in large amounts of contaminants, move the exposed person to fresh air at once. If breathing has stopped, perform artificial respiration immediately. Keep the affected person warm and at rest. Obtain medical attention as soon as possible.
- Swallowing - When contaminated solids or liquids have been swallowed and the person is conscious, attempt to obtain information from the person to aid in identifying the substance swallowed. Contact the poison control center immediately. Transport the person to the hospital and monitor the airway constantly.

12.5 Fire/Explosion

On notification of a fire or explosion onsite, the designated emergency signal of a series of three extended horn blasts shall be sounded and all site personnel will move to the designated meeting location. The fire department shall be alerted and all personnel moved to a safe distance from the emergency area.

Fire extinguishers will be present at the site. If a small, localized fire begins, chemical fire extinguishers will be used to bring the occurrence under control. If necessary and feasible, a fire blanket, soil, or other inert materials will be placed on the burning area to extinguish the flames and minimize the potential for spreading. Local fire-fighting authorities will be contacted for notification and assistance.

12.6 Personal Protective Equipment Failure

If any site worker experiences a failure or alteration of protective equipment that affects the protection factor, that person and his/her buddy shall immediately leave the work area. Re-entry shall not be permitted until the equipment has been repaired or replaced.

12.7 Other Equipment Failure

If any other equipment onsite fails to operate properly, the field team leader or the site health and safety coordinator shall be notified to determine the effect of this failure on continuing operations onsite. If the failure affects worker safety or prevents completion of the activity, all personnel shall evacuate the work area until the situation is evaluated and appropriate actions taken.

In all situations when an emergency results in the evacuation of a work area, personnel shall not re-enter the area until the following conditions have been met:

- the conditions resulting in the emergency have been corrected
- the hazards have been reassessed
- the HASP has been reviewed
- site personnel have been briefed on any changes in the HASP

13 Authorized Changes to the Health and Safety Plan

All changes to the HASP are to be documented by completing a form for Modification of Site Health and Safety Plan (Appendix H). This completed form must be signed by the Site Health and Safety Coordinator, the Health and Safety Officer, and the General Site Supervisor. A copy of each completed form is to be included with each copy of the HASP and made a part of the project files.

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14 References

American Conference of Governmental and Industrial Hygienists. 1999. Threshold Limit Values and Biological Exposure Indices for 1999. Cincinnati, Ohio.

Ansell Edmont Industrial, Chemical Degradation Guide for Gloves and Protective Clothing.

Guidance for Conducting Remedial Investigations/Feasibility Studies under CERCLA.

National Institute of Occupational Safety and Health/Occupational Safety and Health Administration. 2010. Pocket Guide to Chemical Hazards (online).

National Institute of Occupational Safety and Health/Occupational Safety and Health Administration/U.S. Coast Guard/U.S. Environmental Protection Agency. 1985. Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities.

OSHA 29 CFR 1900 to 1926.

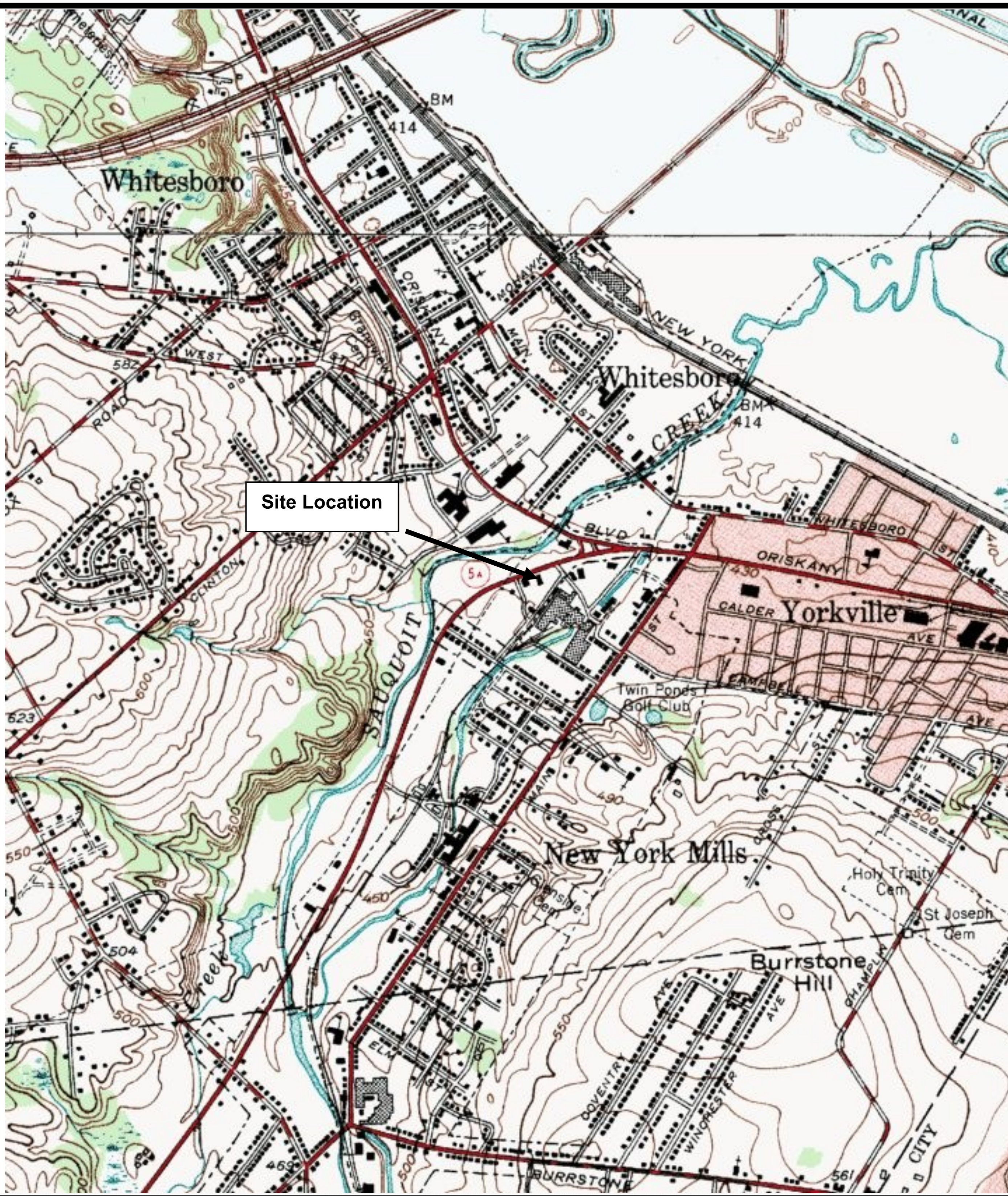
Quick Selection Guide to Chemical Protective Clothing.

U.S. Environmental Protection Agency. 1984. Standard Operating Guides. Office of Emergency and Remedial Response Support Division. Edison, New Jersey.

15 Acronym List

mg/m^3	milligrams per cubic meter
ACGIH	American Conference of Governmental Industrial Hygienists
bgs	below ground surface
CAMP	Community Air Monitoring Plan
CFR	Code of Federal Regulations
COC	chemical of concern
CRZ	contaminant reduction zone
EPA	U.S. Environmental Protection Agency
DCE	dichloroethene
EZ	exclusion zone
HASP	Health and Safety Plan
HEPA	High-Efficiency Particulate Air
IC/EC	Institutional or Engineering Control
IDLH	immediately dangerous to life and health
NIOSH	National Institute of Occupational Safety and Health
NYSDEC	New York State Department of Environmental Conservation
OSHA	Occupational Safety and Health Administration
PEL	permissible exposure limit
PPM	parts per million
SCO	soil cleanup objective
SMP	Site Management Plan
SZ	support zone
TLV	threshold limit values
TWA	time weighted average

Figures



REFERENCE:
7.5 MINUTE SERIES TOPOGRAPHIC QUADRANGLE
UTICA WEST, NEW YORK
PHOTOREVISED 1955 SCALE 1:24,000

0 1000 2000 4000
SCALE, FEET

N

DWG Name:
Checked:
Approved:
Drawn By:
A

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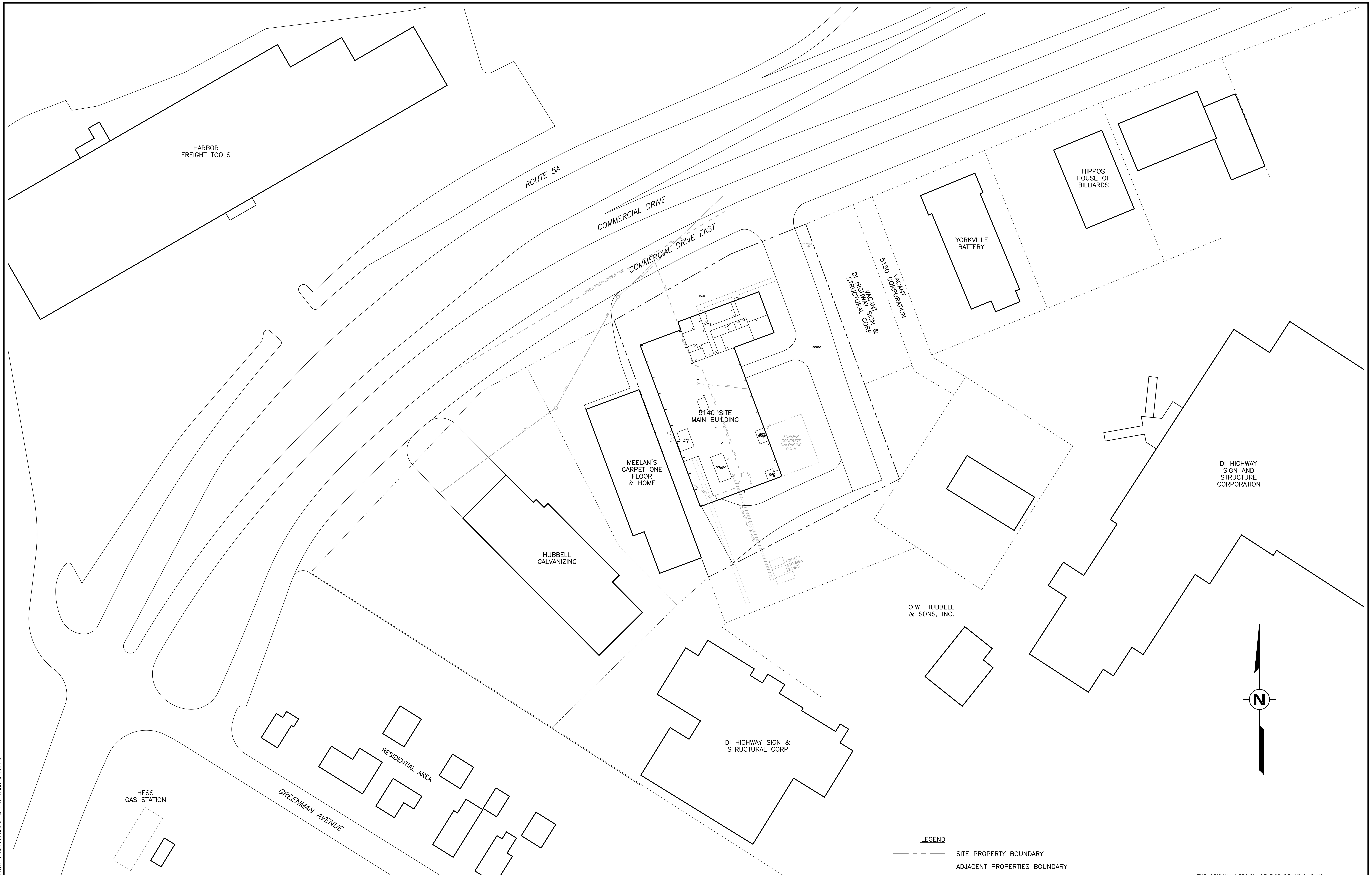
75 Arlington Street, 4th Floor,
Boston, MA 02116
(617) 426-7330

FIGURE 1

SITE LOCATION MAP

5140 COMMERCIAL DRIVE EAST
YORKVILLE, NEW YORK



REFERENCES:

1. PALMERTON GROUP FIGURE 3, TITLED EXCAVATION AREAS.
2. GOOGLE EARTH PRO, IMAGE DATED 7-21-2011.
3. BUILDING, WELLS, SOIL BORINGS, AND HAND AUGERS SURVEYED BY RICHARD RYBINSKI, L.S. AUGUST 3, 2012, DRAWING NUMBER YORK812F.DWG.
4. KUCERA AND ASSOCIATES, INC. DRAWING, TAX MAP NUMBER 305.18, TOWN OF WHITESTOWN, ONEIDA COUNTY, NEW YORK, REVISION 2 DATED 7/27/2009.
5. WESTINGHOUSE ELECTRIC CORPORATION M & R BUILDING DRAWINGS, JOB NUMBER 4395, DATED OCT. 10,1957. SHEET A-1, "SITE PLAN", REV. DATED JAN. 1958 – SHEET A-12, "GROUND FLOOR PLAN", REV. DATED JAN. 1958 – AND SHEET P-7, "SCHEMATIC LAYOUT OF TRANSFORMER OR PIPING". SCALES VARY.
6. GOOGLE EARTH IMAGE DATED 5/13/2015.
7. RICHARD M. RYBINSKI, L.S. SURVEY, REVISION DATE: 8/30/15, NO.: YORK1015.dwg.

D

REVISIONS

REV | DESCRIPTION

SEAL

1/13/17
DATE

DRAWN BY RA 02022016
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ADJACENT PROPERTIES

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YORKVILLE, NEW YORK

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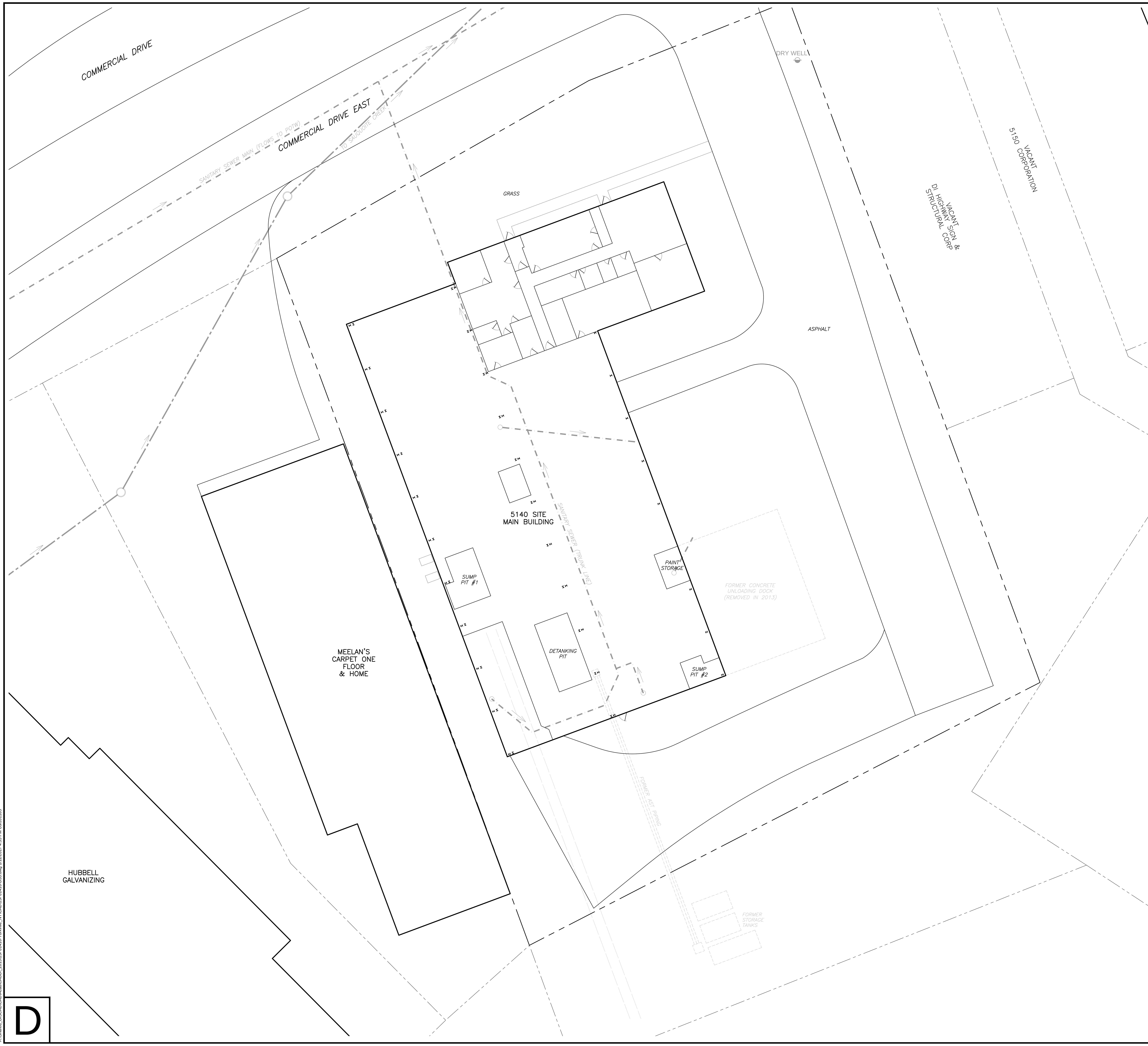
FIGURE 2

Drawing Number
15P01410–D32



LEGEND

- SITE PROPERTY BOUNDARY
- ADJACENT PROPERTIES BOUNDARY
- FORMER RAILROAD SPUR
- DRY WELL
- FLOOR DRAIN
- SANITARY OR FLOOR DRAIN PIPE
- STORM SEWER DRAIN
- STORM SEWER
- FLOW DIRECTION

REFERENCES:

1. PALMERTON GROUP FIGURE 3, TITLED EXCAVATION AREAS.
2. GOOGLE EARTH PRO, IMAGE DATED 7-21-2011.
3. BUILDING, WELLS, SOIL BORINGS, AND HAND AUGERS SURVEYED BY RICHARD RYBINSKI, L.S. AUGUST 3, 2012, DRAWING NUMBER YORK812F.DWG.
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3. GOOGLE EARTH IMAGE DATED 5/13/2015.

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SITE PLAN

5140 SITE
YORKVILLE, NEW YORK

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FIGURE 3

Drawing Number
15P01410-D33

LEGEND

- DRY WELL
- SITE PROPERTY BOUNDARY
- ADJACENT PROPERTIES BOUNDARY
- FORMER RAILROAD SPUR
- FLOOR DRAIN
- SANITARY OR FLOOR DRAIN PIPE
- STORM SEWER DRAIN
- STORM SEWER
- FLOW DIRECTION
- SOIL COVER LIMITS
- ENGINEERED AND ENCAPSULATION BARRIERS
- IRM EXCAVATION LIMITS (2014)
- REMEDIAL EXCAVATION LIMITS (2011)
- INSTITUTIONAL CONTROL BOUNDARY
- REMAINING CONTAMINATION (GREATER THAN 1 FOOT BELOW GROUND SURFACE)
- SURFICIAL HOT SPOT EXCAVATION (2016)

REFERENCES:

1. PALMERTON GROUP FIGURE 3, TITLED EXCAVATION AREAS.
2. GOOGLE EARTH PRO, IMAGE DATED 7-21-2011.
3. BUILDING, WELLS, SOIL BORINGS, AND HAND AUGERS SURVEYED BY RICHARD RYBINSKI, L.S. AUGUST 3, 2012, DRAWING NUMBER YORK812F.DWG.
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6. RICHARD M. RYBINSKI, L.S. SURVEY, REVISION DATE: 8/30/15, NO.: YORK1015.dwg.

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REMAINING CONTAMINATION, BARRIER SYSTEMS, AND INSTITUTIONAL CONTROL BOUNDARY

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YORKVILLE, NEW YORK

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FIGURE 4

Drawing Number
15P01410-D57

HASP Appendix A – Safety Rules and Personal Hygiene

Safety Rules and Personal Hygiene

1. Remove all facial hair that interferes with a satisfactory fit of respiratory protective equipment.
2. Do not wear contact lenses while wearing full-face respirators.
3. Do not take prescribed drugs unless specifically approved by a physician. Notify the Site Health and Safety Coordinator that prescription medication is being taken.
4. In the work zone, do not eat, drink, smoke, chew gum or tobacco, or engage in any other practice that increases the probability of hand-to-mouth transfer or ingestion of material.
5. Wash hands and face thoroughly after leaving the work area and before eating, drinking, or any other activities.
6. Thoroughly wash entire body as soon as possible after removing Level C protective garments.
7. Whenever possible, avoid contact with contaminated or suspected contaminated surfaces.

HASP Appendix B – NIOSH Pocket Guide to Chemical Hazards

Chlorodiphenyl (54% chlorine)

Synonyms & Trade Names Aroclor® 1254, PCB, Polychlorinated biphenyl		
CAS No. 11097-69-1	**RTECS No.** TQ1360000	**DOT ID & Guide** 2315 171
Formula $C_6H_3Cl_2C_6H_2Cl_3$ (approx)	**Conversion**	**IDLH** Ca [5 mg/m³] See: IDLH INDEX

Exposure Limits

NIOSH REL
*: Ca TWA 0.001 mg/m³ See Appendix A[*Note: The REL also applies to other PCBs.]

OSHA PEL
: TWA 0.5 mg/m³ [skin]

Measurement Methods

NIOSH 5503 ;
OSHA PV2088
See: NMAM or OSHA Methods

Physical Description
Colorless to pale-yellow, viscous liquid or solid (below 50°F) with a mild, hydrocarbon odor.

MW: 326 (approx)	**BP:** 689-734°F	**FRZ:** 50°F	**Sol:** Insoluble	**VP:** 0.00006 mmHg	**IP:** ?
Sp.Gr(77°F): 1.38	**Fl.P:** NA	**UEL:** NA	**LEL:** NA		

Nonflammable Liquid, but exposure in a fire results in the formation of a black soot containing PCBs, polychlorinated dibenzofurans, and chlorinated dibenzo-p-dioxins.

Incompatibilities & Reactivities
Strong oxidizers

Exposure Routes
inhalation, skin absorption, ingestion, skin and/or eye contact

Symptoms
irritation eyes, chloracne; liver damage; reproductive effects; [potential occupational carcinogen]

Target Organs
Skin, eyes, liver, reproductive system

Cancer Site
[in animals: tumors of the pituitary gland & liver, leukemia]

Personal Protection/Sanitation
(See protection codes)
Skin: Prevent skin contact
Eyes: Prevent eye contact
Wash skin: When contaminated
Remove: When wet or contaminated
Change: Daily
Provide: Eyewash, Quick drench

First Aid
(See procedures)
Eye: Irrigate immediately
Skin: Soap wash immediately
Breathing: Respiratory support
Swallow: Medical attention immediately

Respirator Recommendations

NIOSH

At concentrations above the NIOSH REL, or where there is no REL, at any detectable concentration:

(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode

(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

Escape:

(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister having an N100, R100, or P100 filter.

Click here for information on selection of N, R, or P filters.

Any appropriate escape-type, self-contained breathing apparatus

Important additional information about respirator selection

See also: INTRODUCTION See ICSC CARD: 0939 See MEDICAL TESTS: 0176

HASP Appendix C – Heat Stress and Heat Stress Monitoring

Heat Stress and Heat Stress Monitoring

Heat is one of the most common (and potentially serious) illnesses at hazardous waste sites where PPE is worn; therefore, regular monitoring and other preventive precautions are vital. Shelter from the sun will be provided during rest periods. Below is a list of the signs and symptoms of heat stress. Initial work schedules will be approximately 90 minutes of work followed by 15 minutes of rest. Work intervals will be adjusted to shorter periods based on the assessment of the Site Health and Safety Coordinator. Monitoring for heat stress will be conducted by visual observation by the individual team members.

Signs and Symptoms of Heat Stress

Heat rash may result from continuous exposure to heat or humid air.

Heat cramps are caused by heavy sweating with inadequate electrolyte replacement. Signs and symptoms include:

- muscle spasms
- pain in the hands, feet, and abdomen

Heat exhaustion occurs from increased stress on various body organs, including inadequate blood circulation caused by cardiovascular insufficiency or dehydration. Signs and symptoms include:

- pale, cool, moist skin
- heavy sweating
- dizziness
- nausea
- fainting

Heat stroke is the most serious form of heat stress. Temperature regulation fails, and the body temperature rises to critical levels. Immediate action must be taken to cool the body before serious injury and death occur. Competent medical help must be obtained. Signs and symptoms include:

- red, hot, usually dry skin
- lack of or reduced perspiration
- nausea
- dizziness and confusion
- strong, rapid pulse
- coma

First-aid remedies for heat stress and heat stroke include removing the worker to a cool place, providing cool water or a commercial sport drink, loosening tight clothing, and calling for an ambulance if victim vomits or starts to loose consciousness.

HASP Appendix D – Cold Stress Prevention for Winter Months

Cold Stress Prevention for Winter Months

The types of cold-related stress are frostbite, hypothermia, and immersion or trench foot. Personnel performing field tasks in the winter months should be aware of the signs and symptoms of cold-related stress so they can take precautionary measures to avoid cold-induced injury and illness. The following is a brief synopsis of each type of cold-related stress.

- Frostbite results when cells are cooled until ice crystals form inside them. Most injuries from frostbite are localized to the exposed part of the body.
- First degree frostbite or frostnip usually strikes the tips of fingers, toes, ears, nose, and chin or cheeks. It is usually painless, and the victim is often unaware of it. The skin turns pale or white from first degree frostbite.
- Second degree frostbite can occur in skin and its underlying tissue. The skin becomes firm and white, waxy, or translucent. As the third injured areas warm, it will become numb, and then will turn blue or purple and swell. The superficial capillaries have been injured, and edema fluid will leak out into the tissue. Stinging and burning pain and superficial blisters may develop. The throbbing, aching, and burning may last for some weeks, and the body part may become permanently red and be extremely sensitive if again exposed to the cold.
- Third degree frostbite involves freezing not only the skin and subcutaneous tissue but even muscle and bone. This serious injury usually involves the hands and feet. The tissues are cold, pale, and frozen to the touch. The injured area usually turns purple or blue and is extremely painful after thawing. Large blisters and tissue death (gangrene) may occur within the first day or two.
- Hypothermia is a systematic severe, progressive body cooling. This may occur at outside temperatures above freezing as well as below freezing. It occurs when the core temperature of the body falls below 95°F (35°C) and results when the body temperature controlling mechanism is overwhelmed. At 96.8oF, the body attempts to compensate for the cold. As core temperatures fall below 95oF, the body is unable to rewarm itself without assistance because of the failure of the temperature control system.

  Hypothermia may be of acute duration if someone is suddenly immersed in cold water. Subacute hypothermia may occur in otherwise healthy people, such as skiers, mountain climbers, or lost hunters, subject to prolonged cold exposure and physical exertion. Chronic hypothermia may occur in old people or those who are ill.

  Hypothermia may be mild to moderate, when the core temperature is between 81°F and 95°F and the patient is conscious, or it may be severe, when the core temperature is below 80°F and the patient is unconscious.

  The symptoms of hypothermia depend on the core temperature and become progressively more severe as the core temperature drops. Between 95°F and 98.6°F, the first symptom is shivering, a subconscious attempt of the body to generate more heat through muscular action. In addition, certain semiconscious activities occur, such as stamping the foot and dancing up and down. Below 95°F, difficulty in speaking, incoordination, stumbling, falling, and an inability to use the hands are seen. It is at this point that the loss of temperature control occurs and the body is unable to rewarm itself. Below 90°F, shivering decreases and the muscles become progressively rigid. Below 85°F, the victim becomes irrational and may fall into a coma. The pulse and respiration slow. Below 80°F, unconsciousness occurs. The pulse is weaker, and cardiac arrhythmia may be noted. Below 78°F, the respiratory and cardiovascular centers fail, with resulting pulmonary edema and ventricular fibrillation and then cardiac standstill. Ventricular fibrillation is the usual cause of death in these victims.

  Even without a thermometer, the level of hypothermia may be noted by observing the victim’s mental state. With a few degrees’ drop in core temperature, the victim may become withdrawn, discouraged, or mildly depressed. As the temperature drops a few degrees more, to 94°F or below, the victim may become indecisive, confused, or disoriented and may make incorrect decisions. Below 86°F, sleepiness, lethargy, and confusion are obvious. These progressively become more sever until coma occurs. The comatose state, if allowed to continue, results in death. The stages of hypothermia may progress rapidly after the victim’s temperature falls below 90°F.

- Trench foot of immersion foot occurs from the wet cooling of an extremity over hours or days at a temperature just above freezing while remaining relatively immobile. It used to been commonly in shipwrecked sailors or soldiers forced to remain in trenches for days at a time. The extremity is cold, swollen, waxy, mottled, and may be numb.

Preventive Work Guidelines

Exposure to cold will be terminated immediately when severe shivering becomes evident.

When air temperature falls below 30°F, dry bulb temperature and wind speed will be measured periodically, and the wind chill factor will be calculated. (Weather radios are an adequate substitute.)

All work except for emergencies will be terminated when the wind chill is below -18°F.

Metal tool handles will be covered with thermal insulating material at temperatures below 30°F.

When work is performed continuously in the cold at a wind chill of below 20°F, heated shelter will be made available. A vehicle can be used for shelter if it is kept idling with the heater on.

Work will be arranged in such a way that sitting or standing for long periods of time is minimized.

Keep warm, dry, and keep moving, but do not become overheated while working in the cold. Exercise fingers and toes.

HASP Appendix E – [EXAMPLE] Medical Monitoring Program

[EXAMPLE] Medical Monitoring Program

The Medical Monitoring Program includes:

- a baseline physical examination
- a medical determination of fitness of duty, including work restrictions after any job-related injury or illness or non job-related absence lasting more than three working days
- the review of each site-specific Health and Safety Plan and potential exposure list to determine the need for specific biological and medical monitoring
- annual and exit physical examinations with attention given to specific exposures or symptoms

Baseline Physical Examination

A baseline physical examination will be performed on each employee engaged in hazardous waste activities. The purposes of this examination are to identify any illness or problem that would put an employee at unusual risk from certain exposures; to certify the safe use of negative-pressure respirators (OSHA Safety and Health Standard 29 CFR 1910.134); and to develop a database for the assessment of exposure-related events detected through periodic medical monitoring. Variable data, such as age, sex, race, smoking, prior employment and exposure history, that may have a bearing on the occurrence of subsequent events after employment begins will be gathered.

The content of the Baseline Physical Examination will include:

- medical, occupational, and fertility histories
- a physical examination, stressing neurological, cardiopulmonary, musculoskeletal, and skin systems
- an electrocardiogram
- PA and lateral chest x-rays
- a pulmonary function test (FEV1, FVC, FEV 25-75)
- an audiogram
- a multi-chemistry blood panel, including kidney and liver function tests, CBC with differential, and urinalysis
- tests deemed necessary by symptoms or exposure history
- a red blood cell cholinesterase
- physical parameters, including blood pressure and visual acuity testing

Annual Physical Examination

An examination and updated occupational history will be performed on an annual basis during the anniversary month of the baseline physical examination. This annual examination serves to identify and prevent illness caused by cumulative exposure to toxic substances.

The Annual Physical Examination will include:

- a personal work history (based on specific project histories)
- a physical examination, stressing neurological, cardiopulmonary, musculoskeletal, and skin systems
- pulmonary function test (FEV1, FVC, FEV 25-75)

- a multi-chemistry blood panel, including kidney and liver function test
- an audiogram
- tests deemed necessary by symptoms or exposure history
- an optional wellness profile

Return to Work Examination

Any job-related illness or injury will be followed by a medical examination to determine fitness for duty or possible job restrictions based on the physical findings of the medical examiner. A similar examination will be performed following three missed workdays caused by a non job-related illness or injury requiring medical intervention.

Exit Physical Examination

The content of the Exit Physical Examination will include:

- a personal work history (based on specific project histories)
- medical, exposure, and fertility histories
- a physical examination, stressing neurological, cardiopulmonary, musculoskeletal, and skin systems
- a pulmonary function test (FEV1, FVC, FEV 25-75)
- an electrocardiogram
- PA and lateral chest x-rays
- an audiogram
- a multi-chemistry blood panel, including kidney and liver function tests, CBC with differential, and urinalysis
- tests deemed necessary by symptoms or exposure history
- a red blood cell cholinesterase
- physical parameters, including blood pressure and visual acuity testing

HASP Appendix F – Field Standards and Operating Procedures for Use and Decontamination of Personal Protective Equipment

Park vehicles outside work boundaries.

During the pre-work safety meeting, the Site Health and Safety Coordinator will provide the following information:

a description of the site and known problem areas

the level of protection required

emergency medical information

the locations of the first aid kit and fire extinguisher

Use the nearest lavatory. A portable lavatory will be provided at the site (outside of work areas).

Lay out and check safety gear.

Check and don modified Level D PPE.

For work in Level C PPE, put on safety gear in the following order:

Coveralls

Steel-toed work boots

Connect suit and boots with tape

Outer booties, if used

Air purifying respirators (APRs), if required

For work in Level C PPE, put on APRs as follows:

Inspect.

Inspect before each use to ensure that they have been cleaned adequately.

Check material conditions for signs of pliability, deterioration, or distortion.

Examine cartridges and ensure that they are the correct type for the intended use, that the expiration date has not passed, and that they have not been opened or used previously.

Check face shields for cracks or fogginess.

Loosen all harness strap adjustments.

Place chin in chin cup and draw back evenly on strap adjustments - the two bottom straps first, then the two top straps, and the center top strap last.

Check that the respirator is centered evenly on the face and that the straps are not uncomfortably tight.

Check for leaks or proper facial seals.

To conduct a negative-pressure test, close the inlet part with the palm of the hand so it does not pass air, and gently inhale for about 10 seconds. Any inward rush of air indicates a poor fit. Note that a leaking facepiece may be drawn tightly to the face to form a good seal, giving a false indication of adequate fit.

To conduct a positive-pressure test, gently exhale while covering the exhalation valve to ensure that a positive pressure can be built up. Failure to build a positive pressure indicates a poor fit.

Put on the rest of the gear in the following order:

Raise hood

Hard hat

Surgical gloves

Outer gloves

Connect gloves and suit with tape

Select a buddy to act as a safety backup.

Check your buddy's equipment and have your buddy check yours for rips, tears, or malfunctions. Pay special attention to respirators, making sure that seals are good and that cartridges are securely in place.

If any equipment or gear gets damaged or if your suit tears badly, GO BACK.

If you experience physical discomfort, breathing difficulties, light-headedness, dizziness, or other abnormalities, GO BACK.

When you return, have your buddy check for external accumulation of contamination and remove it. Also check gear for damage.

Decontamination will be performed in steps as follows (as appropriate for the PPE being utilized):

Step 1 - Segregated Equipment Drop: Deposit equipment used onsite (tools, sampling devices and containers, monitoring instruments, clipboards, etc.) in different containers with plastic liners. Each may be contaminated to a different degree. Segregation at the drop reduces the probability of cross-contamination. This equipment may be reused if properly decontaminated.

Equipment: various sizes of containers
plastic drop cloths

Step 2 - Boot Cover and Outer Glove Wash and Rinse: (Optional - will be used at the Site Health and Safety Coordinator's discretion.)

Equipment: pesticide sprayer with nozzle
two wash basins or tubs
scrub brush
water
Liqui-nox non-phosphate soap solution (1%)

Step 3 - Tape Removal: Remove tape around boots and gloves, and deposit in container with plastic liner. Remove boot covers, then outer gloves, and place them in the container.

Equipment: container (30-50 gallons)
plastic liners
folding chairs

Step 4 - Safety Boot Wash and Rinse: (Optional - will be used at discretion of Environmental Strategies field team members.)

Equipment: two wash basins or tubs
scrub brush
water
Liqui-nox solution (1%)

Step 5 - Protective Coverall Removal: With the assistance of a helper, remove protective coverall. Deposit in container with plastic liner.

Equipment: container (30-50 gallons)
folding chairs
plastic liners

Step 6 - Respirator Removal: Remove facepiece. Avoid touching face with gloves. If work is completed for the day, discard cartridges in lined container, and wash and rinse respirator.

Equipment: container (30-50 gallons)
plastic liners

Step 7 - Inner Glove Removal: Remove inner gloves and deposit in container with plastic liner.

Equipment: container (20-30 gallons)
plastic liners

Respirators will be cleaned daily by hand washing with MSA cleaner-sanitizer solution followed by a thorough rinse and air drying. NEVER ALLOW A RESPIRATOR TO DRY WITH THE STRAPS PLACED FORWARD ACROSS THE FACESHIELD BECAUSE THIS MAY CAUSE CHANGES IN THE FACE-TO-RESPIRATOR SEAL SURFACE. The specific procedures to be employed are as follows:

Remove all cartridges (canisters) and filters plus gaskets and seals not permanently affixed to their seats.

Loosen harness adjustment straps.

Remove exhalation valve cover.

Remove inhalation and exhalation valves.

Remove protective face shield cover.

Wash facepiece in MSA cleaner/sanitizer powder mixed with warm water, preferably at a temperature of 120 F. Wash components separately from facepiece. Heavy soil may be removed from the facepiece surface using a medium-soft hand brush.

Remove all parts from the wash solution, and rinse twice in clean, warm water.

Air dry all parts in a designated clean area.

Pat face pieces, valves, and seats to remove any remaining soap residue, water, or other foreign material with a clean, damp, lint-free cloth.

Reassemble respirator.

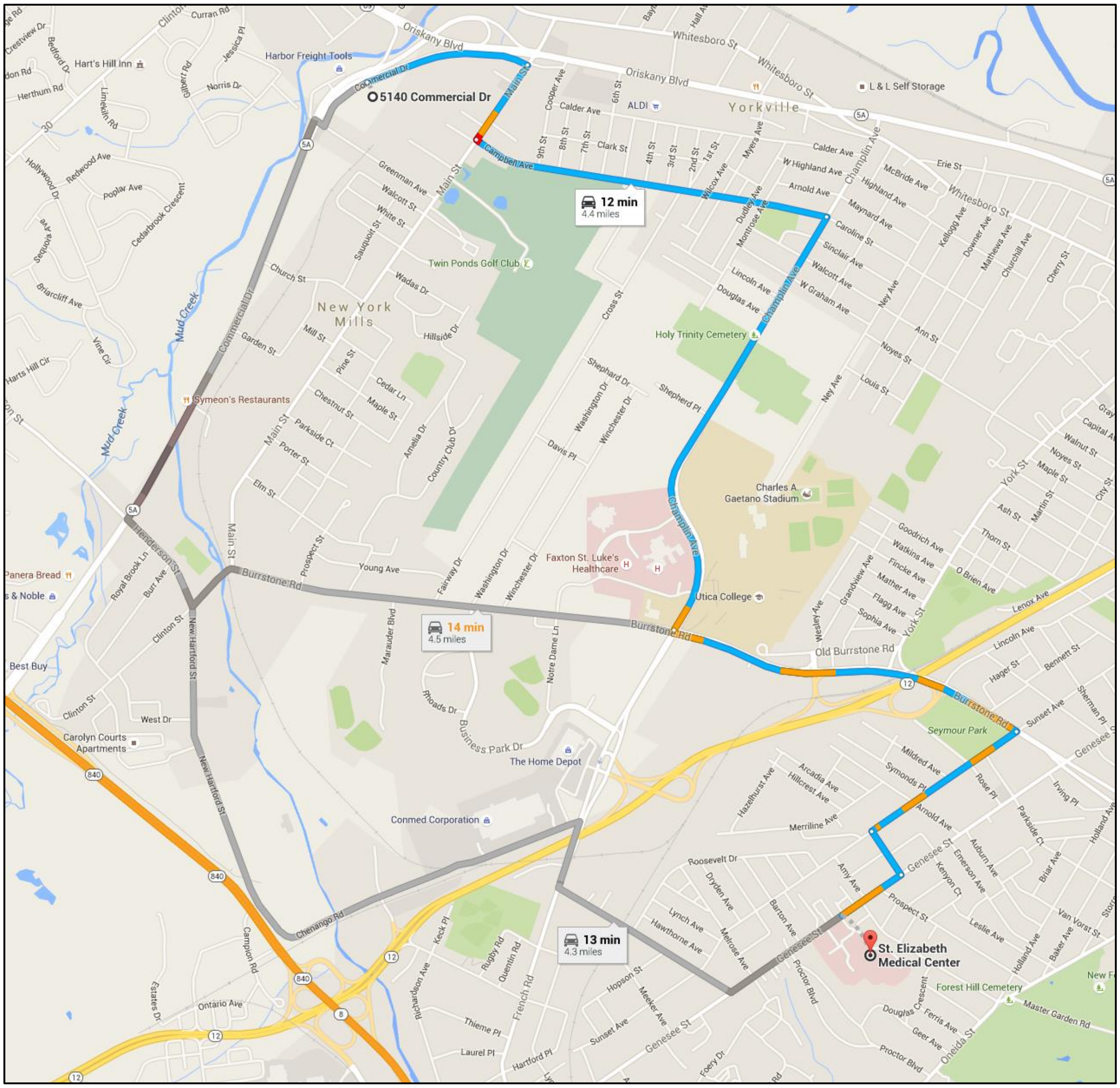
Place respirator in a plastic bag and the respirator box or otherwise store the respirator to prevent exposure to dust, moisture, sunlight, damaging chemicals, extreme temperatures, and impact.

Remediation waste material will be handled as follows:

Expendable material, such as tape, boot covers, inner and outer gloves, coveralls, and expendable sampling items, will be placed in a lined 30- to 33-gallon garbage can. When the container is full, and at the end of every day, the garbage sack will be removed and promptly placed into licensed waste hauler trucks for offsite disposal with excavated soils.

Wash and rinse waters from personal and equipment decontamination will be containerized in 55-gallon drums. When the drum is full, and at the end of every day, the water will be pumped into licensed waste hauler trucks for offsite disposal with excavated soils.

HASP Appendix G – Route to Hospital



Route to Hospital

HASP Appendix H – HASP Modification Form

Modification of the Site Health and Safety Plan

HASP Modification Number:

Date:

Sections of HASP Affected:

Modifications: ____

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Approved:

________________________________ General Site Supervisor

________________________________ Health and Safety Manager

________________________________ Site Health and Safety Coordinator

WSP
75 Arlington Street, 4th Floor
Boston, Massachusetts 02116
Tel: +1 617-426-7330
www.wsp-pb.com/usa

Appendix G – Community Air Monitoring Plan

Appendix G – Community Air Monitoring Plan

This Community Air Monitoring Plan (CAMP) provides real-time monitoring for particulates (i.e., dust that may contain polychlorinated biphenyls [PCBs]) at the upwind and downwind perimeters of each designated work area when intrusive activities are being conducted at the 5140 Site. The CAMP is intended to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of the remedial work activities. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, this CAMP helps to confirm that work activities have not spread contamination offsite through the air.

Reliance on the CAMP will not preclude simple, common-sense measures to keep dust and odors at a minimum around the work areas. **Continuous monitoring will be conducted for all ground intrusive activities conducted within the institutional control boundary for the site (see the Site Management Plan), including, but are not limited to, soil excavation, grading and handling, test pitting or trenching, and the installation of soil borings; or the removal of any impervious cover materials (e.g., asphalt), concrete saw cutting or demolition.**

Periodic monitoring for dust will be conducted during non-intrusive, ancillary activities such as the collection of soil samples from the excavation or from the soil stockpiles. “Periodic” monitoring during sample collection will consist of taking a reading upon arrival at a sample location, monitoring while overturning soil, and taking a reading prior to leaving a sample location.

Particulate Monitoring and Action Levels

Particulate concentrations should be monitored continuously at the upwind and downwind perimeters of the property at temporary particulate monitoring stations. The particulate monitoring should 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 must 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 must be employed. Work may 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 must be stopped and a re-evaluation of activities initiated. Work can 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 shall be recorded in the field logbook and be available for State (New York Departments of Environmental Conservation [NYSDEC] and health [NYSDOH]) personnel to review.

WSP | Parsons Brinckerhoff
75 Arlington Street, 4th Floor
Boston, Massachusetts 02116
Tel: +1-617-426-7330
wsp-pb.com/usa

Appendix C – Waste Characterization Analytical Data

con-test®
ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

August 11, 2016

Dave Bouchard
WSP - NY
5 Sullivan Street
Cazenovia, NY 13035

Project Location: Yorkville, NY
Client Job Number:
Project Number: E1501410.04
Laboratory Work Order Number: 16G1216

Enclosed are results of analyses for samples received by the laboratory on July 27, 2016. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Aaron L. Benoit
Project Manager

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Table of Contents (continued)

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

WSP - NY
5 Sullivan Street
Cazenovia, NY 13035
ATTN: Dave Bouchard

REPORT DATE: 8/11/2016

PURCHASE ORDER NUMBER:

PROJECT NUMBER: E1501410.04

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 16G1216

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Yorkville, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
WS-1	16G1216-01	Soil		SM 2540G	
				SW-846 1010A	
				SW-846 1030	
				SW-846 1311	
				SW-846 6010C-D	
				SW-846 7470A	
				SW-846 8082A	
				SW-846 8260C	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	
				SW-846 9045C	
WS-2	16G1216-02	Soil		SM 2540G	
				SW-846 1010A	
				SW-846 1030	
				SW-846 1311	
				SW-846 6010C-D	
				SW-846 7470A	
				SW-846 8082A	
				SW-846 8260C	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	
				SW-846 9045C	
WA-1	16G1216-03	Product/Solid		SW-846 1010A	
				SW-846 1030	
				SW-846 1311	
				SW-846 6010C-D	
				SW-846 7470A	
				SW-846 8082A	
				SW-846 8260C	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	
				SW-846 9045C	

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CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

REVISED REPORT 08/11/16: Report revised to run Flashpoint 1010 for sample 16G1216 per client request.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

SW-846 1010A

Qualifications:

H-10

Analysis was requested after the recommended holding time had passed.

Analyte & Samples(s) Qualified:

Flashpoint
16G1216-01[WS-1], 16G1216-02[WS-2], 16G1216-03[WA-1]

SW-846 6010C-D

Qualifications:

B

Analyte is found in the associated blank as well as in the sample.

Analyte & Samples(s) Qualified:

Arsenic
B154790-BS1, B154790-BSD1

B-05

Data is not affected by elevated level in blank since sample(s) result is "Not Detected".

Analyte & Samples(s) Qualified:

Arsenic
16G1216-01[WS-1], 16G1216-02[WS-2], 16G1216-03[WA-1], B154790-BLK1

SW-846 8082A

Qualifications:

S-01

The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

Analyte & Samples(s) Qualified:

Decachlorobiphenyl
16G1216-01[WS-1]

Decachlorobiphenyl [2C]
16G1216-01[WS-1]

Tetrachloro-m-xylene
16G1216-01[WS-1]

Tetrachloro-m-xylene [2C]
16G1216-01[WS-1]

SW-846 8270D

Qualifications:

S-07

One associated surrogate standard recovery is outside of control limits but the other(s) is/are within limits. All recoveries are > 10%.

Analyte & Samples(s) Qualified:

2,4,6-Tribromophenol
B154806-BS1

V-06

Continuing calibration did not meet method specifications and was biased on the high side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the high side.

Analyte & Samples(s) Qualified:

Hexachlorobutadiene
B154806-BS1, B154806-BSD1, B154806-MS1

V-20

Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:

Hexachlorobutadiene
16G1216-01[WS-1], 16G1216-02[WS-2], 16G1216-03[WA-1], B154806-BLK1

SW-846 9045C

Qualifications:

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

H-01

Recommended sample holding time was exceeded, but analysis was performed before 2X the allowable holding time.

