

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

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(via E-mail and Certified Mail)

December 28, 2016

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Subject: Site Management Plan (SMP)
Site: 5140 Site (C633079), Town of Whitestown, Oneida County
Tax map parcel numbers: Section 305.018 Block 3 Lot 31

Dear Mr. Sacco and Mrs. Marsh Esq,

Pursuant to Article 71, Title 36 of the New York State Environmental Conservation Law, TBS Group LLC, owner of the above referenced property, granted the New York State Department of Environmental Conservation (Department) an environmental easement (EE) on October 14, 2015. As per the requirements of the EE, a Site Management Plan (SMP) dated February 23, 2016 prepared by WSP Group (copy enclosed) for 5140 Site was submitted. The Department hereby approves the above SMP with following modifications:

1. The word "draft" is omitted from the title page and other parts of the document if used in reference to February 2016 SMP.
2. The Certification Statement page is omitted from SMP.
3. All text indicating that the site specific SCO for polychlorinated biphenyls (PCBs) is 10 mg/kg, is hereby corrected to state that the applicable SCOs for total PCBs are 1 ppm in surficial soil and 10 ppm in subsurface soil.
4. All text indicating that no PCBs were present or were a concern in groundwater is omitted. The detection limits for the PCB analysis were above the screening level



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of 0.09 ug/l. Also, the ground water was not sampled and analyzed for volatile organic compounds (VOCs) even though they were detected in soil vapor and indoor samples. As a result, further evaluation of ground water using proper analytical method is required.

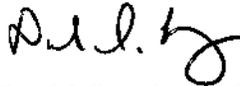
5. Table 1.1: Notification is revised by replacing Mr. Paul Patel and his contact information with Parag Amin, parag.amin@dec.ny.gov and (518) 402-9648.
6. Section 2.5.1 Remaining Contamination, Soil: The exceedances of commercial SCOs for total PCBs (i.e. 1 ppm surface, 10 ppm subsurface) underneath the slab and the soils located in the southwestern portion of the site are included in the remaining contamination.
7. Section 2.5.4 Remaining Contamination, Groundwater: Refer to modification #4. The entire text is replaced to indicate that additional evaluation is required.
8. Section 2.5.6 Remaining Contamination, Soil Vapor: Chlorinated VOCs were detected in soil vapor and/or indoor air. The entire text is replaced to indicate that additional evaluation is required to assess soil vapor intrusion concerns.
9. Section 4.0 Monitoring and Sampling Plan: As indicated in modifications #4 and 7, the text is modified to indicate that one round of groundwater samples will be collected from existing monitoring wells and analyzed for VOCs, SVOCs, inorganics and PCBs. Such sampling will be performed within 60 days of the approval of the SMP. Based on the results of the above analysis, and Department's determination of the need of additional remediation, a corrective measures work plan to address ground water and/or soil vapor will be submitted to the Department for review and approval.
10. Section 4.0 Monitoring and Sampling Plan: As indicated in modification #8, the text is modified to indicate that based on the results of the ground water analysis, and Department's determination on the need of additional remediation, a corrective measures work plan to address soil vapor intrusion concerns will be submitted to the Department for review and approval.
11. Section 7.0 Reporting Requirements: This section is modified to indicate that the validated ground water analytical data mentioned in modification #9 above, along with the corrective measures work plan, if necessary, will be submitted to the Department for review and approval.
12. Section 7.4, Corrective Measures Plan: As mentioned in modification #9 and #10, the text is modified to indicate that the corrective measure plan will be proposed based on the results of the ground water sampling, and Department's determination on the need of the additional remediation.

13. Appendix D: The Excavation Plan is modified to include that the plan will also be implemented when soils become accessible e.g. soils in the vicinity of building foundations near the former concrete pad which exceeds commercial SCOs. Also, the Department's contact person, Paul Patel is replaced with Parag Amin.
14. Appendix G Community Air Monitoring Plan: The text is modified to include that the perimeter ambient air monitoring of VOCs as per DER-10, will be performed while conducting any ground intrusive activity, if deemed necessary by the Department.

Please note that the Department is evaluating the site to determine its appropriate status on the New York State Registry of Inactive Hazardous Waste Disposal Sites. The Department has attempted to communicate with Mr Sacco on several occasions, however due to lack of response, the Department has taken above mentioned actions.

The Department will place a copy of the approved SMP in the document repository established for the project. If you have any questions, please contact me at parag.amin@dec.ny.gov or at (518) 402-9662. Thank you.

Yours sincerely,



David Crosby, P.E.
Section Chief, Section B
Remedial Bureau C

Encl: (see CD)

Ecc w/encl: K. Jacobs, 5140 Commercial Drive, LLC
D. Bouchard, WSP Group
G. Rys, NYSDOH
P. Taylor, DEC Region 6
P. Amin, DER PM

Ebcc w/o encl:

M. Schuck, NYSDOH
G. Heitzman, DER
A. Guglielmi, OGC

A photograph of a forest stream with mossy rocks. The water is clear and flows over large, rounded rocks covered in vibrant green moss. The surrounding forest is dense with tall trees and a thick canopy of green leaves. Sunlight filters through the trees, creating a dappled light effect on the water and rocks. A large green polygonal shape is overlaid on the left side of the image, containing the title and site information.

Site Management Plan (DRAFT)

5140 Site

Yorkville, New York

NYSDEC Site # C633079

February 23, 2016

Site Management Plan (DRAFT)

5140 Site
Oneida County
Yorkville, New York
NYSDEC Site # C633079

February 23, 2016

Client

5140 Commercial Drive LLC
5140 Commercial Drive
Yorkville, New York

Consultant

WSP
300 Trade Center, Suite 4690
Woburn, Massachusetts 01801

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

[MONTH YEAR]

CERTIFICATION STATEMENT

I _____ 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).

_____ P.E.

_____ DATE

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Figure 1 – Site Location

Figure 2 – Adjacent Properties

Figure 3 – Site Layout

Figure 4 – Groundwater Elevation Map – October 2014

Figure 5 – Remaining Contamination, Barrier Systems, and Institutional Control Boundary

Appendices

Appendix A – Environmental Easement

Appendix B – List of Site Contacts

Appendix C – Site Legal Description

Appendix D – Excavation Work Plan

Appendix E – Site Management Plan Annual Reporting Form

Appendix F – Site-Specific Health and Safety Plan
Appendix G – Community Air Monitoring Plan

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** (NYSDEC Site # C633079)
 5140 Commercial Drive
 Yorkville, New York

<p>Institutional Controls:</p>	<p>1. The property within the institutional control boundary may only be used for Commercial/Industrial purposes.</p> <p>2. The following specific controls have been implemented:</p> <ul style="list-style-type: none"> ■ 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 <i>Remaining Contamination</i>, soils that are suspected of having <i>Discovered Contamination</i>, 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.
<p>Engineering Controls:</p>	<p>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.</p>

Site Identification: **5140 Site** (NYSDEC Site # C633079)
5140 Commercial Drive
Yorkville, New York

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

1.1 General

This Site Management Plan (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). The Site is currently in the New York State (NYS) Brownfield Cleanup Program (BCP; Site No. C633079), which is administered by the New York State Department of Environmental Conservation (NYSDEC).

