Remedial Investigation Report and Alternatives Analysis

Meridian Brownfield Environmental Restoration Project
Cayuga County, New York

NYSDEC BROWNFIELD SITE #B00180

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SECTION 1 - INTRODUCTION

1.1 Purpose and Organization of the Report

This Remedial Investigation Report (RIR) and Alternatives Analysis (AA) report documents efforts to characterize the environmental quality and interim remedial measures (IRM) at the Meridian Brownfield ("the site") Site, in the Village of Meridian, Cayuga County, New York. This report covers work performed under the New York State Department of Environmental Conservation's (NYSDEC's) Brownfields Program Environmental Restoration Program (ERP) and addresses elements, as appropriate, established within the ERP.

Sections 2 through 4 of this report document the remedial investigation and IRMs undertaken that were designed and conducted to identify the nature and extent of contamination in the various environmental media as well as remedial efforts to remove contamination from the site. Section 5 provides a qualitative human health risk evaluation based on the extent of impacts to site media and on the potential human populations that could inhabit the site and environs under future redevelopment scenarios. Finally, Section 6 provides an analysis of additional remedial alternatives for returning the site to various degrees of beneficial use without restrictions, such as residential or unrestricted.

1.2 Site Background

The following sections provide background information associated with the site, including a description of the site, the history of the site, and a summary of previous investigations or remedial actions undertaken.

1.2.1 Site Description

The site is a 0.41 acre parcel of land located in the Village of Meridian, Cayuga County, New York, as shown on Figure 1. The property is currently a vacant parcel, but was formerly the location of a service station. The site slopes gently to the south and is in a residential area along NYS Route 370. The village water wells are located approximately 0.2 mile southeast of the site and the Town Highway Garage is located approximately 0.125 mile to the southwest.

The site is located in the Ontario Lake Plain region. According to United States Department of Agriculture - Soil Conservation Service Soil Survey mapping for Cayuga County, the soils in the vicinity of the site are of the the Collamer silt loam. This soil is classified as silty and clayey glaciolacustrine deposits and is moderately well-drained. The soil survey lists the specific soil to be 2 to 6 percent slope although fills and urban soils may constitute a portion of the upper soil profile. Consistent with the topographic setting of the site, shallow groundwater flow in the area of the site would be expected to flow across the site generally in a southerly direction and discharge regionally into the Seneca River drainage.

Regional bedrock geologic mapping indicates that bedrock underlying the site consists of shale generally present at depths of ninety or more feet. Groundwater within the deeper bedrock generally occurs within fractures, joint sets, and bedding planes.

Residents in the area of the site receive their domestic water from the Dudley Water Supply Company. The Dudley Water Supply Company is located on Bonta Ridge Road in Meridian and it also supplies water to the Village of Cato. Their wells are located approximately 0.2 miles southeast of the site and are hydraulically cross-gradient from the site.

1.2.2 Site History

The site was the former site of a service station, which opened around 1934 and burnt down in 1998. Cayuga County foreclosed on the site for delinquent taxes in 2000. The site entered the ERP program with a grant award in 2003 and conducted investigations and evaluations through 2015. Photographs of the service station and area is included in Appendix A.

1.2.3 Previous Investigations

The Cayuga County Planning Department conducted Phase 1 and Phase 2 Environmental Site Assessments in 2000-2001 with assistance from C&S Engineers. These investigations documented that underground fuel tanks were still in place from the closed gasoline station. The early field work also found battery pieces behind the former building pad. These assessments compiled enough site information to support the County's grant application.

1.3 Report Organization

This RI Report utilizes the general format recommended in *Draft DER-10, Technical Guidance for Site Investigation and Remediation*. In order to provide a stand-alone document capable of evaluating the need for site remedial actions, results from the RI and of the IRMs (with reference) are included in this report.

Tasks conducted as part of this RI were performed consistent with the NYSDEC's *Draft DER-10, Technical Guidance for Site Investigation and Remediation* and the NYSDEC's *Draft Brownfield Cleanup Program Guide.*

SECTION 2 - STUDY AREA INVESTIGATION

2.1 Introduction

This Section documents the activities undertaken during the remedial investigations to evaluate the existence and extent of impacts to the Meridian Brownfield Site from past commercial activities and waste management practices. The RI field activities were initiated in April 2010, during which six soil borings, 3 monitoring well installations, and two sediment samples were conducted. Additional samples were taken to confirm the presence of contaminants in the soil following IRMs at two locations. In August 2015, following implementation of the site IRMs, two additional surface soil samples were collected and analyzed. Copies of boring logs, well installation logs, photoionization screening data, and other supporting data are provided in the various appendices to this report.

2.2 Site Characterization Field Activities

This Section summarizes the field activities undertaken to characterize the site.

2.2.1 Preliminary Site Reconnaissance

A 2009 aerial photograph of the layout of the Meridian Brownfield site property is shown in Figure 2. The preliminary site reconnaissance consisted of reviewing historical documents, including the pre RI Environmental Site Assessments (ESA) completed by the County. The site was previously used as a service station, which included underground storage tanks (USTs), a service building, and a suspected battery storage/disposal area.

2.2.2 Surface Features

There were few remaining surface features associated with past commercial activities at the site. Therefore, the locations of areas of concern were associated with the locations of the former service station infrastructure, which include USTs, pump island, service station building, and a suspected battery storage/disposal area. Public access to the site from all other directions was and currently remains unrestricted.

2.2.3 Contaminant Source Investigation

The contaminant source investigation focused on areas associated with the former service infrastructure, including underground storage tanks and the suspected battery storage/disposal area. During the remedial investigation, the following soil and water samples were collected:

- Six soil borings were completed as part of the initial investigation in April, 2010, with three being completed as groundwater monitoring wells;
- Two sediment samples were collected in April, 2010 as part of the initial investigation;
- Two surface water samples were collected in April 2010 in the same location as the sediment samples.
- Two surface soil samples were collected in August, 2015, after completion of the interim remedial measures.

Figure 3 provides the locations for all site soil borings, test pits and monitoring wells during the initial investigation. A representative of the NYSDEC was present during this field work.

2.2.4 Soil Borings

The RI soil boring locations (see Figure 3) were selected and spatially referenced to locations of previous structures that were likely to be associated with the use and /or disposal of industrial chemicals or petroleum. As mentioned previously, these areas focused on the areas of the former service station infrastructure and the suspected battery storage disposal area.

The subsurface borings were obtained using a CME45B-ATV equipped with 4.25 inch diameter hollow stem augers. Soil samples were obtained via a standard split spoon sampler driven with a 140 pound hammer. Discrete depth interval sampling of the former battery storage area was completed using a track mounted Geoprobe rig and direct push technology. Boreholes in that area were designated as LB-1 through LB-8. Near-surface sediment samples and surface water samples were obtained and submitted to the project laboratory for analysis from locations determined via consultation with NYSDEC and NYSDOH during a preliminary reconnaissance of the site.

During that site meeting, it was also agreed upon to delay the RI surface soil sampling until the IRMs were complete.

Subsurface information documented on the logs presented in this data report indicate that overburden on the site are generally brown or gray fine to coarse sands with varying percentages of gravel and silt. The grain size of the material becomes finer at depths greater than approximately 8 ft. Ground water during drilling was generally encountered within approximately 2.5 feet to 4 feet below ground surface. Subsequent top of water measurements recorded in the monitoring wells ranged from approximately 1.6 ft (MW-1) to 3.4 ft (MW-3) below ground surface.

Each borehole made by rotary drilling methods was sampled continuously (i.e., split spoons) in accordance with ASTM D1586-08a. Retrieved soil samples were visually examined to assess subsurface conditions and physical properties of the strata. These properties included: color, moisture content, and visual evidence of discoloration or sheens. Additionally, representative soil samples were field screened for evidence of volatile organic vapors via conventional headspace analysis techniques using a PID equipped with a 10.6 eV lamp. The soil boring logs for the investigation are provided in Appendix B.

2.2.5 Surface Soils

As agreed with NYSDEC and NYSDOH, surface soils were not taken during the initial investigation. In August 2015, surface soil samples were collected at two locations on the property to assess the levels of contamination that could result in exposure to individuals at or near the site. Analysis of the surface soil samples was for the Superfund TCL parameters as specified in Exhibit C of the NYSDEC ASP. Consistent with New York State Department of Health (NYSDOH) guidance, the sample interval for each grab sample was approximately the top two inches of soil.

2.2.6 Groundwater Investigations

As indicated earlier, groundwater monitoring wells were installed to assess the existence and extent of shallow groundwater quality impacts. The subsurface investigation included the installation of three groundwater monitoring wells designated as MW-1, MW-2 and MW-3 using

a CME45B-ATV equipped with 4.25 inch diameter hollow stem augers. Soil samples were obtained via a standard split spoon sampler driven with a 140 pound hammer. The monitoring wells were constructed of 2-inch diameter Schedule 40 PVC. Boreholes B-1 B-2 and B-3 were also made with the same drilling rig and tools. Discrete depth interval sampling of the former battery storage area was completed using a track mounted Geoprobe rig and direct push technology. Boreholes in that area were designated as LB-1 through LB-8. Near-surface sediment samples and surface water samples were obtained and submitted to the project laboratory for analysis from locations determined via consultation with NYSDEC and NYSDOH during a preliminary reconnaissance of the site. During that site meeting, it was also agreed upon to delay the RI surface soil sampling until the IRMs were complete.

Subsequent to well construction, at least 24 hours was allowed to elapse prior to development of each well. Well development was performed via manual bailing or pumping to remove gross fines from the well and surrounding sand pack. Development water was discharged in the vicinity of the well.

Analysis of the groundwater samples was for the Superfund TCL parameters as specified in Exhibit C of the NYSDEC ASP; at locations where the slow recharge resulted in insufficient groundwater quantity for all the analyses, the following priority was imposed: VOCs, semivolatiles (SVOCs), metals, polychlorinated biphenyls (PCBs), pesticides, cyanide.

A representative of the NYSDEC was present during this field work.

2.2.7 Sediment and Surface Water Sampling

Two sediment and surface water samples were collected as shown on Figure 3. Both surface water and sediment were collected at the same location. Analysis of the sediment samples were for the Superfund TCL parameters. It should be noted the as agreed with NYSDEC during the initial investigation, the sediment and surface water samples were taken off the subject parcel, since not surface water was present on the subject parcel during the initial investigation.

2.2.8 Soil Vapor Sampling

NYSDEC and NYSDOH agreed that soil vapor sampling did not need to be conducted as part of the RI of the site. The reason for this agreement was based on the analytical results after the IRMs described in Section 3, the surrounding infrastructure and site conditions which would minimize the potential for vapors mitigating to off-site properties, and future restrictions on the site. The specific conditions for not performing soil vapor sampling include the following:

- There is no building present on the property.
- The underground storage tanks were removed and both the petroleum and lead contaminated areas were remediated to levels where the remaining soil is below unrestricted SCOs for VOCs and SVOCs, except for acetone which was present below the residential SCO.
- The New York State Department of Transportation storm sewer runs along the northern edge of the property in general proximity of the sidewalk along State Route 370. Also, dual culverts run along the western property line that are 30 inch and 36 inch CMP (750 and 900 mm) diameter pipes. It is assumed that these are bedded with gravel, which would consist of a 9-10 foot wide by 5 foot high gravel pack that runs north-south along the west parcel line. The groundwater on the west side of the site would be expected to outlet into this gravel pack, and any low level of VOCs may vent upward through this gravel, venting to the atmosphere.
- The presence of a believed spring-fed natural cistern in the southeast sector of the site, in which groundwater percolates to the surface would minimize the vapor intrusion along the eastern property line.

SECTION 3 - PHYSICAL CHARACTERISTICS OF THE STUDY AREA

This Section provides the results of the field activities that were conducted to determine the physical characteristics of the site.

3.1 Surface Features

Surface features presently visible at the site include a storm water catch basin along Route 370, a natural cistern with water flowing in small channel before infiltrating back into the ground, and a stormwater drainage channel to the east of the property. Otherwise, the majority of the site is covered with vegetation with public access to the site essentially unrestricted.

The locations of previous site structures, such as the service station and fueling facility (gleaned from historic Sanborn maps, aerial photos, and NYSDOT surveys) were spatially referenced to the site map to facilitate location of the sampling points utilized in the investigation of the presence and extent of chemical constituents. Handheld GPS units were then utilized to locate those points in the field.

3.2 Surface Water Hydrology

There is not defined principal surface water body at the site. However, water may be present on the surface at various times of the year, most predominantly from the cistern. Flow is seasonal. Storm water at the site is believed to infiltrate to the subsurface or flows overland the southern portion of the site, while storm water flows to the back of the property.

3.3 Geology

Regional bedrock geologic mapping indicates that bedrock underlying the site consists of the Vernon formation of shale. These formations were not encountered at the terminal depth encountered during the site investigations.

3.4 Hydrogeology

The unconsolidated deposits at the site consist of surficial fill, silt, sand, gravel, and glacial till. The sand and gravel units appear to be the main water-bearing units at the site.

Groundwater Contour Mapping

The groundwater contours of the area flow to the western side of the site and eventually to the south.

3.5 Demography and Land Use

Based on available documentation, land use near the site has been a combination of agricultural, residential and commercial establishments and appears likely to retain that mixed character in the foreseeable future.

SECTION 4 – NATURE, EXTENT OF CONTAMINATION AND IRMS

This section discusses the results of the sampling that was conducted throughout the remedial investigation and interim remedial measures (IRMs).

4.1 Initial Investigation – April 2010

The initial field investigation effort was completed during the period from April 5, 2010 through April 8, 2010. The subsurface investigation included the installation of three groundwater monitoring wells designated as MW-1, MW-2 and MW-3 using a CME45B-ATV equipped with 4.25 inch diameter hollow stem augers. Soil samples were obtained via a standard split spoon sampler driven with a 140 pound hammer. The monitoring wells were constructed of 2-inch diameter Schedule 40 PVC. Boreholes B-1 B-2 and B-3 were also made with the same drilling rig and tools. Discrete depth interval sampling of the former battery storage area was completed using a track mounted Geoprobe rig and direct push technology. Boreholes in that area were designated as LB-1 through LB-8. The boring logs are provided in Appendix B. Near-surface sediment samples and surface water samples were obtained and submitted to the project laboratory for analysis from locations determined via consultation with NYSDEC and NYSDOH during a preliminary reconnaissance of the site. During that site meeting, it was also agreed upon to delay the RI surface soil sampling until the IRMs were complete.

Subsurface information documented on the logs presented in this data report indicate that overburden on the site are generally brown or gray fine to coarse sands with varying percentages of gravel and silt. The grain size of the material becomes finer at depths greater than approximately 8 ft. Ground water during drilling was generally encountered within approximately 2.5 feet to 4 feet below ground surface. Subsequent top of water measurements recorded in the monitoring wells ranged from approximately 1.6 ft (MW-1) to 3.4 ft (MW-3) below ground surface.

Volatile organic vapors were measured in soil samples via conventional PID headspace analysis; the highest readings were obtained during the installation of MW-3 which is nearest to the suspected location of the former fuel dispensing island. Borehole B-1, located approximately 25 feet east-southeast from MW-3 also exhibited elevated headspace measurements. The remaining

four drilled boreholes made during this investigation did not exhibit evidence of volatile organic vapors, nor did the discrete depth sampling locations within the former battery storage area.

Analytical testing of the samples were conducted by Spectrum, while the Alpha Geoscience performed the DUSR. The following summarizes the analytical results of the initial April 2010 sampling:

4.1.1 Subsurface Sampling Results

As illustrated in Table 1, the VOC concentration significantly exceeded "Residential Use" SCOs in subsurface soils at MW-3. The location for MW-3 along the northern boundary of the site was selected to be representative of soils and groundwater in the area of the former dispenser island. VOC contaminants that exceeded SCOs include total xylenes, ethylbenzene, 1,2,4-trimethylbenzene and 1,3,5- trimethylbenzene), , all of which are typical constituents of gasoline. The sampled soils at MW-3 were associated with a PID headspace measurement of greater than 2,000 parts-per-million (ppm), the upper threshold of the instrument. At boring B-1, located approximately 25 feet from MW-3, these same BTEX compounds were not detected at concentrations exceeding the "residential use" SCOs, despite exhibiting PID measurements as elevated as 1,460 ppm. None of the other monitoring wells or soil borings exhibited significant PID measurements or VOC detections.

Tables 2 and 3 indicate that no semi-volatile organic compounds or pesticides/PCBs were detected at concentrations that exceeded the residential use SCOs.

Table 4 indicates that one inorganic parameter at one location (arsenic at 17.1 mg/kg [ppm] at MW-3) was present at a concentration exceeding the residential use SCO (16 mg/kg) for that parameter.

Table 5 provides the discrete depth subsurface soil results in the former "Battery Storage" area to a depth of five feet taken in April 2010. Review of the data in comparison to "residential use" SCO of 400 mg/kg [ppm] indicate:

- Three (LB-1, LB-4, and LB-7) of the eight sample locations contained lead exceeding "residential use" SCOs within the interval from ground surface to a depth of 6 inches.
    - One (LB-4) of the three locations exhibited lead concentrations exceeding "residential use" SCOs from ground surface to a depth of 5 ft.
    - One (LB-7) of the three locations exhibited lead concentrations exceeding "residential use" SCOs from ground surface to a depth of 4 ft.
- One location (LB-3) exhibited lead exceeding "residential use" SCOs within the 0.5 ft to 1.0 ft. interval and the 2 ft. to 4 ft. interval.
- One location (LB-5) contained lead exceeding "residential use" SCOs in the 1.0 ft to 4.0 ft. interval.
- No exceedances of "residential use" SCO were present in two locations (LB-6 and LB-8)
- Lead concentrations within the 4.0 ft to 5.0 ft interval in seven of the eight locations were below "residential use" SCO.
- Average total lead concentrations for each depth interval was calculated. That effort , in general, demonstrates the lead concentrations in soil (which exceed "residential use SCOs) extend to a depth of 4 ft. below existing ground surface,

4.1.2 Sediment Sampling Results

Table 2, the sediment data from the initial RI sampling, indicate that several semi-volatile compounds were detected at sediment sampling location SED-2 at concentrations exceeding the "residential use" SCOs for those compounds. The detected compounds are polycyclic aromatic hydrocarbons (PAHs), some of which are known or suspected carcinogens associated with residual and non-combusted hydrocarbons. These compounds generally exhibit high recalcitrance in soils and low tendency to vaporize or partition to groundwater.

4.1.3 Groundwater Sampling Results

As illustrated in Table 6, VOC (BTEX compounds) levels at MW-3 exceed Class GA Groundwater Standards. These levels are associated with the soil impacts detected at that location. Groundwater at MW-3 also exhibits impacts from several SVOCs (phenols and naphthalenes) associated with degraded hydrocarbons, as provided in Table 7. Inorganic compounds, illustrated in Table 9 exceeding Class GA Standards (essentially drinking water standards) did not indicate significant impacts (with the possible exception of lead) from the parameters observed within the site soils.

4.1.4 Surface Water Sampling Results

No VOC impacts in surface water were observed. Traces of SVOCs exceeding Class GA Guidance Values were detected in surface water sample "Surface Water 1", collected downstream of the culverts. Based on the locations of this sample, the presence of these trace detections may not be site related.

4.1.5 IRM Removal Strategy

Based on the initial RI sampling, IRMs were developed to remove contamination present on the parcel. A preliminary assumption for this site at the time was that there will be no IRM excavations that undermine the sidewalk, utilities, or roadway along the north boundary of the property. Any excavations to depth along that boundary may require the use of shoring to protect that infrastructure.

A secondary assumption that will affect the scope and cost of the IRMs, is that excavation to depths greater than observed groundwater levels will be required. The boring log for monitoring well MW-3 indicated volatile vapor levels that declined in the 6 ft -10 ft depth interval but increased in the interval from 10 ft -14 ft. Such a pattern would be indicative of an extensive "smear zone", generally caused by fluctuating groundwater levels. If that is indicative of actual subsurface conditions, maximum excavation depths with minimal groundwater intrusion might be obtained by implementing the excavations during a seasonal "low groundwater" period, most likely during the late summer or early fall.

4.2 Interim Remedial Measures

Several IRMs were implemented beginning in December 2010 at the site to remove volatile organics in the petroleum-contaminated area as well as lead within the suspected battery storage/disposal area. The IRMs consisted of the following activities:

- Excavation, cleaning and recycling of three underground storage tanks (~1000, 3000, and 4000 gallons) (December 2010);
- Excavation and disposal of petroleum-contaminated soils (December, 2010 and November, 2014);
-
- Excavation and disposal of lead-contaminated soils (July, 2011 and November 2014);

The excavation and disposal activities identified above are continuations of the IRMs that were conducted consistent with Section 3 of the October 2009 Remedial Investigation/Alternatives Analysis (RI/AA) Work Plan which was approved by NYSDEC Region 7 in a January 29, 2010 letter. The remedial contractor for all of the IRMs was Op-Tech of Syracuse, NY. Analytical laboratory work was conducted by either Spectrum (Initial IRM) or Alpha Analytical (subsequent IRM/final sampling), while the DUSR was performed by Alpha Geoscience.

For the duration of ground-intrusive activities associated with the supplemental IRMs, community air monitoring for particulates and VOCs was implemented. Community air monitoring was implemented consistent with NYSDOH's Generic Community Air Monitoring Plan (CAMP) and NYSDEC's Technical and Guidance Memorandum 4031 Fugitive Dust Suppression and Particulate Monitoring Program.

To minimize the spread of contamination during the petroleum-contaminated soils and lead-contaminated soils excavations, the following control measures were employed:

- Excavated materials were loaded directly into trucks lined with polyethylene sheeting and will be covered during transit to the landfill; and
- Soil inadvertently released during handling (e.g., falling from excavator bucket) were recovered manually.

Throughout the field activities, the IRM contractor complied with local, state, and federal rules and regulations associated with construction practices, including maintenance of construction Best Management Practices (BMPs) associated with erosion and sedimentation control. Approximately 9,400 gallons of water was pumped, containerized and removed for off-site treatment by Op-Tech during the December 2010 IRM work. Specific details regarding the IRMs and analytical results for both the petroleum contaminated soil excavation as well as the lead contaminated area are as follows.

4.2.1 Petroleum-Contaminated Soil Excavation and Disposal

4.2.1.1 Initial IRM – December 2010

The initial IRM petroleum-contaminated soil excavation and disposal actions were conducted in December 2010 as part of an Underground Storage Tanks (USTs) removal action. The excavation included removal of approximately 2,100 square-foot area extended to a depth of eight feet to ten feet below the ground surface. Soil samples from excavation sidewalls and bottom were collected for VOCs/SVOCs analysis for confirmation of soil quality at the limits of excavation. Table 11 provides the analytical results of the bottom and sidewall samples following removal of the UST and initial excavation. Following removal of the USTs and ancillary equipment, excavation sidewall samples S-1 and S-2 exhibited concentrations of volatile organic compounds that exceed the "Residential Use" Soil Cleanup Objectives. Those samples were collected at the northern boundary of the remedial excavation at a depth of 6 feet to 8 feet below the ground surface. Prior to backfilling the excavation, polyethylene sheeting was installed as a demarcation layer/barrier. A total of 747 tons of petroleum contaminated soils was disposed of at the City of Auburn Landfill between December 7 and 21, 2010.

4.2.1.2 Subsequent IRMs – November 2014

On November 5, 2014, Op-Tech and C&S mobilized to the site to expand the remedial excavation to the north to address the elevated VOC concentrations in confirmation samples S-1 and S-2. The sidewalk was removed in this effort. PID headspace readings were collected to determine the extent of the petroleum-contaminated soils. Soils exhibiting PID readings exceeding 10 ppm was properly disposed of. The approximate extent of the remedial excavation is shown on Figure 4 and the final depth of the excavation ranged between 8-10 feet. The soils excavated in the petroleum contaminated area were mostly old fill material. Once the excavation didn't exhibit any evidence of petroleum contamination and PID headspace readings were below 10 ppm, confirmatory samples were collected. A total of 84.72 tons of petroleum contaminated soil was disposed of at the City of Auburn Landfill on November 5 and 6, 2014.

4.2.1.3 Final Sampling Results

A total of six (6) confirmatory samples were collected and labeled as North Sidewall 2, East Sidewall 2, West Sidewall 2, South Sidewall 2, Bottom East 2, and Bottom West 2. As requested by NYSDEC, samples North Sidewall 2, East Sidewall 2, and Bottom East 2 were analyzed for the full suite of compounds required by DER-10, which includes Metals, PCBs/Pesticides, Semi-volatile Organic Compounds (SVOCs), and VOCs. Samples Bottom West 2, South Sidewall 2, and West Sidewall 2 were analyzed only for VOCs and SVOCs. The samples are composite samples from each side and bottom of the excavation limits with the sampling locations shown on Figure 5. These samples were collected consistent with NYSDEC guidance set forth in the DER-10 Technical Guidance for Site Investigation and Remediation. The samples were submitted to Alpha Analytical Laboratories for analysis. A summary of the analytical results are presented in Tables 12-16.

Data Quality Control/Quality Assurance (QA/QC) for the IRM was consistent with Analytical Services Protocol (ASP) 2005 and a Data Usability Summary Report (DUSR) was prepared by Alpha Geoscience, an independent data validator. Any data validation qualifiers were incorporated into the analytical result summaries. Appendix C contains the laboratory analytical results, while Appendix D contains the DUSR.

The analytical results were compared with the residential and unrestricted soil clean-up objectives (SCOs). The analytical parameters that were detected and/or exceeded any of the NYSDEC SCOs from 6 NYCRR Part 375 are as follows:

Volatile Organic Compounds (VOCs)

A total of 10 VOC parameters were detected but only acetone was present at levels that exceeded the Unrestricted Use SCO in two of the six samples. The acetone SCO for Unrestricted Use is 50 micrograms per kilogram (ug/kg). The composite sample collected in the East Sidewall 2 had an acetone concentration of 140 ug/kg, while the West Sidewall 2 sample had a concentration of 60 ug/kg. It should be noted that the Residential SCO for acetone is 100,000 ug/kg. Acetone is a naturally occurring compound and detected values are consistent with pre-existing fill material

that may have been part of the samples. In addition, acetone is a common laboratory contaminant, so it is possible that the detected concentration could potentially be a laboratory artifact.

The concentration of all other VOCs within all of the samples from the petroleum contaminated area were below Residential SCO levels.

Semi-volatile Organic Compounds (SVOCs)

A total of 12 parameters were detected but none of the parameters exceeded the Unrestricted or Residential Use SCOs.

Pesticides/PCBs

No pesticides were detected in any of the three samples taken from the petroleum contaminated area, except for 4,4'-DDT, which was detected only in the North Sidewall 2 at a concentration of 0.0046 milligrams/kilogram (mg/kg). This value exceeds the SCO for Unrestricted Use of 0.0033 mg/kg, but is below the SCO for Residential Use of 1.7 mg/kg. The origin of 4,4'-DDT in the sample is unknown, but the sample was taken at depth of over eight (8) feet.

No PCBs were detected in any of the samples taken from the petroleum contaminated area.

Inorganics

As presented in Table 16, a total of 20 inorganic parameters were detected in the petroleum contaminated area. The three samples contained at least one parameter at concentrations that exceeded the Unrestricted Use SCO, while only the Bottom East 2 sample contained analytes at concentrations that exceeded a Residential Use SCO.

The Bottom East 2 sample contained a copper concentration of 110 mg/kg that exceeded the Unrestricted SCOs value of 50 ug/kg, while lead and mercury concentrations exceeded the Unrestricted SCOs for the samples taken from the North Sidewall 2 and East Sidewall 2. The 110 mg/kg concentration of zinc in the East Sidewall 2 sample also slightly exceeded the Unrestricted SCO of 109 mg/kg. The concentrations for these parameters met the Residential SCOs.

The Bottom East 2 sample had an arsenic concentration of 29 mg/kg and a manganese concentration of 5,900 mg/kg, which exceeds the Residential SCOs of 16 mg/l and 2,000 mg/kg, respectively. It should be noted that the SCOs for arsenic, lead, total mercury, manganese and zinc are qualified as follows: "For constituents where the calculated SCO was lower than the rural soil background concentration, as determined by the Department and Department of Health rural soil survey, the rural soil background concentration is used as Track 1 SCO value for this use of the site."

In addition, arsenic and manganese were detected in all samples, taken from both the petroleum contamination and lead contamination areas. These parameters may be present in the glacial till in the area, along with sulfur bearing materials. Therefore, arsenic and manganese may have higher than normal background concentrations.

The source of these contaminants is not known. It was theorized that the concentration of arsenic could have been caused by the upward migration as indicated in the report, Water Quality Study of the Finger Lakes: Part B: Sediment Core Investigation by NYSDEC. This report indicates that "it is possible that there is an upward migration of arsenic within the sediments due to reduction/oxidation conditions within the benthos. The solubility of arsenic in water is influenced by dissolved oxygen levels – in general, as dissolved oxygen levels increase arsenic solubility decreases, and vice versa. A similar relationship exists for several other elements (e.g., phosphorus, manganese, etc.). Thus, in well-oxygenated lakes, the upper sediment layer of the benthos remains oxygenated, thereby restricting the solubility of arsenic in the pore waters of these sediments. In contrast, lower sediment layers, being largely devoid of oxygen (due to oxygen consumption and lack of replenishment), show increased arsenic solubility in pore waters. This disparity in pore water solubility would theoretically establish a vertical concentration gradient within the benthic sediments - with lower pore water arsenic concentrations within surface sediments and higher pore water arsenic concentrations within the deeper sediments – resulting in an upward migration of arsenic within the sediments. However, once the arsenic reaches the surficial sediment layer (which remains oxygenated in many of the study lakes) it precipitates out of solution and is incorporated within the benthic sediments. There are several lines of support for this hypothesis.

First, other researchers have observed a similar upward migration for manganese within the bottom sediments of aquatic systems (Williams, et al., 1978), and, as will be discussed below, manganese was found to show very similar patterns to arsenic within the Finger Lakes. In addition, USGS research conducted on Cayuga Lake cores found differences in pore water arsenic concentrations with depth – with maximum pore water arsenic concentrations at between 35-50 cm depth (Kraemer, unpublished data)."

Because groundwater is often anoxic, this study of the Finger Lakes sediment metal accumulation mechanism may help explain the higher than expected concentrations of arsenic and manganese in both the petroleum contaminated and lead contaminated areas. The soils and groundwater in the area have typically been high in sulfur and hardness. With the depth of excavation being in the saturated clay zone, the arsenic and manganese could have been naturally concentrating at this level, which would have led to background samples exceeding the residential SCO for this area.

Background samples were collected for arsenic to determine if the off-site arsenic concentrations were consistent with the concentrations of the deep samples from the subject property. As shown of Figure 8, the location of these background samples were on the south and east properties adjacent to the site. The samples were collected by use of a Geoprobe rig and collected at 4 foot depth, which was the top of the clay layer.

The background samples indicate the presence of arsenic close to but not above SCOs. It should be noted that these background samples were taken close to the surface of the perched water table, were the soil color started to change from grey to black {indicating ferrous iron (II) instead of ferric (III)}. It is possible that these background samples were taken too close to the surface of the perched water table, and that peak background arsenic levels may be closer to 35-50 cm below the depth surface of the perched water table.

4.2.2 Lead-Contaminated Soil Excavation and Disposal

4.2.2.1 Initial IRM – July 2011

The initial IRM lead-contaminated soil excavation and disposal actions were conducted in July 2011. The IRM included excavation of an approximately 500 square-foot area extended to a maximum depth of five to six feet below the ground surface. The volume of soil associated with this IRM area was approximately 107 tons. Soil samples from the excavation sidewalls and bottom was collected for total lead analysis for confirmation of soil quality at the limits of excavation. Following those actions, excavation bottom samples Quad 2 and Quad 3 exhibited concentrations of total lead that exceed the "Residential Use" Soil Cleanup Objective of 400 mg/kg. Those samples were collected at the bottom of the remedial excavation at a depth of 5 feet below the ground surface. Figure 6 illustrates the IRM sample locations and total lead data are attached. Prior to backfilling the excavation, polyethylene sheeting was installed as a demarcation layer/barrier. After the excavation was backfilled, the site was rough-graded and seeded. Table 12 provides the analytical results for lead from the initial IRM.

4.2.2.2 Subsequent IRM – November 2014

On November 4, 2014, Op-Tech remobilized to the site to excavate the remaining lead contaminated soil. The approximate extent of the remedial excavation is shown on Figure 4. The depth of the excavation was approximately 6-feet. Once the pre-determined depth was reached, confirmatory samples were collected. The 48.26 tons of excavated soil were transported to the City of Auburn Landfill for disposal on November 4, 2014. The excavated soils in the lead contaminated area were mostly wet clays.

4.2.2.3 Final Sampling Results

A total of six (6) confirmatory samples were collected and labeled *East Sidewall, North Sidewall, South Sidewall, Bottom East, Bottom Middle, and Bottom West*. The samples are composite samples from each side and bottom of the excavation limits and shown on Figure 6 of this report. These samples were collected consistent with NYSDEC guidance set forth in the *DER-10*

Technical Guidance for Site Investigation and Remediation. The samples were submitted to Alpha Analytical Laboratories for analysis.

Data Quality Control/Quality Assurance (QA/QC) for the IRM was consistent with Analytical Services Protocol (ASP) 2005 and a Data Usability Summary Report (DUSR) was prepared by an independent data validator, Alpha Geoscience. Any data validation qualifiers were incorporated into the analytical result summary provided in Tables 17 – 21. The DUSR is included as Appendix D on a separate disk for your information.

The laboratory analytical results of the confirmatory soil samples are included in Appendix C under separate cover. The analytical results were compared to the SCOs for Residential and Unrestricted Use and the comparison is provided on the soil quality data tables. As requested by NYSDEC, the samples *East Sidewall, Bottom East, and Bottom Middle* were analyzed for the full suite of compounds, while the samples *North Sidewall, Bottom West, and South Sidewall* were analyzed for only TAL Metals.

A summary of the site analytical parameters that were detected and/or exceeding any of the NYSDEC SCOs from 6 NYCRR Part 375 follows:

Volatile Organic Compounds (VOCs)

Table 17 summarizes the VOC results in the lead contaminated area. No VOCs were detected in any of the samples taken from the lead contaminated area, except for p/m xylene at a concentration of 0.44 ug/kg in the *Bottom Middle* sample. This trace level of xylene is close to the detection limit, and is less than 20% of the reporting limit for this analyte.

Semi-volatile Organic Compounds (SVOCs)

As provided in Table 18, no SVOCs were detected in any of the samples collected from the lead contaminated area.

Pesticides/PCBs

Tables 19 and 20 summarize the analytical results for pesticides and PCBs, respectively. No PCBs were detected in any of the samples taken from the lead contaminated area, except for Aroclor 1260, which was detected at 0.00857 mg/kg in the *Bottom Middle* sample. The concentration does not exceed the Unrestricted SCO of 0.1 mg/kg or the Residential Use SCO of 1 mg/kg.

The *Bottom Middle* sample had a concentration of 0.00392 mg/kg of 4,4'-DDT, 0.00221 mg/kg of 4,4'-DDE and 0.00168 mg/kg of 4,4'-DDD. Only 4,4'-DDT exceeds the Unrestricted Use SCO of 0.0033 mg/kg, while all parameters were below the Residential SCO. No pesticides were present in the other two samples taken from the lead contaminated area.

Inorganics

As provided in Table 21, a total of 19 inorganic parameters were detected in the samples collected from the lead contaminated area. Of these 19 parameters, only arsenic exceeded the unrestricted and residential SCOs. Arsenic exceeded the Unrestricted SCO of 13 mg/kg in all samples, and the Residential Use SCO of 16 mg/kg in five of the six samples. The Unrestricted SCO for Total Copper (50 mg/kg) was slightly exceeded in the *East Sidewall* sample, which had a concentration of 52 mg/kg. It should be noted that the concentration of lead in all of the final samples taken from the lead contaminated area were below the Unrestricted SCO.

As with the petroleum contaminated area, the source of the elevated concentrations of arsenic is not known, but may be associated with background conditions. Since arsenic was detected in samples collected within both excavations at a depth of six feet or greater and the lead concentration has continually decreased with depth in the battery disposal area, the source of the arsenic is not expected to be from the batteries previously disposed at the site. Figure 7 provides a summary of the arsenic levels with depth. As illustrated in Figure 7, the exceedances of the residential SCO for arsenic occurs at depths greater than 5 feet.