Analyte & Samples(s) Qualified:

pH
16G1216-01[WS-1], 16G1216-02[WS-2], 16G1216-03[WA-1]

SW-846 6010C/D SW-846 6020A/B

For NC, Metals methods SW-846 6010D and SW-846 6020B are followed, and for all other states methods SW-846 6010C and SW-846 6020A are followed.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Tod E. Kopyscinski
Laboratory Director

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Yorkville, NY | Sample Description: | Work Order: 16G1216

Date Received: 7/27/2016

Field Sample #: WS-1 | Sampled: 7/26/2016 11:10

Sample ID: 16G1216-01

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	11	6.4	mg/Kg dry	500		SW-846 8082A	7/27/16	7/29/16 8:30	JMB
Aroclor-1221 [1]	ND	11	7.0	mg/Kg dry	500		SW-846 8082A	7/27/16	7/29/16 8:30	JMB
Aroclor-1232 [1]	ND	11	4.8	mg/Kg dry	500		SW-846 8082A	7/27/16	7/29/16 8:30	JMB
Aroclor-1242 [1]	ND	11	5.4	mg/Kg dry	500		SW-846 8082A	7/27/16	7/29/16 8:30	JMB
Aroclor-1248 [1]	ND	11	6.4	mg/Kg dry	500		SW-846 8082A	7/27/16	7/29/16 8:30	JMB
Aroclor-1254 [1]	ND	11	7.0	mg/Kg dry	500		SW-846 8082A	7/27/16	7/29/16 8:30	JMB
Aroclor-1260 [2]	69	11	7.5	mg/Kg dry	500		SW-846 8082A	7/27/16	7/29/16 8:30	JMB
Aroclor-1262 [1]	ND	11	5.4	mg/Kg dry	500		SW-846 8082A	7/27/16	7/29/16 8:30	JMB
Aroclor-1268 [1]	ND	11	4.3	mg/Kg dry	500		SW-846 8082A	7/27/16	7/29/16 8:30	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	Date/Time Analyzed
Decachlorobiphenyl [1]	*	30-150	S-01	7/29/16 8:30
Decachlorobiphenyl [2]	*	30-150	S-01	7/29/16 8:30
Tetrachloro-m-xylene [1]	*	30-150	S-01	7/29/16 8:30
Tetrachloro-m-xylene [2]	*	30-150	S-01	7/29/16 8:30

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Yorkville, NY | Sample Description: | Work Order: 16G1216

Date Received: 7/27/2016

Field Sample #: WS-1 | Sampled: 7/26/2016 11:10

Sample ID: 16G1216-01

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Flashpoint	> 212 °F		°F	1	H-10	SW-846 1010A	8/11/16	8/11/16 13:00	DJM
Ignitability	Absent		present/absent	1		SW-846 1030	7/29/16	7/29/16 11:00	AG
pH @21.6°C	8.0		pH Units	1	H-01	SW-846 9045C	7/27/16	7/27/16 17:45	IS
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	7/28/16	7/28/16 15:05	AG
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	7/28/16	7/28/16 15:00	AG
% Solids	92.3		% Wt	1		SM 2540G	7/28/16	7/28/16 14:05	EC

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Yorkville, NY

Sample Description:

Work Order: 16G1216

Date Received: 7/27/2016

Field Sample #: WS-1

Sampled: 7/26/2016 11:10

Sample ID: 16G1216-01

Sample Matrix: Soil

TCLP - Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Benzene	ND	0.010	mg/L	10		SW-846 8260C	7/29/16	7/29/16 22:58	EEH
2-Butanone (MEK)	ND	0.20	mg/L	10		SW-846 8260C	7/29/16	7/29/16 22:58	EEH
Carbon Tetrachloride	ND	0.050	mg/L	10		SW-846 8260C	7/29/16	7/29/16 22:58	EEH
Chlorobenzene	ND	0.010	mg/L	10		SW-846 8260C	7/29/16	7/29/16 22:58	EEH
Chloroform	ND	0.020	mg/L	10		SW-846 8260C	7/29/16	7/29/16 22:58	EEH
1,4-Dichlorobenzene	ND	0.010	mg/L	10		SW-846 8260C	7/29/16	7/29/16 22:58	EEH
1,2-Dichloroethane	ND	0.010	mg/L	10		SW-846 8260C	7/29/16	7/29/16 22:58	EEH
1,1-Dichloroethylene	ND	0.010	mg/L	10		SW-846 8260C	7/29/16	7/29/16 22:58	EEH
Tetrachloroethylene	ND	0.010	mg/L	10		SW-846 8260C	7/29/16	7/29/16 22:58	EEH
Trichloroethylene	ND	0.010	mg/L	10		SW-846 8260C	7/29/16	7/29/16 22:58	EEH
Vinyl Chloride	ND	0.020	mg/L	10		SW-846 8260C	7/29/16	7/29/16 22:58	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	95.3	70-130		7/29/16 22:58
Toluene-d8	97.1	70-130		7/29/16 22:58
4-Bromofluorobenzene	100	70-130		7/29/16 22:58

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Project Location: Yorkville, NY Sample Description: Work Order: 16G1216

Date Received: 7/27/2016

Field Sample #: WS-1 Sampled: 7/26/2016 11:10

Sample ID: 16G1216-01

Sample Matrix: Soil

TCLP - Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-Dinitrotoluene	ND	0.050	mg/L	1		SW-846 8270D	7/29/16	7/30/16 15:38	WSD
Hexachlorobenzene	ND	0.050	mg/L	1		SW-846 8270D	7/29/16	7/30/16 15:38	WSD
Hexachlorobutadiene	ND	0.050	mg/L	1	V-20	SW-846 8270D	7/29/16	7/30/16 15:38	WSD
Hexachloroethane	ND	0.050	mg/L	1		SW-846 8270D	7/29/16	7/30/16 15:38	WSD
2-Methylphenol	ND	0.050	mg/L	1		SW-846 8270D	7/29/16	7/30/16 15:38	WSD
3/4-Methylphenol	ND	0.050	mg/L	1		SW-846 8270D	7/29/16	7/30/16 15:38	WSD
Nitrobenzene	ND	0.050	mg/L	1		SW-846 8270D	7/29/16	7/30/16 15:38	WSD
Pentachlorophenol	ND	0.050	mg/L	1		SW-846 8270D	7/29/16	7/30/16 15:38	WSD
Pyridine	ND	0.025	mg/L	1		SW-846 8270D	7/29/16	7/30/16 15:38	WSD
2,4,5-Trichlorophenol	ND	0.050	mg/L	1		SW-846 8270D	7/29/16	7/30/16 15:38	WSD
2,4,6-Trichlorophenol	ND	0.050	mg/L	1		SW-846 8270D	7/29/16	7/30/16 15:38	WSD

Surrogates	% Recovery	Recovery Limits	Flag/Qual	Date/Time Analyzed
2-Fluorophenol	72.7	15-110		7/30/16 15:38
Phenol-d6	70.0	15-110		7/30/16 15:38
Nitrobenzene-d5	88.4	30-130		7/30/16 15:38
2-Fluorobiphenyl	93.4	30-130		7/30/16 15:38
2,4,6-Tribromophenol	103	15-110		7/30/16 15:38
p-Terphenyl-d14	105	30-130		7/30/16 15:38

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Project Location: Yorkville, NY | Sample Description: | Work Order: 16G1216

Date Received: 7/27/2016

Field Sample #: WS-1 | Sampled: 7/26/2016 11:10

Sample ID: 16G1216-01

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	ND	0.010	mg/L	1	B-05	SW-846 6010C-D	7/29/16	7/29/16 19:31	MJH
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	7/29/16	8/1/16 9:46	SHN
Barium	0.59	0.050	mg/L	1		SW-846 6010C-D	7/29/16	7/29/16 19:31	MJH
Cadmium	0.014	0.0040	mg/L	1		SW-846 6010C-D	7/29/16	7/29/16 19:31	MJH
Chromium	ND	0.010	mg/L	1		SW-846 6010C-D	7/29/16	7/29/16 19:31	MJH
Lead	ND	0.010	mg/L	1		SW-846 6010C-D	7/29/16	7/29/16 19:31	MJH
Selenium	ND	0.050	mg/L	1		SW-846 6010C-D	7/29/16	7/29/16 19:31	MJH
Silver	ND	0.0050	mg/L	1		SW-846 6010C-D	7/29/16	7/29/16 19:31	MJH

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Project Location: Yorkville, NY | Sample Description: | Work Order: 16G1216

Date Received: 7/27/2016

Field Sample #: WS-2 | Sampled: 7/26/2016 12:00

Sample ID: 16G1216-02

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.54	0.33	mg/Kg dry	25		SW-846 8082A	7/27/16	7/29/16 8:43	JMB
Aroclor-1221 [1]	ND	0.54	0.35	mg/Kg dry	25		SW-846 8082A	7/27/16	7/29/16 8:43	JMB
Aroclor-1232 [1]	ND	0.54	0.24	mg/Kg dry	25		SW-846 8082A	7/27/16	7/29/16 8:43	JMB
Aroclor-1242 [1]	ND	0.54	0.27	mg/Kg dry	25		SW-846 8082A	7/27/16	7/29/16 8:43	JMB
Aroclor-1248 [1]	ND	0.54	0.33	mg/Kg dry	25		SW-846 8082A	7/27/16	7/29/16 8:43	JMB
Aroclor-1254 [1]	ND	0.54	0.35	mg/Kg dry	25		SW-846 8082A	7/27/16	7/29/16 8:43	JMB
Aroclor-1260 [2]	2.5	0.54	0.38	mg/Kg dry	25		SW-846 8082A	7/27/16	7/29/16 8:43	JMB
Aroclor-1262 [1]	ND	0.54	0.27	mg/Kg dry	25		SW-846 8082A	7/27/16	7/29/16 8:43	JMB
Aroclor-1268 [1]	ND	0.54	0.22	mg/Kg dry	25		SW-846 8082A	7/27/16	7/29/16 8:43	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	Date/Time Analyzed
Decachlorobiphenyl [1]	94.0	30-150		7/29/16 8:43
Decachlorobiphenyl [2]	100	30-150		7/29/16 8:43
Tetrachloro-m-xylene [1]	94.8	30-150		7/29/16 8:43
Tetrachloro-m-xylene [2]	97.7	30-150		7/29/16 8:43

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Project Location: Yorkville, NY
Sample Description:
Work Order: 16G1216
Date Received: 7/27/2016
Field Sample #: WS-2
Sampled: 7/26/2016 12:00
Sample ID: 16G1216-02
Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Flashpoint	> 212 °F		°F	1	H-10	SW-846 1010A	8/11/16	8/11/16 16:15	DJM
Ignitability	Absent		present/absent	1		SW-846 1030	7/29/16	7/29/16 11:00	AG
pH @21.1°C	7.9		pH Units	1	H-01	SW-846 9045C	7/27/16	7/27/16 17:45	IS
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	7/28/16	7/28/16 15:05	AG
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	7/28/16	7/28/16 15:00	AG
% Solids	87.6		% Wt	1		SM 2540G	7/28/16	7/28/16 14:05	EC

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Project Location: Yorkville, NY | Sample Description: | Work Order: 16G1216

Date Received: 7/27/2016

Field Sample #: WS-2 | Sampled: 7/26/2016 12:00

Sample ID: 16G1216-02

Sample Matrix: Soil

TCLP - Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Benzene	ND	0.010	mg/L	10		SW-846 8260C	7/29/16	7/29/16 23:25	EEH
2-Butanone (MEK)	ND	0.20	mg/L	10		SW-846 8260C	7/29/16	7/29/16 23:25	EEH
Carbon Tetrachloride	ND	0.050	mg/L	10		SW-846 8260C	7/29/16	7/29/16 23:25	EEH
Chlorobenzene	ND	0.010	mg/L	10		SW-846 8260C	7/29/16	7/29/16 23:25	EEH
Chloroform	ND	0.020	mg/L	10		SW-846 8260C	7/29/16	7/29/16 23:25	EEH
1,4-Dichlorobenzene	ND	0.010	mg/L	10		SW-846 8260C	7/29/16	7/29/16 23:25	EEH
1,2-Dichloroethane	ND	0.010	mg/L	10		SW-846 8260C	7/29/16	7/29/16 23:25	EEH
1,1-Dichloroethylene	ND	0.010	mg/L	10		SW-846 8260C	7/29/16	7/29/16 23:25	EEH
Tetrachloroethylene	ND	0.010	mg/L	10		SW-846 8260C	7/29/16	7/29/16 23:25	EEH
Trichloroethylene	ND	0.010	mg/L	10		SW-846 8260C	7/29/16	7/29/16 23:25	EEH
Vinyl Chloride	ND	0.020	mg/L	10		SW-846 8260C	7/29/16	7/29/16 23:25	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	97.3	70-130		7/29/16 23:25
Toluene-d8	97.6	70-130		7/29/16 23:25
4-Bromofluorobenzene	102	70-130		7/29/16 23:25

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Project Location: Yorkville, NY | Sample Description: | Work Order: 16G1216

Date Received: 7/27/2016

Field Sample #: WS-2 | Sampled: 7/26/2016 12:00

Sample ID: 16G1216-02

Sample Matrix: Soil

TCLP - Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-Dinitrotoluene	ND	0.050	mg/L	1		SW-846 8270D	7/29/16	7/30/16 16:00	WSD
Hexachlorobenzene	ND	0.050	mg/L	1		SW-846 8270D	7/29/16	7/30/16 16:00	WSD
Hexachlorobutadiene	ND	0.050	mg/L	1	V-20	SW-846 8270D	7/29/16	7/30/16 16:00	WSD
Hexachloroethane	ND	0.050	mg/L	1		SW-846 8270D	7/29/16	7/30/16 16:00	WSD
2-Methylphenol	ND	0.050	mg/L	1		SW-846 8270D	7/29/16	7/30/16 16:00	WSD
3/4-Methylphenol	ND	0.050	mg/L	1		SW-846 8270D	7/29/16	7/30/16 16:00	WSD
Nitrobenzene	ND	0.050	mg/L	1		SW-846 8270D	7/29/16	7/30/16 16:00	WSD
Pentachlorophenol	ND	0.050	mg/L	1		SW-846 8270D	7/29/16	7/30/16 16:00	WSD
Pyridine	ND	0.025	mg/L	1		SW-846 8270D	7/29/16	7/30/16 16:00	WSD
2,4,5-Trichlorophenol	ND	0.050	mg/L	1		SW-846 8270D	7/29/16	7/30/16 16:00	WSD
2,4,6-Trichlorophenol	ND	0.050	mg/L	1		SW-846 8270D	7/29/16	7/30/16 16:00	WSD

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	69.7	15-110		7/30/16 16:00
Phenol-d6	69.1	15-110		7/30/16 16:00
Nitrobenzene-d5	84.5	30-130		7/30/16 16:00
2-Fluorobiphenyl	91.1	30-130		7/30/16 16:00
2,4,6-Tribromophenol	101	15-110		7/30/16 16:00
p-Terphenyl-d14	103	30-130		7/30/16 16:00

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Project Location: Yorkville, NY
Sample Description:
Work Order: 16G1216

Date Received: 7/27/2016

Field Sample #: WS-2
Sampled: 7/26/2016 12:00

Sample ID: 16G1216-02

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	ND	0.010	mg/L	1	B-05	SW-846 6010C-D	7/29/16	7/29/16 19:37	MJH
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	7/29/16	8/1/16 9:48	SHN
Barium	0.51	0.050	mg/L	1		SW-846 6010C-D	7/29/16	7/29/16 19:37	MJH
Cadmium	0.020	0.0040	mg/L	1		SW-846 6010C-D	7/29/16	7/29/16 19:37	MJH
Chromium	ND	0.010	mg/L	1		SW-846 6010C-D	7/29/16	7/29/16 19:37	MJH
Lead	ND	0.010	mg/L	1		SW-846 6010C-D	7/29/16	7/29/16 19:37	MJH
Selenium	ND	0.050	mg/L	1		SW-846 6010C-D	7/29/16	7/29/16 19:37	MJH
Silver	ND	0.0050	mg/L	1		SW-846 6010C-D	7/29/16	7/29/16 19:37	MJH

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Project Location: Yorkville, NY

Sample Description:

Work Order: 16G1216

Date Received: 7/27/2016

Field Sample #: WA-1

Sampled: 7/26/2016 12:20

Sample ID: 16G1216-03

Sample Matrix: Product/Solid

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.50	0.060	mg/Kg	5		SW-846 8082A	7/27/16	7/28/16 22:35	JMB
Aroclor-1221 [1]	ND	0.50	0.065	mg/Kg	5		SW-846 8082A	7/27/16	7/28/16 22:35	JMB
Aroclor-1232 [1]	ND	0.50	0.045	mg/Kg	5		SW-846 8082A	7/27/16	7/28/16 22:35	JMB
Aroclor-1242 [1]	ND	0.50	0.050	mg/Kg	5		SW-846 8082A	7/27/16	7/28/16 22:35	JMB
Aroclor-1248 [1]	ND	0.50	0.060	mg/Kg	5		SW-846 8082A	7/27/16	7/28/16 22:35	JMB
Aroclor-1254 [1]	ND	0.50	0.065	mg/Kg	5		SW-846 8082A	7/27/16	7/28/16 22:35	JMB
Aroclor-1260 [2]	0.25	0.50	0.070	mg/Kg	5	J	SW-846 8082A	7/27/16	7/28/16 22:35	JMB
Aroclor-1262 [1]	ND	0.50	0.050	mg/Kg	5		SW-846 8082A	7/27/16	7/28/16 22:35	JMB
Aroclor-1268 [1]	ND	0.50	0.040	mg/Kg	5		SW-846 8082A	7/27/16	7/28/16 22:35	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	73.9	30-150		7/28/16 22:35
Decachlorobiphenyl [2]	84.6	30-150		7/28/16 22:35
Tetrachloro-m-xylene [1]	90.5	30-150		7/28/16 22:35
Tetrachloro-m-xylene [2]	100	30-150		7/28/16 22:35

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Project Location: Yorkville, NY

Sample Description:

Work Order: 16G1216

Date Received: 7/27/2016

Field Sample #: WA-1

Sampled: 7/26/2016 12:20

Sample ID: 16G1216-03

Sample Matrix: Product/Solid

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Flashpoint	> 212 °F		°F	1	H-10	SW-846 1010A	8/11/16	8/11/16 16:15	DJM
Ignitability	Present		present/absent	1		SW-846 1030	7/29/16	7/29/16 11:00	AG
pH @22.3°C	8.8		pH Units	1	H-01	SW-846 9045C	7/27/16	7/27/16 17:45	IS
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	7/28/16	7/28/16 15:05	AG
Reactive Sulfide	ND	19	mg/Kg	1		SW-846 9030A	7/28/16	7/28/16 15:00	AG

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Project Location: Yorkville, NY | Sample Description: | Work Order: 16G1216

Date Received: 7/27/2016

Field Sample #: WA-1

Sampled: 7/26/2016 12:20

Sample ID: 16G1216-03

Sample Matrix: Product/Solid

TCLP - Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Benzene	ND	0.010	mg/L	10		SW-846 8260C	7/29/16	7/29/16 23:52	EEH
2-Butanone (MEK)	ND	0.20	mg/L	10		SW-846 8260C	7/29/16	7/29/16 23:52	EEH
Carbon Tetrachloride	ND	0.050	mg/L	10		SW-846 8260C	7/29/16	7/29/16 23:52	EEH
Chlorobenzene	ND	0.010	mg/L	10		SW-846 8260C	7/29/16	7/29/16 23:52	EEH
Chloroform	ND	0.020	mg/L	10		SW-846 8260C	7/29/16	7/29/16 23:52	EEH
1,4-Dichlorobenzene	ND	0.010	mg/L	10		SW-846 8260C	7/29/16	7/29/16 23:52	EEH
1,2-Dichloroethane	ND	0.010	mg/L	10		SW-846 8260C	7/29/16	7/29/16 23:52	EEH
1,1-Dichloroethylene	ND	0.010	mg/L	10		SW-846 8260C	7/29/16	7/29/16 23:52	EEH
Tetrachloroethylene	ND	0.010	mg/L	10		SW-846 8260C	7/29/16	7/29/16 23:52	EEH
Trichloroethylene	ND	0.010	mg/L	10		SW-846 8260C	7/29/16	7/29/16 23:52	EEH
Vinyl Chloride	ND	0.020	mg/L	10		SW-846 8260C	7/29/16	7/29/16 23:52	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	95.8	70-130		7/29/16 23:52
Toluene-d8	97.7	70-130		7/29/16 23:52
4-Bromofluorobenzene	102	70-130		7/29/16 23:52

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Project Location: Yorkville, NY　　Sample Description:　　Work Order: 16G1216

Date Received: 7/27/2016

Field Sample #: WA-1　　Sampled: 7/26/2016 12:20

Sample ID: 16G1216-03

Sample Matrix: Product/Solid

TCLP - Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-Dinitrotoluene	ND	0.050	mg/L	1		SW-846 8270D	7/29/16	7/30/16 16:22	WSD
Hexachlorobenzene	ND	0.050	mg/L	1		SW-846 8270D	7/29/16	7/30/16 16:22	WSD
Hexachlorobutadiene	ND	0.050	mg/L	1	V-20	SW-846 8270D	7/29/16	7/30/16 16:22	WSD
Hexachloroethane	ND	0.050	mg/L	1		SW-846 8270D	7/29/16	7/30/16 16:22	WSD
2-Methylphenol	ND	0.050	mg/L	1		SW-846 8270D	7/29/16	7/30/16 16:22	WSD
3/4-Methylphenol	ND	0.050	mg/L	1		SW-846 8270D	7/29/16	7/30/16 16:22	WSD
Nitrobenzene	ND	0.050	mg/L	1		SW-846 8270D	7/29/16	7/30/16 16:22	WSD
Pentachlorophenol	ND	0.050	mg/L	1		SW-846 8270D	7/29/16	7/30/16 16:22	WSD
Pyridine	ND	0.025	mg/L	1		SW-846 8270D	7/29/16	7/30/16 16:22	WSD
2,4,5-Trichlorophenol	ND	0.050	mg/L	1		SW-846 8270D	7/29/16	7/30/16 16:22	WSD
2,4,6-Trichlorophenol	ND	0.050	mg/L	1		SW-846 8270D	7/29/16	7/30/16 16:22	WSD

Surrogates	% Recovery	Recovery Limits	Flag/Qual	Date/Time Analyzed
2-Fluorophenol	74.8	15-110		7/30/16 16:22
Phenol-d6	71.9	15-110		7/30/16 16:22
Nitrobenzene-d5	91.5	30-130		7/30/16 16:22
2-Fluorobiphenyl	97.2	30-130		7/30/16 16:22
2,4,6-Tribromophenol	104	15-110		7/30/16 16:22
p-Terphenyl-d14	108	30-130		7/30/16 16:22

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Project Location: Yorkville, NY Sample Description: Work Order: 16G1216

Date Received: 7/27/2016

Field Sample #: WA-1 Sampled: 7/26/2016 12:20

Sample ID: 16G1216-03

Sample Matrix: Product/Solid

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	ND	0.010	mg/L	1	B-05	SW-846 6010C-D	7/29/16	7/29/16 19:44	MJH
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	7/29/16	8/1/16 10:14	SHN
Barium	0.11	0.050	mg/L	1		SW-846 6010C-D	7/29/16	7/29/16 19:44	MJH
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C-D	7/29/16	7/29/16 19:44	MJH
Chromium	ND	0.010	mg/L	1		SW-846 6010C-D	7/29/16	7/29/16 19:44	MJH
Lead	ND	0.010	mg/L	1		SW-846 6010C-D	7/29/16	7/29/16 19:44	MJH
Selenium	ND	0.050	mg/L	1		SW-846 6010C-D	7/29/16	7/29/16 19:44	MJH
Silver	ND	0.0050	mg/L	1		SW-846 6010C-D	7/29/16	7/29/16 19:44	MJH

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Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
16G1216-01 [WS-1]	B154666	07/28/16
16G1216-02 [WS-2]	B154666	07/28/16

SW-846 1010A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
16G1216-01 [WS-1]	B155876	50.0	50.0	08/11/16
16G1216-02 [WS-2]	B155876	50.0	50.0	08/11/16
16G1216-03 [WA-1]	B155876	50.0	50.0	08/11/16

SW-846 1030

Lab Number [Field ID]	Batch	Initial [g]	Date
16G1216-01 [WS-1]	B154789	50.0	07/29/16
16G1216-02 [WS-2]	B154789	50.0	07/29/16
16G1216-03 [WA-1]	B154789	50.0	07/29/16

Prep Method: SW-846 3010A-SW-846 6010C-D **Leachates were extracted on 7/28/2016 per SW-846 1311 in Batch B154667**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
16G1216-01 [WS-1]	B154790	50.0	50.0	07/29/16
16G1216-02 [WS-2]	B154790	50.0	50.0	07/29/16
16G1216-03 [WA-1]	B154790	50.0	50.0	07/29/16

Prep Method: SW-846 7470A Prep-SW-846 7470A **Leachates were extracted on 7/28/2016 per SW-846 1311 in Batch B154667**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
16G1216-01 [WS-1]	B154799	6.00	6.00	07/29/16
16G1216-02 [WS-2]	B154799	6.00	6.00	07/29/16

Prep Method: SW-846 7470A Prep-SW-846 7470A **Leachates were extracted on 7/28/2016 per SW-846 1311 in Batch B154683**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
16G1216-03 [WA-1]	B154808	6.00	6.00	07/29/16

Prep Method: SW-846 3546-SW-846 8082A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
16G1216-03 [WA-1]	B154640	2.00	10.0	07/27/16

Prep Method: SW-846 3546-SW-846 8082A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
16G1216-01 [WS-1]	B154637	10.1	10.0	07/27/16
16G1216-02 [WS-2]	B154637	10.5	10.0	07/27/16

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Sample Extraction Data

Prep Method: SW-846 5030B-SW-846 8260C **Leachates were extracted on 7/27/2016 per SW-846 1311 in Batch B154622**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
16G1216-01 [WS-1]	B154778	5.00	5.00	07/29/16
16G1216-02 [WS-2]	B154778	5.00	5.00	07/29/16
16G1216-03 [WA-1]	B154778	5.00	5.00	07/29/16

Prep Method: SW-846 3510C-SW-846 8270D **Leachates were extracted on 7/28/2016 per SW-846 1311 in Batch B154667**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
16G1216-01 [WS-1]	B154806	200	1.00	07/29/16
16G1216-02 [WS-2]	B154806	200	1.00	07/29/16
16G1216-03 [WA-1]	B154806	200	1.00	07/29/16

SW-846 9014

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
16G1216-03 [WA-1]	B154688	25.8	250	07/28/16

SW-846 9014

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
16G1216-01 [WS-1]	B154687	25.1	250	07/28/16
16G1216-02 [WS-2]	B154687	25.2	250	07/28/16

SW-846 9030A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
16G1216-03 [WA-1]	B154690	25.8	250	07/28/16

SW-846 9030A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
16G1216-01 [WS-1]	B154689	25.1	250	07/28/16
16G1216-02 [WS-2]	B154689	25.2	250	07/28/16

SW-846 9045C

Lab Number [Field ID]	Batch	Initial [g]	Date
16G1216-01 [WS-1]	B154633	20.0	07/27/16
16G1216-02 [WS-2]	B154633	20.0	07/27/16
16G1216-03 [WA-1]	B154633	20.0	07/27/16

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B154637 - SW-846 3546										
Blank (B154637-BLK1)				Prepared: 07/27/16 Analyzed: 07/29/16						
Aroclor-1016	ND	0.020	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1221	ND	0.020	mg/Kg wet							
Aroclor-1221 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1232	ND	0.020	mg/Kg wet							
Aroclor-1232 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1242	ND	0.020	mg/Kg wet							
Aroclor-1242 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1248	ND	0.020	mg/Kg wet							
Aroclor-1248 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1254	ND	0.020	mg/Kg wet							
Aroclor-1254 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1260	ND	0.020	mg/Kg wet							
Aroclor-1260 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1262	ND	0.020	mg/Kg wet							
Aroclor-1262 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1268	ND	0.020	mg/Kg wet							
Aroclor-1268 [2C]	ND	0.020	mg/Kg wet							
Surrogate: Decachlorobiphenyl	*0.216*		mg/Kg wet	0.200		108	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.222*		mg/Kg wet	0.200		111	30-150			
Surrogate: Tetrachloro-m-xylene	*0.194*		mg/Kg wet	0.200		96.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.202*		mg/Kg wet	0.200		101	30-150			
LCS (B154637-BS1)				Prepared: 07/27/16 Analyzed: 07/29/16						
Aroclor-1016	0.21	0.020	mg/Kg wet	0.200		106	40-140			
Aroclor-1016 [2C]	0.21	0.020	mg/Kg wet	0.200		106	40-140			
Aroclor-1260	0.22	0.020	mg/Kg wet	0.200		108	40-140			
Aroclor-1260 [2C]	0.21	0.020	mg/Kg wet	0.200		107	40-140			
Surrogate: Decachlorobiphenyl	*0.169*		mg/Kg wet	0.200		84.5	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.174*		mg/Kg wet	0.200		87.0	30-150			
Surrogate: Tetrachloro-m-xylene	*0.154*		mg/Kg wet	0.200		77.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.159*		mg/Kg wet	0.200		79.7	30-150			
LCS Dup (B154637-BSD1)				Prepared: 07/27/16 Analyzed: 07/29/16						
Aroclor-1016	0.25	0.020	mg/Kg wet	0.200		124	40-140	15.0	30	
Aroclor-1016 [2C]	0.25	0.020	mg/Kg wet	0.200		123	40-140	15.0	30	
Aroclor-1260	0.25	0.020	mg/Kg wet	0.200		126	40-140	15.6	30	
Aroclor-1260 [2C]	0.25	0.020	mg/Kg wet	0.200		125	40-140	15.7	30	
Surrogate: Decachlorobiphenyl	*0.223*		mg/Kg wet	0.200		112	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.231*		mg/Kg wet	0.200		116	30-150			
Surrogate: Tetrachloro-m-xylene	*0.199*		mg/Kg wet	0.200		99.5	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.207*		mg/Kg wet	0.200		103	30-150			

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B154640 - SW-846 3546										
Blank (B154640-BLK1)				Prepared: 07/27/16 Analyzed: 07/28/16						
Aroclor-1016	ND	0.10	mg/Kg							
Aroclor-1016 [2C]	ND	0.10	mg/Kg							
Aroclor-1221	ND	0.10	mg/Kg							
Aroclor-1221 [2C]	ND	0.10	mg/Kg							
Aroclor-1232	ND	0.10	mg/Kg							
Aroclor-1232 [2C]	ND	0.10	mg/Kg							
Aroclor-1242	ND	0.10	mg/Kg							
Aroclor-1242 [2C]	ND	0.10	mg/Kg							
Aroclor-1248	ND	0.10	mg/Kg							
Aroclor-1248 [2C]	ND	0.10	mg/Kg							
Aroclor-1254	ND	0.10	mg/Kg							
Aroclor-1254 [2C]	ND	0.10	mg/Kg							
Aroclor-1260	ND	0.10	mg/Kg							
Aroclor-1260 [2C]	ND	0.10	mg/Kg							
Aroclor-1262	ND	0.10	mg/Kg							
Aroclor-1262 [2C]	ND	0.10	mg/Kg							
Aroclor-1268	ND	0.10	mg/Kg							
Aroclor-1268 [2C]	ND	0.10	mg/Kg							
Surrogate: Decachlorobiphenyl	*0.884*		mg/Kg	1.00		88.4	30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.04*		mg/Kg	1.00		104	30-150			
Surrogate: Tetrachloro-m-xylene	*0.879*		mg/Kg	1.00		87.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.04*		mg/Kg	1.00		104	30-150			
LCS (B154640-BS1)				Prepared: 07/27/16 Analyzed: 07/28/16						
Aroclor-1016	0.25	0.10	mg/Kg	0.250		100	40-140			
Aroclor-1016 [2C]	0.28	0.10	mg/Kg	0.250		114	40-140			
Aroclor-1260	0.23	0.10	mg/Kg	0.250		92.4	40-140			
Aroclor-1260 [2C]	0.27	0.10	mg/Kg	0.250		106	40-140			
Surrogate: Decachlorobiphenyl	*0.853*		mg/Kg	1.00		85.3	30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.00*		mg/Kg	1.00		100	30-150			
Surrogate: Tetrachloro-m-xylene	*0.877*		mg/Kg	1.00		87.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.04*		mg/Kg	1.00		104	30-150			
LCS Dup (B154640-BSD1)				Prepared: 07/27/16 Analyzed: 07/28/16						
Aroclor-1016	0.23	0.10	mg/Kg	0.250		92.2	40-140	8.10	30	
Aroclor-1016 [2C]	0.27	0.10	mg/Kg	0.250		108	40-140	5.48	30	
Aroclor-1260	0.22	0.10	mg/Kg	0.250		89.1	40-140	3.65	30	
Aroclor-1260 [2C]	0.26	0.10	mg/Kg	0.250		103	40-140	2.65	30	
Surrogate: Decachlorobiphenyl	*0.854*		mg/Kg	1.00		85.4	30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.00*		mg/Kg	1.00		100	30-150			
Surrogate: Tetrachloro-m-xylene	*0.864*		mg/Kg	1.00		86.4	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.02*		mg/Kg	1.00		102	30-150			

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B154633 - SW-846 9045C										
LCS (B154633-BS1)				Prepared & Analyzed: 07/27/16						
pH	6.05		pH Units	6.00		101	98.4-110			
Batch B154666 - % Solids										
Duplicate (B154666-DUP2)	**Source: 16G1216-01**			Prepared & Analyzed: 07/28/16						
% Solids	91.9		% Wt		92.3			0.434	20	
Batch B154687 - SW-846 9014										
Blank (B154687-BLK1)				Prepared & Analyzed: 07/28/16						
Reactive Cyanide	ND	0.40	mg/Kg							
LCS (B154687-BS1)				Prepared & Analyzed: 07/28/16						
Reactive Cyanide	9.4	0.40	mg/Kg	10.0		94.4	90.5-110			
Batch B154688 - SW-846 9014										
Blank (B154688-BLK1)				Prepared & Analyzed: 07/28/16						
Reactive Cyanide	ND	0.40	mg/Kg							
LCS (B154688-BS1)				Prepared & Analyzed: 07/28/16						
Reactive Cyanide	9.4	0.40	mg/Kg	10.0		94.4	90.5-110			
Batch B154689 - SW-846 9030A										
Blank (B154689-BLK1)				Prepared & Analyzed: 07/28/16						
Reactive Sulfide	ND	2.0	mg/Kg							
LCS (B154689-BS1)				Prepared & Analyzed: 07/28/16						
Reactive Sulfide	14	2.0	mg/Kg	14.8		91.9	61.4-128			
Batch B154690 - SW-846 9030A										
Blank (B154690-BLK1)				Prepared & Analyzed: 07/28/16						
Reactive Sulfide	ND	2.0	mg/Kg							
LCS (B154690-BS1)				Prepared & Analyzed: 07/28/16						
Reactive Sulfide	14	2.0	mg/Kg	14.8		91.9	61.4-128			

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B155876 - SW-846 1010A										
Blank (B155876-BLK1)				Prepared & Analyzed: 08/11/16						
Flashpoint	> 212 °F		°F							
LCS (B155876-BS1)				Prepared & Analyzed: 08/11/16						
Flashpoint	81		°F	81.0		100	98.8-101			
LCS Dup (B155876-BSD1)				Prepared & Analyzed: 08/11/16						
Flashpoint	81		°F	81.0		100	98.8-101	0.00	5	

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QUALITY CONTROL

TCLP - Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B154778 - SW-846 5030B										
Blank (B154778-BLK1)				Prepared & Analyzed: 07/29/16						
Benzene	ND	0.010	mg/L							
2-Butanone (MEK)	ND	0.20	mg/L							
Carbon Tetrachloride	ND	0.050	mg/L							
Chlorobenzene	ND	0.010	mg/L							
Chloroform	ND	0.020	mg/L							
1,4-Dichlorobenzene	ND	0.010	mg/L							
1,2-Dichloroethane	ND	0.010	mg/L							
1,1-Dichloroethylene	ND	0.010	mg/L							
Tetrachloroethylene	ND	0.010	mg/L							
Trichloroethylene	ND	0.010	mg/L							
Vinyl Chloride	ND	0.020	mg/L							
Surrogate: 1,2-Dichloroethane-d4	*0.0244*		mg/L	0.0250		97.7	70-130			
Surrogate: Toluene-d8	*0.0246*		mg/L	0.0250		98.6	70-130			
Surrogate: 4-Bromofluorobenzene	*0.0255*		mg/L	0.0250		102	70-130			
LCS (B154778-BS1)				Prepared & Analyzed: 07/29/16						
Benzene	0.00992	0.0010	mg/L	0.0100		99.2	70-130			
2-Butanone (MEK)	0.108	0.020	mg/L	0.100		108	40-160			†
Carbon Tetrachloride	0.00989	0.0050	mg/L	0.0100		98.9	70-130			
Chlorobenzene	0.0112	0.0010	mg/L	0.0100		112	70-130			
Chloroform	0.0104	0.0020	mg/L	0.0100		104	70-130			
1,4-Dichlorobenzene	0.0109	0.0010	mg/L	0.0100		109	70-130			
1,2-Dichloroethane	0.00969	0.0010	mg/L	0.0100		96.9	70-130			
1,1-Dichloroethylene	0.00900	0.0010	mg/L	0.0100		90.0	70-130			
Tetrachloroethylene	0.0107	0.0010	mg/L	0.0100		107	70-130			
Trichloroethylene	0.0113	0.0010	mg/L	0.0100		113	70-130			
Vinyl Chloride	0.00888	0.0020	mg/L	0.0100		88.8	40-160			†
Surrogate: 1,2-Dichloroethane-d4	*0.0244*		mg/L	0.0250		97.7	70-130			
Surrogate: Toluene-d8	*0.0247*		mg/L	0.0250		98.8	70-130			
Surrogate: 4-Bromofluorobenzene	*0.0249*		mg/L	0.0250		99.6	70-130			
LCS Dup (B154778-BSD1)				Prepared & Analyzed: 07/29/16						
Benzene	0.00979	0.0010	mg/L	0.0100		97.9	70-130	1.32	25	
2-Butanone (MEK)	0.111	0.020	mg/L	0.100		111	40-160	2.71	25	†
Carbon Tetrachloride	0.0101	0.0050	mg/L	0.0100		101	70-130	1.80	25	
Chlorobenzene	0.0114	0.0010	mg/L	0.0100		114	70-130	0.974	25	
Chloroform	0.0102	0.0020	mg/L	0.0100		102	70-130	1.93	25	
1,4-Dichlorobenzene	0.0108	0.0010	mg/L	0.0100		108	70-130	0.739	25	
1,2-Dichloroethane	0.00974	0.0010	mg/L	0.0100		97.4	70-130	0.515	25	
1,1-Dichloroethylene	0.00900	0.0010	mg/L	0.0100		90.0	70-130	0.00	25	
Tetrachloroethylene	0.0108	0.0010	mg/L	0.0100		108	70-130	1.11	25	
Trichloroethylene	0.0108	0.0010	mg/L	0.0100		108	70-130	4.26	25	
Vinyl Chloride	0.00869	0.0020	mg/L	0.0100		86.9	40-160	2.16	25	†
Surrogate: 1,2-Dichloroethane-d4	*0.0244*		mg/L	0.0250		97.6	70-130			
Surrogate: Toluene-d8	*0.0247*		mg/L	0.0250		98.8	70-130			
Surrogate: 4-Bromofluorobenzene	*0.0253*		mg/L	0.0250		101	70-130			

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QUALITY CONTROL

TCLP - Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B154806 - SW-846 3510C										
Blank (B154806-BLK1)				Prepared: 07/29/16 Analyzed: 07/30/16						
2,4-Dinitrotoluene	ND	0.050	mg/L							
Hexachlorobenzene	ND	0.050	mg/L							
Hexachlorobutadiene	ND	0.050	mg/L							V-20
Hexachloroethane	ND	0.050	mg/L							
2-Methylphenol	ND	0.050	mg/L							
3/4-Methylphenol	ND	0.050	mg/L							
Nitrobenzene	ND	0.050	mg/L							
Pentachlorophenol	ND	0.050	mg/L							
Pyridine	ND	0.025	mg/L							
2,4,5-Trichlorophenol	ND	0.050	mg/L							
2,4,6-Trichlorophenol	ND	0.050	mg/L							
Surrogate: 2-Fluorophenol	*0.787*		mg/L	1.00		78.7	15-110			
Surrogate: Phenol-d6	*0.812*		mg/L	1.00		81.2	15-110			
Surrogate: Nitrobenzene-d5	*0.472*		mg/L	0.500		94.5	30-130			
Surrogate: 2-Fluorobiphenyl	*0.513*		mg/L	0.500		103	30-130			
Surrogate: 2,4,6-Tribromophenol	*1.10*		mg/L	1.00		110	15-110			
Surrogate: p-Terphenyl-d14	*0.572*		mg/L	0.500		114	30-130			
LCS (B154806-BS1)				Prepared: 07/29/16 Analyzed: 07/30/16						
2,4-Dinitrotoluene	0.250	0.050	mg/L	0.250		100	40-140			
Hexachlorobenzene	0.256	0.050	mg/L	0.250		102	40-140			
Hexachlorobutadiene	0.227	0.050	mg/L	0.250		90.8	40-140			V-06
Hexachloroethane	0.182	0.050	mg/L	0.250		72.7	40-140			
2-Methylphenol	0.207	0.050	mg/L	0.250		83.0	30-130			
3/4-Methylphenol	0.220	0.050	mg/L	0.250		87.9	30-130			
Nitrobenzene	0.223	0.050	mg/L	0.250		89.1	40-140			
Pentachlorophenol	0.212	0.050	mg/L	0.250		84.6	30-130			
Pyridine	0.124	0.025	mg/L	0.250		49.7	10-140			†
2,4,5-Trichlorophenol	0.258	0.050	mg/L	0.250		103	30-130			
2,4,6-Trichlorophenol	0.257	0.050	mg/L	0.250		103	30-130			
Surrogate: 2-Fluorophenol	*0.844*		mg/L	1.00		84.4	15-110			
Surrogate: Phenol-d6	*0.861*		mg/L	1.00		86.1	15-110			
Surrogate: Nitrobenzene-d5	*0.514*		mg/L	0.500		103	30-130			
Surrogate: 2-Fluorobiphenyl	*0.551*		mg/L	0.500		110	30-130			
Surrogate: 2,4,6-Tribromophenol	*1.20*		mg/L	1.00		**120** *	15-110			S-07
Surrogate: p-Terphenyl-d14	*0.600*		mg/L	0.500		120	30-130			
LCS Dup (B154806-BSD1)				Prepared: 07/29/16 Analyzed: 07/30/16						
2,4-Dinitrotoluene	0.238	0.050	mg/L	0.250		95.2	40-140	4.94	20	
Hexachlorobenzene	0.235	0.050	mg/L	0.250		94.0	40-140	8.36	20	
Hexachlorobutadiene	0.205	0.050	mg/L	0.250		82.0	40-140	10.1	20	V-06
Hexachloroethane	0.166	0.050	mg/L	0.250		66.2	40-140	9.33	50	‡
2-Methylphenol	0.191	0.050	mg/L	0.250		76.6	30-130	8.02	20	
3/4-Methylphenol	0.202	0.050	mg/L	0.250		80.6	30-130	8.69	20	
Nitrobenzene	0.207	0.050	mg/L	0.250		82.8	40-140	7.38	20	
Pentachlorophenol	0.196	0.050	mg/L	0.250		78.6	30-130	7.40	50	‡
Pyridine	0.0790	0.025	mg/L	0.250		31.6	10-140	44.5	50	† ‡
2,4,5-Trichlorophenol	0.235	0.050	mg/L	0.250		94.0	30-130	9.26	20	
2,4,6-Trichlorophenol	0.236	0.050	mg/L	0.250		94.6	30-130	8.21	50	‡
Surrogate: 2-Fluorophenol	*0.760*		mg/L	1.00		76.0	15-110			
Surrogate: Phenol-d6	*0.792*		mg/L	1.00		79.2	15-110			
Surrogate: Nitrobenzene-d5	*0.468*		mg/L	0.500		93.6	30-130			

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QUALITY CONTROL

TCLP - Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B154806 - SW-846 3510C										
LCS Dup (B154806-BSD1)				Prepared: 07/29/16 Analyzed: 07/30/16						
Surrogate: 2-Fluorobiphenyl	*0.509*		mg/L	0.500		102	30-130			
Surrogate: 2,4,6-Tribromophenol	*1.10*		mg/L	1.00		110	15-110			
Surrogate: p-Terphenyl-d14	*0.542*		mg/L	0.500		108	30-130			
Matrix Spike (B154806-MS1)	**Source: 16G1216-01**			Prepared: 07/29/16 Analyzed: 07/30/16						
2,4-Dinitrotoluene	0.224	0.050	mg/L	0.250	ND	89.5	40-140			
Hexachlorobenzene	0.230	0.050	mg/L	0.250	ND	92.1	40-140			
Hexachlorobutadiene	0.212	0.050	mg/L	0.250	ND	84.6	40-140			V-06
Hexachloroethane	0.179	0.050	mg/L	0.250	ND	71.6	40-140			
2-Methylphenol	0.184	0.050	mg/L	0.250	ND	73.7	40-140			
3/4-Methylphenol	0.198	0.050	mg/L	0.250	ND	79.3	40-140			
Nitrobenzene	0.208	0.050	mg/L	0.250	ND	83.2	40-140			
Pentachlorophenol	0.186	0.050	mg/L	0.250	ND	74.2	40-140			
Pyridine	0.155	0.025	mg/L	0.250	ND	62.0	40-140			
2,4,5-Trichlorophenol	0.225	0.050	mg/L	0.250	ND	90.1	40-140			
2,4,6-Trichlorophenol	0.228	0.050	mg/L	0.250	ND	91.0	40-140			
Surrogate: 2-Fluorophenol	*0.764*		mg/L	1.00		76.4	15-110			
Surrogate: Phenol-d6	*0.776*		mg/L	1.00		77.6	15-110			
Surrogate: Nitrobenzene-d5	*0.456*		mg/L	0.500		91.1	30-130			
Surrogate: 2-Fluorobiphenyl	*0.478*		mg/L	0.500		95.6	30-130			
Surrogate: 2,4,6-Tribromophenol	*1.02*		mg/L	1.00		102	15-110			
Surrogate: p-Terphenyl-d14	*0.524*		mg/L	0.500		105	30-130			

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QUALITY CONTROL

TCLP - Metals Analyses - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B154790 - SW-846 3010A										
Blank (B154790-BLK1)				Prepared & Analyzed: 07/29/16						
Arsenic	0.010	0.010	mg/L							B-05
Barium	ND	0.050	mg/L							
Cadmium	ND	0.0040	mg/L							
Chromium	ND	0.010	mg/L							
Lead	ND	0.010	mg/L							
Selenium	ND	0.050	mg/L							
Silver	ND	0.0050	mg/L							
LCS (B154790-BS1)				Prepared & Analyzed: 07/29/16						
Arsenic	0.559	0.010	mg/L	0.500		112	80-120			B
Barium	0.502	0.050	mg/L	0.500		100	80-120			
Cadmium	0.535	0.0040	mg/L	0.500		107	80-120			
Chromium	0.495	0.010	mg/L	0.500		98.9	80-120			
Lead	0.479	0.010	mg/L	0.500		95.7	80-120			
Selenium	0.582	0.050	mg/L	0.500		116	80-120			
Silver	0.504	0.0050	mg/L	0.500		101	80-120			
LCS Dup (B154790-BSD1)				Prepared & Analyzed: 07/29/16						
Arsenic	0.549	0.010	mg/L	0.500		110	80-120	1.78	20	B
Barium	0.493	0.050	mg/L	0.500		98.5	80-120	1.91	20	
Cadmium	0.522	0.0040	mg/L	0.500		104	80-120	2.46	20	
Chromium	0.484	0.010	mg/L	0.500		96.9	80-120	2.07	20	
Lead	0.474	0.010	mg/L	0.500		94.8	80-120	0.948	20	
Selenium	0.578	0.050	mg/L	0.500		116	80-120	0.774	20	
Silver	0.495	0.0050	mg/L	0.500		99.0	80-120	1.85	20	
Batch B154799 - SW-846 7470A Prep										
Blank (B154799-BLK1)				Prepared: 07/29/16 Analyzed: 08/01/16						
Mercury	ND	0.00010	mg/L							
LCS (B154799-BS1)				Prepared: 07/29/16 Analyzed: 08/01/16						
Mercury	0.00198	0.00010	mg/L	0.00200		98.9	80-120			
LCS Dup (B154799-BSD1)				Prepared: 07/29/16 Analyzed: 08/01/16						
Mercury	0.00202	0.00010	mg/L	0.00200		101	80-120	2.06	20	
Batch B154808 - SW-846 7470A Prep										
Blank (B154808-BLK1)				Prepared: 07/29/16 Analyzed: 08/01/16						
Mercury	ND	0.00010	mg/L							

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QUALITY CONTROL

TCLP - Metals Analyses - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B154808 - SW-846 7470A Prep										
LCS (B154808-BS1)				Prepared: 07/29/16 Analyzed: 08/01/16						
Mercury	0.00197	0.00010	mg/L	0.00200		98.7	80-120			
LCS Dup (B154808-BSD1)				Prepared: 07/29/16 Analyzed: 08/01/16						
Mercury	0.00200	0.00010	mg/L	0.00200		100	80-120	1.29	20	
Matrix Spike (B154808-MS1)	**Source: 16G1216-03**			Prepared: 07/29/16 Analyzed: 08/01/16						
Mercury	0.00199	0.00010	mg/L	0.00200	ND	99.4	75-125			

