PHASE I REMEDIAL ACTION DESIGN

For The

Scenic Hudson's Long Dock Park
Red Flynn Drive
City of Beacon
Dutchess County, New York

NYSDEC BCP Site: C314112

February 2010 (Revised April and June 2010)

ESI File: SG96152.81

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The undersigned has reviewed this Phase I Remedial Action Design and certifies to The Scenic Hudson Land Trust, Inc. that the information provided in this document is accurate as of the date of issuance by this office.

Any and all questions or comments, including requests for additional information, should be submitted to the undersigned.

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Professional Engineer

STATE OF NEW YORK
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1.0 INTRODUCTION

1.1 Purpose

This Phase I Remedial Action Design (Phase I Design) provides a detailed description of the remedial actions that are proposed by Ecosystems Strategies, Inc. (ESI) to address known contamination at the Scenic Hudson's Long Dock Park, Long Dock Beacon Property located at Red Flynn Drive, City of Beacon, Dutchess County, New York (see Section 1.2, below). This work is proposed as Phase I of the development, which will be located on the eastern side of the Site, and includes the construction of a park, the renovation of an existing building as an environmental education/arts facility, and the continued use of the Dutchess Boat Club (see Section 1.4, below).

Remediation of other portions of the Site, as documented in the NYSDEC approved Remedial Alternatives Report and Remedial Work Plan (see Section 1.3.1, below) will be completed in conjunction with the anticipated future commercial development of the Site. This Phase I Design will not be considered to be a "Final" document until written approval has been secured from the New York State Department of Environmental Conservation (NYCDEC).

1.2 Site Location and Description

The Site consists of the eastern and southwestern portion of the 8.85-acre irregular-shaped parcel situated on a peninsula on the eastern shore of the Hudson River, in the City of Beacon, Dutchess County, New York. The property extends approximately 1,200 feet westwards from Red Flynn Drive and includes lands submerged in the Hudson River. A barn (also known as the "Red Barn"), a vacant single-family dwelling, and a boathouse are located on the property; remaining portions consist of vacant, overgrown areas. A Site Location Map is provided as Figure 1 in Appendix A.

1.3 Site History and Environmental Conditions

The Longdock Beacon property was used as a salvage/scrap yard and major oil storage facility (MOSF), among other historical industrial uses. Current environmental data (summarized in the Remedial Investigation Report [RIR]) documents soil contamination by metals (primarily arsenic and lead), polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), and petroleum compounds (semi-volatile organic compounds [SVOCs], volatile organic compounds [VOCs], and total petroleum hydrocarbons – diesel range organics [TPH-DROs]). Groundwater is contaminated by low-level concentrations of petroleum compounds and metals (BTEX is present east of the former MOSF).

Arsenic contamination is present in the northeastern portion of the Site (particularly east of the barn), to the north of the boathouse, and in the northeast portion of the area of the former MOSF. Arsenic contamination throughout the Site generally extends vertically from the surface to approximately 4 feet below surface grade (bsg) with exception of limited areas in the northeast where elevated arsenic was encountered in soil samples at the 9 foot depth. Lead contamination is present in surface soils located east and west of the barn; lead contamination was also encountered west of the dwelling and in the area of the former MOSF, with a maximum depth of 3 feet bsg. PCB contamination is present in limited areas immediately west, east, and southeast of the barn, (northeast portion of the Site) at 0 to 3 feet bsg. Generally, SVOC and VOC soil contamination is limited to the area of the former MOSF, with higher VOC and SVOC concentrations at the southeastern portion of this area. However, a limited area of PAH contamination exists to the east of the barn in deeper soils (in the same area as referenced above containing elevated arsenic).

1.3.1 Remedial Alternatives Report and Remedial Work Plan

Subsequent to the completion of the investigation, a Remedial Alternatives Report and Remedial Work Plan (RAR/RWP) was prepared for the entire property, based on the areas of contamination identified in the RIR. The scope of work in the RAR/RWP included:

- Preparation of full-scale Remedial Design (RD) drawings and specifications, as per the direction of the NYSDEC.

- Demolition of the on-site dwelling and boathouse in accordance with applicable regulations for asbestos and disposition of resulting debris.