4.3 Surface Sampling

As agreed upon with New York State Department of Environmental Conservation (NYSDEC) and New York State Department of Health (NYSDOH), final surface sampling of the site was conducted on August 20, 2015. The work included the following:

> Two (2) surface samples were analyzed for TCL VOCs, TCL SVOCs, TAL Metals, TCL Pesticides/Herbicides, and PCBs. Figure 8 shows the location for these samples. The locations were determined in the field and based on areas that were believed to have no past ground disturbance. Surface samples were collected via a hand shovel. The shovel was decontaminated between sample locations. It should be noted that due to previous soil disturbance of the majority of the property, it was agreed that only two surface samples were to be obtained, rather than four as initially proposed.

The samples obtained on August 20, 2015 were analyzed by Alpha Analytical and the results provided below:

Surface Soil Sample Results

The analytical results of the surface samples are summarized in Tables 22-26, while analytical laboratory reports are provided in Appendix C under separate cover. The following summarizes the analytical results:

As provided in Table 22, VOCs were not detected in either sample, SS-1 and SS-2, with the exception of p/m xylene, which was present at a concentration of 0.32 ug/kg. The compound, 1,4-Dioxane, was not present above the analytical detection limits of 120 ug/kg and 110 ug/kg, respectively. These detection limit concentrations are above the Unrestricted Use SCOs of 100 ug/kg, but well below the Residential Use SCO of 9,800 ug/kg.

As provided in Table 23, several SVOCs were detected in samples SS-1 and SS-2 at concentrations below the unrestricted and residential SCOs. The SVOC compound, 2-Methylnaphthalene, was

not present in sample SS-1 above the analytical detection limit concentration of 450 ug/kg, which exceeds the residential SCO of 410 ug/kg.

Three other compounds, 2-Methylphenol (<380 ug/kg), 3-Methylphenol/4-Methylphenol (<540 ug/kg), and Phenol (<380 ug/kg) were also not presented above analytical detection limits in sample SS-1. The detection limits were above the Unrestricted Use SCO of 330 ug/kg for each of these parameters. It should be noted that the detection limit concentration is well below the Residential Use SCO for these compounds.

As provided in Table 24, five pesticides were detected in samples, SS-1 and SS-2, while three of the detected compounds exceeded the Unrestricted Use SCO. Sample SS-1 had concentrations of 4,4'-DDD at 0.00336 mg/kg, 4,4'-DDE at 0.0215 mg/kg, and 4,4'-DDT at 0.0322 mg/kg, while sample SS-2 had 4,4'-DDE present at 0.00439 mg/kg and 4,4'-DDT at 0.00871 mg/kg. These concentrations are above the Unrestricted Use SCO of 0.0033 mg/kg but well below the Residential Use SCO.

Tables 25 and 26 indicates that no PCBs or metals were detected in the surface samples at concentrations above the Unrestricted Use SCOs.

In summary, only three pesticides, 4,4'-DDD, 4,4'-DDE, and 4,4'-DDT were detected in the surface soils at concentrations above Unrestricted Use SCOs. These detected compounds, however, were below the Residential Use SCO. Several other parameters were not present at detection limits that exceeded the Unrestricted SCO. However, only one parameter, 2-methylnaphthalene, had a detection limit concentration greater than the Residential Use SCO.

4.4 Community Air Monitoring

During the ground-intrusive activities associated with the supplemental IRMs, community air monitoring for particulates and VOCs was implemented. The air monitoring was consistent with NYSDOH's Generic Community Air Monitoring Plan (CAMP) and NYSDEC's Technical and Guidance Memorandum 4031 Fugitive Dust Suppression and Particulate Monitoring Program. Documentation of the CAMP is included as Appendix E of this report.

The equipment used for the air monitoring consisted of the following:

- Volatile Organic Compound (VOC) Monitoring: A photoionization detector - RAE Systems® MiniRAE 2000; 10.6ev lamp was used to measure volatiles in parts per million (ppm).

- Air Particulate Monitoring: An aerosol particulate monitor - TSI DustTrak™ 8530 was used to detect the particulate concentrations in milligrams per cubic meter (mg/m3).

The air monitoring equipment was set up at a downwind and upwind location of soil excavation operations. Each unit included an automatic, real-time, continuous recording at fifteen minute intervals for VOC monitoring and fifteen minute intervals for air particulate monitoring. The location of the equipment was based on wind direction and location of the excavation. The instruments were calibrated daily.

Data from the PID and DusTrak monitors were downloaded and put in MSExcel format. The data is provided in Appendix E, under separate cover. The data is organized by date and time and the appropriate name for the file is on top.

Based on the air monitoring data, the activities performed onsite did not negatively impact the air quality at the site. No action levels were exceeded and no dust suppression techniques were implemented. Also, no elevated VOCs were measured by the PID meter.

SECTION 5 -QUALITATIVE HUMAN HEALTH EXPOSURE ASSESSMENT

Completion of a Qualitative Human Health Exposure Assessment (Qualitative HHEA) following NYSDOH guidance is a requirement of the Brownfield Site Investigation / Remedial Alternatives Assessment process, as set forth in Appendix 3B of the NYSDEC's Draft *DER-10, Technical Guidance for Site Investigations and Remediation*. Summary data generated during the Brownfield RI and from historical investigations are all considered in this assessment. The following subsections identify and assess:

- Contaminant sources within soil and groundwater at the site:
- Contaminant release and transport mechanisms;
- Potential points and routes of exposure;
- Human receptor populations; and
- Conclusions regarding exposure pathways.

5.1 Contaminant Sources in Soil

Subsurface Soils

After completion of the IRMs, the analytical data for inorganics indicate that the soils above a four foot depth meet the soil guidance criteria for both unrestricted and residential use. In the lead contaminated area, the arsenic concentration in the soil was at or exceeded the unrestricted SCO of 13 mg/kg in the confirmation samples, and the Residential Use SCO of 16 mg/kg in five of the six samples at 6 feet. The Unrestricted SCO for Total Copper (50 mg/kg) was slightly exceeded in the East Sidewall sample, which had a concentration of 52 mg/kg. It should be noted that the concentration of lead in all of the final samples taken from the lead contaminated area were below the unrestricted SCO.

In the petroleum contaminated area, a total of 10 VOC parameters were detected in the final samples but only acetone was present at levels that exceeded the Unrestricted Use SCO in two of the six samples, but all samples were below residential SCOs. The acetone SCO for Unrestricted Use is 50 micrograms per kilogram (ug/kg), while the residential SCO was 100,000 ug/kg. The

composite sample collected in the East Sidewall 2 had an acetone concentration of 140 ug/kg, while the West Sidewall 2 sample had a concentration of 60 ug/kg.

Surface Soils

The analytical results of surface sampling conducted on August 20, 2015 indicated that three pesticides, 4,4'-DDD, 4,4'-DDE, and 4,4'-DDT were detected in the surface soils at concentrations above Unrestricted Use SCOs of 0.0033 mg/kg. Sample SS-1 had concentrations of 4,4'-DDD at 0.00336 mg/kg, 4,4'-DDE at 0.0215 mg/kg, and 4,4'-DDT at 0.0322 mg/kg, while sample SS-2 had 4,4'-DDE present at 0.00439 mg/kg and 4,4'-DDT at 0.00871 mg/kg. These detected compounds, however, were well below the Residential Use SCO. Several other parameters were either present below unrestricted use or not present at detection limits that exceeded the Unrestricted SCO. However, only one parameter, 2-methylnaphthalene, had a detection limit concentration greater than the Residential Use SCO.

5.2 Contaminant Sources in Water

Groundwater

VOCs, primarily consisting of BTEX compounds, at MW-3 exceeded Class GA Groundwater Standards in the initial investigation of the site. These levels were associated with the soil impacts detected at that location. Groundwater at MW-3 also exhibited impacts from several SVOCs (phenols and naphthalenes) associated with degraded hydrocarbons. As detailed in Section 4 of this report, the underground storage tanks and associated equipment were removed and contaminated soil was excavated until the remaining soil were below the applicable residential SCOs. This IRM removal included removal of MW-3 and the soils surrounding that well. Groundwater from the two other monitoring wells did not exceed groundwater standards for VOCs and SVOCs.

As illustrated in Table 9, a number of inorganic compounds exceeded Class GA Standards (essentially drinking water standards), but do not appear to indicate significant impacts (with the

possible exception of arsenic and lead) from the parameters observed within the site soils. Similarly, the lead contaminated area was excavated to a depth of approximately six feet.

Surface Water

No VOC impacts in surface water were observed. Traces of SVOCs exceeding Class GA Guidance Values were detected in surface water sample "Surface Water 1", collected off the property downstream of the culverts. Based on the locations of this sample and the detected parameters, it was believed at the time that the presence of these trace detections may not be site related.

5.3 Release and Transport Mechanisms (Soil and Groundwater)

Groundwater surface elevations at the Meridian Brownfield are approximately 1.5 to 3.5 feet below the ground surface, with some seasonal variation. Precipitation percolating through the vadose zone to the saturated zone could potentially act as a transport mechanism. The potential transport mechanisms for site contaminants would be:

- Partitioning between soil, groundwater, and/or soil vapor; and
- Subsurface migration of a contaminant plume;

The potential release mechanism for volatile organics in the remaining soil or groundwater would be as vapor. However, the both the petroleum and lead contaminated areas were remediated with the volatile and semi-volatile organic concentrations in the soil being below unrestricted SCOs, with the exception of acetone. The acetone soil concentrations in the petroleum area, however, were well below residential SCOs. There were volatiles and semi-volatile in MW-3, which was located during the RI directly in the petroleum contaminated area. This area was remediated as described above. There were no volatile organics, semi-volatile organics, PCBs or pesticides were present in MW-1 or MW-2, which were located outside the petroleum contaminated area.

As illustrated in Table 9, a number of inorganic contaminants were present above groundwater standards or guidance values. Besides the possibility of lead, the source of these contaminants unknown. However, the inorganic contaminants can potentially migrate to off-site areas which may have lower concentrations of these contaminants.

5.4 Potential Points and Routes of Exposure

The most likely point of direct human exposure to contaminants in soils would be in the case where impacted soils were disturbed. In that case exposure would be possible via inhalation of dust or, possibly, via dermal absorption. The surface soils did not indicate VOCs, PCBs or inorganics above unrestricted use. Three pesticides, 4,4'-DDD, 4,4'-DDE, and 4,4'-DDT were detected in the surface soils at concentrations above Unrestricted Use SCOs. These detected compounds, however, were below the Residential Use SCO. Several other parameters were not present at detection limits that exceeded the unrestricted SCO. However, only one parameter, 2-methylnaphthalene, had a detection limit concentration greater than the residential Use SCO.

With respect to groundwater, a possible point or route of exposure could occur if impacted groundwater were withdrawn from the subsurface for use at the site. This is unlikely due to domestic water being available, but in that unlikely case, the route of exposure could be ingestion, inhalation of vapors, or dermal absorption. The other potential route of exposure to VOCs in groundwater would be via soil vapor into future indoor environments. The soil in the petroleum contaminated area to levels meeting unrestricted SCOs for VOCs and SVOCs, with the exception of acetone.

5.5 Potential Receptor Populations

Under normal conditions, it is believed that people would not come into contact with contaminated soils above residential SCOS or contaminated groundwater above Class GA standards and would not be potential direct receptor populations. Therefore, the feasible receptors with respect to soil or groundwater are believed to be as follows:

- Workers involved in excavations which might extend into impacted soil or groundwater;
- People at the site who may be exposed to volatile vapors within the indoor environment at the site, if a structure is constructed in the future. As discussed in Section 2.2.8, due to very low residual VOC levels and potential routes for volatile vapors to be emitted to the atmosphere, volatile vapors are probably unlikely in significant concentrations in future on-site and off-site buildings.

Due to the presence of public water for the site, it may be concluded that there is no likely exposure scenario associated with withdrawal and use of groundwater at with the site. However, it is appropriate for a site remedy to include institutional measures to assure that site groundwater will not be withdrawn and used for any purpose**.**

5.6 Conclusions Regarding Exposure Pathways

The preceding exposure assessment indicates that the plausible exposure pathways identified are primarily that future on-site workers may contact impacted soils or groundwater, or future buildings if foundations disturb the remaining impacted soils. It is assumed that engineering and institutional controls can be instituted that will bind the owner to inform future owners as to the potential presence of contaminated site media and to provide adequate health and safety monitoring and, if appropriate, personal protective equipment.

SECTION 6 - ALTERNATIVES ANALYSIS

6.1 Introduction

This section identifies and evaluates the various alternatives to address future remedial efforts at the site. The alternatives analysis follows the methodology set forth in Section 4 of the NYSDEC's Draft *DER-10 Technical Guidance for Site Investigation and Remediation* and is based on site conditions and identified risks to human health or the environment, as identified and discussed in previous sections of this report. Alternatives are typically evaluated relative to the following criteria:

1. *Overall Protection of Public Health and the Environment.* This criterion is an evaluation of the remedy's ability to protect public health and the environment, assessing how risks posed through each existing or potential pathway of exposure are eliminated, reduced or controlled through removal, treatment, engineering controls or institutional controls.
2. *Compliance with Standards, Criteria, and Guidance (SCGs).* Compliance with SCGs addresses whether or not a remedy will meet applicable environmental laws, regulations, standards, and guidance.
3. *Long-term Effectiveness and Permanence.* This criterion evaluates the long-term effectiveness of the remedy after implementation.
4. *Reduction of Toxicity, Mobility or Volume with Treatment*. The remedy's ability to reduce the toxicity, mobility or volume of site contamination is evaluated.
5. *Short-term Effectiveness.* The potential short-term adverse impacts and risks of the remedy upon the community, the workers, and the environment during the construction and/or implementation are evaluated.
6. *Implementability.* The technical and administrative feasibility of implementing the remedy is evaluated. Technical feasibility includes the difficulties associated with the construction and the ability to monitor the effectiveness of the remedy. For administrative feasibility, the availability of the necessary personnel and material is evaluated along with potential difficulties in obtaining specific operating approvals, access for construction, etc.
7. *Cost*. Capital, operation, maintenance and monitoring costs are evaluated for the remedy.

8. *Community Acceptance.* The public's comments, concerns, and overall perception of the remedy, if any, are evaluated in a format that responds to all questions that are raised (i.e., responsiveness summary).
9. *Land Use.* Based on information provided by Cayuga County personnel, it has been assumed that redevelopment of this site would be primarily as an access road to properties located south of the property or a storage structure, such as a detached garage, barn or shed. It should be noted that that alternatives were evaluated as to the ability to attain remedial goals given these potential intended uses.

6.2 Remedial Goals and Objectives

The overall remedial goal for the site is to eliminate or mitigate significant threats to public health and the environment, given the intended use of the site. As provided in Section 5, the qualitative human health exposure assessment (HHEA) identified the feasible exposure scenario at the site as an individual who might contact impacted soils. The Remedial Action Objective (RAO) with respect to site soils would be to protect future on-site workers or individuals from contact with impacted soils.

The lithology and hydrogeology for the site are discussed in Sections 3. The groundwater at the site contained low levels of various contaminants at concentrations exceeding Class GA Groundwater Standards. The HHEA concluded that the feasible exposure scenarios were associated with groundwater include people who might contact impacted groundwater during excavation. Therefore, the RAO with respect to site groundwater would be to protect future access of individuals from contact with groundwater.

As detailed in Section 2.2.8, NYSDEC and NYSDOH agreed that soil vapor sampling was not required since USTs were removed, the petroleum contaminated area was remediated, and the presence of various means, such as the gravel packs for culverts and the believed spring fed cistern, for volatile vapors to enter the atmosphere. However, permanent structures on the property may need underslab depressurization due to the number of homes in the area having high radon levels.

Although the withdrawal and use of groundwater at the site does not appear likely, it would be appropriate for a site remedy to include measures to assure that site groundwater will not be withdrawn and used for any purpose.

6.3 Evaluation of Alternatives

The evaluation of alternatives to meet the remedial goals and objectives focused on the elevated arsenic samples that are present at depths of greater than 5 feet throughout the site. Although the majority of these samples are concentrated in the lead-contaminated soil area where batteries were stored and believed to have been discarded, the source of the arsenic at this depth is not known.

The following remedial technologies have been identified as potentially applicable to meeting the remedial goals and objectives:

- No action
- No further remedial action with institutional and engineering controls
- Excavation and off-site soil disposal to meet residential SCOs
- Excavation and off-site soil disposal to meet unrestricted SCOs
- Groundwater treatment systems

The following subsections describe the evaluated alternatives and assess the feasibility of each in addressing the impacted soils and groundwater at the site. For each remedial technology, the evaluation includes a technology description, feasibility, costs, and conclusions.

6.3.1 The "No Action" Alternative

Technology Description

Guidance for assessing remedial alternatives requires that the "No Action" alternative be included in the assessment. Under this alternative, the consequences of doing nothing to address identified or potential risks posed by the presence of contamination at a site are assessed. This alternative may be the appropriate one if the risks present are not of sufficient significance, or if the effectiveness of other potential remedies cannot be established.

For the Meridian Brownfields site, this alternative assumes that no further actions would be undertaken by Cayuga County with respect to mitigating potential risks posed by contaminants that remain at the site and no controls would be placed on future development of the site.

Feasibility Assessment

Analytical data from the site indicate that arsenic is present in the soil above residential SCOs and the groundwater at the property is above New York State standards and guidance values for a number of inorganic parameters. These impacts could potentially cause exposure pathways and the "No-Action" alternative would not be able to meet the remedial action objectives of preventing people from coming into contact with the soil below four feet in depth and groundwater. In addition, it would not prevent groundwater from being withdrawn and used for any reason.

Cost Assessment

The cost for this "No Action" alternative would be minimal, since no further controls or remedial efforts would be undertaken.

Conclusion

The "No Action" alternative is not recommended because there is no means to prevent people from coming into contact with the soil below four feet in depth and groundwater. In addition, it would not prevent groundwater from being withdrawn and used for any reason.

6.3.2 No Further Remedial Action with Institutional and Engineering Controls

Technology Description

This technology does not mandate any further remedial efforts at this time, but places restrictions on the further use of the property. An institutional control is a non-physical means of enforcing a restriction on the use of real property that is used in situations where conditions make the property suitable for some, but not all, potential uses of the property. The purpose of an institutional control, such as an environmental easement, may be to limit human or environmental exposure, restrict use, or provide notice of such restriction. Environmental easements are an effective and

enforceable means of encouraging reuse and redevelopment of the property at levels that have been determined to be safe while controlling future use of the land. Such institutional controls limit access and the potential for individuals to come in contact with the contaminated soil and groundwater.

Engineering controls consist of physical barriers or methods employed to actively or passively contain, stabilize, or monitor contamination; restrict the movement of contamination to ensure the long-term effectiveness of a remedial program; or eliminate potential exposure pathways to contamination. Examples include low-permeability membranes or sub-slab depressurization systems applied below concrete building slabs for any new structures or physical barriers to contain groundwater, such as slurry walls or sheet piling barriers. Other types of engineering controls include access controls, provision of alternative water supplies via connection to public water supply, adding treatment technologies to existing public water supplies, or installing filtration devices on private water supplies.

Feasibility Assessment

The surface samples did not exceed any residential SCOs (only pesticides exceeded unrestricted SCOs) and the arsenic was present above residential SCOs in samples greater than 5 feet. In addition, the groundwater did exhibit exceedances of standards, but the elevated soil concentrations of lead in the battery storage area as well as the petroleum constituents in the area of the former gas station and underground storage tank area have been removed below SCOs. Barrier type engineering controls would not appear to be applicable to this site as no distinct plume or area of particularly elevated contaminant levels appears to be present at this time. However, an underslab depressurisation system is probably warranted as over 16% of houses in the Town of Cato have high radon levels in their basements (NYSDOH). With respect to the other types of engineering controls, the availability and use of public water in the vicinity of the site would be expected to render these technologies unnecessary.

To assure that withdrawal and use of groundwater from beneath the site does not occur, institution of site controls restricting such groundwater use would be appropriate, as would be the provision

of a deed restriction requiring further assessment of any excavation of greater than 4 feet below grade. Although the site lends itself to the potential for the intrusion of volatile vapors from the subsurface into the indoor environment within a future site structure, the deed restriction could also require mitigation of potential radon and vapor intrusion if a structure is built.

If the property were to be developed, individuals would be restricted in the use of groundwater and subsurface construction on the property. Therefore, this approach would limit the further use of the property, minimizing potential property tax income for Cayuga County.

Cost Assessment

The cost for this "No Further Remedial Action with Institutional and Engineering Controls" alternative would be small compared to any remedial efforts at the property. The initial costs would be associated with attorney fees for mandating environmental easements to the deed for the property and development of a Site Management Plan. Long term costs, such as any future excavation, would require enforcement of the easement, monitoring and reporting. Although the intent for the property is storage with no excavation, Cayuga County and any future property owner would be responsible any future investigations should the easement need to be changed in the future.

Conclusion

The "No Further Remedial Action with Institutional and Engineering Controls" provides a means to meet the future property objectives, but restricts future use of the property. As indicated in the November 13, 2015 correspondence to NYSDEC, use of an environmental easement would allow the property may be used for industrial, commercial, or residential use, as long as the following proposed long term institutional and engineering controls are employed:

1. No structure shall be constructed with an excavation greater than 4 feet in depth.
2. Any structure must maintain a barrier of one foot of clean fill or an alternative barrier layer approved by NYSDEC, such as concrete or asphalt.

3. Any proposed excavation to a depth of greater than 4 feet will require notification and approval by the NYSDEC in accordance with a Site Management Plan, approved by NYSDEC.
4. Any excavated soil from below a depth of 4 feet must be managed, characterized, and properly disposed of in accordance with NYSDEC regulations and guidance as well as the approved Site Management Plan.
5. The use of groundwater underlying the property is prohibited without prior approval from NYSDEC.
6. The property may not have a higher level of use, such as unrestricted use.
7. Subsurface depressurization is recommended for permanent structures to minimize radon and organic vapor levels.
8. The engineering controls listed above may not be discontinued with an amendment or extinguishment of the Environmental Easement.

6.3.3 Excavation and Off-Site Soil Disposal to Meet Residential SCOs

Technology Description

This technology consists of excavating impacted materials that have an arsenic concentration greater than residential use, transporting the material off-site for disposal or treatment, and replacing the excavated materials with clean imported fill. Although the soil remaining at the site would be below residential SCOs, groundwater in the area may still exceed some New York State standards for inorganic contaminants and further controls may still need to be implemented.

For this technology to be cost-effective, the following project components would be necessary:

- Non-impacted soils would be characterized, removed and stockpiled.
- Impacted soils would be excavated and segregated for disposal.
- A confirmation sampling program would be incorporated to confirm that remedial goals were achieved.
- Affected areas would need to be restored.

Feasibility Assessment

This technology could be successfully implemented: soils with impacts exceeding residential cleanup goals could be excavated and transported from the site for disposal, until verification samples from the limits of excavations met the cleanup goals. However, based on the presence of arsenic throughout the site and no simple method for field screening for arsenic or inorganic contaminants, positively identifying areas to be excavated would require a comprehensive analytical testing program. Even after that inordinate effort and expense, institutional and/or engineering controls would likely remain appropriate to meet the site RAOs due to the presence of inorganics in the groundwater.

Cost Estimate

The cost of excavating and disposing of contaminated soil to meet residential SCOs was based on the following assumptions:

- Implement a boring and sampling program throughout the entire site to characterize the soil for arsenic soil concentration with depth, focusing on the battery storage area. For this assessment, it is assumed that 16 borings, each drilled to a depth of 10 feet will be sufficient. It is assumed that the driller and engineering oversight can be completed in 2 days at a cost of $5,000/day. Total Cost = $10,000
- Characterize the horizontal and vertical extent of arsenic that exceeds residential SCOs. Therefore, samples will be taken at 4, 6, 8 and 10 feet depth for each boring, It is estimated that the analytical cost for arsenic is approximately $50/sample or a total cost of $3,200 for 64 samples.
- Excavate and stockpile the soil meeting residential SCOs. It is assume approximately 5 feet of material will be excavated across a 60 ft x 100 ft area. The approximate volume and weight would be 1,111 cubic yards or 1,666 tons (1.5 tons/cubic yard). The estimated costs include the following:
    - Mobilization - $3,500
    - Excavation at $20/ton for 1,666 tons = $33,300
    - Total = $36,800
- Excavate and dispose of soil that does not meet the residential SCO. It is assumed approximately 1,111 cubic yards (60 ft x 100 ft x 5 ft) or 1,666 tons would require disposal.
    - Excavation at $20/ton for 1,666 tons = $33,300
    - Transport at $20/ton for 1,666 tons = $33,300
    - Disposal at $30/ton for 1,666 tons = $50,000
    - Total Cost = $116,600
- Import and place clean fill in place of the removed.
    - Clean Fill at $15/ton for 1,666 tons = $25,000

- Regrade incorporating the stockpiled clean fill for a lump sum of $5,000.
- This cost does not include confirmation sampling or sampling of the fill material or the handling of groundwater during excavation (which could be substantial).

Therefore, the total cost to excavate and dispose of contaminated soil to meet residential SCOs would be estimated at $196,600, without treatment and/or mitigation of groundwater into the excavation.

.

Conclusion

Given the costs of implementing this technology, and the fact that successful implementation may not obviate the need for institutional and/or engineering controls, this technology is deemed not appropriate for addressing impacts to both soils and groundwater, given the intended use of the site being access and/or storage structures.

6.3.4 Excavation and Off-Site Soil Disposal to Meet Unrestricted SCOs

Technology Description

This technology consists of excavating impacted materials that have a contaminant concentrations greater than unrestricted use, transporting the material off-site for disposal, and replacing the excavated materials with clean imported fill. Similar to excavation and off-site soil disposal to meet residential SCOs, the remaining material would meet unrestricted SCO levels, groundwater in the area may still exceed New York State standards and further controls may still need to be implemented.

For this technology to be cost-effective, the following project components would be necessary:

- Non-impacted soils would be characterized, removed and stockpiled.
- Impacted soils would be excavated and segregated for disposal.
- A confirmation sampling program would be incorporated to confirm that remedial goals were achieved;
- Affected areas would need to be restored.

Feasibility Assessment

Based on the surface sampling conducted on August 20, 2015, three pesticides (4,4'-DDD, 4,4' DDE, and 4,4'-DDT)were present in surface soils above unrestricted use SCOs. Acetone, 4,4-DDT, and several inorganic parameters exceeded unrestricted SCOs in confirmation samples from the petroleum contaminated area, while 4,4 DDT, total copper and arsenic exceeded unrestricted SCOs in the confirmation samples in the lead contaminated area. Therefore, due to the presence of pesticides at the surface and at depths of feet across the entire site as well as arsenic removal to meet the unrestricted SCOs to a depth of 6 to 8 feet, it is assumed that the entire site would need to be excavated to a depth of 10 feet. This technology could be implemented, but would appear to be impractical. However, a sampling program could be implemented for the presence of arsenic, acetone, copper, and pesticides throughout the site to positively identify areas to be excavated. This would require a comprehensive analytical testing program. Even after that inordinate effort and expense, institutional and/or engineering controls would likely remain appropriate to meet the site RAOs due to the presence of inorganic contaminants in the groundwater.

Cost Estimate

The cost of excavating and disposing of contaminating soil to meet unrestricted SCOs for a 18,860 square foot site to a depth of 10 feet was based on the following assumptions:

- The excavation would generate approximately 7,000 cubic yards or 10,500 tons of soil requiring disposal and backfill.
- Excavate and dispose of soil that does not meet the unrestricted SCO.
- Mobilization - $3,500
- Excavation at $20/ton for 10,500 tons = $210,000
- Transport at $20/ton for 10,500 tons = $210,000
- Disposal at $30/ton for 10,500 tons = $315,000
- Total Cost = $738,500
- Import and place clean fill in place of the removed.
- Clean fill at $15/ton for 10,500 tons = $157,000
- Replace entire sidewalk at $20,000
- Regrade and seed entire site for a lump sum of $20,000
- Therefore, the total cost to excavate and dispose of contaminated soil to meet residential SCOs would be estimated at $939,500
- This cost does not include confirmation sampling or sampling of the fill material or the handling of groundwater during excavation (which could be substantial).

Conclusion

Therefore, given the prohibitive efforts and costs of implementing this technology, this technology is deemed not feasible for addressing impacts at the site.

6.3.5 Treatment Systems for Groundwater

The remedial goal would be to mitigate human or environmental exposure to contaminants in the groundwater. The Qualitative HHEA evaluated use of the groundwater from the site as a potential human exposure pathway, and concluded that, given the availability of public drinking water, such use is unlikely. Exposure would be associated with human contact during excavation. Treatment technologies available for mitigating exposure to contaminated groundwater are:

- In-Situ or Ex-Situ Groundwater Treatment; and
- Monitored Natural Attenuation;

The following describes the above technologies and assess the feasibility and costs of each in addressing groundwater impacts at the Meridian Brownfields site.

In-Situ or Ex-Situ Groundwater Treatment

Technology Description

This technology could consist of one of a large variety of treatment systems that are capable of treating groundwater either in place (e.g., reaction walls, injection of microbes or nutrients, air sparge) or after extraction of the groundwater (e.g., air stripping, granular activated carbon adsorption). In general, these technologies are applicable to sites where a distinct area of impacted groundwater (contaminant plume) is present. For in-situ technologies to be effective the hydrogeological characteristics and contaminant distribution data for the site should indicate that the contaminant plume coincides with the treatment area to an extent necessary for adequate treatment to occur; otherwise, a hydraulic control technology would need to be included to achieve that condition. For ex-situ technologies to be effective, the groundwater extraction field would need to assert an area of influence sufficient to remove and treat impacted groundwater from the entire plume. In-situ technologies tend to be capital intensive, but may be less expensive to operate

and maintain compared to ex-situ technologies. Achieving remediation to stringent standards (such as Class GA Groundwater Standards) is often problematic for all of these technologies due to ongoing soil/groundwater contaminant partitioning and to practical difficulties and costs involved with addressing large areas of low-level groundwater contamination. Also, the groundwater in this area is extremely hard and the system would need to be designed to handle high iron, manganese, sulfates and limescale and still be able to remove the contaminants of concern.

Feasibility Assessment

The summary site groundwater data do not identify a contaminant plume that would appear to be compatible with ex-situ or in-situ treatment technologies.

Cost Assessment

The low levels of both organic and inorganic contaminants present in the groundwater would make the unit costs (dollars per pound of contaminants removed) inordinately high and could not be expected to significantly improve local or regional groundwater quality.

Conclusion

In situ or ex situ remediation does not appear to be compatible with the contaminant plume and would be costly. Therefore, this technology is not recommended.

Natural Attenuation

Technology Description

Natural attenuation processes (biodegradation, dispersion, sorption, and volatilization) are active to some degree within any impacted groundwater system. In a situation where natural attenuation processes, compared with other remedial alternatives, can be expected to attain site remedial objectives within a reasonable time period, reliance on and monitoring of these processes can constitute an appropriate site remedy. In most cases, adoption of monitored natural attenuation as

the site remedy follows a period of active remediation, such as a source area removal or treatment. Determining the appropriateness of monitored natural attenuation for a site requires, at a minimum:

- That the contaminant flow field be known to an acceptable degree of certainty;
- For VOCs, that a source of electron donors is present and that inorganic electron acceptors are not present in quantities that would interfere with biodegradation pathways;
- That the affects and interactions of attenuation processes have been considered and can be assessed periodically via monitoring; and
- That the potential for downgradient receptors to be exposed to contaminants can be assessed.

In most cases, site characterization data are used as a basis for determining whether monitored natural attenuation may be appropriate for a site. Performance monitoring will then be used to demonstrate the progress of natural attenuation of contaminants, as well as to confirm that, among other things:

- No impacts to downgradient receptors are occurring;
- No additional releases of contaminants have occurred;
- No potentially toxic transformation products have resulted from biodegradation; and
- No environmental conditions (hydrogeologic, geochemical, microbiological) have changed to the extent that the efficacy of the attenuation processes may be compromised.

Performance monitoring typically continues for a specified period (e.g., two years) after the other clean-up objectives have been achieved. Institutional mechanisms for maintaining the monitoring program should be established in the remedy decision or in other binding site documents.

Feasibility Assessment

The contaminants that exceed groundwater standards are inorganic, such as antimony, arsenic, iron, manganese, magnesium, sodium, thallium and lead, natural attenuation via biodegradation and volatilization is not operative for these parameters as well as the dispersion/sorption pathways

typically tend to favor maintenance of these parameters within the soil. Therefore, an extremely long period of time would likely be required for significant natural attenuation of these parameters. In addition, the groundwater in this area is naturally high in inorganics, such as iron, manganese, sulfates and limescale.

Since the petroleum contaminated area has been remediated and there is no believed groundwater impacts associated with VOCs, monitored natural attenuation does not appear to be a feasible remedy for this site.

Cost Assessment

The costs associated with natural attenuation would be associated with monitoring, including sampling, analysis, and reporting. The cost would vary depending on the required frequency, monitored parameters, and number of sampling locations.

Conclusion

Monitored natural attenuation does not appear to be a feasible alternative due to the groundwater contaminants of concern being inorganic parameters. The source of volatile and semi-volatile organics have been removed by the various IRMs.

6.4 Comparative Assessment

The alternative assessments appears to indicate that "No Further Remedial Action with Institutional and Engineering Controls" meets the remedial goals and provides a cost-effective means to return this site for use. Although this approach may not achieve the Residential Soil Clean-up Objectives at a depth of greater than 5 feet or Groundwater Standards for inorganic parameters, the existing surface conditions meet residential use criteria (unrestricted use for all parameters except for pesticides). It is believed that limiting excavations to a depth of no more than four feet and restricting groundwater use will protect both human health and the environment.

6.5 Conclusions

The imposition of an institutional control in the form of an environmental easement and a Site Management Plan will be required. The remedy will achieve residential SCOs at the surface and up to a depth of approximately 5 feet. Soil five feet deep does not meet residential SCOs in the lead contaminated area for arsenic. Imposition of an institutional control for the controlled property which will:

- allow the use and development of the property, although land use is subject to local zoning laws;
- restrict excavation on the property and the use of groundwater as a source of potable or process water; and
- require compliance with the Department approved Site Management Plan.

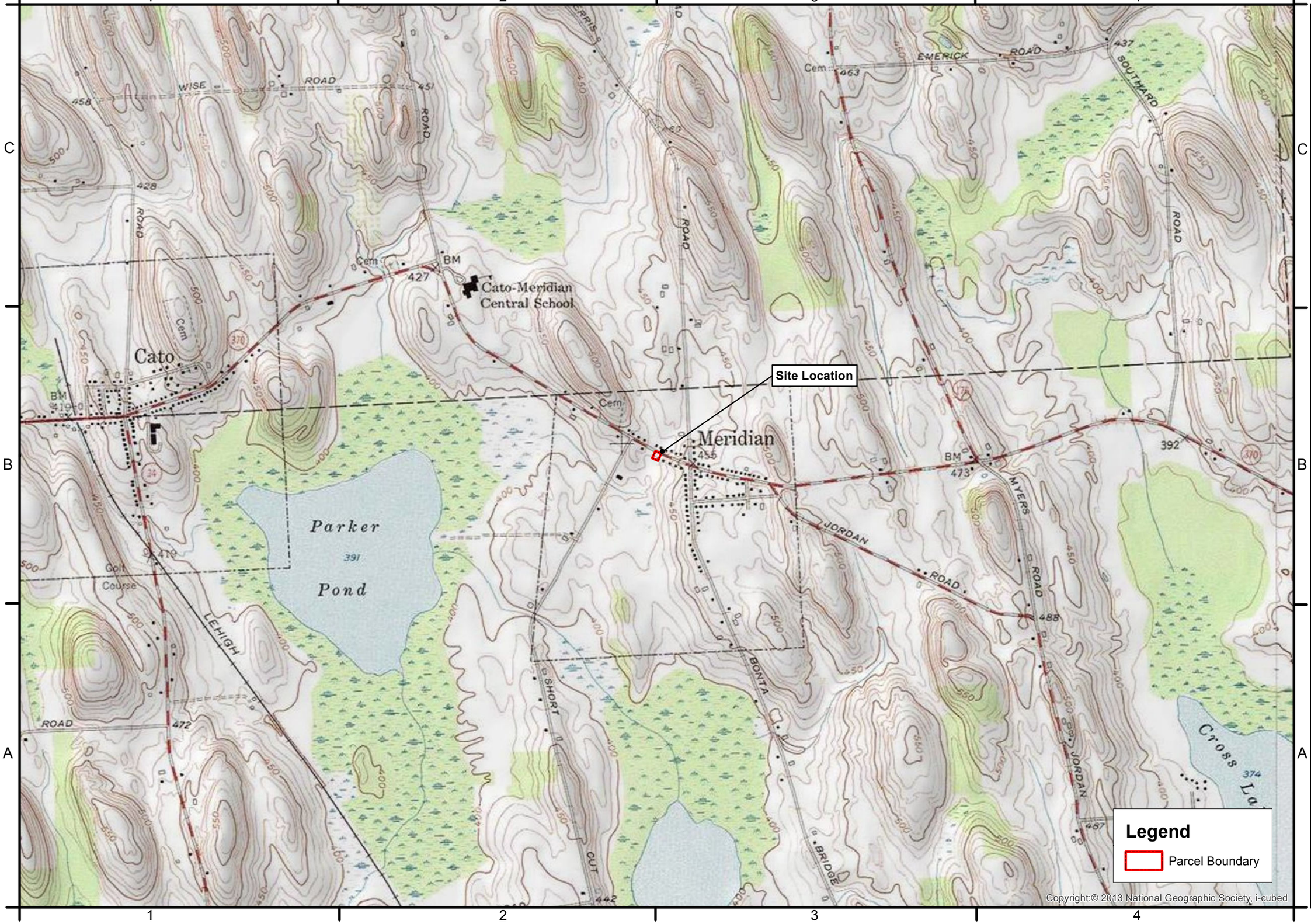
This Site Management Plan will include, but may not be limited to:

- An Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
- Descriptions of the provisions of the environmental easement including any land use, and/or groundwater restrictions;
- Provision for evaluation of the potential for soil vapor intrusion if future buildings are developed on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
- Provisions for the management and inspection of the identified engineering controls;
- Maintaining site access controls and Department notification;
- Underslab depressurization for radon and/or volatile vapors would need to evaluated, and
- The steps necessary for the periodic reviews and certification of the institutional and/or engineering controls., such as an underslab depressurization system for radon.