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

WS-1

Lab Sample ID: 16G1216-01

Date(s) Analyzed: 07/29/2016 07/29/2016

Instrument ID (1):

Instrument ID (2):

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1260	1	0.00	0.00	0.00	65	
	2	0.00	0.00	0.00	69	6.0

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

WS-2

Lab Sample ID: 16G1216-02

Date(s) Analyzed: 07/29/2016 07/29/2016

Instrument ID (1):

Instrument ID (2):

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1260	1	0.00	0.00	0.00	2.3	
	2	0.00	0.00	0.00	2.5	7.0

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IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

WA-1

Lab Sample ID: 16G1216-03

Date(s) Analyzed: 07/28/2016 07/28/2016

Instrument ID (1):

Instrument ID (2):

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1260	1	0.00	0.00	0.00	0.21	
	2	0.00	0.00	0.00	0.25	17.9

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B154637-BS1

Date(s) Analyzed: 07/29/2016 07/29/2016

Instrument ID (1):

Instrument ID (2):

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	0.21	
	2	0.00	0.00	0.00	0.21	1
Aroclor-1260	1	0.00	0.00	0.00	0.22	
	2	0.00	0.00	0.00	0.21	2

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IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B154637-BSD1

Date(s) Analyzed: 07/29/2016 07/29/2016

Instrument ID (1):

Instrument ID (2):

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	0.25	
	2	0.00	0.00	0.00	0.25	1
Aroclor-1260	1	0.00	0.00	0.00	0.25	
	2	0.00	0.00	0.00	0.25	1

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IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B154640-BS1

Date(s) Analyzed: 07/28/2016 07/28/2016

Instrument ID (1):

Instrument ID (2):

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	0.25	
	2	0.00	0.00	0.00	0.28	11
Aroclor-1260	1	0.00	0.00	0.00	0.23	
	2	0.00	0.00	0.00	0.27	16

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IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B154640-BSD1

Date(s) Analyzed: 07/28/2016 07/28/2016

Instrument ID (1):

Instrument ID (2):

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	0.23	
	2	0.00	0.00	0.00	0.27	16
Aroclor-1260	1	0.00	0.00	0.00	0.22	
	2	0.00	0.00	0.00	0.26	15

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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit
DL	Method Detection Limit
MCL	Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

B	Analyte is found in the associated blank as well as in the sample.
B-05	Data is not affected by elevated level in blank since sample(s) result is "Not Detected".
H-01	Recommended sample holding time was exceeded, but analysis was performed before 2X the allowable holding time.
H-10	Analysis was requested after the recommended holding time had passed.
J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
S-01	The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.
S-07	One associated surrogate standard recovery is outside of control limits but the other(s) is/are within limits. All recoveries are > 10%.
V-06	Continuing calibration did not meet method specifications and was biased on the high side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the high side.
V-20	Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 1010A in Soil	
Flashpoint	NY,NC,ME,VA
SW-846 1030 in Soil	
Ignitability	NY,NH,CT,NC,ME,VA
SW-846 6010C-D in Water	
Arsenic	NY,CT,NC,ME,NH,VA
Barium	NY,CT,ME,NC,NH,VA
Cadmium	NY,CT,ME,NC,NH,VA
Chromium	NY,CT,ME,NC,NH,VA
Lead	NY,CT,ME,NC,NH,VA
Selenium	CT,ME,NC,NH,NY,VA
Silver	CT,ME,NC,NH,NY,VA
SW-846 7470A in Water	
Mercury	CT,ME,NC,NH,NY,VA
SW-846 8082A in Product/Solid	
Aroclor-1016	CT,NH,NY,NC,ME,VA
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1221	CT,NH,NY,NC,ME,VA
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1232	CT,NH,NY,NC,ME,VA
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1242	CT,NH,NY,NC,ME,VA
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1248	CT,NH,NY,NC,ME,VA
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1254	CT,NH,NY,NC,ME,VA
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1260	CT,NH,NY,NC,ME,VA
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1262	NH,NY,NC,ME,VA
Aroclor-1262 [2C]	NH,NY,NC,ME,VA
Aroclor-1268	NH,NY,NC,ME,VA
Aroclor-1268 [2C]	NH,NY,NC,ME,VA
SW-846 8082A in Soil	
Aroclor-1016	CT,NH,NY,NC,ME,VA
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1221	CT,NH,NY,NC,ME,VA
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1232	CT,NH,NY,NC,ME,VA
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1242	CT,NH,NY,NC,ME,VA
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1248	CT,NH,NY,NC,ME,VA
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1254	CT,NH,NY,NC,ME,VA
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8082A in Soil	
Aroclor-1260	CT,NH,NY,NC,ME,VA
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1262	NH,NY,NC,ME,VA
Aroclor-1262 [2C]	NH,NY,NC,ME,VA
Aroclor-1268	NH,NY,NC,ME,VA
Aroclor-1268 [2C]	NH,NY,NC,ME,VA
SW-846 8260C in Soil	
Benzene	ME,NY,CT,NC,VA
2-Butanone (MEK)	ME,NY,CT,NC,VA
Carbon Tetrachloride	ME,NY,CT,NC,VA
Chlorobenzene	ME,NY,CT,NC,VA
Chloroform	ME,NY,CT,NC,VA
1,4-Dichlorobenzene	ME,NY,CT,NC,VA
1,2-Dichloroethane	ME,NY,CT,NC,VA
1,1-Dichloroethylene	ME,NY,CT,NC,VA
Hexachlorobutadiene	ME,NY,VA
Tetrachloroethylene	ME,NY,CT,NC,VA
Trichloroethylene	ME,NY,CT,NC,VA
Vinyl Chloride	ME,NY,CT,NC,VA
SW-846 8270D in Water	
1,4-Dichlorobenzene	ME,NC,NH,NY,VA
2,4-Dinitrotoluene	ME,NC,NH,CT,NY,VA
Hexachlorobenzene	ME,NC,NH,CT,NY,VA
Hexachlorobutadiene	ME,NC,NH,CT,NY,VA
Hexachloroethane	ME,NC,NH,CT,NY,VA
2-Methylphenol	ME,NC,NH,CT
3/4-Methylphenol	ME,NC,NH,CT
Nitrobenzene	ME,NC,NH,CT,NY,VA
Pentachlorophenol	ME,NC,NH,CT,NY,VA
Pyridine	ME,NC,NH,CT,NY,VA
2,4,5-Trichlorophenol	ME,NC,NH,CT,NY,VA
2,4,6-Trichlorophenol	ME,NC,NH,CT,NY,VA
2-Fluorophenol	NC

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The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC	100033	02/1/2018
MA	Massachusetts DEP	M-MA100	06/30/2017
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2017
NY	New York State Department of Health	10899 NELAP	04/1/2017
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2017
RI	Rhode Island Department of Health	LAO00112	12/30/2016
NC	North Carolina Div. of Water Quality	652	12/31/2016
NJ	New Jersey DEP	MA007 NELAP	06/30/2017
FL	Florida Department of Health	E871027 NELAP	06/30/2017
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2017
ME	State of Maine	2011028	06/9/2017
VA	Commonwealth of Virginia	460217	12/14/2016
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2016

CHAIN OF CUSTODY RECORD 16G1216

Project Number: E1501410.04

Site and Location: Yorkville, NY

Contact Name: Dave Bouchard

Contact Email: dave.bouchard@wspgroup.com

Sampler's Name: Brian Silker

Sampler's Signature: [signature]

Matrices: S = Soil; Aq = Water; A = Air; Bu = Bulk; W = Wipe; Bi = Biota; OW = Oily Waste; O = Other

Requested Analyses

Sample Identification:		Depth	Date	Time	Matrix	Number of Containers	TCLP VOCs 1311/8260B	TCLP SVOCs 1311/8270C	TCLP Metals 1311/6010/7000	Total PCBs Method 8082	Reactivity	Corrosivity	Ignitibility			Remarks
WS-1	01	0.5'	7/26/16	1110	S	3	X	X	X	X	X	X	X			
WS-2	02	0.5'	7/26/16	1200	S	3	X	X	X	X	X	X	X			
WA-1	03	0-2"	7/26/16	1220	S	3	X	X	X	X	X	X	X			

Nº

Relinquished by (*Signature*): [signature]	7/26/16 1515 Date | Time	Received by (*Signature*): Marigold Garcia 7/27/16 3.1 926	Laboratory Name:
Relinquished by (*Signature*):	Date | Time	Received by (*Signature*):	Laboratory Location:
			Custody Seal Numbers:
Turn-Around Time:		Tracking Number:	Method of Shipment:

WSP Environment & Energy

- ❑ Reston Office: 11190 Sunrise Valley Dr., #300, Reston, VA 20191 / Tel: 703-709-6500
- ❑ Pittsburgh Office: 750 Holiday Dr., #410, Pittsburgh, PA 15220 / Tel: 412-604-1040
- ❑ San Jose Office: 2025 Gateway Place, #435, San Jose, CA 95110 / Tel: 408-453-6100
- ❑ New Jersey Office: 200 Cottontail Ln., Somerset, NJ 08873 / Tel: 732-564-0888
- ❑ Denver Office: 4600 South Ulster, #930, Denver, CO 80237 / Tel: 303-850-9200
- ❑ Minneapolis Office: 123 North 3rd St., #808, Minneapolis, MN 55401 / Tel: 612-343-0510
- ❑ Woburn Office: 300 Trade Center, Suite 4690, Woburn, MA 01801
- ❑ Cazenovia Office: 5 Sullivan St., Cazenovia, NY 13035 / Tel: 315-655-3900

39 Spruce St.
East Longmeadow, MA. 01028
P: 413-525-2332
F: 413-525-6405
www.contestlabs.com

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Sample Receipt Checklist

CLIENT NAME: WSP **RECEIVED BY:** MG **DATE:** 7/27/16

1) **Was the chain(s) of custody relinquished and signed?** Yes ✓ No ___ No COC Incl.

2) **Does the chain agree with the samples?** Yes ✓ No ___
If not, explain:

3) **Are all the samples in good condition?** Yes ✓ No ___
If not, explain:

4) **How were the samples received:**
On Ice ✓ Direct from Sampling ___ Ambient ___ In Cooler(s) ✓

Were the samples received in Temperature Compliance of (2-6°C)? Yes ✓ No ___ N/A ___

Temperature °C by Temp blank ___ Temperature °C by Temp gun 3.1

5) **Are there Dissolved samples for the lab to filter?** Yes ___ No ✓
Who was notified ___ Date ___ Time ___

6) **Are there any RUSH or SHORT HOLDING TIME samples?** Yes ___ No ✓
Who was notified ___ Date ___ Time ___

7) **Location where samples are stored:** LOGIN

Permission to subcontract samples? Yes No
(Walk-in clients only) if not already approved
Client Signature: ___

8) **Do all samples have the proper Acid pH:** Yes ___ No ___ N/A ✓

9) **Do all samples have the proper Base pH:** Yes ___ No ___ N/A ✓

10) **Was the PC notified of any discrepancies with the CoC vs the samples:** Yes ___ N/A ✓

Containers received at Con-Test

	# of containers		# of containers
1 Liter Amber		16 oz amber	3
500 mL Amber		8 oz amber/clear jar	3
250 mL Amber (8oz amber)		4 oz amber/clear jar	3
1 Liter Plastic		2 oz amber/clear jar	
500 mL Plastic		Plastic Bag / Ziploc	
250 mL plastic		SOC Kit	
40 mL Vial - type listed below		Perchlorate Kit	
Colisure / bacteria bottle		Flashpoint bottle	
Dissolved Oxygen bottle		Other glass jar	
Encore		Other	

40 mL vials: # HCl ___ # Methanol ___
Bisulfate ___ # DI Water ___
Thiosulfate ___ Unpreserved ___

Time and Date Frozen:

Login Sample Receipt Checklist
(Rejection Criteria Listing - Using Sample Acceptance Policy)
Any False statement will be brought to the attention of Client

Question	Answer (True/False) T/F/NA	Comment
1) The cooler's custody seal, if present, is intact.	T	
2) The cooler or samples do not appear to have been compromised or tampered with.	T	
3) Samples were received on ice.	T	
4) Cooler Temperature is acceptable.	T	
5) Cooler Temperature is recorded.	T	
6) COC is filled out in ink and legible.	T	
7) COC is filled out with all pertinent information.	T	
8) Field Sampler's name present on COC.	T	
9) There are no discrepancies between the sample IDs on the container and the COC.	T	
10) Samples are received within Holding Time.	T	
11) Sample containers have legible labels.	T	
12) Containers are not broken or leaking.	T	
13) Air Cassettes are not broken/open.	NA	
14) Sample collection date/times are provided.	T	
15) Appropriate sample containers are used.	T	
16) Proper collection media used.	T	
17) No headspace sample bottles are completely filled.	NA	
18) There is sufficient volume for all requsted analyses, including any requested MS/MSDs.	T	
19) Trip blanks provided if applicable.	NA	
20) VOA sample vials do not have head space or bubble is <6mm (1/4") in diameter.	NA	
21) Samples do not require splitting or compositing.	T	

Who notified of False statements? **Date/Time:**

Doc #277 Rev. 4 August 2013 **Log-In Technician Initials:** MG **Date/Time:** 7/27/16 926

Appendix D – Soil Confirmation Analytical Data

ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

August 17, 2016

Dave Bouchard
WSP - NY
5 Sullivan Street
Cazenovia, NY 13035

Project Location: Yorkville, NY
Client Job Number:
Project Number: E1501410.000 Task-5
Laboratory Work Order Number: 16H0755

Enclosed are results of analyses for samples received by the laboratory on August 16, 2016. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Aaron L. Benoit
Project Manager

Table of Contents

Table of Contents (continued)

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

WSP - NY
5 Sullivan Street
Cazenovia, NY 13035
ATTN: Dave Bouchard

REPORT DATE: 8/17/2016

PURCHASE ORDER NUMBER:

PROJECT NUMBER: E1501410.000 Task-5

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 16H0755

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Yorkville, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
EXC-WS1NSW (1.0)	16H0755-01	Soil		SM 2540G	
				SW-846 8082A	
EXC-WS1ESW (1.0)	16H0755-02	Soil		SM 2540G	
				SW-846 8082A	
EXC-WS1SSW (1.0)	16H0755-03	Soil		SM 2540G	
				SW-846 8082A	
EXC-WS1WSW (1.0)	16H0755-04	Soil		SM 2540G	
				SW-846 8082A	
EXC-WS1B1 (2.0)	16H0755-05	Soil		SM 2540G	
				SW-846 8082A	
EXC-WS1B2 (2.0)	16H0755-06	Soil		SM 2540G	
				SW-846 8082A	
EB-081516	16H0755-07	Equipment Blank Water		SW-846 8082A	
EXC-SB29NSW (1.5)	16H0755-08	Soil		SM 2540G	
				SW-846 8082A	
EXC-SB29ESW (1.5)	16H0755-09	Soil		SM 2540G	
				SW-846 8082A	
EXC-SB29SSW (1.5)	16H0755-10	Soil		SM 2540G	
				SW-846 8082A	
EXC-SB29WSW (1.5)	16H0755-11	Soil		SM 2540G	
				SW-846 8082A	
EXC-SB29B1 (3.0)	16H0755-12	Soil		SM 2540G	
				SW-846 8082A	
EXC-SB29B2 (3.0)	16H0755-13	Soil		SM 2540G	
				SW-846 8082A	

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CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

SW-846 8082A

Qualifications:

P-01

Result was confirmed using a dissimilar column. Relative percent difference between the two results was >40%. In accordance with the method, the higher result was reported.

Analyte & Samples(s) Qualified:

Aroclor-1254 [2C]
16H0755-10[EXC-SB29SSW (1.5)]

S-01

The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

Analyte & Samples(s) Qualified:

Decachlorobiphenyl
16H0755-03[EXC-WS1SSW (1.0)]

Decachlorobiphenyl [2C]
16H0755-03[EXC-WS1SSW (1.0)]

Tetrachloro-m-xylene
16H0755-03[EXC-WS1SSW (1.0)]

Tetrachloro-m-xylene [2C]
16H0755-03[EXC-WS1SSW (1.0)]

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Lisa Worthington

Lisa A. Worthington
Project Manager

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Yorkville, NY | Sample Description: | Work Order: 16H0755

Date Received: 8/16/2016

Field Sample #: EXC-WS1NSW (1.0) | Sampled: 8/15/2016 14:43

Sample ID: 16H0755-01

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.12	0.073	mg/Kg dry	5		SW-846 8082A	8/16/16	8/16/16 22:41	KAL
Aroclor-1221 [1]	ND	0.12	0.079	mg/Kg dry	5		SW-846 8082A	8/16/16	8/16/16 22:41	KAL
Aroclor-1232 [1]	ND	0.12	0.055	mg/Kg dry	5		SW-846 8082A	8/16/16	8/16/16 22:41	KAL
Aroclor-1242 [1]	ND	0.12	0.061	mg/Kg dry	5		SW-846 8082A	8/16/16	8/16/16 22:41	KAL
Aroclor-1248 [1]	ND	0.12	0.073	mg/Kg dry	5		SW-846 8082A	8/16/16	8/16/16 22:41	KAL
Aroclor-1254 [1]	ND	0.12	0.079	mg/Kg dry	5		SW-846 8082A	8/16/16	8/16/16 22:41	KAL
Aroclor-1260 [2]	0.52	0.12	0.085	mg/Kg dry	5		SW-846 8082A	8/16/16	8/16/16 22:41	KAL
Aroclor-1262 [1]	ND	0.12	0.061	mg/Kg dry	5		SW-846 8082A	8/16/16	8/16/16 22:41	KAL
Aroclor-1268 [1]	ND	0.12	0.049	mg/Kg dry	5		SW-846 8082A	8/16/16	8/16/16 22:41	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	81.2	30-150		8/16/16 22:41
Decachlorobiphenyl [2]	84.0	30-150		8/16/16 22:41
Tetrachloro-m-xylene [1]	89.6	30-150		8/16/16 22:41
Tetrachloro-m-xylene [2]	99.4	30-150		8/16/16 22:41

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Yorkville, NY | Sample Description: | Work Order: 16H0755

Date Received: 8/16/2016

Field Sample #: EXC-WS1NSW (1.0) | Sampled: 8/15/2016 14:43

Sample ID: 16H0755-01

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	82.1		% Wt	1		SM 2540G	8/16/16	8/17/16 9:36	MRL

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Yorkville, NY   Sample Description: Work Order: 16H0755

Date Received: 8/16/2016

Field Sample #: EXC-WS1ESW (1.0)   Sampled: 8/15/2016 14:49

Sample ID: 16H0755-02

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.23	0.14	mg/Kg dry	10		SW-846 8082A	8/16/16	8/17/16 10:18	KAL
Aroclor-1221 [1]	ND	0.23	0.15	mg/Kg dry	10		SW-846 8082A	8/16/16	8/17/16 10:18	KAL
Aroclor-1232 [1]	ND	0.23	0.11	mg/Kg dry	10		SW-846 8082A	8/16/16	8/17/16 10:18	KAL
Aroclor-1242 [1]	ND	0.23	0.12	mg/Kg dry	10		SW-846 8082A	8/16/16	8/17/16 10:18	KAL
Aroclor-1248 [1]	ND	0.23	0.14	mg/Kg dry	10		SW-846 8082A	8/16/16	8/17/16 10:18	KAL
Aroclor-1254 [1]	ND	0.23	0.15	mg/Kg dry	10		SW-846 8082A	8/16/16	8/17/16 10:18	KAL
Aroclor-1260 [2]	1.7	0.23	0.16	mg/Kg dry	10		SW-846 8082A	8/16/16	8/17/16 10:18	KAL
Aroclor-1262 [1]	ND	0.23	0.12	mg/Kg dry	10		SW-846 8082A	8/16/16	8/17/16 10:18	KAL
Aroclor-1268 [1]	ND	0.23	0.093	mg/Kg dry	10		SW-846 8082A	8/16/16	8/17/16 10:18	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	Date/Time Analyzed
Decachlorobiphenyl [1]	91.8	30-150		8/17/16 10:18
Decachlorobiphenyl [2]	96.4	30-150		8/17/16 10:18
Tetrachloro-m-xylene [1]	99.5	30-150		8/17/16 10:18
Tetrachloro-m-xylene [2]	109	30-150		8/17/16 10:18

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Yorkville, NY | Sample Description: | Work Order: 16H0755

Date Received: 8/16/2016

Field Sample #: EXC-WS1ESW (1.0) | Sampled: 8/15/2016 14:49

Sample ID: 16H0755-02

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	85.6		% Wt	1		SM 2540G	8/16/16	8/17/16 9:36	MRL

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Project Location: Yorkville, NY		Sample Description:		Work Order: 16H0755

Date Received: 8/16/2016

Field Sample #: EXC-WS1SSW (1.0)		Sampled: 8/15/2016 14:55

Sample ID: 16H0755-03

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	1.2	0.70	mg/Kg dry	50		SW-846 8082A	8/16/16	8/17/16 10:31	KAL
Aroclor-1221 [1]	ND	1.2	0.75	mg/Kg dry	50		SW-846 8082A	8/16/16	8/17/16 10:31	KAL
Aroclor-1232 [1]	ND	1.2	0.52	mg/Kg dry	50		SW-846 8082A	8/16/16	8/17/16 10:31	KAL
Aroclor-1242 [1]	ND	1.2	0.58	mg/Kg dry	50		SW-846 8082A	8/16/16	8/17/16 10:31	KAL
Aroclor-1248 [1]	ND	1.2	0.70	mg/Kg dry	50		SW-846 8082A	8/16/16	8/17/16 10:31	KAL
Aroclor-1254 [1]	ND	1.2	0.75	mg/Kg dry	50		SW-846 8082A	8/16/16	8/17/16 10:31	KAL
Aroclor-1260 [2]	5.0	1.2	0.81	mg/Kg dry	50		SW-846 8082A	8/16/16	8/17/16 10:31	KAL
Aroclor-1262 [1]	ND	1.2	0.58	mg/Kg dry	50		SW-846 8082A	8/16/16	8/17/16 10:31	KAL
Aroclor-1268 [1]	ND	1.2	0.46	mg/Kg dry	50		SW-846 8082A	8/16/16	8/17/16 10:31	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	8/17/16 10:31
Decachlorobiphenyl [2]	*	30-150	S-01	8/17/16 10:31
Tetrachloro-m-xylene [1]	*	30-150	S-01	8/17/16 10:31
Tetrachloro-m-xylene [2]	*	30-150	S-01	8/17/16 10:31

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Project Location: Yorkville, NY

Sample Description:

Work Order: 16H0755

Date Received: 8/16/2016

Field Sample #: EXC-WS1SSW (1.0)

Sampled: 8/15/2016 14:55

Sample ID: 16H0755-03

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	86.1		% Wt	1		SM 2540G	8/16/16	8/17/16 9:36	MRL

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Yorkville, NY   Sample Description: Work Order: 16H0755

Date Received: 8/16/2016

Field Sample #: EXC-WS1WSW (1.0)   Sampled: 8/15/2016 15:00

Sample ID: 16H0755-04

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.12	0.072	mg/Kg dry	5		SW-846 8082A	8/16/16	8/16/16 23:20	KAL
Aroclor-1221 [1]	ND	0.12	0.079	mg/Kg dry	5		SW-846 8082A	8/16/16	8/16/16 23:20	KAL
Aroclor-1232 [1]	ND	0.12	0.054	mg/Kg dry	5		SW-846 8082A	8/16/16	8/16/16 23:20	KAL
Aroclor-1242 [1]	ND	0.12	0.060	mg/Kg dry	5		SW-846 8082A	8/16/16	8/16/16 23:20	KAL
Aroclor-1248 [1]	ND	0.12	0.072	mg/Kg dry	5		SW-846 8082A	8/16/16	8/16/16 23:20	KAL
Aroclor-1254 [1]	ND	0.12	0.079	mg/Kg dry	5		SW-846 8082A	8/16/16	8/16/16 23:20	KAL
Aroclor-1260 [2]	0.33	0.12	0.085	mg/Kg dry	5		SW-846 8082A	8/16/16	8/16/16 23:20	KAL
Aroclor-1262 [1]	ND	0.12	0.060	mg/Kg dry	5		SW-846 8082A	8/16/16	8/16/16 23:20	KAL
Aroclor-1268 [1]	ND	0.12	0.048	mg/Kg dry	5		SW-846 8082A	8/16/16	8/16/16 23:20	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	84.8	30-150		8/16/16 23:20
Decachlorobiphenyl [2]	91.2	30-150		8/16/16 23:20
Tetrachloro-m-xylene [1]	94.4	30-150		8/16/16 23:20
Tetrachloro-m-xylene [2]	104	30-150		8/16/16 23:20

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Yorkville, NY

Sample Description:

Work Order: 16H0755

Date Received: 8/16/2016

Field Sample #: EXC-WS1WSW (1.0)

Sampled: 8/15/2016 15:00

Sample ID: 16H0755-04

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	82.8		% Wt	1		SM 2540G	8/16/16	8/17/16 9:36	MRL

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Yorkville, NY   Sample Description: Work Order: 16H0755

Date Received: 8/16/2016

Field Sample #: EXC-WS1B1 (2.0)   Sampled: 8/15/2016 15:08

Sample ID: 16H0755-05

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.11	0.069	mg/Kg dry	5		SW-846 8082A	8/16/16	8/16/16 23:33	KAL
Aroclor-1221 [1]	ND	0.11	0.075	mg/Kg dry	5		SW-846 8082A	8/16/16	8/16/16 23:33	KAL
Aroclor-1232 [1]	ND	0.11	0.052	mg/Kg dry	5		SW-846 8082A	8/16/16	8/16/16 23:33	KAL
Aroclor-1242 [1]	ND	0.11	0.057	mg/Kg dry	5		SW-846 8082A	8/16/16	8/16/16 23:33	KAL
Aroclor-1248 [1]	ND	0.11	0.069	mg/Kg dry	5		SW-846 8082A	8/16/16	8/16/16 23:33	KAL
Aroclor-1254 [1]	ND	0.11	0.075	mg/Kg dry	5		SW-846 8082A	8/16/16	8/16/16 23:33	KAL
Aroclor-1260 [2]	0.29	0.11	0.080	mg/Kg dry	5		SW-846 8082A	8/16/16	8/16/16 23:33	KAL
Aroclor-1262 [1]	ND	0.11	0.057	mg/Kg dry	5		SW-846 8082A	8/16/16	8/16/16 23:33	KAL
Aroclor-1268 [1]	ND	0.11	0.046	mg/Kg dry	5		SW-846 8082A	8/16/16	8/16/16 23:33	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	83.9	30-150		8/16/16 23:33
Decachlorobiphenyl [2]	88.4	30-150		8/16/16 23:33
Tetrachloro-m-xylene [1]	97.1	30-150		8/16/16 23:33
Tetrachloro-m-xylene [2]	108	30-150		8/16/16 23:33

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Yorkville, NY | Sample Description: | Work Order: 16H0755

Date Received: 8/16/2016

Field Sample #: EXC-WS1B1 (2.0) | Sampled: 8/15/2016 15:08

Sample ID: 16H0755-05

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	87.1		% Wt	1		SM 2540G	8/16/16	8/17/16 9:36	MRL

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Yorkville, NY | Sample Description: | Work Order: 16H0755

Date Received: 8/16/2016

Field Sample #: EXC-WS1B2 (2.0) | Sampled: 8/15/2016 15:13

Sample ID: 16H0755-06

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.11	0.067	mg/Kg dry	5		SW-846 8082A	8/16/16	8/16/16 23:46	KAL
Aroclor-1221 [1]	ND	0.11	0.072	mg/Kg dry	5		SW-846 8082A	8/16/16	8/16/16 23:46	KAL
Aroclor-1232 [1]	ND	0.11	0.050	mg/Kg dry	5		SW-846 8082A	8/16/16	8/16/16 23:46	KAL
Aroclor-1242 [1]	ND	0.11	0.056	mg/Kg dry	5		SW-846 8082A	8/16/16	8/16/16 23:46	KAL
Aroclor-1248 [1]	ND	0.11	0.067	mg/Kg dry	5		SW-846 8082A	8/16/16	8/16/16 23:46	KAL
Aroclor-1254 [1]	ND	0.11	0.072	mg/Kg dry	5		SW-846 8082A	8/16/16	8/16/16 23:46	KAL
Aroclor-1260 [2]	0.32	0.11	0.078	mg/Kg dry	5		SW-846 8082A	8/16/16	8/16/16 23:46	KAL
Aroclor-1262 [1]	ND	0.11	0.056	mg/Kg dry	5		SW-846 8082A	8/16/16	8/16/16 23:46	KAL
Aroclor-1268 [1]	ND	0.11	0.044	mg/Kg dry	5		SW-846 8082A	8/16/16	8/16/16 23:46	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	92.8	30-150		8/16/16 23:46
Decachlorobiphenyl [2]	96.5	30-150		8/16/16 23:46
Tetrachloro-m-xylene [1]	101	30-150		8/16/16 23:46
Tetrachloro-m-xylene [2]	112	30-150		8/16/16 23:46

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Project Location: Yorkville, NY | Sample Description: | Work Order: 16H0755

Date Received: 8/16/2016

Field Sample #: EXC-WS1B2 (2.0) | Sampled: 8/15/2016 15:13

Sample ID: 16H0755-06

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.9		% Wt	1		SM 2540G	8/16/16	8/17/16 9:36	MRL

Project Location: Yorkville, NY | Sample Description: | Work Order: 16H0755

Date Received: 8/16/2016

Field Sample #: EB-081516 | Sampled: 8/15/2016 15:18

Sample ID: 16H0755-07

Sample Matrix: Equipment Blank Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	0.11	µg/L	1		SW-846 8082A	8/16/16	8/16/16 21:13	PJG
Aroclor-1221 [1]	ND	0.20	0.12	µg/L	1		SW-846 8082A	8/16/16	8/16/16 21:13	PJG
Aroclor-1232 [1]	ND	0.20	0.076	µg/L	1		SW-846 8082A	8/16/16	8/16/16 21:13	PJG
Aroclor-1242 [1]	ND	0.20	0.11	µg/L	1		SW-846 8082A	8/16/16	8/16/16 21:13	PJG
Aroclor-1248 [1]	ND	0.20	0.13	µg/L	1		SW-846 8082A	8/16/16	8/16/16 21:13	PJG
Aroclor-1254 [1]	ND	0.20	0.14	µg/L	1		SW-846 8082A	8/16/16	8/16/16 21:13	PJG
Aroclor-1260 [1]	ND	0.20	0.15	µg/L	1		SW-846 8082A	8/16/16	8/16/16 21:13	PJG
Aroclor-1262 [1]	ND	0.20	0.12	µg/L	1		SW-846 8082A	8/16/16	8/16/16 21:13	PJG
Aroclor-1268 [1]	ND	0.20	0.080	µg/L	1		SW-846 8082A	8/16/16	8/16/16 21:13	PJG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	98.9	30-150		8/16/16 21:13
Decachlorobiphenyl [2]	108	30-150		8/16/16 21:13
Tetrachloro-m-xylene [1]	89.3	30-150		8/16/16 21:13
Tetrachloro-m-xylene [2]	86.0	30-150		8/16/16 21:13

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Project Location: Yorkville, NY

Sample Description:

Work Order: 16H0755

Date Received: 8/16/2016

Field Sample #: EXC-SB29NSW (1.5)

Sampled: 8/15/2016 16:00

Sample ID: 16H0755-08

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.12	0.069	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 0:38	KAL
Aroclor-1221 [1]	ND	0.12	0.075	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 0:38	KAL
Aroclor-1232 [1]	ND	0.12	0.052	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 0:38	KAL
Aroclor-1242 [1]	ND	0.12	0.058	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 0:38	KAL
Aroclor-1248 [1]	ND	0.12	0.069	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 0:38	KAL
Aroclor-1254 [1]	ND	0.12	0.075	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 0:38	KAL
Aroclor-1260 [1]	ND	0.12	0.081	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 0:38	KAL
Aroclor-1262 [1]	ND	0.12	0.058	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 0:38	KAL
Aroclor-1268 [1]	ND	0.12	0.046	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 0:38	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	Date/Time Analyzed
Decachlorobiphenyl [1]	86.4	30-150		8/17/16 0:38
Decachlorobiphenyl [2]	90.0	30-150		8/17/16 0:38
Tetrachloro-m-xylene [1]	100	30-150		8/17/16 0:38
Tetrachloro-m-xylene [2]	111	30-150		8/17/16 0:38

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Project Location: Yorkville, NY

Sample Description:

Work Order: 16H0755

Date Received: 8/16/2016

Field Sample #: EXC-SB29NSW (1.5)

Sampled: 8/15/2016 16:00

Sample ID: 16H0755-08

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	86.8		% Wt	1		SM 2540G	8/16/16	8/17/16 9:36	MRL

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Project Location: Yorkville, NY | Sample Description: | Work Order: 16H0755

Date Received: 8/16/2016

Field Sample #: EXC-SB29ESW (1.5) | Sampled: 8/15/2016 16:06

Sample ID: 16H0755-09

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.12	0.070	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 0:51	KAL
Aroclor-1221 [1]	ND	0.12	0.075	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 0:51	KAL
Aroclor-1232 [1]	ND	0.12	0.052	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 0:51	KAL
Aroclor-1242 [1]	ND	0.12	0.058	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 0:51	KAL
Aroclor-1248 [1]	ND	0.12	0.070	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 0:51	KAL
Aroclor-1254 [1]	ND	0.12	0.075	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 0:51	KAL
Aroclor-1260 [1]	ND	0.12	0.081	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 0:51	KAL
Aroclor-1262 [1]	ND	0.12	0.058	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 0:51	KAL
Aroclor-1268 [1]	ND	0.12	0.046	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 0:51	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	Date/Time Analyzed
Decachlorobiphenyl [1]	85.2	30-150		8/17/16 0:51
Decachlorobiphenyl [2]	88.5	30-150		8/17/16 0:51
Tetrachloro-m-xylene [1]	94.6	30-150		8/17/16 0:51
Tetrachloro-m-xylene [2]	106	30-150		8/17/16 0:51

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Project Location: Yorkville, NY | Sample Description: | Work Order: 16H0755

Date Received: 8/16/2016

Field Sample #: EXC-SB29ESW (1.5) | Sampled: 8/15/2016 16:06

Sample ID: 16H0755-09

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	86.3		% Wt	1		SM 2540G	8/16/16	8/17/16 9:36	MRL

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Project Location: Yorkville, NY   Sample Description: Work Order: 16H0755

Date Received: 8/16/2016

Field Sample #: EXC-SB29SSW (1.5)   Sampled: 8/15/2016 16:10

Sample ID: 16H0755-10

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.12	0.075	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 1:04	KAL
Aroclor-1221 [1]	ND	0.12	0.081	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 1:04	KAL
Aroclor-1232 [1]	ND	0.12	0.056	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 1:04	KAL
Aroclor-1242 [1]	ND	0.12	0.062	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 1:04	KAL
Aroclor-1248 [2]	0.59	0.12	0.075	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 1:04	KAL
Aroclor-1254 [2]	0.59	0.12	0.081	mg/Kg dry	5	P-01	SW-846 8082A	8/16/16	8/17/16 1:04	KAL
Aroclor-1260 [2]	0.49	0.12	0.088	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 1:04	KAL
Aroclor-1262 [1]	ND	0.12	0.062	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 1:04	KAL
Aroclor-1268 [1]	ND	0.12	0.050	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 1:04	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	Date/Time Analyzed
Decachlorobiphenyl [1]	93.0	30-150		8/17/16 1:04
Decachlorobiphenyl [2]	96.2	30-150		8/17/16 1:04
Tetrachloro-m-xylene [1]	99.9	30-150		8/17/16 1:04
Tetrachloro-m-xylene [2]	112	30-150		8/17/16 1:04

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Project Location: Yorkville, NY

Sample Description:

Work Order: 16H0755

Date Received: 8/16/2016

Field Sample #: EXC-SB29SSW (1.5)

Sampled: 8/15/2016 16:10

Sample ID: 16H0755-10

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	80.0		% Wt	1		SM 2540G	8/16/16	8/17/16 9:36	MRL

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Project Location: Yorkville, NY   Sample Description: Work Order: 16H0755

Date Received: 8/16/2016

Field Sample #: EXC-SB29WSW (1.5)   Sampled: 8/15/2016 16:14

Sample ID: 16H0755-11

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.12	0.072	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 1:17	KAL
Aroclor-1221 [1]	ND	0.12	0.078	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 1:17	KAL
Aroclor-1232 [1]	ND	0.12	0.054	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 1:17	KAL
Aroclor-1242 [1]	ND	0.12	0.060	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 1:17	KAL
Aroclor-1248 [1]	ND	0.12	0.072	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 1:17	KAL
Aroclor-1254 [1]	ND	0.12	0.078	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 1:17	KAL
Aroclor-1260 [1]	ND	0.12	0.084	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 1:17	KAL
Aroclor-1262 [1]	ND	0.12	0.060	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 1:17	KAL
Aroclor-1268 [1]	ND	0.12	0.048	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 1:17	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	Date/Time Analyzed
Decachlorobiphenyl [1]	87.1	30-150		8/17/16 1:17
Decachlorobiphenyl [2]	90.0	30-150		8/17/16 1:17
Tetrachloro-m-xylene [1]	86.2	30-150		8/17/16 1:17
Tetrachloro-m-xylene [2]	96.3	30-150		8/17/16 1:17

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Project Location: Yorkville, NY | Sample Description: | Work Order: 16H0755

Date Received: 8/16/2016

Field Sample #: EXC-SB29WSW (1.5) | Sampled: 8/15/2016 16:14

Sample ID: 16H0755-11

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	83.0		% Wt	1		SM 2540G	8/16/16	8/17/16 9:36	MRL

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Project Location: Yorkville, NY   Sample Description: Work Order: 16H0755

Date Received: 8/16/2016

Field Sample #: EXC-SB29B1 (3.0)   Sampled: 8/15/2016 16:22

Sample ID: 16H0755-12

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.11	0.067	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 1:30	KAL
Aroclor-1221 [1]	ND	0.11	0.072	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 1:30	KAL
Aroclor-1232 [1]	ND	0.11	0.050	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 1:30	KAL
Aroclor-1242 [1]	ND	0.11	0.056	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 1:30	KAL
Aroclor-1248 [1]	ND	0.11	0.067	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 1:30	KAL
Aroclor-1254 [1]	ND	0.11	0.072	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 1:30	KAL
Aroclor-1260 [2]	0.18	0.11	0.078	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 1:30	KAL
Aroclor-1262 [1]	ND	0.11	0.056	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 1:30	KAL
Aroclor-1268 [1]	ND	0.11	0.044	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 1:30	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	Date/Time Analyzed
Decachlorobiphenyl [1]	95.7	30-150		8/17/16 1:30
Decachlorobiphenyl [2]	100	30-150		8/17/16 1:30
Tetrachloro-m-xylene [1]	103	30-150		8/17/16 1:30
Tetrachloro-m-xylene [2]	115	30-150		8/17/16 1:30

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Project Location: Yorkville, NY

Sample Description:

Work Order: 16H0755

Date Received: 8/16/2016

Field Sample #: EXC-SB29B1 (3.0)

Sampled: 8/15/2016 16:22

Sample ID: 16H0755-12

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.0		% Wt	1		SM 2540G	8/16/16	8/17/16 9:36	MRL

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Project Location: Yorkville, NY   Sample Description: Work Order: 16H0755

Date Received: 8/16/2016

Field Sample #: EXC-SB29B2 (3.0)   Sampled: 8/15/2016 16:30

Sample ID: 16H0755-13

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.11	0.069	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 1:42	KAL
Aroclor-1221 [1]	ND	0.11	0.075	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 1:42	KAL
Aroclor-1232 [1]	ND	0.11	0.052	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 1:42	KAL
Aroclor-1242 [1]	ND	0.11	0.057	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 1:42	KAL
Aroclor-1248 [1]	ND	0.11	0.069	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 1:42	KAL
Aroclor-1254 [1]	ND	0.11	0.075	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 1:42	KAL
Aroclor-1260 [1]	ND	0.11	0.080	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 1:42	KAL
Aroclor-1262 [1]	ND	0.11	0.057	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 1:42	KAL
Aroclor-1268 [1]	ND	0.11	0.046	mg/Kg dry	5		SW-846 8082A	8/16/16	8/17/16 1:42	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	Date/Time Analyzed
Decachlorobiphenyl [1]	91.0	30-150		8/17/16 1:42
Decachlorobiphenyl [2]	93.3	30-150		8/17/16 1:42
Tetrachloro-m-xylene [1]	100	30-150		8/17/16 1:42
Tetrachloro-m-xylene [2]	113	30-150		8/17/16 1:42

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Project Location: Yorkville, NY

Sample Description:

Work Order: 16H0755

Date Received: 8/16/2016

Field Sample #: EXC-SB29B2 (3.0)

Sampled: 8/15/2016 16:30

Sample ID: 16H0755-13

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	87.2		% Wt	1		SM 2540G	8/16/16	8/17/16 9:36	MRL

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Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
16H0755-01 [EXC-WS1NSW (1.0)]	B156207	08/16/16
16H0755-02 [EXC-WS1ESW (1.0)]	B156207	08/16/16
16H0755-03 [EXC-WS1SSW (1.0)]	B156207	08/16/16
16H0755-04 [EXC-WS1WSW (1.0)]	B156207	08/16/16
16H0755-05 [EXC-WS1B1 (2.0)]	B156207	08/16/16
16H0755-06 [EXC-WS1B2 (2.0)]	B156207	08/16/16
16H0755-08 [EXC-SB29NSW (1.5)]	B156207	08/16/16
16H0755-09 [EXC-SB29ESW (1.5)]	B156207	08/16/16
16H0755-10 [EXC-SB29SSW (1.5)]	B156207	08/16/16
16H0755-11 [EXC-SB29WSW (1.5)]	B156207	08/16/16
16H0755-12 [EXC-SB29B1 (3.0)]	B156207	08/16/16
16H0755-13 [EXC-SB29B2 (3.0)]	B156207	08/16/16

Prep Method: SW-846 3546-SW-846 8082A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
16H0755-01 [EXC-WS1NSW (1.0)]	B156165	10.0	10.0	08/16/16
16H0755-02 [EXC-WS1ESW (1.0)]	B156165	10.0	10.0	08/16/16
16H0755-03 [EXC-WS1SSW (1.0)]	B156165	10.0	10.0	08/16/16
16H0755-04 [EXC-WS1WSW (1.0)]	B156165	10.0	10.0	08/16/16
16H0755-05 [EXC-WS1B1 (2.0)]	B156165	10.0	10.0	08/16/16
16H0755-06 [EXC-WS1B2 (2.0)]	B156165	10.0	10.0	08/16/16
16H0755-08 [EXC-SB29NSW (1.5)]	B156165	10.0	10.0	08/16/16
16H0755-09 [EXC-SB29ESW (1.5)]	B156165	10.0	10.0	08/16/16
16H0755-10 [EXC-SB29SSW (1.5)]	B156165	10.0	10.0	08/16/16
16H0755-11 [EXC-SB29WSW (1.5)]	B156165	10.0	10.0	08/16/16
16H0755-12 [EXC-SB29B1 (3.0)]	B156165	10.0	10.0	08/16/16
16H0755-13 [EXC-SB29B2 (3.0)]	B156165	10.0	10.0	08/16/16

Prep Method: SW-846 3510C-SW-846 8082A

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
16H0755-07 [EB-081516]	B156200	1000	10.0	08/16/16

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B156165 - SW-846 3546										
Blank (B156165-BLK1)				Prepared & Analyzed: 08/16/16						
Aroclor-1016	ND	0.020	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1221	ND	0.020	mg/Kg wet							
Aroclor-1221 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1232	ND	0.020	mg/Kg wet							
Aroclor-1232 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1242	ND	0.020	mg/Kg wet							
Aroclor-1242 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1248	ND	0.020	mg/Kg wet							
Aroclor-1248 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1254	ND	0.020	mg/Kg wet							
Aroclor-1254 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1260	ND	0.020	mg/Kg wet							
Aroclor-1260 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1262	ND	0.020	mg/Kg wet							
Aroclor-1262 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1268	ND	0.020	mg/Kg wet							
Aroclor-1268 [2C]	ND	0.020	mg/Kg wet							
Surrogate: Decachlorobiphenyl	*0.180*		mg/Kg wet	0.200		90.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.193*		mg/Kg wet	0.200		96.6	30-150			
Surrogate: Tetrachloro-m-xylene	*0.188*		mg/Kg wet	0.200		94.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.216*		mg/Kg wet	0.200		108	30-150			
LCS (B156165-BS1)				Prepared & Analyzed: 08/16/16						
Aroclor-1016	0.19	0.020	mg/Kg wet	0.200		92.6	40-140			
Aroclor-1016 [2C]	0.21	0.020	mg/Kg wet	0.200		107	40-140			
Aroclor-1260	0.17	0.020	mg/Kg wet	0.200		84.3	40-140			
Aroclor-1260 [2C]	0.19	0.020	mg/Kg wet	0.200		95.4	40-140			
Surrogate: Decachlorobiphenyl	*0.181*		mg/Kg wet	0.200		90.3	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.193*		mg/Kg wet	0.200		96.6	30-150			
Surrogate: Tetrachloro-m-xylene	*0.189*		mg/Kg wet	0.200		94.4	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.216*		mg/Kg wet	0.200		108	30-150			
LCS Dup (B156165-BSD1)				Prepared & Analyzed: 08/16/16						
Aroclor-1016	0.18	0.020	mg/Kg wet	0.200		91.0	40-140	1.75	30	
Aroclor-1016 [2C]	0.21	0.020	mg/Kg wet	0.200		104	40-140	2.57	30	
Aroclor-1260	0.17	0.020	mg/Kg wet	0.200		83.0	40-140	1.57	30	
Aroclor-1260 [2C]	0.19	0.020	mg/Kg wet	0.200		93.3	40-140	2.26	30	
Surrogate: Decachlorobiphenyl	*0.177*		mg/Kg wet	0.200		88.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.191*		mg/Kg wet	0.200		95.3	30-150			
Surrogate: Tetrachloro-m-xylene	*0.186*		mg/Kg wet	0.200		93.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.214*		mg/Kg wet	0.200		107	30-150			

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B156200 - SW-846 3510C										
Blank (B156200-BLK1)				Prepared & Analyzed: 08/16/16						
Aroclor-1016	ND	0.20	µg/L							
Aroclor-1016 [2C]	ND	0.20	µg/L							
Aroclor-1221	ND	0.20	µg/L							
Aroclor-1221 [2C]	ND	0.20	µg/L							
Aroclor-1232	ND	0.20	µg/L							
Aroclor-1232 [2C]	ND	0.20	µg/L							
Aroclor-1242	ND	0.20	µg/L							
Aroclor-1242 [2C]	ND	0.20	µg/L							
Aroclor-1248	ND	0.20	µg/L							
Aroclor-1248 [2C]	ND	0.20	µg/L							
Aroclor-1254	ND	0.20	µg/L							
Aroclor-1254 [2C]	ND	0.20	µg/L							
Aroclor-1260	ND	0.20	µg/L							
Aroclor-1260 [2C]	ND	0.20	µg/L							
Aroclor-1262	ND	0.20	µg/L							
Aroclor-1262 [2C]	ND	0.20	µg/L							
Aroclor-1268	ND	0.20	µg/L							
Aroclor-1268 [2C]	ND	0.20	µg/L							
Surrogate: Decachlorobiphenyl	*2.02*		µg/L	2.00		101	30-150			
Surrogate: Decachlorobiphenyl [2C]	*2.22*		µg/L	2.00		111	30-150			
Surrogate: Tetrachloro-m-xylene	*1.80*		µg/L	2.00		89.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.77*		µg/L	2.00		88.3	30-150			
LCS (B156200-BS1)				Prepared & Analyzed: 08/16/16						
Aroclor-1016	0.55	0.20	µg/L	0.500		110	40-140			
Aroclor-1016 [2C]	0.61	0.20	µg/L	0.500		121	40-140			
Aroclor-1260	0.55	0.20	µg/L	0.500		110	40-140			
Aroclor-1260 [2C]	0.60	0.20	µg/L	0.500		120	40-140			
Surrogate: Decachlorobiphenyl	*2.10*		µg/L	2.00		105	30-150			
Surrogate: Decachlorobiphenyl [2C]	*2.30*		µg/L	2.00		115	30-150			
Surrogate: Tetrachloro-m-xylene	*1.87*		µg/L	2.00		93.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.83*		µg/L	2.00		91.4	30-150			
LCS Dup (B156200-BSD1)				Prepared & Analyzed: 08/16/16						
Aroclor-1016	0.62	0.20	µg/L	0.500		123	40-140	11.7	20	
Aroclor-1016 [2C]	0.60	0.20	µg/L	0.500		120	40-140	0.902	20	
Aroclor-1260	0.54	0.20	µg/L	0.500		107	40-140	2.73	20	
Aroclor-1260 [2C]	0.60	0.20	µg/L	0.500		120	40-140	0.119	20	
Surrogate: Decachlorobiphenyl	*1.99*		µg/L	2.00		99.4	30-150			
Surrogate: Decachlorobiphenyl [2C]	*2.18*		µg/L	2.00		109	30-150			
Surrogate: Tetrachloro-m-xylene	*1.79*		µg/L	2.00		89.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.77*		µg/L	2.00		88.3	30-150			