5140 Commercial Drive, LLC (5140) entered into a Brownfield Cleanup Agreement (BCA; Index #C633079-06-13) in August 2013¹ with the NYSDEC to remediate the site. 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.

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., on behalf of 5140, 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

¹ The property was sold on July 29, 2015, to TSB Group, LLC. BCA was amended on October 20, 2015, to reflect the new owner of the site.

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
Mr. Paul Patel	(518) 402-8801; anand.patel@dec.ny.gov
[NYSDEC Regional HW Engineer]	[phone] [email address]
[NYSDEC Site Control]	[phone] [email address]

* 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 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. 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 ($\mu\text{g}/100\text{ cm}^2$). 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 ($\mu\text{g}/\text{l}$) 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 ($\mu\text{g}/100\text{ cm}^2$), which were above the U.S. Environmental Protection Agency's (EPA's) 10 $\mu\text{g}/100\text{ cm}^2$ 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 line².

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.

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)

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.

-
- 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 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 TSCA waste 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 sample³. 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.

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 unrestricted use remedial alternative and 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.

2.3.2.3 Final Remediation

This is a draft SMP being prepared in advance of completing the final remedy. A summary of the final remediation will be included once the work has been completed.

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.

2.4 Remedial Action Objectives

The Remediation Action Objectives (RAOs) for the Site as presented in the *Alternatives Analysis and Remedial Action Work Plan*,⁴ 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

⁴ The NYSDEC has not issued a formal decision document approving the Remedial Action Objectives proposed in the October 2015 *Alternatives Analysis and Remedial Action Work Plan*. The objectives presented here will be revised, if necessary, once the decision document has been issued.

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 $\mu\text{g}/100\text{ cm}^2$, which were above the EPA's 10 $\mu\text{g}/100\text{ cm}^2$ 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 pits⁵ 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.

2.5.6 Soil Vapor

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

⁵ 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.

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.

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- 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*, *Discovered 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. A second smaller (10-foot-square) area of soil cover was emplaced east of the main building where a former floor drain discharged to the ground surface. Figure 5 illustrates the extent of the soil cover system. 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 EQulSTM 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

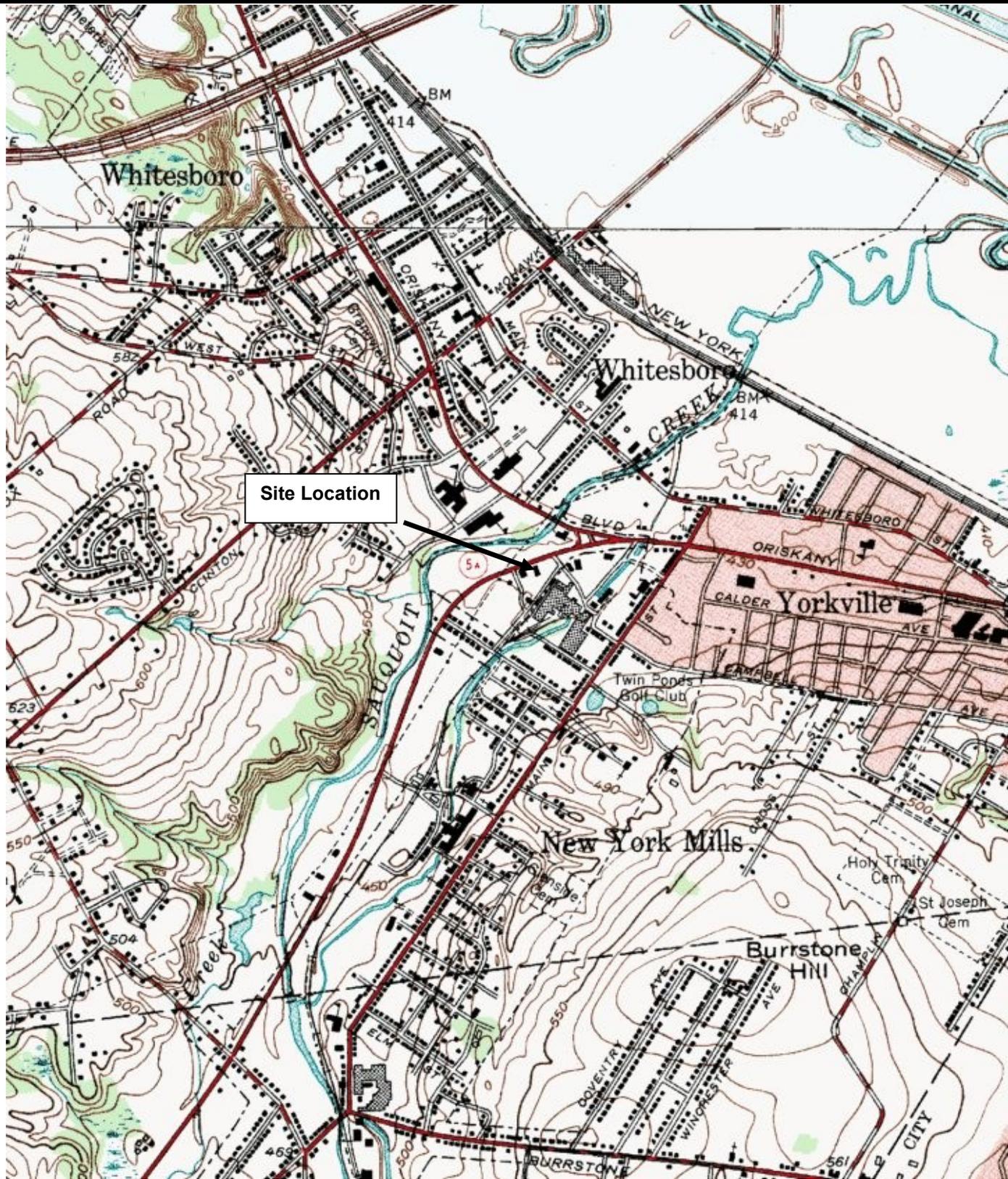
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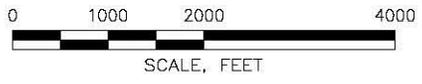
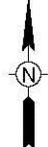
Approved:

Drawn By:

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REFERENCE:
 7.5 MINUTE SERIES TOPOGRAPHIC QUADRANGLE
 UTICA WEST, NEW YORK
 PHOTOREVISED 1955 SCALE 1:24,000