- Excavation and off-site disposal of soils containing elevated concentrations (above Residential Restricted Use soil cleanup objectives [SCOs]) of arsenic, lead, mercury, PCBs, individual SVOCs (east of the concrete foundation), and total SVOCs (east of the barn). The RAR/RWP recommended soil excavation and off-site disposal for the following four areas including:

Table 1: RAR/RWP Excavation Areas

Area	Location	Contamination	Proposed Excavation Depth (bsg)
1	East of the concrete foundation - western portion of the Site	PAHs & Arsenic	4 feet
2	West and southwest of the barn - north-central portion of the Site	Arsenic, Lead & PCBs – north of sampling location TP-01 Arsenic & Lead – south of sampling location TP-01	4 feet – north of sampling location TP-01 2 feet – south of sampling location TP-01
3	East and southeast of the barn - eastern portion of the Site	Arsenic, Lead, Mercury & PCBs – north of sampling location 2SB-29; with a limited area of PAHs around SB-01 Arsenic, Lead & PCBs– south of sampling location 2SB-29	4 feet – north of sampling location 2SB-29 and 9 feet in a limited area around SB-01, 2SB-23, 2SB-25, and 2SB-26 4 feet – south of sampling location 2SB-29
4	South of the barn - southeastern portion of the Site	Arsenic	10 feet
bsg = below surface grade			

- Collection of confirmatory endpoint samples to document the effectiveness of contaminant removal activities and the integrity of post-excavation soils including the possible removal of additional soils in those areas where confirmatory samples indicate that additional removal is warranted.

- The implementation and management of an in-situ chemical oxidation treatment to measurably reduce petroleum contamination in the south-central portion of the Site (former MOSF area).

- The installation of a sub-slab depressurization system (SSDS), with a vapor barrier, under the foundation of the proposed building to manage potential remaining soil vapors in the south-central portion of the property.

- The installation of a protective barrier layer (clean soil, building foundations, and paved areas) throughout the entire property, to prevent exposures to any remaining contaminants.

Prior to implementation of the full scale in-situ treatment, bench scale testing and a pilot program were recommended to evaluate the feasibility and effectiveness of the chemical oxidation. Bench scale testing is on-going at this time; documentation regarding this testing will be provided to the NYSDEC under separate cover. The Proposed Site Remediation Map from the RAR/RWP is included as Figure 2, Appendix A.

1.4 Proposed Development

In the RAR/RWP, development plans called for a mixed-use waterfront development, which would include a hotel, conference center, restaurants, offices, retail stores, water dependent uses, and a park with public access to waterfront-related amenities. This plan called for demolishing all on-site structures, with the exception of the Red Barn, located on the northeastern portion of the Site. No specific use for this structure was indicated in the RAR/RWP.

A development plan has been proposed by The Scenic Hudson Land Trust, Inc. (Scenic Hudson) for the Site (eastern and southwestern portion property) around the Red Barn and the Dutchess Boat Club; this portion of the Site will be referred in the document as “Scenic Hudson’s Long Dock Park” or “the Park”. This plan calls for the development of an environmental educational/arts facility at the Red Barn which will be surrounded by parking and green space. It also calls for the continued use of the boat club and surrounding parking. The environmental arts/education facility would be accessed from the south and east by paved drives and a walking path. A Phase I Site Remediation Map (Park Construction) has been included as Figure 3, Appendix A.

As part of the development, a Request for Change of Use letter was submitted to the NYSDEC on May 15, 2009. This letter requested that the land use under the Brownfield Cleanup Program be modified to allow the development of the eastern portion of the Site as a park and educational/arts facility and the continued use of the southwestern portion of the Site by the boat club.

The NYSDEC accepted the change of use in a letter dated June 4, 2009. Additionally, the NYSDEC requested that documents detailing park design, soil management, and health and safety procedures be submitted for department review and approval prior to implementation of this change of use. As requested, these changes are detailed in Section 2.0, below.

2.0 PHASE I REMEDIAL ACTION DESIGN

This Phase I Remedial Action Design details actions proposed to address known contamination at the Park portion of the Site, as identified in Sections 1.2 and 1.4, above. A Phase I Site Remediation Map depicting relevant Site features, conditions of concern, and areas of proposed remedial activities, is provided in Appendix A. All proposed work will be conducted according to a site specific Health and Safety Plan (HASP), provided as Appendix B and the Community Air Monitoring Plan (CAMP), provided as Appendix C.

For the purpose of the work detailed in this Phase I Design, the "Client" is defined as The Scenic Hudson Land Trust, Inc., which will contract with the environmental consultant and/or remediation firm (hereafter referred to as the On-site Coordinator [OSC]) to provide the services detailed below.

2.1 Remedial Objective

The objective of this fieldwork is to complete remedial activities in the area of the Red Barn and a limited area for a kayak camp to the south of Dutchess Boat Club that are consistent with the NYSDEC approved RAR/RWP and that are protective of human health and the environment so that the Site be utilized by the public, prior to completion of full development of the entire property.