Draft language for the site restrictions should include, but not limited to, the following:

1. No structure shall be constructed with an excavation greater than 4 feet in depth.
2. Any structure must maintain a barrier of one foot of clean fill or an alternative barrier layer approved by NYSDEC, such as concrete or asphalt.
3. Any proposed excavation to a depth of greater than 4 feet will require notification and approval by the NYSDEC in accordance with a Site Management Plan, approved by NYSDEC.
4. Any excavated soil from below a depth of 4 feet must be managed, characterized, and properly disposed of in accordance with NYSDEC regulations and guidance as well as the approved Site Management Plan.
5. The use of groundwater underlying the property is prohibited without prior approval from NYSDEC.
6. The property may not have a higher level of use, such as unrestricted use.
7. Recommend use or evaluation of subsurface depressurization for radon and volatile vapors.
8. The engineering controls listed above may not be discontinued with an amendment or extinguishment of the Environmental Easement.

Figures



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0 1,500 Feet

Meridian Brownfield Site
Environmental Restoration Project
Village of Meridian
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NYSDEC Brownfield Site #B00180

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DATE:	December 29, 2015
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DESIGNED BY:	WNR
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Figure 1

Site Location Map

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Figure 2

Aerial Photograph Map

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Figure 3

RI Soil Borings, Monitoring Wells, and Sediment Samples

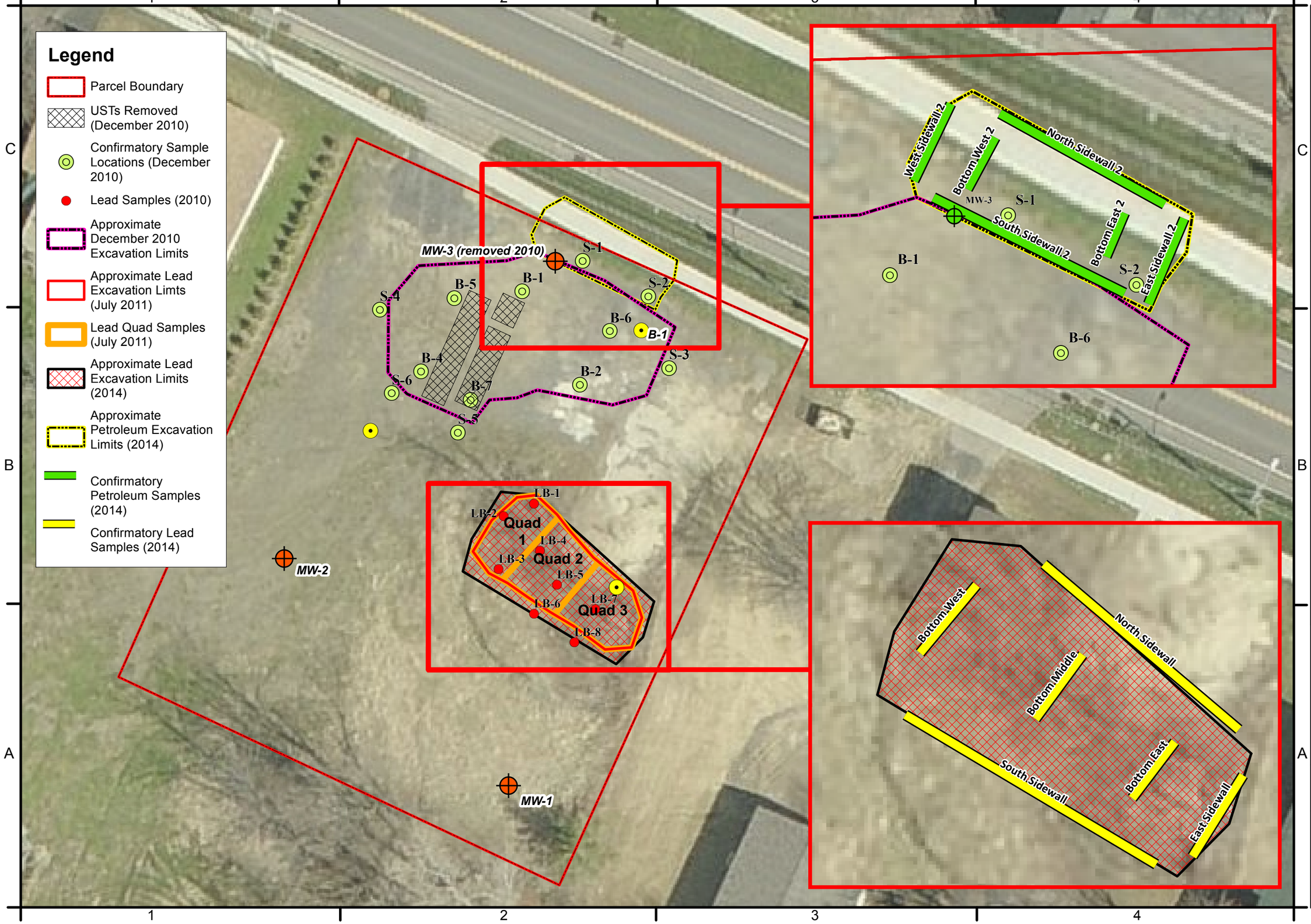

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Figure 4

Excavation & Sampling Location Map

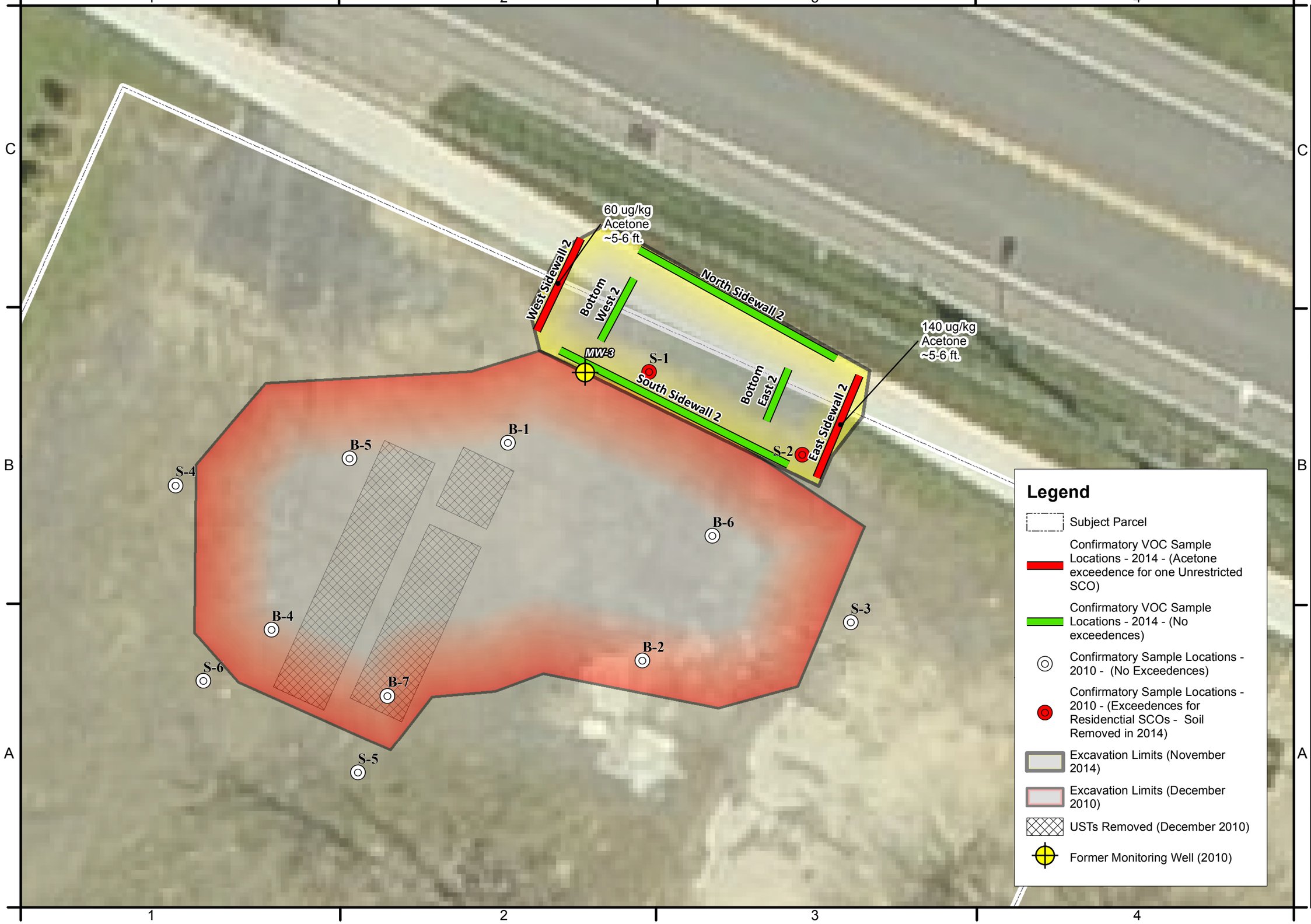

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Figure 5

Volatile Level Map Petreloeum Contaminated Area

Cayuga County - Meridian Brownfields ERP Site
Former Battery Disposal Area Soils Investigation
Lead Concentrations at Discrete Depth Intervals

Sample ID	Quad 1	Quad 2	Quad3	Center	LB-4
	Lead Concentration in mg/kg (parts per million)				
Depth Interval					
2.5	862	1680.0	733.0	1210.0	
5.0	379	1200	493		
6.0					19.2

Sample ID	LB-1	LB-2	LB-3	LB-4	LB-5	LB-6	LB-7	LB-8	Average
	Lead Concentration in mg/kg (parts per million)								
Depth Interval									
A (0-0.5 ft)	717	276	194	2050	337	133	4650	99.2	1057.0
B (0.5-1.0 ft)	393	277	863	641	1060	196	1430	88.1	618.5
C (1.0-2.0 ft)	297	342	299	510	955	156	1000	36.9	449.5
D (2.0 -4.0 ft)	214	411	1540	708	492	39.1	762	99.7	533.2
E (4.0-5.0 ft)	103	45.2	53.5	517	6.3	19.8	8.9	6.8	95.1

The following table provides the NYSDEC's Soil Clean-up Objectives (SCOs) for lead from 6NYCRR Subpart 375-6:

Intended Use	SCO (ppm)
Unrestricted	63 or site background from NYSDOH rural soil survey
Residential	400
Restricted Residential	400
Commercial	1,000
Industrial	3,900
Protection of Ecological Resources	63 or site background from NYSDOH rural soil survey
Protection of Groundwater	450

Concentrations exceeding the residential clean-up criteria are shaded

Legend

- Confirmatory Lead Sample Composites (5-6 ft) (November 2014)
- Subject Parcel
- Lead Quad Samples (July 2011)
- Lead Samples (April 2010)
- Approximate Lead Excavation Limits (Novevmber 2014)

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Figure 6

Lead Level Map
Lead Contaminated Area

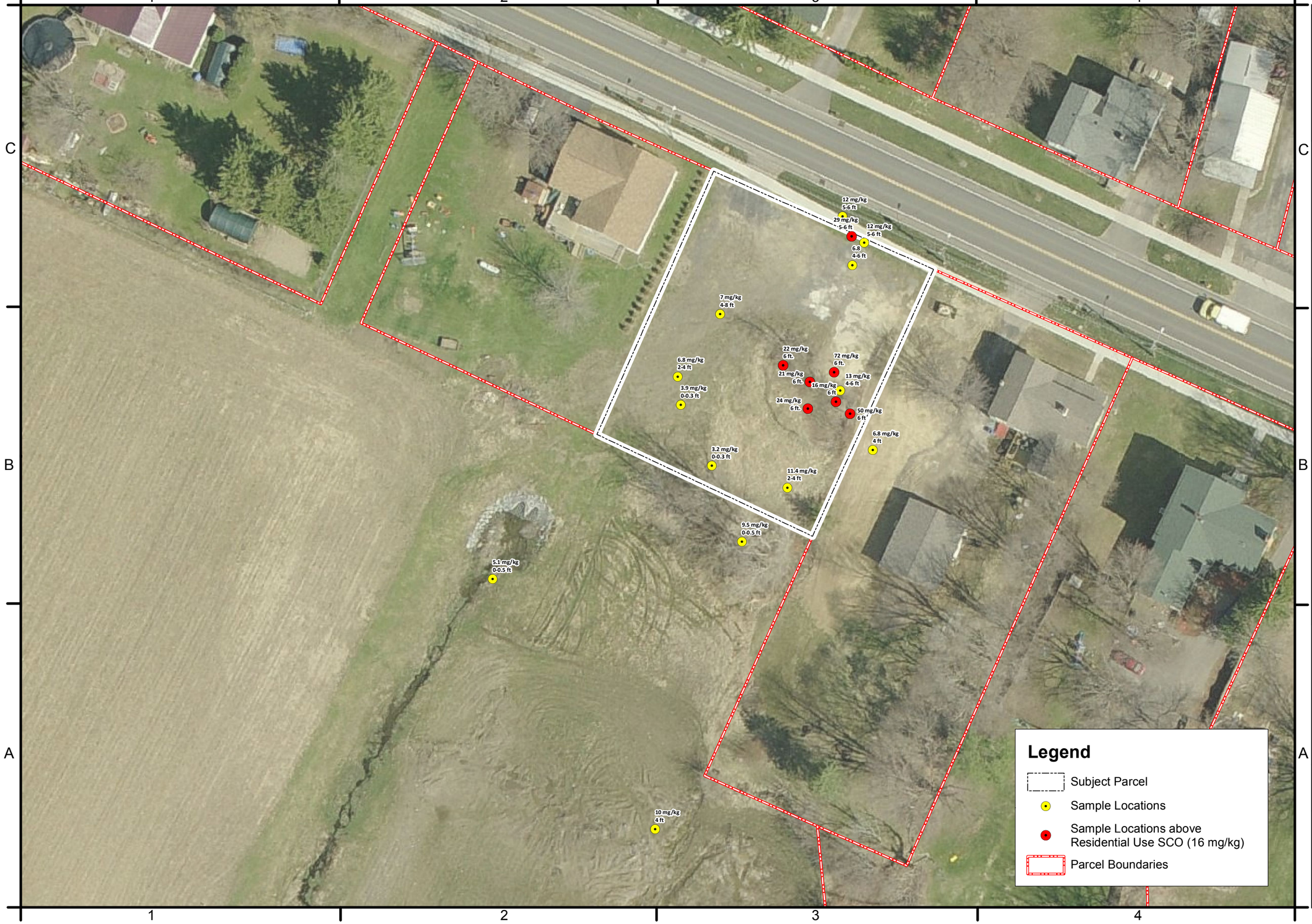

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Figure 7

Arsenic Level Map Entire Site

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Figure 8

Sample Location Map Surface and Background

Tables

Meridian Brownfields Site Investigation

Table 1 - Summary of Volatile Organic Compounds in
Subsurface Soils and Sediments

Sample ID	Residential Soil Clean-up Objective from 6NYSCRR Part 375		MW-1	MW-2	MW-3	B-1	B-2
Sample Depth (feet)			2-4	2-4	2-4	4-6	4-6
Sample Date			04/05/2010	04/05/2010	04/05/2010	04/06/2010	04/06/2010
Volatile Organic Compounds	Units						
1,1,1,2-Tetrachloroethane	ug/Kg	NL	5.5 U	6.6 U	20,000 U	10 U	6.4 U
1,1,1-Trichloroethane	ug/Kg	100,000	5.5 U	6.6 U	20,000 U	10 U	6.4 U
1,1,2,2-Tetrachloroethane	ug/Kg	NL	5.5 U	6.6 U	20,000 U	10 U	6.4 U
1,1,2-Trichloroethane	ug/Kg	NL	5.5 U	6.6 U	20,000 U	10 U	6.4 U
1,1-Dichloroethane	ug/Kg	19,000	5.5 U	6.6 U	20,000 U	10 U	6.4 U
1,1-Dichloroethene	ug/Kg	100,000	5.5 U	6.6 U	20,000 U	10 U	6.4 U
1,1-Dichloropropene	ug/Kg	NL	5.5 U	6.6 U	20,000 U	10 U	6.4 U
1,2,3-Trichlorobenzene	ug/Kg	NL	5.5 U	6.6 U	20,000 U	**19**	6.4 U
1,2,3-Trichloropropane	ug/Kg	NL	5.5 U	6.6 U	20,000 U	10 U	6.4 U
1,2,4-Trichlorobenzene	ug/Kg	NL	5.5 U	6.6 U	20,000 U	**19**	6.4 U
1,2,4-Trimethylbenzene	ug/Kg	47,000	5.5 U	6.6 U	**700,000**	**980 E**	6.4 U
1,2-Dibromo-3-chloropropane	ug/Kg	NL	5.5 U	6.6 U	20,000 U	10 U	6.4 U
1,2-Dibromoethane	ug/Kg	NL	5.5 U	6.6 U	20,000 U	10 U	6.4 U
1,2-Dichlorobenzene	ug/Kg	100,000	5.5 U	6.6 U	20,000 U	10 U	6.4 U
1,2-Dichloroethane	ug/Kg	2,300	5.5 U	6.6 U	20,000 U	10 U	6.4 U
1,2-Dichloropropane	ug/Kg	NL	5.5 U	6.6 U	20,000 U	10 U	6.4 U
1,3,5-Trimethylbenzene	ug/Kg	47,000	5.5 U	6.6 U	**220,000**	**520 E**	6.4 U
1,3-Dichlorobenzene	ug/Kg	17,000	5.5 U	6.6 U	20,000 U	10 U	6.4 U
1,3-Dichloropropane	ug/Kg	NL	5.5 U	6.6 U	20,000 U	10 U	6.4 U
1,4-Dichlorobenzene	ug/Kg	9,800	5.5 U	6.6 U	20,000 U	10 U	6.4 U
2,2-Dichloropropane	ug/Kg	NL	5.5 U	6.6 U	20,000 U	10 U	6.4 U
2-Butanone	ug/Kg	NL	5.5 U	6.6 U	20,000 U	10 U	6.4 U
2-Chlorotoluene	ug/Kg	NL	5.5 U	6.6 U	20,000 U	10 U	6.4 U
2-Hexanone (MBK)	ug/Kg	NL	5.5 U	6.6 U	**39,000**	10 U	6.4 U
4-Chlorotoluene	ug/Kg	NL	5.5 U	6.6 U	20,000 U	10 U	6.4 U

Meridian Brownfields Site Investigation

Table 1 - Summary of Volatile Organic Compounds in
Subsurface Soils and Sediments

Sample ID	**Residential Soil Clean-up Objective from 6NYSCRR Part 375**		MW-1	MW-2	MW-3	B-1	B-2
Sample Depth (feet)			2-4	2-4	2-4	4-6	4-6
Sample Date			04/05/2010	04/05/2010	04/05/2010	04/06/2010	04/06/2010
4-Isopropyltoluene	ug/Kg	NL	5.5 U	6.6 U	20,000 U	**100**	6.4 U
4-Methyl-2-pentanone	ug/Kg	NL	5.5 U	6.6 U	20,000 U	10 U	6.4 U
Acetone	ug/Kg	100,000	5.5 U	**28**	20,000 U	10 U	6.4 U
Benzene	ug/Kg	2,900	5.5 U	6.6 U	20,000 U	**44**	6.4 U
Bromobenzene	ug/Kg	NL	5.5 U	6.6 U	20,000 U	10 U	6.4 U
Bromochloromethane	ug/Kg	NL	5.5 U	6.6 U	20,000 U	10 U	6.4 U
Bromodichloromethane	ug/Kg	NL	5.5 U	6.6 U	20,000 U	10 U	6.4 U
Bromoform	ug/Kg	NL	5.5 U	6.6 U	20,000 U	10 U	6.4 U
Bromomethane	ug/Kg	NL	5.5 U	6.6 U	20,000 U	10 U	6.4 U
Carbon disulfide	ug/Kg	NL	5.5 U	6.6 U	20,000 U	10 U	6.4 U
Carbon tetrachloride	ug/Kg	1,400	5.5 U	6.6 U	20,000 U	10 U	6.4 U
Chlorobenzene	ug/Kg	100,000	5.5 U	6.6 U	20,000 U	10 U	6.4 U
Chloroethane	ug/Kg	NL	5.5 U	6.6 U	20,000 U	10 U	6.4 U
Chloroform	ug/Kg	10,000	5.5 U	6.6 U	20,000 U	10 U	6.4 U
Chloromethane	ug/Kg	NL	5.5 U	6.6 U	20,000 U	10 U	6.4 U
cis-1,2-Dichloroethene	ug/Kg	59,000	5.5 U	6.6 U	20,000 U	10 U	6.4 U
cis-1,3-Dichloropropene	ug/Kg	NL	5.5 U	6.6 U	20,000 U	10 U	6.4 U
Dibromochloromethane	ug/Kg	NL	5.5 U	6.6 U	20,000 U	10 U	6.4 U
Dibromomethane	ug/Kg	NL	5.5 U	6.6 U	20,000 U	10 U	6.4 U
Dichlorodifluoromethane	ug/Kg	NL	5.5 U	6.6 U	20,000 U	10 U	6.4 U
Ethylbenzene	ug/Kg	30,000	5.5 U	6.6 U	**160,000**	**420 E**	6.4 U
Hexachlorobutadiene	ug/Kg	NL	5.5 U	6.6 U	20,000 U	10 U	6.4 U
Iodomethane	ug/Kg	NL	5.5 U	6.6 U	20,000 U	10 U	6.4 U
Isopropylbenzene	ug/Kg	NL	5.5 U	6.6 U	**28,000**	**120**	6.4 U
m,p-Xylene	ug/Kg	NL	5.5 U	**4.1 J**	**840,000**	**1,600 E**	6.4 U
Methyl tert-butyl ether	ug/Kg	62,000	5.5 U	6.6 U	20,000 U	10 U	6.4 U

Meridian Brownfields Site Investigation

Table 1 - Summary of Volatile Organic Compounds in
Subsurface Soils and Sediments

Sample ID	**Residential Soil Clean-up Objective from 6NYSCRR Part 375**		MW-1	MW-2	MW-3	B-1	B-2
Sample Depth (feet)			2-4	2-4	2-4	4-6	4-6
Sample Date			04/05/2010	04/05/2010	04/05/2010	04/06/2010	04/06/2010
Methylene chloride	ug/Kg	51,000	5.5 U	6.6 U	20,000 U	10 U	6.4 U
n-Butylbenzene	ug/Kg	100,000	5.5 U	6.6 U	**73,000**	**130**	6.4 U
n-Propylbenzene	ug/Kg	100,000	5.5 U	6.6 U	**96,000**	**150**	6.4 U
Naphthalene	ug/Kg	NL	5.5 U	6.6 U	**82,000**	**570 E**	6.4 U
o-Xylene	ug/Kg	NL	5.5 U	6.6 U	**260,000**	**67**	6.4 U
sec-Butylbenzene	ug/Kg	100,000	5.5 U	6.6 U	**17,000 J**	**46**	6.4 U
Styrene	ug/Kg	NL	5.5 U	6.6 U	20,000 U	10 U	6.4 U
tert-Butylbenzene	ug/Kg	100,000	5.5 U	6.6 U	20,000 U	**7.9 J**	6.4 U
Tetrachloroethene	ug/Kg	5,500	5.5 U	6.6 U	20,000 U	10 U	6.4 U
Toluene	ug/Kg	100,000	5.5 U	6.6 U	20,000 U	**53**	6.4 U
trans-1,2-Dichloroethene	ug/Kg	100,000	5.5 U	6.6 U	20,000 U	10 U	6.4 U
trans-1,3-Dichloropropene	ug/Kg	NL	5.5 U	6.6 U	20,000 U	10 U	6.4 U
Trichloroethene	ug/Kg	10,000	5.5 U	6.6 U	20,000 U	10 U	6.4 U
Trichlorofluoromethane	ug/Kg	NL	5.5 U	6.6 U	20,000 U	10 U	6.4 U
Vinyl acetate	ug/Kg	NL	5.5 U	6.6 U	20,000 U	10 U	6.4 U
Vinyl chloride	ug/Kg	210	5.5 U	6.6 U	20,000 U	10 U	6.4 U
Xylene (Total)	ug/Kg	100,000	5.5 U	**4.1 J**	**1,100,000**	**1700 E**	6.4 U

Notes:

NA = listed analysis not performed on this sample

NL = No listed cleanup objective in 6NYCRR Part 375-6

Detected analytical parameters are shown in **BOLD**

Detections exceeding the residential use cleanup objective are shaded yellow

Data Qualifiers: U = analyte was not detected at the listed quantitation limit;

J = estimated value,compound detected below reporting limit;

E = concentration exceeded calibration range

Table 1 - Summary of Volatile Organic Compounds in
Subsurface Soils and Sediments

Sample ID	**Residential Soil Clean-up Objective from 6NYSCRR Part 375**		B-3	SED 1	SED 2
Sample Depth (feet)			4-8	0-0.5	0-0.5
Sample Date			04/07/2010	04/07/2010	04/07/2010
Volatile Organic Compounds	Units				
1,1,1,2-Tetrachloroethane	ug/Kg	NL	6.6 U	6.7 U	11 U
1,1,1-Trichloroethane	ug/Kg	100,000	6.6 U	6.7 U	11 U
1,1,2,2-Tetrachloroethane	ug/Kg	NL	6.6 U	6.7 U	11 U
1,1,2-Trichloroethane	ug/Kg	NL	6.6 U	6.7 U	11 U
1,1-Dichloroethane	ug/Kg	19,000	6.6 U	6.7 U	11 U
1,1-Dichloroethene	ug/Kg	100,000	6.6 U	6.7 U	11 U
1,1-Dichloropropene	ug/Kg	NL	6.6 U	6.7 U	11 U
1,2,3-Trichlorobenzene	ug/Kg	NL	**4.0 J**	6.7 U	11 U
1,2,3-Trichloropropane	ug/Kg	NL	6.6 U	6.7 U	11 U
1,2,4-Trichlorobenzene	ug/Kg	NL	**3.0 J**	6.7 U	11 U
1,2,4-Trimethylbenzene	ug/Kg	47,000	6.6 U	6.7 U	11 U
1,2-Dibromo-3-chloropropane	ug/Kg	NL	6.6 U	6.7 U	11 U
1,2-Dibromoethane	ug/Kg	NL	6.6 U	6.7 U	11 U
1,2-Dichlorobenzene	ug/Kg	100,000	6.6 U	6.7 U	11 U
1,2-Dichloroethane	ug/Kg	2,300	6.6 U	6.7 U	11 U
1,2-Dichloropropane	ug/Kg	NL	6.6 U	6.7 U	11 U
1,3,5-Trimethylbenzene	ug/Kg	47,000	6.6 U	6.7 U	11 U
1,3-Dichlorobenzene	ug/Kg	17,000	6.6 U	6.7 U	11 U
1,3-Dichloropropane	ug/Kg	NL	6.6 U	6.7 U	11 U
1,4-Dichlorobenzene	ug/Kg	9,800	6.6 U	6.7 U	11 U
2,2-Dichloropropane	ug/Kg	NL	6.6 U	6.7 U	11 U
2-Butanone	ug/Kg	NL	6.6 U	6.7 U	11 U
2-Chlorotoluene	ug/Kg	NL	6.6 U	6.7 U	11 U
2-Hexanone (MBK)	ug/Kg	NL	6.6 U	6.7 U	11 U
4-Chlorotoluene	ug/Kg	NL	6.6 U	6.7 U	11 U

Meridian Brownfields Site Investigation

Table 1 - Summary of Volatile Organic Compounds in
Subsurface Soils and Sediments

Sample ID	**Residential Soil Clean-up Objective from 6NYSCRR Part 375**		B-3	SED 1	SED 2
Sample Depth (feet)			4-8	0-0.5	0-0.5
Sample Date			04/07/2010	04/07/2010	04/07/2010
4-Isopropyltoluene	ug/Kg	NL	6.6 U	6.7 U	11 U
4-Methyl-2-pentanone	ug/Kg	NL	6.6 U	6.7 U	11 U
Acetone	ug/Kg	100,000	**17**	6.7 U	**8.8 J**
Benzene	ug/Kg	2,900	6.6 U	6.7 U	11 U
Bromobenzene	ug/Kg	NL	6.6 U	6.7 U	11 U
Bromochloromethane	ug/Kg	NL	6.6 U	6.7 U	11 U
Bromodichloromethane	ug/Kg	NL	6.6 U	6.7 U	11 U
Bromoform	ug/Kg	NL	6.6 U	6.7 U	11 U
Bromomethane	ug/Kg	NL	6.6 U	6.7 U	11 U
Carbon disulfide	ug/Kg	NL	6.6 U	6.7 U	11 U
Carbon tetrachloride	ug/Kg	1,400	6.6 U	6.7 U	11 U
Chlorobenzene	ug/Kg	100,000	6.6 U	6.7 U	11 U
Chloroethane	ug/Kg	NL	6.6 U	6.7 U	11 U
Chloroform	ug/Kg	10,000	6.6 U	6.7 U	11 U
Chloromethane	ug/Kg	NL	6.6 U	6.7 U	11 U
cis-1,2-Dichloroethene	ug/Kg	59,000	6.6 U	6.7 U	11 U
cis-1,3-Dichloropropene	ug/Kg	NL	6.6 U	6.7 U	11 U
Dibromochloromethane	ug/Kg	NL	6.6 U	6.7 U	11 U
Dibromomethane	ug/Kg	NL	6.6 U	6.7 U	11 U
Dichlorodifluoromethane	ug/Kg	NL	6.6 U	6.7 U	11 U
Ethylbenzene	ug/Kg	30,000	6.6 U	6.7 U	11 U
Hexachlorobutadiene	ug/Kg	NL	6.6 U	6.7 U	11 U
Iodomethane	ug/Kg	NL	6.6 U	6.7 U	11 U
Isopropylbenzene	ug/Kg	NL	6.6 U	6.7 U	11 U
m,p-Xylene	ug/Kg	NL	6.6 U	6.7 U	11 U
Methyl tert-butyl ether	ug/Kg	62,000	6.6 U	6.7 U	11 U

Table 1 - Summary of Volatile Organic Compounds in
Subsurface Soils and Sediments

Sample ID	Residential Soil Clean-up Objective from 6NYSCRR Part 375		B-3	SED 1	SED 2
Sample Depth (feet)			4-8	0-0.5	0-0.5
Sample Date			04/07/2010	04/07/2010	04/07/2010
Methylene chloride	ug/Kg	51,000	6.6 U	6.7 U	11 U
n-Butylbenzene	ug/Kg	100,000	6.6 U	6.7 U	11 U
n-Propylbenzene	ug/Kg	100,000	6.6 U	6.7 U	11 U
Naphthalene	ug/Kg	NL	**4.2 J**	2.3 J	11 U
o-Xylene	ug/Kg	NL	6.6 U	6.7 U	11 U
sec-Butylbenzene	ug/Kg	100,000	6.6 U	6.7 U	11 U
Styrene	ug/Kg	NL	6.6 U	6.7 U	11 U
tert-Butylbenzene	ug/Kg	100,000	6.6 U	6.7 U	11 U
Tetrachloroethene	ug/Kg	5,500	6.6 U	6.7 U	11 U
Toluene	ug/Kg	100,000	6.6 U	6.7 U	11 U
trans-1,2-Dichloroethene	ug/Kg	100,000	6.6 U	6.7 U	11 U
trans-1,3-Dichloropropene	ug/Kg	NL	6.6 U	6.7 U	11 U
Trichloroethene	ug/Kg	10,000	6.6 U	6.7 U	11 U
Trichlorofluoromethane	ug/Kg	NL	6.6 U	6.7 U	11 U
Vinyl acetate	ug/Kg	NL	6.6 U	6.7 U	11 U
Vinyl chloride	ug/Kg	210	6.6 U	6.7 U	11 U
Xylene (Total)	ug/Kg	100,000	6.6 U	6.7 U	11 U

Notes:

NA = listed analysis not performed on this sample

NL = No listed cleanup objective in 6NYCRR Part 375-6

Detected analytical parameters are shown in **BOLD**

Detections exceeding the residential use cleanup objective are shaded yellov

Data Qualifiers: U = analyte was not detected at the listed quantitation limit;

J = estimated value,compound detected below reporting limi

E = concentration exceeded calibration range

Meridian Brownfields Site Investigation

Table 2 - Summary of Semi-volatile Organic Compounds
in Subsurface Soils and Sediments

Sample ID	Residential Use Soil Clean-up Objective from 6NYCRR Part 375		MW-1	MW-2	MW-3DL	MW-3	B-1
Sample Depth (feet)			2-4	2-4	4-6		4-6
Sample Date			04/05/2010	04/05/2010	04/05/2010	04/05/2010	04/06/2010
Semi-Volatile Organic Compounds	Units						
1,2,4-Trichlorobenzene	ug/Kg	NL	380 U	460 U	3900 U	390 U	390 U
1,2-Dichlorobenzene	ug/Kg	100,000	380 U	460 U	3900 U	390 U	390 U
1,3-Dichlorobenzene	ug/Kg	17,000	380 U	460 U	3900 U	390 U	390 U
1,4-Dichlorobenzene	ug/Kg	9,800	380 U	460 U	3900 U	390 U	390 U
2,2´-oxybis(1-Chloropropane)	ug/Kg	NL	380 U	460 U	3900 U	390 U	390 U
2,4,5-Trichlorophenol	ug/Kg	NL	770 U	940 U	7900 U	790 U	780 U
2,4,6-Trichlorophenol	ug/Kg	NL	380 U	460 U	3900 U	390 U	390 U
2,4-Dichlorophenol	ug/Kg	NL	380 U	460 U	3900 U	390 U	390 U
2,4-Dimethylphenol	ug/Kg	NL	380 U	460 U	3900 U	390 U	390 U
2,4-Dinitrophenol	ug/Kg	NL	770 U	940 U	7900 U	790 U	780 U
2,4-Dinitrotoluene	ug/Kg	NL	380 U	460 U	3900 U	390 U	390 U
2,6-Dinitrotoluene	ug/Kg	NL	380 U	460 U	3900 U	390 U	390 U
2-Chloronaphthalene	ug/Kg	NL	380 U	460 U	3900 U	390 U	390 U
2-Chlorophenol	ug/Kg	NL	380 U	460 U	3900 U	390 U	390 U
2-Methylnaphthalene	ug/Kg	NL	380 U	460 U	**60000 D**	**47000 E**	**510**
2-Methylphenol	ug/Kg	NL	380 U	460 U	3900 U	390 U	390 U
2-Nitroaniline	ug/Kg	NL	770 U	940 U	7900 U	790 U	780 U
2-Nitrophenol	ug/Kg	NL	380 U	460 U	3900 U	390 U	390 U
3,3´-Dichlorobenzidine	ug/Kg	NL	380 U	460 U	3900 U	390 U	390 U
3-Nitroaniline	ug/Kg	NL	770 U	940 U	7900 U	790 U	780 U
4,6-Dinitro-2-methylphenol	ug/Kg	NL	770 U	940 U	7900 U	790 U	780 U
4-Bromophenyl-phenylether	ug/Kg	NL	380 U	460 U	3900 U	390 U	390 U
4-Chloro-3-methylphenol	ug/Kg	NL	380 U	460 U	3900 U	390 U	390 U
4-Chloroaniline	ug/Kg	NL	380 U	460 U	3900 U	390 U	390 U
4-Chlorophenyl-phenylether	ug/Kg	NL	380 U	460 U	3900 U	390 U	390 U