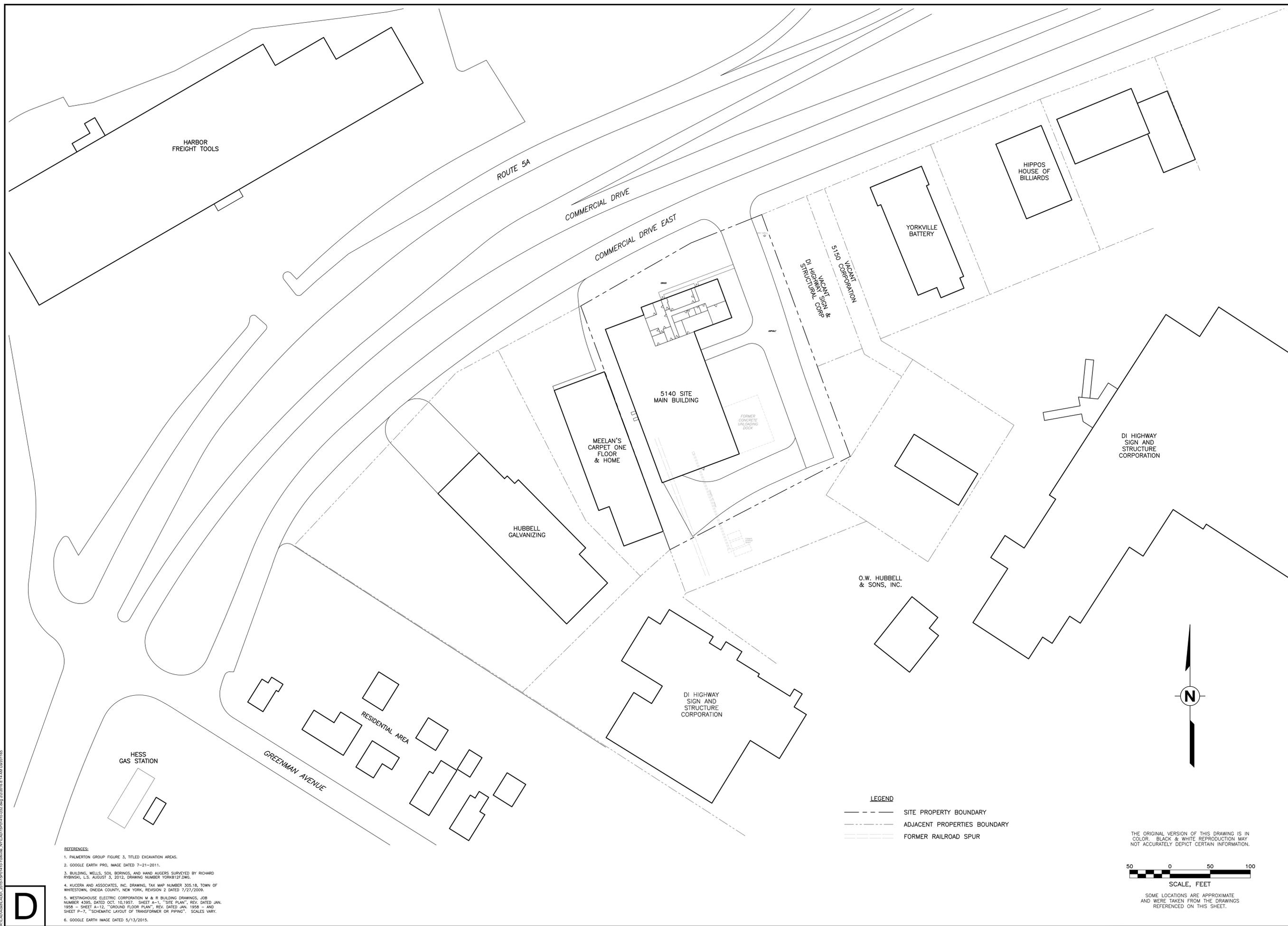
WSP Environment & Energy, LLC
 300 Trade Center, Suite 4690
 Woburn, MA 01801
 (781) 933-7340

FIGURE 1

SITE LOCATION MAP

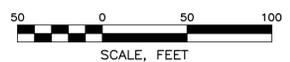
5140 COMMERCIAL DRIVE EAST
 YORKVILLE, NEW YORK

PREPARED FOR
 5140 Commercial Drive, LLC
 Yorkville, New York

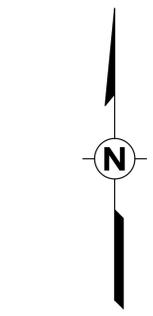


- REFERENCES:**
1. PALMERTON GROUP FIGURE 3, TITLED EXCAVATION AREAS.
 2. GOOGLE EARTH PRO, IMAGE DATED 7-21-2011.
 3. BUILDING, WELLS, SOIL BORINGS, AND HAND AUGERS SURVEYED BY RICHARD RYBINSKI, L.S. AUGUST 3, 2012, DRAWING NUMBER YORK812F.DWG.
 4. KUCERA AND ASSOCIATES, INC. DRAWING, TAX MAP NUMBER 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.

- LEGEND**
- SITE PROPERTY BOUNDARY
 - - - ADJACENT PROPERTIES BOUNDARY
 - FORMER RAILROAD SPUR



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REV	REVISIONS	DESCRIPTION

SEAL

DATE

DRAWN BY: *R. Brinkerhoff*

CHECKED: _____

APPROVED: _____

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ADJACENT PROPERTIES

5140 SITE
 YORKVILLE, NEW YORK

PREPARED FOR:
 5140 COMMERCIAL DRIVE, LLC
 YORKVILLE, NEW YORK

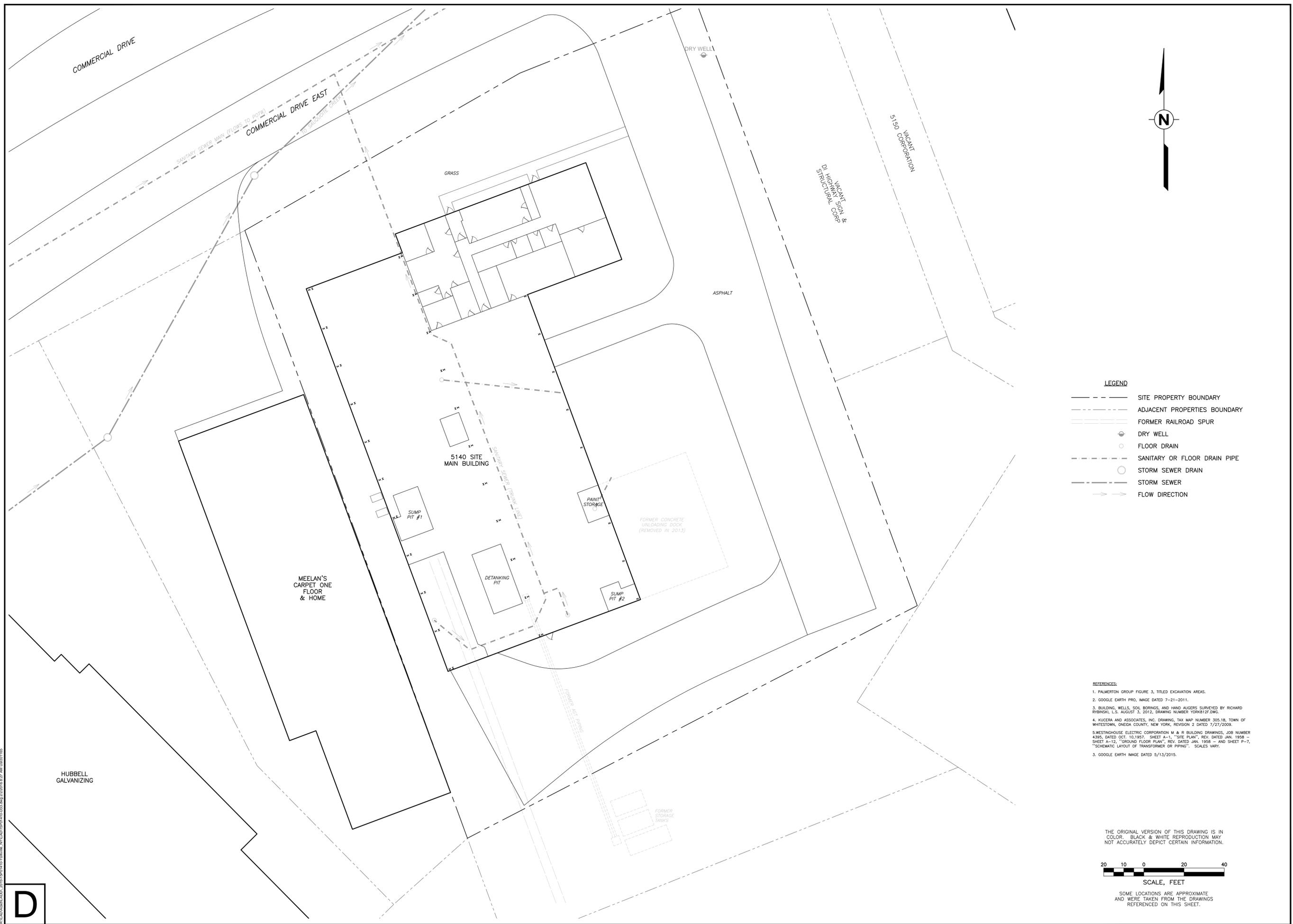
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 Woburn, Massachusetts 01801
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FIGURE 2