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B156207 - % Solids										
Duplicate (B156207-DUP1)	**Source: 16H0755-01**			Prepared: 08/16/16 Analyzed: 08/17/16						
% Solids	79.6		% Wt		82.1			3.09	20	
Duplicate (B156207-DUP2)	**Source: 16H0755-02**			Prepared: 08/16/16 Analyzed: 08/17/16						
% Solids	86.3		% Wt		85.6			0.814	20	

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IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

EXC-WS1NSW (1.0)

Lab Sample ID: 16H0755-01   Date(s) Analyzed: 08/16/2016   08/16/2016

Instrument ID (1):   Instrument ID (2):

GC Column (1):   ID: (mm)   GC Column (2):   ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1260	1	0.00	0.00	0.00	0.48	
	2	0.00	0.00	0.00	0.52	8.8

ANALYTICAL LABORATORY

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IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

EXC-WS1ESW (1.0)

Lab Sample ID: 16H0755-02

Date(s) Analyzed: 08/17/2016 08/17/2016

Instrument ID (1):

Instrument ID (2):

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1260	1	0.00	0.00	0.00	1.5	
	2	0.00	0.00	0.00	1.7	14.5

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

EXC-WS1SSW (1.0)

Lab Sample ID: 16H0755-03 Date(s) Analyzed: 08/17/2016 08/17/2016

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1260	1	0.00	0.00	0.00	4.5	
	2	0.00	0.00	0.00	5.0	11.6

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IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

EXC-WS1WSW (1.0)

Lab Sample ID: 16H0755-04

Date(s) Analyzed: 08/16/2016 08/16/2016

Instrument ID (1):

Instrument ID (2):

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1260	1	0.00	0.00	0.00	0.30	
	2	0.00	0.00	0.00	0.33	9.2

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

EXC-WS1B1 (2.0)

Lab Sample ID: 16H0755-05

Date(s) Analyzed: 08/16/2016 08/16/2016

Instrument ID (1):

Instrument ID (2):

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1260	1	0.00	0.00	0.00	0.27	
	2	0.00	0.00	0.00	0.29	8.6

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

EXC-WS1B2 (2.0)

Lab Sample ID: 16H0755-06

Date(s) Analyzed: 08/16/2016 08/16/2016

Instrument ID (1):

Instrument ID (2):

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1260	1	0.00	0.00	0.00	0.29	
	2	0.00	0.00	0.00	0.32	9.2

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IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

EXC-SB29SSW (1.5)

Lab Sample ID: 16H0755-10 Date(s) Analyzed: 08/17/2016 08/17/2016

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1248	1	0.00	0.00	0.00	0.54	
	2	0.00	0.00	0.00	0.59	8.3
Aroclor-1254	1	0.00	0.00	0.00	0.36	
	2	0.00	0.00	0.00	0.59	47.9
Aroclor-1260	1	0.00	0.00	0.00	0.49	
	2	0.00	0.00	0.00	0.49	1.0

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IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

EXC-SB29B1 (3.0)

Lab Sample ID: 16H0755-12

Date(s) Analyzed: 08/17/2016 08/17/2016

Instrument ID (1):

Instrument ID (2):

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1260	1	0.00	0.00	0.00	0.17	
	2	0.00	0.00	0.00	0.18	5.1

ANALYTICAL LABORATORY

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IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B156165-BS1

Date(s) Analyzed: 08/16/2016 08/16/2016

Instrument ID (1):

Instrument ID (2):

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	0.19	
	2	0.00	0.00	0.00	0.21	13
Aroclor-1260	1	0.00	0.00	0.00	0.17	
	2	0.00	0.00	0.00	0.19	12

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IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B156165-BSD1

Date(s) Analyzed: 08/16/2016 08/16/2016

Instrument ID (1):

Instrument ID (2):

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	0.18	
	2	0.00	0.00	0.00	0.21	14
Aroclor-1260	1	0.00	0.00	0.00	0.17	
	2	0.00	0.00	0.00	0.19	14

ANALYTICAL LABORATORY

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IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B156200-BS1

Date(s) Analyzed: 08/16/2016 08/16/2016

Instrument ID (1):

Instrument ID (2):

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	0.55	
	2	0.00	0.00	0.00	0.61	11
Aroclor-1260	1	0.00	0.00	0.00	0.55	
	2	0.00	0.00	0.00	0.60	8

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IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B156200-BSD1

Date(s) Analyzed: 08/16/2016 08/16/2016

Instrument ID (1):

Instrument ID (2):

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	0.62	
	2	0.00	0.00	0.00	0.60	3
Aroclor-1260	1	0.00	0.00	0.00	0.54	
	2	0.00	0.00	0.00	0.60	11

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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit
DL	Method Detection Limit
MCL	Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

P-01	Result was confirmed using a dissimilar column. Relative percent difference between the two results was >40%. In accordance with the method, the higher result was reported.
S-01	The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8082A in Soil	
Aroclor-1016	CT,NH,NY,NC,ME,VA
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1221	CT,NH,NY,NC,ME,VA
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1232	CT,NH,NY,NC,ME,VA
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1242	CT,NH,NY,NC,ME,VA
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1248	CT,NH,NY,NC,ME,VA
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1254	CT,NH,NY,NC,ME,VA
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1260	CT,NH,NY,NC,ME,VA
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1262	NH,NY,NC,ME,VA
Aroclor-1262 [2C]	NH,NY,NC,ME,VA
Aroclor-1268	NH,NY,NC,ME,VA
Aroclor-1268 [2C]	NH,NY,NC,ME,VA
SW-846 8082A in Water	
Aroclor-1016	CT,NH,NY,NC,ME,VA
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1221	CT,NH,NY,NC,ME,VA
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1232	CT,NH,NY,NC,ME,VA
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1242	CT,NH,NY,NC,ME,VA
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1248	CT,NH,NY,NC,ME,VA
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1254	CT,NH,NY,NC,ME,VA
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1260	CT,NH,NY,NC,ME,VA
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1262	NH,NY,NC,ME,VA
Aroclor-1262 [2C]	NH,NY,NC,ME,VA
Aroclor-1268	NH,NY,NC,ME,VA
Aroclor-1268 [2C]	NH,NY,NC,ME,VA

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The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC	100033	02/1/2018
MA	Massachusetts DEP	M-MA100	06/30/2017
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2017
NY	New York State Department of Health	10899 NELAP	04/1/2017
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2017
RI	Rhode Island Department of Health	LAO00112	12/30/2016
NC	North Carolina Div. of Water Quality	652	12/31/2016
NJ	New Jersey DEP	MA007 NELAP	06/30/2017
FL	Florida Department of Health	E871027 NELAP	06/30/2017
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2017
ME	State of Maine	2011028	06/9/2017
VA	Commonwealth of Virginia	460217	12/14/2016
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2016

16H0755

CHAIN-OF-CUSTODY RECORD

No.

WSP | PARSONS BRINCKERHOFF

WSP | Parsons Brinckerhoff Office Address: 5 Sullivan St, Lazenovia NY 13035

Project Name: 5140 Site

WSP | Parsons Brinckerhoff Contact Name: Dave Bouchard

Project Location: Yorkville, NY

WSP | Parsons Brinckerhoff Contact E-mail: Dave.Bouchard @wspgroup.com

Project Number & Task: E1501410.000 Task 5

WSP | Parsons Brinckerhoff Contact Phone: 315-374-8494

Sampler(s) Name(s): Nate Winston

Sampler(s) Signature(s): [signature]

Laboratory Name & Location: Con-Test, MA

Laboratory Project Manager:

Requested Turn-Around-Time: ☐ Standard ☒ 24 HR ☐ 48 HR ☐ 72 HR ☐ ___ HR

Requested Analyses & Preservatives: PCBs, EPA 8082

	Sample Identification	Matrix	Collection Start* Date	Collection Start* Time	Collection Stop* Date	Collection Stop* Time	Number of Containers	PCBs, EPA 8082	Sample Comments
01	EXC-WS1NSW(1.0)	S	8/15/16	1443	—	—	1	X	
02	EXC-WS1ESW(1.0)	S		1449	—	—	1	X	
03	EXC-WS1SSW(1.0)			1455	—	—	1	X	
04	EXC-WS1WSW(1.0)			1500	—	—	1	X	
05	EXC-WS1B1(2.0)			1508	—	—	1	X	
06	EXC-WS1-B2(2.0)			1513	—	—	1	X	
07	EB-081516	AQ		1518	—	—	2	X	
08	EXC-SB29NSW(1.5)	S		1600	—	—	1	X	
09	EXC-SB29ESW(1.5)			1606	—	—	1	X	
10	EXC-SB29SSW(1.5)			1610	—	—	1	X	
11	EXC-SB29WSW(1.5)			1614	—	—	1	X	
12	EXC-SB29B1(3.0)			1622	—	—	~~1~~	X	
13	EXC-SB29B2(3.0)			1630	—	—	1	X	

Relinquished By (Signature)	Date	Time	Received By (Signature)	Date	Time	Shipment Method	Tracking Number(s)
[signature]	8-15-16	1800	Paula [signature] 3.3	8.16.16	9:07	FedEx	806632456332

Relinquished By (Signature)	Date	Time	Received By (Signature)	Date	Time	Number of Packages	Custody Seal Number(s)

*Use stop time/date for composite and/or air samples; use only start time/date for all other samples.

Matrix: AQ = Aqueous, S = Soil, SE = Sediment, A = Air, W = Wipe, B = Bulk, O = Other (detail in comments)

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East Longmeadow, MA. 01028
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ANALYTICAL LABORATORY

Sample Receipt Checklist

CLIENT NAME: WSP **RECEIVED BY:** PB **DATE:** 8.16.16

1) **Was the chain(s) of custody relinquished and signed?** Yes ✓ No ____ No COC Incl.
2) **Does the chain agree with the samples?** Yes ✓ No ____
   If not, explain:
3) **Are all the samples in good condition?** Yes ✓ No ____
   If not, explain:
4) **How were the samples received:**

On Ice ✓ Direct from Sampling ____ Ambient ____ In Cooler(s) ✓

Were the samples received in Temperature Compliance of (2-6°C)? Yes ✓ No ____ N/A ____

Temperature °C by Temp blank ____ Temperature °C by Temp gun 3.3

5) **Are there Dissolved samples for the lab to filter?** Yes ____ No ✓
   Who was notified ____ Date ____ Time ____
6) **Are there any RUSH or SHORT HOLDING TIME samples?** Yes ✓ No ____
   Who was notified Devyn Date 8.16.16 Time 9:30
7) **Location where samples are stored:** Login

Permission to subcontract samples? Yes No
(Walk-in clients only) if not already approved
Client Signature: ____

8) **Do all samples have the proper Acid pH:** Yes ____ No ____ N/A ✓
9) **Do all samples have the proper Base pH:** Yes ____ No ____ N/A ✓
10) **Was the PC notified of any discrepancies with the CoC vs the samples:** Yes ____ N/A ✓

Containers received at Con-Test

	# of containers		# of containers
1 Liter Amber	2	16 oz amber	
500 mL Amber		8 oz amber/clear jar	
250 mL Amber (8oz amber)		4 oz amber/clear jar	12
1 Liter Plastic		2 oz amber/clear jar	
500 mL Plastic		Plastic Bag / Ziploc	
250 mL plastic		SOC Kit	
40 mL Vial - type listed below		Perchlorate Kit	
Colisure / bacteria bottle		Flashpoint bottle	
Dissolved Oxygen bottle		Other glass jar	
Encore		Other	

40 mL vials: # HCl ____ # Methanol ____
Bisulfate ____ # DI Water ____
Thiosulfate ____ Unpreserved ____

Time and Date Frozen:

Login Sample Receipt Checklist

(Rejection Criteria Listing - Using Sample Acceptance Policy)
Any False statement will be brought to the attention of Client

Question	Answer (True/False) T/F/NA	Comment
1) The cooler's custody seal, if present, is intact.	NA	
2) The cooler or samples do not appear to have been compromised or tampered with.	T	
3) Samples were received on ice.	T	
4) Cooler Temperature is acceptable.	T	
5) Cooler Temperature is recorded.	T	
6) COC is filled out in ink and legible.	T	
7) COC is filled out with all pertinent information.	T	
8) Field Sampler's name present on COC.	T	
9) There are no discrepancies between the sample IDs on the container and the COC.	T	
10) Samples are received within Holding Time.	T	
11) Sample containers have legible labels.	T	
12) Containers are not broken or leaking.	T	
13) Air Cassettes are not broken/open.	NA	
14) Sample collection date/times are provided.	T	
15) Appropriate sample containers are used.	T	
16) Proper collection media used.	T	
17) No headspace sample bottles are completely filled.	NA	
18) There is sufficient volume for all requsted analyses, including any requested MS/MSDs.	T	
19) Trip blanks provided if applicable.	NA	
20) VOA sample vials do not have head space or bubble is <6mm (1/4") in diameter.	NA	
21) Samples do not require splitting or compositing.	T	

Who notified of False statements? **Date/Time:**

Doc #277 Rev. 4 August 2013 **Log-In Technician Initials:** PB **Date/Time:** 8.16.16 9:07

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August 19, 2016

Dave Bouchard
WSP - NY
5 Sullivan Street
Cazenovia, NY 13035

Project Location: Yorkville, NY
Client Job Number:
Project Number: E1501410.000 Task-5
Laboratory Work Order Number: 16H0825

Enclosed are results of analyses for samples received by the laboratory on August 17, 2016. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Aaron L. Benoit
Project Manager

Table of Contents

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

WSP - NY
5 Sullivan Street
Cazenovia, NY 13035
ATTN: Dave Bouchard

REPORT DATE: 8/19/2016

PURCHASE ORDER NUMBER:

PROJECT NUMBER: E1501410.000 Task-5

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 16H0825

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Yorkville, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
EXC-SB30NSW (1.5)	16H0825-01	Soil		SM 2540G	
				SW-846 8082A	
EXC-SB30ESW (1.5)	16H0825-02	Soil		SM 2540G	
				SW-846 8082A	
EXC-SB30SSW (1.5) MS/MSD	16H0825-03	Soil		SM 2540G	
				SW-846 8082A	
EXC-SB30WSW (1.5)	16H0825-04	Soil		SM 2540G	
				SW-846 8082A	
EXC-SB30B1 (3.0)	16H0825-05	Soil		SM 2540G	
				SW-846 8082A	
EXC-SB30B2 (3.0)	16H0825-06	Soil		SM 2540G	
				SW-846 8082A	
EXC-B3NSW (1.5)	16H0825-07	Soil		SM 2540G	
				SW-846 8082A	
EXC-B3ESW (1.5)	16H0825-08	Soil		SM 2540G	
				SW-846 8082A	
EXC-B3SSW (1.5)	16H0825-09	Soil		SM 2540G	
				SW-846 8082A	
EXC-B3WSW (1.5)	16H0825-10	Soil		SM 2540G	
				SW-846 8082A	
EXC-B3B1 (3.0)	16H0825-11	Soil		SM 2540G	
				SW-846 8082A	
EXC-B3B2 (3.0)-MS/MSD	16H0825-12	Soil		SM 2540G	
				SW-846 8082A	
EXC-081616A	16H0825-13	Soil		SM 2540G	
				SW-846 8082A	
EXC-081616B	16H0825-14	Soil		SM 2540G	
				SW-846 8082A	
EB-081616	16H0825-15	Equipment Blank Water		SW-846 8082A	

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CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Lisa A. Worthington
Project Manager

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Yorkville, NY Sample Description: Work Order: 16H0825

Date Received: 8/17/2016

Field Sample #: EXC-SB30NSW (1.5) Sampled: 8/16/2016 09:26

Sample ID: 16H0825-01

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.12	0.075	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 0:46	KAL
Aroclor-1221 [1]	ND	0.12	0.081	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 0:46	KAL
Aroclor-1232 [1]	ND	0.12	0.056	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 0:46	KAL
Aroclor-1242 [1]	ND	0.12	0.062	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 0:46	KAL
Aroclor-1248 [1]	ND	0.12	0.075	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 0:46	KAL
Aroclor-1254 [1]	ND	0.12	0.081	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 0:46	KAL
Aroclor-1260 [1]	ND	0.12	0.087	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 0:46	KAL
Aroclor-1262 [1]	ND	0.12	0.062	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 0:46	KAL
Aroclor-1268 [1]	ND	0.12	0.050	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 0:46	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	Date/Time Analyzed
Decachlorobiphenyl [1]	99.1	30-150		8/18/16 0:46
Decachlorobiphenyl [2]	111	30-150		8/18/16 0:46
Tetrachloro-m-xylene [1]	84.0	30-150		8/18/16 0:46
Tetrachloro-m-xylene [2]	87.6	30-150		8/18/16 0:46

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Project Location: Yorkville, NY   Sample Description: Work Order: 16H0825

Date Received: 8/17/2016

Field Sample #: EXC-SB30NSW (1.5)   Sampled: 8/16/2016 09:26

Sample ID: 16H0825-01

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	80.1		% Wt	1		SM 2540G	8/17/16	8/18/16 9:00	MRL

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Project Location: Yorkville, NY | Sample Description: | Work Order: 16H0825

Date Received: 8/17/2016

Field Sample #: EXC-SB30ESW (1.5) | Sampled: 8/16/2016 09:30

Sample ID: 16H0825-02

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.11	0.067	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 0:59	KAL
Aroclor-1221 [1]	ND	0.11	0.073	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 0:59	KAL
Aroclor-1232 [1]	ND	0.11	0.050	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 0:59	KAL
Aroclor-1242 [1]	ND	0.11	0.056	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 0:59	KAL
Aroclor-1248 [1]	ND	0.11	0.067	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 0:59	KAL
Aroclor-1254 [1]	ND	0.11	0.073	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 0:59	KAL
Aroclor-1260 [1]	ND	0.11	0.078	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 0:59	KAL
Aroclor-1262 [1]	ND	0.11	0.056	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 0:59	KAL
Aroclor-1268 [1]	ND	0.11	0.045	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 0:59	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	Date/Time Analyzed
Decachlorobiphenyl [1]	95.5	30-150		8/18/16 0:59
Decachlorobiphenyl [2]	107	30-150		8/18/16 0:59
Tetrachloro-m-xylene [1]	79.2	30-150		8/18/16 0:59
Tetrachloro-m-xylene [2]	82.7	30-150		8/18/16 0:59

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Project Location: Yorkville, NY	Sample Description:	Work Order: 16H0825

Date Received: 8/17/2016

Field Sample #: EXC-SB30ESW (1.5)	Sampled: 8/16/2016 09:30

Sample ID: 16H0825-02

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.3		% Wt	1		SM 2540G	8/17/16	8/18/16 9:00	MRL

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Project Location: Yorkville, NY   Sample Description: Work Order: 16H0825

Date Received: 8/17/2016

Field Sample #: EXC-SB30SSW (1.5) MS/MSD   Sampled: 8/16/2016 09:35

Sample ID: 16H0825-03

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.11	0.068	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 1:12	KAL
Aroclor-1221 [1]	ND	0.11	0.074	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 1:12	KAL
Aroclor-1232 [1]	ND	0.11	0.051	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 1:12	KAL
Aroclor-1242 [1]	ND	0.11	0.057	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 1:12	KAL
Aroclor-1248 [1]	ND	0.11	0.068	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 1:12	KAL
Aroclor-1254 [1]	ND	0.11	0.074	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 1:12	KAL
Aroclor-1260 [1]	ND	0.11	0.080	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 1:12	KAL
Aroclor-1262 [1]	ND	0.11	0.057	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 1:12	KAL
Aroclor-1268 [1]	ND	0.11	0.046	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 1:12	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	Date/Time Analyzed
Decachlorobiphenyl [1]	98.0	30-150		8/18/16 1:12
Decachlorobiphenyl [2]	110	30-150		8/18/16 1:12
Tetrachloro-m-xylene [1]	82.9	30-150		8/18/16 1:12
Tetrachloro-m-xylene [2]	87.3	30-150		8/18/16 1:12

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Project Location: Yorkville, NY | Sample Description: | Work Order: 16H0825

Date Received: 8/17/2016

Field Sample #: EXC-SB30SSW (1.5) MS/MSD | Sampled: 8/16/2016 09:35

Sample ID: 16H0825-03

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	87.8		% Wt	1		SM 2540G	8/17/16	8/18/16 9:00	MRL

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Project Location: Yorkville, NY   Sample Description: Work Order: 16H0825

Date Received: 8/17/2016

Field Sample #: EXC-SB30WSW (1.5)   Sampled: 8/16/2016 09:39

Sample ID: 16H0825-04

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.12	0.071	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 1:24	KAL
Aroclor-1221 [1]	ND	0.12	0.077	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 1:24	KAL
Aroclor-1232 [1]	ND	0.12	0.053	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 1:24	KAL
Aroclor-1242 [1]	ND	0.12	0.059	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 1:24	KAL
Aroclor-1248 [1]	ND	0.12	0.071	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 1:24	KAL
Aroclor-1254 [1]	ND	0.12	0.077	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 1:24	KAL
Aroclor-1260 [2]	0.44	0.12	0.082	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 1:24	KAL
Aroclor-1262 [1]	ND	0.12	0.059	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 1:24	KAL
Aroclor-1268 [1]	ND	0.12	0.047	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 1:24	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	Date/Time Analyzed
Decachlorobiphenyl [1]	95.3	30-150		8/18/16 1:24
Decachlorobiphenyl [2]	106	30-150		8/18/16 1:24
Tetrachloro-m-xylene [1]	82.6	30-150		8/18/16 1:24
Tetrachloro-m-xylene [2]	84.6	30-150		8/18/16 1:24

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Project Location: Yorkville, NY Sample Description: Work Order: 16H0825

Date Received: 8/17/2016

Field Sample #: EXC-SB30WSW (1.5) Sampled: 8/16/2016 09:39

Sample ID: 16H0825-04

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	84.9		% Wt	1		SM 2540G	8/17/16	8/18/16 9:00	MRL

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Yorkville, NY | Sample Description: | Work Order: 16H0825

Date Received: 8/17/2016

Field Sample #: EXC-SB30B1 (3.0) | Sampled: 8/16/2016 09:47

Sample ID: 16H0825-05

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.11	0.068	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 1:37	KAL
Aroclor-1221 [1]	ND	0.11	0.073	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 1:37	KAL
Aroclor-1232 [1]	ND	0.11	0.051	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 1:37	KAL
Aroclor-1242 [1]	ND	0.11	0.056	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 1:37	KAL
Aroclor-1248 [1]	ND	0.11	0.068	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 1:37	KAL
Aroclor-1254 [1]	ND	0.11	0.073	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 1:37	KAL
Aroclor-1260 [2]	0.28	0.11	0.079	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 1:37	KAL
Aroclor-1262 [1]	ND	0.11	0.056	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 1:37	KAL
Aroclor-1268 [1]	ND	0.11	0.045	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 1:37	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	Date/Time Analyzed
Decachlorobiphenyl [1]	101	30-150		8/18/16 1:37
Decachlorobiphenyl [2]	111	30-150		8/18/16 1:37
Tetrachloro-m-xylene [1]	87.8	30-150		8/18/16 1:37
Tetrachloro-m-xylene [2]	89.9	30-150		8/18/16 1:37

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Project Location: Yorkville, NY   Sample Description: Work Order: 16H0825

Date Received: 8/17/2016

Field Sample #: EXC-SB30B1 (3.0)   Sampled: 8/16/2016 09:47

Sample ID: 16H0825-05

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	88.6		% Wt	1		SM 2540G	8/17/16	8/18/16 9:00	MRL

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Project Location: Yorkville, NY   Sample Description: Work Order: 16H0825

Date Received: 8/17/2016

Field Sample #: EXC-SB30B2 (3.0)   Sampled: 8/16/2016 09:53

Sample ID: 16H0825-06

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.11	0.069	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 1:50	KAL
Aroclor-1221 [1]	ND	0.11	0.074	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 1:50	KAL
Aroclor-1232 [1]	ND	0.11	0.051	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 1:50	KAL
Aroclor-1242 [1]	ND	0.11	0.057	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 1:50	KAL
Aroclor-1248 [1]	ND	0.11	0.069	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 1:50	KAL
Aroclor-1254 [1]	ND	0.11	0.074	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 1:50	KAL
Aroclor-1260 [2]	0.52	0.11	0.080	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 1:50	KAL
Aroclor-1262 [1]	ND	0.11	0.057	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 1:50	KAL
Aroclor-1268 [1]	ND	0.11	0.046	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 1:50	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	Date/Time Analyzed
Decachlorobiphenyl [1]	96.4	30-150		8/18/16 1:50
Decachlorobiphenyl [2]	105	30-150		8/18/16 1:50
Tetrachloro-m-xylene [1]	85.5	30-150		8/18/16 1:50
Tetrachloro-m-xylene [2]	88.0	30-150		8/18/16 1:50

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Project Location: Yorkville, NY   Sample Description: Work Order: 16H0825

Date Received: 8/17/2016

Field Sample #: EXC-SB30B2 (3.0)   Sampled: 8/16/2016 09:53

Sample ID: 16H0825-06

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	87.5		% Wt	1		SM 2540G	8/17/16	8/18/16 9:00	MRL

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Project Location: Yorkville, NY   Sample Description: Work Order: 16H0825

Date Received: 8/17/2016

Field Sample #: EXC-B3NSW (1.5)   Sampled: 8/16/2016 10:10

Sample ID: 16H0825-07

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.12	0.069	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 2:02	KAL
Aroclor-1221 [1]	ND	0.12	0.075	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 2:02	KAL
Aroclor-1232 [1]	ND	0.12	0.052	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 2:02	KAL
Aroclor-1242 [1]	ND	0.12	0.058	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 2:02	KAL
Aroclor-1248 [1]	ND	0.12	0.069	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 2:02	KAL
Aroclor-1254 [1]	ND	0.12	0.075	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 2:02	KAL
Aroclor-1260 [1]	ND	0.12	0.081	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 2:02	KAL
Aroclor-1262 [1]	ND	0.12	0.058	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 2:02	KAL
Aroclor-1268 [1]	ND	0.12	0.046	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 2:02	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	Date/Time Analyzed
Decachlorobiphenyl [1]	84.9	30-150		8/18/16 2:02
Decachlorobiphenyl [2]	95.1	30-150		8/18/16 2:02
Tetrachloro-m-xylene [1]	75.5	30-150		8/18/16 2:02
Tetrachloro-m-xylene [2]	80.1	30-150		8/18/16 2:02

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Project Location: Yorkville, NY
Sample Description:
Work Order: 16H0825

Date Received: 8/17/2016

Field Sample #: EXC-B3NSW (1.5)
Sampled: 8/16/2016 10:10

Sample ID: 16H0825-07

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	86.6		% Wt	1		SM 2540G	8/17/16	8/18/16 9:00	MRL

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Project Location: Yorkville, NY   Sample Description: Work Order: 16H0825

Date Received: 8/17/2016

Field Sample #: EXC-B3ESW (1.5)   Sampled: 8/16/2016 10:15

Sample ID: 16H0825-08

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.11	0.066	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 2:15	KAL
Aroclor-1221 [1]	ND	0.11	0.072	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 2:15	KAL
Aroclor-1232 [1]	ND	0.11	0.050	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 2:15	KAL
Aroclor-1242 [1]	ND	0.11	0.055	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 2:15	KAL
Aroclor-1248 [1]	ND	0.11	0.066	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 2:15	KAL
Aroclor-1254 [1]	ND	0.11	0.072	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 2:15	KAL
Aroclor-1260 [1]	ND	0.11	0.077	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 2:15	KAL
Aroclor-1262 [1]	ND	0.11	0.055	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 2:15	KAL
Aroclor-1268 [1]	ND	0.11	0.044	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 2:15	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	Date/Time Analyzed
Decachlorobiphenyl [1]	94.5	30-150		8/18/16 2:15
Decachlorobiphenyl [2]	106	30-150		8/18/16 2:15
Tetrachloro-m-xylene [1]	83.9	30-150		8/18/16 2:15
Tetrachloro-m-xylene [2]	88.3	30-150		8/18/16 2:15

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Project Location: Yorkville, NY | Sample Description: | Work Order: 16H0825

Date Received: 8/17/2016

Field Sample #: EXC-B3ESW (1.5) | Sampled: 8/16/2016 10:15

Sample ID: 16H0825-08

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.6		% Wt	1		SM 2540G	8/17/16	8/18/16 9:00	MRL

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Project Location: Yorkville, NY   Sample Description: Work Order: 16H0825

Date Received: 8/17/2016

Field Sample #: EXC-B3SSW (1.5)   Sampled: 8/16/2016 10:19

Sample ID: 16H0825-09

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.11	0.066	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 3:06	KAL
Aroclor-1221 [1]	ND	0.11	0.072	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 3:06	KAL
Aroclor-1232 [1]	ND	0.11	0.050	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 3:06	KAL
Aroclor-1242 [1]	ND	0.11	0.055	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 3:06	KAL
Aroclor-1248 [1]	ND	0.11	0.066	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 3:06	KAL
Aroclor-1254 [1]	ND	0.11	0.072	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 3:06	KAL
Aroclor-1260 [1]	ND	0.11	0.077	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 3:06	KAL
Aroclor-1262 [1]	ND	0.11	0.055	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 3:06	KAL
Aroclor-1268 [1]	ND	0.11	0.044	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 3:06	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	Analyzed
Decachlorobiphenyl [1]	95.7	30-150		8/18/16 3:06
Decachlorobiphenyl [2]	108	30-150		8/18/16 3:06
Tetrachloro-m-xylene [1]	83.7	30-150		8/18/16 3:06
Tetrachloro-m-xylene [2]	87.8	30-150		8/18/16 3:06

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Project Location: Yorkville, NY   Sample Description: Work Order: 16H0825

Date Received: 8/17/2016

Field Sample #: EXC-B3SSW (1.5)   Sampled: 8/16/2016 10:19

Sample ID: 16H0825-09

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.8		% Wt	1		SM 2540G	8/17/16	8/18/16 9:00	MRL

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Project Location: Yorkville, NY   Sample Description: Work Order: 16H0825

Date Received: 8/17/2016

Field Sample #: EXC-B3WSW (1.5)   Sampled: 8/16/2016 10:26

Sample ID: 16H0825-10

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.11	0.067	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 3:18	KAL
Aroclor-1221 [1]	ND	0.11	0.072	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 3:18	KAL
Aroclor-1232 [1]	ND	0.11	0.050	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 3:18	KAL
Aroclor-1242 [1]	ND	0.11	0.056	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 3:18	KAL
Aroclor-1248 [1]	ND	0.11	0.067	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 3:18	KAL
Aroclor-1254 [1]	ND	0.11	0.072	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 3:18	KAL
Aroclor-1260 [1]	ND	0.11	0.078	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 3:18	KAL
Aroclor-1262 [1]	ND	0.11	0.056	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 3:18	KAL
Aroclor-1268 [1]	ND	0.11	0.045	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 3:18	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	Date/Time Analyzed
Decachlorobiphenyl [1]	81.8	30-150		8/18/16 3:18
Decachlorobiphenyl [2]	92.3	30-150		8/18/16 3:18
Tetrachloro-m-xylene [1]	69.8	30-150		8/18/16 3:18
Tetrachloro-m-xylene [2]	72.7	30-150		8/18/16 3:18

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Project Location: Yorkville, NY Sample Description: Work Order: 16H0825

Date Received: 8/17/2016

Field Sample #: EXC-B3WSW (1.5) Sampled: 8/16/2016 10:26

Sample ID: 16H0825-10

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.8		% Wt	1		SM 2540G	8/17/16	8/18/16 9:00	MRL

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Project Location: Yorkville, NY   Sample Description: Work Order: 16H0825

Date Received: 8/17/2016

Field Sample #: EXC-B3B1 (3.0)   Sampled: 8/16/2016 10:32

Sample ID: 16H0825-11

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.11	0.068	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 3:31	KAL
Aroclor-1221 [1]	ND	0.11	0.074	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 3:31	KAL
Aroclor-1232 [1]	ND	0.11	0.051	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 3:31	KAL
Aroclor-1242 [1]	ND	0.11	0.057	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 3:31	KAL
Aroclor-1248 [1]	ND	0.11	0.068	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 3:31	KAL
Aroclor-1254 [1]	ND	0.11	0.074	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 3:31	KAL
Aroclor-1260 [1]	ND	0.11	0.079	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 3:31	KAL
Aroclor-1262 [1]	ND	0.11	0.057	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 3:31	KAL
Aroclor-1268 [1]	ND	0.11	0.045	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 3:31	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	Date/Time Analyzed
Decachlorobiphenyl [1]	84.6	30-150		8/18/16 3:31
Decachlorobiphenyl [2]	95.6	30-150		8/18/16 3:31
Tetrachloro-m-xylene [1]	73.2	30-150		8/18/16 3:31
Tetrachloro-m-xylene [2]	76.7	30-150		8/18/16 3:31

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Project Location: Yorkville, NY   Sample Description: Work Order: 16H0825

Date Received: 8/17/2016

Field Sample #: EXC-B3B1 (3.0)   Sampled: 8/16/2016 10:32

Sample ID: 16H0825-11

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	88.2		% Wt	1		SM 2540G	8/17/16	8/18/16 9:00	MRL

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Project Location: Yorkville, NY   Sample Description: Work Order: 16H0825

Date Received: 8/17/2016

Field Sample #: EXC-B3B2 (3.0)-MS/MSD   Sampled: 8/16/2016 10:40

Sample ID: 16H0825-12

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.11	0.067	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 3:43	KAL
Aroclor-1221 [1]	ND	0.11	0.073	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 3:43	KAL
Aroclor-1232 [1]	ND	0.11	0.050	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 3:43	KAL
Aroclor-1242 [1]	ND	0.11	0.056	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 3:43	KAL
Aroclor-1248 [1]	ND	0.11	0.067	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 3:43	KAL
Aroclor-1254 [1]	ND	0.11	0.073	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 3:43	KAL
Aroclor-1260 [1]	ND	0.11	0.078	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 3:43	KAL
Aroclor-1262 [1]	ND	0.11	0.056	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 3:43	KAL
Aroclor-1268 [1]	ND	0.11	0.045	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 3:43	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	Date/Time Analyzed
Decachlorobiphenyl [1]	98.8	30-150		8/18/16 3:43
Decachlorobiphenyl [2]	111	30-150		8/18/16 3:43
Tetrachloro-m-xylene [1]	84.3	30-150		8/18/16 3:43
Tetrachloro-m-xylene [2]	86.5	30-150		8/18/16 3:43

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Project Location: Yorkville, NY
Sample Description:
Work Order: 16H0825

Date Received: 8/17/2016

Field Sample #: EXC-B3B2 (3.0)-MS/MSD
Sampled: 8/16/2016 10:40

Sample ID: 16H0825-12

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.4		% Wt	1		SM 2540G	8/17/16	8/18/16 9:00	MRL

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Project Location: Yorkville, NY | Sample Description: | Work Order: 16H0825

Date Received: 8/17/2016

Field Sample #: EXC-081616A | Sampled: 8/16/2016 11:00

Sample ID: 16H0825-13

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.11	0.065	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 3:56	KAL
Aroclor-1221 [1]	ND	0.11	0.070	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 3:56	KAL
Aroclor-1232 [1]	ND	0.11	0.049	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 3:56	KAL
Aroclor-1242 [1]	ND	0.11	0.054	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 3:56	KAL
Aroclor-1248 [1]	ND	0.11	0.065	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 3:56	KAL
Aroclor-1254 [1]	ND	0.11	0.070	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 3:56	KAL
Aroclor-1260 [1]	ND	0.11	0.076	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 3:56	KAL
Aroclor-1262 [1]	ND	0.11	0.054	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 3:56	KAL
Aroclor-1268 [1]	ND	0.11	0.043	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 3:56	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	Analyzed
Decachlorobiphenyl [1]	95.9	30-150		8/18/16 3:56
Decachlorobiphenyl [2]	108	30-150		8/18/16 3:56
Tetrachloro-m-xylene [1]	83.0	30-150		8/18/16 3:56
Tetrachloro-m-xylene [2]	86.5	30-150		8/18/16 3:56

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Yorkville, NY   Sample Description: Work Order: 16H0825

Date Received: 8/17/2016

Field Sample #: EXC-081616A   Sampled: 8/16/2016 11:00

Sample ID: 16H0825-13

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	92.4		% Wt	1		SM 2540G	8/17/16	8/18/16 9:00	MRL

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Project Location: Yorkville, NY   Sample Description: Work Order: 16H0825

Date Received: 8/17/2016

Field Sample #: EXC-081616B   Sampled: 8/16/2016 11:10

Sample ID: 16H0825-14

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.11	0.067	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 4:09	KAL
Aroclor-1221 [1]	ND	0.11	0.073	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 4:09	KAL
Aroclor-1232 [1]	ND	0.11	0.051	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 4:09	KAL
Aroclor-1242 [1]	ND	0.11	0.056	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 4:09	KAL
Aroclor-1248 [1]	ND	0.11	0.067	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 4:09	KAL
Aroclor-1254 [1]	ND	0.11	0.073	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 4:09	KAL
Aroclor-1260 [1]	ND	0.11	0.079	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 4:09	KAL
Aroclor-1262 [1]	ND	0.11	0.056	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 4:09	KAL
Aroclor-1268 [1]	ND	0.11	0.045	mg/Kg dry	5		SW-846 8082A	8/17/16	8/18/16 4:09	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	101	30-150		8/18/16 4:09
Decachlorobiphenyl [2]	114	30-150		8/18/16 4:09
Tetrachloro-m-xylene [1]	88.2	30-150		8/18/16 4:09
Tetrachloro-m-xylene [2]	91.7	30-150		8/18/16 4:09

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Project Location: Yorkville, NY | Sample Description: | Work Order: 16H0825

Date Received: 8/17/2016

Field Sample #: EXC-081616B | Sampled: 8/16/2016 11:10

Sample ID: 16H0825-14

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.0		% Wt	1		SM 2540G	8/17/16	8/18/16 9:00	MRL

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Project Location: Yorkville, NY　　Sample Description:　　Work Order: 16H0825

Date Received: 8/17/2016

Field Sample #: EB-081616　　Sampled: 8/16/2016 16:45

Sample ID: 16H0825-15

Sample Matrix: Equipment Blank Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	0.11	µg/L	1		SW-846 8082A	8/18/16	8/18/16 19:19	PJG
Aroclor-1221 [1]	ND	0.20	0.12	µg/L	1		SW-846 8082A	8/18/16	8/18/16 19:19	PJG
Aroclor-1232 [1]	ND	0.20	0.076	µg/L	1		SW-846 8082A	8/18/16	8/18/16 19:19	PJG
Aroclor-1242 [1]	ND	0.20	0.11	µg/L	1		SW-846 8082A	8/18/16	8/18/16 19:19	PJG
Aroclor-1248 [1]	ND	0.20	0.13	µg/L	1		SW-846 8082A	8/18/16	8/18/16 19:19	PJG
Aroclor-1254 [1]	ND	0.20	0.14	µg/L	1		SW-846 8082A	8/18/16	8/18/16 19:19	PJG
Aroclor-1260 [1]	ND	0.20	0.15	µg/L	1		SW-846 8082A	8/18/16	8/18/16 19:19	PJG
Aroclor-1262 [1]	ND	0.20	0.12	µg/L	1		SW-846 8082A	8/18/16	8/18/16 19:19	PJG
Aroclor-1268 [1]	ND	0.20	0.080	µg/L	1		SW-846 8082A	8/18/16	8/18/16 19:19	PJG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	Date/Time Analyzed
Decachlorobiphenyl [1]	51.9	30-150		8/18/16 19:19
Decachlorobiphenyl [2]	50.5	30-150		8/18/16 19:19
Tetrachloro-m-xylene [1]	39.9	30-150		8/18/16 19:19
Tetrachloro-m-xylene [2]	39.1	30-150		8/18/16 19:19

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Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
16H0825-01 [EXC-SB30NSW (1.5)]	B156306	08/17/16
16H0825-02 [EXC-SB30ESW (1.5)]	B156306	08/17/16
16H0825-03 [EXC-SB30SSW (1.5) MS/MSD]	B156306	08/17/16
16H0825-04 [EXC-SB30WSW (1.5)]	B156306	08/17/16
16H0825-05 [EXC-SB30B1 (3.0)]	B156306	08/17/16
16H0825-06 [EXC-SB30B2 (3.0)]	B156306	08/17/16
16H0825-07 [EXC-B3NSW (1.5)]	B156306	08/17/16
16H0825-08 [EXC-B3ESW (1.5)]	B156306	08/17/16
16H0825-09 [EXC-B3SSW (1.5)]	B156306	08/17/16
16H0825-10 [EXC-B3WSW (1.5)]	B156306	08/17/16
16H0825-11 [EXC-B3B1 (3.0)]	B156306	08/17/16
16H0825-12 [EXC-B3B2 (3.0)-MS/MSD]	B156306	08/17/16
16H0825-13 [EXC-081616A]	B156306	08/17/16
16H0825-14 [EXC-081616B]	B156306	08/17/16

Prep Method: SW-846 3546-SW-846 8082A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
16H0825-01 [EXC-SB30NSW (1.5)]	B156321	10.0	10.0	08/17/16
16H0825-02 [EXC-SB30ESW (1.5)]	B156321	10.0	10.0	08/17/16
16H0825-03 [EXC-SB30SSW (1.5) MS/MSD]	B156321	10.0	10.0	08/17/16
16H0825-04 [EXC-SB30WSW (1.5)]	B156321	10.0	10.0	08/17/16
16H0825-05 [EXC-SB30B1 (3.0)]	B156321	10.0	10.0	08/17/16
16H0825-06 [EXC-SB30B2 (3.0)]	B156321	10.0	10.0	08/17/16
16H0825-07 [EXC-B3NSW (1.5)]	B156321	10.0	10.0	08/17/16
16H0825-08 [EXC-B3ESW (1.5)]	B156321	10.0	10.0	08/17/16
16H0825-09 [EXC-B3SSW (1.5)]	B156321	10.0	10.0	08/17/16
16H0825-10 [EXC-B3WSW (1.5)]	B156321	10.0	10.0	08/17/16
16H0825-11 [EXC-B3B1 (3.0)]	B156321	10.0	10.0	08/17/16
16H0825-12 [EXC-B3B2 (3.0)-MS/MSD]	B156321	10.0	10.0	08/17/16
16H0825-13 [EXC-081616A]	B156321	10.0	10.0	08/17/16
16H0825-14 [EXC-081616B]	B156321	10.0	10.0	08/17/16

Prep Method: SW-846 3510C-SW-846 8082A

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
16H0825-15RE1 [EB-081616]	B156429	1000	10.0	08/18/16

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B156321 - SW-846 3546										
Blank (B156321-BLK1)				Prepared: 08/17/16 Analyzed: 08/18/16						
Aroclor-1016	ND	0.020	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1221	ND	0.020	mg/Kg wet							
Aroclor-1221 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1232	ND	0.020	mg/Kg wet							
Aroclor-1232 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1242	ND	0.020	mg/Kg wet							
Aroclor-1242 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1248	ND	0.020	mg/Kg wet							
Aroclor-1248 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1254	ND	0.020	mg/Kg wet							
Aroclor-1254 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1260	ND	0.020	mg/Kg wet							
Aroclor-1260 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1262	ND	0.020	mg/Kg wet							
Aroclor-1262 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1268	ND	0.020	mg/Kg wet							
Aroclor-1268 [2C]	ND	0.020	mg/Kg wet							
Surrogate: Decachlorobiphenyl	*0.197*		mg/Kg wet	0.200		98.5	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.217*		mg/Kg wet	0.200		109	30-150			
Surrogate: Tetrachloro-m-xylene	*0.176*		mg/Kg wet	0.200		88.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.179*		mg/Kg wet	0.200		89.6	30-150			
LCS (B156321-BS1)				Prepared: 08/17/16 Analyzed: 08/18/16						
Aroclor-1016	0.17	0.020	mg/Kg wet	0.200		85.4	40-140			
Aroclor-1016 [2C]	0.18	0.020	mg/Kg wet	0.200		89.6	40-140			
Aroclor-1260	0.17	0.020	mg/Kg wet	0.200		85.1	40-140			
Aroclor-1260 [2C]	0.18	0.020	mg/Kg wet	0.200		87.8	40-140			
Surrogate: Decachlorobiphenyl	*0.192*		mg/Kg wet	0.200		96.0	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.212*		mg/Kg wet	0.200		106	30-150			
Surrogate: Tetrachloro-m-xylene	*0.172*		mg/Kg wet	0.200		86.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.175*		mg/Kg wet	0.200		87.6	30-150			
LCS Dup (B156321-BSD1)				Prepared: 08/17/16 Analyzed: 08/18/16						
Aroclor-1016	0.18	0.020	mg/Kg wet	0.200		90.7	40-140	6.01	30	
Aroclor-1016 [2C]	0.19	0.020	mg/Kg wet	0.200		94.7	40-140	5.51	30	
Aroclor-1260	0.18	0.020	mg/Kg wet	0.200		91.2	40-140	6.88	30	
Aroclor-1260 [2C]	0.19	0.020	mg/Kg wet	0.200		93.7	40-140	6.54	30	
Surrogate: Decachlorobiphenyl	*0.203*		mg/Kg wet	0.200		101	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.223*		mg/Kg wet	0.200		112	30-150			
Surrogate: Tetrachloro-m-xylene	*0.178*		mg/Kg wet	0.200		89.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.179*		mg/Kg wet	0.200		89.7	30-150			