Meridian Brownfields Site Investigation

Table 2 - Summary of Semi-volatile Organic Compounds
in Subsurface Soils and Sediments

Sample ID	Residential Use Soil Clean-up Objective from 6NYCRR Part 375		MW-1	MW-2	MW-3DL	MW-3	B-1
Sample Depth (feet)			2-4	2-4	4-6		4-6
Sample Date			04/05/2010	04/05/2010	04/05/2010	04/05/2010	04/06/2010
4-Methylphenol	ug/Kg	NL	380 U	460 U	3900 U	390 U	390 U
4-Nitroaniline	ug/Kg	NL	770 U	940 U	7900 U	790 U	780 U
4-Nitrophenol	ug/Kg	NL	770 U	940 U	7900 U	790 U	780 U
Acenaphthene	ug/Kg	100,000	380 U	460 U	3900 U	**270 J**	390 U
Acenaphthylene	ug/Kg	100,000	380 U	460 U	3900 U	390 U	**52 J**
Anthracene	ug/Kg	100,000	380 U	460 U	3900 U	**160 J**	**41 J**
Benzo(a)anthracene	ug/Kg	1,000	380 U	**99 J**	3900 U	**280 J**	**210 J**
Benzo(a)pyrene	ug/Kg	1,000	380 U	**71 J**	3900 U	**150 J**	**160 J**
Benzo(b)fluoranthene	ug/Kg	1,000	380 U	**87 J**	3900 U	**220 J**	**240 J**
Benzo(g,h,i)perylene	ug/Kg	100,000	380 U	**85 J**	3900 U	**130 J**	**130 J**
Benzo(k)fluoranthene	ug/Kg	1,000	380 U	**72 J**	3900 U	**97 J**	**81 J**
Bis(2-chloroethoxy)methane	ug/Kg	NL	380 U	460 U	3900 U	390 U	390 U
Bis(2-chloroethyl)ether	ug/Kg	NL	380 U	460 U	3900 U	390 U	390 U
Bis(2-ethylhexyl)phthalate	ug/Kg	NL	380 U	460 U	3900 U	390 U	**170 J**
Butylbenzylphthalate	ug/Kg	NL	380 U	460 U	3900 U	390 U	390 U
Carbazole	ug/Kg	NL	380 U	460 U	3900 U	390 U	390 U
Chrysene	ug/Kg	1,000	380 U	**93 J**	3900 U	**240 J**	**190 J**
Di-n-butylphthalate	ug/Kg	NL	380 U	460 U	3900 U	390 U	390 U
Di-n-octylphthalate	ug/Kg	NL	380 U	460 U	3900 U	390 U	390 U
Dibenzo(a,h)anthracene	ug/Kg	330	380 U	460 U	3900 U	390 U	390 U
Dibenzofuran	ug/Kg	NL	380 U	460 U	3900 U	**61 J**	390 U
Diethylphthalate	ug/Kg	NL	380 U	460 U	3900 U	390 U	390 U
Dimethylphthalate	ug/Kg	NL	380 U	460 U	3900 U	390 U	390 U
Fluoranthene	ug/Kg	100,000	380 U	350 J	3900 U	**840**	**160 J**
Fluorene	ug/Kg	100,000	380 U	460 U	3900 U	**310 J**	390 U
Hexachlorobenzene	ug/Kg	NL	380 U	460 U	3900 U	390 U	390 U

Meridian Brownfields Site Investigation

Table 2 - Summary of Semi-volatile Organic Compounds
in Subsurface Soils and Sediments

Sample ID	Residential Use Soil Clean-up Objective from 6NYCRR Part 375		MW-1	MW-2	MW-3DL	MW-3	B-1
Sample Depth (feet)			2-4	2-4	4-6		4-6
Sample Date			04/05/2010	04/05/2010	04/05/2010	04/05/2010	04/06/2010
Hexachlorobutadiene	ug/Kg	NL	380 U	460 U	3900 U	390 U	390 U
Hexachlorocyclopentadiene	ug/Kg	NL	380 U	460 U	3900 U	390 U	390 U
Hexachloroethane	ug/Kg	NL	380 U	460 U	3900 U	390 U	390 U
Indeno(1,2,3-cd)pyrene	ug/Kg	500	380 U	**63 J**	3900 U	**100 J**	**120 J**
Isophorone	ug/Kg	NL	380 U	460 U	3900 U	390 U	390 U
N-Nitroso-di-n-propylamine	ug/Kg	NL	380 U	460 U	3900 U	390 U	390 U
N-Nitrosodiphenylamine	ug/Kg	NL	380 U	460 U	3900 U	390 U	390 U
Naphthalene	ug/Kg	100,000	380 U	460 U	**57000 D**	**39000 E**	**770**
Nitrobenzene	ug/Kg	NL	380 U	460 U	3900 U	390 U	390 U
Pentachlorophenol	ug/Kg	2,400	770 U	940 U	7900 U	790 U	780 U
Phenanthrene	ug/Kg	100,000	380 U	**94 J**	**470 DJ**	**480**	**88 J**
Phenol	ug/Kg	100,000	380 U	460 U	3900 U	390 U	390 U
Pyrene	ug/Kg	100,000	380 U	**160 J**	3900 U	**400**	**160 J**

Notes:
NA = listed analysis not performed on this sample
NL = No listed cleanup objective in 6NYCRR Part 375-6
Detected analytical parameters are shown in **BOLD**
Detections exceeding the residential use cleanup objective are shaded yellow
Data Qualifiers: U = analyte was not detected at the listed quantitation limit;
J = estimated value,compound detected below reporting limit;
B = analyte was detected in associated method blank;
D = concentration obtained from diluted analysis
E = concentration exceeded calibration range

Meridian Brownfields Site Investigation

Table 2 - Summary of Semi-volatile Organic Compounds
in Subsurface Soils and Sediments

Sample ID	Residential Use Soil Clean-up Objective from 6NYCRR Part 375		B-2	B-3	SED 1	SED 2DL	SED 2
Sample Depth (feet)			4-6	4-8	0-0.5	0-0.5	
Sample Date			04/06/2010	04/07/2010	04/07/2010	04/07/2010	04/07/2010
Semi-Volatile Organic Compounds	Units						
1,2,4-Trichlorobenzene	ug/Kg	NL	400 U	440 U	440 U	1400 U	700 U
1,2-Dichlorobenzene	ug/Kg	100,000	400 U	440 U	440 U	1400 U	700 U
1,3-Dichlorobenzene	ug/Kg	17,000	400 U	440 U	440 U	1400 U	700 U
1,4-Dichlorobenzene	ug/Kg	9,800	400 U	440 U	440 U	1400 U	700 U
2,2´-oxybis(1-Chloropropane)	ug/Kg	NL	400 U	440 U	440 U	1400 U	700 U
2,4,5-Trichlorophenol	ug/Kg	NL	800 U	900 U	890 U	2800 U	1400 U
2,4,6-Trichlorophenol	ug/Kg	NL	400 U	440 U	440 U	1400 U	700 U
2,4-Dichlorophenol	ug/Kg	NL	400 U	440 U	440 U	1400 U	700 U
2,4-Dimethylphenol	ug/Kg	NL	400 U	440 U	440 U	1400 U	700 U
2,4-Dinitrophenol	ug/Kg	NL	800 U	900 U	890 U	2800 U	1400 U
2,4-Dinitrotoluene	ug/Kg	NL	400 U	440 U	440 U	1400 U	700 U
2,6-Dinitrotoluene	ug/Kg	NL	400 U	440 U	440 U	1400 U	700 U
2-Chloronaphthalene	ug/Kg	NL	400 U	440 U	440 U	1400 U	700 U
2-Chlorophenol	ug/Kg	NL	400 U	440 U	440 U	1400 U	700 U
2-Methylnaphthalene	ug/Kg	NL	400 U	440 U	440 U	1400 U	700 U
2-Methylphenol	ug/Kg	NL	400 U	440 U	440 U	1400 U	700 U
2-Nitroaniline	ug/Kg	NL	800 U	900 U	890 U	2800 U	1400 U
2-Nitrophenol	ug/Kg	NL	400 U	440 U	440 U	1400 U	700 U
3,3´-Dichlorobenzidine	ug/Kg	NL	400 U	440 U	440 U	1400 U	700 U
3-Nitroaniline	ug/Kg	NL	800 U	900 U	890 U	2800 U	1400 U
4,6-Dinitro-2-methylphenol	ug/Kg	NL	800 U	900 U	890 U	2800 U	1400 U
4-Bromophenyl-phenylether	ug/Kg	NL	400 U	440 U	440 U	1400 U	700 U
4-Chloro-3-methylphenol	ug/Kg	NL	400 U	440 U	440 U	1400 U	700 U
4-Chloroaniline	ug/Kg	NL	400 U	440 U	440 U	1400 U	700 U
4-Chlorophenyl-phenylether	ug/Kg	NL	400 U	440 U	440 U	1400 U	700 U

Meridian Brownfields Site Investigation

Table 2 - Summary of Semi-volatile Organic Compounds
in Subsurface Soils and Sediments

Sample ID	Residential Use Soil Clean-up Objective from 6NYCRR Part 375		B-2	B-3	SED 1	SED 2DL	SED 2
Sample Depth (feet)			4-6	4-8	0-0.5	0-0.5	
Sample Date			04/06/2010	04/07/2010	04/07/2010	04/07/2010	04/07/2010
4-Methylphenol	ug/Kg	NL	400 U	440 U	440 U	1400 U	700 U
4-Nitroaniline	ug/Kg	NL	800 U	900 U	890 U	2800 U	1400 U
4-Nitrophenol	ug/Kg	NL	800 U	900 U	890 U	2800 U	1400 U
Acenaphthene	ug/Kg	100,000	400 U	440 U	440 U	**1400 U**	**130** J
Acenaphthylene	ug/Kg	100,000	400 U	440 U	440 U	**450 DJ**	**520** J
Anthracene	ug/Kg	100,000	400 U	**63 J**	**55 J**	**860 DJ**	**990**
Benzo(a)anthracene	ug/Kg	1,000	400 U	**270 J**	**220 J**	**3400 D**	**3600**
Benzo(a)pyrene	ug/Kg	1,000	400 U	**230 J**	**110 J**	**2000 D**	**2200**
Benzo(b)fluoranthene	ug/Kg	1,000	400 U	**340 J**	**180 J**	**3000 D**	**2700**
Benzo(g,h,i)perylene	ug/Kg	100,000	400 U	**220 J**	**110 J**	**1500 D**	**1800**
Benzo(k)fluoranthene	ug/Kg	1,000	400 U	**120 J**	**72 J**	**840 DJ**	**1700**
Bis(2-chloroethoxy)methane	ug/Kg	NL	400 U	440 U	440 U	1400 U	700 U
Bis(2-chloroethyl)ether	ug/Kg	NL	400 U	440 U	440 U	1400 U	700 U
Bis(2-ethylhexyl)phthalate	ug/Kg	NL	400 U	440 U	440 U	1400 U	700 U
Butylbenzylphthalate	ug/Kg	NL	400 U	440 U	440 U	1400 U	700 U
Carbazole	ug/Kg	NL	400 U	440 U	440 U	**360 DJ**	**340 J**
Chrysene	ug/Kg	1,000	400 U	**280 J**	**200 J**	**2800 D**	**3200**
Di-n-butylphthalate	ug/Kg	NL	400 U	440 U	440 U	**2600 D**	**2900**
Di-n-octylphthalate	ug/Kg	NL	400 U	440 U	440 U	1400 U	700 U
Dibenzo(a,h)anthracene	ug/Kg	330	400 U	440 U	440 U	**480 DJ**	**580 J**
Dibenzofuran	ug/Kg	NL	400 U	440 U	440 U	**1400 U**	**110 J**
Diethylphthalate	ug/Kg	NL	400 U	440 U	440 U	1400 U	700 U
Dimethylphthalate	ug/Kg	NL	400 U	440 U	440 U	1400 U	700 U
Fluoranthene	ug/Kg	100,000	400 U	**1000**	**350 J**	**14000 D**	**13000 E**
Fluorene	ug/Kg	100,000	400 U	440 U	440 U	**240 DJ**	**260 J**
Hexachlorobenzene	ug/Kg	NL	400 U	440 U	440 U	1400 U	700 U

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Table 2 - Summary of Semi-volatile Organic Compounds
in Subsurface Soils and Sediments

Sample ID	Residential Use Soil Clean-up Objective from 6NYCRR Part 375		B-2	B-3	SED 1	SED 2DL	SED 2
Sample Depth (feet)			4-6	4-8	0-0.5	0-0.5	
Sample Date			04/06/2010	04/07/2010	04/07/2010	04/07/2010	04/07/2010
Hexachlorobutadiene	ug/Kg	NL	400 U	440 U	440 U	1400 U	700 U
Hexachlorocyclopentadiene	ug/Kg	NL	400 U	440 U	440 U	1400 U	700 U
Hexachloroethane	ug/Kg	NL	400 U	440 U	440 U	1400 U	700 U
Indeno(1,2,3-cd)pyrene	ug/Kg	500	400 U	**160 J**	**86 J**	**1200 DJ**	**1500**
Isophorone	ug/Kg	NL	400 U	440 U	440 U	1400 U	700 U
N-Nitroso-di-n-propylamine	ug/Kg	NL	400 U	440 U	440 U	1400 U	700 U
N-Nitrosodiphenylamine	ug/Kg	NL	400 U	440 U	440 U	1400 U	700 U
Naphthalene	ug/Kg	100,000	400 U	440 U	440 U	1400 U	700 U
Nitrobenzene	ug/Kg	NL	400 U	440 U	440 U	1400 U	700 U
Pentachlorophenol	ug/Kg	2,400	800 U	900 U	890 U	2800 U	1400 U
Phenanthrene	ug/Kg	100,000	400 U	**220 J**	**190 J**	3500 D	3900
Phenol	ug/Kg	100,000	400 U	440 U	440 U	1400 U	700 U
Pyrene	ug/Kg	100,000	400 U	**460**	**320 J**	**6100 D**	**6500**

Notes:
NA = listed analysis not performed on this sample
NL = No listed cleanup objective in 6NYCRR Part 375-6
Detected analytical parameters are shown in **BOLD**
Detections exceeding the residential use cleanup objective are shaded yellow
Data Qualifiers: U = analyte was not detected at the listed quantitation limit;
J = estimated value,compound detected below reporting lin
B = analyte was detected in associated method blank;
D = concentration obtained from diluted analysis
E = concentration exceeded calibration range

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Table 3 - Summary of Pesticides/PCBS in Subsurface Soils
and Sediments

Sample ID		**Residential Soil Clean-up Objective from 6NYSCRR Part 375**	MW-1	MW-2	MW-3	B-1	B-2	B-3	SED 1	SED 2
Sample Depth (feet)			2-4	2-4	2-4	4-6	4-6	4-8	0-0.5	0-0.5
Sample Date			04/05/2010	04/05/2010	04/05/2010	04/06/2010	04/06/2010	04/07/2010	04/07/2010	04/07/2010
Pesticides/PCBs	Units									
4,4´-DDD	ug/Kg	2,600	3.7 U	4.6 U	3.9 U	3.9 U	4.0 U	4.5 U	4.4 U	7.0 U
4,4´-DDE	ug/Kg	1,800	3.7 U	4.6 U	3.9 U	**6.0**	4.0 U	4.5 U	**6.3**	**65**
4,4´-DDT	ug/Kg	1,700	3.7 U	4.6 U	3.9 U	**22**	4.0 U	4.5 U	**8.1**	**8.3**
Aldrin	ug/Kg	19	1.9 U	2.4 U	2.0 U	2.0 U	2.1 U	2.3 U	2.3 U	3.6 U
alpha-BHC	ug/Kg	97	1.9 U	2.4 U	2.0 U	2.0 U	2.1 U	2.3 U	2.3 U	3.6 U
alpha-Chlordane	ug/Kg	910	1.9 U	2.4 U	2.0 U	2.0 U	2.1 U	2.3 U	2.3 U	3.6 U
beta-BHC	ug/Kg	72	1.9 U	2.4 U	2.0 U	2.0 U	2.1 U	2.3 U	2.3 U	3.6 U
delta-BHC	ug/Kg	100,000	1.9 U	2.4 U	2.0 U	2.0 U	2.1 U	2.3 U	2.3 U	3.6 U
Dieldrin	ug/Kg	39	3.7 U	4.6 U	3.9 U	3.9 U	4.0 U	4.5 U	4.4 U	7.0 U
Endosulfan I	ug/Kg	4,800	1.9 U	2.4 U	2.0 U	2.0 U	2.1 U	2.3 U	2.3 U	3.6 U
Endosulfan II	ug/Kg	4,800	3.7 U	4.6 U	3.9 U	3.9 U	4.0 U	4.5 U	4.4 U	7.0 U
Endosulfan sulfate	ug/Kg	4,800	4.8	4.6 U	3.9 U	3.9 U	4.0 U	4.5 U	4.4 U	7.0 U
Endrin	ug/Kg	2,200	3.7 U	4.6 U	3.9 U	3.9 U	4.0 U	4.5 U	4.4 U	7.0 U
Endrin aldehyde	ug/Kg	NL	3.7 U	4.6 U	3.9 U	3.9 U	4.0 U	4.5 U	4.4 U	7.0 U
Endrin ketone	ug/Kg	NL	3.7 U	4.6 U	3.9 U	3.9 U	4.0 U	4.5 U	4.4 U	7.0 U
gamma-BHC (Lindane)	ug/Kg	280	1.9 U	2.4 U	2.0 U	2.0 U	2.1 U	2.3 U	2.3 U	3.6 U
gamma-Chlordane	ug/Kg	NA	1.9 U	2.4 U	2.0 U	2.0 U	2.1 U	2.3 U	2.3 U	3.6 U
Heptachlor	ug/Kg	420	1.9 U	2.4 U	2.0 U	2.0 U	2.1 U	2.3 U	2.3 U	3.6 U
Heptachlor epoxide	ug/Kg	NL	1.9 U	2.4 U	2.0 U	2.0 U	2.1 U	2.3 U	2.3 U	3.6 U
Methoxychlor	ug/Kg	NL	19 U	24 U	20 U	20 U	21 U	23 U	23 U	36 U
Toxaphene	ug/Kg	NL	190 U	240 U	200 U	200 U	210 U	230 U	230 U	360 U
Aroclor-1016	ug/Kg	1,000	37 U	46 U	39 U	39 U	40 U	45 U	44 U	70 U
Aroclor-1221	ug/Kg		37 U	46 U	39 U	39 U	40 U	45 U	44 U	70 U
Aroclor-1232	ug/Kg		37 U	46 U	39 U	39 U	40 U	45 U	44 U	70 U
Aroclor-1242	ug/Kg		37 U	46 U	39 U	39 U	40 U	45 U	44 U	70 U
Aroclor-1248	ug/Kg		37 U	46 U	39 U	39 U	40 U	45 U	44 U	70 U
Aroclor-1254	ug/Kg		37 U	46 U	39 U	39 U	40 U	45 U	44 U	70 U
Aroclor-1260	ug/Kg		37 U	46 U	39 U	**110**	40 U	45 U	44 U	70 U

Notes:

NL = No listed cleanup objective in 6NYCRR Part 375-6

Detected analytical parameters are shown in **BOLD**

Data Qualifiers: U = analyte was not detected at the listed quantitation limit;

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Table 4 - Summary of Inorganic Parameters in Subsurface Soils and Sediments

Sample ID		Residential Soil Clean-up Objective from 6NYSCRR Part 375	MW-1	MW-2	MW-3	B-1	B-2	B-3	SED 1	SED 2
Sample Depth (feet)			2-4	2-4	2-4	4-6	4-6	4-8	0-0.5	0-0.5
Sample Date			04/05/2010	04/05/2010	04/05/2010	04/06/2010	04/06/2010	04/07/2010	04/07/2010	04/07/2010
Inorganic Parameter	Units									
Aluminum	mg/Kg	NL	5270 E	5890 E	3780 E	5200 E	5620 E	7490 E	8200 E	6420 E
Antimony	mg/Kg	NL	0.26 BN	0.77 BN	7.3 N	1.0 N	0.12 U	0.20 U	0.16 U	0.32 U
Arsenic	mg/Kg	16	11.4	6.8	17.1	6.8	13.0	7.0	5.1	9.5
Barium	mg/Kg	350	37.9 E	67.5 E	108 E	64.7 E	56.5 E	79.2 E	64.0 E	101 E
Beryllium	mg/Kg	14	0.17 BE	0.31 BE	0.20 BE	0.18 BE	0.14 BE	0.32 E	0.34 E	0.25 BE
Cadmium	mg/Kg	2.5	0.013 U	1.0	0.34	0.56	0.070 B	0.21 B	0.19 B	0.41 B
Calcium	mg/Kg	NL	22800 E	17900 E	92600 E	77200 E	21700 E	11300 E	9580 E	16900 E
Chromium	mg/Kg	22	9.3 E	11.7 E	7.0 E	9.1 E	9.1 E	10.3 E	10.8 E	10.7 E
Cobalt	mg/Kg	NA	4.0 E	10.1 E	7.3 E	5.3 E	7.7 E	7.7 E	6.4 E	5.3 E
Copper	mg/Kg	270	11.0 E	49.2 E	163 E	36.7 E	16.5 E	38.3 E	22.2 E	45.4 E
Cyanide	mg/Kg	27	0.39 B	0.61 B	0.40 B	0.52 B	0.48 B	0.54 B	0.75 B	1.3 B
Iron	mg/Kg	NL	13400	30600	17900	13800	17300	22400	22000	20000
Lead	mg/Kg	400	3.8 E	78.8 E	227 E	120 E	6.4 E	127 E	17.6 E	84.1 E
Magnesium	mg/Kg	NL	11200 E	7500 E	37800 E	9760 E	8910 E	5030 E	4350 E	3820 E
Manganese	mg/Kg	2,000	249 *E	310 *E	1070 *E	476 *E	554 *E	313 *E	511 *E	1040 *E
Nickel	mg/Kg	140	10.3 E	17.9 E	8.5 E	11.7 E	12.1 E	11.6 E	11.0 E	10.2 E
Potassium	mg/Kg	NL	953 E	641 E	659 E	790 E	871 E	784 E	771 E	1100 E
Selenium	mg/Kg	36	1.3 B	3.9	1.0 B	0.79 U	1.5	3.0	1.6	3.1
Silver	mg/Kg	36	0.080 U	0.10 U	0.068 U	0.080 U	0.052 U	0.089 U	0.070 U	0.14 U
Sodium	mg/Kg	NL	90.5 E	89.6 E	287 E	146 E	124 E	87.9 E	98.8 E	167 E
Thallium	mg/Kg	NL	1.1	1.1 B	4.9	1.2	2.8	1.4	2.8	5.2
Vanadium	mg/Kg	NL	13.5 E	15.2 E	12.9 E	13.7 E	15.3 E	17.4 E	17.6 E	15.4 E
Zinc	mg/Kg	2200	21.4 E	369 E	178 E	160 E	33.3 E	58.7 E	57.0 E	113 E
Mercury	mg/Kg	0.81	0.0059 U	0.094 N	0.086 N	0.061 N	0.0070 U	0.087 N	0.050 N	0.15 N

Notes:

NA = listed analysis not performed on this sample

NL = No listed cleanup objective in 6NYCRR Part 375-6

Detected analytical parameters are shown in **BOLD**

Detections exceeding the residential use cleanup objective are shaded yellow

Data Qualifiers: U = analyte was not detected at the listed quantitation limit;

E = concentration estimated due to interference;

B = concentrationis below the reporting limit but above the detection limit;

N = matrix spike recovery outside of control limit;

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Table 5 - Lead Concentrations at Discrete Depth Intervals

Sample ID	LB-1	LB-2	LB-3	LB-4	LB-5	LB-6	LB-7	LB-8	Average
Depth Interval	Lead Concentration in mg/kg (parts per million)								
A (0-0.5 ft)	717	276	194	2050	337	133	4650	99.2	1057.0
B (0.5-1.0 ft)	393	277	863	641	1060	196	1430	88.1	618.5
C (1.0-2.0 ft)	297	342	299	510	955	156	1000	36.9	449.5
D (2.0 -4.0 ft)	214	411	1540	708	492	39.1	762	99.7	533.2
E (4.0-5.0 ft)	103	45.2	53.5	517	6.3	19.8	8.9	6.8	95.1

The following table provides the NYSDEC's Soil Clean-up Objectives (SCOs) for lead from 6NYCRR Subpart 375-6:

Intended Use	SCO (ppm)
Unrestricted	63 or site background from NYSDOH rural soil survey
Residential	400
Restricted Residential	400
Commercial	1,000
Industrial	3,900
Protection of Ecological Resources	63 or site background from NYSDOH rural soil survey
Protection of Groundwater	450

Concentrations exceeding the residential clean-up criteria are shaded

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Table 6 - Summary of Volatile Organic Compunds in
Groundwater abd Surface Water

Sample ID		NYSDEC Class GA		MW-1	MW-2	MW-3DL	MW-3
Sample Date				04/08/2010	04/08/2010	04/08/2010	04/08/2010
	Units	Standard	Guidance				
1,1,1,2-Tetrachloroethane	ug/L	NL	NL	5.0 U	5.0 U	1000 U	5.0 U
1,1,1-Trichloroethane	ug/L	5	NL	5.0 U	5.0 U	1000 U	5.0 U
1,1,2,2-Tetrachloroethane	ug/L	5	NL	5.0 U	5.0 U	1000 U	5.0 U
1,1,2-Trichloroethane	ug/L	5	NL	5.0 U	5.0 U	1000 U	5.0 U
1,1-Dichloroethane	ug/L	5	NL	5.0 U	5.0 U	1000 U	5.0 U
1,1-Dichloroethene	ug/L	5	NL	5.0 U	5.0 U	1000 U	5.0 U
1,1-Dichloropropene	ug/L	NL	NL	5.0 U	5.0 U	1000 U	5.0 U
1,2,3-Trichlorobenzene	ug/L	NL	NL	5.0 U	5.0 U	1000 U	5.0 U
1,2,3-Trichloropropane	ug/L	NL	NL	5.0 U	5.0 U	1000 U	5.0 U
1,2,4-Trichlorobenzene	ug/L	5	NL	5.0 U	5.0 U	1000 U	5.0 U
1,2,4-Trimethylbenzene	ug/L	NL	NL	5.0 U	5.0 U	**3400 D**	**1200 E**
1,2-Dibromo-3-chloropropane	ug/L	0.04	NL	5.0 U	5.0 U	1000 U	5.0 U
1,2-Dibromoethane	ug/L	NL	NL	5.0 U	5.0 U	1000 U	5.0 U
1,2-Dichlorobenzene	ug/L	3	NL	5.0 U	5.0 U	1000 U	5.0 U
1,2-Dichloroethane	ug/L	0.6	NL	5.0 U	5.0 U	1000 U	**35**
1,2-Dichloropropane	ug/L	1	NL	5.0 U	5.0 U	1000 U	5.0 U
1,3,5-Trimethylbenzene	ug/L	NL	NL	5.0 U	5.0 U	**940 DJ**	**770 E**
1,3-Dichlorobenzene	ug/L	3	NL	5.0 U	5.0 U	1000 U	5.0 U
1,3-Dichloropropane	ug/L	NL	NL	5.0 U	5.0 U	1000 U	5.0 U
1,4-Dichlorobenzene	ug/L	3	NL	5.0 U	5.0 U	1000 U	5.0 U
2,2-Dichloropropane	ug/L	NL	NL	5.0 U	5.0 U	1000 U	5.0 U
2-Butanone (MEK)	ug/L	NL	50	5.0 U	5.0 U	1000 U	**4.6 J**
2-Chlorotoluene	ug/L	NL	NL	5.0 U	5.0 U	1000 U	5.0 U
2-Hexanone	ug/L	NL	50	5.0 U	5.0 U	1000 U	5.0 U
4-Chlorotoluene	ug/L	NL	NL	5.0 U	5.0 U	1000 U	5.0 U
4-Isopropyltoluene	ug/L	NL	NL	5.0 U	5.0 U	1000 U	5.0 U

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Table 6 - Summary of Volatile Organic Compunds in
Groundwater abd Surface Water

Sample ID		NYSDEC Class GA		MW-1	MW-2	MW-3DL	MW-3
Sample Date				04/08/2010	04/08/2010	04/08/2010	04/08/2010
	Units	Standard	Guidance				
4-Methyl-2-pentanone	ug/L	NL	NL	5.0 U	5.0 U	1000 U	**8.1**
Acetone	ug/L	NL	50	5.0 U	5.0 U	1000 U	**16**
Benzene	ug/L	1	NL	5.0 U	5.0 U	**1700 D**	**970 E**
Bromobenzene	ug/L	NL	NL	5.0 U	5.0 U	1000 U	5.0 U
Bromochloromethane	ug/L	NL	NL	5.0 U	5.0 U	1000 U	5.0 U
Bromodichloromethane	ug/L	NL	50	5.0 U	5.0 U	1000 U	5.0 U
Bromoform	ug/L	NL	50	5.0 U	5.0 U	1000 U	5.0 U
Bromomethane	ug/L	NL	NL	5.0 U	5.0 U	1000 U	5.0 U
Carbon disulfide	ug/L	60	NL	5.0 U	5.0 U	1000 U	5.0 U
Carbon tetrachloride	ug/L	5	NL	5.0 U	5.0 U	1000 U	5.0 U
Chlorobenzene	ug/L	5	NL	5.0 U	5.0 U	1000 U	5.0 U
Chloroethane	ug/L	5	NL	5.0 U	5.0 U	1000 U	**1.2 J**
Chloroform	ug/L	7	NL	5.0 U	5.0 U	1000 U	5.0 U
Chloromethane	ug/L	NL	NL	5.0 U	5.0 U	1000 U	**2.7 J**
cis-1,2-Dichloroethene	ug/L	5	NL	5.0 U	5.0 U	1000 U	5.0 U
cis-1,3-Dichloropropene	ug/L	0.4	NL	5.0 U	5.0 U	1000 U	5.0 U
Dibromochloromethane	ug/L	5	NL	5.0 U	5.0 U	1000 U	5.0 U
Dibromomethane	ug/L	NL	NL	5.0 U	5.0 U	1000 U	5.0 U
Dichlorodifluoromethane	ug/L	5	NL	5.0 U	5.0 U	1000 U	5.0 U
Ethylbenzene	ug/L	5	NL	5.0 U	5.0 U	**4100 D**	**1900 E**
Hexachlorobutadiene	ug/L	NL	NL	5.0 U	5.0 U	1000 U	5.0 U
Iodomethane	ug/L	NL	NL	5.0 U	5.0 U	1000 U	5.0 U
Isopropylbenzene	ug/L	5	NL	5.0 U	5.0 U	1000 U	**180**
m,p-Xylene	ug/L	NL	NL	5.0 U	5.0 U	**18000 D**	**2600 E**
Methyl tert-butyl ether	ug/L	10	NL	5.0 U	5.0 U	1000 U	**6.8**
Methylene chloride	ug/L	5	NL	5.0 U	5.0 U	1000 U	5.0 U

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Table 6 - Summary of Volatile Organic Compunds in
Groundwater abd Surface Water

Sample ID		NYSDEC Class GA		MW-1	MW-2	MW-3DL	MW-3
Sample Date				04/08/2010	04/08/2010	04/08/2010	04/08/2010
	Units	Standard	Guidance				
n-Butylbenzene	ug/L	NL	NL	5.0 U	5.0 U	1000 U	**87**
n-Propylbenzene	ug/L	NL	NL	5.0 U	5.0 U	**350 DJ**	**510 E**
Naphthalene	ug/L	NL	10	5.0 U	5.0 U	**680 DJ**	**610 E**
o-Xylene	ug/L	NL	NL	5.0 U	5.0 U	**3800 D**	**1600 E**
sec-Butylbenzene	ug/L	NL	NL	5.0 U	5.0 U	1000 U	**23**
Styrene	ug/L	5	NL	5.0 U	5.0 U	1000 U	5.0 U
tert-Butylbenzene	ug/L	NL	NL	5.0 U	5.0 U	1000 U	5.0 U
Tetrachloroethene	ug/L	5	NL	5.0 U	5.0 U	1000 U	5.0 U
Toluene	ug/L	5	NL	5.0 U	5.0 U	**320 DJ**	**330 E**
trans-1,2-Dichloroethene	ug/L	5	NL	5.0 U	5.0 U	1000 U	5.0 U
trans-1,3-Dichloropropene	ug/L	0.4	NL	5.0 U	5.0 U	1000 U	5.0 U
Trichloroethene	ug/L	5	NL	5.0 U	5.0 U	1000 U	5.0 U
Trichlorofluoromethane	ug/L	5	NL	5.0 U	5.0 U	1000 U	5.0 U
Vinyl acetate	ug/L	NL	NL	5.0 U	5.0 U	1000 U	5.0 U
Vinyl chloride	ug/L	2	NL	5.0 U	5.0 U	1000 U	5.0 U
Xylene (Total)	ug/L	5	NL	5.0 U	5.0 U	**22000 D**	**4200 E**

Notes:
NL = No listed Class GA Standard or Guidance Value
Detected analytical parameters are shown in **BOLD**
Detections exceeding the residential use cleanup objective
are shaded yellow

Data Qualifiers:
U = analyte was not detected at the listed quantitation limit;
J = estimated value,compound detected below reporting limit;
D = concentration obtained from diluted analysis
E = concentration exceeded calibration range

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Table 6 - Summary of Volatile Organic Compunds in
Groundwater abd Surface Water

Sample ID		NYSDEC Class GA		SURFACEWATER 1	SURFACEWATER 2
Sample Date				04/08/2010	04/08/2010
	Units	Standard	Guidance		
1,1,1,2-Tetrachloroethane	ug/L	NL	NL	5.0 U	5.0 U
1,1,1-Trichloroethane	ug/L	5	NL	5.0 U	5.0 U
1,1,2,2-Tetrachloroethane	ug/L	5	NL	5.0 U	5.0 U
1,1,2-Trichloroethane	ug/L	5	NL	5.0 U	5.0 U
1,1-Dichloroethane	ug/L	5	NL	5.0 U	5.0 U
1,1-Dichloroethene	ug/L	5	NL	5.0 U	5.0 U
1,1-Dichloropropene	ug/L	NL	NL	5.0 U	5.0 U
1,2,3-Trichlorobenzene	ug/L	NL	NL	5.0 U	5.0 U
1,2,3-Trichloropropane	ug/L	NL	NL	5.0 U	5.0 U
1,2,4-Trichlorobenzene	ug/L	5	NL	5.0 U	5.0 U
1,2,4-Trimethylbenzene	ug/L	NL	NL	5.0 U	5.0 U
1,2-Dibromo-3-chloropropane	ug/L	0.04	NL	5.0 U	5.0 U
1,2-Dibromoethane	ug/L	NL	NL	5.0 U	5.0 U
1,2-Dichlorobenzene	ug/L	3	NL	5.0 U	5.0 U
1,2-Dichloroethane	ug/L	0.6	NL	5.0 U	5.0 U
1,2-Dichloropropane	ug/L	1	NL	5.0 U	5.0 U
1,3,5-Trimethylbenzene	ug/L	NL	NL	5.0 U	5.0 U
1,3-Dichlorobenzene	ug/L	3	NL	5.0 U	5.0 U
1,3-Dichloropropane	ug/L	NL	NL	5.0 U	5.0 U
1,4-Dichlorobenzene	ug/L	3	NL	5.0 U	5.0 U
2,2-Dichloropropane	ug/L	NL	NL	5.0 U	5.0 U
2-Butanone (MEK)	ug/L	NL	50	5.0 U	5.0 U
2-Chlorotoluene	ug/L	NL	NL	5.0 U	5.0 U
2-Hexanone	ug/L	NL	50	5.0 U	5.0 U
4-Chlorotoluene	ug/L	NL	NL	5.0 U	5.0 U
4-Isopropyltoluene	ug/L	NL	NL	5.0 U	5.0 U