Drawing Number
15P01410-D32

D



- LEGEND**
- SITE PROPERTY BOUNDARY
 - - - ADJACENT PROPERTIES BOUNDARY
 - FORMER RAILROAD SPUR
 - FLOOR DRAIN
 - DRY WELL
 - - - 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 RYAN, L.S. AUGUST 3, 2012. DRAWING NUMBER YORK12.FWG.
 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.

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SCALE, FEET

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SEAL

DRAWN BY: *RK*

CHECKED: _____

APPROVED: _____

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SITE LAYOUT

5140 SITE

YORKVILLE, NEW YORK

PREPARED FOR:
5140 COMMERCIAL DRIVE, LLC
YORKVILLE, NEW YORK

WSP | PARSONS | BRINCKERHOFF

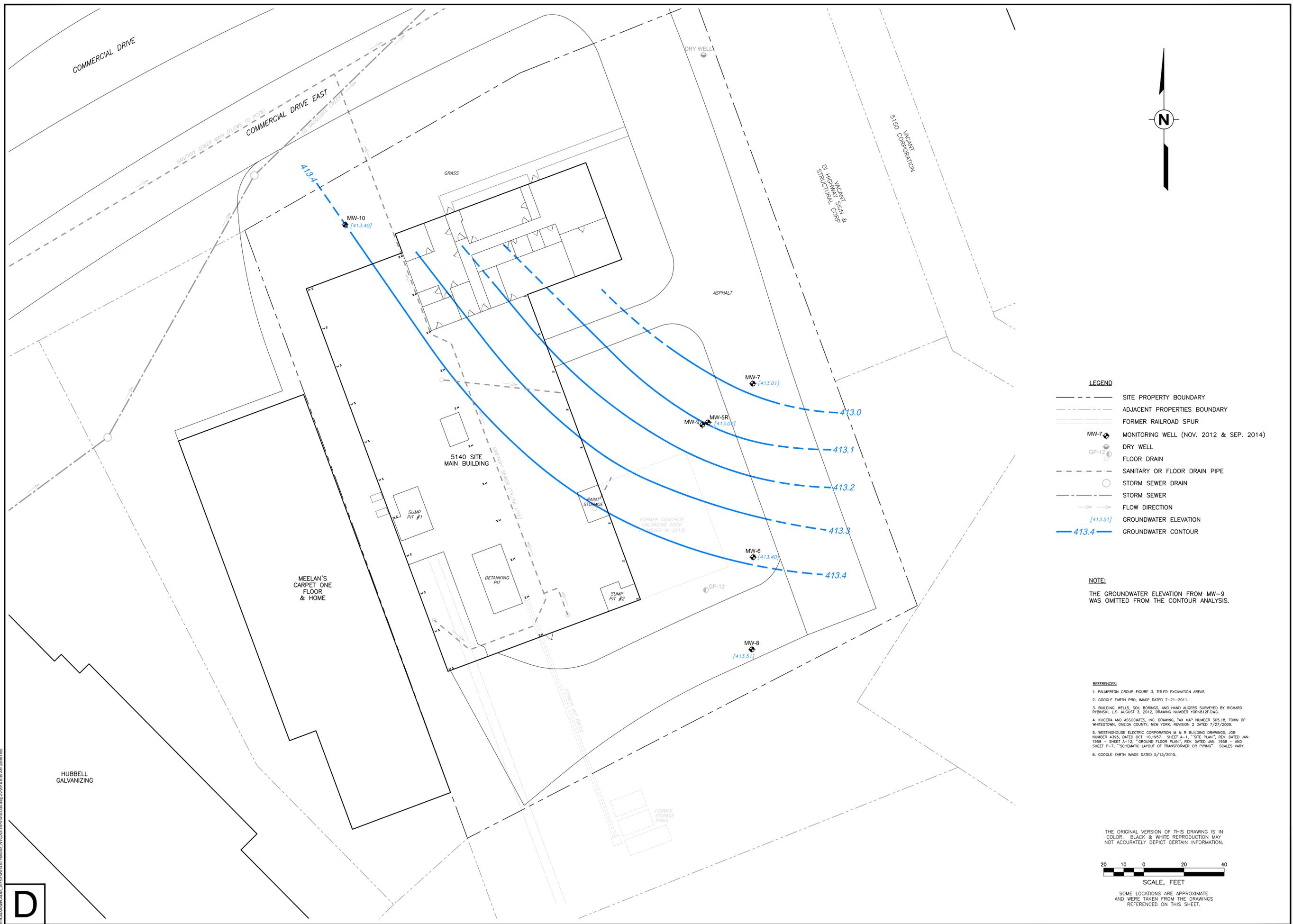
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(781) 933-7340
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FIGURE 3

Drawing Number
15P01410-D33

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D



- LEGEND**
- SITE PROPERTY BOUNDARY
 - ADJACENT PROPERTIES BOUNDARY
 - FORMER RAILROAD SPUR
 - MW-7 MONITORING WELL (NOV. 2012 & SEP. 2014)
 - 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 RYBICKI, L.S. AUGUST 3, 2012. DRAWING NUMBER YORK12-010.
 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.

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SCALE, FEET

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GROUNDWATER ELEVATION MAP	
OCTOBER 2014	
5140 SITE YORKVILLE, NEW YORK	
PREPARED FOR 5140 COMMERCIAL DRIVE, LLC YORKVILLE, NEW YORK	
WSP PARSONS BRINCKERHOFF	WSP USA Corp. 5 Sullivan Street Cazenovia, New York 13035 (315) 655-3900 www.wspgroup.com/usa
FIGURE 4	
Drawing Number 15P01410-D34	

REV	REVISIONS	DESCRIPTION
1	[Symbol]	Issue
2	[Symbol]	Issue
3	[Symbol]	Issue
4	[Symbol]	Issue

DRAWN BY	CHECKED	APPROVED	SEAL	DATE
[Signature]	[Signature]	[Signature]	[Signature]	10/20/14

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LEGEND

EXC60N-8E	CONFIRMATION SOIL SAMPLE (2014)
DRY WELL	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

- 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 REYNOLDS, L.S. AUGUST 3, 2012. DRAWING NUMBER YORK12-FWG.
 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 4306, 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.