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B156321 - SW-846 3546										
Matrix Spike (B156321-MS1)	**Source: 16H0825-03**			Prepared: 08/17/16 Analyzed: 08/18/16						
Aroclor-1016	0.22	0.11	mg/Kg dry	0.228	ND	96.3	40-140			
Aroclor-1016 [2C]	0.23	0.11	mg/Kg dry	0.228	ND	101	40-140			
Aroclor-1260	0.22	0.11	mg/Kg dry	0.228	ND	96.9	40-140			
Aroclor-1260 [2C]	0.24	0.11	mg/Kg dry	0.228	ND	104	40-140			
Surrogate: Decachlorobiphenyl	*0.243*		mg/Kg dry	0.228		107	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.272*		mg/Kg dry	0.228		120	30-150			
Surrogate: Tetrachloro-m-xylene	*0.201*		mg/Kg dry	0.228		88.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.207*		mg/Kg dry	0.228		91.0	30-150			
Matrix Spike (B156321-MS2)	**Source: 16H0825-12**			Prepared: 08/17/16 Analyzed: 08/18/16						
Aroclor-1016	0.19	0.11	mg/Kg dry	0.224	ND	85.6	40-140			
Aroclor-1016 [2C]	0.20	0.11	mg/Kg dry	0.224	ND	87.8	40-140			
Aroclor-1260	0.21	0.11	mg/Kg dry	0.224	ND	94.2	40-140			
Aroclor-1260 [2C]	0.22	0.11	mg/Kg dry	0.224	ND	100	40-140			
Surrogate: Decachlorobiphenyl	*0.207*		mg/Kg dry	0.224		92.5	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.232*		mg/Kg dry	0.224		104	30-150			
Surrogate: Tetrachloro-m-xylene	*0.178*		mg/Kg dry	0.224		79.6	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.185*		mg/Kg dry	0.224		82.5	30-150			
Matrix Spike Dup (B156321-MSD1)	**Source: 16H0825-03**			Prepared: 08/17/16 Analyzed: 08/18/16						
Aroclor-1016	0.22	0.11	mg/Kg dry	0.228	ND	94.8	40-140	1.51	30	
Aroclor-1016 [2C]	0.22	0.11	mg/Kg dry	0.228	ND	97.6	40-140	3.31	30	
Aroclor-1260	0.22	0.11	mg/Kg dry	0.228	ND	95.2	40-140	1.76	30	
Aroclor-1260 [2C]	0.23	0.11	mg/Kg dry	0.228	ND	101	40-140	2.30	30	
Surrogate: Decachlorobiphenyl	*0.238*		mg/Kg dry	0.228		105	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.268*		mg/Kg dry	0.228		118	30-150			
Surrogate: Tetrachloro-m-xylene	*0.200*		mg/Kg dry	0.228		87.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.208*		mg/Kg dry	0.228		91.3	30-150			
Matrix Spike Dup (B156321-MSD2)	**Source: 16H0825-12**			Prepared: 08/17/16 Analyzed: 08/18/16						
Aroclor-1016	0.22	0.11	mg/Kg dry	0.224	ND	99.1	40-140	14.6	30	
Aroclor-1016 [2C]	0.22	0.11	mg/Kg dry	0.224	ND	100	40-140	13.0	30	
Aroclor-1260	0.25	0.11	mg/Kg dry	0.224	ND	111	40-140	16.8	30	
Aroclor-1260 [2C]	0.26	0.11	mg/Kg dry	0.224	ND	116	40-140	14.7	30	
Surrogate: Decachlorobiphenyl	*0.244*		mg/Kg dry	0.224		109	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.272*		mg/Kg dry	0.224		122	30-150			
Surrogate: Tetrachloro-m-xylene	*0.206*		mg/Kg dry	0.224		92.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.212*		mg/Kg dry	0.224		94.6	30-150			
Batch B156429 - SW-846 3510C										
Blank (B156429-BLK1)				Prepared & Analyzed: 08/18/16						
Aroclor-1016	ND	0.20	µg/L							
Aroclor-1016 [2C]	ND	0.20	µg/L							
Aroclor-1221	ND	0.20	µg/L							
Aroclor-1221 [2C]	ND	0.20	µg/L							
Aroclor-1232	ND	0.20	µg/L							
Aroclor-1232 [2C]	ND	0.20	µg/L							
Aroclor-1242	ND	0.20	µg/L							
Aroclor-1242 [2C]	ND	0.20	µg/L							
Aroclor-1248	ND	0.20	µg/L							
Aroclor-1248 [2C]	ND	0.20	µg/L							
Aroclor-1254	ND	0.20	µg/L							

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B156429 - SW-846 3510C										
Blank (B156429-BLK1)				Prepared & Analyzed: 08/18/16						
Aroclor-1254 [2C]	ND	0.20	µg/L							
Aroclor-1260	ND	0.20	µg/L							
Aroclor-1260 [2C]	ND	0.20	µg/L							
Aroclor-1262	ND	0.20	µg/L							
Aroclor-1262 [2C]	ND	0.20	µg/L							
Aroclor-1268	ND	0.20	µg/L							
Aroclor-1268 [2C]	ND	0.20	µg/L							
Surrogate: Decachlorobiphenyl	*1.41*		µg/L	2.00		70.6	30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.39*		µg/L	2.00		69.6	30-150			
Surrogate: Tetrachloro-m-xylene	*1.30*		µg/L	2.00		65.2	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.28*		µg/L	2.00		63.8	30-150			
LCS (B156429-BS1)				Prepared & Analyzed: 08/18/16						
Aroclor-1016	0.42	0.20	µg/L	0.500		84.6	40-140			
Aroclor-1016 [2C]	0.44	0.20	µg/L	0.500		87.3	40-140			
Aroclor-1260	0.41	0.20	µg/L	0.500		81.8	40-140			
Aroclor-1260 [2C]	0.41	0.20	µg/L	0.500		82.0	40-140			
Surrogate: Decachlorobiphenyl	*1.46*		µg/L	2.00		72.9	30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.43*		µg/L	2.00		71.6	30-150			
Surrogate: Tetrachloro-m-xylene	*1.33*		µg/L	2.00		66.4	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.30*		µg/L	2.00		65.2	30-150			
LCS Dup (B156429-BSD1)				Prepared & Analyzed: 08/18/16						
Aroclor-1016	0.41	0.20	µg/L	0.500		82.4	40-140	2.62	20	
Aroclor-1016 [2C]	0.42	0.20	µg/L	0.500		84.4	40-140	3.32	20	
Aroclor-1260	0.40	0.20	µg/L	0.500		79.2	40-140	3.22	20	
Aroclor-1260 [2C]	0.40	0.20	µg/L	0.500		79.9	40-140	2.61	20	
Surrogate: Decachlorobiphenyl	*1.40*		µg/L	2.00		70.0	30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.38*		µg/L	2.00		69.2	30-150			
Surrogate: Tetrachloro-m-xylene	*1.28*		µg/L	2.00		64.2	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.26*		µg/L	2.00		63.1	30-150			

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B156306 - % Solids										
Duplicate (B156306-DUP1)	**Source: 16H0825-03**			Prepared: 08/17/16 Analyzed: 08/18/16						
% Solids	88.4		% Wt		87.8			0.681	20	
Duplicate (B156306-DUP2)	**Source: 16H0825-12**			Prepared: 08/17/16 Analyzed: 08/18/16						
% Solids	86.7		% Wt		89.4			3.07	20	

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ANALYTICAL LABORATORY

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IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

EXC-SB30WSW (1.5)

Lab Sample ID: 16H0825-04

Date(s) Analyzed: 08/18/2016 08/18/2016

Instrument ID (1):

Instrument ID (2):

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1260	1	0.00	0.00	0.00	0.41	
	2	0.00	0.00	0.00	0.44	6.8

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

EXC-SB30B1 (3.0)

Lab Sample ID: 16H0825-05

Date(s) Analyzed: 08/18/2016 08/18/2016

Instrument ID (1):

Instrument ID (2):

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1260	1	0.00	0.00	0.00	0.26	
	2	0.00	0.00	0.00	0.28	6.6

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IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

EXC-SB30B2 (3.0)

Lab Sample ID: 16H0825-06 Date(s) Analyzed: 08/18/2016 08/18/2016

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1260	1	0.00	0.00	0.00	0.50	
	2	0.00	0.00	0.00	0.52	3.9

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IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B156321-BS1

Date(s) Analyzed: 08/18/2016 08/18/2016

Instrument ID (1):

Instrument ID (2):

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	0.17	
	2	0.00	0.00	0.00	0.18	5
Aroclor-1260	1	0.00	0.00	0.00	0.17	
	2	0.00	0.00	0.00	0.18	6

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IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B156321-BSD1

Date(s) Analyzed: 08/18/2016 08/18/2016

Instrument ID (1):

Instrument ID (2):

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	0.18	
	2	0.00	0.00	0.00	0.19	5
Aroclor-1260	1	0.00	0.00	0.00	0.18	
	2	0.00	0.00	0.00	0.19	4

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IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike

Lab Sample ID: B156321-MS1

Date(s) Analyzed: 08/18/2016 08/18/2016

Instrument ID (1):

Instrument ID (2):

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	0.22	
	2	0.00	0.00	0.00	0.23	5
Aroclor-1260	1	0.00	0.00	0.00	0.22	
	2	0.00	0.00	0.00	0.24	8

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike

Lab Sample ID: B156321-MS2

Date(s) Analyzed: 08/18/2016 08/18/2016

Instrument ID (1):

Instrument ID (2):

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	0.19	
	2	0.00	0.00	0.00	0.20	5
Aroclor-1260	1	0.00	0.00	0.00	0.21	
	2	0.00	0.00	0.00	0.22	4

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike Dup

Lab Sample ID: B156321-MSD1

Date(s) Analyzed: 08/18/2016 08/18/2016

Instrument ID (1):

Instrument ID (2):

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	0.22	
	2	0.00	0.00	0.00	0.22	2
Aroclor-1260	1	0.00	0.00	0.00	0.22	
	2	0.00	0.00	0.00	0.23	6

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike Dup

Lab Sample ID: B156321-MSD2

Date(s) Analyzed: 08/18/2016 08/18/2016

Instrument ID (1):

Instrument ID (2):

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	0.22	
	2	0.00	0.00	0.00	0.22	1
Aroclor-1260	1	0.00	0.00	0.00	0.25	
	2	0.00	0.00	0.00	0.26	4

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B156429-BS1

Date(s) Analyzed: 08/18/2016 08/18/2016

Instrument ID (1):

Instrument ID (2):

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	0.42	
	2	0.00	0.00	0.00	0.44	4
Aroclor-1260	1	0.00	0.00	0.00	0.41	
	2	0.00	0.00	0.00	0.41	0

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B156429-BSD1

Date(s) Analyzed: 08/18/2016 08/18/2016

Instrument ID (1):

Instrument ID (2):

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	0.41	
	2	0.00	0.00	0.00	0.42	2
Aroclor-1260	1	0.00	0.00	0.00	0.40	
	2	0.00	0.00	0.00	0.40	1

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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit
DL	Method Detection Limit
MCL	Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8082A in Soil	
Aroclor-1016	CT,NH,NY,NC,ME,VA
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1221	CT,NH,NY,NC,ME,VA
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1232	CT,NH,NY,NC,ME,VA
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1242	CT,NH,NY,NC,ME,VA
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1248	CT,NH,NY,NC,ME,VA
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1254	CT,NH,NY,NC,ME,VA
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1260	CT,NH,NY,NC,ME,VA
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1262	NH,NY,NC,ME,VA
Aroclor-1262 [2C]	NH,NY,NC,ME,VA
Aroclor-1268	NH,NY,NC,ME,VA
Aroclor-1268 [2C]	NH,NY,NC,ME,VA
SW-846 8082A in Water	
Aroclor-1016	CT,NH,NY,NC,ME,VA
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1221	CT,NH,NY,NC,ME,VA
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1232	CT,NH,NY,NC,ME,VA
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1242	CT,NH,NY,NC,ME,VA
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1248	CT,NH,NY,NC,ME,VA
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1254	CT,NH,NY,NC,ME,VA
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1260	CT,NH,NY,NC,ME,VA
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1262	NH,NY,NC,ME,VA
Aroclor-1262 [2C]	NH,NY,NC,ME,VA
Aroclor-1268	NH,NY,NC,ME,VA
Aroclor-1268 [2C]	NH,NY,NC,ME,VA

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The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC	100033	02/1/2018
MA	Massachusetts DEP	M-MA100	06/30/2017
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2017
NY	New York State Department of Health	10899 NELAP	04/1/2017
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2017
RI	Rhode Island Department of Health	LAO00112	12/30/2016
NC	North Carolina Div. of Water Quality	652	12/31/2016
NJ	New Jersey DEP	MA007 NELAP	06/30/2017
FL	Florida Department of Health	E871027 NELAP	06/30/2017
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2017
ME	State of Maine	2011028	06/9/2017
VA	Commonwealth of Virginia	460217	12/14/2016
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2016

16H0825

CHAIN-OF-CUSTODY RECORD

Page 1 of

No.

WSP | PARSONS BRINCKERHOFF

WSP | Parsons Brinckerhoff Office Address: 5 Sullivan St. Cazenovia, NY 13035

Project Name: 5140 Site

WSP | Parsons Brinckerhoff Contact Name: Dave Bouchard

Project Location: Yorkville, NY

WSP | Parsons Brinckerhoff Contact E-mail: Dave.Bouchard @wspgroup.com

Project Number & Task: E1501410.000 Task 5

WSP | Parsons Brinckerhoff Contact Phone: 315-374-8444

Sampler(s) Name(s): Nate Winston

Sampler(s) Signature(s): [signature]

Laboratory Name & Location: Con-Test

Laboratory Project Manager:

Requested Turn-Around-Time: ☐ Standard ☒ 24 HR ☐ 48 HR ☐ 72 HR ☐ ___ HR

Requested Analyses & Preservatives: PCBs EPA 8082

	Sample Identification	Matrix	Collection Start* Date	Collection Start* Time	Collection Stop* Date	Collection Stop* Time	Number of Containers	PCBs EPA 8082	Sample Comments
01	EXC-SB30NSW(1.5)	S	8-16-16	0926	—	—	1	X	
02	EXC-SB30ESW(1.5)	S	8-16-16	0930	—	—	1	X	
03	EXC-SB30SSW-(1.5) MS/MSD	S	8-16-16	0935	—	—	3	X	RUN MS/MSD
04	EXC-SB30WSW(1.5)	S	8-16-16	0939	—	—	1	X	
05	EXC-SB30B1(3.0)	S	8-16-16	0947	—	—	1	X	
06	EXC-SB30B2(3.0)	S	8-16-16	0953	—	—	1	X	
07	EXC-B3NSW(1.5)	S	8-16-16	1010	—	—	1	X	
08	EXC-B3ESW(1.5)	S	8-16-16	1015	—	—	1	X	
09	EXC-B3SSW(1.5)	S	8-16-16	1019	—	—	1	X	
10	EXC-B3WSW(1.5)	S	8-16-16	1026	—	—	1	X	
11	EXC-B3B1(3.0)	S	8-16-16	1032	—	—	1	X	
12	EXC-B3B2(3.0)-MS/MSD	S	8-16-16	1040	—	—	3	X	RUN MS/MSD
13	EXC-081616A	S	8-16-16	1100	—	—	1	X	
14	EXC-081616B	S	8-16-16	1110	—	—	1	X	
15	EB-081616	Aq	8-16-16	1645	—	—	2	X	

Relinquished By (Signature)	Date	Time	Received By (Signature)	Date	Time	Shipment Method	Tracking Number(s)
[signature]	8-16-16	1700	Paula [signature] 3.1	8.17.16	9:31	FedEx	

Relinquished By (Signature)	Date	Time	Received By (Signature)	Date	Time	Number of Packages	Custody Seal Number(s)

*Use stop time/date for composite and/or air samples; use only start time/date for all other samples.

Matrix: AQ = Aqueous, S = Soil, SE = Sediment, A = Air, W = Wipe, B = Bulk, O = Other (detail in comments)

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East Longmeadow, MA. 01028
P: 413-525-2332
F: 413-525-6405
www.contestlabs.com

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Sample Receipt Checklist

CLIENT NAME: WSP **RECEIVED BY:** PB **DATE:** 8·17·16

1) **Was the chain(s) of custody relinquished and signed?** Yes ✓ No ___ No COC Incl.

2) **Does the chain agree with the samples?** Yes ✓ No ___
If not, explain:

3) **Are all the samples in good condition?** Yes ✓ No ___
If not, explain:

4) **How were the samples received:**
On Ice ✓ Direct from Sampling ___ Ambient ___ In Cooler(s) ✓

Were the samples received in Temperature Compliance of (2-6°C)? Yes ✓ No ___ N/A ___

Temperature °C by Temp blank ___ Temperature °C by Temp gun 3.1

5) **Are there Dissolved samples for the lab to filter?** Yes ___ No ✓
Who was notified ___ Date ___ Time ___

6) **Are there any RUSH or SHORT HOLDING TIME samples?** Yes ✓ No ___
Who was notified Bill L. Date 8·17·16 Time 9:45

7) **Location where samples are stored:** Login

Permission to subcontract samples? Yes No
(Walk-in clients only) if not already approved
Client Signature: ___

8) **Do all samples have the proper Acid pH:** Yes ___ No ___ N/A ✓

9) **Do all samples have the proper Base pH:** Yes ___ No ___ N/A ✓

10) **Was the PC notified of any discrepancies with the CoC vs the samples:** Yes ___ N/A ✓

Containers received at Con-Test

	# of containers		# of containers
1 Liter Amber	2	16 oz amber	
500 mL Amber		8 oz amber/clear jar	
250 mL Amber (8oz amber)		4 oz amber/clear jar	18
1 Liter Plastic		2 oz amber/clear jar	
500 mL Plastic		Plastic Bag / Ziploc	
250 mL plastic		SOC Kit	
40 mL Vial - type listed below		Perchlorate Kit	
Colisure / bacteria bottle		Flashpoint bottle	
Dissolved Oxygen bottle		Other glass jar	
Encore		Other	

40 mL vials: # HCl ___ # Methanol ___
Bisulfate ___ # DI Water ___
Thiosulfate ___ Unpreserved ___

Time and Date Frozen:

Doc# 277
Rev. 4 August 2013

Page 2 of 2

Login Sample Receipt Checklist

(Rejection Criteria Listing - Using Sample Acceptance Policy)

Any False statement will be brought to the attention of Client

Question	Answer (True/False) T/F/NA	Comment
1) The cooler's custody seal, if present, is intact.	NA	
2) The cooler or samples do not appear to have been compromised or tampered with.	T	
3) Samples were received on ice.	T	
4) Cooler Temperature is acceptable.	T	
5) Cooler Temperature is recorded.	T	
6) COC is filled out in ink and legible.	T	
7) COC is filled out with all pertinent information.	T	
8) Field Sampler's name present on COC.	T	
9) There are no discrepancies between the sample IDs on the container and the COC.	T	
10) Samples are received within Holding Time.	T	
11) Sample containers have legible labels.	T	
12) Containers are not broken or leaking.	T	
13) Air Cassettes are not broken/open.	NA	
14) Sample collection date/times are provided.	T	
15) Appropriate sample containers are used.	T	
16) Proper collection media used.	T	
17) No headspace sample bottles are completely filled.	NA	
18) There is sufficient volume for all requsted analyses, including any requested MS/MSDs.	T	
19) Trip blanks provided if applicable.	NA	
20) VOA sample vials do not have head space or bubble is <6mm (1/4") in diameter.	NA	
21) Samples do not require splitting or compositing.	T	

Who notified of False statements? **Date/Time:**

Doc #277 Rev. 4 August 2013 **Log-In Technician Initials:** PB **Date/Time:** 8.17.16 9:31

Appendix E – Data Usability Study Report

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

WSP Environmental & Energy
205 West Park Street
Jackson, MO 63755
ATTN: Mr. Dave Bouchard

November 7, 2016

SUBJECT: 5140 Site, Yorkville, NY, Data Validation

Dear Mr. Bouchard,

Enclosed are the final validation reports for the fraction listed below. These SDGs were received on October 19, 2016. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project # 37302:

SDG #	Fraction
16H0755, 16H0825	Polychlorinated Biphenyls

The data validation was performed under Level IV guidelines. The analyses were validated using the following documents, as applicable to each method:

- USEPA, Region 2 Standard Operating Procedure for Validating PCB Compounds, PCBs by Gas Chromatography SW-846 Method 8082A, SOP HW-45, Revision 1, October 2006
- USEPA, Contract Laboratory Program National Functional Guidelines for I Superfund Organic Data Review, EPA 540-R-014-002
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014

Please feel free to contact us if you have any questions.

Sincerely,

Christina Rink

Christina Rink
Project Manager/Chemist

850 pages-SF

Attachment 1

Category B

LDC #37302 (WSP Group- Herndon, VA / 5140 Site - Yorkville, NY)

Task # E1501410.05

LDC	SDG#	DATE REC'D	(3) DATE DUE	PCBs (8082A)																																	
Matrix:	Water/Soil			W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	16H0755	10/19/16	11/09/16	1	12																																
B	16H0825	10/19/16	11/09/16	1	14																																
Total	T/CR			2	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28

Shaded cells indicate Category B validation (all other cells are Category A validation). These sample counts do not include MS/MSD, and DUPs

L:\WSP\Yorkville\37302ST.wpd

11/07/16

The attached zipped file contains three files:

File	Format	Description	
1) Readme_Yorkville_110716.doc	MS Word 2003	A "Readme" file (this document).	
	MS Excel 2007	A spreadsheet for the following SDG(s):	
2) 16H0755 FINAL NYSDEC EDD.xls		16H0755	37302A
3) 16H0825 FINAL NYSDEC EDD.xls		16H0825	37302B

No discrepancies were observed between the hardcopy data packages and the electronic data deliverables during EDD population of validation qualifiers. A 100% verification of the EDD was not performed.

Please contact Christina Rink or Allie Jefferson at (760) 827-1100 if you have any questions regarding this electronic data submittal.

LDC #: 37302

EDD POPULATION COMPLETENESS WORKSHEET

Date: 11/7/16
Page: 1 of 1
2nd Reviewer: GG

The LDC job number listed above was entered by ag.

	EDD Process		Comments/Action
I.	EDD Completeness	-	
Ia.	- All methods present?	Y	
Ib.	- All samples present/match report?	Y	
Ic.	- All reported analytes present?	Y	
Id.	- 10% or 100% verification of EDD?	Y	
II.	EDD Preparation/Entry	-	
IIa.	- Carryover U/J?	Y	
IIb.	- Reason Codes used? If so, note which codes.	N	
IIc.	- Additional Information (QC Level, Validator, Validated Y/N, etc.)	Y	
III.	Reasonableness Checks	-	
IIIa.	- Do all qualified ND results have ND qualifier (e.g. UJ)?	Y	
IIIb.	- Do all qualified detect results have detect qualifier (e.g. J)?	Y	
IIIc.	- If reason codes are used, do all qualified results have reason code field populated, and vice versa?	—	
IIId.	-Does the detect flag require changing for blank qualifier? If so, are all U results marked ND?	N/NA	
IIIe.	- Do blank concentrations in report match EDD where data was qualified due to blank contamination?	NA	
IIIf.	- Were any results reported above calibration range? If so, were results qualified appropriately?	N/NA	
IIIg.	-Is the readme complete? If applicable, were edits or discrepancies listed in the readme?	Y.	

Notes: *see discrepancy sheet

Site:	5140 Site-Yorkville, NY
Laboratory:	Con-test Analytical Laboratory, East Longmeadow, MA
Report No.:	16H0755
Reviewer:	Felomina Tanguilig and Christina Rink/Laboratory Data Consultants for WSP Group
Date:	November 1, 2016

Samples Reviewed and Evaluation Summary

FIELD ID	LAB ID	FRACTIONS VALIDATED
EXC-WS1NSW (1.0)	16H0755-01	PCB
EXC-WS1ESW (1.0)	16H0755-02	PCB
EXC-WS1SSW (1.0)	16H0755-03	PCB
EXC-WS1WSW (1.0)	16H0755-04	PCB
EXC-WS1B1 (2.0)	16H0755-05	PCB
EXC-WS1B2 (2.0)	16H0755-06	PCB
EB-081516	16H0755-07	PCB
EXC-SB29NSW (1.5)	16H0755-08	PCB
EXC-SB29ESW (1.5)	16H0755-09	PCB
EXC-SB29SSW (1.5)	16H0755-10	PCB
EXC-SB29WSW (1.5)	16H0755-11	PCB
EXC-SB29B1 (3.0)	16H0755-12	PCB
EXC-SB29B2 (3.0)	16H0755-13	PCB

Associated QC Samples(s):
Field/Trip Blanks: EB-081516
Field Duplicate pair: None Associated

The above-listed soil and water samples were collected on October 03, 2016 and were analyzed for polychlorinated biphenyls (PCBs) by SW-846 method 8082A. The data validation was performed in accordance with the USEPA Region 2 *Standard Operating Procedure for Validating PCB Compounds, PCBs by Gas Chromatography SW-846 Method 8082A,* SOP HW-45, Revision 1 (October 2006) and the USEPA *Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review,* EPA 540-R-014-002 (August 2014), modified as necessary to accommodate the non-CLP methodologies used.

The organic data were evaluated based on the following parameters:

- Data Completeness
- Holding Times and Sample Preservation
- GC/Electron Capture Detector (GC/ECD) Instrument Performance Checks
- Initial and Continuing Calibrations
- Blanks
- Surrogate Recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results
- Laboratory Control Sample (LCS) Results
- Internal Standards
- Field Duplicate Results
- Moisture Content
- Quantitation Limits and Data Assessment
- Sample Quantitation and Compound Identification

Overall Evaluation of Data and Potential Usability Issues

All results are usable as reported or usable with minor qualification due to sample matrix or laboratory quality control outliers.

The validation findings were based on the following information.

Data Completeness

The data package was complete as defined under the requirements for the NYSDEC ASP category B laboratory deliverables.

Holding Times and Sample Preservation

All criteria were met.

GC/ECD Instrument Performance Checks

All criteria were met.

Initial and Continuing Calibrations

All criteria were met.

Blanks

Contamination was not detected in the method blanks.

No positive results were found in the equipment blank sample EB-081516 for PCB analysis.

Surrogate Recoveries

Surrogates were recovered outside of control limits for sample EXC-WS1SSW (1.0). No actions were taken for samples analyzed at greater than 5X dilution.

MS/MSD Results

MS/MSD analyses were not performed for the PCB analyses. Validation action was not required on this basis.

LCS Results

All criteria were met.

Internal Standards

All criteria were met.

Moisture Content

All criteria were met.

Field Duplicate Results

A field duplicate pair was not associated with this sample set. Validation action was not required on this basis.

Quantitation Limits and Data Assessment

No results were reported below the reporting limit (RL) and above the method detection limit (MDL) in the PCB analysis.

Due to difficult sample matrix, select samples were analyzed at dilutions. The following table lists the sample dilutions which were performed and the results reported. RLs were elevated accordingly.

Sample	PCB Analysis Reported
EXC-WS1NSW (1.0) EXC-WS1WSW (1.0) EXC-WS1B1 (2.0) EXC-WS1B2 (2.0) EXC-SB29NSW (1.5) EXC-SB29ESW (1.5) EXC-SB29SSW (1.5) EXC-SB29WSW (1.5) EXC-SB29B1 (3.0) EXC-SB29B2 (3.0)	5-fold dilution due to nature of sample matrix
EXC-WS1ESW (1.0)	10-fold dilution due to nature of sample matrix
EXC-WS1SSW (1.0)	50-fold dilution due to nature of sample matrix

Sample Quantitation and Compound Identification

Calculations were spot-checked; no discrepancies were noted.

The following table lists the GC dual column RPDs for PCB analysis which were outside the control limit of 40% and the resulting actions.

Sample	Compound	RPD (%)	Validation Actions
EXC-SB29SSW (1.5)	Aroclor-1254	47.9	J all detects

The bias cannot be determined due to dual column RPD exceedances. The results can be used for project objectives as estimated (J) which may have a minor impact on the data usability.

DATA VALIDATION QUALIFIERS

U - The analyte was analyzed for, but due to blank contamination was flagged as nondetect (U). The result is usable as a nondetect.

J - Data are flagged (J) when a QC analysis fails outside the primary acceptance limits. The qualified "J" data are not excluded from further review or consideration. However, only one flag (J) is applied to a sample result, even though several associated QC analyses may fail. The 'J' data may be biased high or low or the direction of the bias may be indeterminable.

UJ - The analyte was not detected above the reported sample quantitation limit. Data are flagged (UJ) when a QC analysis fails outside the primary acceptance limits. The qualified "UJ" data are not excluded from further review or consideration. However, only one flag is applied to a sample result, even though several associated QC analyses may fail. The 'UJ' data may be biased low.

JN - The analysis indicates the presence of a compound that has been "tentatively identified" (N) and the associated numerical value represents its approximate (J) concentration.

R - Data rejected (R) on the basis of an unacceptable QC analysis should be excluded from further review or consideration. Data are rejected when associated QC analysis results exceed the expanded control limits of the QC criteria. The rejected data are known to contain significant errors based on documented information. The data user must not use the rejected data to make environmental decisions. The presence or absence of the analyte cannot be verified.

LDC #: 37302A3b

SDG #: 16H0755

Laboratory: Con-test Analytical Laboratory

VALIDATION COMPLETENESS WORKSHEET

Category B

Date: 10/29/16

Page: 1 of 1

Reviewer: FT

2nd Reviewer: [illegible]

METHOD: GC Polychlorinated Biphenyls (EPA SW846 Method 8082A)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A / A	
II.	Initial calibration/ICV	A / A	% RSD / ICV ≤ 20
III.	Continuing calibration	A	CCV ≤ 20
IV.	Laboratory Blanks	A	
V.	Field blanks	ND	EB = 7
VI.	Surrogate spikes	SW	
VII.	Matrix spike/Matrix spike duplicates	N	CS
VIII.	Laboratory control samples	A	LCS ID
IX.	Field duplicates	N	
X.	Compound quantitation/RL/LOQ/LODs	SW	No Result < RL > MDL
XI.	Target compound identification	A	
XII	Overall assessment of data	A	

Note:
A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank
SB=Source blank
OTHER:

	Client ID		Lab ID	Matrix	Date
1 1	EXC-WS1NSW (1.0)	5X	16H0755-01	Soil	08/15/16
2	EXC-WS1ESW (1.0)	10X	16H0755-02	Soil	08/15/16
3	EXC-WS1SSW (1.0)	50X	16H0755-03	Soil	08/15/16
4	EXC-WS1WSW (1.0)	5X	16H0755-04	Soil	08/15/16
5	EXC-WS1B1 (2.0)	5X	16H0755-05	Soil	08/15/16
6	EXC-WS1B2 (2.0)	5X	16H0755-06	Soil	08/15/16
7 2	EB-08~~16~~ 15 16		16H0755-07	Water	08/15/16
8	EXC-SB29NSW (1.5)	5X	16H0755-08	Soil	08/15/16
9	EXC-SB29ESW (1.5)	5X	16H0755-09	Soil	08/15/16
+ 10	EXC-SB29SSW (1.5)	5X	16H0755-10	Soil	08/15/16
11	EXC-SB29WSW (1.5)	5X	16H0755-11	Soil	08/15/16
+ 12	EXC-SB29B1 (3.0)	5X	16H0755-12	Soil	08/15/16
13	EXC-SB29B2 (3.0)	5X	16H0755-13	Soil	08/15/16
14					
15					
16 1	B156165				
17 2	B156200				

LDC #: 37302A3b

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: FT
2nd Reviewer: [illegible]

Method: ✓ GC ____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
Were all technical holding times met?	✓			
Was cooler temperature criteria met?	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation? If yes, did the initial calibration meet the curve fit acceptance criteria of ≥0.990?			✓	
Were the RT windows properly established?	✓			
III. Initial calibration verification				
Was an initial calibration verification standard analyzed after each initial calibration for each instrument?	✓			
Were all percent differences (%D) ≤ 20% or percent recoveries (%R) 80-120%?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20% or percent recoveries (%R) 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Laboratory Blanks				
Was a laboratory blank associated with every sample in this SDG?	✓			
Was a laboratory blank analyzed for each matrix and concentration?	✓			
Was there contamination in the laboratory blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Field blanks				
Were field blanks identified in this SDG?	✓			
Were target compounds detected in the field blanks?		✓		
VII. Surrogate spikes				
Were all surrogate percent recovery (%R) within the QC limits?		✓		
If the percent recovery (%R) of one or more surrogates was outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any %R was less than 10 percent, was a reanalysis performed to confirm %R?			✓	
VIII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.			✓	
Was a MS/MSD analyzed every 20 samples of each matrix?			✓	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	

LDC #: 37302A3b

VALIDATION FINDINGS CHECKLIST

Page: 2 of 2
Reviewer: FT
2nd Reviewer: [illegible]

Validation Area	Yes	No	NA	Findings/Comments
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
[illegible]. Field duplicates				
Were field duplicate pairs identified in this SDG?		✓		
Were target compounds detected in the field duplicates?			✓	
[illegible]. Compound quantitation				
Were compound quantitation and RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
[illegible]. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
[illegible]. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			

VALIDATION FINDINGS WORKSHEET

METHOD: Pesticide/PCBs (EPA SW 846 Method 8081/8082)

A. alpha-BHC	I. Dieldrin	Q. Endrin ketone	Y. Aroclor-1242	GG. Chlordane
B. beta-BHC	J. 4,4'-DDE	R. Endrin aldehyde	Z. Aroclor-1248	HH. Chlordane (Technical)
C. delta-BHC	K. Endrin	S. alpha-Chlordane	AA. Aroclor-1254	II. Arochlor 1262
D. gamma-BHC	L. Endosulfan II	T. gamma-Chlordane	BB. Aroclor-1260	JJ. Aroclor 1268
E. Heptachlor	M. 4,4'-DDD	U. Toxaphene	CC. 2,4'-DDD	KK. Oxychlordane
F. Aldrin	N. Endosulfan sulfate	V. Aroclor-1016	DD. 2,4'-DDE	LL. trans-Nonachlor
G. Heptachlor epoxide	O. 4,4'-DDT	W. Aroclor-1221	EE. 2,4'-DDT	MM. cis-Nonachlor
H. Endosulfan I	P. Methoxychlor	X. Aroclor-1232	FF. Hexachlorobenzene	NN.

Notes:____

LDC #: 37302A3b

VALIDATION FINDINDS WORKSHEET
Surrogate Recovery

Reviewer: FT
2nd Reviewer: C

METHOD: ✓ GC ___ HPLC
Are surrogates required by the method? Yes____ or No____.
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
Y N N/A Were surrogates spiked into all samples and blanks?
Y N N/A Did all surrogate recoveries (%R) meet the QC limits?

#	Sample ID	Detector/ Column	Surrogate Compound	%R (Limits)	Qualifications
	3	surrogate	outside	limit ( )	no qual 50x DL
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	

	Surrogate Compound		Surrogate Compound		Surrogate Compound		Surrogate Compound		
A	Chlorobenzene (CBZ)	G	Octacosane	M	Benzo(e)Pyrene	S	1-Chloro-3-Nitrobenzene	Y	Tetrachloro-m- xylene
B	4-Bromofluorobenzene (BFB)	H	Ortho-Terphenyl	N	Terphenyl-D14	T	3,4-Dinitrotoluene	Z	2-Bromonaphthalene
C	a,a,a-Trifluorotoluene	I	Fluorobenzene (FBZ)	O	Decachlorobiphenyl (DCB)	U	Tripentyltin	AA	Chloro-octadecane
D	Bromochlorobenene	J	n-Triacontane	P	1-methylnaphthalene	V	Tri-n-propyltin	BB	2,4-Dichlorophenylacetic acid
E	1,4-Dichlorobutane	K	Hexacosane	Q	Dichlorophenyl Acetic Acid (DCAA)	W	Tributyl Phosphate	CC	2,5-Dibromotoluene
F	1,4-Difluorobenzene (DFB)	L	Bromobenzene	R	4-Nitrophenol	X	Triphenyl Phosphate		

LDC #: 37302A3b

VALIDATION FINDINGS WORKSHEET

Compound Quantitation and Reported CRQLs

Page: 1 of 1
Reviewer: FT
2nd Reviewer: Q

METHOD: ✓ GC __ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Level IV/D Only

Y N N/A Were CRQLs adjusted for sample dilutions, dry weight factors, etc.?

Y N N/A Did the reported results for detected target compounds agree within 10.0% of the recalculated results?

#	Associated Samples	Compound Name	% RPD Bet 2 col Findings ≤ 40	Qualifications
	10	AA	47.9	J det /A

Comments: See sample calculation verification worksheet for recalculations

LDC #: 37302 A3b

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: FT
2nd Reviewer: Q

METHOD: GC ✓ HPLC ____

The calibration factors (CF) and relative standard deviation (%RSD) were recalculated using the following calculations:

CF = A/C
Average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

Where: A = Area of compound
C = Concentration of compound
S = Standard deviation of calibration factors
X = Mean of calibration factors

#	Standard ID	Calibration Date	Compound	Reported CF (100 std)	Recalculated CF (100 std)	Reported CF (initial)	Recalculated CF (intial)	Reported %RSD	Recalculated %RSD
1	ICAL	7/15/16	Aroclor 1260-1 (A)	650872.4	650872.4	656306.2	656306.2	7.5	7.5
			(B)	1268000	1268000	1272014	1272014	9.9	9.9
2	ICAL	8/3/16	✓	771353.6	771353.6	793387.6	793387.6	9.7	9.7
				593328.1	593328.1	602773.2	602773.2	5.8	5.8
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 37302A36

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FT
2nd Reviewer: Q

METHOD: GC ✓ HPLC ____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF -CF)/ave.CF

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(ICAL)/ CCV Conc.	Reported CF/ Conc. CCV	Recalculated CF/ Conc. CCV	Reported %D	Recalculated %D
1	CCV ~~16:00~~ 20:31 E0816050	8/~~15~~16/16	Aroclor 1260 A	100	94.0	94.0	6.0	6.0
			B	100	101	101.2	1.2	1.2
2	CCV ~~00:00~~ 02:21 E0816077	8/17/16	↓	100	94.5	94.5	5.5	5.5
				100	104	104	3.6	3.6
3	CCV ~~00:00~~ 20:08 E0815107	8/16/16	↓	100	102	102	1.9	1.9
				100	111	111	11.1	11.1
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 37302A3b

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT
2nd reviewer: Q

METHOD: ✓ GC __ HPLC

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #10

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
DCB chA	chA	40.0	37.218	93.0	93.0	0
↓ B	B	↓	38.461	96.2	96.2	↓
TCMX chA	chA		39.976	99.9	99.9	
B	B		44.725	112	112	

Sample ID:

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference

	Surrogate Compound		Surrogate Compound		Surrogate Compound		Surrogate Compound		Surrogate Compound
A	Chlorobenzene (CBZ)	G	Octacosane	M	Benzo(e)Pyrene	S	1-Chloro-3-Nitrobenzene	Y	Tetrachloro-m- xylene
B	4-Bromofluorobenzene (BFB)	H	Ortho-Terphenyl	N	Terphenyl-D14	T	3,4-Dinitrotoluene	Z	2-Bromonaphthalene
C	a,a,a-Trifluorotoluene	I	Fluorobenzene (FBZ)	O	Decachlorobiphenyl (DCB)	U	Tripentyltin	AA	Chloro-octadecane
D	Bromochlorobenene	J	n-Triacontane	P	1-methylnaphthalene	V	Tri-n-propyltin	BB	2,4-Dichlorophenylacetic acid
E	1,4-Dichlorobutane	K	Hexacosane	Q	Dichlorophenyl Acetic Acid (DCAA)	W	Tributyl Phosphate	CC	2,5-Dibromotoluene
F	1,4-Difluorobenzene (DFB)	L	Bromobenzene	R	4-Nitrophenol	X	Triphenyl Phosphate		

LDC #: 37302A36

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer: [illegible]

METHOD: ✓ GC ___HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC/SA)
RPD =(({SSCLCS - SSCLCSD} * 2) / (SSCLCS + SSCLCSD))*100

Where SSC = Spiked sample concentration
LCS = Laboratory Control Sample
SA = Spike added
LCSD = Laboratory Control Sample duplicate

LCS/LCSD samples: B156165 lcs ID

Compound	Spike Added (mg/Kg)		Spike Sample Concentration (mg/Kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
[redacted]	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										
Phorate (8141A)										
Malathion (8141A)										
Formaldehyde (8315A)										
Arochlor 1260	0.200	0.200	0.17	0.17	84.3	84.3	83.0	83.0	1.57	1.57
			0.1685	0.1659						

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 37302A 3b

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer: G

METHOD: ✓ GC __ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration = $\frac{(A)(Fv)(Df)}{(RF)(Vs\ or\ Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound In the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID. #10 Compound Name PCB 1260

Concentration = $\frac{(79.143)(5)(5)}{(5)(0.8)(1000)}$ =

= 0.494 mg/kg

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications
	#10				
	PCB - 3		PCB - 3 =	82.396	
	= 42533343		- 4 =	77.597	
	516212.6		- 5 =	77.437	
			Ave =	79.143	
	= 82.395				

Comments:

SAMPCLC_r1.wpd

Site:	5140 Site-Yorkville, NY
Laboratory:	Con-test Analytical Laboratory, East Longmeadow, MA
Report No.:	16H0825
Reviewer:	Felomina Tanguilig and Christina Rink/Laboratory Data Consultants for WSP Group
Date:	November 1, 2016

Samples Reviewed and Evaluation Summary

FIELD ID	LAB ID	FRACTIONS VALIDATED
EXC-SB30NSW (1.5)	16H0825-01	PCB
EXC-SB30ESW (1.5)	16H0825-02	PCB
EXC-SB30SSW (1.5)	16H0825-03	PCB
EXC-SB30WSW (1.5)	16H0825-04	PCB
EXC-SB30B1 (3.0)	16H0825-05	PCB
EXC-SB30B2 (3.0)	16H0825-06	PCB
EXC-B3NSW (1.5)	16H0825-07	PCB
EXC-B3ESW (1.5)	16H0825-08	PCB
EXC-B3SSW (1.5)	16H0825-09	PCB
EXC-B3WSW (1.5)	16H0825-10	PCB
EXC-B3B1 (3.0)	16H0825-11	PCB
EXC-B3B2 (3.0)	16H0825-12	PCB
EXC-081616A	16H0825-13	PCB
EXC-081616B	16H0825-14	PCB
EB-081616	16H0825-15	PCB
EXC-SB30SSW (1.5)MS	16H0825-03MS	PCB
EXC-SB30SSW (1.5)MSD	16H0825-03MSD	PCB
EXC-B3B2 (3.0)MS	16H0825-12MS	PCB
EXC-B3B2 (3.0)MSD	16H0825-12MSD	PCB

Associated QC Samples(s):

Field/Trip Blanks:	EB-081616
Field Duplicate pair:	EXC-B3WSW (1.5) and EXC-081616A
	EXC-B3B1 (3.0) and EXC-081616B

The above-listed soil and water samples were collected on August 017, 2016 and were analyzed for polychlorinated biphenyls (PCBs) by SW-846 method 8082A. The data validation was performed in accordance with the USEPA Region 2 *Standard Operating Procedure for Validating PCB Compounds, PCBs by Gas Chromatography SW-846 Method 8082A,* SOP HW-45, Revision 1 (October 2006) and the USEPA *Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review,* EPA 540-R-014-002 (August 2014), modified as necessary to accommodate the non-CLP methodologies used.

The organic data were evaluated based on the following parameters:

- Data Completeness
- Holding Times and Sample Preservation
- GC/Electron Capture Detector (GC/ECD) Instrument Performance Checks
- Initial and Continuing Calibrations
- Blanks
- Surrogate Recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results
- Laboratory Control Sample (LCS) Results
- Internal Standards
- Field Duplicate Results
- Moisture Content
- Quantitation Limits and Data Assessment
- Sample Quantitation and Compound Identification

Overall Evaluation of Data and Potential Usability Issues

All results are usable as reported.

The validation findings were based on the following information.

Data Completeness

The data package was complete as defined under the requirements for the NYSDEC ASP category B laboratory deliverables.

Holding Times and Sample Preservation

All criteria were met.

GC/ECD Instrument Performance Checks

All criteria were met.

Initial and Continuing Calibrations

All criteria were met.

Blanks

Contamination was not detected in the method blanks.

No positive results were found in the equipment blank sample EB-081616 for PCB analysis.

Surrogate Recoveries

All criteria were met.

MS/MSD Results

MS/MSD analyses were performed on sample EXC-SB30SSW (1.5) and EXC-B3B2 (3.0) for PCB analysis. All criteria were met.

LCS Results

All criteria were met.

Internal Standards

All criteria were met.

Moisture Content

All criteria were met.

Field Duplicate Results

Samples EXC-B3WSW (1.5) and EXC-081616A and samples EXC-B3B1 (3.0) and EXC-081616B were submitted as the field duplicate pairs with this sample group. No results were detected in any of the samples.

Quantitation Limits and Data Assessment

No results were reported below the reporting limit (RL) and above the method detection limit (MDL) in the PCB analysis.

Due to difficult sample matrix, select samples were analyzed at dilutions. The following table lists the sample dilutions which were performed and the results reported. RLs were elevated accordingly.

Sample	PCB Analysis Reported
EXC-SB30NSW (1.5) EXC-SB30ESW (1.5) EXC-SB30SSW (1.5) EXC-SB30WSW (1.5) EXC-SB30B1 (3.0) EXC-SB30B2 (3.0) EXC-B3NSW (1.5) EXC-B3ESW (1.5) EXC-B3SSW (1.5) EXC-B3WSW (1.5) EXC-B3B1 (3.0) EXC-B3B2 (3.0) EXC-081616A EXC-081616B EB-081616	5-fold dilution due to nature of sample matrix

Sample Quantitation and Compound Identification

Calculations were spot-checked; no discrepancies were noted.

DATA VALIDATION QUALIFIERS

U - The analyte was analyzed for, but due to blank contamination was flagged as nondetect (U). The result is usable as a nondetect.

J - Data are flagged (J) when a QC analysis fails outside the primary acceptance limits. The qualified "J" data are not excluded from further review or consideration. However, only one flag (J) is applied to a sample result, even though several associated QC analyses may fail. The 'J' data may be biased high or low or the direction of the bias may be indeterminable.

UJ - The analyte was not detected above the reported sample quantitation limit. Data are flagged (UJ) when a QC analysis fails outside the primary acceptance limits. The qualified "UJ" data are not excluded from further review or consideration. However, only one flag is applied to a sample result, even though several associated QC analyses may fail. The 'UJ' data may be biased low.

JN - The analysis indicates the presence of a compound that has been "tentatively identified" (N) and the associated numerical value represents its approximate (J) concentration.

R - Data rejected (R) on the basis of an unacceptable QC analysis should be excluded from further review or consideration. Data are rejected when associated QC analysis results exceed the expanded control limits of the QC criteria. The rejected data are known to contain significant errors based on documented information. The data user must not use the rejected data to make environmental decisions. The presence or absence of the analyte cannot be verified.