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Table 6 - Summary of Volatile Organic Compunds in
Groundwater abd Surface Water

Sample ID		NYSDEC Class GA		SURFACEWATER 1	SURFACEWATER 2
Sample Date				04/08/2010	04/08/2010
	Units	Standard	Guidance		
4-Methyl-2-pentanone	ug/L	NL	NL	5.0 U	5.0 U
Acetone	ug/L	NL	50	5.0 U	5.0 U
Benzene	ug/L	1	NL	5.0 U	5.0 U
Bromobenzene	ug/L	NL	NL	5.0 U	5.0 U
Bromochloromethane	ug/L	NL	NL	5.0 U	5.0 U
Bromodichloromethane	ug/L	NL	50	5.0 U	5.0 U
Bromoform	ug/L	NL	50	5.0 U	5.0 U
Bromomethane	ug/L	NL	NL	5.0 U	5.0 U
Carbon disulfide	ug/L	60	NL	5.0 U	5.0 U
Carbon tetrachloride	ug/L	5	NL	5.0 U	5.0 U
Chlorobenzene	ug/L	5	NL	5.0 U	5.0 U
Chloroethane	ug/L	5	NL	5.0 U	5.0 U
Chloroform	ug/L	7	NL	5.0 U	5.0 U
Chloromethane	ug/L	NL	NL	5.0 U	5.0 U
cis-1,2-Dichloroethene	ug/L	5	NL	5.0 U	5.0 U
cis-1,3-Dichloropropene	ug/L	0.4	NL	5.0 U	5.0 U
Dibromochloromethane	ug/L	5	NL	5.0 U	5.0 U
Dibromomethane	ug/L	NL	NL	5.0 U	5.0 U
Dichlorodifluoromethane	ug/L	5	NL	5.0 U	5.0 U
Ethylbenzene	ug/L	5	NL	5.0 U	5.0 U
Hexachlorobutadiene	ug/L	NL	NL	5.0 U	5.0 U
Iodomethane	ug/L	NL	NL	5.0 U	5.0 U
Isopropylbenzene	ug/L	5	NL	5.0 U	5.0 U
m,p-Xylene	ug/L	NL	NL	5.0 U	**1.3 J**
Methyl tert-butyl ether	ug/L	10	NL	5.0 U	5.0 U
Methylene chloride	ug/L	5	NL	5.0 U	5.0 U

Meridian Brownfields Site Investigation

Table 6 - Summary of Volatile Organic Compunds in
Groundwater abd Surface Water

Sample ID		NYSDEC Class GA		SURFACEWATER 1	SURFACEWATER 2
Sample Date				04/08/2010	04/08/2010
	Units	Standard	Guidance		
n-Butylbenzene	ug/L	NL	NL	5.0 U	5.0 U
n-Propylbenzene	ug/L	NL	NL	5.0 U	5.0 U
Naphthalene	ug/L	NL	10	**1.1 J**	**1.6 J**
o-Xylene	ug/L	NL	NL	5.0 U	5.0 U
sec-Butylbenzene	ug/L	NL	NL	5.0 U	5.0 U
Styrene	ug/L	5	NL	5.0 U	5.0 U
tert-Butylbenzene	ug/L	NL	NL	5.0 U	5.0 U
Tetrachloroethene	ug/L	5	NL	5.0 U	5.0 U
Toluene	ug/L	5	NL	5.0 U	5.0 U
trans-1,2-Dichloroethene	ug/L	5	NL	5.0 U	5.0 U
trans-1,3-Dichloropropene	ug/L	0.4	NL	5.0 U	5.0 U
Trichloroethene	ug/L	5	NL	5.0 U	5.0 U
Trichlorofluoromethane	ug/L	5	NL	5.0 U	5.0 U
Vinyl acetate	ug/L	NL	NL	5.0 U	5.0 U
Vinyl chloride	ug/L	2	NL	5.0 U	5.0 U
Xylene (Total)	ug/L	5	NL	5.0 U	**1.3 J**

Notes:
NL = No listed Class GA Standard or Guidance Value
Detected analytical parameters are shown in **BOLD**
Detections exceeding the residential use cleanup objective
are shaded yellow

Data Qualifiers:
U = analyte was not detected at the listed quantitation limit;
J = estimated value,compound detected below reporting limit;
D = concentration obtained from diluted analysis
E = concentration exceeded calibration range

Meridian Brownfields Site Investigation

Table 7 - Summary of Semivolatile Organic Compounds in
Groundwater and Surface Water

Sample ID		NYSDEC Class GA		MW-1	MW-2
Sample Date				04/08/2010	04/08/2010
	Units	Standard	Guidance		
1,2,4-Trichlorobenzene	ug/L	NL	NL	10 U	10 U
1,2-Dichlorobenzene	ug/L	NL	NL	10 U	10 U
1,3-Dichlorobenzene	ug/L	NL	NL	10 U	10 U
1,4-Dichlorobenzene	ug/L	NL	NL	10 U	10 U
2,2´-oxybis(1-Chloropropane)	ug/L	NL	NL	10 U	10 U
2,4,5-Trichlorophenol	ug/L	1	NL	20 U	20 U
2,4,6-Trichlorophenol	ug/L	1	NL	10 U	10 U
2,4-Dichlorophenol	ug/L	1	NL	10 U	10 U
2,4-Dimethylphenol	ug/L	1	NL	10 U	10 U
2,4-Dinitrophenol	ug/L	1	NL	20 U	20 U
2,4-Dinitrotoluene	ug/L	5	NL	10 U	10 U
2,6-Dinitrotoluene	ug/L	5	NL	10 U	10 U
2-Chloronaphthalene	ug/L	NL	10	10 U	10 U
2-Chlorophenol	ug/L	1	NL	10 U	10 U
2-Methylnaphthalene	ug/L	NL	NL	10 U	10 U
2-Methylphenol	ug/L	1	NL	10 U	10 U
2-Nitroaniline	ug/L	5	NL	20 U	20 U
2-Nitrophenol	ug/L	1	NL	10 U	10 U
3,3´-Dichlorobenzidine	ug/L	5	NL	10 U	10 U
3-Nitroaniline	ug/L	5	NL	20 U	20 U
4,6-Dinitro-2-methylphenol	ug/L	1	NL	20 U	20 U
4-Bromophenyl-phenylether	ug/L	NL	NL	10 U	10 U
4-Chloro-3-methylphenol	ug/L	1	NL	10 U	10 U
4-Chloroaniline	ug/L	5	NL	10 U	10 U
4-Chlorophenyl-phenylether	ug/L	NL	NL	10 U	10 U
4-Methylphenol	ug/L	1	NL	10 U	10 U
4-Nitroaniline	ug/L	5	NL	20 U	20 U
4-Nitrophenol	ug/L	1	NL	20 U	20 U
Acenaphthene	ug/L	NL	NL	10 U	10 U
Acenaphthylene	ug/L	NL	NL	10 U	10 U
Anthracene	ug/L	NL	50	10 U	10 U
Benzo(a)anthracene	ug/L	NL	0.002	10 U	10 U
Benzo(a)pyrene	ug/L	ND	NL	10 U	10 U
Benzo(b)fluoranthene	ug/L	NL	0.002	10 U	10 U
Benzo(g,h,i)perylene	ug/L	NL	NL	10 U	10 U
Benzo(k)fluoranthene	ug/L	NL	0.002	10 U	10 U
Bis(2-chloroethoxy)methane	ug/L	5	NL	10 U	10 U
Bis(2-chloroethyl)ether	ug/L	1	NL	10 U	10 U
Bis(2-ethylhexyl)phthalate	ug/L	5	NL	10 U	10 U
Butylbenzylphthalate	ug/L	NL	50	10 U	10 U

Meridian Brownfields Site Investigation

Table 7 - Summary of Semivolatile Organic Compounds in
Groundwater and Surface Water

Sample ID		NYSDEC Class GA		MW-1	MW-2
Sample Date				04/08/2010	04/08/2010
	Units	Standard	Guidance		
Carbazole	ug/L	NL	NL	10 U	10 U
Chrysene	ug/L	NL	0.002	10 U	10 U
Di-n-butylphthalate	ug/L	50	NL	10 U	10 U
Di-n-octylphthalate	ug/L	NL	50	10 U	10 U
Dibenzo(a,h)anthracene	ug/L	NL	NL	10 U	10 U
Dibenzofuran	ug/L	NL	NL	10 U	10 U
Diethylphthalate	ug/L	NL	50	10 U	10 U
Dimethylphthalate	ug/L	NL	50	10 U	10 U
Fluoranthene	ug/L	NL	50	10 U	10 U
Fluorene	ug/L	NL	50	10 U	10 U
Hexachlorobenzene	ug/L	0.04	NL	10 U	10 U
Hexachlorobutadiene	ug/L	0.5	NL	10 U	10 U
Hexachlorocyclopentadiene	ug/L	5	NL	10 U	10 U
Hexachloroethane	ug/L	5	NL	10 U	10 U
Indeno(1,2,3-cd)pyrene	ug/L	NL	0.002	10 U	10 U
Isophorone	ug/L	NL	50	10 U	10 U
N-Nitroso-di-n-propylamine	ug/L	NL	NL	10 U	10 U
N-Nitrosodiphenylamine	ug/L	NL	50	10 U	10 U
Naphthalene	ug/L	NL	10	10 U	10 U
Nitrobenzene	ug/L	0.4	NL	10 U	10 U
Pentachlorophenol	ug/L	1	NL	20 U	20 U
Phenanthrene	ug/L	NL	50	10 U	10 U
Phenol	ug/L	1	NL	10 U	10 U
Pyrene	ug/L	NL	50	10 U	10 U

Notes:
NL = No listed Class GA Standard or Guidnace Value
Detected analytical parameters are shown in **BOLD**
Detections exceeding the Class GA Standard or Guidance value are shaded yellow

Data Qualifiers:
U = analyte was not detected at the listed quantitation limit;
J = estimated value,compound detected below reporting limit;
D = concentration obtained from diluted analysis
E = concentration exceeded calibration range

Meridian Brownfields Site Investigation

Table 7 - Summary of Semivolatile Organic Compounds in Groundwater and Surface Water

Sample ID		NYSDEC Class GA		MW-3DL	MW-3
Sample Date				04/08/2010	04/08/2010
	Units	Standard	Guidance		
1,2,4-Trichlorobenzene	ug/L	NL	NL	50 U	10 U
1,2-Dichlorobenzene	ug/L	NL	NL	50 U	10 U
1,3-Dichlorobenzene	ug/L	NL	NL	50 U	10 U
1,4-Dichlorobenzene	ug/L	NL	NL	50 U	10 U
2,2´-oxybis(1-Chloropropane)	ug/L	NL	NL	50 U	10 U
2,4,5-Trichlorophenol	ug/L	1	NL	100 U	20 U
2,4,6-Trichlorophenol	ug/L	1	NL	50 U	10 U
2,4-Dichlorophenol	ug/L	1	NL	50 U	10 U
2,4-Dimethylphenol	ug/L	1	NL	**100 D**	**110**
2,4-Dinitrophenol	ug/L	1	NL	100 U	20 U
2,4-Dinitrotoluene	ug/L	5	NL	50 U	10 U
2,6-Dinitrotoluene	ug/L	5	NL	50 U	10 U
2-Chloronaphthalene	ug/L	NL	10	50 U	10 U
2-Chlorophenol	ug/L	1	NL	50 U	10 U
2-Methylnaphthalene	ug/L	NL	NL	**100 D**	**160**
2-Methylphenol	ug/L	1	NL	**9.3 DJ**	**11**
2-Nitroaniline	ug/L	5	NL	100 U	20 U
2-Nitrophenol	ug/L	1	NL	50 U	10 U
3,3´-Dichlorobenzidine	ug/L	5	NL	50 U	10 U
3-Nitroaniline	ug/L	5	NL	100 U	20 U
4,6-Dinitro-2-methylphenol	ug/L	1	NL	100 U	20 U
4-Bromophenyl-phenylether	ug/L	NL	NL	50 U	10 U
4-Chloro-3-methylphenol	ug/L	1	NL	50 U	10 U
4-Chloroaniline	ug/L	5	NL	50 U	10 U
4-Chlorophenyl-phenylether	ug/L	NL	NL	50 U	10 U
4-Methylphenol	ug/L	1	NL	**19 DJ**	**29**
4-Nitroaniline	ug/L	5	NL	100 U	20 U
4-Nitrophenol	ug/L	1	NL	100 U	20 U
Acenaphthene	ug/L	NL	NL	50 U	10 U
Acenaphthylene	ug/L	NL	NL	50 U	10 U
Anthracene	ug/L	NL	50	50 U	10 U
Benzo(a)anthracene	ug/L	NL	0.002	50 U	10 U
Benzo(a)pyrene	ug/L	ND	NL	50 U	10 U
Benzo(b)fluoranthene	ug/L	NL	0.002	50 U	10 U
Benzo(g,h,i)perylene	ug/L	NL	NL	50 U	10 U
Benzo(k)fluoranthene	ug/L	NL	0.002	50 U	10 U
Bis(2-chloroethoxy)methane	ug/L	5	NL	50 U	10 U
Bis(2-chloroethyl)ether	ug/L	1	NL	50 U	10 U
Bis(2-ethylhexyl)phthalate	ug/L	5	NL	50 U	10 U
Butylbenzylphthalate	ug/L	NL	50	50 U	10 U

Table 7 - Summary of Semivolatile Organic Compounds in
Groundwater and Surface Water

Sample ID		NYSDEC Class GA		MW-3DL	MW-3
Sample Date				04/08/2010	04/08/2010
	Units	Standard	Guidance		
Carbazole	ug/L	NL	NL	50 U	10 U
Chrysene	ug/L	NL	0.002	50 U	10 U
Di-n-butylphthalate	ug/L	50	NL	50 U	10 U
Di-n-octylphthalate	ug/L	NL	50	50 U	10 U
Dibenzo(a,h)anthracene	ug/L	NL	NL	50 U	10 U
Dibenzofuran	ug/L	NL	NL	50 U	10 U
Diethylphthalate	ug/L	NL	50	50 U	10 U
Dimethylphthalate	ug/L	NL	50	50 U	10 U
Fluoranthene	ug/L	NL	50	50 U	10 U
Fluorene	ug/L	NL	50	50 U	10 U
Hexachlorobenzene	ug/L	0.04	NL	50 U	10 U
Hexachlorobutadiene	ug/L	0.5	NL	50 U	10 U
Hexachlorocyclopentadiene	ug/L	5	NL	50 U	10 U
Hexachloroethane	ug/L	5	NL	50 U	10 U
Indeno(1,2,3-cd)pyrene	ug/L	NL	0.002	50 U	10 U
Isophorone	ug/L	NL	50	50 U	10 U
N-Nitroso-di-n-propylamine	ug/L	NL	NL	50 U	10 U
N-Nitrosodiphenylamine	ug/L	NL	50	50 U	10 U
Naphthalene	ug/L	NL	10	**470 D**	**550 E**
Nitrobenzene	ug/L	0.4	NL	50 U	10 U
Pentachlorophenol	ug/L	1	NL	100 U	20 U
Phenanthrene	ug/L	NL	50	50 U	**1.0 J**
Phenol	ug/L	1	NL	**17 DJ**	**17**
Pyrene	ug/L	NL	50	50 U	10 U

Notes:
NL = No listed Class GA Standard or Guidnace Value
Detected analytical parameters are shown in **BOLD**
Detections exceeding the Class GA Standard or Guidance value are shaded yellow

Data Qualifiers:
U = analyte was not detected at the listed quantitation limit;
J = estimated value,compound detected below reporting limit;
D = concentration obtained from diluted analysis
E = concentration exceeded calibration range

Table 7 - Summary of Semivolatile Organic Compounds in Groundwater and Surface Water

Sample ID		NYSDEC Class GA		SURFACEWATER 1	SURFACEWATER 2
Sample Date				04/08/2010	04/08/2010
	Units	Standard	Guidance		
1,2,4-Trichlorobenzene	ug/L	NL	NL	10 U	10 U
1,2-Dichlorobenzene	ug/L	NL	NL	10 U	10 U
1,3-Dichlorobenzene	ug/L	NL	NL	10 U	10 U
1,4-Dichlorobenzene	ug/L	NL	NL	10 U	10 U
2,2´-oxybis(1-Chloropropane)	ug/L	NL	NL	10 U	10 U
2,4,5-Trichlorophenol	ug/L	1	NL	20 U	20 U
2,4,6-Trichlorophenol	ug/L	1	NL	10 U	10 U
2,4-Dichlorophenol	ug/L	1	NL	10 U	10 U
2,4-Dimethylphenol	ug/L	1	NL	10 U	10 U
2,4-Dinitrophenol	ug/L	1	NL	20 U	20 U
2,4-Dinitrotoluene	ug/L	5	NL	10 U	10 U
2,6-Dinitrotoluene	ug/L	5	NL	10 U	10 U
2-Chloronaphthalene	ug/L	NL	10	10 U	10 U
2-Chlorophenol	ug/L	1	NL	10 U	10 U
2-Methylnaphthalene	ug/L	NL	NL	10 U	10 U
2-Methylphenol	ug/L	1	NL	10 U	10 U
2-Nitroaniline	ug/L	5	NL	20 U	20 U
2-Nitrophenol	ug/L	1	NL	10 U	10 U
3,3´-Dichlorobenzidine	ug/L	5	NL	10 U	10 U
3-Nitroaniline	ug/L	5	NL	20 U	20 U
4,6-Dinitro-2-methylphenol	ug/L	1	NL	20 U	20 U
4-Bromophenyl-phenylether	ug/L	NL	NL	10 U	10 U
4-Chloro-3-methylphenol	ug/L	1	NL	10 U	10 U
4-Chloroaniline	ug/L	5	NL	10 U	10 U
4-Chlorophenyl-phenylether	ug/L	NL	NL	10 U	10 U
4-Methylphenol	ug/L	1	NL	10 U	10 U
4-Nitroaniline	ug/L	5	NL	20 U	20 U
4-Nitrophenol	ug/L	1	NL	20 U	20 U
Acenaphthene	ug/L	NL	NL	10 U	10 U
Acenaphthylene	ug/L	NL	NL	**1.5 J**	10 U
Anthracene	ug/L	NL	50	**1.6 J**	10 U
Benzo(a)anthracene	ug/L	NL	0.002	**7.4 J**	10 U
Benzo(a)pyrene	ug/L	ND	NL	**5.1 J**	10 U
Benzo(b)fluoranthene	ug/L	NL	0.002	**8.3 J**	10 U
Benzo(g,h,i)perylene	ug/L	NL	NL	**3.6 J**	10 U
Benzo(k)fluoranthene	ug/L	NL	0.002	**2.3 J**	10 U
Bis(2-chloroethoxy)methane	ug/L	5	NL	10 U	10 U
Bis(2-chloroethyl)ether	ug/L	1	NL	10 U	10 U
Bis(2-ethylhexyl)phthalate	ug/L	5	NL	10 U	10 U
Butylbenzylphthalate	ug/L	NL	50	10 U	10 U

Table 7 - Summary of Semivolatile Organic Compounds in
Groundwater and Surface Water

Sample ID		NYSDEC Class GA		SURFACEWATER 1	SURFACEWATER 2
Sample Date				04/08/2010	04/08/2010
	Units	Standard	Guidance		
Carbazole	ug/L	NL	NL	10 U	10 U
Chrysene	ug/L	NL	0.002	**7.0 J**	10 U
Di-n-butylphthalate	ug/L	50	NL	10 U	10 U
Di-n-octylphthalate	ug/L	NL	50	10 U	10 U
Dibenzo(a,h)anthracene	ug/L	NL	NL	10 U	10 U
Dibenzofuran	ug/L	NL	NL	10 U	10 U
Diethylphthalate	ug/L	NL	50	10 U	10 U
Dimethylphthalate	ug/L	NL	50	10 U	10 U
Fluoranthene	ug/L	NL	50	**13**	10 U
Fluorene	ug/L	NL	50	10 U	10 U
Hexachlorobenzene	ug/L	0.04	NL	10 U	10 U
Hexachlorobutadiene	ug/L	0.5	NL	10 U	10 U
Hexachlorocyclopentadiene	ug/L	5	NL	10 U	10 U
Hexachloroethane	ug/L	5	NL	10 U	10 U
Indeno(1,2,3-cd)pyrene	ug/L	NL	0.002	**3.0 J**	10 U
Isophorone	ug/L	NL	50	10 U	10 U
N-Nitroso-di-n-propylamine	ug/L	NL	NL	10 U	10 U
N-Nitrosodiphenylamine	ug/L	NL	50	10 U	10 U
Naphthalene	ug/L	NL	10	10 U	10 U
Nitrobenzene	ug/L	0.4	NL	10 U	10 U
Pentachlorophenol	ug/L	1	NL	20 U	20 U
Phenanthrene	ug/L	NL	50	**4.2 J**	10 U
Phenol	ug/L	1	NL	10 U	10 U
Pyrene	ug/L	NL	50	**13**	10 U

Notes:
NL = No listed Class GA Standard or Guidnace Value
Detected analytical parameters are shown in **BOLD**
Detections exceeding the Class GA Standard or Guidance value
are shaded yellow

Data Qualifiers:
U = analyte was not detected at the listed quantitation limit;
J = estimated value,compound detected below reporting limit;
D = concentration obtained from diluted analysis
E = concentration exceeded calibration range

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Table 8 - Summary of Pesticides and PCBs in Groundwater

Sample ID	NYSDEC Class GA			MW-1		MW-2		MW-3	
Sample Date			Units	04/08/2010		04/08/2010		04/08/2010	
Parameter	Standard	Guidance							
4,4´-DDD	0.3	NL	ug/L	0.10	U	0.10	U	0.10	U
4,4´-DDE	0.2	NL	ug/L	0.10	U	0.10	U	0.10	U
4,4´-DDT	0.2	NL	ug/L	0.10	U	0.10	U	0.10	U
Aldrin	ND	NL	ug/L	0.050	U	0.050	U	0.050	U
alpha-BHC	NL	NL	ug/L	0.050	U	0.050	U	0.050	U
alpha-Chlordane	0.05	NL	ug/L	0.050	U	0.050	U	0.050	U
beta-BHC	NL	NL	ug/L	0.050	U	0.050	U	**0.073**	
delta-BHC	NL	NL	ug/L	0.050	U	0.050	U	0.050	U
Dieldrin	0.004	NL	ug/L	0.10	U	0.10	U	0.10	U
Endosulfan I	NL	NL	ug/L	0.050	U	0.050	U	0.050	U
Endosulfan II	NL	NL	ug/L	0.10	U	0.10	U	0.10	U
Endosulfan sulfate	NL	NL	ug/L	0.10	U	0.10	U	0.10	U
Endrin	ND	NL	ug/L	0.10	U	0.10	U	0.10	U
Endrin aldehyde	5	NL	ug/L	0.10	U	0.10	U	0.10	U
Endrin ketone	NL	NL	ug/L	0.10	U	0.10	U	0.10	U
gamma-BHC (Lindane)	NL	NL	ug/L	0.050	U	0.050	U	0.050	U
gamma-Chlordane	0.05	NL	ug/L	0.050	U	0.050	U	0.050	U
Heptachlor	0.04	NL	ug/L	0.050	U	0.050	U	0.050	U
Heptachlor epoxide	0.03	NL	ug/L	0.050	U	0.050	U	0.050	U
Methoxychlor	35	NL	ug/L	0.50	U	0.50	U	0.50	U
Toxaphene	0.06	NL	ug/L	5.0	U	5.0	U	5.0	U
Aroclor-1016	0.09	NL	ug/L	1.0	U	1.0	U	1.0	U
Aroclor-1221	0.09	NL	ug/L	1.0	U	1.0	U	1.0	U
Aroclor-1232	0.09	NL	ug/L	1.0	U	1.0	U	1.0	U
Aroclor-1242	0.09	NL	ug/L	1.0	U	1.0	U	1.0	U
Aroclor-1248	0.09	NL	ug/L	1.0	U	1.0	U	1.0	U
Aroclor-1254	0.09	NL	ug/L	1.0	U	1.0	U	1.0	U
Aroclor-1260	0.09	NL	ug/L	1.0	U	1.0	U	1.0	U

Notes:

ND = detections exceeding the reporting limit exceed the standard

NL = No listed Class GA standard or Guidance Value

Detected analytical parameters are shown in **BOLD**

Data Qualifiers: U = analyte was not detected at the listed quantitation limit;

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Table 9 - Summary of Inorganic Parameters in Groundwater

Sample ID	NYSDEC Class GA			MW-1		MW-2		MW-3	
Sample Date				04/08/2010		04/08/2010		04/08/2010	
Inorganic Parameter	Standard	Guidance	Units						
Aluminum	NL	NL	ug/L	13900		32100		157	B
Antimony	3	NL	ug/L	8.0	B	9.7	B	5.3	B
Arsenic	25	NL	ug/L	35.4		29.7		8.3	B
Barium	1000	NL	ug/L	266		584		291	
Beryllium	NL	3	ug/L	0.67	B	1.7	B	0.13	B
Cadmium	5	NL	ug/L	0.50	U	0.95	B	0.50	U
Calcium	NL	NL	ug/L	282000		563000		130000	
Chromium	50	NL	ug/L	23.3		49.4		1.5	B
Cobalt	NL	NL	ug/L	31.1	BE	42.2	BE	4.8	BE
Copper	200	NL	ug/L	134		185		5.7	B
Iron	300	NL	ug/L	43700		83600		4060	
Lead	25	NL	ug/L	47.2	E	122	E	7.7	BE
Magnesium	NL	35,000	ug/L	94500		169000		27200	
Manganese	300	NL	ug/L	2600		3800		1030	
Nickel	100	NL	ug/L	38.4	BE	74.8	E	4.5	BE
Potassium	NL	NL	ug/L	29200		11400		8710	
Selenium	10	NL	ug/L	10.0	U	10.0	U	10.0	U
Silver	50	NL	ug/L	2.4	U	2.4	U	2.4	U
Sodium	20,000	NL	ug/L	34200		48600		173000	
Thallium	NL	0.5	ug/L	11.5	B	12.2	B	5.7	U
Vanadium	NL	NL	ug/L	31.5	B	70.0		2.2	B
Zinc	NL	2,000	ug/L	181		522		38.3	B
Mercury	NL	NL	ug/L	0.056	U	0.083	BN	0.056	U
Cyanide	NL	NL	ug/L	3.0	B	2.5	U	2.5	U

NL = No listed Class GA Standard or Guidnace Value

Detections exceeding the residential use cleanup objective are shaded yellow

Data Qualifiers: U = analyte was not detected at the listed quantitation limit;

E = concentration estimated due to interference;

B = concentrationis below the reporting limit but above the detection limit;

Table 10
Meridian Brownfields Site
Environmental Restoration Project
Cayuga County, New York
NYSDEC Brownfield Site #E712001
Soil Analytical Data Summary for UST Removal

Sample ID	6 NYCRR Part 375.6 Soil Cleanup Objective - Residential	6 NYCRR Part 375.6 Soil Cleanup Objective - Residential Restricted	6 NYCRR Part 375.6 Soil Cleanup Objective - Commercial	7 NYCRR Part 375.6 Soil Cleanup Objective - Protection of Groundwater	Unit	S-1			S-1DL			S-2			S-2DL			S-3			S-4			S-6		
Sample Depth Interval						6-8 Feet			6-8 Feet			6-8 Feet			6-8 Feet			6-8 Feet			6-8 Feet			6-8 Feet		
Date Sampled						12/21/2010			12/21/2010			12/21/2010			12/21/2010			12/21/2010			12/21/2010			12/21/2010		
						Result	Qual	DF	Result	Qual	DF	Result	Qual	DF	Result	Qual	DF	Result	Qual	DF	Result	Qual	DF	Result	Qual	DF
SEMIVOLATILE ORGANIC COMPOUNDS																										
1,2,4-Trichlorobenzene	NA	NA	NA	NA	ug/kg	450.00	U		**			420.00	U		840.00	U		390.00	U		390.00	U		580.00	U	
1,2-Dichlorobenzene	100,000.00	100,000.00	500,000.00	1,100.00	ug/kg	450.00	U		**			420.00	U		840.00	U		390.00	U		390.00	U		580.00	U	
1,3-Dichlorobenzene	17,000.00	49,000.00	280,000.00	2,400.00	ug/kg	450.00	U		**			420.00	U		840.00	U		390.00	U		390.00	U		580.00	U	
1,4-Dichlorobenzene	9,800.00	13,000.00	130,000.00	1,800.00	ug/kg	450.00	U		**			420.00	U		840.00	U		390.00	U		390.00	U		580.00	U	
2,2´-oxybis(1-Chloropropane)	NA	NA	NA	NA	ug/kg	450.00	U		**			420.00	U		840.00	U		390.00	U		390.00	U		580.00	U	
2,4,5-Trichlorophenol	NA	NA	NA	NA	ug/kg	920.00	U		**			860.00	U		1,700.00	U		790.00	U		790.00	U		1,200.00	U	
2,4,6-Trichlorophenol	NA	NA	NA	NA	ug/kg	450.00	U		**			420.00	U		840.00	U		390.00	U		390.00	U		580.00	U	
2,4-Dichlorophenol	NA	NA	NA	NA	ug/kg	450.00	U		**			420.00	U		840.00	U		390.00	U		390.00	U		580.00	U	
2,4-Dimethylphenol	NA	NA	NA	NA	ug/kg	450.00	U		**			420.00	U		840.00	U		390.00	U		390.00	U		580.00	U	
2,4-Dinitrophenol	NA	NA	NA	NA	ug/kg	920.00	U		**			860.00	U		1,700.00	U		790.00	U		790.00	U		1,200.00	U	
2,4-Dinitrotoluene	NA	NA	NA	NA	ug/kg	450.00	U		**			420.00	U		840.00	U		390.00	U		390.00	U		580.00	U	
2,6-Dinitrotoluene	NA	NA	NA	NA	ug/kg	450.00	U		**			420.00	U		840.00	U		390.00	U		390.00	U		580.00	U	
2-Chloronaphthalene	NA	NA	NA	NA	ug/kg	450.00	U		**			420.00	U		840.00	U		390.00	U		390.00	U		580.00	U	
2-Chlorophenol	NA	NA	NA	NA	ug/kg	450.00	U		**			420.00	U		840.00	U		390.00	U		390.00	U		580.00	U	
2-Methylnaphthalene	NA	NA	NA	NA	ug/kg	**5,500.00**			**			**9,600.00**	E		**9,800.00**	D		390.00	U		**99.00**	J		580.00	U	
2-Methylphenol	NA	NA	NA	NA	ug/kg	450.00	U		**			420.00	U		840.00	U		390.00	U		390.00	U		580.00	U	
2-Nitroaniline	NA	NA	NA	NA	ug/kg	920.00	U		**			860.00	U		1,700.00	U		790.00	U		790.00	U		1,200.00	U	
2-Nitrophenol	NA	NA	NA	NA	ug/kg	450.00	U		**			420.00	U		840.00	U		390.00	U		390.00	U		580.00	U	
3,3'-Dichlorobenzidine	NA	NA	NA	NA	ug/kg	450.00	U		**			420.00	U		840.00	U		390.00	U		390.00	U		580.00	U	
3-Nitroaniline	NA	NA	NA	NA	ug/kg	920.00	U		**			860.00	U		1,700.00	U		790.00	U		790.00	U		1,200.00	U	
4,6-Dinitro-2-methylphenol	NA	NA	NA	NA	ug/kg	920.00	U		**			860.00	U		1,700.00	U		790.00	U		790.00	U		1,200.00	U	
4-Bromophenyl phenyl ether	NA	NA	NA	NA	ug/kg	450.00	U		**			420.00	U		840.00	U		390.00	U		390.00	U		580.00	U	
4-Chloro-3-methylphenol	NA	NA	NA	NA	ug/kg	450.00	U		**			420.00	U		840.00	U		390.00	U		390.00	U		580.00	U	
4-Chloroaniline	NA	NA	NA	NA	ug/kg	450.00	U		**			420.00	U		840.00	U		390.00	U		390.00	U		580.00	U	
4-Chlorophenyl phenyl ether	NA	NA	NA	NA	ug/kg	450.00	U		**			420.00	U		840.00	U		390.00	U		390.00	U		580.00	U	
4-Methylphenol	NA	NA	NA	NA	ug/kg	450.00	U		**			420.00	U		840.00	U		390.00	U		390.00	U		580.00	U	
4-Nitroaniline	NA	NA	NA	NA	ug/kg	920.00	U		**			860.00	U		1,700.00	U		790.00	U		790.00	U		1,200.00	U	
4-Nitrophenol	NA	NA	NA	NA	ug/kg	920.00	U		**			860.00	U		1,700.00	U		790.00	U		790.00	U		1,200.00	U	
Acenaphthene *	100,000	100,000	500,000	98,000	ug/kg	**65.00**	J		**			420.00	U		840.00	U		390.00	U		390.00	U		580.00	U	
Acenaphthylene *	100,000	100,000	500,000	107,000	ug/kg	450.00	U		**			420.00	U		840.00	U		390.00	U		390.00	U		580.00	U	
Anthracene *	100,000	100,000	500,000	1,000,000	ug/kg	**140.00**	J		**			420.00	U		840.00	U		390.00	U		390.00	U		580.00	U	

Table 10
Meridian Brownfields Site
Environmental Restoration Project
Cayuga County, New York
NYSDEC Brownfield Site #E712001
Soil Analytical Data Summary for UST Removal