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SCALE, FEET

0 10 20 30 40

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REVISIONS		DESCRIPTION	
REV	DATE	BY	DESCRIPTION

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REMAINING CONTAMINATION, BARRIER SYSTEMS, AND INSTITUTIONAL CONTROL BOUNDARY

5140 SITE
 YORKVILLE, NEW YORK
 PREPARED FOR
 5140 COMMERCIAL DRIVE, LLC
 YORKVILLE, NEW YORK

WSP | PARSONS | BRINCKERHOFF
 WSP USA Corp.
 300 Trade Center, Suite 4690
 Woburn, Massachusetts 01801
 (781) 933-7340
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FIGURE 5
 Drawing Number
15P01410-D36

PLT ZING

D

O.W. HUBBELL & SON, INC.

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

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

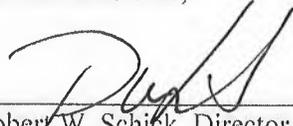
8. Amendment. Any amendment to this Environmental Easement may only be executed by the Commissioner of the New York State Department of Environmental Conservation or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated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

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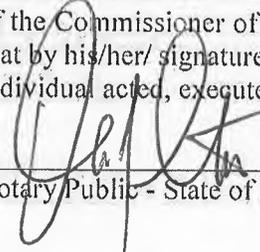
THIS ENVIRONMENTAL EASEMENT IS HEREBY ACCEPTED BY THE PEOPLE OF THE STATE OF NEW YORK, Acting By and Through the Department of Environmental Conservation as Designee of the Commissioner,

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 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.



**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-584-1, Instructions for Form TP-584, before completing this form. Print or type.

Schedule A – Information relating to conveyance

Grantor/Transferor <input type="checkbox"/> Individual <input type="checkbox"/> Corporation <input type="checkbox"/> Partnership <input type="checkbox"/> Estate/Trust <input type="checkbox"/> Single member LLC <input checked="" type="checkbox"/> Other	Name (if individual, last, first, middle initial) (<input type="checkbox"/> check if more than one grantor)	TSB Group, LLC			Social security number
	Mailing address	129 Gilbert Road			Social security number
	City	State	ZIP code	Federal EIN	
	New Hartford	NY	13413	45-2918966	
	Single member's name if grantor is a single member LLC (see instructions)				Single member EIN or SSN
Grantee/Transferee <input type="checkbox"/> Individual <input type="checkbox"/> Corporation <input type="checkbox"/> Partnership <input type="checkbox"/> Estate/Trust <input type="checkbox"/> Single member LLC <input checked="" type="checkbox"/> Other	Name (if individual, last, first, middle initial) (<input type="checkbox"/> check if more than one grantee)	The Department of Environmental Conservation			Social security number
	Mailing address	625 Broadway, 11th Floor			Social security number
	City	State	ZIP code	Federal EIN	
	Albany	NY	12233-7014	19-6013202	
	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 <input type="checkbox"/> One- to three-family house	5 <input checked="" type="checkbox"/> Commercial/Industrial	Date of conveyance <u>11</u> / <u>06</u> / <u>2015</u> month day year	Percentage of real property conveyed which is residential real property <u>0</u> % (see instructions)
2 <input type="checkbox"/> Residential cooperative	6 <input type="checkbox"/> Apartment building		
3 <input type="checkbox"/> Residential condominium	7 <input type="checkbox"/> Office building		
4 <input type="checkbox"/> Vacant land	8 <input type="checkbox"/> Other _____		

Condition of conveyance (check all that apply)

a. <input type="checkbox"/> Conveyance of fee interest	f. <input type="checkbox"/> Conveyance which consists of a mere change of identity or form of ownership or organization (attach Form TP-584.1, Schedule F)	i. <input type="checkbox"/> Option assignment or surrender
b. <input type="checkbox"/> Acquisition of a controlling interest (state percentage acquired _____%)	g. <input type="checkbox"/> Conveyance for which credit for tax previously paid will be claimed (attach Form TP-584.1, Schedule G)	m. <input type="checkbox"/> Leasehold assignment or surrender
c. <input type="checkbox"/> Transfer of a controlling interest (state percentage transferred _____%)	h. <input type="checkbox"/> Conveyance of cooperative apartment(s)	n. <input type="checkbox"/> Leasehold grant
d. <input type="checkbox"/> Conveyance to cooperative housing corporation	i. <input type="checkbox"/> Syndication	o. <input checked="" type="checkbox"/> Conveyance of an easement
e. <input type="checkbox"/> Conveyance pursuant to or in lieu of foreclosure or enforcement of security interest (attach Form TP-584.1, Schedule E)	j. <input type="checkbox"/> Conveyance of air rights or development rights	p. <input type="checkbox"/> Conveyance for which exemption from transfer tax claimed (complete Schedule B, Part III)
	k. <input type="checkbox"/> Contract assignment	q. <input type="checkbox"/> Conveyance of property partly within and partly outside the state
		r. <input type="checkbox"/> Conveyance pursuant to divorce or separation
		s. <input type="checkbox"/> 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) <input checked="" type="checkbox"/> 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(a) (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. [X] 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.

Handwritten signature of Paul Spades

Grantor signature

Member
Title

Handwritten signature of Andrew Guglielmi, ESQ.
NYSDC

Grantee signature

Title

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-584-1.

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

David P. Bouchard (WSP USA Corp.)

(315)-374-8494; dave.bouchard@wspgroup.com

Mr. Paul Patel (NYSDEC)

(518) 402-8801; anand.patel@dec.ny.gov

Wendy Marsh, Esquire; (Hancock Estabrook, LLP)

(315) 565-4500; wmarsh@hancocklaw.com

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 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 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 breached.

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. Paul Patel, Project Manager
New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway, 11th Floor
Albany, NY 12233-7014
Phone: (518) 402-8801
Anand.patel@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).⁶ 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.

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.

⁶ 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-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 total 1 acre in size, or greater (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:

Paul Patel, Project Manager (or currently assigned Project Manager)
New York State Department of Environmental Conservation
625 Broadway, 11th Floor
Albany, NY 12233-7015
Phone: (518) 402-8801
Anand.patel@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 Contamination*¹? (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 any 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. Soil Cover System

- 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 breaches 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 breach:

Date of excavation or breach: _____

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 an 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 an 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 breached 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 an 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

February 23, 2016

Client

5140 Commercial Drive LLC

Consultant

WSP USA Corp.
300 Trade Center, Suite 4690
Woburn, Massachusetts 01801

WSP Contacts

David P. Bouchard
dave.bouchard@wspgroup.com

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Appendix A – Safety Rules and Personal Hygiene

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Appendix C – Heat Stress and Heat Stress Monitoring
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Appendix E – [EXAMPLE] Medical Monitoring Program
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Appendix G – Route to Hospital
Appendix H– HASP Modification Form

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 ($\mu\text{g}/100\text{ cm}^2$). 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 ($\mu\text{g}/\text{l}$) 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 ($\mu\text{g}/100\text{ cm}^2$), which were above the U.S. Environmental Protection Agency's (EPA's) 10 $\mu\text{g}/100\text{ cm}^2$ 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 line¹.