LDC #: 37302B3b

SDG #: 16H0825

Laboratory: Con-test Analytical Laboratory

VALIDATION COMPLETENESS WORKSHEET

Category B

Date: 10/29/16

Page: 1 of 2

Reviewer:

2nd Reviewer:

METHOD: GC Polychlorinated Biphenyls (EPA SW846 Method 8082A)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A / A	
II.	Initial calibration/ICV	A / A	% RSD / ICV ≤ 20
III.	Continuing calibration	A	CCV ≤ 20
IV.	Laboratory Blanks	A	
V.	Field blanks	ND	EB = 15
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	A	
VIII.	Laboratory control samples	A	LCS/D
IX.	Field duplicates	ND	D = 10, 13 11, 14
X.	Compound quantitation/RL/LOQ/LODs	A	No Result < RL > MDL
XI.	Target compound identification	A	
XII.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID		Lab ID	Matrix	Date
1	EXC-SB30NSW (1.5)	5X	16H0825-01	Soil	08/17/16
2	EXC-SB30ESW (1.5)	5X	16H0825-02	Soil	08/17/16
3	EXC-SB30SSW (1.5)	5X	16H0825-03	Soil	08/17/16
4	EXC-SB30WSW (1.5)	5X	16H0825-04	Soil	08/17/16
5	EXC-SB30B1 (3.0)	5X	16H0825-05	Soil	08/17/16
6	EXC-SB30B2 (3.0)	5X	16H0825-06	Soil	08/17/16
7	EXC-B3NSW (1.5)	5X	16H0825-07	Soil	08/17/16
8	EXC-B3ESW (1.5)		16H0825-08	Soil	08/17/16
9	EXC-B3S~~WW~~ (1.5)		16H0825-09	Soil	08/17/16
10	EXC-B3WSW (1.5)	D	16H0825-10	Soil	08/17/16
11	EXC-B3B1 (3.0)	D1	16H0825-11	Soil	08/17/16
12	EXC-B3B2 (3.0)		16H0825-12	Soil	08/17/16
13	EXC-081616A	D	16H0825-13	Soil	08/17/16
14	EXC-081616B	D1	16H0825-14	Soil	08/17/16
15	EB-081616		16H0825-15	Water	08/17/16
16	EXC-SB30SSW (1.5)MS		16H0825-03MS	Soil	08/17/16
17	EXC-SB30SSW (1.5)MSD		16H0825-03MSD	Soil	08/17/16

LDC #: 37302B3b
SDG #: 16H0825
Laboratory: Con-test Analytical Laboratory

VALIDATION COMPLETENESS WORKSHEET

Category B

Date: 10/29/16

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC Polychlorinated Biphenyls (EPA SW846 Method 8082A)

	Client ID	Lab ID	Matrix	Date
18	EXC-B3B2 (3.0)MS	16H0825-12MS	Soil	08/17/16
19	EXC-B3B2 (3.0)MSD	16H0825-12MSD	Soil	08/17/16
20				
21				
22				
23				
24				

Notes:

1	B156420						
2	B156321						

LDC #: 37302B3b

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: FZ
2nd Reviewer: Q

Method: ✓ GC ______ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
Were all technical holding times met?	✓			
Was cooler temperature criteria met?	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation? If yes, did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were the RT windows properly established?	✓			
IIb. Initial calibration verification				
Was an initial calibration verification standard analyzed after each initial calibration for each instrument?	✓			
Were all percent differences (%D) ≤ 20% or percent recoveries (%R) 80-120%?	✓			
III. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20% or percent recoveries (%R) 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
IV. Laboratory Blanks				
Was a laboratory blank associated with every sample in this SDG?	✓			
Was a laboratory blank analyzed for each matrix and concentration?	✓			
Was there contamination in the laboratory blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
V. Field Blanks				
Were field blanks identified in this SDG?	✓			
Were target compounds detected in the field blanks?		✓		
VI. Surrogate spikes				
Were all surrogate percent recovery (%R) within the QC limits?	✓			
If the percent recovery (%R) of one or more surrogates was outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any %R was less than 10 percent, was a reanalysis performed to confirm %R?				
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			

LDC #: 37302B3b

VALIDATION FINDINGS CHECKLIST

Page: 2 of 2
Reviewer: FT
2nd Reviewer: [illegible]

Validation Area	Yes	No	NA	Findings/Comments
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Field duplicates				
Were field duplicate pairs identified in this SDG?	✓			
Were target compounds detected in the field duplicates?	✓			
X. Compound quantitation				
Were compound quantitation and RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XI. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
XII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			

LDC #: 37302B36

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: FT
2nd Reviewer: G

METHOD: GC ✓ HPLC

The calibration factors (CF) and relative standard deviation (%RSD) were recalculated using the following calculations:

CF = A/C
Average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

Where: A = Area of compound
C = Concentration of compound
S = Standard deviation of calibration factors
X = Mean of calibration factors

#	Standard ID	Calibration Date	Compound	Reported CF (100 std)	Recalculated CF (100 std)	Reported CF (initial)	Recalculated CF (intial)	Reported %RSD	Recalculated %RSD
1	ICAL 1600192 ECD3	7/15/16	Aroclor 1260-1 (chA)	650872.4	650872.4	656306.2	656306.2	7.5	7.5
			(chB)	1268000	1268000	1272014	1272014	9.9	9.9
2	ICAL 1600193 ECD10	7/15/16	↓	1613000	1613000	1605279	1605279	4.5	4.5
				1281000	1281000	1277470	1277470	6.3	6.3
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 37302B3b

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer: Q

METHOD: GC ✓ HPLC ____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF -CF)/ave.CF

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(ICAL)/ CCV Conc.	Reported CF/ Conc. CCV	Recalculated CF/ Conc. CCV	Reported %D	Recalculated %D
1	CCV 22:52 C0817062	8/17/16	PCB 1260 ch A	100	104	104	3.8	3.8
			B	100	113	113	13.3	13.3
2	CCV 0253 C0817081	8/18/16	↓	100	108	108	8.4	8.4
				100	118	118	17.9	17.9
3	CCV 1445 J0818028	8/18/16	↓	100	116	116	16.4	16.4
				100	115	115	14.7	14.7
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 37302 B3b

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT
2nd reviewer: G

METHOD: ✓ GC __ HPLC

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #4

Surrogate		Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
DCB	ch A	ch A	40.0	38.106	95.3	95.3	0
↓	B	B		42.343	106	106	
TCMX	ch A	A		33.057	82.6	82.6	
↓	B	B	↓	33.848	84.6	84.6	↓

Sample ID:

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference

	Surrogate Compound		Surrogate Compound		Surrogate Compound		Surrogate Compound		Surrogate Compound
A	Chlorobenzene (CBZ)	G	Octacosane	M	Benzo(e)Pyrene	S	1-Chloro-3-Nitrobenzene	Y	Tetrachloro-m- xylene
B	4-Bromofluorobenzene (BFB)	H	Ortho-Terphenyl	N	Terphenyl-D14	T	3,4-Dinitrotoluene	Z	2-Bromonaphthalene
C	a,a,a-Trifluorotoluene	I	Fluorobenzene (FBZ)	O	Decachlorobiphenyl (DCB)	U	Tripentyltin	AA	Chloro-octadecane
D	Bromochlorobenene	J	n-Triacontane	P	1-methylnaphthalene	V	Tri-n-propyltin	BB	2,4-Dichlorophenylacetic acid
E	1,4-Dichlorobutane	K	Hexacosane	Q	Dichlorophenyl Acetic Acid (DCAA)	W	Tributyl Phosphate	CC	2,5-Dibromotoluene
F	1,4-Difluorobenzene (DFB)	L	Bromobenzene	R	4-Nitrophenol	X	Triphenyl Phosphate		

LDC #: 37302B3b

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: FT

2nd Reviewer: Q

METHOD: ✓ **GC** __ **HPLC**

The percent recoveries (%R) and relative percent differences (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA

RPD =(((SSCMS - SSCMSD) * 2) / (SSCMS + SSCMSD))*100

Where SSC = Spiked sample concentration
SC = Sample concentration
SA = Spike added

MS = Matrix spike
MSD = Matrix spike duplicate

MS/MSD samples: 16 + 17

Compound	Spike Added (mg/kg)		Sample Conc. (mg/kg)	Spike Sample Concentration (mg/kg)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
[redacted]	MS	MSD	--	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)											
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)											
2,4-D (8151)											
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)											
HMX (8330)											
2,4,6-Trinitrotoluene (8330)											
Phorate (8141A)											
Malathion (8141A)											
Formaldehyde (8315A)											
Arochlor 1260	~~0.2~~	0.228	ND	0.22	0.22	96.9	96.9	95.2	95.2	1.76	1.76
	0.228										

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 37302B3b

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer: Q

METHOD: ✓ **GC** ___ **HPLC**

The percent recoveries (%R) and relative percent differences (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC/SA)
RPD =(({SSCLCS - SSCLCSD} * 2) / (SSCLCS + SSCLCSD))*100

Where SSC = Spiked sample concentration; SA = Spike added
LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample duplicate

LCS/LCSD samples: B156321-LCS/D

Compound	Spike Added (mg/Kg)		Spike Sample Concentration (mg/Kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
[redacted]	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										
Phorate (8141A)										
Malathion (8141A)										
Formaldehyde (8315A)										
Aroclor 1260	0.20	0.20	0.17	0.18	85.1	85.1	91.2	91.2	6.88	6.88
			0.1702	0.182						

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 37302B3b

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: FT
2nd Reviewer: Q

METHOD: ✓ GC ___ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs\ or\ Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound In the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID. #4 Compound Name PCB 1260

Concentration = $\frac{(74.302)(5)(5)}{(5)(0.8490)(100)}$ =

= 0.44 mg/kg

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications
	1260 - 1 = 9174804		1260-1 = 72.12		
	1272014		2 = 67.525		
			3 = 78.011		
	= 72.12		4 = 72.523		
			5 = 81.323		
			Ave = 74.302		

Comments:

SAMPCLC_r1.wpd

LDC# 37302 - 5140 Site, Yorkville

SDG: 16H0755

Analytical Method 8082A

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Validated	Detect	Lab Qual	Val Qual	Final qual	RL	MDL	Units
EB-081516	16H0755-07	PCB-1232 (Aroclor 1232)	8/16/2016		Y	N	U		U	0.076	0.076	ug/l
EB-081516	16H0755-07	PCB-1221 (Aroclor 1221)	8/16/2016		Y	N	U		U	0.12	0.12	ug/l
EB-081516	16H0755-07	PCB-1268 (Aroclor 1268)	8/16/2016		Y	N	U		U	0.08	0.08	ug/l
EB-081516	16H0755-07	PCB-1254 (Aroclor 1254)	8/16/2016		Y	N	U		U	0.14	0.14	ug/l
EB-081516	16H0755-07	PCB-1260 (Aroclor 1260)	8/16/2016		Y	N	U		U	0.15	0.15	ug/l
EB-081516	16H0755-07	PCB-1262 (Aroclor 1262)	8/16/2016		Y	N	U		U	0.12	0.12	ug/l
EB-081516	16H0755-07	PCB-1242 (Aroclor 1242)	8/16/2016		Y	N	U		U	0.11	0.11	ug/l
EB-081516	16H0755-07	PCB-1016 (Aroclor 1016)	8/16/2016		Y	N	U		U	0.11	0.11	ug/l
EB-081516	16H0755-07	PCB-1248 (Aroclor 1248)	8/16/2016		Y	N	U		U	0.13	0.13	ug/l
EXC-SB29B1 (3.0)	16H0755-12	PCB-1262 (Aroclor 1262)	8/17/2016		Y	N	U		U	0.056	0.056	mg/kg
EXC-SB29B1 (3.0)	16H0755-12	PCB-1242 (Aroclor 1242)	8/17/2016		Y	N	U		U	0.056	0.056	mg/kg
EXC-SB29B1 (3.0)	16H0755-12	PCB-1016 (Aroclor 1016)	8/17/2016		Y	N	U		U	0.067	0.067	mg/kg
EXC-SB29B1 (3.0)	16H0755-12	PCB-1232 (Aroclor 1232)	8/17/2016		Y	N	U		U	0.05	0.05	mg/kg
EXC-SB29B1 (3.0)	16H0755-12	PCB-1254 (Aroclor 1254)	8/17/2016		Y	N	U		U	0.072	0.072	mg/kg
EXC-SB29B1 (3.0)	16H0755-12	PCB-1221 (Aroclor 1221)	8/17/2016		Y	N	U		U	0.072	0.072	mg/kg
EXC-SB29B1 (3.0)	16H0755-12	PCB-1268 (Aroclor 1268)	8/17/2016		Y	N	U		U	0.044	0.044	mg/kg
EXC-SB29B1 (3.0)	16H0755-12	PCB-1248 (Aroclor 1248)	8/17/2016		Y	N	U		U	0.067	0.067	mg/kg
EXC-SB29B1 (3.0)	16H0755-12	PCB-1260 (Aroclor 1260)	8/17/2016	0.18	Y	Y	D			0.078	0.078	mg/kg
EXC-SB29B2 (3.0)	16H0755-13	PCB-1221 (Aroclor 1221)	8/17/2016		Y	N	U		U	0.075	0.075	mg/kg
EXC-SB29B2 (3.0)	16H0755-13	PCB-1242 (Aroclor 1242)	8/17/2016		Y	N	U		U	0.057	0.057	mg/kg
EXC-SB29B2 (3.0)	16H0755-13	PCB-1262 (Aroclor 1262)	8/17/2016		Y	N	U		U	0.057	0.057	mg/kg
EXC-SB29B2 (3.0)	16H0755-13	PCB-1016 (Aroclor 1016)	8/17/2016		Y	N	U		U	0.069	0.069	mg/kg
EXC-SB29B2 (3.0)	16H0755-13	PCB-1232 (Aroclor 1232)	8/17/2016		Y	N	U		U	0.052	0.052	mg/kg

Analytical Method 8082A

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Validated	Detect	Lab Qual	Val Qual	Final qual	RL	MDL	Units
EXC-SB29B2 (3.0)	16H0755-13	PCB-1268 (Aroclor 1268)	8/17/2016		Y	N	U		U	0.046	0.046	mg/kg
EXC-SB29B2 (3.0)	16H0755-13	PCB-1254 (Aroclor 1254)	8/17/2016		Y	N	U		U	0.075	0.075	mg/kg
EXC-SB29B2 (3.0)	16H0755-13	PCB-1260 (Aroclor 1260)	8/17/2016		Y	N	U		U	0.08	0.08	mg/kg
EXC-SB29B2 (3.0)	16H0755-13	PCB-1248 (Aroclor 1248)	8/17/2016		Y	N	U		U	0.069	0.069	mg/kg
EXC-SB29ESW (1.5)	16H0755-09	PCB-1016 (Aroclor 1016)	8/17/2016		Y	N	U		U	0.07	0.07	mg/kg
EXC-SB29ESW (1.5)	16H0755-09	PCB-1254 (Aroclor 1254)	8/17/2016		Y	N	U		U	0.075	0.075	mg/kg
EXC-SB29ESW (1.5)	16H0755-09	PCB-1242 (Aroclor 1242)	8/17/2016		Y	N	U		U	0.058	0.058	mg/kg
EXC-SB29ESW (1.5)	16H0755-09	PCB-1262 (Aroclor 1262)	8/17/2016		Y	N	U		U	0.058	0.058	mg/kg
EXC-SB29ESW (1.5)	16H0755-09	PCB-1232 (Aroclor 1232)	8/17/2016		Y	N	U		U	0.052	0.052	mg/kg
EXC-SB29ESW (1.5)	16H0755-09	PCB-1260 (Aroclor 1260)	8/17/2016		Y	N	U		U	0.081	0.081	mg/kg
EXC-SB29ESW (1.5)	16H0755-09	PCB-1268 (Aroclor 1268)	8/17/2016		Y	N	U		U	0.046	0.046	mg/kg
EXC-SB29ESW (1.5)	16H0755-09	PCB-1221 (Aroclor 1221)	8/17/2016		Y	N	U		U	0.075	0.075	mg/kg
EXC-SB29ESW (1.5)	16H0755-09	PCB-1248 (Aroclor 1248)	8/17/2016		Y	N	U		U	0.07	0.07	mg/kg
EXC-SB29NSW (1.5)	16H0755-08	PCB-1232 (Aroclor 1232)	8/17/2016		Y	N	U		U	0.052	0.052	mg/kg
EXC-SB29NSW (1.5)	16H0755-08	PCB-1262 (Aroclor 1262)	8/17/2016		Y	N	U		U	0.058	0.058	mg/kg
EXC-SB29NSW (1.5)	16H0755-08	PCB-1248 (Aroclor 1248)	8/17/2016		Y	N	U		U	0.069	0.069	mg/kg
EXC-SB29NSW (1.5)	16H0755-08	PCB-1242 (Aroclor 1242)	8/17/2016		Y	N	U		U	0.058	0.058	mg/kg
EXC-SB29NSW (1.5)	16H0755-08	PCB-1221 (Aroclor 1221)	8/17/2016		Y	N	U		U	0.075	0.075	mg/kg
EXC-SB29NSW (1.5)	16H0755-08	PCB-1268 (Aroclor 1268)	8/17/2016		Y	N	U		U	0.046	0.046	mg/kg
EXC-SB29NSW (1.5)	16H0755-08	PCB-1254 (Aroclor 1254)	8/17/2016		Y	N	U		U	0.075	0.075	mg/kg
EXC-SB29NSW (1.5)	16H0755-08	PCB-1260 (Aroclor 1260)	8/17/2016		Y	N	U		U	0.081	0.081	mg/kg
EXC-SB29NSW (1.5)	16H0755-08	PCB-1016 (Aroclor 1016)	8/17/2016		Y	N	U		U	0.069	0.069	mg/kg
EXC-SB29SSW (1.5)	16H0755-10	PCB-1242 (Aroclor 1242)	8/17/2016		Y	N	U		U	0.062	0.062	mg/kg
EXC-SB29SSW (1.5)	16H0755-10	PCB-1248 (Aroclor 1248)	8/17/2016	0.59	Y	Y	D			0.075	0.075	mg/kg
EXC-SB29SSW (1.5)	16H0755-10	PCB-1254 (Aroclor 1254)	8/17/2016	0.59	Y	Y	D	J	J	0.081	0.081	mg/kg

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Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Validated	Detect	Lab Qual	Val Qual	Final qual	RL	MDL	Units
EXC-SB29SSW (1.5)	16H0755-10	PCB-1260 (Aroclor 1260)	8/17/2016	0.49	Y	Y	D			0.088	0.088	mg/kg
EXC-SB29SSW (1.5)	16H0755-10	PCB-1262 (Aroclor 1262)	8/17/2016		Y	N	U		U	0.062	0.062	mg/kg
EXC-SB29SSW (1.5)	16H0755-10	PCB-1016 (Aroclor 1016)	8/17/2016		Y	N	U		U	0.075	0.075	mg/kg
EXC-SB29SSW (1.5)	16H0755-10	PCB-1232 (Aroclor 1232)	8/17/2016		Y	N	U		U	0.056	0.056	mg/kg
EXC-SB29SSW (1.5)	16H0755-10	PCB-1268 (Aroclor 1268)	8/17/2016		Y	N	U		U	0.05	0.05	mg/kg
EXC-SB29SSW (1.5)	16H0755-10	PCB-1221 (Aroclor 1221)	8/17/2016		Y	N	U		U	0.081	0.081	mg/kg
EXC-SB29WSW (1.5)	16H0755-11	PCB-1016 (Aroclor 1016)	8/17/2016		Y	N	U		U	0.072	0.072	mg/kg
EXC-SB29WSW (1.5)	16H0755-11	PCB-1248 (Aroclor 1248)	8/17/2016		Y	N	U		U	0.072	0.072	mg/kg
EXC-SB29WSW (1.5)	16H0755-11	PCB-1262 (Aroclor 1262)	8/17/2016		Y	N	U		U	0.06	0.06	mg/kg
EXC-SB29WSW (1.5)	16H0755-11	PCB-1221 (Aroclor 1221)	8/17/2016		Y	N	U		U	0.078	0.078	mg/kg
EXC-SB29WSW (1.5)	16H0755-11	PCB-1260 (Aroclor 1260)	8/17/2016		Y	N	U		U	0.084	0.084	mg/kg
EXC-SB29WSW (1.5)	16H0755-11	PCB-1268 (Aroclor 1268)	8/17/2016		Y	N	U		U	0.048	0.048	mg/kg
EXC-SB29WSW (1.5)	16H0755-11	PCB-1254 (Aroclor 1254)	8/17/2016		Y	N	U		U	0.078	0.078	mg/kg
EXC-SB29WSW (1.5)	16H0755-11	PCB-1242 (Aroclor 1242)	8/17/2016		Y	N	U		U	0.06	0.06	mg/kg
EXC-SB29WSW (1.5)	16H0755-11	PCB-1232 (Aroclor 1232)	8/17/2016		Y	N	U		U	0.054	0.054	mg/kg
EXC-WS1B1 (2.0)	16H0755-05	PCB-1232 (Aroclor 1232)	8/16/2016		Y	N	U		U	0.052	0.052	mg/kg
EXC-WS1B1 (2.0)	16H0755-05	PCB-1242 (Aroclor 1242)	8/16/2016		Y	N	U		U	0.057	0.057	mg/kg
EXC-WS1B1 (2.0)	16H0755-05	PCB-1262 (Aroclor 1262)	8/16/2016		Y	N	U		U	0.057	0.057	mg/kg
EXC-WS1B1 (2.0)	16H0755-05	PCB-1248 (Aroclor 1248)	8/16/2016		Y	N	U		U	0.069	0.069	mg/kg
EXC-WS1B1 (2.0)	16H0755-05	PCB-1260 (Aroclor 1260)	8/16/2016	0.29	Y	Y	D			0.08	0.08	mg/kg
EXC-WS1B1 (2.0)	16H0755-05	PCB-1221 (Aroclor 1221)	8/16/2016		Y	N	U		U	0.075	0.075	mg/kg
EXC-WS1B1 (2.0)	16H0755-05	PCB-1268 (Aroclor 1268)	8/16/2016		Y	N	U		U	0.046	0.046	mg/kg
EXC-WS1B1 (2.0)	16H0755-05	PCB-1254 (Aroclor 1254)	8/16/2016		Y	N	U		U	0.075	0.075	mg/kg
EXC-WS1B1 (2.0)	16H0755-05	PCB-1016 (Aroclor 1016)	8/16/2016		Y	N	U		U	0.069	0.069	mg/kg
EXC-WS1B2 (2.0)	16H0755-06	PCB-1016 (Aroclor 1016)	8/16/2016		Y	N	U		U	0.067	0.067	mg/kg

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Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Validated	Detect	Lab Qual	Val Qual	Final qual	RL	MDL	Units
EXC-WS1B2 (2.0)	16H0755-06	PCB-1260 (Aroclor 1260)	8/16/2016	0.32	Y	Y	D			0.078	0.078	mg/kg
EXC-WS1B2 (2.0)	16H0755-06	PCB-1242 (Aroclor 1242)	8/16/2016		Y	N	U		U	0.056	0.056	mg/kg
EXC-WS1B2 (2.0)	16H0755-06	PCB-1262 (Aroclor 1262)	8/16/2016		Y	N	U		U	0.056	0.056	mg/kg
EXC-WS1B2 (2.0)	16H0755-06	PCB-1248 (Aroclor 1248)	8/16/2016		Y	N	U		U	0.067	0.067	mg/kg
EXC-WS1B2 (2.0)	16H0755-06	PCB-1232 (Aroclor 1232)	8/16/2016		Y	N	U		U	0.05	0.05	mg/kg
EXC-WS1B2 (2.0)	16H0755-06	PCB-1221 (Aroclor 1221)	8/16/2016		Y	N	U		U	0.072	0.072	mg/kg
EXC-WS1B2 (2.0)	16H0755-06	PCB-1254 (Aroclor 1254)	8/16/2016		Y	N	U		U	0.072	0.072	mg/kg
EXC-WS1B2 (2.0)	16H0755-06	PCB-1268 (Aroclor 1268)	8/16/2016		Y	N	U		U	0.044	0.044	mg/kg
EXC-WS1ESW (1.0)	16H0755-02	PCB-1016 (Aroclor 1016)	8/17/2016		Y	N	U		U	0.14	0.14	mg/kg
EXC-WS1ESW (1.0)	16H0755-02	PCB-1260 (Aroclor 1260)	8/17/2016	1.7	Y	Y	D			0.16	0.16	mg/kg
EXC-WS1ESW (1.0)	16H0755-02	PCB-1242 (Aroclor 1242)	8/17/2016		Y	N	U		U	0.12	0.12	mg/kg
EXC-WS1ESW (1.0)	16H0755-02	PCB-1262 (Aroclor 1262)	8/17/2016		Y	N	U		U	0.12	0.12	mg/kg
EXC-WS1ESW (1.0)	16H0755-02	PCB-1232 (Aroclor 1232)	8/17/2016		Y	N	U		U	0.11	0.11	mg/kg
EXC-WS1ESW (1.0)	16H0755-02	PCB-1221 (Aroclor 1221)	8/17/2016		Y	N	U		U	0.15	0.15	mg/kg
EXC-WS1ESW (1.0)	16H0755-02	PCB-1268 (Aroclor 1268)	8/17/2016		Y	N	U		U	0.093	0.093	mg/kg
EXC-WS1ESW (1.0)	16H0755-02	PCB-1254 (Aroclor 1254)	8/17/2016		Y	N	U		U	0.15	0.15	mg/kg
EXC-WS1ESW (1.0)	16H0755-02	PCB-1248 (Aroclor 1248)	8/17/2016		Y	N	U		U	0.14	0.14	mg/kg
EXC-WS1NSW (1.0)	16H0755-01	PCB-1248 (Aroclor 1248)	8/16/2016		Y	N	U		U	0.073	0.073	mg/kg
EXC-WS1NSW (1.0)	16H0755-01	PCB-1260 (Aroclor 1260)	8/16/2016	0.52	Y	Y	D			0.085	0.085	mg/kg
EXC-WS1NSW (1.0)	16H0755-01	PCB-1242 (Aroclor 1242)	8/16/2016		Y	N	U		U	0.061	0.061	mg/kg
EXC-WS1NSW (1.0)	16H0755-01	PCB-1254 (Aroclor 1254)	8/16/2016		Y	N	U		U	0.079	0.079	mg/kg
EXC-WS1NSW (1.0)	16H0755-01	PCB-1016 (Aroclor 1016)	8/16/2016		Y	N	U		U	0.073	0.073	mg/kg
EXC-WS1NSW (1.0)	16H0755-01	PCB-1232 (Aroclor 1232)	8/16/2016		Y	N	U		U	0.055	0.055	mg/kg
EXC-WS1NSW (1.0)	16H0755-01	PCB-1221 (Aroclor 1221)	8/16/2016		Y	N	U		U	0.079	0.079	mg/kg
EXC-WS1NSW (1.0)	16H0755-01	PCB-1268 (Aroclor 1268)	8/16/2016		Y	N	U		U	0.049	0.049	mg/kg

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Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Validated	Detect	Lab Qual	Val Qual	Final qual	RL	MDL	Units
EXC-WS1NSW (1.0)	16H0755-01	PCB-1262 (Aroclor 1262)	8/16/2016		Y	N	U		U	0.061	0.061	mg/kg
EXC-WS1SSW (1.0)	16H0755-03	PCB-1232 (Aroclor 1232)	8/17/2016		Y	N	U		U	0.52	0.52	mg/kg
EXC-WS1SSW (1.0)	16H0755-03	PCB-1260 (Aroclor 1260)	8/17/2016	5	Y	Y	D			0.81	0.81	mg/kg
EXC-WS1SSW (1.0)	16H0755-03	PCB-1242 (Aroclor 1242)	8/17/2016		Y	N	U		U	0.58	0.58	mg/kg
EXC-WS1SSW (1.0)	16H0755-03	PCB-1262 (Aroclor 1262)	8/17/2016		Y	N	U		U	0.58	0.58	mg/kg
EXC-WS1SSW (1.0)	16H0755-03	PCB-1221 (Aroclor 1221)	8/17/2016		Y	N	U		U	0.75	0.75	mg/kg
EXC-WS1SSW (1.0)	16H0755-03	PCB-1268 (Aroclor 1268)	8/17/2016		Y	N	U		U	0.46	0.46	mg/kg
EXC-WS1SSW (1.0)	16H0755-03	PCB-1254 (Aroclor 1254)	8/17/2016		Y	N	U		U	0.75	0.75	mg/kg
EXC-WS1SSW (1.0)	16H0755-03	PCB-1248 (Aroclor 1248)	8/17/2016		Y	N	U		U	0.7	0.7	mg/kg
EXC-WS1SSW (1.0)	16H0755-03	PCB-1016 (Aroclor 1016)	8/17/2016		Y	N	U		U	0.7	0.7	mg/kg
EXC-WS1WSW (1.0)	16H0755-04	PCB-1232 (Aroclor 1232)	8/16/2016		Y	N	U		U	0.054	0.054	mg/kg
EXC-WS1WSW (1.0)	16H0755-04	PCB-1260 (Aroclor 1260)	8/16/2016	0.33	Y	Y	D			0.085	0.085	mg/kg
EXC-WS1WSW (1.0)	16H0755-04	PCB-1242 (Aroclor 1242)	8/16/2016		Y	N	U		U	0.06	0.06	mg/kg
EXC-WS1WSW (1.0)	16H0755-04	PCB-1262 (Aroclor 1262)	8/16/2016		Y	N	U		U	0.06	0.06	mg/kg
EXC-WS1WSW (1.0)	16H0755-04	PCB-1248 (Aroclor 1248)	8/16/2016		Y	N	U		U	0.072	0.072	mg/kg
EXC-WS1WSW (1.0)	16H0755-04	PCB-1221 (Aroclor 1221)	8/16/2016		Y	N	U		U	0.079	0.079	mg/kg
EXC-WS1WSW (1.0)	16H0755-04	PCB-1268 (Aroclor 1268)	8/16/2016		Y	N	U		U	0.048	0.048	mg/kg
EXC-WS1WSW (1.0)	16H0755-04	PCB-1254 (Aroclor 1254)	8/16/2016		Y	N	U		U	0.079	0.079	mg/kg
EXC-WS1WSW (1.0)	16H0755-04	PCB-1016 (Aroclor 1016)	8/16/2016		Y	N	U		U	0.072	0.072	mg/kg

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Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Validated	Detect	Lab Qual	Val Qual	Final qual	RL	MDL	Units
EB-081616	16H0825-15R	PCB-1254 (Aroclor 1254)	8/18/2016		Y	N	U		U	0.14	0.14	ug/l
EB-081616	16H0825-15R	PCB-1260 (Aroclor 1260)	8/18/2016		Y	N	U		U	0.15	0.15	ug/l
EB-081616	16H0825-15R	PCB-1016 (Aroclor 1016)	8/18/2016		Y	N	U		U	0.11	0.11	ug/l
EB-081616	16H0825-15R	PCB-1221 (Aroclor 1221)	8/18/2016		Y	N	U		U	0.12	0.12	ug/l
EB-081616	16H0825-15R	PCB-1248 (Aroclor 1248)	8/18/2016		Y	N	U		U	0.13	0.13	ug/l
EB-081616	16H0825-15R	PCB-1262 (Aroclor 1262)	8/18/2016		Y	N	U		U	0.12	0.12	ug/l
EB-081616	16H0825-15R	PCB-1242 (Aroclor 1242)	8/18/2016		Y	N	U		U	0.11	0.11	ug/l
EB-081616	16H0825-15R	PCB-1268 (Aroclor 1268)	8/18/2016		Y	N	U		U	0.08	0.08	ug/l
EB-081616	16H0825-15R	PCB-1232 (Aroclor 1232)	8/18/2016		Y	N	U		U	0.076	0.076	ug/l
EXC-081616A	16H0825-13	PCB-1221 (Aroclor 1221)	8/18/2016		Y	N	U		U	0.07	0.07	mg/kg
EXC-081616A	16H0825-13	PCB-1262 (Aroclor 1262)	8/18/2016		Y	N	U		U	0.054	0.054	mg/kg
EXC-081616A	16H0825-13	PCB-1016 (Aroclor 1016)	8/18/2016		Y	N	U		U	0.065	0.065	mg/kg
EXC-081616A	16H0825-13	PCB-1232 (Aroclor 1232)	8/18/2016		Y	N	U		U	0.049	0.049	mg/kg
EXC-081616A	16H0825-13	PCB-1242 (Aroclor 1242)	8/18/2016		Y	N	U		U	0.054	0.054	mg/kg
EXC-081616A	16H0825-13	PCB-1268 (Aroclor 1268)	8/18/2016		Y	N	U		U	0.043	0.043	mg/kg
EXC-081616A	16H0825-13	PCB-1254 (Aroclor 1254)	8/18/2016		Y	N	U		U	0.07	0.07	mg/kg
EXC-081616A	16H0825-13	PCB-1260 (Aroclor 1260)	8/18/2016		Y	N	U		U	0.076	0.076	mg/kg
EXC-081616A	16H0825-13	PCB-1248 (Aroclor 1248)	8/18/2016		Y	N	U		U	0.065	0.065	mg/kg
EXC-081616B	16H0825-14	PCB-1248 (Aroclor 1248)	8/18/2016		Y	N	U		U	0.067	0.067	mg/kg
EXC-081616B	16H0825-14	PCB-1242 (Aroclor 1242)	8/18/2016		Y	N	U		U	0.056	0.056	mg/kg
EXC-081616B	16H0825-14	PCB-1262 (Aroclor 1262)	8/18/2016		Y	N	U		U	0.056	0.056	mg/kg
EXC-081616B	16H0825-14	PCB-1016 (Aroclor 1016)	8/18/2016		Y	N	U		U	0.067	0.067	mg/kg
EXC-081616B	16H0825-14	PCB-1232 (Aroclor 1232)	8/18/2016		Y	N	U		U	0.051	0.051	mg/kg
EXC-081616B	16H0825-14	PCB-1221 (Aroclor 1221)	8/18/2016		Y	N	U		U	0.073	0.073	mg/kg
EXC-081616B	16H0825-14	PCB-1268 (Aroclor 1268)	8/18/2016		Y	N	U		U	0.045	0.045	mg/kg

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Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Validated	Detect	Lab Qual	Val Qual	Final qual	RL	MDL	Units
EXC-081616B	16H0825-14	PCB-1260 (Aroclor 1260)	8/18/2016		Y	N	U		U	0.079	0.079	mg/kg
EXC-081616B	16H0825-14	PCB-1254 (Aroclor 1254)	8/18/2016		Y	N	U		U	0.073	0.073	mg/kg
EXC-B3B1 (3.0)	16H0825-11	PCB-1016 (Aroclor 1016)	8/18/2016		Y	N	U		U	0.068	0.068	mg/kg
EXC-B3B1 (3.0)	16H0825-11	PCB-1221 (Aroclor 1221)	8/18/2016		Y	N	U		U	0.074	0.074	mg/kg
EXC-B3B1 (3.0)	16H0825-11	PCB-1242 (Aroclor 1242)	8/18/2016		Y	N	U		U	0.057	0.057	mg/kg
EXC-B3B1 (3.0)	16H0825-11	PCB-1262 (Aroclor 1262)	8/18/2016		Y	N	U		U	0.057	0.057	mg/kg
EXC-B3B1 (3.0)	16H0825-11	PCB-1232 (Aroclor 1232)	8/18/2016		Y	N	U		U	0.051	0.051	mg/kg
EXC-B3B1 (3.0)	16H0825-11	PCB-1260 (Aroclor 1260)	8/18/2016		Y	N	U		U	0.079	0.079	mg/kg
EXC-B3B1 (3.0)	16H0825-11	PCB-1268 (Aroclor 1268)	8/18/2016		Y	N	U		U	0.045	0.045	mg/kg
EXC-B3B1 (3.0)	16H0825-11	PCB-1248 (Aroclor 1248)	8/18/2016		Y	N	U		U	0.068	0.068	mg/kg
EXC-B3B1 (3.0)	16H0825-11	PCB-1254 (Aroclor 1254)	8/18/2016		Y	N	U		U	0.074	0.074	mg/kg
EXC-B3ESW (1.5)	16H0825-08	PCB-1232 (Aroclor 1232)	8/18/2016		Y	N	U		U	0.05	0.05	mg/kg
EXC-B3ESW (1.5)	16H0825-08	PCB-1262 (Aroclor 1262)	8/18/2016		Y	N	U		U	0.055	0.055	mg/kg
EXC-B3ESW (1.5)	16H0825-08	PCB-1248 (Aroclor 1248)	8/18/2016		Y	N	U		U	0.066	0.066	mg/kg
EXC-B3ESW (1.5)	16H0825-08	PCB-1242 (Aroclor 1242)	8/18/2016		Y	N	U		U	0.055	0.055	mg/kg
EXC-B3ESW (1.5)	16H0825-08	PCB-1221 (Aroclor 1221)	8/18/2016		Y	N	U		U	0.072	0.072	mg/kg
EXC-B3ESW (1.5)	16H0825-08	PCB-1268 (Aroclor 1268)	8/18/2016		Y	N	U		U	0.044	0.044	mg/kg
EXC-B3ESW (1.5)	16H0825-08	PCB-1254 (Aroclor 1254)	8/18/2016		Y	N	U		U	0.072	0.072	mg/kg
EXC-B3ESW (1.5)	16H0825-08	PCB-1260 (Aroclor 1260)	8/18/2016		Y	N	U		U	0.077	0.077	mg/kg
EXC-B3ESW (1.5)	16H0825-08	PCB-1016 (Aroclor 1016)	8/18/2016		Y	N	U		U	0.066	0.066	mg/kg
EXC-B3NSW (1.5)	16H0825-07	PCB-1248 (Aroclor 1248)	8/18/2016		Y	N	U		U	0.069	0.069	mg/kg
EXC-B3NSW (1.5)	16H0825-07	PCB-1242 (Aroclor 1242)	8/18/2016		Y	N	U		U	0.058	0.058	mg/kg
EXC-B3NSW (1.5)	16H0825-07	PCB-1262 (Aroclor 1262)	8/18/2016		Y	N	U		U	0.058	0.058	mg/kg
EXC-B3NSW (1.5)	16H0825-07	PCB-1016 (Aroclor 1016)	8/18/2016		Y	N	U		U	0.069	0.069	mg/kg
EXC-B3NSW (1.5)	16H0825-07	PCB-1232 (Aroclor 1232)	8/18/2016		Y	N	U		U	0.052	0.052	mg/kg

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Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Validated	Detect	Lab Qual	Val Qual	Final qual	RL	MDL	Units
EXC-B3NSW (1.5)	16H0825-07	PCB-1221 (Aroclor 1221)	8/18/2016		Y	N	U		U	0.075	0.075	mg/kg
EXC-B3NSW (1.5)	16H0825-07	PCB-1268 (Aroclor 1268)	8/18/2016		Y	N	U		U	0.046	0.046	mg/kg
EXC-B3NSW (1.5)	16H0825-07	PCB-1260 (Aroclor 1260)	8/18/2016		Y	N	U		U	0.081	0.081	mg/kg
EXC-B3NSW (1.5)	16H0825-07	PCB-1254 (Aroclor 1254)	8/18/2016		Y	N	U		U	0.075	0.075	mg/kg
EXC-B3SSW (1.5)	16H0825-09	PCB-1248 (Aroclor 1248)	8/18/2016		Y	N	U		U	0.066	0.066	mg/kg
EXC-B3SSW (1.5)	16H0825-09	PCB-1262 (Aroclor 1262)	8/18/2016		Y	N	U		U	0.055	0.055	mg/kg
EXC-B3SSW (1.5)	16H0825-09	PCB-1016 (Aroclor 1016)	8/18/2016		Y	N	U		U	0.066	0.066	mg/kg
EXC-B3SSW (1.5)	16H0825-09	PCB-1221 (Aroclor 1221)	8/18/2016		Y	N	U		U	0.072	0.072	mg/kg
EXC-B3SSW (1.5)	16H0825-09	PCB-1268 (Aroclor 1268)	8/18/2016		Y	N	U		U	0.044	0.044	mg/kg
EXC-B3SSW (1.5)	16H0825-09	PCB-1254 (Aroclor 1254)	8/18/2016		Y	N	U		U	0.072	0.072	mg/kg
EXC-B3SSW (1.5)	16H0825-09	PCB-1260 (Aroclor 1260)	8/18/2016		Y	N	U		U	0.077	0.077	mg/kg
EXC-B3SSW (1.5)	16H0825-09	PCB-1232 (Aroclor 1232)	8/18/2016		Y	N	U		U	0.05	0.05	mg/kg
EXC-B3SSW (1.5)	16H0825-09	PCB-1242 (Aroclor 1242)	8/18/2016		Y	N	U		U	0.055	0.055	mg/kg
EXC-B3WSW (1.5)	16H0825-10	PCB-1262 (Aroclor 1262)	8/18/2016		Y	N	U		U	0.056	0.056	mg/kg
EXC-B3WSW (1.5)	16H0825-10	PCB-1242 (Aroclor 1242)	8/18/2016		Y	N	U		U	0.056	0.056	mg/kg
EXC-B3WSW (1.5)	16H0825-10	PCB-1016 (Aroclor 1016)	8/18/2016		Y	N	U		U	0.067	0.067	mg/kg
EXC-B3WSW (1.5)	16H0825-10	PCB-1248 (Aroclor 1248)	8/18/2016		Y	N	U		U	0.067	0.067	mg/kg
EXC-B3WSW (1.5)	16H0825-10	PCB-1221 (Aroclor 1221)	8/18/2016		Y	N	U		U	0.072	0.072	mg/kg
EXC-B3WSW (1.5)	16H0825-10	PCB-1260 (Aroclor 1260)	8/18/2016		Y	N	U		U	0.078	0.078	mg/kg
EXC-B3WSW (1.5)	16H0825-10	PCB-1268 (Aroclor 1268)	8/18/2016		Y	N	U		U	0.045	0.045	mg/kg
EXC-B3WSW (1.5)	16H0825-10	PCB-1254 (Aroclor 1254)	8/18/2016		Y	N	U		U	0.072	0.072	mg/kg
EXC-B3WSW (1.5)	16H0825-10	PCB-1232 (Aroclor 1232)	8/18/2016		Y	N	U		U	0.05	0.05	mg/kg
EXC-SB30B1 (3.0)	16H0825-05	PCB-1232 (Aroclor 1232)	8/18/2016		Y	N	U		U	0.051	0.051	mg/kg
EXC-SB30B1 (3.0)	16H0825-05	PCB-1260 (Aroclor 1260)	8/18/2016	0.28	Y	Y	D			0.079	0.079	mg/kg
EXC-SB30B1 (3.0)	16H0825-05	PCB-1242 (Aroclor 1242)	8/18/2016		Y	N	U		U	0.056	0.056	mg/kg

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Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Validated	Detect	Lab Qual	Val Qual	Final qual	RL	MDL	Units
EXC-SB30B1 (3.0)	16H0825-05	PCB-1262 (Aroclor 1262)	8/18/2016		Y	N	U		U	0.056	0.056	mg/kg
EXC-SB30B1 (3.0)	16H0825-05	PCB-1254 (Aroclor 1254)	8/18/2016		Y	N	U		U	0.073	0.073	mg/kg
EXC-SB30B1 (3.0)	16H0825-05	PCB-1248 (Aroclor 1248)	8/18/2016		Y	N	U		U	0.068	0.068	mg/kg
EXC-SB30B1 (3.0)	16H0825-05	PCB-1221 (Aroclor 1221)	8/18/2016		Y	N	U		U	0.073	0.073	mg/kg
EXC-SB30B1 (3.0)	16H0825-05	PCB-1268 (Aroclor 1268)	8/18/2016		Y	N	U		U	0.045	0.045	mg/kg
EXC-SB30B1 (3.0)	16H0825-05	PCB-1016 (Aroclor 1016)	8/18/2016		Y	N	U		U	0.068	0.068	mg/kg
EXC-SB30B2 (3.0)	16H0825-06	PCB-1016 (Aroclor 1016)	8/18/2016		Y	N	U		U	0.069	0.069	mg/kg
EXC-SB30B2 (3.0)	16H0825-06	PCB-1242 (Aroclor 1242)	8/18/2016		Y	N	U		U	0.057	0.057	mg/kg
EXC-SB30B2 (3.0)	16H0825-06	PCB-1262 (Aroclor 1262)	8/18/2016		Y	N	U		U	0.057	0.057	mg/kg
EXC-SB30B2 (3.0)	16H0825-06	PCB-1232 (Aroclor 1232)	8/18/2016		Y	N	U		U	0.051	0.051	mg/kg
EXC-SB30B2 (3.0)	16H0825-06	PCB-1221 (Aroclor 1221)	8/18/2016		Y	N	U		U	0.074	0.074	mg/kg
EXC-SB30B2 (3.0)	16H0825-06	PCB-1268 (Aroclor 1268)	8/18/2016		Y	N	U		U	0.046	0.046	mg/kg
EXC-SB30B2 (3.0)	16H0825-06	PCB-1254 (Aroclor 1254)	8/18/2016		Y	N	U		U	0.074	0.074	mg/kg
EXC-SB30B2 (3.0)	16H0825-06	PCB-1260 (Aroclor 1260)	8/18/2016	0.52	Y	Y	D			0.08	0.08	mg/kg
EXC-SB30B2 (3.0)	16H0825-06	PCB-1248 (Aroclor 1248)	8/18/2016		Y	N	U		U	0.069	0.069	mg/kg
EXC-SB30ESW (1.5)	16H0825-02	PCB-1221 (Aroclor 1221)	8/18/2016		Y	N	U		U	0.073	0.073	mg/kg
EXC-SB30ESW (1.5)	16H0825-02	PCB-1242 (Aroclor 1242)	8/18/2016		Y	N	U		U	0.056	0.056	mg/kg
EXC-SB30ESW (1.5)	16H0825-02	PCB-1262 (Aroclor 1262)	8/18/2016		Y	N	U		U	0.056	0.056	mg/kg
EXC-SB30ESW (1.5)	16H0825-02	PCB-1016 (Aroclor 1016)	8/18/2016		Y	N	U		U	0.067	0.067	mg/kg
EXC-SB30ESW (1.5)	16H0825-02	PCB-1232 (Aroclor 1232)	8/18/2016		Y	N	U		U	0.05	0.05	mg/kg
EXC-SB30ESW (1.5)	16H0825-02	PCB-1268 (Aroclor 1268)	8/18/2016		Y	N	U		U	0.045	0.045	mg/kg
EXC-SB30ESW (1.5)	16H0825-02	PCB-1254 (Aroclor 1254)	8/18/2016		Y	N	U		U	0.073	0.073	mg/kg
EXC-SB30ESW (1.5)	16H0825-02	PCB-1260 (Aroclor 1260)	8/18/2016		Y	N	U		U	0.078	0.078	mg/kg
EXC-SB30ESW (1.5)	16H0825-02	PCB-1248 (Aroclor 1248)	8/18/2016		Y	N	U		U	0.067	0.067	mg/kg
EXC-SB30NSW (1.5)	16H0825-01	PCB-1016 (Aroclor 1016)	8/18/2016		Y	N	U		U	0.075	0.075	mg/kg

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Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Validated	Detect	Lab Qual	Val Qual	Final qual	RL	MDL	Units
EXC-SB30NSW (1.5)	16H0825-01	PCB-1254 (Aroclor 1254)	8/18/2016		Y	N	U		U	0.081	0.081	mg/kg
EXC-SB30NSW (1.5)	16H0825-01	PCB-1242 (Aroclor 1242)	8/18/2016		Y	N	U		U	0.062	0.062	mg/kg
EXC-SB30NSW (1.5)	16H0825-01	PCB-1262 (Aroclor 1262)	8/18/2016		Y	N	U		U	0.062	0.062	mg/kg
EXC-SB30NSW (1.5)	16H0825-01	PCB-1248 (Aroclor 1248)	8/18/2016		Y	N	U		U	0.075	0.075	mg/kg
EXC-SB30NSW (1.5)	16H0825-01	PCB-1232 (Aroclor 1232)	8/18/2016		Y	N	U		U	0.056	0.056	mg/kg
EXC-SB30NSW (1.5)	16H0825-01	PCB-1268 (Aroclor 1268)	8/18/2016		Y	N	U		U	0.05	0.05	mg/kg
EXC-SB30NSW (1.5)	16H0825-01	PCB-1260 (Aroclor 1260)	8/18/2016		Y	N	U		U	0.087	0.087	mg/kg
EXC-SB30NSW (1.5)	16H0825-01	PCB-1221 (Aroclor 1221)	8/18/2016		Y	N	U		U	0.081	0.081	mg/kg
EXC-SB30WSW (1.5)	16H0825-04	PCB-1254 (Aroclor 1254)	8/18/2016		Y	N	U		U	0.077	0.077	mg/kg
EXC-SB30WSW (1.5)	16H0825-04	PCB-1268 (Aroclor 1268)	8/18/2016		Y	N	U		U	0.047	0.047	mg/kg
EXC-SB30WSW (1.5)	16H0825-04	PCB-1221 (Aroclor 1221)	8/18/2016		Y	N	U		U	0.077	0.077	mg/kg
EXC-SB30WSW (1.5)	16H0825-04	PCB-1232 (Aroclor 1232)	8/18/2016		Y	N	U		U	0.053	0.053	mg/kg
EXC-SB30WSW (1.5)	16H0825-04	PCB-1248 (Aroclor 1248)	8/18/2016		Y	N	U		U	0.071	0.071	mg/kg
EXC-SB30WSW (1.5)	16H0825-04	PCB-1016 (Aroclor 1016)	8/18/2016		Y	N	U		U	0.071	0.071	mg/kg
EXC-SB30WSW (1.5)	16H0825-04	PCB-1262 (Aroclor 1262)	8/18/2016		Y	N	U		U	0.059	0.059	mg/kg
EXC-SB30WSW (1.5)	16H0825-04	PCB-1242 (Aroclor 1242)	8/18/2016		Y	N	U		U	0.059	0.059	mg/kg
EXC-SB30WSW (1.5)	16H0825-04	PCB-1260 (Aroclor 1260)	8/18/2016	0.44	Y	Y	D			0.082	0.082	mg/kg

Appendix F – Standard Operating Procedures

FIELD STANDARD OPERATING PROCEDURE #3

SAMPLE PACKAGING AND SHIPMENT PROCEDURE

Shipping samples is a basic but important component of field work. The majority of field activities include the collection of environmental samples. Proper packing and preservation of those samples is critical to ensuring the integrity of our work product. The user is advised to read the entire standard operating procedure (SOP) and review the site health and safety plan (HASP) before beginning any onsite activities. In accordance with the HASP, proper personal protective equipment (PPE) must be selected and used appropriately.

3.1 ACRONYMS AND ABBREVIATIONS

CFR	Code of Federal Regulations
DOT	U.S. Department of Transportation
IATA	International Air Transport Association
HASP	health and safety plan
PPE	personal protective equipment
SOP	standard operating procedure

3.2 MATERIALS

- Suitable shipping container (e.g., plastic cooler)
- Chain-of-custody forms
- Custody seals
- Sample container custody seals (as necessary)
- Mailing address labels (as necessary)
- Shipping form (with account number, as necessary)
- Tape (e.g., strapping, clear packing)
- Knife or scissors
- Permanent marker
- PPE
- Bubble wrap or other packing material

Temperature-preserved samples:

- Large plastic garbage bag
- Wet ice
- Heavy-duty zipper-style plastic bags
- Universal sorbent materials

Note: Some materials will be supplied by the laboratory, while others are must be supplied by the sampler. Confirm supplier of materials prior to mobilizing to the field.

3.3 PRECONDITIONS AND BACKGROUND

This SOP has been prepared as part of the company's Environmental Quality Management Plan and is designed to provide detailed procedures for common field practices. Compliance with the methods presented in this document is mandatory for all field personnel and will ensure that the tasks are performed in a safe and consistent manner, are in accordance with federal and state guidance, and are technically defensible.