Sample ID	6 NYCRR Part 375.6 Soil Cleanup Objective - Residential	6 NYCRR Part 375.6 Soil Cleanup Objective - Residential Restricted	6 NYCRR Part 375.6 Soil Cleanup Objective - Commercial	7 NYCRR Part 375.6 Soil Cleanup Objective - Protection of Groundwater	Unit	S-1			S-1DL			S-2			S-2DL			S-3			S-4			S-6		
Sample Depth Interval						6-8 Feet			6-8 Feet			6-8 Feet			6-8 Feet			6-8 Feet			6-8 Feet			6-8 Feet		
Date Sampled						12/21/2010			12/21/2010			12/21/2010			12/21/2010			12/21/2010			12/21/2010			12/21/2010		
						Result	Qual	DF	Result	Qual	DF	Result	Qual	DF	Result	Qual	DF	Result	Qual	DF	Result	Qual	DF	Result	Qual	DF
SEMIVOLATILE ORGANIC COMPOUNDS (continued…)																										
Benzo[a]anthracene *	1,000	1,000	5,600	1,000	ug/kg	**150.00**	J		**			420.00	U		840.00	U		390.00	U		**44.00**	J		**110.00**	J	
Benzo[a]pyrene *	1,000	1,000	1,000	22,000	ug/kg	**130.00**	J		**			420.00	U		840.00	U		390.00	U		**48.00**	J		**150.00**	J	
Benzo[b]fluoranthene *	1,000	1,000	5,600	1,700	ug/kg	**130.00**	J		**			420.00	U		840.00	U		390.00	U		**67.00**	J		**130.00**	J	
Benzo[g,h,i]perylene *	100,000	100,000	500,000	1,000,000	ug/kg	**110.00**	J		**			420.00	U		840.00	U		390.00	U		390.00	U		**150.00**	J	
Benzo[k]fluoranthene *	1,000	3,900	56,000	1,700	ug/kg	**130.00**	J		**			420.00	U		840.00	U		390.00	U		390.00	U		**190.00**	J	
Bis(2-chloroethoxy)methane	NA	NA	NA	NA	ug/kg	450.00	U		**			420.00	U		840.00	U		390.00	U		390.00	U		580.00	U	
Bis(2-chloroethyl)ether	NA	NA	NA	NA	ug/kg	450.00	U		**			420.00	U		840.00	U		390.00	U		390.00	U		580.00	U	
Bis(2-ethylhexyl) phthalate	NA	NA	NA	NA	ug/kg	450.00	U		**			420.00	U		840.00	U		390.00	U		390.00	U		580.00	U	
Butyl benzyl phthalate	NA	NA	NA	NA	ug/kg	450.00	U		**			420.00	U		840.00	U		390.00	U		390.00	U		580.00	U	
Carbazole	NA	NA	NA	NA	ug/kg	450.00	U		**			420.00	U		840.00	U		390.00	U		390.00	U		580.00	U	
Chrysene *	1,000	3,900	56,000	1,000	ug/kg	**180.00**	J		**			420.00	U		840.00	U		390.00	U		**64.00**	J		**150.00**	J	
Di-n-butyl phthalate	NA	NA	NA	NA	ug/kg	450.00	U		**			420.00	U		840.00	U		390.00	U		390.00	U		580.00	U	
Di-n-octyl phthalate	NA	NA	NA	NA	ug/kg	450.00	U		**			420.00	U		840.00	U		390.00	U		390.00	U		580.00	U	
Dibenz[a,h]anthracene *	330	330	560	1,000,000	ug/kg	450.00	U		**			420.00	U		840.00	U		390.00	U		390.00	U		580.00	U	
Dibenzofuran	14,000	59,000	350,000	210,000	ug/kg	450.00	U		**			420.00	U		840.00	U		390.00	U		390.00	U		580.00	U	
Diethyl phthalate	NA	NA	NA	NA	ug/kg	450.00	U		**			420.00	U		840.00	U		390.00	U		390.00	U		580.00	U	
Dimethyl phthalate	NA	NA	NA	NA	ug/kg	450.00	U		**			420.00	U		840.00	U		390.00	U		390.00	U		580.00	U	
Fluoranthene *	100,000	100,000	500,000	1,000,000	ug/kg	**400.00**	J		**			**48.00**	J		840.00	U		390.00	U		**76.00**	J		**170.00**	J	
Fluorene *	100,000	100,000	500,000	386,000	ug/kg	**140.00**	J		**			420.00	U		840.00	U		390.00	U		390.00	U		580.00	U	
Hexachlorobenzene	330	1,200	6,000	3,200	ug/kg	450.00	U		**			420.00	U		840.00	U		390.00	U		390.00	U		580.00	U	
Hexachlorobutadiene	NA	NA	NA	NA	ug/kg	450.00	U		**			420.00	U		840.00	U		390.00	U		390.00	U		580.00	U	
Hexachlorocyclopentadiene	NA	NA	NA	NA	ug/kg	450.00	U		**			420.00	U		840.00	U		390.00	U		390.00	U		580.00	U	
Hexachloroethane	NA	NA	NA	NA	ug/kg	450.00	U		**			420.00	U		840.00	U		390.00	U		390.00	U		580.00	U	
Indeno[1,2,3-cd]pyrene *	500	500	5,600	8,200	ug/kg	**81.00**	J		**			420.00	U		840.00	U		390.00	U		390.00	U		**120.00**	J	
Isophorone	NA	NA	NA	NA	ug/kg	450.00	U		**			420.00	U		840.00	U		390.00	U		390.00	U		580.00	U	
N-Nitrosodi-n-propylamine	NA	NA	NA	NA	ug/kg	450.00	U		**			420.00	U		840.00	U		390.00	U		390.00	U		580.00	U	
N-Nitrosodiphenylamine	NA	NA	NA	NA	ug/kg	450.00	U		**			420.00	U		840.00	U		390.00	U		390.00	U		580.00	U	
Naphthalene *	100,000	100,000	500,000	12,000	ug/kg	**5,500.00**			**			**8,200.00**	E		**8,500.00**	D		390.00	U		390.00	U		580.00	U	
Nitrobenzene	NA	NA	NA	NA	ug/kg	450.00	U		**			420.00	U		840.00	U		390.00	U		390.00	U		580.00	U	
Pentachlorophenol	2,400	2,400	6,700	800	ug/kg	920.00	U		**			860.00	U		1,700.00	U		790.00	U		790.00	U		1,200.00	U	
Phenanthrene *	100,000	100,000	500,000	1,000,000	ug/kg	**460.00**			**			**66.00**	J		840.00	U		390.00	U		390.00	U		**83.00**	J	
Phenol	100,000	100,000	500,000	330	ug/kg	450.00	U		**			420.00	U		840.00	U		390.00	U		390.00	U		580.00	U	
Pyrene *	100,000	100,000	500,000	1,000,000	ug/kg	**450.00**			**			**48.00**	J		840.00	U		390.00	U		**78.00**	J		**170.00**	J	

Table 10
Meridian Brownfields Site
Environmental Restoration Project
Cayuga County, New York
NYSDEC Brownfield Site #E712001
Soil Analytical Data Summary for UST Removal

Sample ID	6 NYCRR Part 375.6 Soil Cleanup Objective - Residential	6 NYCRR Part 375.6 Soil Cleanup Objective - Residential Restricted	6 NYCRR Part 375.6 Soil Cleanup Objective - Commercial	7 NYCRR Part 375.6 Soil Cleanup Objective - Protection of Groundwater	Unit	S-1			S-1DL			S-2			S-2DL			S-3			S-4			S-6		
Sample Depth Interval						6-8 Feet			6-8 Feet			6-8 Feet			6-8 Feet			6-8 Feet			6-8 Feet			6-8 Feet		
Date Sampled						12/21/2010			12/21/2010			12/21/2010			12/21/2010			12/21/2010			12/21/2010			12/21/2010		
						Result	Qual	DF	Result	Qual	DF	Result	Qual	DF	Result	Qual	DF	Result	Qual	DF	Result	Qual	DF	Result	Qual	DF
VOLATILE ORGANIC COMPOUNDS																										
1,1,1,2-Tetrachloroethane	NA	NA	NA	NA	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		5.80	U		5.80	U		8.60	U	
1,1,1-Trichloroethane	100,000	100,000	500,000	680	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		5.80	U		5.80	U		8.60	U	
1,1,2,2-Tetrachloroethane	NA	NA	NA	NA	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		5.80	U		5.80	U		8.60	U	
1,1,2-Trichloroethane	NA	NA	NA	NA	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		5.80	U		5.80	U		8.60	U	
1,1-Dichloroethane	19,000	26,000	240,000	270	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		5.80	U		5.80	U		8.60	U	
1,1-Dichloroethene	100,000	100,000	500,000	330	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		5.80	U		5.80	U		8.60	U	
1,1-Dichloropropene	NA	NA	NA	NA	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		5.80	U		5.80	U		8.60	U	
1,2,3-Trichlorobenzene	NA	NA	NA	NA	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		**1.20**	J		5.80	U		8.60	U	
1,2,3-Trichloropropane	NA	NA	NA	NA	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		5.80	U		5.80	U		8.60	U	
1,2,4-Trichlorobenzene	NA	NA	NA	NA	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		5.80	U		5.80	U		8.60	U	
1,2,4-Trimethylbenzene *	47,000	52,000	190,000	3,600	ug/kg	**63,000.00**	E		**87,000.00**	D		**140,000.00**	E		**110,000.00**	D		**1.90**	J		**87.00**			8.60	U	
1,2-Dibromo-3-chloropropane	NA	NA	NA	NA	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		5.80	U		5.80	U		8.60	U	
1,2-Dibromoethane (EDB)	NA	NA	NA	NA	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		5.80	U		5.80	U		8.60	U	
1,2-Dichlorobenzene	100,000	100,000	500,000	1,100	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		5.80	U		5.80	U		8.60	U	
1,2-Dichloroethane	2,300	3,100	30,000	20	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		5.80	U		5.80	U		8.60	U	
1,2-Dichloropropane	NA	NA	NA	NA	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		5.80	U		5.80	U		8.60	U	
1,3,5-Trimethylbenzene *	47,000	52,000	190,000	8,400	ug/kg	**16,000.00**			**24,000.00**	D		**33,000.00**	E		**38,000.00**	D		5.80	U		**41.00**			8.60	U	
1,3-Dichlorobenzene	17,000	49,000	280,000	2,400	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		5.80	U		5.80	U		8.60	U	
1,3-Dichloropropane	NA	NA	NA	NA	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		5.80	U		5.80	U		8.60	U	
1,4-Dichlorobenzene	9,800	13,000	130,000	1,800	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		5.80	U		5.80	U		8.60	U	
2,2-Dichloropropane	NA	NA	NA	NA	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		5.80	U		5.80	U		8.60	U	
2-Butanone (MEK)	100,000	100,000	500,000	120	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		5.80	U		**11.00**			**23.00**		
2-Chlorotoluene	NA	NA	NA	NA	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		5.80	U		5.80	U		8.60	U	
2-Hexanone	NA	NA	NA	NA	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		**3.20**	J		5.80	U		8.60	U	
4-Chlorotoluene	NA	NA	NA	NA	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		5.80	U		5.80	U		8.60	U	
4-Isopropyltoluene	NA	NA	NA	NA	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		5.80	U		**3.80**	J		8.60	U	
4-Methyl-2-pentanone (MIBK)	NA	NA	NA	NA	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		5.80	U		5.80	U		8.60	U	
Acetone	100,000	100,000	500,000	50	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		**7.90**			**43.00**			**71.00**		
Benzene *	2900	4800	44,000	60	ug/kg	440.00	U		4,400.00	U		**370.00**	J		7,700.00	U		5.80	U		**1.40**	J		8.60	U	
Bromobenzene	NA	NA	NA	NA	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		5.80	U		5.80	U		8.60	U	
Bromochloromethane	NA	NA	NA	NA	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		5.80	U		5.80	U		8.60	U	
Bromodichloromethane	NA	NA	NA	NA	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		5.80	U		5.80	U		8.60	U	
Bromoform	NA	NA	NA	NA	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		5.80	U		5.80	U		8.60	U	
Bromomethane	NA	NA	NA	NA	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		5.80	U		5.80	U		8.60	U	

Table 10
Meridian Brownfields Site
Environmental Restoration Project
Cayuga County, New York
NYSDEC Brownfield Site #E712001
Soil Analytical Data Summary for UST Removal

Sample ID	6 NYCRR Part 375.6 Soil Cleanup Objective - Residential	6 NYCRR Part 375.6 Soil Cleanup Objective - Residential Restricted	6 NYCRR Part 375.6 Soil Cleanup Objective - Commercial	7 NYCRR Part 375.6 Soil Cleanup Objective - Protection of Groundwater	Unit	S-1			S-1DL			S-2			S-2DL			S-3			S-4			S-6		
Sample Depth Interval						6-8 Feet			6-8 Feet			6-8 Feet			6-8 Feet			6-8 Feet			6-8 Feet			6-8 Feet		
Date Sampled						12/21/2010			12/21/2010			12/21/2010			12/21/2010			12/21/2010			12/21/2010			12/21/2010		
						Result	Qual	DF	Result	Qual	DF	Result	Qual	DF	Result	Qual	DF	Result	Qual	DF	Result	Qual	DF	Result	Qual	DF
VOLATILE ORGANIC COMPOUNDS (continued…)																										
Carbon disulfide	NA	NA	NA	NA	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		5.80	U		5.80	U		8.60	U	
Carbon Tetrachloride	1,400	2,400	22,000	760	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		5.80	U		5.80	U		8.60	U	
Chlorobenzene	100,000	100,000	500,000	1,100	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		5.80	U		5.80	U		8.60	U	
Chloroethane	NA	NA	NA	NA	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		5.80	U		5.80	U		8.60	U	
Chloroform	10,000	49,000	350,000	370	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		5.80	U		5.80	U		8.60	U	
Chloromethane	NA	NA	NA	NA	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		5.80	U		5.80	U		8.60	U	
cis-1,2-Dichloroethene	59,000	100,000	500,000	250	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		5.80	U		5.80	U		8.60	U	
cis-1,3-Dichloropropene	NA	NA	NA	NA	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		5.80	U		5.80	U		8.60	U	
Dibromochloromethane	NA	NA	NA	NA	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		5.80	U		5.80	U		8.60	U	
Dibromomethane	NA	NA	NA	NA	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		5.80	U		5.80	U		8.60	U	
Dichlorodifluoromethane	NA	NA	NA	NA	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		5.80	U		5.80	U		8.60	U	
Ethylbenzene *	30,000	41,000	390,000	1,000	ug/kg	**11,000.00**			**18,000.00**	D		**19,000.00**	E		**22,000.00**	D		**3.40**	J		**39.00**			**4.00**	J	
Hexachlorobutadiene	NA	NA	NA	NA	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		5.80	U		5.80	U		8.60	U	
Iodomethane	NA	NA	NA	NA	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		5.80	U		5.80	U		8.60	U	
Isopropylbenzene *	NA	NA	NA	NA	ug/kg	**1,800.00**			**3,000.00**	DJ		**4,800.00**			**5,800.00**	DJ		5.80	U		**16.00**			8.60	U	
m,p-Xylene [1]	NA	NA	NA	NA		**59,000.00**	E		**85,000.00**	D		**140,000.00**	E		**120,000.00**	D		**14.00**			**170.00**			**16.00**		
Methyl tert-Butyl Ether *	62,000	100,000	500,000	930	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		5.80	U		5.80	U		8.60	U	
Methylene Chloride	51,000	100,000	500,000	50	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		5.80	U		5.80	U		8.60	U	
n-Butylbenzene *	100,000	100,000	500,000	12,000	ug/kg	**3,900.00**			**7,400.00**	D		**11,000.00**			**15,000.00**	D		5.80	U		**39.00**			8.60	U	
n-Propylbenzene *	100,000	100,000	500,000	3,900	ug/kg	**7,000.00**			**11,000.00**	D		**14,000.00**			**16,000.00**	D		5.80	U		**49.00**			8.60	U	
Naphthalene *	100,000	100,000	500,000	12,000	ug/kg	**5,800.00**			**13,000.00**	D		**11,000.00**			**18,000.00**	D		5.80	U		**27.00**	B		8.60	U	
o-Xylene [1]	NA	NA	NA	NA	ug/kg	**5,000.00**			**8,400.00**	D		**4,200.00**			**4,800.00**	DJ		5.80	U		**2.10**	J		8.60	U	
sec-Butylbenzene *	100,000	100,000	500,000	11,000	ug/kg	**800.00**			**1,600.00**	DJ		**2,400.00**			**3,200.00**	DJ		5.80	U		**11.00**			8.60	U	
Styrene	NA	NA	NA	NA	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		5.80	U		5.80	U		8.60	U	
tert-Butylbenzene *	100,000	100,000	500,000	5,900	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		5.80	U		5.80	U		8.60	U	
Tetrachloroethene	5,500	19,000	150,000	1,300	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		**1.20**	J		5.80	U		8.60	U	
Toluene *	100,000	100,000	500,000	700	ug/kg	440.00	U		4,400.00	U		**490.00**			7,700.00	U		5.80	U		5.80	U		8.60	U	
trans-1,2-Dichloroethene	100,000	100,000	500,000	190	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		5.80	U		5.80	U		8.60	U	
trans-1,3-Dichloropropene	NA	NA	NA	NA	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		5.80	U		5.80	U		8.60	U	
Trichloroethene	10,000	21,000	200,000	470	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		5.80	U		5.80	U		8.60	U	
Trichlorofluoromethane	NA	NA	NA	NA	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		5.80	U		5.80	U		8.60	U	
Vinyl acetate	NA	NA	NA	NA	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		5.80	U		5.80	U		8.60	U	
Vinyl chloride	210	900	13,000	20	ug/kg	440.00	U		4,400.00	U		390.00	U		7,700.00	U		5.80	U		5.80	U		8.60	U	
Xylenes, total *	100,000	100,000	500,000	1,600	ug/kg	**64,000.00**	E		**93,000.00**	D		**150,000.00**	E		**120,000.00**	D		**14.00**			**170.00**			**16.00**		

General Notes:

NA = No cleanup objective for this analyte per 6 NYCRR Part 375.6 and / or NYSDEC Commissioner Policy 51 Supplemental Soil Cleanup Objectives.

* NYSDEC CP-51 SCO's for these compounds apply to fuel oil and / or gasoline contaminated soil.

** = Analysis for this parameter not performed.

[1] - Refer to "Xylenes, total" for comparison to applicable SCO.

S = Sidewall Sample

B = Bottom Sample

Soil Cleanup Objective Notes:

Detected analytes are shown in **BOLD**

Analyte concentrations exceeding Residential SCO's are denoted by: **50**

Analyte concentrations exceeding all SCO's listed above are denoted by: ~~**60**~~

Data Qualifiers:

U = analyte was not detected at the listed quantitation limit

J = Listed concentration is estimated

B = analyte was detected in associated method blank;

D = Concentration was obtained from a diluted analysis

E = The compound concentration exceeded the calibration range.

Table 10
Meridian Brownfields Site
Environmental Restoration Project
Cayuga County, New York
NYSDEC Brownfield Site #E712001
Soil Analytical Data Summary for UST Removal

Sample ID	6 NYCRR Part 375.6 Soil Cleanup Objective - Residential	6 NYCRR Part 375.6 Soil Cleanup Objective - Residential Restricted	6 NYCRR Part 375.6 Soil Cleanup Objective - Commercial	7 NYCRR Part 375.6 Soil Cleanup Objective - Protection of Groundwater	Unit	B-1			B-2			B-3			B-4			B-5			B-6			B-7		
Sample Depth Interval						8-10 Feet			8-10 Feet			8-10 Feet			8-10 Feet			8-10 Feet			8-10 Feet			8-10 Feet		
Date Sampled						12/21/2010			12/21/2010			12/21/2010			12/21/2010			12/21/2010			12/21/2010			12/21/2010		
						Result	Qual	DF	Result	Qual	DF	Result	Qual	DF	Result	Qual	DF	Result	Qual	DF	Result	Qual	DF	Result	Qual	DF
SEMIVOLATILE ORGANIC COMPOUNDS																										
1,2,4-Trichlorobenzene	NA	NA	NA	NA	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	
1,2-Dichlorobenzene	100,000.00	100,000.00	500,000.00	1,100.00	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	
1,3-Dichlorobenzene	17,000.00	49,000.00	280,000.00	2,400.00	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	
1,4-Dichlorobenzene	9,800.00	13,000.00	130,000.00	1,800.00	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	
2,2´-oxybis(1-Chloropropane)	NA	NA	NA	NA	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	
2,4,5-Trichlorophenol	NA	NA	NA	NA	ug/kg	720.00	U		820.00	U		730.00	U		730.00	U		770.00	U		1,200.00	U		700.00	U	
2,4,6-Trichlorophenol	NA	NA	NA	NA	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	
2,4-Dichlorophenol	NA	NA	NA	NA	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	
2,4-Dimethylphenol	NA	NA	NA	NA	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	
2,4-Dinitrophenol	NA	NA	NA	NA	ug/kg	720.00	U		820.00	U		730.00	U		730.00	U		770.00	U		1,200.00	U		700.00	U	
2,4-Dinitrotoluene	NA	NA	NA	NA	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	
2,6-Dinitrotoluene	NA	NA	NA	NA	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	
2-Chloronaphthalene	NA	NA	NA	NA	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	
2-Chlorophenol	NA	NA	NA	NA	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	
2-Methylnaphthalene	NA	NA	NA	NA	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	
2-Methylphenol	NA	NA	NA	NA	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	
2-Nitroaniline	NA	NA	NA	NA	ug/kg	720.00	U		820.00	U		730.00	U		730.00	U		770.00	U		1,200.00	U		700.00	U	
2-Nitrophenol	NA	NA	NA	NA	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	
3,3'-Dichlorobenzidine	NA	NA	NA	NA	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	
3-Nitroaniline	NA	NA	NA	NA	ug/kg	720.00	U		820.00	U		730.00	U		730.00	U		770.00	U		1,200.00	U		700.00	U	
4,6-Dinitro-2-methylphenol	NA	NA	NA	NA	ug/kg	720.00	U		820.00	U		730.00	U		730.00	U		770.00	U		1,200.00	U		700.00	U	
4-Bromophenyl phenyl ether	NA	NA	NA	NA	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	
4-Chloro-3-methylphenol	NA	NA	NA	NA	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	
4-Chloroaniline	NA	NA	NA	NA	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	
4-Chlorophenyl phenyl ether	NA	NA	NA	NA	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	
4-Methylphenol	NA	NA	NA	NA	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	
4-Nitroaniline	NA	NA	NA	NA	ug/kg	720.00	U		820.00	U		730.00	U		730.00	U		770.00	U		1,200.00	U		700.00	U	
4-Nitrophenol	NA	NA	NA	NA	ug/kg	720.00	U		820.00	U		730.00	U		730.00	U		770.00	U		1,200.00	U		700.00	U	
Acenaphthene *	100,000	100,000	500,000	98,000	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	
Acenaphthylene *	100,000	100,000	500,000	107,000	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	
Anthracene *	100,000	100,000	500,000	1,000,000	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	

Table 10
Meridian Brownfields Site
Environmental Restoration Project
Cayuga County, New York
NYSDEC Brownfield Site #E712001
Soil Analytical Data Summary for UST Removal

Sample ID	6 NYCRR Part 375.6 Soil Cleanup Objective - Residential	6 NYCRR Part 375.6 Soil Cleanup Objective - Residential Restricted	6 NYCRR Part 375.6 Soil Cleanup Objective - Commercial	7 NYCRR Part 375.6 Soil Cleanup Objective - Protection of Groundwater	Unit	B-1			B-2			B-3			B-4			B-5			B-6			B-7		
Sample Depth Interval						8-10 Feet			8-10 Feet			8-10 Feet			8-10 Feet			8-10 Feet			8-10 Feet			8-10 Feet		
Date Sampled						12/21/2010			12/21/2010			12/21/2010			12/21/2010			12/21/2010			12/21/2010			12/21/2010		
						Result	Qual	DF	Result	Qual	DF	Result	Qual	DF	Result	Qual	DF	Result	Qual	DF	Result	Qual	DF	Result	Qual	DF
SEMIVOLATILE ORGANIC COMPOUNDS (continued…)																										
Benzo[a]anthracene *	1,000	1,000	5,600	1,000	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	
Benzo[a]pyrene *	1,000	1,000	1,000	22,000	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		**72.00**	J		350.00	U	
Benzo[b]fluoranthene *	1,000	1,000	5,600	1,700	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	
Benzo[g,h,i]perylene *	100,000	100,000	500,000	1,000,000	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		**150.00**	J		350.00	U	
Benzo[k]fluoranthene *	1,000	3,900	56,000	1,700	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	
Bis(2-chloroethoxy)methane	NA	NA	NA	NA	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	
Bis(2-chloroethyl)ether	NA	NA	NA	NA	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	
Bis(2-ethylhexyl) phthalate	NA	NA	NA	NA	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	
Butyl benzyl phthalate	NA	NA	NA	NA	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	
Carbazole	NA	NA	NA	NA	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	
Chrysene *	1,000	3,900	56,000	1,000	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	
Di-n-butyl phthalate	NA	NA	NA	NA	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	
Di-n-octyl phthalate	NA	NA	NA	NA	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	
Dibenz[a,h]anthracene *	330	330	560	1,000,000	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	
Dibenzofuran	14,000	59,000	350,000	210,000	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	
Diethyl phthalate	NA	NA	NA	NA	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	
Dimethyl phthalate	NA	NA	NA	NA	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	
Fluoranthene *	100,000	100,000	500,000	1,000,000	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	
Fluorene *	100,000	100,000	500,000	386,000	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	
Hexachlorobenzene	330	1,200	6,000	3,200	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	
Hexachlorobutadiene	NA	NA	NA	NA	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	
Hexachlorocyclopentadiene	NA	NA	NA	NA	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	
Hexachloroethane	NA	NA	NA	NA	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	
Indeno[1,2,3-cd]pyrene *	500	500	5,600	8,200	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		**71.00**	J		350.00	U	
Isophorone	NA	NA	NA	NA	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	
N-Nitrosodi-n-propylamine	NA	NA	NA	NA	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	
N-Nitrosodiphenylamine	NA	NA	NA	NA	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	
Naphthalene *	100,000	100,000	500,000	12,000	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	
Nitrobenzene	NA	NA	NA	NA	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	
Pentachlorophenol	2,400	2,400	6,700	800	ug/kg	720.00	U		820.00	U		730.00	U		730.00	U		770.00	U		1,200.00	U		700.00	U	
Phenanthrene *	100,000	100,000	500,000	1,000,000	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	
Phenol	100,000	100,000	500,000	330	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	
Pyrene *	100,000	100,000	500,000	1,000,000	ug/kg	360.00	U		400.00	U		360.00	U		360.00	U		380.00	U		590.00	U		350.00	U	

Table 10
Meridian Brownfields Site
Environmental Restoration Project
Cayuga County, New York
NYSDEC Brownfield Site #E712001
Soil Analytical Data Summary for UST Removal

Sample ID	6 NYCRR Part 375.6 Soil Cleanup Objective - Residential	6 NYCRR Part 375.6 Soil Cleanup Objective - Residential Restricted	6 NYCRR Part 375.6 Soil Cleanup Objective - Commercial	7 NYCRR Part 375.6 Soil Cleanup Objective - Protection of Groundwater	Unit	B-1			B-2			B-3			B-4			B-5			B-6			B-7		
Sample Depth Interval						8-10 Feet			8-10 Feet			8-10 Feet			8-10 Feet			8-10 Feet			8-10 Feet			8-10 Feet		
Date Sampled						12/21/2010			12/21/2010			12/21/2010			12/21/2010			12/21/2010			12/21/2010			12/21/2010		
						Result	Qual	DF	Result	Qual	DF	Result	Qual	DF	Result	Qual	DF	Result	Qual	DF	Result	Qual	DF	Result	Qual	DF
VOLATILE ORGANIC COMPOUNDS																										
1,1,1,2-Tetrachloroethane	NA	NA	NA	NA	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
1,1,1-Trichloroethane	100,000	100,000	500,000	680	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
1,1,2,2-Tetrachloroethane	NA	NA	NA	NA	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
1,1,2-Trichloroethane	NA	NA	NA	NA	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
1,1-Dichloroethane	19,000	26,000	240,000	270	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
1,1-Dichloroethene	100,000	100,000	500,000	330	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
1,1-Dichloropropene	NA	NA	NA	NA	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
1,2,3-Trichlorobenzene	NA	NA	NA	NA	ug/kg	5.30	U		6.00	U		5.20	U		**1.10**	BJ		5.70	U		9.10	U		5.30	U	
1,2,3-Trichloropropane	NA	NA	NA	NA	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
1,2,4-Trichlorobenzene	NA	NA	NA	NA	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
1,2,4-Trimethylbenzene *	47,000	52,000	190,000	3,600	ug/kg	5.30	U		**9.30**			5.20	U		5.50	U		**5.50**	J		**48.00**			**1.30**	J	
1,2-Dibromo-3-chloropropane	NA	NA	NA	NA	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
1,2-Dibromoethane (EDB)	NA	NA	NA	NA	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
1,2-Dichlorobenzene	100,000	100,000	500,000	1,100	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
1,2-Dichloroethane	2,300	3,100	30,000	20	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
1,2-Dichloropropane	NA	NA	NA	NA	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
1,3,5-Trimethylbenzene *	47,000	52,000	190,000	8,400	ug/kg	5.30	U		**4.90**	J		5.20	U		5.50	U		**1.70**	J		**19.00**			5.30	U	
1,3-Dichlorobenzene	17,000	49,000	280,000	2,400	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
1,3-Dichloropropane	NA	NA	NA	NA	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
1,4-Dichlorobenzene	9,800	13,000	130,000	1,800	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
2,2-Dichloropropane	NA	NA	NA	NA	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
2-Butanone (MEK)	100,000	100,000	500,000	120	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		**24.00**			5.30	U	
2-Chlorotoluene	NA	NA	NA	NA	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
2-Hexanone	NA	NA	NA	NA	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
4-Chlorotoluene	NA	NA	NA	NA	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
4-Isopropyltoluene	NA	NA	NA	NA	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
4-Methyl-2-pentanone (MIBK)	NA	NA	NA	NA	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
Acetone	100,000	100,000	500,000	50	ug/kg	5.30	U		**4.00**	J		**6.60**			**6.70**			**7.10**			**78.00**			**4.30**	J	
Benzene *	2900	4800	44,000	60	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		**14.00**			9.10	U		**61.00**		
Bromobenzene	NA	NA	NA	NA	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
Bromochloromethane	NA	NA	NA	NA	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
Bromodichloromethane	NA	NA	NA	NA	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
Bromoform	NA	NA	NA	NA	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
Bromomethane	NA	NA	NA	NA	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	

Table 10
Meridian Brownfields Site
Environmental Restoration Project
Cayuga County, New York
NYSDEC Brownfield Site #E712001
Soil Analytical Data Summary for UST Removal

Sample ID	6 NYCRR Part 375.6 Soil Cleanup Objective - Residential	6 NYCRR Part 375.6 Soil Cleanup Objective - Residential Restricted	6 NYCRR Part 375.6 Soil Cleanup Objective - Commercial	7 NYCRR Part 375.6 Soil Cleanup Objective - Protection of Groundwater	Unit	B-1			B-2			B-3			B-4			B-5			B-6			B-7		
Sample Depth Interval						8-10 Feet			8-10 Feet			8-10 Feet			8-10 Feet			8-10 Feet			8-10 Feet			8-10 Feet		
Date Sampled						12/21/2010			12/21/2010			12/21/2010			12/21/2010			12/21/2010			12/21/2010			12/21/2010		
						Result	Qual	DF	Result	Qual	DF	Result	Qual	DF	Result	Qual	DF	Result	Qual	DF	Result	Qual	DF	Result	Qual	DF
VOLATILE ORGANIC COMPOUNDS (continued…)																										
Carbon disulfide	NA	NA	NA	NA	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
Carbon Tetrachloride	1,400	2,400	22,000	760	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
Chlorobenzene	100,000	100,000	500,000	1,100	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
Chloroethane	NA	NA	NA	NA	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
Chloroform	10,000	49,000	350,000	370	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
Chloromethane	NA	NA	NA	NA	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
cis-1,2-Dichloroethene	59,000	100,000	500,000	250	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
cis-1,3-Dichloropropene	NA	NA	NA	NA	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
Dibromochloromethane	NA	NA	NA	NA	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
Dibromomethane	NA	NA	NA	NA	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
Dichlorodifluoromethane	NA	NA	NA	NA	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
Ethylbenzene *	30,000	41,000	390,000	1,000	ug/kg	5.30	U		**2.80**	J		5.20	U		5.50	U		**6.50**			**38.00**			**2.40**	J	
Hexachlorobutadiene	NA	NA	NA	NA	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
Iodomethane	NA	NA	NA	NA	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
Isopropylbenzene *	NA	NA	NA	NA	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		**4.80**	J		**5.10**	J		5.30	U	
m,p-Xylene [1]	NA	NA	NA	NA		5.30	U		**11.00**			5.20	U		**2.60**	J		**20.00**			**170.00**			**10.00**		
Methyl tert-Butyl Ether *	62,000	100,000	500,000	930	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
Methylene Chloride	51,000	100,000	500,000	50	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
n-Butylbenzene *	100,000	100,000	500,000	12,000	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
n-Propylbenzene *	100,000	100,000	500,000	3,900	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		**9.40**			**8.00**	J		5.30	U	
Naphthalene *	100,000	100,000	500,000	12,000	ug/kg	5.30	U		**4.40**	BJ		5.20	U		5.50	U		**9.40**	B		**2.60**	BJ		5.30	U	
o-Xylene [1]	NA	NA	NA	NA	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
sec-Butylbenzene *	100,000	100,000	500,000	11,000	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
Styrene	NA	NA	NA	NA	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
tert-Butylbenzene *	100,000	100,000	500,000	5,900	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
Tetrachloroethene	5,500	19,000	150,000	1,300	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
Toluene *	100,000	100,000	500,000	700	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
trans-1,2-Dichloroethene	100,000	100,000	500,000	190	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
trans-1,3-Dichloropropene	NA	NA	NA	NA	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
Trichloroethene	10,000	21,000	200,000	470	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
Trichlorofluoromethane	NA	NA	NA	NA	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
Vinyl acetate	NA	NA	NA	NA	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
Vinyl chloride	210	900	13,000	20	ug/kg	5.30	U		6.00	U		5.20	U		5.50	U		5.70	U		9.10	U		5.30	U	
Xylenes, total *	100,000	100,000	500,000	1,600	ug/kg	5.30	U		**11.00**			5.20	U		**2.60**	J		**20.00**			**170.00**			**10.00**		

General Notes:

NA = No cleanup objective for this analyte per 6 NYCRR Part 375.6 and / or NYSDEC Commissioner Policy 51 Supplemental Soil Cleanup Objectives.

* NYSDEC CP-51 SCO's for these compounds apply to fuel oil and / or gasoline contaminated soil.

** = Analysis for this parameter not performed.

[1] - Refer to "Xylenes, total" for comparison to applicable SCO.

S = Sidewall Sample

B = Bottom Sample

Soil Cleanup Objective Notes:

Detected analytes are shown in **BOLD**

0

Analyte concentrations exceeding Residential SCO's are denoted by: **50**

Analyte concentrations exceeding all SCO's listed above are denoted by: ~~60~~

Cayuga County - Meridian Brownfields ERP Site
Former Battery Disposal Area Soils Investigation
Lead Concentrations at Discrete Depth Intervals

Sample ID	Quad 1	Quad 2	Quad3	Center	LB-4
	Lead Concentration in mg/kg (parts per million)				
Depth Interval					
2.5	862	1680.0	733.0	1210.0	
5.0	379	1200	493		
6.0					19.2

Sample ID	LB-1	LB-2	LB-3	LB-4	LB-5	LB-6	LB-7	LB-8	Average
	Lead Concentration in mg/kg (parts per million)								
Depth Interval									
A (0-0.5 ft)	717	276	194	2050	337	133	4650	99.2	1057.0
B (0.5-1.0 ft)	393	277	863	641	1060	196	1430	88.1	618.5
C (1.0-2.0 ft)	297	342	299	510	955	156	1000	36.9	449.5
D (2.0 -4.0 ft)	214	411	1540	708	492	39.1	762	99.7	533.2
E (4.0-5.0 ft)	103	45.2	53.5	517	6.3	19.8	8.9	6.8	95.1

The following table provides the NYSDEC's Soil Clean-up Objectives (SCOs) for lead from 6NYCRR Subpart 375-6:

Intended Use	SCO (ppm)
Unrestricted	63 or site background from NYSDOH rural soil survey
Residential	400
Restricted Residential	400
Commercial	1,000
Industrial	3,900
Protection of Ecological Resources	63 or site background from NYSDOH rural soil survey
Protection of Groundwater	450

Concentrations exceeding the residential clean-up criteria are shaded

MW-3
B-1
B-3
LB-1
LB-2
Quad 1
LB-4
Quad 2
Center
LB-5
LB-7
Quad 3
B-2
LB-3
LB-6
LB-8
MW-2
MW-1

Note: Composite samples were collected from each Quad from a level of 2.5 feet and 5.0 feet.

Source: 2008 Image from Pictometry.
Parcel Boundary from the Cayuga County New York "ImageMate On-Line" website.