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 TSCA waste 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 sample². 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.

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.

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 unrestricted use remedial alternative and 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.

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 breach 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 breached. 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. Subpart 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 level³ of 38 mg/m³. This calculated surrogate value exceeds the action level for nuisance dust of 5 mg/m³, 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)
- assure that equipment and excavation spoils are at least 2 feet away from the edge of excavations

³ The action level for dust-borne PCBs was calculated as follows:

$$([\text{TLV}_{\text{PCB}} / \text{Concentration}_{\text{PCB}}] \times 1 \text{ E}06) / 2 = \text{Action Level (mg/m}^3\text{)}$$

Where:

TLV_{PCB} = TLV for PCBs (inhalation; 0.5 mg/m³)

$\text{Concentration}_{\text{PCB}}$ = concentration of chromium detected in soil at the site (100 mg/kg)

-
- 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.

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 of 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.

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

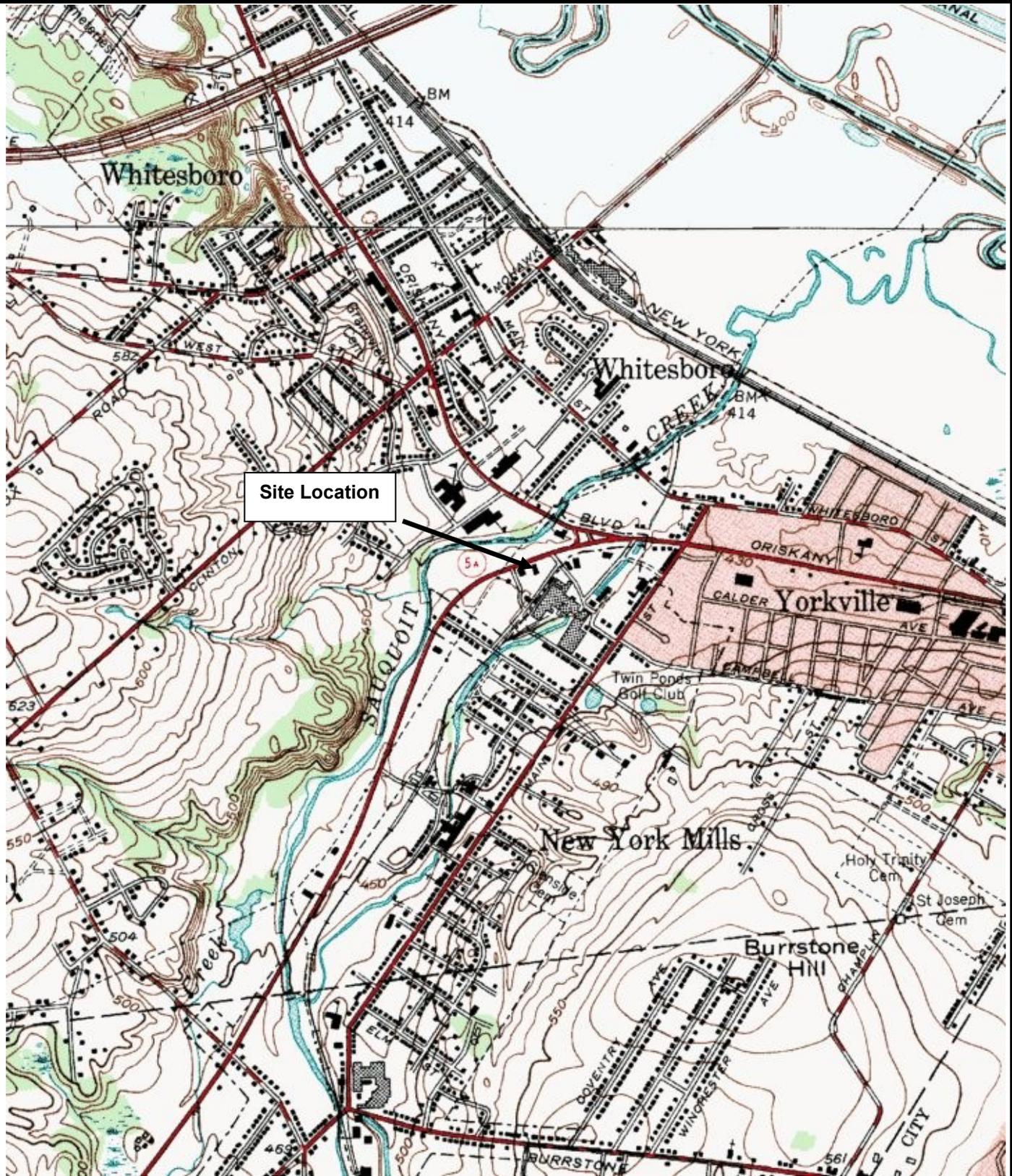
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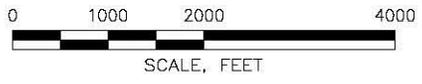
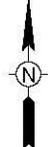
Approved:

Drawn By:

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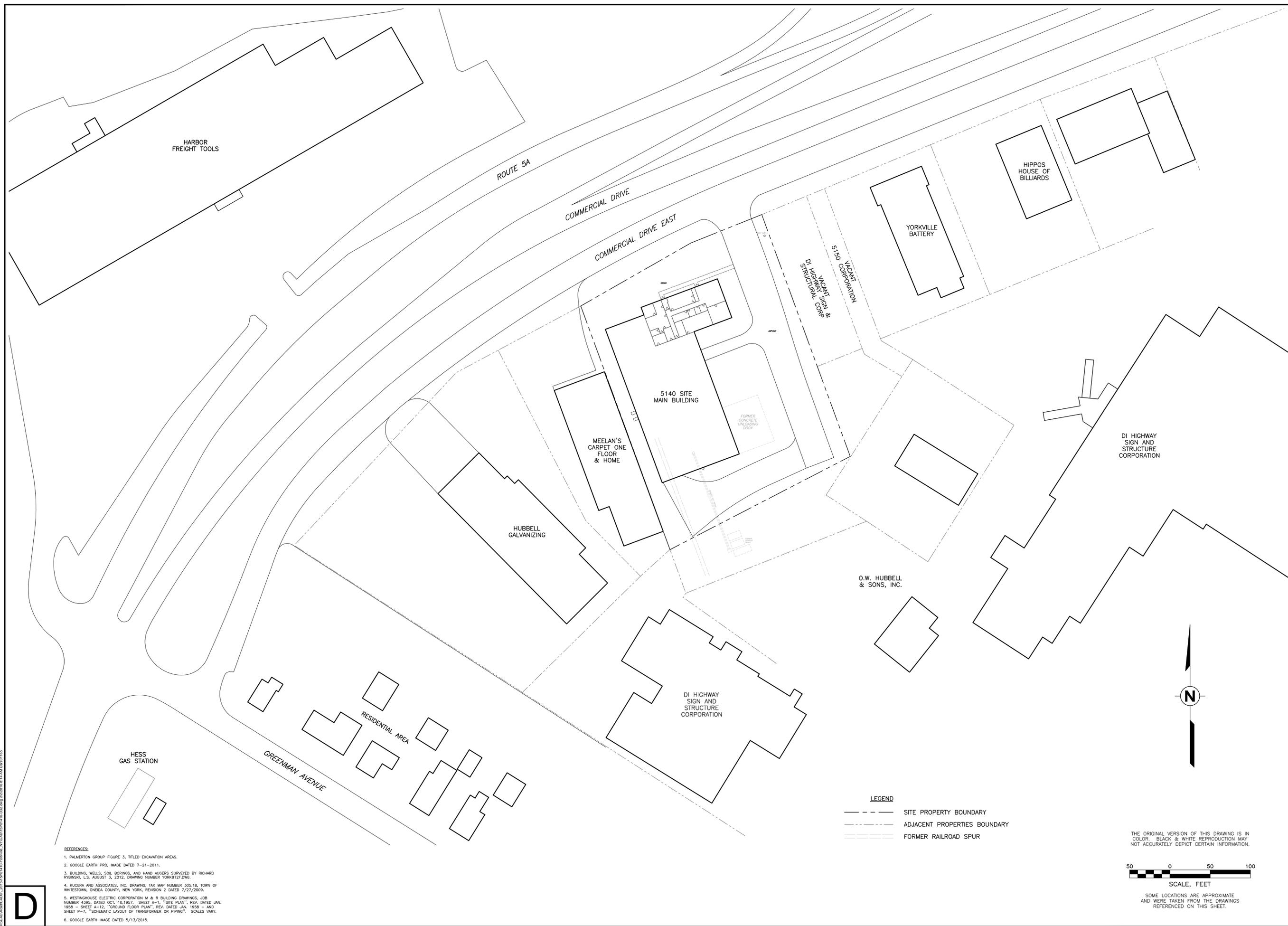
REFERENCE:
 7.5 MINUTE SERIES TOPOGRAPHIC QUADRANGLE
 UTICA WEST, NEW YORK
 PHOTOREVISED 1955 SCALE 1:24,000



WSP | **PARSONS BRINCKERHOFF**
 WSP Environment & Energy, LLC
 300 Trade Center, Suite 4690
 Woburn, MA 01801
 (781) 933-7340

FIGURE 1
 SITE LOCATION MAP

5140 COMMERCIAL DRIVE EAST
 YORKVILLE, NEW YORK
 PREPARED FOR
 5140 Commercial Drive, LLC
 Yorkville, New York

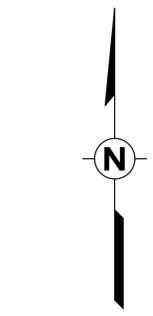


- REFERENCES:**
1. PALMERTON GROUP FIGURE 3, TITLED EXCAVATION AREAS.
 2. GOOGLE EARTH PRO, IMAGE DATED 7-21-2011.
 3. BUILDING, WELLS, SOIL BORINGS, AND HAND AUGERS SURVEYED BY RICHARD RYBINSKI, L.S. AUGUST 3, 2012, DRAWING NUMBER YORK812F.DWG.
 4. KUCERA AND ASSOCIATES, INC. DRAWING, TAX MAP NUMBER 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.

- 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.



REV	REVISIONS	DESCRIPTION

SEAL

DRAWN BY: *R. Brinkerhoff*

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APPROVED: _____

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ADJACENT PROPERTIES

5140 SITE
 YORKVILLE, NEW YORK

PREPARED FOR:
 5140 COMMERCIAL DRIVE, LLC
 YORKVILLE, NEW YORK

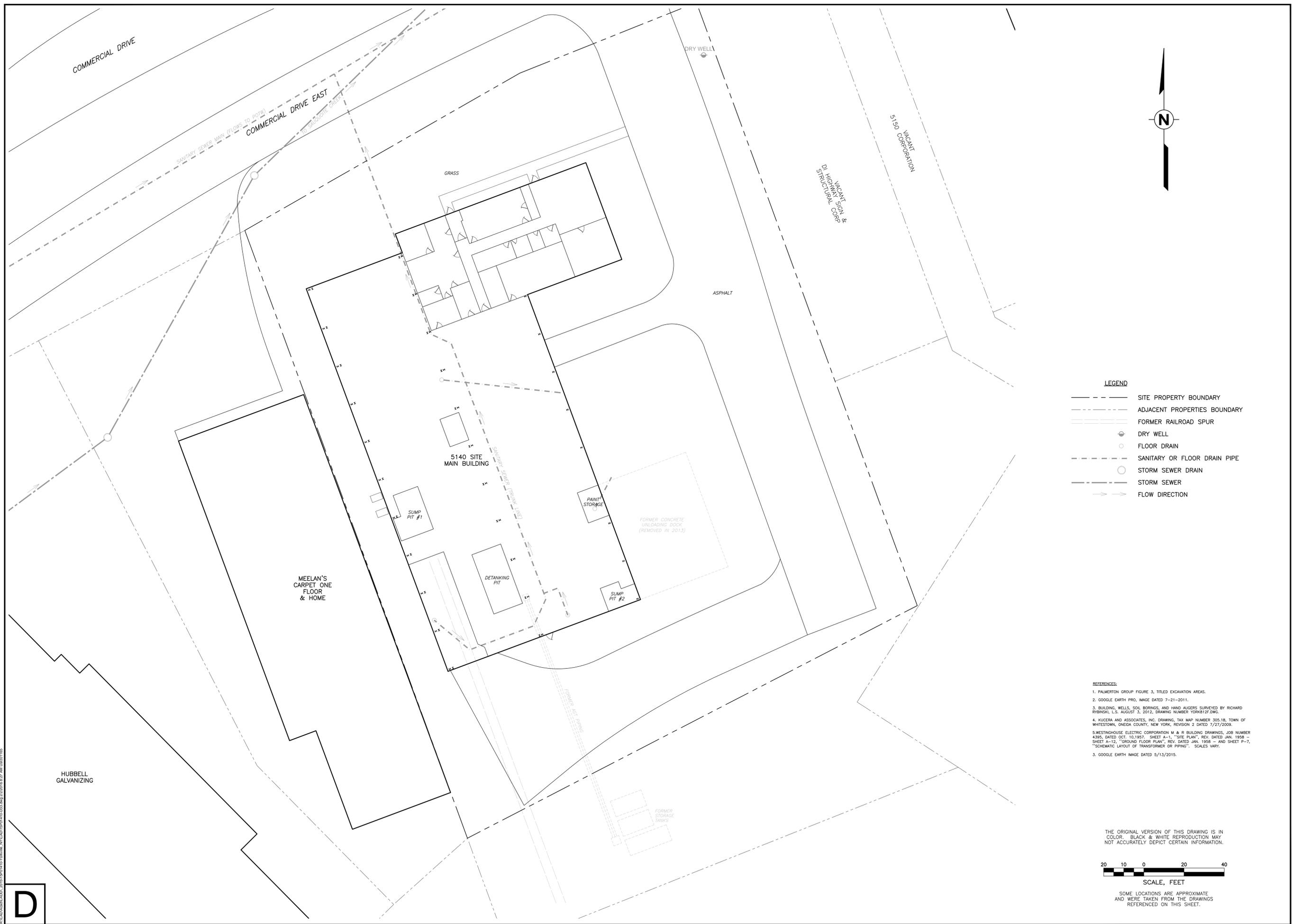
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FIGURE 2

Drawing Number
15P01410-D32

D



- LEGEND**
- SITE PROPERTY BOUNDARY
 - - - ADJACENT PROPERTIES BOUNDARY
 - FORMER RAILROAD SPUR
 - FLOOR DRAIN
 - DRY WELL
 - - - 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 RYAN, L.S. AUGUST 3, 2012. DRAWING NUMBER YORK12FWG.
 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.