This SOP is written for the sole use of company employees and will be revised periodically to reflect updates to company policies, work practices, and the applicable state and/or federal guidance. Employees must verify that this document is the most recent version of the company SOPs. Employees are also strongly advised to review relevant state and/or federal guidance, which may stipulate program-specific procedures, in advance of task implementation.

This SOP is designed to provide the user with a general outline for shipping samples and assumes the user is familiar with basic field procedures, such as recording field notes (SOP 1), sample collection and quality assurance procedures (SOP 4), and investigation derived waste management procedures (SOP 5).

Most environmental samples are classified non-hazardous materials due to unknown characteristics and hazardous classes, however environmental samples can meet the definition of DOT hazardous materials when shipped by air, ground, or rail from a project site to the laboratory (e.g., free product, samples preserved with a hazardous material [TerraCore® samplers]). As such, field staff must work with their assigned company compliance professional to determine whether the sample shipment is subject to any specific requirements (e.g., packaging, marking, labeling, and documentation) under the DOT hazardous materials regulations.

3.4 SAMPLE SHIPMENT PROCEDURES

The two major concerns in shipping samples are incidental breakage during shipment and complying with applicable DOT and courier requirements for hazardous materials shipments.

> **NOTE: Many couriers, including Federal Express and UPS, have requirements that the company register with them before shipping hazard materials. In most cases, it is the sampling location, not the company office address, which needs to be registered. Therefore, each project will likely have unique requirements. Please contact your company compliance professional to determine whether or not you will be required to register for your shipment.**

Protecting the samples from incidental breakage can be achieved using "common sense." Pack all samples in a manner that will prevent them from moving freely about in the cooler or shipping container. Do not allow glass surfaces to contact each other. When possible, repack the sample containers in the same materials that they were originally received in from the laboratory. Cushion each sample container with plastic bubble wrap, styrofoam, or other nonreactive cushioning material. A more detailed procedure for packing environmental samples is presented below.

3.4.1 NON-HAZARDOUS MATERIAL ENVIRONMENTAL SAMPLES

The first step in preparing your samples for shipment is securing an appropriate shipping container. In most cases, the analytical laboratory will supply the appropriate container for bottle shipment, which can be used to return samples once they have been collected. Be sure that the container is large enough to contain the samples plus a sufficient amount of packing materials, and if applicable, enough wet ice to maintain the samples at the preservation temperature (usually 4 degrees Celsius). Use additional shipping containers as needed so that sample containers are protected from breakage due to overcrowding. Do not use lunch-box sized coolers or soft-sided coolers, which do not offer sufficient insulation or protection from damage.

3.4.1.1 TEMPERATURE-PRESERVED SAMPLE CONTAINER PREPARATION

Temperature-preserved samples should be shipped to the laboratory in an insulated container (e.g., cooler). If using a plastic cooler with a drain, securely tape the inside of the drain plug with duct tape or other material to ensure that no water leaks from the cooler during shipment. Place universal sorbent materials (e.g., sorbent pads) in the bottom of the insulated container. The amount of sorbent material must be sufficient to absorb any condensation from the wet ice and a reasonable volume of water from melted wet ice (if a bag were to rupture) or a damaged (aqueous) sample container.

The next step is to line the insulated container with a large, heavy-duty plastic garbage bag. If shipping breakable sample containers (e.g., glass), place bubble wrap or other packing materials on the bottom of the container. Place the samples on the packing materials with sufficient space to allow for the addition of more bubble wrap or other packing material between the sample containers. Place large or heavy sample containers on the bottom of the cooler with lighter samples placed on top to minimize the potential for breakage. Place all sample containers in the shipping container right-side up. Do not overfill the cooler with samples; room must be left for a sufficient volume of wet ice. Wet ice must be double-bagged in heavy-duty zipper-style plastic bags (1 gallon-sized, or less); properly seal both bags before placing in the insulated container. Place the bags of ice on top of or between the samples. Place as much ice as possible into the cooler to ensure the samples arrive at the lab at the required preservation temperature, even if the shipment is delayed. Fill any remaining space in the container with bubble wrap or other packing material to limit the airspace and minimize the shifting of the sample containers and in-transit melting of ice. Securely close the top of the heavy-duty plastic bag and seal with tape.

3.4.1.2 NON-TEMPERATURE-PRESERVED SAMPLE CONTAINER PREPARATION

Non-temperature-preserved samples should be shipped to the laboratory in a durable package (e.g., hard plastic container or cardboard box). If shipping breakable sample containers (e.g., glass), place bubble wrap or other packing materials on the bottom of the container. Place the samples on the packing materials with sufficient space to allow for the addition of more bubble wrap or other packing material between and on top of the sample containers. Place large or heavy sample containers on the bottom of the container with lighter samples placed on top to minimize the potential for breakage. Place all sample containers within the shipping container right-side up. Fill any remaining space in the container with bubble wrap or other packing material to limit the airspace and minimize the shifting of the sample containers and in-transit melting of ice.

3.4.1.3 CONTAINER SHIPMENT

Place the original, white, top copy of the chain-of-custody form (i.e., laboratory copy) into a heavy-duty zipper-style plastic bag, affix/tape the bag to the shipping container's inside lid, and then close the shipping container. Only one chain-of-custody form is required to accompany one of the shipping containers per sample shipment; the other coolers in the shipment do not need to include chain-of-custody forms. At this point, sample shipment preparations are complete if using a laboratory courier.

Once the shipping container is sealed, shake test the shipping container to make sure that there are no loose sample containers. If loose sample containers are detected, open the shipping container, repack the contents, and reseal the shipping container. If sending the sample shipment through a commercial shipping vendor, place two signed and dated chain-of-custody seals on alternate sides of the shipping container lid so that it cannot be opened without breaking the seals. Securely fasten the top of the shipping container shut with clear packing tape; carefully tape over the custody seals to prevent damage during shipping.

Using clear tape, affix a mailing label with the company's return address to the top of the shipping container. Ship environmental samples to the contracted analytical laboratory using an appropriate delivery schedule. If applicable, check the appropriate box on the airbill for Saturday delivery (you need to verify with the laboratory that someone will be at the laboratory on a Saturday to receive the sample shipment). Declare the value of samples on the shipping form for insurance purposes, if applicable, and be sure to include the project billable number on the shipping form's internal billing reference section. When shipping samples to a lab, identify a declared value equal to the carrier's default value ($100); additional fees will be charged based on a higher value declared. Our preferred carrier, Federal Express, will only reimburse for the actual value of the cooler and its contents if a sample shipment is lost; they will not reimburse for the cost of having to re-collect the samples. [Please note: if you are shipping something other than samples, such as field equipment, declare the replacement value of the contents.]

Record the tracking numbers from the shipping company forms (i.e., the airbill number) in the field book and retain a copy of the shipping airbill. On the expected delivery date, confirm sample receipt by contacting the laboratory or tracking the package using the tracking number; provide this confirmation information to the project manager.

NOTE: Most shipping carriers adhere to transit schedules with final pickup times each day; these schedules are subject to change and vary by service location. If shipping containers are dropped off at a service location after the final pickup time, transit to the laboratory will not be initiated until the following day, and samples may not be properly preserved. Therefore, confirm transit schedules in advance of each sampling event, and ensure samples are dropped off before the final pickup time of the day.

3.4.2 HAZARDOUS MATERIALS SAMPLES

Employees rarely ship hazardous materials due to DOT shipping requirements. If you find that your samples could be considered a DOT hazardous material, first coordinate with the assigned company compliance professional and project manager to make a hazardous material classification and, if necessary, establish the necessary protocols and to receive the appropriate training/certification.

NOTE: Employees shipping samples regulated as hazardous materials or exempt hazardous materials by air must have International Air Transport Association (IATA) training. IATA training is a separate training required in addition to DOT hazardous materials training for such shipments. Most of our employees do not have IATA training and therefore, anyone who needs to ship by air MUST consult with a company IATA-trained compliance professional.

INFIELD STANDARD OPERATING PROCEDURE #6

DECONTAMINATION

The decontamination procedures outlined in this standard operating procedure (SOP) are designed to ensure that all sampling equipment is free from the analytes that could potentially interfere with the sample results. The user is advised to read the entire SOP and review the site health and safety plan (HASP) before beginning any onsite activities. In accordance with the HASP, proper personal protective equipment (PPE) must be selected and used appropriately.

6.1 ACRONYMS AND ABBREVIATIONS

DI	deionized water
DOT	U.S. Department of Transportation
EPA	U.S. Environmental Protection Agency
HASP	health and safety plan
PPE	personal protective equipment
QAPP	quality assurance project plan
SOP	standard operating procedure

6.2 MATERIALS

- Field book
- PPE
- Polyethylene sheeting and/or garbage bags
- Laboratory-grade non-phosphate detergent[1] (e.g., Luminox® or Liquinox®)
- Cleaning reagents, as needed (e.g., isopropyl alcohol, methanol, hexane, etc.)
- Potable water
- Deionized (DI) water
- Containers (e.g., plastic buckets)
- Nylon brushes
- Aluminum foil
- Spray bottles
- Paper towels
- Pressurized steam cleaner (e.g., steam jenny), as needed
- Decontamination pad, as needed

6.3 PRECONDITIONS AND BACKGROUND

This SOP has been prepared as part of the company's Environmental Quality Management Plan and is designed to provide detailed procedures for common field practices. Compliance with the methods presented in this document is mandatory for all field personnel and will ensure that the tasks are performed in a safe and consistent manner, are in accordance with federal and state guidance, and are technically defensible.

[1] Not all laboratory-grade detergents are phosphate free. Be sure to verify the detergent's phosphate content before use.

This SOP is written for the sole use of company employees and will be revised periodically to reflect updates to company policies, work practices, and the applicable state and/or federal guidance. Employees must verify that this document is the most recent version of the company's SOPs. Employees are also strongly advised to review relevant state and/or federal guidance, which may stipulate program-specific procedures, in advance of task implementation.

This SOP is designed to provide the user with a general outline for decontamination and assumes the user is familiar with basic field procedures, such as recording field notes (SOP 1), sample shipment procedures (SOP 3), sample collection and quality assurance procedures (SOP 4), and investigation-derived waste management procedures (SOP 5). All decontamination references must be available for consultation in the field, including:

- Company's SOPs
- Applicable state and federal guidelines or procedures
- Manufacturer's manuals
- Project-specific work plan and HASP
- QAPP

6.4 GENERAL PROCEDURES

The cleaning and decontamination procedures described below are designed to ensure that the equipment used for sample collection is free of analytes that could potentially alter the analytical results. These procedures are primarily targeted at reducing the incidence of cross-contamination (i.e., compounds of interest being transferred on the sampling equipment from one sample location or depth to another) and, when properly implemented, provide a methodology for obtaining high quality, representative results. As with all analytical sampling, the effectiveness of the cleaning procedures must be demonstrated with the collection of equipment blanks. The sampling procedures and equipment blank collection frequency are discussed in SOP 4.

6.4.1 EQUIPMENT AND REAGENT SELECTION

It is important for employees to evaluate the expected types of contamination before mobilization to a site. State programs (or the U.S. Environmental Protection Agency [EPA], depending on the site) may require more stringent decontamination procedures than those listed in this SOP, specify the types and grades of various cleaning detergents and reagents (e.g., acids and solvents), or allow the use of phosphate-containing detergents, such as Alconox®. Many of these reagents, such as nitric acid or pesticide-grade hexane, are U.S. Department of Transportation (DOT) hazardous materials and must be shipped using a ground delivery service. These compounds may also require specialized PPE (e.g., eye protection for concentrated acids) or have other special handling or disposal procedures that must be considered before arriving onsite. Decontamination equipment (e.g., spray bottles, brushes, etc.) should be constructed of non-reactive, non-leachable materials (e.g., metal, glass, Teflon®-coated, polyethylene, etc.) which are compatible with the reagents and solvents being used for decontamination.

In specific cases, it may be necessary to steam clean the field equipment before proceeding with the decontamination steps presented in Section 6.5 (e.g., hollow stem augers). Generally, the company's subcontractors are responsible for bringing or building a decontamination pad, if necessary, to contain the spray from a steam jenny. Decontamination pads should be constructed on a level, paved surface (if possible) in an area known or believed to be free of surface contamination, and should be of sufficient size to contain the decontamination water. Equipment that is steam cleaned should be placed on racks or saw horses and not on the floor of the decontamination pad. Decontamination water should be removed from the decontamination pad frequently to minimize the potential for leaks or overflow.

Consult and involve the company's compliance professionals for storage procedures and disposal requirements of solvent rinsate, detergent wastes, and other decontamination materials.

6.4.2 OTHER CONSIDERATIONS

In preparing for decontamination, you should perform the following activities (with all observations and measurements noted in the field book):

- Perform a quick reconnaissance of the site to identify a decontamination (pad) area and evaluate the accessibility to and safety of the location.
- Record a description of the decontamination (pad) area.

Survey the breathing zone around the decontamination area with the appropriate air quality meter(s), as necessary (see HASP), to ensure that the level of PPE is appropriate. When decontaminating equipment, it is important to find a suitable location away from any sources of cross-contamination that could compromise the integrity of the decontamination. As possible, position the decontamination area away from fuel-powered equipment, such as drill rigs or excavators, and upwind of other site activities (e.g., purging, sampling).

6.5 DECONTAMINATION PROCEDURES

The decontamination procedures are based on a nine-step process, which is tailored in the field depending on the samples to be collected. Decontaminate all non-dedicated equipment that contacts the sample directly, including spoons, trowels, pumps, etc., before and between each sample location and sampling interval. Record decontamination procedures in the field book. Disposable, single use items, such as bailers or tubing, do not require decontamination.

The decontamination process includes the following four basic steps:

1. Physical removal of debris
2. Wash with non-phosphate detergent, such as Liquinox®, and nylon brush
3. Potable water rinse
4. Deionized (DI), analyte-free water rinse (distilled water can be used as a substitute)

The first step is to remove as much soil or other debris from the sampling device as possible near the sampling area to limit the spread of potentially-contaminated materials into clean areas of the site.

Cleaning and decontamination should occur at a designated area(s) (decontamination pad) on the site. If gross contamination or an oily film or residue is observed on the equipment, use steam jenny or wash by hand using a brush to remove the particulate matter or surface film. Heavy oils or grease may be removed with paper towels soaked with isopropyl alcohol.

The physical removal is followed by a hand wash using non-phosphate detergent (mixed to the appropriate dilution in potable water) followed by a potable water rinse. If not using a decontamination pad, the most common set-up uses 5-gallon plastic buckets for washing and rinsing, although plastic garbage pails or plastic tubs can also be used. Place containers on polyethylene sheeting to limit spillage of the decontamination fluids.

Be sure to scrub the equipment thoroughly with a nylon bristle brush (or similar) and allow enough submersion time for the non-phosphate detergent to effectively clean the surfaces (a simple dunk of the equipment in the detergent solution is insufficient). If decontaminating submersible pumps, flush both the non-phosphate detergent wash fluid and the potable water rinse through the pump body itself (usually done in separate buckets) to ensure that the internal components are thoroughly cleaned. The internal decontamination of motorized pumps can be accomplished by pumping the non-phosphate detergent wash fluid and the potable water rinse through the pump. Replace the detergent solution and rinse water when it becomes oily or silty.

Place the DI water for the rinse in a small spray bottle or pour over the equipment after the potable water rinse. **Typically, this level of decontamination (i.e., steps 1 through 4) is sufficient**.

Following Steps 1 through 4, additional decontamination (steps 5 through 9) may be required by the applicable federal or state guidelines, the project-specific work plan or the QAPP. Typically, these decontamination steps are performed when sampling for inorganics using non-motorized equipment. These steps include:

5. 10% nitric acid rinse

6. DI water rinse

7. Pesticide-grade solvent rinse (e.g., hexane or isopropyl alcohol)

8. Air dry (solvent must evaporate)

9. DI water rinse

Isopropyl alcohol is the recommended solvent for organic contaminants because it is readily available (at most drug and department stores) and is not a DOT hazardous material. However, other solvents (e.g., hexane and methanol) may be more effective in removing certain contaminants, such as oils or polychlorinated biphenyls, but any waste generated using these solvents must be managed accordingly.

Handle the solvents and acid with care and store unused chemicals in their original, labeled, protective containers when not in use. It is a good idea to transfer small quantities of each solution into labeled, laboratory-grade spray bottles, which offer a convenient and controllable way to rinse the equipment. The equipment can then be rinsed over a 5-gallon plastic bucket or other suitable container placed on plastic sheeting as with the first part of the cleaning process. Nitric acid rinses must be used only on non-carbon steel sampling devices. Do not spray acid into pumps.

6.6 HANDLING DECONTAMINATED EQUIPMENT

Handle any decontaminated equipment using clean gloves to prevent re-contamination. Place the equipment away (preferably upwind) from the decontamination area once the process has been completed on clean plastic sheeting to allow it to air-dry. Once the equipment is dry, protect it from re-contamination by securely wrapping and sealing with aluminum foil (shiny side out) or clean, disposable plastic bags. Plastic bags may be wrapped directly around wet or dry equipment except when the expected contaminants include volatile and extractable organics; under those circumstances, allow the equipment to completely dry or wrap it in aluminum foil.

All sampling equipment must be decontaminated at the end of the investigation (i.e., prior to departure from the site). Label each piece of equipment with the date of decontamination, the initials of personnel performing the decontamination, and the type of decontamination solution(s) used. Containerize all solvent rinsate, detergent wastes, and other disposable decontamination materials in DOT-compliant containers in accordance with SOP 5 or the project-specific work plan. Dispose of all wastes in conformance with the project-specific work plan and applicable regulations.

FIELD STANDARD OPERATING PROCEDURE #17

SOLID WASTE SAMPLING PROCEDURE

Solid waste sampling procedures outlined in this standard operating procedure (SOP) are designed to ensure that samples are representative of current conditions. Solid waste materials are commonly stored or staged in open (e.g., waste piles, outfalls, surface impoundments) or closed units (e.g., drums, tanks and associated ancillary equipment, containers, sumps). Solid waste samples can be collected for onsite screening or for laboratory analysis. The user is advised to read the entire SOP and review the site health and safety plan (HASP) before beginning any onsite activities. In accordance with the HASP, proper personal protective equipment (PPE) must be selected and used appropriately.

17.1 ACRONYMS AND ABBREVIATIONS

ºF	degrees Fahrenheit
HASP	health and safety plan
IDW	investigation-derived waste
NAPL	non-aqueous phase liquid
PID	photoionization detector
PPE	personal protective equipment
QAPP	quality assurance project plan
QA/QC	quality assurance/quality control
SOP	standard operating procedure
VOC	volatile organic compounds

17.2 MATERIALS

- Field book
- PPE
- Air quality monitoring equipment (e.g., photoionization detector [PID]), as needed
- Field test kits, as needed
- Knife or scissors
- Sample bottles, labels, indelible markers, and clear tape
- Hip waders or rubber boots, as necessary
- Expanding ruler or tape measure
- Solid waste sampler (e.g., trowels, shovels, spoons, bucket auger, sludge judge, dredge)
- Mixing tray or bowl, as needed
- Decontamination supplies

17.3 PRECONDITIONS AND BACKGROUND

This SOP has been prepared as part of the company's Environmental Quality Management Plan and is designed to provide detailed procedures for common field practices. Compliance with the methods presented in this document is mandatory for all field personnel and will ensure that the tasks are performed in a safe and consistent manner, are in accordance with federal and state guidance, and are technically defensible.

This SOP is written for the sole use of company employees and will be revised periodically to reflect updates to company policies, work practices, and the applicable state and/or federal guidance. Employees must verify that this document is the most recent version of the company SOPs. Employees are also strongly advised to review relevant state and/or federal guidance, which may stipulate program-specific procedures, in advance of task implementation.

This SOP is designed to provide the user with a general outline for conducting waste material sampling and assumes the user is familiar with basic field procedures, such as recording field notes (SOP 1), utility location (SOP 2), sample shipment procedures (SOP 3), sample collection and quality assurance procedures (SOP 4), investigation-derived waste (IDW) management procedures (SOP 5), equipment decontamination (SOP 6), use and calibration of all sampling and monitoring equipment (SOPs 7 and 8), soil sampling procedure (SOP 9) and waste water sampling (SOP 18). This SOP does not cover waste storage, waste characterization, or waste profiling, nor does it cover the evaluation of the analytical results. These topics are more appropriately addressed in a project-specific work plan. Before sampling, be sure to review the project-specific work plan or quality assurance project plan (QAPP) and any applicable state and federal guidelines or sampling procedures.

Consult and involve the company's compliance professionals during all phases of waste sampling. Do not ship samples which could be classified as hazardous waste without first consulting a company compliance professional.

All sampling and monitoring references must be available for consultation in the field, including:

- Company SOPs
- Applicable state and federal guidelines or sampling procedures
- Manufacturer's manuals
- Project-specific work plan and HASP
- QAPP

17.4 GENERAL PROCEDURES

Solid waste sampling presents a number of unique challenges for safe collection due to the potentially hazardous environment(s) where waste materials are located. Sampling of closed waste containers (e.g., drums, tanks) is considered a higher hazard risk because of the potential of exposure to toxic gases, internal pressure, or flammable/explosive atmospheres. Due to these potential hazards, proper safety precautions (e.g., monitoring, venting, and grounding) must be employed during opening and sampling of waste containers. Follow the appropriate safety requirements stipulated in the HASP. Do not bodily enter tanks, sumps, or pipes, such as storm sewers or other drainage conveyances, during sample collection.

Employees are not authorized to open closed units that are unlabeled or contain unknown contents.

Each sampling situation will have unique set of equipment requirements and techniques. The selected equipment and procedures are project-specific and should be discussed by the project team, including the assigned compliance professional, before arriving onsite. All types of solid waste sampling, however, regardless of the equipment used, share common handling and management procedures that are designed to ensure the integrity of the samples collected. These procedures include:

- The use of new, disposable or decontaminated sampling equipment
- The use and rotation of the appropriate PPE
- Selection of a suitable sampling location and staging area

Wear a clean pair of new, disposable gloves each time a different sample is collected and don the gloves immediately prior to collection. This limits the possibility of cross-contamination from accidental contact with gloves soiled during collection of the previous sample. The gloves must not come in contact with the medium being sampled and must be changed any time during sample collection when their cleanliness is compromised. In no case should gloved hands be used as a sampling device: always use the appropriate equipment (e.g., spoon, trowel, sampler) to move the sample from the device to the laboratory-supplied containers.

17.4.1 EQUIPMENT SELECTION

Collect all samples using either new, disposable equipment, or properly decontaminated sampling equipment. Common waste sampling equipment includes trowels, shovels, spoons and bucket augers. Follow the manufacturer's operation manual for proper sampling procedures. Solid waste sampling equipment should be selected based on the analytical requirements of the project and the project-specific conditions likely to be encountered. The equipment should be constructed of non-reactive, non-leachable materials (e.g., stainless steel, Teflon®, Teflon®-coated steel, polyethylene, polypropylene) which are compatible with the chemical constituents at the site. Extension rods or other appropriate devices can be used, as necessary, to allow the sample to be collected at a distance (or through deeper water) to minimize the risk to the sampler. When choosing sampling equipment, give consideration to:

- the type and location of the waste unit
- the required depth of the sample
- the volume of sample required
- the analytes of interest

Select the decontamination procedures based on the types of sampling to be performed and media encountered; decontamination may require multiple steps or differing cleaning methods, depending on the sampling objectives and media encountered (see SOP 6 for decontamination procedures). In no case should disposable, single use materials be used to collect more than one sample.

17.4.2 SAMPLING CONSIDERATIONS

In preparing for sampling, you should perform the following activities (with all observations and measurements noted in the field book):

- Perform a quick reconnaissance of the site to identify sampling locations and evaluate the accessibility to the waste unit, including ladders or stairs, and ensure that proper grounding is present, if needed.
- Record the approximate ambient air temperature, precipitation, wind (direction and speed), tide, and other field conditions in the field book. In addition, any site-specific conditions or situations that could potentially affect the samples at the sample locations should be recorded.
- Record sample locations with respect to approximate distance to and direction from at least one permanent feature and/or description of the waste unit (e.g., type, capacity, markings, condition, and contents).
- Survey the breathing zone around the sampling location with the appropriate air quality meter(s), as necessary (see HASP), to ensure that the level of PPE is appropriate.

When sampling, it is important to find a suitable sampling location away from any sources of cross-contamination that could compromise the integrity of the samples. Consider the following:

- Position the sample collection area away from fuel-powered equipment, such as drill rigs or excavators, and upwind of other site activities (e.g., purging, sampling, decontamination) that could influence the sample. This is particularly important when screening samples in the field for volatile organic compounds (VOCs) with a PID, but should not be limited to the active sample collection.
- If wastewater samples are being collected from the same location or vessel, collect the wastewater samples first to avoid disturbing the bottom and suspending solid waste in the water column (see SOP 18 for waste water sampling procedures).

- If collecting several solid waste samples from a linear waterway with moving water (e.g., ditch), start sampling at the downstream location and progressively move upstream.
- Store samples already collected from the field for laboratory analysis in clean containers and securely stage, if possible, in an uncontaminated area of the site.

17.4.3 SAFETY CONSIDERATIONS

Solid waste sampling may present a number of unique challenges for safe collection. Solid waste materials are frequently heterogeneous due to the physical characteristics of the matrix (e.g., particle size, viscosity), the distribution of hazardous constituents within the matrix, or the manner in which the material was managed or disposed. Because waste often stratifies over time due to different densities of phases, settling of solids, or varying wastes generated at different times, both solid and liquid waste samples may need to be collected (see SOP 18 for waste water sampling procedures). Caution should be exercised when sampling *in situ* wastes (e.g., landfills) because of the potential presence of explosive/flammable gases or toxic vapors. Stockpiled waste or the surface of a waste disposal unit may not be stable and could present an engulfment hazard. Do not attempt to sample surface impoundments used to manage wastes from a boat; all sampling should be conducted from the banks or piers of surface impoundments.

Employees are not authorized to open closed units that are unlabeled or contain unknown contents.

Caution should also be exercised when opening closed waste containers, such as sealed drums, because of the potential pressurization and presence of explosive/flammable gases and/or toxic vapors. Before opening, visually inspect all waste units for the following:

- pressurization (bulging/dimples)
- crystals formed around the drum opening
- leaks, holes, stains
- labels, markings, hazardous warnings, potential shock sensitivity (as indicated by contents listed on waste label)
- composition and type (steel/polyethylene/polypropylene and open/bung)
- dead vegetation around drum
- condition, age, rust
- sampling accessibility (including a determination if it qualifies as a confined space)

Waste containers showing evidence of pressurization and/or crystals should be furthered assessed to determine if remote opening is needed. If containers cannot be accessed for sampling, heavy equipment may be necessary to stage the containers before sampling. Adequate time should be allowed for the contents to stabilize after a container is handled.

A grounding strap must be used when sampling metal waste containers, such as 55-gallon steel drums, due to the potential presence of explosive/flammable gases. First attach a grounding strap, then touch the waste container opening with a gloved hand and allow an electrically conductive path to form, as appropriate. Using spark-resistant tools, slowly open the waste container (e.g., vents, pressure release valves, bung or drum ring and/or lid) to allow the unit to vent to the atmosphere. Do not attempt to use a manual bung wrench or de-header on drums that potentially contain shock-sensitive, reactive, explosive or flammable materials. Once sampling is complete, (re)seal the waste container in accordance with the manufacturer's instructions.

<u>Do not</u> bodily enter containers, such as roll off boxes, or pipes, such as storm sewers or other drainage conduits, during sample collection as these may be considered confined spaces.

Heavy equipment may also be necessary to collect samples from inaccessible locations (e.g., excavator bucket used to collect sample from an excavation pit).

17.5 SOLID WASTE SAMPLE COLLECTION PROCEDURES

There are two primary types of solid waste samples: grab samples and composite (a sample composited from several locations collected concurrently) samples. Refer to the project-specific work plan for prescribed sampling methods.

Push or drive the method-specific decontaminated or disposable sampling equipment (e.g., trowel, spoon) into the solid waste materials to the desired sampling depth. Slowly retrieve the sample, and transfer to the sample containers. Samples collected from an excavator bucket should be taken from the center of the material to ensure material is representative of the desired sampling interval. As applicable, tilt the sampling equipment at a slight angle in the upstream direction to minimize the disturbance and to avoid losing waste materials. Occasionally solid waste materials lack cohesiveness and are subject to falling out of the sampler. The use of core catchers on the leading end of the sampler may help retain the sample until it is retrieved to the surface; core catchers must be evaluated for compatibility with the proposed analytical program before use.

Dedicated samplers, if used, or the waste materials themselves, should be placed on plastic sheeting (for logging) in a consistent manner such that the orientation of the sample (i.e., which end is "up") and the depth interval is readily apparent to the sampling personnel. Measure the length of the material recovered relative to the interval the sampler was advanced in percent notation (e.g., 75%) or as a fraction of the total length of the sample interval (e.g., [3/4] indicating 3 out of 4 feet) and record this information in the field book. Record the depth interval through which the sampler was advanced in the field book. Note the state, quantity, phases, and color of the solid waste in the field book. If field screening for organic vapors is required, break or cut the waste every 3 to 4 inches and quickly scan the breaks in the core material with the appropriate air quality monitoring equipment (e.g., PID) and record the readings and approximate depth in the field book. These measurements can be used to select appropriate waste samples for VOC or headspace analysis, if required (see procedures below).

If a liquid sample is not required, decant liquid into a separate container or back into the vessel being sampled. If a liquid sample is required, decant any liquid directly into sample containers (see SOP 18). If necessary, collect additional waste material to provide sufficient sample volume.

Should any sample location require a vertical or horizontal offset from the proposed location, indicate the reason and record the actual sample location in the field book.

17.5.1 UNDISTURBED SAMPLE COLLECTION

Undisturbed waste material samples collected for geotechnical parameters (e.g., porosity, permeability) generally require the use of specialized undisturbed sampling equipment (e.g., Shelby tube or sealed Geoprobe® liner) and collection procedures. The sampling device, once retrieved, is typically capped or sealed (to maintain the sample in its relatively undisturbed state), labeled with the sample name, orientation of the sample (i.e., top and bottom), depth interval, and shipped to the appropriate geotechnical laboratory. Follow sample labeling, preparation, and shipping procedures in SOPs 3 and 4.

17.5.2 VOLATILE ORGANIC COMPOUND SAMPLING

Analytical samples for VOC analysis should be collected <u>immediately</u> after screening with the PID to avoid volatilization of constituents to the atmosphere. Transfer the waste material from the center portion of the sample interval directly into the sample containers; <u>do not homogenize waste materials for VOC analysis</u>. Collect the sample such that no headspace is present above the waste material when the cover is placed on the container. If sampling by US Environmental Protection Agency Method 5035 is required, follow manufacturer's specifications to use a closed-system sampler (e.g., Encore® samplers). Collect quality assurance/quality control (QA/QC) samples, if appropriate, in accordance with SOP 4, the project-specific work plan, and the QAPP.

17.5.3 HEADSPACE ANALYSIS

Collect samples for field-based headspace analysis, if required by the project-specific work plan, after collecting the VOC samples. First, examine the contents of the sample and remove coarse gravel, organic material (e.g., roots, grass, and woody material) and any other debris. Collect the sample using decontaminated spoons or trowels and seal it in a heavy-duty zipper-style plastic bag. Label the sample indicating the sampling location, depth, and date. Shake the sample vigorously for approximately 15 seconds to disaggregate the sample and expose as much surface area of the material as possible (to release the VOCs to the atmosphere within the bag). If necessary, warm the sample to room temperature (70º Fahrenheit, ºF) by placing the bag in a heated room or vehicle. This step is very important when the ambient temperature is below 32 ºF.

VOCs, if present, will volatilize into the sealed bag. Allow the bag to stand (to achieve equilibrium) for approximately 15 minutes. Carefully open the bag slightly and place the tip of the PID into the opening. Do not insert the tip of the probe into the waste material and avoid the uptake of water droplets. Record the highest meter response. Erratic PID response may result from high organic vapor concentrations or elevated headspace moisture. If these conditions exist, qualify the headspace data in the field book. It is also important to record the ambient temperature, humidity, and whether moisture was present in the plastic bag. Duplicate 10% of the headspace samples by collecting two samples from the same location. Generally, duplicate sample values should be consistent to ±20%. Samples collected for headspace screening cannot be retained for laboratory analysis.

17.5.4 SEMI- AND NON-VOLATILE ANALYTICAL SAMPLE COLLECTION

Collect remaining organic samples then inorganic samples in the following order of volatilization sensitivity:

- Extractable organics, petroleum hydrocarbons, aggregate organics, and oil and grease
- Metals
- Inorganic non-metallic and physical and aggregate properties
- Microbiological samples
- Radionuclides

If homogenization is required, mix the soils (using stainless steel bowls and spoons, or other appropriate equipment) to a homogeneous particle size and texture. Transfer the soils from the sampler or mixing bowl to the sample container using a decontaminated or dedicated stainless steel spoon or spatula. Collect QA/QC samples in accordance with SOP 4, the project-specific work plan, and the QAPP. If approved by the appropriate regulatory agency and specified in the project-specific work plan, composite samples can be collected to minimize the total number of analytical samples. Composite samples consist of equal aliquots (same sample size) of waste material from each location being sampled (e.g., from multiple areas of a soil pile), by mixing the waste to a homogeneous particle size and texture using new or decontaminated stainless steel bowls and a stainless steel spoon or trowel. Transfer the contents to the appropriate laboratory-supplied sample container using a stainless steel spoon. Collect QA/QC samples, if appropriate, in accordance with SOP 4, the project-specific work plan, and the QAPP.

Interstitial water, or pore water, is the water occupying the space between solid particles. It can be isolated to provide either a matrix for toxicity testing or an indication of the concentration and partitioning of contaminants with a solid matrix. Pore water samples may be collected in the field using any available technology that will preserve the integrity of the analytes of interest during collection (e.g., lysimeter) or extracted in the laboratory from field-collected waste. The substrate type will dictate the volume of sample needed. In all cases, consult the laboratory conducting the analyses to provide estimates of the amount of sample necessary to obtain the desired quantity of pore water.

If necessary, conduct field tests or screening of waste materials in accordance with the project-specific work plan and manufacturer's specifications for field testing equipment.

17.5.5 NON-AQUEOUS PHASE LIQUID SAMPLING PROCEDURES

Non-aqueous phase liquids (NAPL) may be encountered in solid waste units. If NAPL samples are required, the sampling options and techniques should be discussed with the assigned compliance professional and project manager to ensure that the NAPL is not considered to be a hazardous material for the purpose of shipping to the laboratory (SOP 3). Samples of NAPL should be collected using the same procedures as above and placed in the appropriate laboratory-supplied containers, packed on ice, and shipped to the analytical laboratory using procedures outlined in SOP 3.

17.5.6 SAMPLE LABELING AND PREPARATION FOR SHIPMENT

Once collected, prepare the waste samples for offsite laboratory analysis:

1. Clean the outside of the sample container with paper towels or appropriate materials, if necessary
2. Affix a sample tag or label to each sample container and complete all required information (sample number, date, time, depth interval, sampler's initials, analysis, preservatives, place of collection)
3. Place clear tape over the tag or label (if non-waterproof labels are used)
4. Preserve samples immediately after collection by placing them into an insulated cooler filled with bagged wet ice to maintain a temperature of approximately 4°Celcius
5. Record the sample designation, date, time, depth interval, and the sampler's initials in the field book and on a sample tracking form, if appropriate
6. Complete the chain-of-custody forms with appropriate sampling information, including:
   - Location
   - Sample name
   - Sample collection date and time
   - Number of sample containers
   - Analytical method
7. Complete sample packing and ship in accordance with proper procedures

Do not ship samples which could be classified as hazardous waste without first consulting a compliance professional.

17.6 CLOSING NOTES

Once sampling is completed, secure the waste unit(s) in accordance with the project-specific work plan. If possible, restore and mark all sample locations with spray paint, stakes, or other appropriate marker for future reference. Decontaminate all equipment prior to departure and properly manage all PPE and IDW in conformance with applicable regulations.

Appendix G – Nonhazardous Waste Shipping Documents

TICKET # 2322865

Oneida-Herkimer Solid Waste
Management Authority
1600 Genesee Street
Utica,New York 13502
(315)733-1224

CUSTOMER # 1121A
PARAGON ENVIRONMENTAL
5664 MUD MILL ROAD
BREWERTON,NY 13029-8661

Truck ID **1121.1**

TRAILER #

Order #

DATE : 08/15/2016

TIME IN: 2:49 pm TIME OUT: 3:01 pm

CSRLF Contaminated Soil to R 20.23tn

Gross:	**70660**	Tare.	**30200**	Net:	**40460**
Scale 5		Scale 5		**20.23**	**Tn**

.CS/0816-03 T # 630

WEIGHTMASTER: PATTY

Thanks

TICKET # 2323008

Oneida-Herkimer Solid Waste
Management Authority
1600 Genesee Street
Utica,New York 13502
(315)733-1224

CUSTOMER # 1121A
PARAGON ENVIRONMENTAL
5664 MUD MILL ROAD
BREWERTON,NY 13029-8661

Truck ID **1121.1**
TRAILER # 160194
Order #
DATE: 08/16/2016
TIME IN: 7:35 am TIME OUT: 7:47 am

CSRLF	Contaminated Soil to R 21.93tn				
Gross:	**72300**	Tare:	**28440**	Net:	**43860**
Scale 5		Scale 5		**21.93**	**Tn**

Todd R[illegible]

CS0816-03

WEIGHTMASTER: PATTY

Thanks

TICKET # 2322989

Oneida-Herkimer Solid Waste
Management Authority
1600 Genesee Street
Utica,New York 13502
(315)733-1224

CUSTOMER # 1121A
PARAGON ENVIRONMENTAL
5664 MUD MILL ROAD
BREWERTON,NY 13029-8661

Truck ID **1121.1**
TRAILER #
Order #
DATE : 08/16/2016
TIME IN: 7:16 am TIME OUT: 7:32 am

CSRLF Contaminated Soil to R 24.86tn

Gross:	**79720**	Tare:	**30000**	Net:	**49720**
Scale 5		Scale 5		**24.86**	**Tn**

Scott R

CS0816-03.

WEIGHTMASTER: PATTY

Thanks

TICKET # 2323557

Oneida-Herkimer Solid Waste
Management Authority
1600 Genesee Street
Utica,New York 13502
(315)733-1224

CUSTOMER # 1121A
PARAGON ENVIRONMENTAL
5664 MUD MILL ROAD
BREWERTON,NY 13029-8661

Truck ID **1121.1**

TRAILER #

Order #

DATE : 08/17/2016

TIME IN: 7:04 am TIME OUT: 7:20 am

CSRLF Contaminated Soil to R 26.88 tn

Gross:	**82520**	Tare:	**28760**	Net:	**53760**
Scale 5		Scale 5		**26.88**	**Tn**

CS0816-03.

WEIGHTMASTER: PATTY

Thanks

TICKET # 2323569

Oneida-Herkimer Solid Waste
Management Authority
1600 Genesee Street
Utica,New York 13502
(315)733-1224

CUSTOMER # 1121A
PARAGON ENVIRONMENTAL
5664 MUD MILL ROAD
BREWERTON,NY 13029-8661

Job #
16-0194

Truck ID **1121.1**
TRAILER #
Order #
DATE: 08/17/2016
TIME IN: 7:26 am TIME OUT: 7:39 am

CSRLF	Contaminated Soil to R	16.51tn

Gross.	**71120**	Tare:	**38100**	Net:	**33020**
Scale 5		Scale 5			**16.51 Tn**

Todd R. Moore

CS0816-03.

WEIGHTMASTER: PATTY

Thanks

TICKET # 2323571

Oneida-Herkimer Solid Waste
Management Authority
1600 Genesee Street
Utica,New York 13502
(315)733-1224

CUSTOMER # 1121A
PARAGON ENVIRONMENTAL
5664 MUD MILL ROAD
BREWERTON,NY 13029-8661

Truck ID **1121.2**
TRAILER #
Order #
DATE: 08/17/2016
TIME IN: 7:32 am TIME OUT: 7:46 am

CSRLF Contaminated Soil to R 35.82tn

Gross:	**115140**	Tare:	**43500**	Net:	**71640**
Scale 5		Scale 5			**35.82 Tn**

JOB # 160196

#633/CS0816-03.

WEIGHTMASTER: PATTY
Thanks

TICKET # 2323574

Oneida-Herkimer Solid Waste
Management Authority
1600 Genesee Street
Utica,New York 13502
(315)733-1224

CUSTOMER # 1121A
PARAGON ENVIRONMENTAL
5664 MUD MILL ROAD
BREWERTON,NY 13029-8661

Truck ID **1121.1**

TRAILER #

Order #

DATE : 08/17/2016

TIME IN: 7:42 am TIME OUT: 7:57 am

CSRLF Contaminated Soil to R 29.00tn

Gross:	**103580**	Tare:	**45580**	Net:	**58000**
Scale 5		Scale 5			**29.00 Tn**

CS0816-03./#192

WEIGHTMASTER: PATTY

Thanks

TICKET # 2323653

Oneida-Herkimer Solid Waste
Management Authority
1600 Genesee Street
Utica,New York 13502
(315)733-1224

CUSTOMER # 1121
PARAGON ENVIRONMENTAL
5664 MUD MILL ROAD
BREWERTON,NY 13029-8661

Truck ID **1121.1**
TRAILER #

Order # **2016** **2016 CONTRACT PRICING**
DATE: 08/17/2016
TIME IN: 9:19 am TIME OUT: 9:42 am

CSRLF Contaminated Soil to R 24.83tn

Gross: **78320** Tare: **28660** Net: **49660**
Scale 5 Scale 5 **24.83 Tn**

Route Truck
Date Time

CS0816-03

WEIGHTMASTER: PATTY

Thanks

TICKET # 2323689

Oneida-Herkimer Solid Waste
Management Authority
1600 Genesee Street
Utica,New York 13502
(315)733-1224

CUSTOMER # 1121A
PARAGON ENVIRONMENTAL
5664 MUD MILL ROAD
BREWERTON,NY 13029-8661

Truck ID **1121.1**

TRAILER #

Order #

DATE : 08/17/2016

TIME IN: 9:57 am TIME OUT: 10:26 am

CSRLF	Contaminated Soil to R	31.62tn

Gross:	**108600**	Tare:	**45360**	Net:	**63240**
Scale 5		Scale 5			**31.62 Tn**

Martin R Tyson

CS0816-03.

WEIGHTMASTER: PATTY

Thanks

TICKET # 2323595

Oneida-Herkimer Solid Waste
Management Authority
1600 Genesee Street
Utica, New York 13502
(315)733-1224

CUSTOMER # 1121A
PARAGON ENVIRONMENTAL
5664 MUD MILL ROAD
BREWERTON, NY 13029-8661

Truck ID **1148.1**

TRAILER #

Order #

DATE: 08/17/2016

TIME IN: 8:05 am TIME OUT: 8:14 am

CSRLF	Contaminated Soil to R	24.76tn

Gross:	**78580**	Tare:	**29060**	Net:	**49520**
Scale 5		Scale 5			**24.76 Tn**

.CS0816-03

WEIGHTMASTER: PATTY

Thanks

TICKET # 2323614

Oneida-Herkimer Solid Waste
Management Authority
1600 Genesee Street
Utica,New York 13502
(315)733-1224

CUSTOMER # 1121A
PARAGON ENVIRONMENTAL
5664 MUD MILL ROAD
BREWERTON,NY 13029-8661

Truck ID **1148.1**
TRAILER #
Order #
DATE : 08/17/2016
TIME IN: 8:27 am TIME OUT: 8:40 am

CSRLF Contaminated Soil to R 23.53tn

Gross:	**76240**	Tare:	**29180**	Net:	**47060**
Scale 5		Scale 5		**23.53**	**Tn**

Mate 357

CS0816-03.

WEIGHTMASTER: PATTY

Thanks

TICKET #2323706

Oneida-Herkimer Solid Waste
Management Authority
1600 Genesee Street
Utica,New York 13502
(315)733-1224

CUSTOMER # 1121A
PARAGON ENVIRONMENTAL
5664 MUD MILL ROAD
BREWERTON,NY 13029-8661

Truck ID **1148.1**

TRAILER #

Order #

DATE : 08/17/2016

TIME IN:10:11am TIME OUT: 10:33 am

CSRLF	Contaminated Soil to R		24.38tn		
Gross:	**77680**	Tare:	**28920**	Net:	**48760**
Scale 5		Scale 5			**24.38 Tn**

CS0816-03

WEIGHTMASTER: PATTY

Thanks

TICKET # 2323009

Oneida-Herkimer Solid Waste
Management Authority
1600 Genesee Street
Utica,New York 13502
(315)733-1224

CUSTOMER # 1121A
PARAGON ENVIRONMENTAL
5664 MUD MILL ROAD
BREWERTON,NY 13029-8661

Truck ID **1121.2**
TRAILER #
Order #
DATE: 08/16/2016
TIME IN: 7:37 am TIME OUT: 7:55 am

CSRLF Contaminated Soil to R 26.96tn

Gross:	**101400**	Tare.	**47480**	Net:	**53920**
Scale 5		Scale 5			**26.96 Tn**

Mark Fuge

CS0816-03./DT

WEIGHTMASTER: PATTY

Thanks

TICKET # 2323032

Oneida-Herkimer Solid Waste
Management Authority
1600 Genesee Street
Utica,New York 13502
(315)733-1224

CUSTOMER # 1121
PARAGON ENVIRONMENTAL
5664 MUD MILL ROAD
BREWERTON,NY 13029-8661

Truck ID **1121.1**
TRAILER #

Order # **2016** **2016 CONTRACT PRICING**
DATE : 08/16/2016
TIME IN. 8:05 am TIME OUT: 8:50 am

CSRLF Contaminated Soil to R 30.94tn

Gross: **105820** Tare: **43940** Net: **61880**
Scale 5 Scale 5 **30.94 Tn**

Route Truck
Date Time

C+C #160196
[illegible]

#633/CS0816-03

WEIGHTMASTER: PATTY

Thanks

TICKET # 2323130

Oneida-Herkimer Solid Waste
Management Authority
1600 Genesee Street
Utica,New York 13502
(315)733-1224

CUSTOMER # 1121A
PARAGON ENVIRONMENTAL
5664 MUD MILL ROAD
BREWERTON,NY 13029-8661

Truck ID **1121.1**

TRAILER #

Order #

DATE : 08/16/2016

TIME IN: 9:27 am TIME OUT: 9:38 am

CSRLF Contaminated Soil to R 20.25 tn

Gross.	**69980**	Tare:	**29480**	Net:	**40500**
Scale 5		Scale 5		**20.25**	**Tn**

Scott R

CS0816-03

WEIGHTMASTER: PATTY

Thanks

TICKET # 2323170

Oneida-Herkimer Solid Waste
Management Authority
1600 Genesee Street
Utica,New York 13502
(315)733-1224

CUSTOMER # 1121A
PARAGON ENVIRONMENTAL
5664 MUD MILL ROAD
BREWERTON,NY 13029-8661

Truck ID **1121.1**
TRAILER #
Order #
DATE : 08/16/2016
TIME IN 10:11am TIME OUT. 10:31am

CSRLF	Contaminated Soil to R	33.04tn

Gross: **111420** Tare: **45340** Net: **66080**
Scale 5 Scale 5 **33.04 Tn**

Mark Tross

CS0816-03.

WEIGHTMASTER: PATTY

Thanks

TICKET # 2323210

Oneida-Herkimer Solid Waste
Management Authority
1600 Genesee Street
Utica, New York 13502
(315)733-1224

CUSTOMER # 1121A
PARAGON ENVIRONMENTAL
5664 MUD MILL ROAD
BREWERTON,NY 13029-8661

Truck ID **1121.1**

TRAILER #

Order #

DATE : 08/16/2016

TIME IN:10:53 am TIME OUT: 11:12 am

CSRLF Contaminated Soil to R 34.12tn

Gross: **112000** Tare: **43760** Net: **68240**
Scale 5 Scale 5 **34.12 Tn**

CmC #160196

CS0816-03.

WEIGHTMASTER: PATTY

Thanks

TICKET # 2323280

Oneida-Herkimer Solid Waste
Management Authority
1600 Genesee Street
Utica,New York 13502
(315)733-1224

CUSTOMER # 1121A
PARAGON ENVIRONMENTAL
5664 MUD MILL ROAD
BREWERTON,NY 13029-8661

Truck ID **1121.1**

TRAILER #

Order #

DATE : 08/16/2016

TIME IN:11:56 am TIME OUT: 12:06 pm

CSRLF Contaminated Soil to R 24.16tn

Gross:	**77260**	Tare:	**28940**	Net:	**48320**
Scale 5		Scale 5		**24.16 Tn**	

Scott R

CS08160-03.