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N

0 2.5 5 7.5 10 Feet

Legend

- Approximate Parcel Boundary
- Lead Dig Out
- Lead Boring Location
- VOC Sample
- Monitoring Well
- Boring

Meridian Brownfields Site
Environmental Restoration Project
Cayuga County, New York
NYSDEC Brownfield Site #E712001

Table 12
Meridian Brownfields Site Investigation
Village of Meridian, Cayuga County, New York
Summary of Volatile Organic Compounds - Petroleum Contaminated Area

Location	Soil Clean-up Objective from 6 NYCRR Part 375		Units	North Sidewall 2		East Sidewall 2		Bottom East Wall 2		Bottom West Wall 2		South Sidewall 2		West Sidewall 2	
Sampling Date	**Residential**	**Unrestricted**		**11/5/2014**		**11/5/2014**		**11/5/2014**		**11/5/2014**		**11/5/2014**		**11/5/2014**	
1,1,1-Trichloroethane	100,000	680	ug/kg	1.2	U	1.3	U	1.3	U	3.3	U	1.2	U	1.2	U
1,1,2,2-Tetrachloroethane	35,000		ug/kg	1.2	U	1.3	U	1.3	U	3.3	U	1.2	U	1.2	U
1,1-Dichloroethane	19,000	270	ug/kg	1.9	U	1.9	U	1.9	U	5	U	1.9	U	1.9	U
1,1-Dichloroethene	100,000	330	ug/kg	1.2	U	1.3	U	1.3	U	3.3	U	1.2	U	1.2	U
1,2-Dichlorobenzene	100,000	1,100	ug/kg	6.2	U	6.3	U	6.4	U	17	U	6.2	U	6.2	U
1,2-Dichloroethane	2,300	20	ug/kg	1.2	U	1.3	U	1.3	U	3.3	U	1.2	U	1.2	U
1,3-Dichlorobenzene	17,000	2,400	ug/kg	6.2	U	6.3	U	6.4	U	17	U	6.2	U	6.2	U
1,4-Dichlorobenzene	9,800	1,800	ug/kg	6.2	U	6.3	U	6.4	U	17	U	6.2	U	6.2	U
1,4-Dioxane	9,800	100	ug/kg	120	U	130	U	130	U	330	U	120	U	120	U
2-Butanone	100,000	120	ug/kg	12	U	**34**		**13**	U	33	U	**11**	**J**	**12**	
Acetone	100,000	50	ug/kg	20	U	**140**		26	U	**47**		**47**		**60**	
Benzene	2,900	60	ug/kg	1.2	U	**0.83**	**J**	**28**		**50**		**2.4**		**0.35**	**J**
Carbon disulfide	100,000		ug/kg	12	U	13	U	13	U	33	U	12	U	12	U
Carbon tetrachloride	1,400	760	ug/kg	1.2	U	1.3	U	1.3	U	3.3	U	1.2	U	1.2	U
Chlorobenzene	100,000	1,100	ug/kg	1.2	U	1.3	U	1.3	U	3.3	U	1.2	U	1.2	U
Chloroform	10,000	370	ug/kg	1.9	U	1.9	U	1.9	U	5	U	1.9	U	1.9	U
cis-1,2-Dichloroethene	59,000	250	ug/kg	1.2	U	1.3	U	1.3	U	3.3	U	1.2	U	1.2	U
Ethylbenzene	30,000	1,000	ug/kg	**0.51**	**J**	**0.33**	**J**	**190**		**330**		**8**		**3.6**	
Freon-113	100,000		ug/kg	25	U	25	U	26	U	67	U	25	U	25	U
Isopropylbenzene	100,000		ug/kg	1.2	U	**2.2**		**19**		**33**		**1.1**	**J**	**0.92**	**J**
Methyl tert butyl ether	62,000	930	ug/kg	2.5	U	2.5	U	2.6	U	6.7	U	2.5	U	2.5	U
Methylene chloride	51,000	50	ug/kg	12	U	13	U	13	U	33	U	12	U	12	U
Tetrachloroethene	5,500	1,300	ug/kg	1.2	U	1.3	U	1.3	U	3.3	U	1.2	U	1.2	U
Toluene	100,000	700	ug/kg	1.9	U	**0.31**	**J**	**3.1**		**4.7**	**J**	**0.68**	**J**	**0.51**	**J**
trans-1,2-Dichloroethene	100,000	190	ug/kg	1.9	U	1.9	U	1.9	U	5	U	1.9	U	1.9	U
Trichloroethene	10,000	470	ug/kg	1.2	U	1.3	U	1.3	U	3.3	U	1.2	U	1.2	U
Vinyl chloride	210	20	ug/kg	2.5	U	2.5	U	2.6	U	6.7	U	2.5	U	2.5	U
No Regulatory Limits															
1,1,2-Trichloroethane			ug/kg	1.9	U	1.9	U	1.9	U	5	U	1.9	U	1.9	U
1,2,3-Trichlorobenzene			ug/kg	6.2	U	6.3	U	6.4	U	17	U	6.2	U	6.2	U
1,2,4-Trichlorobenzene			ug/kg	6.2	U	6.3	U	6.4	U	17	U	6.2	U	6.2	U
1,2-Dibromo-3-chloropropane			ug/kg	6.2	U	6.3	U	6.4	U	17	U	6.2	U	6.2	U
1,2-Dibromoethane			ug/kg	5	U	5.1	U	5.1	U	13	U	5	U	5	U
1,2-Dichloropropane			ug/kg	4.4	U	4.4	U	4.5	U	12	U	4.4	U	4.4	U
2-Hexanone			ug/kg	12	U	13	U	13	U	33	U	12	U	12	U
4-Methyl-2-pentanone			ug/kg	12	U	13	U	13	U	33	U	12	U	12	U
Bromochloromethane			ug/kg	6.2	U	6.3	U	6.4	U	17	U	6.2	U	6.2	U
Bromodichloromethane			ug/kg	1.2	U	1.3	U	1.3	U	3.3	U	1.2	U	1.2	U
Bromoform			ug/kg	5	U	5.1	U	5.1	U	13	U	5	U	5	U
Bromomethane			ug/kg	2.5	U	2.5	U	2.6	U	6.7	U	2.5	U	2.5	U
Chloroethane			ug/kg	2.5	U	2.5	U	2.6	U	6.7	U	2.5	U	2.5	U
Chloromethane			ug/kg	6.2	U	6.3	U	6.4	U	17	U	6.2	U	6.2	U
cis-1,3-Dichloropropene			ug/kg	1.2	U	1.3	U	1.3	U	3.3	U	1.2	U	1.2	U
Cyclohexane			ug/kg	25	U	**0.53**	**J**	**37**		**82**		**4.2**	**J**	**1**	**J**
Dibromochloromethane			ug/kg	1.2	U	1.3	U	1.3	U	3.3	U	1.2	U	1.2	U
Dichlorodifluoromethane			ug/kg	12	U	13	U	13	U	33	U	12	U	12	U
Methyl Acetate			ug/kg	25	U	25	U	26	U	67	U	25	U	25	U
Methyl cyclohexane			ug/kg	5	U	**1.4**	**J**	**100**		**200**		**9**		**2.2**	**J**
o-Xylene			ug/kg	**0.3**	**J**	**0.78**	**J**	**4.1**		**6.2**	**J**	**2.2**	**J**	**5.6**	
p/m-Xylene			ug/kg	**2.5**		**9.4**		**100**		**92**		**10**		**18**	
Styrene			ug/kg	2.5	U	2.5	U	2.6	U	6.7	U	2.5	U	2.5	U
trans-1,3-Dichloropropene			ug/kg	1.2	U	1.3	U	1.3	U	3.3	U	1.2	U	1.2	U
Trichlorofluoromethane			ug/kg	6.2	U	6.3	U	6.4	U	17	U	6.2	U	6.2	U

Notes:
ug/kg = micrograms per kilogram
Bold value indicates the analyte was detected
Shaded cell indicates respective cleanup standard was exceeded
B = Compound was found in the blank and sample
J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value
U = The analyte was analyzed for, but was not detected above the reporting limit

Table 13
Meridian Brownfields Site Investigation
Village of Meridian, Cayuga County, New York
Summary of Semi-Volatile Organic Compounds - Petroleum Contaminated Area

Location	Soil Clean-up Objective from 6 NYCRR Part 375		Units	North Sidewall 2		East Sidewall 2		Bottom East 2		Bottom West 2		South Side 2		West Side 2	
Sampling Date	Residential	Unrestricted		11/5/2014		11/5/2014		11/5/2014		11/5/2014		11/5/2014		11/5/2014	
2,4,5-Trichlorophenol	100,000		ug/kg	200	U	200	U	210	U	220	U	200	U	200	U
2,4-Dichlorophenol	100,000		ug/kg	180	U	180	U	190	U	190	U	180	U	180	U
2,4-Dinitrophenol	100,000		ug/kg	980	U	990	U	1000	U	1000	U	970	U	980	U
2,6-Dinitrotoluene	1,030		ug/kg	200	U	200	U	210	U	220	U	200	U	200	U
2-Chlorophenol	100,000		ug/kg	200	U	200	U	210	U	220	U	200	U	200	U
2-Methylnaphthalene	410		ug/kg	240	U	250	U	**110**	**J**	**120**	**J**	**160**	**J**	240	U
2-Methylphenol	100,000	330	ug/kg	200	U	200	U	210	U	220	U	200	U	200	U
3-Methylphenol/4-Methylphenol	100,000	330	ug/kg	290	U	300	U	300	U	310	U	290	U	290	U
4-Chloroaniline	100,000		ug/kg	200	U	200	U	210	U	220	U	200	U	200	U
Acenaphthene	100,000	20,000	ug/kg	160	U	**80**	**J**	170	U	170	U	160	U	160	U
Acenaphthylene	100,000	100,000	ug/kg	**88**	**J**	**160**		170	U	170	U	160	U	**54**	**J**
Anthracene	100,000	100,000	ug/kg	**45**	**J**	**200**		120	U	130	U	120	U	120	U
Benzo(a)anthracene	1,000	1,000	ug/kg	**290**		**440**		120	U	130	U	120	U	**190**	
Benzo(a)pyrene	1,000	1,000	ug/kg	**310**		**480**		170	U	170	U	160	U	**200**	
Benzo(b)fluoranthene	1,000	1,000	ug/kg	**400**		**640**		120	U	130	U	120	U	**280**	
Benzo(ghi)perylene	100,000	100,000	ug/kg	**180**		**310**		170	U	170	U	160	U	**130**	**J**
Benzo(k)fluoranthene	1,000	800	ug/kg	**170**		**220**		120	U	130	U	120	U	**100**	**J**
Bis(2-ethylhexyl)phthalate	50,000		ug/kg	200	U	200	U	210	U	220	U	200	U	200	U
Butyl benzyl phthalate	100,000		ug/kg	200	U	200	U	210	U	220	U	200	U	200	U
Chrysene	1,000	1,000	ug/kg	**290**		**460**		120	U	130	U	120	U	**180**	
Dibenzo(a,h)anthracene	330	330	ug/kg	**47**	**J**	**85**	**J**	120	U	130	U	120	U	120	U
Dibenzofuran	14,000	7,000	ug/kg	200	U	200	U	210	U	220	U	200	U	200	U
Diethyl phthalate	100,000		ug/kg	200	U	200	U	210	U	220	U	200	U	200	U
Dimethyl phthalate	100,000		ug/kg	200	U	200	U	210	U	220	U	200	U	200	U
Di-n-butylphthalate	100,000		ug/kg	200	U	200	U	210	U	220	U	200	U	200	U
Di-n-octylphthalate	100,000		ug/kg	200	U	200	U	210	U	220	U	200	U	200	U
Fluoranthene	100,000	100,000	ug/kg	**370**		**810**		120	U	130	U	120	U	**250**	
Fluorene	100,000	30,000	ug/kg	200	U	**91**	**J**	210	U	220	U	200	U	200	U
Hexachlorobenzene	410	330	ug/kg	120	U	120	U	120	U	130	U	120	U	120	U
Indeno(1,2,3-cd)pyrene	500	500	ug/kg	**210**		**330**		170	U	170	U	160	U	**140**	**J**
Isophorone	100,000	0	ug/kg	180	U	180	U	190	U	190	U	180	U	180	U
Naphthalene	100,000	12,000	ug/kg	200	U	**120**	**J**	**220**		**200**	**J**	**200**		200	U
Nitrobenzene	3,700		ug/kg	180	U	180	U	190	U	190	U	180	U	180	U
Pentachlorophenol	2,400	800	ug/kg	160	U	160	U	170	U	170	U	160	U	160	U
Phenanthrene	100,000	100,000	ug/kg	**100**	**J**	**600**		120	U	130	U	120	U	**82**	**J**
Phenol	100,000	330	ug/kg	200	U	200	U	210	U	220	U	200	U	200	U
Pyrene	100,000	100,000	ug/kg	**340**		**690**		120	U	130	U	120	U	**210**	

Table 13
Meridian Brownfields Site Investigation
Village of Meridian, Cayuga County, New York
Summary of Semi-Volatile Organic Compounds - Petroleum Contaminated Area

Location	Soil Clean-up Objective from 6 NYCRR Part 375		Units	North Sidewall 2		East Sidewall 2		Bottom East 2		Bottom West 2		South Side 2		West Side 2	
Sampling Date	Residential	Unrestricted		11/5/2014		11/5/2014		11/5/2014		11/5/2014		11/5/2014		11/5/2014	
No Regulatory Limits															
1,2,4,5-Tetrachlorobenzene			ug/kg	200	U	200	U	210	U	220	U	200	U	200	U
2,3,4,6-Tetrachlorophenol			ug/kg	200	U	200	U	210	U	220	U	200	U	200	U
2,4,6-Trichlorophenol			ug/kg	120	U	120	U	120	U	130	U	120	U	120	U
2,4-Dimethylphenol			ug/kg	200	U	200	U	210	U	220	U	200	U	200	U
2,4-Dinitrotoluene			ug/kg	200	U	200	U	210	U	220	U	200	U	200	U
2-Chloronaphthalene			ug/kg	200	U	200	U	210	U	220	U	200	U	200	U
2-Nitroaniline			ug/kg	200	U	200	U	210	U	220	U	200	U	200	U
2-Nitrophenol			ug/kg	440	U	440	U	450	U	470	U	440	U	440	U
3,3'-Dichlorobenzidine			ug/kg	200	U	200	U	210	U	220	U	200	U	200	U
3-Nitroaniline			ug/kg	200	U	200	U	210	U	220	U	200	U	200	U
4,6-Dinitro-o-cresol			ug/kg	530	U	540	U	540	U	560	U	520	U	530	U
4-Bromophenyl phenyl ether			ug/kg	200	U	200	U	210	U	220	U	200	U	200	U
4-Chlorophenyl phenyl ether			ug/kg	200	U	200	U	210	U	220	U	200	U	200	U
4-Nitroaniline			ug/kg	200	U	200	U	210	U	220	U	200	U	200	U
4-Nitrophenol			ug/kg	280	U	290	U	290	U	300	U	280	U	280	U
Acetophenone			ug/kg	200	U	200	U	210	U	220	U	200	U	200	U
Atrazine			ug/kg	160	U	160	U	170	U	170	U	160	U	160	U
Benzaldehyde			ug/kg	270	U	270	U	280	U	280	U	270	U	270	U
Biphenyl			ug/kg	460	U	470	U	480	U	490	U	460	U	460	U
Bis(2-chloroethoxy)methane			ug/kg	220	U	220	U	220	U	230	U	220	U	220	U
Bis(2-chloroethyl)ether			ug/kg	180	U	180	U	190	U	190	U	180	U	180	U
Bis(2-chloroisopropyl)ether			ug/kg	240	U	250	U	250	U	260	U	240	U	240	U
Caprolactam			ug/kg	200	U	200	U	210	U	220	U	200	U	200	U
Carbazole			ug/kg	200	U	**91**	**J**	210	U	220	U	200	U	200	U
Hexachlorobutadiene			ug/kg	200	U	200	U	210	U	220	U	200	U	200	U
Hexachlorocyclopentadiene			ug/kg	580	U	590	U	600	U	620	U	580	U	580	U
Hexachloroethane			ug/kg	160	U	160	U	170	U	170	U	160	U	160	U
NDPA/DPA			ug/kg	160	U	160	U	170	U	170	U	160	U	160	U
n-Nitrosodi-n-propylamine			ug/kg	200	U	200	U	210	U	220	U	200	U	200	U
p-Chloro-m-cresol			ug/kg	200	U	200	U	210	U	220	U	200	U	200	U

Notes:
ug/kg = micrograms per kilogram
Bold value indicates the analyte was detected
Shaded cell indicates respective cleanup standard was exceeded
B = Compound was found in the blank and sample
J = Result is less than the reporting limit but greater than or equal to the method detection limit
and the concentration is an approximate value
U = The analyte was analyzed for, but was not detected above the reporting limit

Table 14
Meridian Brownfield Project
Village of Meridian, Cayuga County
Summary of Pesticide Results - Petroleum Contaminated Area

Location	Soil Clean-up Objective from 6 NYCRR Part 375		Units	North Sidewall 2		East Sidewall 2		Bottom East 2	
Sampling Date	**Residential**	**Unrestricted**		**11/5/2014**		**11/5/2014**		**11/5/2014**	
4,4'-DDD	2.6	0.0033	mg/kg	0.00191	U	0.00192	U	0.00203	U
4,4'-DDE	1.8	0.0033	mg/kg	0.00191	U	0.00192	U	0.00203	U
4,4'-DDT	1.7	0.0033	mg/kg	**0.0046**		0.00359	U	0.0038	U
Aldrin	0.019	0.005	mg/kg	0.00191	U	0.00192	U	0.00203	U
Alpha-BHC	0.097	0.02	mg/kg	0.000798	U	0.000799	U	0.000846	U
Beta-BHC	0.072	0.036	mg/kg	0.00191	U	0.00192	U	0.00203	U
cis-Chlordane	0.91	0.094	mg/kg	0.00239	U	0.0024	U	0.00254	U
Delta-BHC	100	0.04	mg/kg	0.00191	U	0.00192	U	0.00203	U
Dieldrin	0.039	0.005	mg/kg	0.0012	U	0.0012	U	0.00127	U
Endosulfan I	4.8	2.4	mg/kg	0.00191	U	0.00192	U	0.00203	U
Endosulfan II	4.8	2.4	mg/kg	0.00191	U	0.00192	U	0.00203	U
Endosulfan sulfate	4.8	2.4	mg/kg	0.000798	U	0.000799	U	0.000846	U
Endrin	2.2	0.014	mg/kg	0.000798	U	0.000799	U	0.000846	U
Heptachlor	0.42	0.042	mg/kg	0.000957	U	0.000958	U	0.00101	U
Heptachlor epoxide	0.077		mg/kg	0.00359	U	0.00359	U	0.0038	U
Lindane	0.28	0.1	mg/kg	0.000798	U	0.000799	U	0.000846	U
Methoxychlor	100		mg/kg	0.00359	U	0.00359	U	0.0038	U
trans-Chlordane	0.54		mg/kg	0.00239	U	0.0024	U	0.00254	U
No Regulatory Limits									
Chlordane			mg/kg	0.0156	U	0.0156	U	0.0165	U
Endrin ketone			mg/kg	0.00191	U	0.00192	U	0.00203	U
Toxaphene			mg/kg	0.0359	U	0.0359	U	0.038	U

Notes:
mg/kg = milligrams per kilogram
Bold value indicates the analyte was detected
Shaded cell indicates respective cleanup standard was exceeded
B = Compound was found in the blank and sample
J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value
U = The analyte was analyzed for, but was not detected above the reporting limit

Table 15
Meridian Brownfields Site Investigation
Village of Meridian, Cayuga County, New York
Summary of PCBs - Petroleum Contaminated Area

Location	Soil Clean-up Objective from 6 NYCRR Part 375		Units	North Sidewall 2		East Sidewall 2		Bottom East 2	
Sampling Date	Residential	Unrestricted		11/5/2014		11/5/2014		11/5/2014	
Aroclor 1016	1	0.1	mg/kg	0.0395	U	0.0414	U	0.0413	U
Aroclor 1221	1	0.1	mg/kg	0.0395	U	0.0414	U	0.0413	U
Aroclor 1232	1	0.1	mg/kg	0.0395	U	0.0414	U	0.0413	U
Aroclor 1242	1	0.1	mg/kg	0.0395	U	0.0414	U	0.0413	U
Aroclor 1248	1	0.1	mg/kg	0.0395	U	0.0414	U	0.0413	U
Aroclor 1254	1	0.1	mg/kg	0.0395	U	0.0414	U	0.0413	U
Aroclor 1260	1	0.1	mg/kg	0.0395	U	0.0414	U	0.0413	U
Aroclor 1262	1	0.1	mg/kg	0.0395	U	0.0414	U	0.0413	U
Aroclor 1268	1	0.1	mg/kg	0.0395	U	0.0414	U	0.0413	U

Notes:
mg/kg = milligrams per kilogram
Bold value indicates the analyte was detected
Shaded cell indicates respective cleanup standard was exceeded
B = Compound was found in the blank and sample
J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value
U = The analyte was analyzed for, but was not detected above the reporting limit

Tabl;e 16
Meridian Brownfields Site Investigation
Village of Meridian, Cayuga County, New York
Summary of Inorganic Compounds - Petroleum Contaminated Area

Location	Soil Clean-up Objective from 6 NYCRR Part 375		Units	North Sidewall 2		East Sidewall 2		Bottom East 2	
Sampling Date	Residential	Unrestricted		11/5/2014		11/5/2014		11/5/2014	
Arsenic, Total	16	13	mg/kg	**12**		**13**		**29**	
Barium, Total	350	350	mg/kg	**69**	J	**83**	J	**51**	J
Beryllium, Total	14	7.2	mg/kg	**0.34**	J	**0.34**	J	**0.27**	J
Cadmium, Total	2.5	2.5	mg/kg	0.99	U	1	U	1	U
Chromium, Total	36	30	mg/kg	**8.8**		**10**		**7.5**	
Cobalt, Total	30		mg/kg	**7.4**		**6.8**		**15**	
Copper, Total	270	50	mg/kg	**48**	J	**50**	J	**110**	J
Lead, Total	400	63	mg/kg	**110**	J	**130**	J	**23**	J
Manganese, Total	2,000	1,600	mg/kg	**980**	J	**890**	J	**5,900**	J
Mercury, Total	0.81	0.18	mg/kg	**0.4**	J	**0.35**	J	**0.03**	J
Nickel, Total	140	30	mg/kg	**9.3**		**9.9**		**14**	
Selenium, Total	36	3.9	mg/kg	2	U	2	U	2	U
Silver, Total	36	2	mg/kg	0.99	U	1	U	**0.76**	J
Vanadium, Total	100		mg/kg	**15**		**17**		**17**	
Zinc, Total	2,200	109	mg/kg	**78**		**110**		**68**	
No Regulatory Limits									
Aluminum, Total			mg/kg	**6,000**	J	**6,600**	J	**4,100**	J
Antimony, Total			mg/kg	4.9	U	5	U	5.1	U
Calcium, Total			mg/kg	**46,000**	J	**34,000**	J	**10,000**	J
Iron, Total			mg/kg	**16,000**	J	**17,000**	J	**24,000**	J
Magnesium, Total			mg/kg	**12,000**	J	**9,800**	J	**3,400**	J
Potassium, Total			mg/kg	**660**	J	**740**	J	**520**	J
Sodium, Total			mg/kg	**340**		**340**		**170**	J
Thallium, Total			mg/kg	2	U	2	U	**0.42**	J

Notes:
mg/kg = milligrams per kilogram
Bold value indicates the analyte was detected
Shaded cell indicates respective cleanup standard was exceeded
B = Compound was found in the blank and sample
J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value or requested by data validator.
U = The analyte was analyzed for, but was not detected above the reporting limit

Table 17
Meridian Brownfields Site Investigation
Village of Meridian, Cayuga County, New York
Summary of Volatile Organic Compounds - Lead Contaminated Area

Location	Soil Clean-up Objective from 6 NYCRR Part 375		Units	East Sidewall		Bottom East		Bottom Middle	
Sampling Date	Residential	Unrestricted		11/4/2014		11/4/2014		11/4/2014	
1,1,1-Trichloroethane	100,000	680	ug/kg	1.3	U	1.2	U	1.2	U
1,1,2,2-Tetrachloroethane	35,000		ug/kg	1.3	U	1.2	U	1.2	U
1,1-Dichloroethane	19,000	270	ug/kg	1.9	U	1.8	U	1.8	U
1,1-Dichloroethene	100,000	330	ug/kg	1.3	U	1.2	U	1.2	U
1,2-Dichlorobenzene	100,000	1,100	ug/kg	6.5	U	5.9	U	5.8	U
1,2-Dichloroethane	2,300	20	ug/kg	1.3	U	1.2	U	1.2	U
1,3-Dichlorobenzene	17,000	2,400	ug/kg	6.5	U	5.9	U	5.8	U
1,4-Dichlorobenzene	9,800	1,800	ug/kg	6.5	U	5.9	U	5.8	U
1,4-Dioxane	9,800	100	ug/kg	130	U	120	U	120	U
2-Butanone	100,000	120	ug/kg	13	U	12	U	12	U
Acetone	100,000	50	ug/kg	13	U	12	U	12	U
Benzene	2,900	60	ug/kg	1.3	U	1.2	U	1.2	U
Carbon disulfide	100,000		ug/kg	13	U	12	U	12	U
Carbon tetrachloride	1,400	760	ug/kg	1.3	U	1.2	U	1.2	U
Chlorobenzene	100,000	1,100	ug/kg	1.3	U	1.2	U	1.2	U
Chloroform	10,000	370	ug/kg	1.9	U	1.8	U	1.8	U
cis-1,2-Dichloroethene	59,000	250	ug/kg	1.3	U	1.2	U	1.2	U
Ethylbenzene	30,000	1,000	ug/kg	1.3	U	1.2	U	1.2	U
Freon-113	100,000		ug/kg	26	U	24	U	23	U
Isopropylbenzene	100,000		ug/kg	1.3	U	1.2	U	1.2	U
Methyl tert butyl ether	62,000	930	ug/kg	2.6	U	2.4	U	2.3	U
Methylene chloride	51,000	50	ug/kg	13	U	12	U	12	U
Tetrachloroethene	5,500	1,300	ug/kg	1.3	U	1.2	U	1.2	U
Toluene	100,000	700	ug/kg	1.9	U	1.8	U	1.8	U
trans-1,2-Dichloroethene	100,000	190	ug/kg	1.9	U	1.8	U	1.8	U
Trichloroethene	10,000	470	ug/kg	1.3	U	1.2	U	1.2	U
Vinyl chloride	210	20	ug/kg	2.6	U	2.4	U	2.3	U
No Regulatory Limits									
1,1,2-Trichloroethane			ug/kg	1.9	U	1.8	U	1.8	U
1,2,3-Trichlorobenzene			ug/kg	6.5	U	5.9	U	5.8	U
1,2,4-Trichlorobenzene			ug/kg	6.5	U	5.9	U	5.8	U
1,2-Dibromo-3-chloropropane			ug/kg	6.5	U	5.9	U	5.8	U
1,2-Dibromoethane			ug/kg	5.2	U	4.7	U	4.7	U
1,2-Dichloropropane			ug/kg	4.5	U	4.1	U	4.1	U
2-Hexanone			ug/kg	13	U	12	U	12	U
4-Methyl-2-pentanone			ug/kg	13	U	12	U	12	U
Bromochloromethane			ug/kg	6.5	U	5.9	U	5.8	U
Bromodichloromethane			ug/kg	1.3	U	1.2	U	1.2	U
Bromoform			ug/kg	5.2	U	4.7	U	4.7	U
Bromomethane			ug/kg	2.6	U	2.4	U	2.3	U
Chloroethane			ug/kg	2.6	U	2.4	U	2.3	U
Chloromethane			ug/kg	6.5	U	5.9	U	5.8	U
cis-1,3-Dichloropropene			ug/kg	1.3	U	1.2	U	1.2	U
Cyclohexane			ug/kg	26	U	24	U	23	U
Dibromochloromethane			ug/kg	1.3	U	1.2	U	1.2	U
Dichlorodifluoromethane			ug/kg	13	U	12	U	12	U
Methyl Acetate			ug/kg	26	U	24	U	23	U
Methyl cyclohexane			ug/kg	5.2	U	4.7	U	4.7	U
o-Xylene			ug/kg	2.6	U	2.4	U	2.3	U
p/m-Xylene			ug/kg	2.6	U	2.4	U	**0.44**	**J**
Styrene			ug/kg	2.6	U	2.4	U	2.3	U
trans-1,3-Dichloropropene			ug/kg	1.3	U	1.2	U	1.2	U
Trichlorofluoromethane			ug/kg	6.5	U	5.9	U	5.8	U

Notes:
ug/kg = micrograms per kilogram
Bold value indicates the analyte was detected
Shaded cell indicates respective cleanup standard was exceeded
B = Compound was found in the blank and sample
J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value
U = The analyte was analyzed for, but was not detected above the reporting limit

Table 18
Meridian Brownfields Site Investigation
Village of Meridian, Cayuga County, New York
Summary of Semi-Volatile Organic Compounds - Lead Contaminated Area

Location	Soil Clean-up Objective from 6 NYCRR Part 375		Units	East Sidewall		Bottom East		Bottom Middle	
Sampling Date	Residential	Unrestricted		11/4/2014		11/4/2014		11/4/2014	
2,4,5-Trichlorophenol	100,000		ug/kg	210	U	190	U	190	U
2,4-Dichlorophenol	100,000		ug/kg	190	U	170	U	170	U
2,4-Dinitrophenol	100,000		ug/kg	1000	U	920	U	920	U
2,6-Dinitrotoluene	1,030		ug/kg	210	U	190	U	190	U
2-Chlorophenol	100,000		ug/kg	210	U	190	U	190	U
2-Methylnaphthalene	410		ug/kg	250	U	230	U	230	U
2-Methylphenol	100,000	330	ug/kg	210	U	190	U	190	U
3-Methylphenol/4-Methylphenol	100,000	330	ug/kg	300	U	280	U	280	U
4-Chloroaniline	100,000		ug/kg	210	U	190	U	190	U
Acenaphthene	100,000	20,000	ug/kg	170	U	150	U	150	U
Acenaphthylene	100,000	100,000	ug/kg	170	U	150	U	150	U
Anthracene	100,000	100,000	ug/kg	120	U	120	U	110	U
Benzo(a)anthracene	1,000	1,000	ug/kg	120	U	120	U	110	U
Benzo(a)pyrene	1,000	1,000	ug/kg	170	U	150	U	150	U
Benzo(b)fluoranthene	1,000	1,000	ug/kg	120	U	120	U	110	U
Benzo(ghi)perylene	100,000	100,000	ug/kg	170	U	150	U	150	U
Benzo(k)fluoranthene	1,000	800	ug/kg	120	U	120	U	110	U
Bis(2-ethylhexyl)phthalate	50,000		ug/kg	210	U	190	U	190	U
Butyl benzyl phthalate	100,000		ug/kg	210	U	190	U	190	U
Chrysene	1,000	1,000	ug/kg	120	U	120	U	110	U
Dibenzo(a,h)anthracene	330	330	ug/kg	120	U	120	U	110	U
Dibenzofuran	14,000	7,000	ug/kg	210	U	190	U	190	U
Diethyl phthalate	100,000		ug/kg	210	U	190	U	190	U
Dimethyl phthalate	100,000		ug/kg	210	U	190	U	190	U
Di-n-butylphthalate	100,000		ug/kg	210	U	190	U	190	U
Di-n-octylphthalate	100,000		ug/kg	210	U	190	U	190	U
Fluoranthene	100,000	100,000	ug/kg	120	U	120	U	110	U
Fluorene	100,000	30,000	ug/kg	210	U	190	U	190	U
Hexachlorobenzene	410	330	ug/kg	120	U	120	U	110	U
Indeno(1,2,3-cd)pyrene	500	500	ug/kg	170	U	150	U	150	U
Isophorone	100,000	0	ug/kg	190	U	170	U	170	U
Naphthalene	100,000	12,000	ug/kg	210	U	190	U	190	U
Nitrobenzene	3,700		ug/kg	190	U	170	U	170	U
Pentachlorophenol	2,400	800	ug/kg	170	U	150	U	150	U
Phenanthrene	100,000	100,000	ug/kg	120	U	120	U	110	U
Phenol	100,000	330	ug/kg	210	U	190	U	190	U
Pyrene	100,000	100,000	ug/kg	120	U	120	U	110	U
No Regulatory Limits									
1,2,4,5-Tetrachlorobenzene			ug/kg	210	U	190	U	190	U
2,3,4,6-Tetrachlorophenol			ug/kg	210	U	190	U	190	U
2,4,6-Trichlorophenol			ug/kg	120	U	120	U	110	U
2,4-Dimethylphenol			ug/kg	210	U	190	U	190	U
2,4-Dinitrotoluene			ug/kg	210	U	190	U	190	U
2-Chloronaphthalene			ug/kg	210	U	190	U	190	U
2-Nitroaniline			ug/kg	210	U	190	U	190	U
2-Nitrophenol			ug/kg	450	U	410	U	410	U
3,3'-Dichlorobenzidine			ug/kg	210	U	190	U	190	U
3-Nitroaniline			ug/kg	210	U	190	U	190	U
4,6-Dinitro-o-cresol			ug/kg	540	U	500	U	500	U
4-Bromophenyl phenyl ether			ug/kg	210	U	190	U	190	U
4-Chlorophenyl phenyl ether			ug/kg	210	U	190	U	190	U
4-Nitroaniline			ug/kg	210	U	190	U	190	U
4-Nitrophenol			ug/kg	290	U	270	U	270	U
Acetophenone			ug/kg	210	U	190	U	190	U
Atrazine			ug/kg	170	U	150	U	150	U
Benzaldehyde			ug/kg	280	U	250	U	250	U
Biphenyl			ug/kg	480	U	440	U	440	U
Bis(2-chloroethoxy)methane			ug/kg	220	U	210	U	210	U
Bis(2-chloroethyl)ether			ug/kg	190	U	170	U	170	U
Bis(2-chloroisopropyl)ether			ug/kg	250	U	230	U	230	U
Caprolactam			ug/kg	210	U	190	U	190	U
Carbazole			ug/kg	210	U	190	U	190	U
Hexachlorobutadiene			ug/kg	210	U	190	U	190	U
Hexachlorocyclopentadiene			ug/kg	600	U	550	U	550	U
Hexachloroethane			ug/kg	170	U	150	U	150	U
NDPA/DPA			ug/kg	170	U	150	U	150	U
n-Nitrosodi-n-propylamine			ug/kg	210	U	190	U	190	U
p-Chloro-m-cresol			ug/kg	210	U	190	U	190	U

Notes:
ug/kg = micrograms per kilogram
Bold value indicates the analyte was detected
Shaded cell indicates respective cleanup standard was exceeded
B = Compound was found in the blank and sample
J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value
U = The analyte was analyzed for, but was not detected above the reporting limit

Table 19
Meridian Brownfields Site Investigation
Village of Meridian, Cayuga County, New York
Summary of Pesticides - Lead Contaminated Area

Location	Soil Clean-up Objective from 6 NYCRR Part 375		Units	East Sidewall		Bottom East		Bottom Middle	
Sampling Date	**Residential**	**Unrestricted**		**11/4/2014**		**11/4/2014**		**11/4/2014**	
4,4'-DDD	2.6	0.0033	mg/kg	0.00205	U	0.00186	U	**0.00168**	**J**
4,4'-DDE	1.8	0.0033	mg/kg	0.00205	U	0.00186	U	**0.00221**	
4,4'-DDT	1.7	0.0033	mg/kg	0.00385	U	0.00348	U	**0.00392**	
Aldrin	0.019	0.005	mg/kg	0.00205	U	0.00186	U	0.00182	U
Alpha-BHC	0.097	0.02	mg/kg	0.000856	U	0.000774	U	0.000759	U
Beta-BHC	0.072	0.036	mg/kg	0.00205	U	0.00186	U	0.00182	U
cis-Chlordane	0.91	0.094	mg/kg	0.00257	U	0.00232	U	0.00228	U
Delta-BHC	100	0.04	mg/kg	0.00205	U	0.00186	U	0.00182	U
Dieldrin	0.039	0.005	mg/kg	0.00128	U	0.00116	U	0.00114	U
Endosulfan I	4.8	2.4	mg/kg	0.00205	U	0.00186	U	0.00182	U
Endosulfan II	4.8	2.4	mg/kg	0.00205	U	0.00186	U	0.00182	U
Endosulfan sulfate	4.8	2.4	mg/kg	0.000856	U	0.000774	U	0.000759	U
Endrin	2.2	0.014	mg/kg	0.000856	U	0.000774	U	0.000759	U
Heptachlor	0.42	0.042	mg/kg	0.00103	U	0.000929	U	0.000911	U
Heptachlor epoxide	0.077		mg/kg	0.00385	U	0.00348	U	0.00342	U
Lindane	0.28	0.1	mg/kg	0.000856	U	0.000774	U	0.000759	U
Methoxychlor	100		mg/kg	0.00385	U	0.00348	U	0.00342	U
trans-Chlordane	0.54		mg/kg	0.00257	U	0.00232	U	0.00228	U
No Regulatory Limits									
Chlordane			mg/kg	0.0167	U	0.0151	U	0.0148	U
Endrin ketone			mg/kg	0.00205	U	0.00186	U	0.00182	U
Toxaphene			mg/kg	0.0385	U	0.0348	U	0.0342	U

Notes:
mg/kg = milligrams per kilogram
Bold value indicates the analyte was detected
Shaded cell indicates respective cleanup standard was exceeded
B = Compound was found in the blank and sample
J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value
U = The analyte was analyzed for, but was not detected above the reporting limit

Table 20
Meridian Brownfields Site Investigation
Village of Meridian, Cayuga County, New York
Summary of PCBs - Lead Contaminated Area

Location	Soil Clean-up Objective from 6 NYCRR Part 375		Units	East Sidewall		Bottom East		Bottom Middle	
Sampling Date	Residential	Unrestricted		11/4/2014		11/4/2014		11/4/2014	
Aroclor 1016	1	0.1	mg/kg	0.042	U	0.0372	U	0.0389	U
Aroclor 1221	1	0.1	mg/kg	0.042	U	0.0372	U	0.0389	U
Aroclor 1232	1	0.1	mg/kg	0.042	U	0.0372	U	0.0389	U
Aroclor 1242	1	0.1	mg/kg	0.042	U	0.0372	U	0.0389	U
Aroclor 1248	1	0.1	mg/kg	0.042	U	0.0372	U	0.0389	U
Aroclor 1254	1	0.1	mg/kg	0.042	U	0.0372	U	0.0389	U
Aroclor 1260	1	0.1	mg/kg	0.042	U	0.0372	U	**0.00857**	**J**
Aroclor 1262	1	0.1	mg/kg	0.042	U	0.0372	U	0.0389	U
Aroclor 1268	1	0.1	mg/kg	0.042	U	0.0372	U	0.0389	U