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SCALE, FEET

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

DRAWN BY <i>R. Brinkerhoff</i>	CHECKED <i>R. Brinkerhoff</i>	APPROVED <i>R. Brinkerhoff</i>	<p style="font-size: 8px;">PROPERTY OF WSP USA CORP. THIS DRAWING IS THE PROPERTY OF WSP USA CORP. ANY INFORMATION CONTAINED HEREIN IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, WITHOUT THE WRITTEN CONSENT OF WSP USA CORP.</p> <p style="font-size: 8px;">NOTICE: THIS DRAWING HAS BEEN PREPARED UNDER THE PROFESSIONAL SEAL AND SIGNATURE OF A LICENSED PROFESSIONAL ENGINEER UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER. THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER IS REQUIRED FOR THIS DOCUMENT TO BE VALID.</p>
SITE LAYOUT			5140 SITE
YORKVILLE, NEW YORK			PREPARED FOR 5140 COMMERCIAL DRIVE, LLC YORKVILLE, NEW YORK
			<p style="font-size: 8px;">WSP USA Corp. 300 Trade Center, Suite 4690 Woburn, Massachusetts 01801 (781) 933-7340 www.wspgroup.com/usa</p>
FIGURE 3			Drawing Number
15P01410-D33			DATE

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LEGEND

EXC60N-8E	CONFIRMATION SOIL SAMPLE (2014)
DRY WELL	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

- 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 REYNOLDS, L.S. AUGUST 3, 2012. DRAWING NUMBER YORK612.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 4396, 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.

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SCALE, FEET

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

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REMAINING CONTAMINATION, BARRIER SYSTEMS, AND INSTITUTIONAL CONTROL BOUNDARY

5140 SITE
YORKVILLE, NEW YORK
PREPARED FOR
5140 COMMERCIAL DRIVE, LLC
YORKVILLE, NEW YORK

WSP | PARSONS | BRINCKERHOFF

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FIGURE 4

Drawing Number
15P01410-D37

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O.W. HUBBELL & SON, INC.

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

2315171 [↗](#)

Formula

C₆H₃Cl₂C₆H₂Cl₃ (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 lose 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 severe 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 be 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

Field Standard 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.

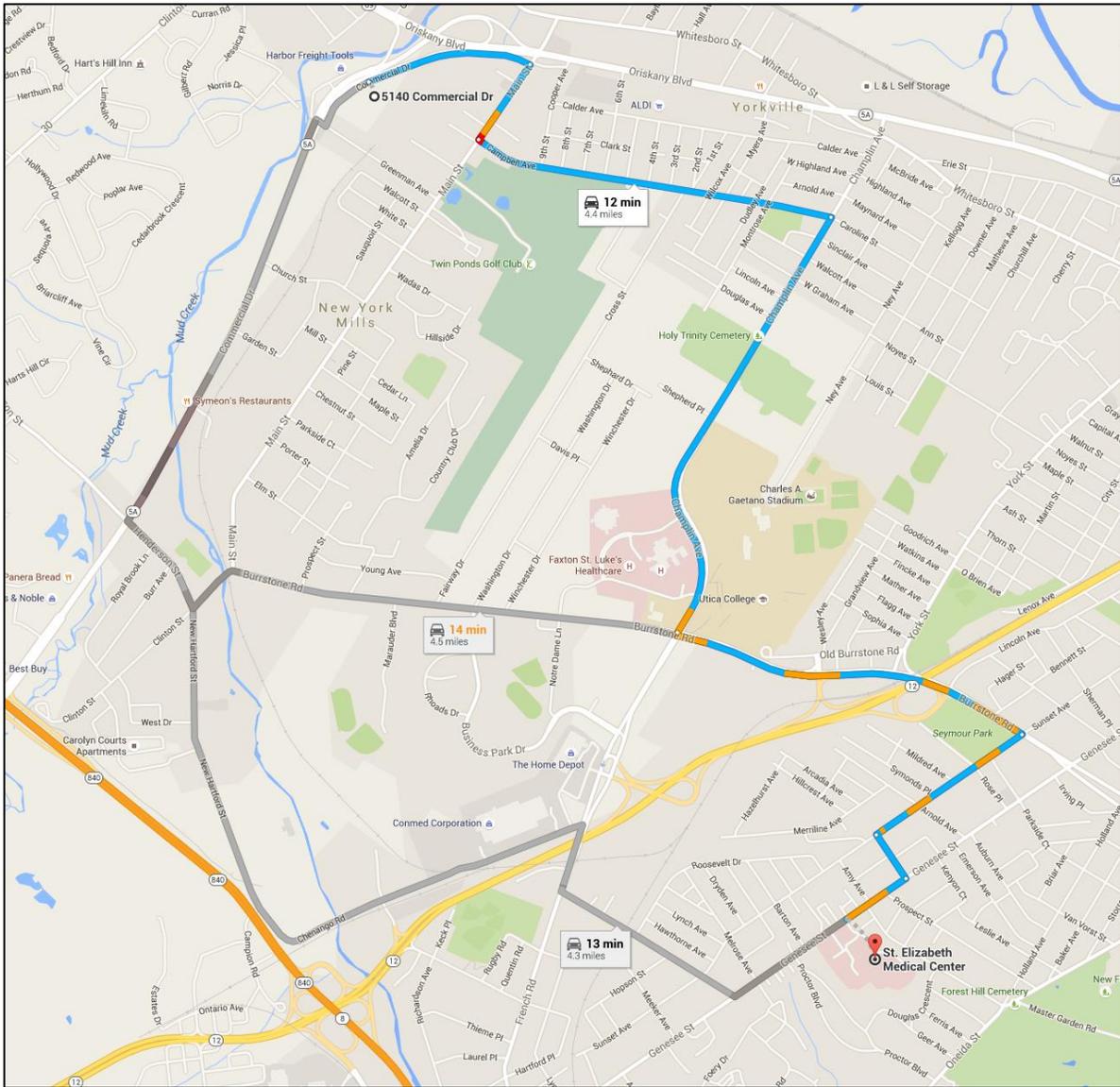
Place respirator in a plastic bag and the respirator box or otherwise store the respirator to prevent exposure to dust, moisture, sunlight, damaging chemicals, extreme temperatures, and impact.

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:

Approved:

General Site Supervisor
Health and Safety Manager
Site Health and Safety Coordinator

WSP

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Appendix G – Community Air Monitoring Plan

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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 ($\mu\text{g}/\text{m}^3$) 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 $150 \mu\text{g}/\text{m}^3$ 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 $150 \mu\text{g}/\text{m}^3$ 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 $150 \mu\text{g}/\text{m}^3$ 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.

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