WEIGHTMASTER: PATTY

Thanks

TICKET # 2323305

Oneida-Herkimer Solid Waste
Management Authority
1600 Genesee Street
Utica,New York 13502
(315)733-1224

CUSTOMER # 1121A
PARAGON ENVIRONMENTAL
5664 MUD MILL ROAD
BREWERTON,NY 13029-6661

Truck ID **1121.1**

TRAILER #

Order #

DATE : 08/16/2016

TIME IN:12:29 pm TIME OUT: 12:44 pm

CSRLF Contaminated Soil to R 29.54tn

Gross:	**104380**	Tare:	**45300**	Net:	**59080**
Scale 5		Scale 5			**29.54 Tn**

CS0816-03.

WEIGHTMASTER: PATTY

Thanks

TICKET # 2323354

Oneida-Herkimer Solid Waste
Management Authority
1600 Genesee Street
Utica,New York 13502
(315)733-1224

CUSTOMER # 1121A
PARAGON ENVIRONMENTAL
5664 MUD MILL ROAD
BREWERTON,NY 13029-8661

Truck ID **1121.1**

TRAILER #

Order #

DATE : 08/16/2016

TIME IN: 1:16 pm TIME OUT: 1:43 pm

CSRLF Contaminated Soil to R 34.67tn

Gross:	**112980**	Tare:	**43640**	Net:	**69340**
Scale 5		Scale 5			**34.67 Tn**

Cn C #160196

CS0816-03.

WEIGHTMASTER: PATTY

Thanks

TICKET # 2323402

Oneida-Herkimer Solid Waste
Management Authority
1600 Genesee Street
Utica,New York 13502
(315)733-1224

CUSTOMER # 1121A
PARAGON ENVIRONMENTAL
5664 MUD MILL ROAD
BREWERTON,NY 13029-8661

Truck ID **1121.1**

TRAILER #

Order #

DATE: 08/16/2016

TIME IN: 2:04 pm TIME OUT: 2:14 pm

CSRLF Contaminated Soil to R 24.72 tn

Gross:	**78280**	Tare:	**28840**	Net:	**49440**
Scale 5		Scale 5		**24.72**	**Tn**

Scott R

CS0816-03

WEIGHTMASTER: PATTY

Thanks

TICKET # 2323445

Oneida-Herkimer Solid Waste
Management Authority
1600 Genesee Street
Utica,New York 13502
(315)733-1224

CUSTOMER # 1121A
PARAGON ENVIRONMENTAL
5664 MUD MILL ROAD
BREWERTON,NY 13029-8661

Truck ID **1121.1**

TRAILER #

Order #

DATE : 08/16/2016

TIME IN: 2:39 pm TIME OUT: 2:57 pm

CSRLF Contaminated Soil to R 27.82tn

Gross: **101020** Tare: **45380** Net: **55640**

Scale 5 Scale 5 **27.82 Tn**

CS0816-03.

WEIGHTMASTER: PATTY

Thanks

TICKET # 2323392

Oneida-Herkimer Solid Waste
Management Authority
1600 Genesee Street
Utica,New York 13502
(315)733-1224

CUSTOMER #1121A
PARAGON ENVIRONMENTAL
5664 MUD MILL ROAD
BREWERTON,NY 13029-8661

Truck ID **1148.1**
TRAILER #
Order #
DATE : 08/16/2016
TIME IN: 1:54 pm TIME OUT: 2:10 pm

CSRLF	Contaminated Soil to R	24.23tn

Gross:	**77220**	Tare:	**28760**	Net:	**48460**
Scale 5		Scale 5			**24.23 Tn**

TR#351/CS0816-03

WEIGHTMASTER: PATTY

Thanks

TICKET # 2323395

Oneida-Herkimer Solid Waste
Management Authority
1600 Genesee Street
Utica,New York 13502
(315)733-1224

CUSTOMER #1121A
PARAGON ENVIRONMENTAL
5664 MUD MILL ROAD
BREWERTON,NY 13029-8661

Truck ID **1148.2**

TRAILER #

Order #

DATE . 08/16/2016

TIME IN: 1:55 pm TIME OUT: 2:12 pm

CSRLF Contaminated Soil to R 22.83tn

Gross:	**73620**	Tare:	**27960**	Net:	**45660**
Scale 5		Scale 5			**22.83 Tn**

TRK # 341/CS0816-03

WEIGHTMASTER: PATTY

Thanks

Appendix H – Poland Sand and Gravel Permit

PERMIT
Under the Environmental Conservation Law (ECL)

Permittee and Facility Information

Permit Issued To:
PSG REALTY LLC
RAILROAD ST
PO BOX 83
POLAND, NY 13431
(315) 826-3758

Facility:
PSG POLAND PIT
ST RTE 28 - NE SIDE - S OF TOWN LINE
NEWPORT, NY 13416

Facility Permit Contact:
SCOTT ROMMEL
PO BOX 83
POLAND, NY 13431
(315) 826-3758

Facility Application Contact:
JONATHAN W HARRINGTON
HARRINGTON ASSOCIATES
390 CLARK ST EXT
GROTON, NY 13073
(607) 898-3421

Facility Location: in NEWPORT in HERKIMER COUNTY **Village:** Newport
Facility Principal Reference Point: NYTM-E: 495.695 NYTM-N: 4785.41
Latitude: 43°13'17.3" Longitude: 75°03'10.8"
Project Location: ST Rte 28; S of Town line
Authorized Activity: The mining of sand and gravel from lands owned by the permittee. Approved operations involve a total of 82.63 acres of affected land during the permit term. This affected acreage is also the limits of a "major" mining activity, with a life of mine area of 159.0 acres, identified in the approved mined land use plan. On-site material processing includes screening, crushing and washing.

Permit Authorizations

Mined Land Reclamation - Under Article 23, Title 27
Permit ID 6-2138-00024/00001 (Mined Land ID 60729)

Renewal	Effective Date: 8/3/2012	Expiration Date: 8/2/2017
Modification # 1	Effective Date: 11/1/2012	Expiration Date: 8/2/2017

Appendix I – Geotextile Product Data Sheet

WINFAB INDUSTRIAL FABRICS

PRODUCT DATA SHEET

WINFAB 3150

SEPARATION STABILIZATION

WINFAB 3150 is manufactured using high tenacity polypropylene yarns that are woven to form a dimensionally stable network, which allows the yarns to maintain their relative position.
WINFAB 3150 resists ultraviolet deterioration, rotting, and biological degradation and is inert to commonly encountered soil chemicals.

PROPERTY	TEST METHOD	MARV English	MARV Metric
Tensile Strength (Grab)	ASTM D-4632	150 x 150 lbs	667.5 x 667.5 N
Elongation	ASTM D-4632	15%	15%
CBR Puncture	ASTM D-6241	450 lbs	2002.5 N
Trapezoidal Tear	ASTM D-4533	65 x 65 lbs	289.3 x 289.3 N
UV Resistance (500 hrs)	ASTM D-4355	70%	70%
Apparent Opening Size (AOS)*	ASTM D-4751	40 US Std. Sieve	0.425 mm
Permittivity	ASTM D-4491	0.05 sec^{-1}	0.05 sec^{-1}
Water Flow Rate	ASTM D-4491	8 gpm/ft^2	326 lpm/m^2

***Maximum Average Roll Valve**

Notes:

- Mullen Burst ASTM D-3786 has been removed. It is not recognized by ASTM D-35 on Geosynthetics.
- Puncture ASTM D-4833 has been removed. It is not recognized by AASHTO M288 and has been replaced with CBR Puncture ASTM D-6241

PROPERTY	Typical English	Typical Metric
Roll Dimensions	12.x 300 ft	3.65 x 91.5 m
Roll Area	400 yd^2	334 m^2

Disclaimer: Willacoochee Industrial Fabrics assumes no liability for the completeness or accuracy of this information or the ultimate use of this information. Willacoochee Industrial Fabrics disclaims any and all implied, expressed, or statutory standards, guarantees, or warranties. This includes without limitation any implied warranty as to merchantability or fitness for a particular purpose or arising from a course of dealing or usage of trade as to equipment, materials, or information furnished herewith. This document should not be construed as engineering advice. Always consult the project engineer for project specific requirements. The end user assumes sole responsibility for the use of this information and product. The property values listed above are subject to change without notice.

Willacoochee Industrial Fabrics, Inc.
PO Box 599 • 769 West Main Street • Willacoochee, GA 31650
Ph: (912) 534-5757 • Fax: (912) 534-5533

GMA Geosynthetic Materials Association

Appendix J – Topsoil Analytical Data

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Analytical Report For

Paragon Environmental

For Lab Project ID

152973

Referencing

PEC Topsoil Stockpile, 9999

Prepared

Thursday, July 23, 2015

Any noncompliant QC parameters or other notes impacting data interpretation are flagged or documented on the final report or are noted below.

KBHansen

Certifies that this report has been approved by the Technical Director or Designee

179 Lake Avenue • Rochester, NY 14608 • (585) 647-2530 • Fax (585) 647-3311 • ELAP ID# 10958

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 152973

Client: **Paragon Environmental**

Project Reference: PEC Topsoil Stockpile, 9999

Sample Identifier: Topsoil Stockpile
Lab Sample ID: 152973-01 **Date Sampled:** 7/15/2015
Matrix: Soil **Date Received:** 7/16/2015

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 9.64	ug/Kg		7/21/2015 16:09
1,1,2,2-Tetrachloroethane	< 9.64	ug/Kg		7/21/2015 16:09
1,1,2-Trichloroethane	< 9.64	ug/Kg		7/21/2015 16:09
1,1-Dichloroethane	< 9.64	ug/Kg		7/21/2015 16:09
1,1-Dichloroethene	< 9.64	ug/Kg		7/21/2015 16:09
1,2,3-Trichlorobenzene	< 24.1	ug/Kg		7/21/2015 16:09
1,2,4-Trichlorobenzene	< 24.1	ug/Kg		7/21/2015 16:09
1,2,4-Trimethylbenzene	< 9.64	ug/Kg		7/21/2015 16:09
1,2-Dibromo-3-Chloropropane	< 48.2	ug/Kg		7/21/2015 16:09
1,2-Dibromoethane	< 9.64	ug/Kg		7/21/2015 16:09
1,2-Dichlorobenzene	< 9.64	ug/Kg		7/21/2015 16:09
1,2-Dichloroethane	< 9.64	ug/Kg		7/21/2015 16:09
1,2-Dichloropropane	< 9.64	ug/Kg		7/21/2015 16:09
1,3,5-Trimethylbenzene	< 9.64	ug/Kg		7/21/2015 16:09
1,3-Dichlorobenzene	< 9.64	ug/Kg		7/21/2015 16:09
1,4-Dichlorobenzene	< 9.64	ug/Kg		7/21/2015 16:09
1,4-dioxane	< 96.4	ug/Kg		7/21/2015 16:09
2-Butanone	< 48.2	ug/Kg		7/21/2015 16:09
2-Hexanone	< 24.1	ug/Kg		7/21/2015 16:09
4-Methyl-2-pentanone	< 24.1	ug/Kg		7/21/2015 16:09
Acetone	< 48.2	ug/Kg		7/21/2015 16:09
Benzene	< 9.64	ug/Kg		7/21/2015 16:09
Bromochloromethane	< 24.1	ug/Kg		7/21/2015 16:09
Bromodichloromethane	< 9.64	ug/Kg		7/21/2015 16:09
Bromoform	< 24.1	ug/Kg		7/21/2015 16:09
Bromomethane	< 9.64	ug/Kg		7/21/2015 16:09
Carbon disulfide	< 9.64	ug/Kg		7/21/2015 16:09
Carbon Tetrachloride	< 9.64	ug/Kg		7/21/2015 16:09
Chlorobenzene	< 9.64	ug/Kg		7/21/2015 16:09

Report Prepared Thursday, July 23, 2015

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 152973

Client: **Paragon Environmental**

Project Reference: PEC Topsoil Stockpile, 9999

Sample Identifier: Topsoil Stockpile
Lab Sample ID: 152973-01 **Date Sampled:** 7/15/2015
Matrix: Soil **Date Received:** 7/16/2015

Chloroethane	< 9.64	ug/Kg		7/21/2015 16:09
Chloroform	< 9.64	ug/Kg		7/21/2015 16:09
Chloromethane	< 9.64	ug/Kg		7/21/2015 16:09
cis-1,2-Dichloroethene	< 9.64	ug/Kg		7/21/2015 16:09
cis-1,3-Dichloropropene	< 9.64	ug/Kg		7/21/2015 16:09
Cyclohexane	< 48.2	ug/Kg		7/21/2015 16:09
Dibromochloromethane	< 9.64	ug/Kg		7/21/2015 16:09
Dichlorodifluoromethane	< 9.64	ug/Kg		7/21/2015 16:09
Ethylbenzene	< 9.64	ug/Kg		7/21/2015 16:09
Freon 113	< 9.64	ug/Kg		7/21/2015 16:09
Isopropylbenzene	< 9.64	ug/Kg		7/21/2015 16:09
m,p-Xylene	< 9.64	ug/Kg		7/21/2015 16:09
Methyl acetate	< 9.64	ug/Kg		7/21/2015 16:09
Methyl tert-butyl Ether	< 9.64	ug/Kg		7/21/2015 16:09
Methylcyclohexane	< 9.64	ug/Kg		7/21/2015 16:09
Methylene chloride	< 24.1	ug/Kg		7/21/2015 16:09
Naphthalene	< 24.1	ug/Kg		7/21/2015 16:09
n-Butylbenzene	< 9.64	ug/Kg		7/21/2015 16:09
n-Propylbenzene	< 9.64	ug/Kg		7/21/2015 16:09
o-Xylene	< 9.64	ug/Kg		7/21/2015 16:09
p-Isopropyltoluene	< 9.64	ug/Kg		7/21/2015 16:09
sec-Butylbenzene	< 9.64	ug/Kg		7/21/2015 16:09
Styrene	< 24.1	ug/Kg		7/21/2015 16:09
tert-Butylbenzene	< 9.64	ug/Kg		7/21/2015 16:09
Tetrachloroethene	< 9.64	ug/Kg		7/21/2015 16:09
Toluene	< 9.64	ug/Kg		7/21/2015 16:09
trans-1,2-Dichloroethene	< 9.64	ug/Kg		7/21/2015 16:09
trans-1,3-Dichloropropene	< 9.64	ug/Kg		7/21/2015 16:09
Trichloroethene	< 9.64	ug/Kg		7/21/2015 16:09
Trichlorofluoromethane	< 9.64	ug/Kg		7/21/2015 16:09
Vinyl chloride	< 9.64	ug/Kg		7/21/2015 16:09

Report Prepared Thursday, July 23, 2015

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 152973

Client: **Paragon Environmental**

Project Reference: PEC Topsoil Stockpile, 9999

Sample Identifier:	Topsoil Stockpile		
Lab Sample ID:	152973-01	**Date Sampled:**	7/15/2015
Matrix:	Soil	**Date Received:**	7/16/2015

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed	
1,2-Dichloroethane-d4	**106**	80.6 - 125		7/21/2015	16:09
4-Bromofluorobenzene	**97.1**	86.6 - 111		7/21/2015	16:09
Pentafluorobenzene	**102**	90.9 - 107		7/21/2015	16:09
Toluene-D8	**98.4**	90.8 - 109		7/21/2015	16:09

Method Reference(s): EPA 8260C
EPA 5035A
Data File: x24762.D

This sample was not collected following SW846 5035A specifications. Accordingly, any Volatiles soil results that are less than 200 ug/Kg, including Non Detects, may be biased low, per ELAP method 5035 guidance document from 11/15/2012.

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 152973

Client: **Paragon Environmental**

Project Reference: PEC Topsoil Stockpile, 9999

Sample Identifier:	Topsoil Stockpile		
Lab Sample ID:	152973-02	**Date Sampled:**	7/15/2015
Matrix:	Soil	**Date Received:**	7/16/2015

Hexavalent Chromium

Analyte	Result	Units	Qualifier	Date Analyzed
Chrome, Hexavalent	<1.1	mg/Kg		7/22/2015

Method Reference(s): EPA 7196A
Subcontractor ELAP ID: 11148

Part 375 Metals (ICP)

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**4.09**	mg/Kg		7/17/2015 16:51
Barium	**76.4**	mg/Kg		7/17/2015 16:51
Beryllium	**0.487**	mg/Kg		7/17/2015 16:51
Cadmium	< 0.337	mg/Kg		7/17/2015 16:51
Chromium	**15.1**	mg/Kg		7/17/2015 16:51
Copper	**11.6**	mg/Kg		7/17/2015 16:51
Lead	**13.2**	mg/Kg		7/17/2015 16:51
Manganese	**258**	mg/Kg		7/17/2015 16:51
Nickel	**14.2**	mg/Kg		7/17/2015 16:51
Selenium	< 0.675	mg/Kg		7/17/2015 16:51
Silver	< 0.675	mg/Kg		7/17/2015 16:51
Zinc	**44.3**	mg/Kg		7/17/2015 16:51

Method Reference(s): EPA 6010C
EPA 3050
Preparation Date: 7/17/2015
Data File: 071715b

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.0703**	mg/Kg		7/20/2015 12:56

Method Reference(s): EPA 7471B
Preparation Date: 7/17/2015
Data File: Hg150720A

Report Prepared Thursday, July 23, 2015

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 152973

Client: **Paragon Environmental**

Project Reference: PEC Topsoil Stockpile, 9999

Sample Identifier:	Topsoil Stockpile		
Lab Sample ID:	152973-02	**Date Sampled:**	7/15/2015
Matrix:	Soil	**Date Received:**	7/16/2015

PCBs

Analyte	Result	Units	Qualifier	Date Analyzed
PCB-1016	< 0.0382	mg/Kg		7/20/2015 21:56
PCB-1221	< 0.0382	mg/Kg		7/20/2015 21:56
PCB-1232	< 0.0382	mg/Kg		7/20/2015 21:56
PCB-1242	< 0.0382	mg/Kg		7/20/2015 21:56
PCB-1248	< 0.0382	mg/Kg		7/20/2015 21:56
PCB-1254	< 0.0382	mg/Kg		7/20/2015 21:56
PCB-1260	< 0.0382	mg/Kg		7/20/2015 21:56
PCB-1262	< 0.0382	mg/Kg		7/20/2015 21:56
PCB-1268	< 0.0382	mg/Kg		7/20/2015 21:56

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
Decachlorobiphenyl	**71.1**	30.5 - 159		7/20/2015 21:56
Tetrachloro-m-xylene	**52.5**	23.2 - 144		7/20/2015 21:56

Method Reference(s): EPA 8082A
EPA 3550C
Preparation Date: 7/21/2015

Chlorinated Pesticides

Analyte	Result	Units	Qualifier	Date Analyzed
4,4-DDD	< 3.82	ug/Kg		7/20/2015 17:21
4,4-DDE	< 3.82	ug/Kg		7/20/2015 17:21
4,4-DDT	< 3.82	ug/Kg		7/20/2015 17:21
Aldrin	< 3.82	ug/Kg		7/20/2015 17:21
alpha-BHC	< 3.82	ug/Kg		7/20/2015 17:21
beta-BHC	< 3.82	ug/Kg		7/20/2015 17:21
cis-Chlordane	< 3.82	ug/Kg		7/20/2015 17:21
delta-BHC	< 3.82	ug/Kg		7/20/2015 17:21
Dieldrin	< 3.82	ug/Kg		7/20/2015 17:21
Endosulfan I	< 3.82	ug/Kg		7/20/2015 17:21
Endosulfan II	< 3.82	ug/Kg		7/20/2015 17:21
Endosulfan Sulfate	< 3.82	ug/Kg		7/20/2015 17:21

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 152973

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Project Reference: PEC Topsoil Stockpile, 9999

Sample Identifier:	Topsoil Stockpile		
Lab Sample ID:	152973-02	**Date Sampled:**	7/15/2015
Matrix:	Soil	**Date Received:**	7/16/2015

Endrin	< 3.82	ug/Kg		7/20/2015 17:21
Endrin Aldehyde	< 3.82	ug/Kg		7/20/2015 17:21
Endrin Ketone	< 3.82	ug/Kg		7/20/2015 17:21
gamma-BHC (Lindane)	< 3.82	ug/Kg		7/20/2015 17:21
Heptachlor	< 3.82	ug/Kg		7/20/2015 17:21
Heptachlor Epoxide	< 3.82	ug/Kg		7/20/2015 17:21
Methoxychlor	< 3.82	ug/Kg		7/20/2015 17:21
Toxaphene	< 38.2	ug/Kg		7/20/2015 17:21
trans-Chlordane	< 3.82	ug/Kg		7/20/2015 17:21

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
Decachlorobiphenyl (1)	**98.3**	32.1 - 117.1		7/20/2015 17:21
Tetrachloro-m-xylene (1)	**59.6**	28.3 - 115.3		7/20/2015 17:21

Method Reference(s): EPA 8081B
EPA 3550C
Preparation Date: 7/21/2015

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Result	Units	Qualifier	Date Analyzed
1,1-Biphenyl	< 382	ug/Kg		7/20/2015 20:11
1,2,4,5-Tetrachlorobenzene	< 382	ug/Kg		7/20/2015 20:11
1,2,4-Trichlorobenzene	< 382	ug/Kg		7/20/2015 20:11
1,2-Dichlorobenzene	< 382	ug/Kg		7/20/2015 20:11
1,3-Dichlorobenzene	< 382	ug/Kg		7/20/2015 20:11
1,4-Dichlorobenzene	< 382	ug/Kg		7/20/2015 20:11
2,3,4,6-Tetrachlorophenol	< 382	ug/Kg		7/20/2015 20:11
2,4,5-Trichlorophenol	< 765	ug/Kg		7/20/2015 20:11
2,4,6-Trichlorophenol	< 382	ug/Kg		7/20/2015 20:11
2,4-Dichlorophenol	< 382	ug/Kg		7/20/2015 20:11
2,4-Dimethylphenol	< 382	ug/Kg		7/20/2015 20:11
2,4-Dinitrophenol	< 765	ug/Kg		7/20/2015 20:11
2,4-Dinitrotoluene	< 382	ug/Kg		7/20/2015 20:11
2,6-Dinitrotoluene	< 382	ug/Kg		7/20/2015 20:11
2-Chloronaphthalene	< 382	ug/Kg		7/20/2015 20:11

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 152973

Client: **Paragon Environmental**

Project Reference: PEC Topsoil Stockpile, 9999

Sample Identifier: Topsoil Stockpile

Lab Sample ID: 152973-02 **Date Sampled:** 7/15/2015

Matrix: Soil **Date Received:** 7/16/2015

2-Chlorophenol	< 382	ug/Kg	7/20/2015 20:11
2-Methylnapthalene	< 382	ug/Kg	7/20/2015 20:11
2-Methylphenol	< 382	ug/Kg	7/20/2015 20:11
2-Nitroaniline	< 765	ug/Kg	7/20/2015 20:11
2-Nitrophenol	< 382	ug/Kg	7/20/2015 20:11
3&4-Methylphenol	< 382	ug/Kg	7/20/2015 20:11
3,3'-Dichlorobenzidine	< 382	ug/Kg	7/20/2015 20:11
3-Nitroaniline	< 765	ug/Kg	7/20/2015 20:11
4,6-Dinitro-2-methylphenol	< 765	ug/Kg	7/20/2015 20:11
4-Bromophenyl phenyl ether	< 382	ug/Kg	7/20/2015 20:11
4-Chloro-3-methylphenol	< 382	ug/Kg	7/20/2015 20:11
4-Chloroaniline	< 382	ug/Kg	7/20/2015 20:11
4-Chlorophenyl phenyl ether	< 382	ug/Kg	7/20/2015 20:11
4-Nitroaniline	< 765	ug/Kg	7/20/2015 20:11
4-Nitrophenol	< 765	ug/Kg	7/20/2015 20:11
Acenaphthene	< 382	ug/Kg	7/20/2015 20:11
Acenaphthylene	< 382	ug/Kg	7/20/2015 20:11
Acetophenone	< 382	ug/Kg	7/20/2015 20:11
Anthracene	< 382	ug/Kg	7/20/2015 20:11
Atrazine	< 382	ug/Kg	7/20/2015 20:11
Benzaldehyde	< 382	ug/Kg	7/20/2015 20:11
Benzo (a) anthracene	< 382	ug/Kg	7/20/2015 20:11
Benzo (a) pyrene	< 382	ug/Kg	7/20/2015 20:11
Benzo (b) fluoranthene	< 382	ug/Kg	7/20/2015 20:11
Benzo (g,h,i) perylene	< 382	ug/Kg	7/20/2015 20:11
Benzo (k) fluoranthene	< 382	ug/Kg	7/20/2015 20:11
Bis (2-chloroethoxy) methane	< 382	ug/Kg	7/20/2015 20:11
Bis (2-chloroethyl) ether	< 382	ug/Kg	7/20/2015 20:11
Bis (2-chloroisopropyl) ether	< 382	ug/Kg	7/20/2015 20:11
Bis (2-ethylhexyl) phthalate	< 382	ug/Kg	7/20/2015 20:11
Butylbenzylphthalate	< 382	ug/Kg	7/20/2015 20:11
Caprolactam	< 382	ug/Kg	7/20/2015 20:11

Report Prepared Thursday, July 23, 2015

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 152973

Client: **Paragon Environmental**

Project Reference: PEC Topsoil Stockpile, 9999

Sample Identifier: Topsoil Stockpile
Lab Sample ID: 152973-02 **Date Sampled:** 7/15/2015
Matrix: Soil **Date Received:** 7/16/2015

Carbazole	< 382	ug/Kg	7/20/2015 20:11
Chrysene	< 382	ug/Kg	7/20/2015 20:11
Dibenz (a,h) anthracene	< 382	ug/Kg	7/20/2015 20:11
Dibenzofuran	< 382	ug/Kg	7/20/2015 20:11
Diethyl phthalate	< 382	ug/Kg	7/20/2015 20:11
Dimethyl phthalate	< 765	ug/Kg	7/20/2015 20:11
Di-n-butyl phthalate	< 382	ug/Kg	7/20/2015 20:11
Di-n-octylphthalate	< 382	ug/Kg	7/20/2015 20:11
Fluoranthene	< 382	ug/Kg	7/20/2015 20:11
Fluorene	< 382	ug/Kg	7/20/2015 20:11
Hexachlorobenzene	< 382	ug/Kg	7/20/2015 20:11
Hexachlorobutadiene	< 382	ug/Kg	7/20/2015 20:11
Hexachlorocyclopentadiene	< 382	ug/Kg	7/20/2015 20:11
Hexachloroethane	< 382	ug/Kg	7/20/2015 20:11
Indeno (1,2,3-cd) pyrene	< 382	ug/Kg	7/20/2015 20:11
Isophorone	< 382	ug/Kg	7/20/2015 20:11
Naphthalene	< 382	ug/Kg	7/20/2015 20:11
Nitrobenzene	< 382	ug/Kg	7/20/2015 20:11
N-Nitroso-di-n-propylamine	< 382	ug/Kg	7/20/2015 20:11
N-Nitrosodiphenylamine	< 382	ug/Kg	7/20/2015 20:11
Pentachlorophenol	< 765	ug/Kg	7/20/2015 20:11
Phenanthrene	< 382	ug/Kg	7/20/2015 20:11
Phenol	< 382	ug/Kg	7/20/2015 20:11
Pyrene	< 382	ug/Kg	7/20/2015 20:11

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 152973

Client: **Paragon Environmental**

Project Reference: PEC Topsoil Stockpile, 9999

Sample Identifier: Topsoil Stockpile

Lab Sample ID: 152973-02 **Date Sampled:** 7/15/2015

Matrix: Soil **Date Received:** 7/16/2015

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed	
2,4,6-Tribromophenol	**51.0**	41.6 - 115		7/20/2015	20:11
2-Fluorobiphenyl	**34.2**	35.9 - 103	*	7/20/2015	20:11
2-Fluorophenol	**40.3**	39.9 - 87.9		7/20/2015	20:11
Nitrobenzene-d5	**33.3**	37.2 - 90.6	*	7/20/2015	20:11
Phenol-d5	**39.4**	42.3 - 90.6	*	7/20/2015	20:11
Terphenyl-d14	**76.1**	58.2 - 113		7/20/2015	20:11

Method Reference(s): EPA 8270D
EPA 3550C
Preparation Date: 7/21/2015
Data File: B06512.D

Herbicides

Analyte	Result	Units	Qualifier	Date Analyzed
2,4,5-TP (Silvex)	<226	ug/Kg		7/20/2015

Method Reference(s): EPA 8151A
Subcontractor ELAP ID: 11148

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	< 0.612	mg/Kg		7/23/2015

Method Reference(s): EPA 9014
Preparation Date: 7/22/2015

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 152973

Client: **Paragon Environmental**

Project Reference: PEC Topsoil Stockpile, 9999

Sample Identifier:	Topsoil Stockpile		
Lab Sample ID:	152973-03	**Date Sampled:**	7/15/2015
Matrix:	Soil	**Date Received:**	7/16/2015

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 7.36	ug/Kg		7/21/2015 16:58
1,1,2,2-Tetrachloroethane	< 7.36	ug/Kg		7/21/2015 16:58
1,1,2-Trichloroethane	< 7.36	ug/Kg		7/21/2015 16:58
1,1-Dichloroethane	< 7.36	ug/Kg		7/21/2015 16:58
1,1-Dichloroethene	< 7.36	ug/Kg		7/21/2015 16:58
1,2,3-Trichlorobenzene	< 18.4	ug/Kg		7/21/2015 16:58
1,2,4-Trichlorobenzene	< 18.4	ug/Kg		7/21/2015 16:58
1,2,4-Trimethylbenzene	< 7.36	ug/Kg		7/21/2015 16:58
1,2-Dibromo-3-Chloropropane	< 36.8	ug/Kg		7/21/2015 16:58
1,2-Dibromoethane	< 7.36	ug/Kg		7/21/2015 16:58
1,2-Dichlorobenzene	< 7.36	ug/Kg		7/21/2015 16:58
1,2-Dichloroethane	< 7.36	ug/Kg		7/21/2015 16:58
1,2-Dichloropropane	< 7.36	ug/Kg		7/21/2015 16:58
1,3,5-Trimethylbenzene	< 7.36	ug/Kg		7/21/2015 16:58
1,3-Dichlorobenzene	< 7.36	ug/Kg		7/21/2015 16:58
1,4-Dichlorobenzene	< 7.36	ug/Kg		7/21/2015 16:58
1,4-dioxane	< 73.6	ug/Kg		7/21/2015 16:58
2-Butanone	< 36.8	ug/Kg		7/21/2015 16:58
2-Hexanone	< 18.4	ug/Kg		7/21/2015 16:58
4-Methyl-2-pentanone	< 18.4	ug/Kg		7/21/2015 16:58
Acetone	< 36.8	ug/Kg		7/21/2015 16:58
Benzene	< 7.36	ug/Kg		7/21/2015 16:58
Bromochloromethane	< 18.4	ug/Kg		7/21/2015 16:58
Bromodichloromethane	< 7.36	ug/Kg		7/21/2015 16:58
Bromoform	< 18.4	ug/Kg		7/21/2015 16:58
Bromomethane	< 7.36	ug/Kg		7/21/2015 16:58
Carbon disulfide	< 7.36	ug/Kg		7/21/2015 16:58
Carbon Tetrachloride	< 7.36	ug/Kg		7/21/2015 16:58
Chlorobenzene	< 7.36	ug/Kg		7/21/2015 16:58

Report Prepared Thursday, July 23, 2015

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 152973

Client: **Paragon Environmental**

Project Reference: PEC Topsoil Stockpile, 9999

Sample Identifier: Topsoil Stockpile
Lab Sample ID: 152973-03 **Date Sampled:** 7/15/2015
Matrix: Soil **Date Received:** 7/16/2015

Chloroethane	< 7.36	ug/Kg	7/21/2015 16:58
Chloroform	< 7.36	ug/Kg	7/21/2015 16:58
Chloromethane	< 7.36	ug/Kg	7/21/2015 16:58
cis-1,2-Dichloroethene	< 7.36	ug/Kg	7/21/2015 16:58
cis-1,3-Dichloropropene	< 7.36	ug/Kg	7/21/2015 16:58
Cyclohexane	< 36.8	ug/Kg	7/21/2015 16:58
Dibromochloromethane	< 7.36	ug/Kg	7/21/2015 16:58
Dichlorodifluoromethane	< 7.36	ug/Kg	7/21/2015 16:58
Ethylbenzene	< 7.36	ug/Kg	7/21/2015 16:58
Freon 113	< 7.36	ug/Kg	7/21/2015 16:58
Isopropylbenzene	< 7.36	ug/Kg	7/21/2015 16:58
m,p-Xylene	< 7.36	ug/Kg	7/21/2015 16:58
Methyl acetate	< 7.36	ug/Kg	7/21/2015 16:58
Methyl tert-butyl Ether	< 7.36	ug/Kg	7/21/2015 16:58
Methylcyclohexane	< 7.36	ug/Kg	7/21/2015 16:58
Methylene chloride	< 18.4	ug/Kg	7/21/2015 16:58
Naphthalene	< 18.4	ug/Kg	7/21/2015 16:58
n-Butylbenzene	< 7.36	ug/Kg	7/21/2015 16:58
n-Propylbenzene	< 7.36	ug/Kg	7/21/2015 16:58
o-Xylene	< 7.36	ug/Kg	7/21/2015 16:58
p-Isopropyltoluene	< 7.36	ug/Kg	7/21/2015 16:58
sec-Butylbenzene	< 7.36	ug/Kg	7/21/2015 16:58
Styrene	< 18.4	ug/Kg	7/21/2015 16:58
tert-Butylbenzene	< 7.36	ug/Kg	7/21/2015 16:58
Tetrachloroethene	< 7.36	ug/Kg	7/21/2015 16:58
Toluene	< 7.36	ug/Kg	7/21/2015 16:58
trans-1,2-Dichloroethene	< 7.36	ug/Kg	7/21/2015 16:58
trans-1,3-Dichloropropene	< 7.36	ug/Kg	7/21/2015 16:58
Trichloroethene	< 7.36	ug/Kg	7/21/2015 16:58
Trichlorofluoromethane	< 7.36	ug/Kg	7/21/2015 16:58
Vinyl chloride	< 7.36	ug/Kg	7/21/2015 16:58

Report Prepared Thursday, July 23, 2015

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 152973

Client: **Paragon Environmental**

Project Reference: PEC Topsoil Stockpile, 9999

Sample Identifier:	Topsoil Stockpile		
Lab Sample ID:	152973-03	**Date Sampled:**	7/15/2015
Matrix:	Soil	**Date Received:**	7/16/2015

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed	
1,2-Dichloroethane-d4	**103**	80.6 - 125		7/21/2015	16:58
4-Bromofluorobenzene	**93.5**	86.6 - 111		7/21/2015	16:58
Pentafluorobenzene	**103**	90.9 - 107		7/21/2015	16:58
Toluene-D8	**96.6**	90.8 - 109		7/21/2015	16:58

Method Reference(s): EPA 8260C
EPA 5035A
Data File: x24764.D

This sample was not collected following SW846 5035A specifications. Accordingly, any Volatiles soil results that are less than 200 ug/Kg, including Non Detects, may be biased low, per ELAP method 5035 guidance document from 11/15/2012.

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Analytical Report Appendix

The reported results relate only to the samples as they have been received by the laboratory.

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All soil/sludge samples have been reported on a dry weight basis, unless qualified “reported as received”. Other solids are reported as received.

Low level Volatiles blank reports for soil/solid matrix are based on a nominal 5 gram weight. Sample results and reporting limits are based on actual weight, which may be more or less than 5 grams.

The Chain of Custody provides additional information, including compliance with sample condition requirements upon receipt. Sample condition requirements are defined under the 2003 NELAC Standard, sections 5.5.8.3.1 and 5.5.8.3.2.

NYSDOH ELAP does not certify for all parameters. Paradigm Environmental Services or the indicated subcontracted laboratory does hold certification for all analytes where certification is offered by ELAP unless otherwise specified.   Aliquots separated for certain tests, such as TCLP, are indicated on the Chain of Custody and final reports with an “A” suffix.

Data qualifiers are used, when necessary, to provide additional information about the data. This information may be communicated as a flag or as text at the bottom of the report. Please refer to the following list of analyte-specific, frequently used data flags and their meaning:

“<” = Analyzed for but not detected at or above the quantitation limit.
“E” = Result has been estimated, calibration limit exceeded.
“Z” = See case narrative.
“D” = Sample, Laboratory Control Sample, or Matrix Spike Duplicate results above Relative Percent Difference limit.
“M” = Matrix spike recoveries outside QC limits. Matrix bias indicated.
“B” = Method blank contained trace levels of analyte. Refer to included method blank report.
“J” = Result estimated between the quantitation limit and half the quantitation limit.
"L" = Laboratory Control Sample recovery outside accepted QC limits.
“P” = Concentration differs by more than 40% between the primary and secondary analytical columns.
"NC" = Not calculable. Applicable to RPD if sample or duplicate result is non-detect or estimated (see primary report for data flags). Applicable to MS if sample is greater or equal to ten times the spike added. Applicable to sample surrogates or MS if sample dilution is 10x or higher.
"" = Indicates any recoveries outside associated acceptance windows. Surrogate outliers in samples are presumed matrix effects. LCS demonstrates method compliance unless otherwise noted.*
"(1)" = Indicates data from primary column used for QC calculation.

GENERAL TERMS AND CONDITIONS
LABORATORY SERVICES

These Terms and Conditions embody the whole agreement of the parties in the absence of a signed and executed contract between the Laboratory (LAB) and Client. They shall supersede all previous communications, representations, or agreements, either verbal or written, between the parties. The LAB specifically rejects all additional, inconsistent, or conflicting terms, whether printed or otherwise set forth in any purchase order or other communication from the Client to the LAB. The invalidity or unenforceability in whole or in part of any provision, tern or condition hereof shall not affect in any way the validity or enforceability of the remainder of the Terms and Conditions. No waiver by LAB of any provision, term, or condition hereof or of any breach by or obligation of the Client hereunder shall constitute a waiver of such provision, term, or condition on any other occasion or a waiver of any other breach by or obligation of the Client. This agreement shall be administered and interpreted under the laws of the state which services are procured.

Warranty. Recognizing that the nature of many samples is unknown and that some may contain potentially hazardous components, LAB warrants only that it will perform testing services, obtain findings, and prepare reports in accordance with generally accepted analytical laboratory principles and practices at the time of performance of services. LAB makes no other warranty, express or implied.

Scope and Compensation. LAB agrees to perform the services described in the chain of custody to which these terms and conditions are attached. Unless the parties agree in writing to the contrary, the duties of LAB shall not be construed to exceed the services specifically described. LAB wi use LAB default method for all tests unless specified otherwise on the Work Order.

Payment terms are net 30 days from the date of invoice. All overdue payments are subject to an interest charge of one and one-half percent (1-1/2%) per month or a portion thereof. Client shall also be responsible for costs of collection, including payment of reasonable attorney fees if such expense is incurred. The prices, unless stated, do not include any sale, use or other taxes. Such taxes will be added to invoice prices when required.

Prices. Compensation for services performed will be based on the current Lab Analytical Fee Schedule or on quotations agreed to in writing by the parties. Turnaround time based charges are determined from the time of resolution of all work order questions. Testimony, court appearances or data compilation for legal action will be charged separately. Evaluation and reporting of initial screening runs may incur additional fees.

Limitations of Liability. In the event of any error, omission, or other professional negligence, the sole and exclusive responsibility of LAB shall be to re-perform the deficient work at its own expense and LAB shall have no other liability whatsoever. All claims shall be deemed waived unless made in writing and received by LAB within ninety (90) days following completion of services.

LAB shall have no liability, obligation, or responsibility of any kind for losses, costs, expenses, or other damages (including but not limited to any special, direct, incidental or consequential damages) with respect to LAB's services or results.

All results provided by LAB are strictly for the use of its clients and LAB is in no way responsible for the use of such results by clients or third parties. All reports should be considered in their entirety, and LAB is not responsible for the separation, detachment, or other use of any portion of these reports. Client may not assign the lab report without the written consent of the LAB.

Client covenants and agrees, at its/his/her sole expense, to indemnify, protect, defend, and save harmless the LAB from and against any and all damages, losses, liabilities, obligations, penalties, claims, litigation, demands, defenses, judgments, suits, actions, proceedings, costs, disbursements and/or expenses (including, without limitation attorneys' and experts' fees and disbursements) of any kind whatsoever which may at any time be imposed upon, incurred by or asserted or awarded against client relating to, resulting from or arising out of (a) the breach of this agreement by this client, (b) the negligence of the client in handling, delivering or disclosing any hazardous substance, (c) the violation of the Client of any applicable law, (d) non-compliance by the Client with any environmental permit or (e) a material misrepresentation in disclosing the materials to be tested.

Hazard Disclosure. Client represents and warrants that any sample delivered to LAB will be preceded or accompanied by complete written disclosure of the presence of any hazardous substances known or suspected by Client. Client further warrants that any sample containing any hazardous substance that is to be delivered to LAB will be packaged, labeled, transported, and delivered properly and in accordance with applicable laws.

Sample Handling. Prior to LAB's acceptance of any sample (or after any revocation of acceptance), the entire risk of loss or of damage to such sample remains with Client. Samples are accepted when receipt is acknowledged on chain of custody documentation. In no event will LAB have any responsibility for the action or inaction of any carrier shipping or delivering any sample to or from LAB premises.

Client authorizes LAB to proceed with the analysis of samples as received by the laboratory, recognizing that any samples not in compliance with all current DOH-ELAP-NELAP requirements for containers, preservation or holding time will be noted as such on th final report.

Disposal of hazardous waste samples is the responsibility of the Client. If the Client does not wish such samples returned, LAB may add storage and disposal fees to the final invoice. Maximum storage time for samples is 30 days after completion of analysis unless modified by applicable state or federal laws. Client will be required to give the LAB written instructions concerning disposal of these samples.

LAB reserves the absolute right, exercisable at any time, to refuse to receive delivery of, refuse to accept, or revoke acceptance of any sample, which, in the sole judgment of LAB (a) is of unsuitable volume, (b) may be or become unsuitable for or may pose a risk in handling, transport, or processing for any health, safety, environmental or other reason whether or not due to the presence in the sample of any hazardous substance, and whether or not such presence has been disclosed to LAB by Client or (c) if the condition or sample date make the sample unsuitable for analysis.

Legal Responsibility. LAB is solely responsible for performance of this contract, and no affiliated company, director, officer, employee, or agent shall have any legal responsibility hereunder, whether in contract or tort including negligence.

Assignment. LAB may assign its performance obligations under this contract to other parties, as it deems necessary. LAB shall disclose to Client any assignee (subcontractor) by ELAP ID # on the submitted final report.

Force Majeure. LAB shall have no responsibility or liability to the Client for any failure or delay in performance by LAB, which results in whole or in part from any cause or circumstance beyond the reasonable control of LAB. Such causes and circumstances shall include, but not limited to, acts of God, acts or orders of any government authority, strikes or other labor disputes, natural disasters, accidents, wars, civil disturbances, difficulties or delays in transportation, mail or delivery services, inability to obtain sufficient services or supplies from LAB's usual suppliers, or any other cause beyond LAB's reasonable control.

Law. This contract shall be continued under the laws of the State of New York without regard to its conflicts of laws provision.

10f2

179 Lake Avenue, Rochester, NY 14608 Office (585) 647-2530 Fax (585) 647-3311

CHAIN OF CUSTODY

PARADIGM ENVIRONMENTAL SERVICES, INC.

REPORT TO:		INVOICE TO:	
COMPANY: Paragon Env.		COMPANY: Same	
ADDRESS: 5664 Mud Mill Rd		ADDRESS:	
CITY: Brewerton STATE: NY ZIP: 13029		CITY: STATE: ZIP:	
PHONE: 315-699-0840	FAX: 315-699-0841	PHONE:	FAX:
ATTN: Chris		ATTN:	
COMMENTS: email Chriss@paragonec.net			

LAB PROJECT #: 152973

CLIENT PROJECT #: 9999

TURNAROUND TIME: (WORKING DAYS) ☐ 1 ☐ 2 ☐ 3 ☒ 5 (STD) ☐ OTHER

Quotation #

PROJECT NAME/SITE NAME: PEC Topsoil Stockpile

REQUESTED ANALYSIS

	DATE	TIME	COMPOSITE	GRAB	SAMPLE LOCATION/FIELD ID	MATRIX	NUMBER CONTAINERS	VOC TCL+STARS	SVOC TCL	Inorganics	PCBs ~~LL~~ mr 7/16/15	Pesticides	Silvex	Hex Cr	Part 375 metals	TCN	per part 375 list mr 7/16/15	REMARKS	PARADIGM LAB SAMPLE NUMBER
1	7/15/15	1345		X	Topsoil Stockpile	S	1	X										Part 375 parameters + DL	01
2	7/15/15	1350	X		Top soil Stockpile	S	4		X	X	X	X							02
3	7/15/15	1355		X	Topsoil Stockpile	S	1	X											03
4																			
5																			
6																			
7																			
8																			
9																			
10																			

LAB USE ONLY BELOW THIS LINE

Sample Condition: Per NELAC/ELAP 210/241/242/243/244

Receipt Parameter	NELAC Compliance
Container Type:	Y ☐ N ☐
Comments:	
Preservation:	Y ☐ N ☐
Comments:	
Holding Time:	Y ☐ N ☐
Comments:	
Temperature:	Y ☐ N ☐
Comments: 2°C iced 7/16/15 13:28	

	Date/Time
Sampled By: [illegible]	7/15/15 @ 1345-1355
Relinquished By: [illegible]	7/15/15 @ 18:58
Received By: [illegible]	7/15/15 18:58
Received @ Lab By: [illegible]	7/16/15 1518

Total Cost:

P.I.F.

PARADIGM
ENVIRONMENTAL SERVICES, INC

Chain of Custody Supplement

Client:	Paragon	**Completed by:**	Molly Vail
Lab Project ID:	152973	**Date:**	7/16/15

Sample Condition Requirements

Per NELAC/ELAP 210/241/242/243/244

NELAC compliance with the sample condition requirements upon receipt

Condition	Yes	No	N/A
Container Type	X	5035	
Comments			
Transferred to method-compliant container			X
Headspace (<1 mL)			X
Comments			
Preservation			X
Comments			
Chlorine Absent (<0.10 ppm per test strip)			X
Comments			
Holding Time	X		
Comments			
Temperature	X		X met
Comments	2°C iced 7/16/15 1328		
Sufficient Sample Quantity	X		
Comments	sub sent directly to sub lab		

179 Lake Avenue • Rochester, NY 14608 • (585) 647-2530 • Fax (585) 647-3311 • ELAP ID# 10958

CHAIN OF CUSTODY

PAGE OF

ALPHA ANALYTICAL World Class Chemistry

Westborough, MA
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA
TEL: 508-822-9300
FAX: 508-822-3288

Project Information

Project Name: Paradigm

Project Location:

Project #:

Project Manager:

ALPHA Quote #:

Client Information

Client: Envirotest Laboratories

Address: 315 Fullerton Avenue

Newburgh, NY 12550

Phone: (845) 562-0890

Fax: (845) 562-0841

Email: mruthven@envirotestlaboratorie

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☐ Standard ☒ Rush (ONLY IF PRE-APPROVED)

Due Date: 7/22/15 Time:

Other Project Specific Requirements/Comments/Detection Limits:

Date Rec'd in Lab: 7/17/15

ALPHA Job #: L1516545

Report Information Data Deliverables

☐ FAX ☐ EMAIL

☐ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program | Criteria

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☐ Yes ☐ No Are MCP Analytical Methods Required?

☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

ANALYSIS

SAMPLE HANDLING
Filtration
☐ Done
☐ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	Hex Cr	Silvex											Sample Specific Comments	TOTAL # BOTTLES
16545 -01	Top Soil Stockpile	7/15/15	1350	Soil	DH	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
	420-92820					☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
					Container Type	-	-	-	-	-	-	-	-	-	-	-	-		
					Preservative	-	-	-	-	-	-	-	-	-	-	-	-		

PLEASE ANSWER QUESTIONS ABOVE!

Relinquished By:	Date/Time	Received By:	Date/Time
L Maraaro	7/16/15 1630	[illegible]	7/17/15 947

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

IS YOUR PROJECT MA MCP or CT RCP?

FORM NO: 01-01(I)
(rev. 5-JAN-12)

WSP
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