Notes:
mg/kg = milligrams per kilogram
Bold value indicates the analyte was detected
Shaded cell indicates respective cleanup standard was exceeded
B = Compound was found in the blank and sample
J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value
U = The analyte was analyzed for, but was not detected above the reporting limit

Table 21
Meridian Brownfields Site Investigation
Village of Meridian, Cayuga County, New York
Summary of Inorganic Compounds - Lead Contaminated Area

Location	Soil Clean-up Objective from 6 NYCRR Part 375		Units	East Sidewall		North Sidewall		Bottom East		Bottom Middle		Bottom West		South Sidewall	
Sampling Date	Residential	Unrestricted		11/4/2014		11/4/2014		11/4/2014		11/4/2014		11/4/2014		11/4/2014	
Arsenic, Total	16	13	mg/kg	**50**		**72**		**16**		**21**		**22**		**24**	
Barium, Total	350	350	mg/kg	**68**	J	**79**	J	**49**	J	**34**	J	**82**	J	**46**	J
Beryllium, Total	14	7.2	mg/kg	**0.36**	J	**0.51**	J	**0.27**	J	**0.17**	J	**0.5**	J	**0.32**	J
Cadmium, Total	2.5	2.5	mg/kg	1	U	1	U	0.9	U	0.9	U	1	U	0.94	U
Chromium, Total	36	30	mg/kg	**13**		**15**		**13**		**5.8**		**14**		**11**	
Cobalt, Total	30		mg/kg	**10**		**8.6**		**4.8**		**6.1**		**7**		**5.3**	
Copper, Total	270	50	mg/kg	**52**	J	**46**	J	**12**	J	**39**	J	**29**	J	**16**	J
Lead, Total	400	63	mg/kg	**15**	J	**16**	J	**11**	J	**19**	J	**9.5**	J	**5.2**	J
Manganese, Total	2,000	1,600	mg/kg	**960**	J	**810**	J	**310**	J	**650**	J	**260**	J	**380**	J
Mercury, Total	0.81	0.18	mg/kg	**0.07**	J	**0.1**	J	0.08	U	**0.02**	J	**0.07**	J	0.08	U
Nickel, Total	140	30	mg/kg	**12**		**14**		**10**		**6.1**		**12**		**11**	
Selenium, Total	36	3.9	mg/kg	2	U	2	U	1.8	U	1.8	U	2	U	1.9	U
Silver, Total	36	2	mg/kg	1	U	1	U	0.9	U	0.9	U	1	U	0.94	U
Vanadium, Total	100		mg/kg	**20**		**25**		**15**		**9.9**		**21**		**16**	
Zinc, Total	2,200	109	mg/kg	**41**		**61**		**29**		**40**		**34**		**29**	
No Regulatory Limits															
Aluminum, Total			mg/kg	**6,000**	J	**9,000**	J	**6,200**	J	**3,100**	J	**9,200**	J	**6,500**	J
Antimony, Total			mg/kg	**5.2**	J	**1**	J	4.5	U	4.5	U	5.1	U	4.7	U
Calcium, Total			mg/kg	**3,800**	J	**2,000**	J	**16,000**	J	**63,000**	J	**2,300**	J	**2,400**	J
Iron, Total			mg/kg	**26,000**	J	**30,000**	J	**14,000**	J	**14,000**	J	**22,000**	J	**19,000**	J
Magnesium, Total			mg/kg	**2,300**	J	**2,300**	J	**9,100**	J	**17,000**	J	**2,800**	J	**2,700**	J
Potassium, Total			mg/kg	**560**	J	**750**	J	**860**	J	**370**	J	**750**	J	**790**	J
Sodium, Total			mg/kg	**67**	J	**74**	J	**110**	J	**120**	J	**100**	J	**79**	J
Thallium, Total			mg/kg	2	U	2	U	1.8	U	1.8	U	2	U	1.9	U

Notes:
mg/kg = milligrams per kilogram
Bold value indicates the analyte was detected
Shaded cell indicates respective cleanup standard was exceeded
B = Compound was found in the blank and sample
J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value or requested by data validator.
U = The analyte was analyzed for, but was not detected above the reporting limit

Table 22
Meridian Brownfields Site Investigation
Village of Meridian, Cayuga County, New York
Summary of Volatile Organic Compounds - 2015 Surface Samples

Location	Soil Clean-up Objective from 6 NYCRR Part 375		Units	SS-1		SS-2	
Sampling Date	**Residential**	**Unrestricted**		**8/20/15**		**8/20/15**	
1,1,1-Trichloroethane	100,000	680	ug/kg	1.2	U	1.1	U
1,1,2,2-Tetrachloroethane	35,000		ug/kg	1.2	U	1.1	U
1,1-Dichloroethane	19,000	270	ug/kg	1.8	U	1.6	U
1,1-Dichloroethene	100,000	330	ug/kg	1.2	U	1.1	U
1,2-Dichlorobenzene	100,000	1,100	ug/kg	6	U	5.4	U
1,2-Dichloroethane	2,300	20	ug/kg	1.2	U	1.1	U
1,3-Dichlorobenzene	17,000	2,400	ug/kg	6	U	5.4	U
1,4-Dichlorobenzene	9,800	1,800	ug/kg	6	U	5.4	U
1,4-Dioxane	9,800	100	ug/kg	120	U	110	U
2-Butanone	100,000	120	ug/kg	12	U	11	U
Acetone	100,000	50	ug/kg	12	U	11	U
Benzene	2,900	60	ug/kg	1.2	U	1.1	U
Carbon disulfide	100,000		ug/kg	12	U	11	U
Carbon tetrachloride	1,400	760	ug/kg	1.2	U	1.1	U
Chlorobenzene	100,000	1,100	ug/kg	1.2	U	1.1	U
Chloroform	10,000	370	ug/kg	1.8	U	1.6	U
cis-1,2-Dichloroethene	59,000	250	ug/kg	1.2	U	1.1	U
Ethylbenzene	30,000	1,000	ug/kg	1.2	U	1.1	U
Freon-113	100,000		ug/kg	24	U	21	U
Isopropylbenzene	100,000		ug/kg	1.2	U	1.1	U
Methyl tert butyl ether	62,000	930	ug/kg	2.4	U	2.1	U
Methylene chloride	51,000	50	ug/kg	12	U	11	U
Tetrachloroethene	5,500	1,300	ug/kg	1.2	U	1.1	U
Toluene	100,000	700	ug/kg	1.8	U	1.6	U
trans-1,2-Dichloroethene	100,000	190	ug/kg	1.8	U	1.6	U
Trichloroethene	10,000	470	ug/kg	1.2	U	1.1	U
Vinyl chloride	210	20	ug/kg	2.4	U	2.1	U
No Regulatory Limits							
1,1,2-Trichloroethane			ug/kg	1.8	U	1.6	U
1,2,3-Trichlorobenzene			ug/kg	6	U	5.4	U
1,2,4-Trichlorobenzene			ug/kg	6	U	5.4	U
1,2-Dibromo-3-chloropropane			ug/kg	6	U	5.4	U
1,2-Dibromoethane			ug/kg	4.8	U	4.3	U
1,2-Dichloropropane			ug/kg	4.2	U	3.8	U
2-Hexanone			ug/kg	12	U	11	U
4-Methyl-2-pentanone			ug/kg	12	U	11	U
Bromochloromethane			ug/kg	6	U	5.4	U
Bromodichloromethane			ug/kg	1.2	U	1.1	U
Bromoform			ug/kg	4.8	U	4.3	U
Bromomethane			ug/kg	2.4	U	2.1	U
Chloroethane			ug/kg	2.4	U	2.1	U
Chloromethane			ug/kg	6	U	5.4	U
cis-1,3-Dichloropropene			ug/kg	1.2	U	1.1	U
Cyclohexane			ug/kg	24	U	21	U
Dibromochloromethane			ug/kg	1.2	U	1.1	U
Dichlorodifluoromethane			ug/kg	12	U	11	U
Methyl Acetate			ug/kg	24	U	21	U
Methyl cyclohexane			ug/kg	4.8	U	4.3	U
o-Xylene			ug/kg	2.4	U	2.1	U
p/m-Xylene			ug/kg	2.4	U	0.32	J
Styrene			ug/kg	2.4	U	2.1	U
trans-1,3-Dichloropropene			ug/kg	1.2	U	1.1	U
Trichlorofluoromethane			ug/kg	6	U	5.4	U

Notes:
ug/kg = micrograms per kilogram
Bold value indicates the analyte was detected
Shaded cell indicates respective cleanup standard was exceeded
B = Compound was found in the blank and sample
J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value
U = The analyte was analyzed for, but was not detected above the reporting limit

Table 23
Meridian Brownfields Site Investigation
Village of Meridian, Cayuga County, New York
Summary of Semi-Volatile Organic Compounds - 2015 Surface Samples

Location	Soil Clean-up Objective from 6 NYCRR Part 375		Units	SS-1		SS-2	
Sampling Date	Residential	Unrestricted		8/20/15		8/20/15	
2,4,5-Trichlorophenol	100,000		ug/kg	380	U	180	U
2,4-Dichlorophenol	100,000		ug/kg	340	U	170	U
2,4-Dinitrophenol	100,000		ug/kg	1800	U	880	U
2,6-Dinitrotoluene	1,030		ug/kg	380	U	180	U
2-Chlorophenol	100,000		ug/kg	380	U	180	U
2-Methylnaphthalene	410		ug/kg	450	U	220	U
2-Methylphenol	100,000	330	ug/kg	380	U	180	U
3-Methylphenol/4-Methylphenol	100,000	330	ug/kg	540	U	260	U
4-Chloroaniline	100,000		ug/kg	380	U	180	U
Acenaphthene	100,000	20,000	ug/kg	300	U	**88**	**J**
Acenaphthylene	100,000	100,000	ug/kg	**160**	**J**	**180**	
Anthracene	100,000	100,000	ug/kg	**140**	**J**	**300**	
Benzo(a)anthracene	1,000	1,000	ug/kg	**430**		**670**	
Benzo(a)pyrene	1,000	1,000	ug/kg	**520**		**650**	
Benzo(b)fluoranthene	1,000	1,000	ug/kg	**680**		**780**	
Benzo(ghi)perylene	100,000	100,000	ug/kg	**380**		**400**	
Benzo(k)fluoranthene	1,000	800	ug/kg	**250**		**330**	
Bis(2-ethylhexyl)phthalate	50,000		ug/kg	380	U	180	U
Butyl benzyl phthalate	100,000		ug/kg	380	U	180	U
Chrysene	1,000	1,000	ug/kg	500		760	
Dibenzo(a,h)anthracene	330	330	ug/kg	**84**	**J**	**99**	**J**
Dibenzofuran	14,000	7,000	ug/kg	380	U	180	U
Diethyl phthalate	100,000		ug/kg	380	U	180	U
Dimethyl phthalate	100,000		ug/kg	380	U	180	U
Di-n-butylphthalate	100,000		ug/kg	380	U	180	U
Di-n-octylphthalate	100,000		ug/kg	380	U	180	U
Fluoranthene	100,000	100,000	ug/kg	**860**		1500	
Fluorene	100,000	30,000	ug/kg	380	U	**130**	**J**
Hexachlorobenzene	410	330	ug/kg	220	U	110	U
Indeno(1,2,3-cd)pyrene	500	500	ug/kg	**420**		**450**	
Isophorone	100,000	0	ug/kg	340	U	170	U
Naphthalene	100,000	12,000	ug/kg	380	U	180	U
Nitrobenzene	3,700		ug/kg	340	U	170	U
Pentachlorophenol	2,400	800	ug/kg	300	U	150	U
Phenanthrene	100,000	100,000	ug/kg	**360**		**1100**	
Phenol	100,000	330	ug/kg	380	U	180	U
Pyrene	100,000	100,000	ug/kg	**760**		**1300**	
No Regulatory Limits							
1,2,4,5-Tetrachlorobenzene			ug/kg	380	U	180	U
2,3,4,6-Tetrachlorophenol			ug/kg	380	U	180	U
2,4,6-Trichlorophenol			ug/kg	220	U	110	U
2,4-Dimethylphenol			ug/kg	380	U	180	U
2,4-Dinitrotoluene			ug/kg	380	U	180	U
2-Chloronaphthalene			ug/kg	380	U	180	U
2-Nitroaniline			ug/kg	380	U	180	U
2-Nitrophenol			ug/kg	810	U	400	U
3,3'-Dichlorobenzidine			ug/kg	380	U	180	U
3-Nitroaniline			ug/kg	380	U	180	U
4,6-Dinitro-o-cresol			ug/kg	980	U	480	U
4-Bromophenyl phenyl ether			ug/kg	380	U	180	U
4-Chlorophenyl phenyl ether			ug/kg	380	U	180	U
4-Nitroaniline			ug/kg	380	U	180	U
4-Nitrophenol			ug/kg	520	U	260	U
Acetophenone			ug/kg	380	U	180	U
Atrazine			ug/kg	300	U	150	U
Benzaldehyde			ug/kg	500	U	**86**	**J**
Biphenyl			ug/kg	860	U	420	U
Bis(2-chloroethoxy)methane			ug/kg	400	U	200	U
Bis(2-chloroethyl)ether			ug/kg	340	U	170	U
Bis(2-chloroisopropyl)ether			ug/kg	450	U	220	U
Caprolactam			ug/kg	380	U	180	U
Carbazole			ug/kg	380	U	**110**	**J**
Hexachlorobutadiene			ug/kg	380	U	180	U
Hexachlorocyclopentadiene			ug/kg	1100	U	530	U
Hexachloroethane			ug/kg	300	U	150	U
NDPA/DPA			ug/kg	300	U	150	U
n-Nitrosodi-n-propylamine			ug/kg	380	U	180	U
p-Chloro-m-cresol			ug/kg	380	U	180	U

Notes:
ug/kg = micrograms per kilogram
Bold value indicates the analyte was detected
Shaded cell indicates respective cleanup standard was exceeded
B = Compound was found in the blank and sample
J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value
U = The analyte was analyzed for, but was not detected above the reporting limit

Table 24
Meridian Brownfields Site Investigation
Village of Meridian, Cayuga County, New York
Summary of Pesticides - 2015 Surface Samples

Location	Soil Clean-up Objective from 6 NYCRR Part 375		Units	SS-1		SS-2	
Sampling Date	Residential	Unrestricted		8/20/15		8/20/15	
4,4'-DDD	2.6	0.0033	mg/kg	**0.00336**		**0.00122**	**J**
4,4'-DDE	1.8	0.0033	mg/kg	**0.0215**		**0.00439**	
4,4'-DDT	1.7	0.0033	mg/kg	**0.0322**		**0.00871**	
Aldrin	0.019	0.005	mg/kg	0.00176	U	0.00178	U
Alpha-BHC	0.097	0.02	mg/kg	0.000734	U	0.00074	U
Beta-BHC	0.072	0.036	mg/kg	0.00176	U	0.00178	U
cis-Chlordane	0.91	0.094	mg/kg	0.0022	U	0.00222	U
Delta-BHC	100	0.04	mg/kg	0.00176	U	0.00178	U
Dieldrin	0.039	0.005	mg/kg	0.00183	PI	0.00111	U
Endosulfan I	4.8	2.4	mg/kg	0.00176	U	0.00178	U
Endosulfan II	4.8	2.4	mg/kg	0.00176	U	0.00178	U
Endosulfan sulfate	4.8	2.4	mg/kg	0.000734	U	0.00074	U
Endrin	2.2	0.014	mg/kg	0.000734	U	0.00074	U
Heptachlor	0.42	0.042	mg/kg	0.00088	U	0.000888	U
Heptachlor epoxide	0.077		mg/kg	0.0033	U	0.00333	U
Lindane	0.28	0.1	mg/kg	0.000734	U	0.00074	U
Methoxychlor	100		mg/kg	0.0033	U	0.00333	U
trans-Chlordane	0.54		mg/kg	**0.00124**	**J**	**0.00111**	**J**
No Regulatory Limits							
Chlordane			mg/kg	**0.00988**	**J**	**0.00757**	**J**
Endrin ketone			mg/kg	0.00176	U	**0.0017**	**J**
Toxaphene			mg/kg	0.033	U	0.0333	U

Notes:
mg/kg = milligrams per kilogram
Bold value indicates the analyte was detected
Shaded cell indicates respective cleanup standard was exceeded
B = Compound was found in the blank and sample
J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value
U = The analyte was analyzed for, but was not detected above the reporting limit

Table 25
Meridian Brownfields Site Investigation
Village of Meridian, Cayuga County, New York
Summary of PCBs - 2015 Surface Samples

Location	Soil Clean-up Objective from 6 NYCRR Part 375		Units	SS-1		SS-2	
Sampling Date	Residential	Unrestricted		8/20/15		8/20/15	
Aroclor 1016	1	0.1	mg/kg	0.037	U	0.0358	U
Aroclor 1221	1	0.1	mg/kg	0.037	U	0.0358	U
Aroclor 1232	1	0.1	mg/kg	0.037	U	0.0358	U
Aroclor 1242	1	0.1	mg/kg	0.037	U	0.0358	U
Aroclor 1248	1	0.1	mg/kg	**0.0086**	**J**	0.0358	U
Aroclor 1254	1	0.1	mg/kg	**0.0103**	**J**	0.0358	U
Aroclor 1260	1	0.1	mg/kg	**0.0142**	**J**	0.0358	U
Aroclor 1262	1	0.1	mg/kg	0.037	U	0.0358	U
Aroclor 1268	1	0.1	mg/kg	0.037	U	0.0358	U

Notes:
mg/kg = milligrams per kilogram
Bold value indicates the analyte was detected
Shaded cell indicates respective cleanup standard was exceeded
B = Compound was found in the blank and sample
J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value
U = The analyte was analyzed for, but was not detected above the reporting limit

Table 26
Meridian Brownfields Site Investigation
Village of Meridian, Cayuga County, New York
Summary of Metals 2015 - Surface and Background Arsenic Samples

Location	Soil Clean-up Objective from 6 NYCRR Part 375		Units	SS-1		SS-2		Arsenic East		Arsenic South	
Sampling Date	**Residential**	**Unrestricted**		**8/20/15**		**8/20/15**		**8/20/15**		**8/20/15**	
Arsenic, Total	16	13	mg/kg	**3.9**		**3.2**		**6.8**		**10**	
Barium, Total	350	350	mg/kg	**47**		**41**		-	-	-	-
Beryllium, Total	14	7.2	mg/kg	**0.22**	**J**	**0.19**	**J**	-	-	-	-
Cadmium, Total	2.5	2.5	mg/kg	**0.29**	**J**	**0.26**	**J**	-	-	-	-
Chromium, Total	36	30	mg/kg	**7.7**		**7.3**		-	-	-	-
Cobalt, Total	30		mg/kg	**4.5**		**4**		-	-	-	-
Copper, Total	270	50	mg/kg	**24**		**18**		-	-	-	-
Lead, Total	400	63	mg/kg	**29**		**26**		-	-	-	-
Manganese, Total	2,000	1,600	mg/kg	**470**		**400**		-	-	-	-
Mercury, Total	0.81	0.18	mg/kg	**0.06**	**J**	**0.05**	**J**	-	-	-	-
Nickel, Total	140	30	mg/kg	**8.5**		**7.4**		-	-	-	-
Selenium, Total	36	3.9	mg/kg	1.8	U	1.8	U	-	-	-	-
Silver, Total	36	2	mg/kg	0.9	U	0.88	U	-	-	-	-
Vanadium, Total	100		mg/kg	**10**		**10**		-	-	-	-
Zinc, Total	2,200	109	mg/kg	**57**		**43**		-	-	-	-
No Regulatory Limits											
Aluminum, Total			mg/kg	**4700**		**4900**		-	-	-	-
Antimony, Total			mg/kg	4.5	U	4.4	U	-	-	-	-
Calcium, Total			mg/kg	**70000**		**42000**		-	-	-	-
Iron, Total			mg/kg	**11000**		**11000**					
Magnesium, Total			mg/kg	**9000**		**6300**		-	-	-	-
Potassium, Total			mg/kg	**560**		**400**		-	-	-	-
Sodium, Total			mg/kg	**64**	**J**	**56**	**J**	-	-	-	-
Thallium, Total			mg/kg	1.8	U	1.8	U	-	-	-	-

Notes:
mg/kg = milligrams per kilogram
Bold value indicates the analyte was detected
Shaded cell indicates respective cleanup standard was exceeded
B = Compound was found in the blank and sample
J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value or requested by data validator.
U = The analyte was analyzed for, but was not detected above the reporting limit

Appendix A

Pictures

Remedial Investigation Report and Alternatives Analysis
Meridian Brownfield Environmental Restoration Project
Cayuga County, New York
NYSDEC Brownfield Site #B00180

Original Tydol Garage

Garage across street in 1987

UST removal - 2010

UST removal - 2010

Appendix B

Boring Logs

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667

Boring ID: MW-1 **Page:** 1 of 1
Project: Meridian Brownfield **Date:** 04/05/10
Client: Cayuga County
Contractor: GeoLogic NY
Equipment: CME 45B ATV **C&S Representative:** Wayne Randall

Depth (ft.)	Sample Number	Sample Recovery (in.)	SPT Blows (blows/6in.)	PID Reading (ppm)	Water Level (ft)	Physical Description Lithology	Remarks	Depth (ft.)
2	1	12	1, 1, 2, 3	0.0		dry brown fine silty SAND, some fine gravel		2
4	2	3	2, 1, 2, 2	0.0	▽	moist to wet at 3 feet	Soil sample from 2 to 4ft submitted to laboratory for analysis of metals, VOCs, SVOCs, and PCBs	4
6	3	24	1, 1, 2, 3	0.0				6
8	4	20	3, 6, 10, 6	0.0		wet, brown, loose GRAVEL, loose, some silt and sand		8
10	5	18	2, 5, 12, 9	0.0				10
12	6	6	9, 20, 18, 13	0.0				12
14	7	20	4, 4, 4, 2	0.0		increase in silt content		14
16						Bottom of Boring @ 14 feet		16
18								18
20								20

NOTES:
Sampling Method: ASTM D-1586
2 in.diameter, 2ft. long standard split spoon, 140 lb. hammer, HSA - 4.25 in. augers
Hole completed as a 2 in. pvc monitoring well. Screened from 4-14 feet with 10-slot.
Water Level on 4/6/10 was 1.0 feet from top of pvc casing.
▽ = Approximate water level while drilling

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667

Boring ID: MW-2 **Page:** 1 of 1
Project: Meridian Brownfield **Date:** 04/05/10
Client: Cayuga County
Contractor: GeoLogic NY
Equipment: Mobile Drill **C&S Representative:** Wayne Randall

Depth (ft.)	Sample Number	Sample Recovery (in.)	SPT Blows (blows/6in.)	PID Reading (ppm)	Water Level (ft)	Physical Description Lithology	Remarks	Depth (ft.)
2	1	12	4, 8, 6, 8	0.0		dry, black, tan, fmc SAND, some gravel		2
4	2	18	3, 4, 3, 3	0.0	▽	moist, brown to tan, fm SAND, trace silt, moist	Soil sample from 2 to 4ft submitted to laboratory for analysis of metals, VOCs, SVOCs, and PCBs	4
6	3	18	2, 1, 1, 2	0.0		wet, dark brown, moist, fm SAND, some silt, trace marl concretions		6
8	4	18	1, 1, 1, 1	0.0				8
10	5	16	4, 8, 5, 8	0.0		wet, grey SILT, some fm sand, trace gravel		10
12	6	12	6, 4, 3, 5	0.0				12
14	7	12	3, 4, 6, 9	0.0		wet, loose, grey SAND, some silt, trace gravel		14
16						Bottom of Boring @ 14 feet		16
18								18
20								20

NOTES:
Sampling Method: ASTM D-1586
2 in.diameter, 2ft. long standard split spoon, 140 lb. hammer, HSA - 4.25 in. augers
Hole completed as a 2 in. pvc monitoring well. Screened from 4-14 feet with 10-slot.
Water Level on 4/7/10 was 1.7 feet from top of pvc casing.
▽ = Approximate water level while drilling

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667

Boring ID: MW-3 **Page:** 1 of 1
Project: Meridian Brownfield **Date:** 4/5/10 an 4/6/10
Client: Cayuga County
Contractor: GeoLogic NY
Equipment: Mobile Drill **C&S Representative:** Wayne Randall

Depth (ft.)	Sample Number	Sample Recovery (in.)	SPT Blows (blows/6in.)	PID Reading (ppm)	Water Level (ft)	Physical Description Lithology	Remarks	Depth (ft.)
2	1	12	4, 8, 6, 8	>2000	▽	moist black, grey, fmc SAND, trace gravel	petroleum odor	2
4	2	18	3, 4, 3, 3	>2000		wet, grey, similar to above with ash and brick fragments, trace marl	Soil sample from 2 to 4ft submitted to laboratory for analysis of metals, VOCs, SVOCs, and PCBs	4
6	3	18	2, 1, 1, 2	1460.0			petroleum odor	6
8	4	18	1, 1, 1, 1	55.7		wet, black, grey, fmc SAND, some gravel and silt		8
10	5	16	4, 8, 5, 8	NM				10
12	6	12	6, 4, 3, 5	267.0		wet, grey, fine SAND, some gravel and silt	petroleum odor	12
14	7	12	3, 4, 6, 9	101.0				14
16						Bottom of Boring @ 14 feet		16
18								18
20								20

NOTES:
Sampling Method: ASTM D-1586
2 in.diameter, 2ft. long standard split spoon, 140 lb. hammer, HSA - 4.25 in. augers
Hole completed as a 2 in. pvc monitoring well. Screened from 4-14 feet with 10-slot.
Water Level on 4/7/10 was 3.6 feet from top of pvc casing.
NM = Not measured
▽ = Approximate water level while drilling

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667

Boring ID: B-1 **Page:** 1 of 1
Project: Meridian Brownfield **Date:** 04/06/10
Client: Cayuga County
Contractor: GeoLogic NY
Equipment: Mobile Drill **C&S Representative:** Wayne Randall

Depth (ft.)	Sample Number	Sample Recovery (in.)	SPT Blows (blows/6in.)	PID Reading (ppm)	Water Level (ft)	Physical Description Lithology	Remarks	Depth (ft.)
2	1	12	14, 10, 11, 7	50.0	▽	moist to wet, grey, brown, fmc SAND and GRAVEL, black ash, red brick	slight petroleum odor	2
4	2	18	4, 3, 2, 4	50.0				4
6	3	15	1, 1, 1, 1	1460.0		grey SILT, fm sand, trace gravel	Soil sample from 4 to 6ft submitted to laboratory for analysis of metals, VOCs, SVOCs, and PCBs	6
8	4	15	1, 1, 1, 3	1400.0				8
10	5	16	6, 11, 14, 15	50.0		wet, grey fm SAND, color transition to tan/brown		10
12	6	12	6, 9, 14, 20	0.0		wet, grey, fine SAND, some gravel and silt		12
14	7	12	3, 4, 6, 9	0.0		Bottom of Boring @ 14 feet		14
16								16
18								18
20								20

NOTES:
Sampling Method: ASTM D-1586
2 in.diameter, 2ft. long standard split spoon, 140 lb. hammer, HSA - 4.25 in. augers
Hole completed as a 2 in. pvc monitoring well. Screened from 4-14 feet with 10-slot.
Water Level on 4/6/10 was 1.0 feet from top of pvc casing.
▽ = Approximate water level while drilling

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667

Boring ID: B-2 **Page:** 1 of 1
Project: Meridian Brownfield **Date:** 04/06/10
Client: Cayuga County
Contractor: GeoLogic NY
Equipment: Mobile Drill **C&S Representative:** Wayne Randall

Depth (ft.)	Sample Number	Sample Recovery (in.)	SPT Blows (blows/6in.)	PID Reading (ppm)	Water Level (ft)	Physical Description Lithology	Remarks	Depth (ft.)
2	1	3	4 3 2 1	0.0		dry, brown fmc SAND, trace red brick, concrete		2
4	2	18	1 2 2 1	0.0	▽	moist, tan, brown, SILT and fm SAND, trace brick, gravel		4
6	3	18	WH 1 1 7	0.0		wet, tan, brown, fm SAND, some silt, trace gravel	Soil sample from 4 to 6ft submitted to laboratory for analysis of metals, VOCs, SVOCs, and PCBs	6
8	4	18	17 18 18 14	0.0		grey, dense, fm SAND, some gravel		8
10	5	18	8 11 16 15	0.0		grey, fm SAND, some gravel		10
12	6	NR	6 7 7 7	0.0				12
14	7	12	7 6 7 9	0.0		grey, wet, SILT and fm SAND, trace gravel		14
16	8		3 3 2 4	0.0		Bottom of Boring @ 16 feet		16
18								18
20								20

NOTES:
Sampling Method: ASTM D-1586
2 in.diameter, 2ft. long standard split spoon, 140 lb. hammer, HSA - 4.25 in. augers
Hole completed as a 2 in. pvc monitoring well. Screened from 4-14 feet with 10-slot.
Water Level on 4/6/10 was 1.0 feet from top of pvc casing.
▽ = Approximate water level while drilling

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd
Syracuse, New York 13212
Phone: (315) 455-2000
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Boring ID: B-3
Project: Meridian Brownfield
Client: Cayuga County
Contractor: GeoLogic NY
Equipment: Geoprobe® 6626 DT

Page: 1 of 1
Date: 04/07/10
C&S Representative: Wayne Randall

Depth (ft.)	Sample Number	Sample Recovery (in.)	PID Reading (ppm)	Water Level (ft)	Physical Description Lithology	Remarks	Depth (ft.)
2	1	30	0.0	▽	dry, brown, black, dry, fmc SAND, some gravel		2
					wet, brown, fmc SAND and GRAVEL, trace marl concretions		
4							4
6	2	24	0.0		wet, dark brown, fm SAND, some silt, trace gravel	Soil sample from 4 to 8ft submitted to laboratory for analysis of metals, VOCs, SVOCs, and PCBs	6
8							8
10	3	24	0.0				10
12					wet, fine grey SAND, trace silt, gravel		12
14	4	24	0.0			harder drilling at 13 feet	14
16					Bottom of Boring @ 16 feet		16
18							18
20							20

NOTES:
Direct push method of drilling with Geoprobe
▽ = Approximate water level while drilling

Boring ID: LB-1 | **Page:** 1 of 1
Project: Meridian Brownfield | **Date:** 04/07/10
Client: Cayuga County
Contractor: GeoLogic NY
Equipment: Geoprobe® 6626 DT | **C&S Representative:** Wayne Randall

Depth (in.)	Sample ID	PID Reading (ppm)	Physical Description Lithology	Remarks
	a	0.0	dry, brown, black, fmc SAND, some silt, trace gravel	Soil sample taken for each sample ID **a, b, c, d, and e** and submitted to laboratory for Total Lead
12	b	0.0	moist, fmc SAND, trace glass frags	
24	c	0.0	SAA, wet	
36	d	0.0	SAA, with trace white marl concretions	
48				
60	e	0.0	SAA, loose, increase in gravel	

Boring ID: LB-2 | **Date:** 04/07/10
Project: Meridian Brownfield
Client: Cayuga County
Contractor: GeoLogic NY
Equipment: Geoprobe® 6626 DT | **C&S Representative:** Wayne Randall

Depth (in.)	Sample ID	PID Reading (ppm)	Physical Description Lithology	Remarks
	a	0.0	dry, brown, fmc SAND, some silt, trace gravel	Soil sample taken for each sample ID **a, b, c, d, and e** and submitted to laboratory for Total Lead
12	b	0.0	moist, fmc SAND	
24	c	0.0	SAA, wet	
36	d	0.0		
48				
60	e	0.0	SAA, loose, increase in gravel	

NOTES:
Direct push method of drilling with Geoprobe
SAA = Same as Above

Boring ID: LB-3 **Page:** 1 of 1
Project: Meridian Brownfield **Date:** 04/07/10
Client: Cayuga County
Contractor: GeoLogic NY
Equipment: Geoprobe® 6626 DT **C&S Representative:** Wayne Randall

Depth (in.)	Sample ID	PID Reading (ppm)	Physical Description Lithology	Remarks
	a	0.0	moist, brown, fmc SAND, some silt	Soil sample taken for each sample ID **a, b, c, d, and e** and submitted to laboratory for Total Lead
12	b	0.0	moist, brown, black fmc SAND, some gravel	
24	c	0.0	SAA, wet	
36	d	0.0	SAA, with trace white marl concretions	
48				
60	e	0.0	SAA, loose	

Boring ID: LB-4 **Date:** 04/07/10
Project: Meridian Brownfield
Client: Cayuga County
Contractor: GeoLogic NY
Equipment: Geoprobe® 6626 DT **C&S Representative:** Wayne Randall

Depth (in.)	Sample ID	PID Reading (ppm)	Physical Description Lithology	Remarks
	a	0.0	moist, brown, black, fmc SAND, some silt	Battery connection found at surface
12	b	0.0	SAA	
24	c	0.0	wet, SAA with increase in silt, trace black ash	
36	d	0.0	SAA, no ash	Soil sample taken for each sample ID **a, b, c, d, and e** and submitted to laboratory for Total Lead
48				
60	e	0.0		

NOTES:
Direct push method of drilling with Geoprobe
SAA = Same as Above

Boring ID: LB-5 | **Page:** 1 of 1
Project: Meridian Brownfield | **Date:** 04/07/10
Client: Cayuga County
Contractor: GeoLogic NY
Equipment: Geoprobe® 6626 DT | **C&S Representative:** Wayne Randall

Depth (in.)	Sample ID	PID Reading (ppm)	Physical Description Lithology	Remarks
	a	0.0	moist, brown, fmc SAND, some silt and gravel, trace glass frags	Soil sample taken for each sample ID **a, b, c, d, and e** and submitted to laboratory for Total Lead
12	b	0.0	SAA	
24	c	0.0	SAA, increase in silt	
36	d	0.0		
48				
60	e	0.0	wet, tan, fm SAND, some silt, trace gravel	

Boring ID: LB-6 | **Date:** 04/07/10
Project: Meridian Brownfield
Client: Cayuga County
Contractor: GeoLogic NY
Equipment: Geoprobe® 6626 DT | **C&S Representative:** Wayne Randall

Depth (in.)	Sample ID	PID Reading (ppm)	Physical Description Lithology	Remarks
	a	0.0	moist, brown, black, fmc SAND, some silt and gravel	Soil sample taken for each sample ID **a, b, c, d, and e** and submitted to laboratory for Total Lead
12	b	0.0	SAA	
24	c	0.0	SAA, increase in silt content with depth	
36	d	0.0		
48				
60	e	0.0		

NOTES:
Direct push method of drilling with Geoprobe
SAA = Same as Above

Boring ID: LB-7 | **Page:** 1 of 1
Project: Meridian Brownfield | **Date:** 04/07/10
Client: Cayuga County
Contractor: GeoLogic NY
Equipment: Geoprobe® 6626 DT | **C&S Representative:** Wayne Randall

Depth (in.)	Sample ID	PID Reading (ppm)	Physical Description Lithology	Remarks
	a	0.0	moist, brown, fmc SAND, some sit	Soil sample taken for each sample ID **a, b, c, d, and e** and submitted to laboratory for Total Lead
12	b	0.0	SAA, trace gravel	
24	c	0.0	SAA, increase in silt	
36	d	0.0		
48			wet, orange to tan, fmc SAND, trace white marl concretions	
60	e	0.0	SAA	

Boring ID: LB-8 | **Date:** 04/07/10
Project: Meridian Brownfield
Client: Cayuga County
Contractor: GeoLogic NY
Equipment: Geoprobe® 6626 DT | **C&S Representative:** Wayne Randall

Depth (in.)	Sample ID	PID Reading (ppm)	Physical Description Lithology	Remarks
	a	0.0	moist, tan to brown, fmc SAND, some gravel	Battery strap found at surface
12	b	0.0	wet, black, brown, fmc SAND and GRAVEL	
24	c	0.0	SAA	Soil sample taken for each sample ID **a, b, c, d, and e** and submitted to laboratory for Total Lead
36	d	0.0		
48				
60	e	0.0		

NOTES:
Direct push method of drilling with Geoprobe
SAA = Same as Above

Appendix C

Laboratory Analytical Results
(Under Separate Cover)

Appendix D

Data Usability Summary Reports
(Under Separate Cover)

Appendix E

Continuous Air Monitoring Results
(Under Separate Cover)