2.2 Overview of Proposed Remediation Services

The proposed remedial services described in detail in subsequent sections of this Phase I Design consist of the following:

1. Demolition of the on-site single-family structure per all applicable rules and regulations (Section 2.5.1, below);

2. Initiation of air monitoring during ground intrusive activities (Section 2.5.2, below);

3. Excavation and off-site disposal of contaminated on-site soils in conjunction with Site development including limited dewatering activities in "Area A" where soils below the static water level are proposed for removal (Section 2.5.3, below);

4. Post-excavation confirmatory endpoint sampling to document acceptable contaminant levels in remaining soils including the possible removal of additional soils in those areas where confirmatory samples indicate that additional removal is warranted (Section 2.5.3, below);

5. Installation of a demarcation layer and importing clean fill onto the Site (Section 2.5.4, below);

6. Post-remedial groundwater sampling (Section 2.5.5, below); and,

7. Preparation of a Phase I Remediation Report, including a Site Management Plan, for the Client and the NYSDEC (Section 2.5.6, below).

Prior to, or in conjunction with, the initiation of these actions, the tasks detailed in Section 2.4, below, will also be conducted.

2.3 Remediation Services to be Completed Under Subsequent Phases

The activities to be completed subsequent phases of remediation include:

- Demolition of the on-site boathouse in accordance with applicable regulations for asbestos and disposition of resulting debris.
- Excavation and off-site disposal of soils containing elevated concentrations of contaminants in other areas of the Site identified for soil removal in the RAR/RWP (see Table 1, above).
- Although bench-scale testing is on-going, the implementation in-situ chemical oxidation treatment in the south-central portion of the Site (former MOSF area) will be conducted separately from the activities completed under this Phase I Design.
- The installation of a SSDS, with a vapor barrier, under the foundation of the prospective commercial structure (and any other foundation slabs in contact with Site soils) to manage potential remaining soil vapors in the south-central portion of the Site.
- The installation of a protective barrier layer (clean soil, building foundations, and paved areas) throughout the areas of the property not completed during this Phase I Design, to prevent exposures to any remaining contaminants.

2.4 Proposed Site Preparation Services

This section of the Phase I Design provides details on activities and services necessary to be initiated and/or completed prior to the implementation of Phase I remediation services.

2.4.1 Agency Notification

The NYSDEC will be notified in writing at least five (5) business days prior to the start of fieldwork. Notification of subsequent field activities will be in accordance with reasonable business practice, with verbal notification for immediate (within 48 hours) activities and written notification otherwise. Written notifications will be transmitted to the NYSDEC via facsimile or electronic mail. Notification to the NYSDEC will be directed to Mr. William Bennett, unless otherwise specified by the NYSDEC.

2.4.2 Utility Markout

Prior to the implementation of any of the remedial tasks outlined in Section 2.5, below, a request for a complete utility markout of the Site will be submitted as required by New York State Department of Labor regulations. Confirmation of underground utility locations will be secured, and a field check of the utility markout will be conducted prior to the initiation of work. Any utilities on the Site will be protected (as necessary) by the contractor or owner.

2.4.3 Equipment Calibration

A photo-ionization detector (PID) will be utilized to screen encountered materials for the presence of volatile vapors. The PID will be calibrated at the onset of each workday, and a written calibration log will be maintained for this project. The PID will be calibrated to read parts per million gas equivalents of isobutylene in accordance with protocols set forth by the equipment manufacturer.

2.4.4 Coordination of Subcontractors

Subcontractors will perform requested services under the direct supervision of the OSC. Prior to the initiation of fieldwork, all subcontractors will be notified of the components of the Health and Safety Plan (see 2.4.5, below). All necessary insurance certificates will be secured from subcontractors by the Client and/or by the OSC. At this time, the following subcontractors are anticipated to be used on this project:

- Excavator
- Licensed Hauler
- Analytical Laboratory

2.4.5 Health and Safety Plan

The site-specific HASP will be reviewed with on-site personnel (including subcontractors) prior to the initiation of fieldwork. All proposed work will be performed in "Level D" personal protective equipment; however, all on-site field personnel will be prepared to continue services wearing more protective levels of equipment should field conditions warrant. See Appendix B for a copy of the HASP.

2.4.6 Erosion Controls

Erosion and sedimentation controls will be installed prior to disturbance of soils, as described in Division 31 – Earthwork, Section 312500 Erosion Control and Protection of Work and design drawing C-100 (see Appendix F).

Generally, these requirements, as they pertain to the removal and/or management of contaminated soils on the Site, include the following actions:

- Installation of all erosion control structures (e.g., silt fence, hay bale barriers, and temporary grass cover) in accordance with the design drawings and the Guidelines for Urban & Erosions Control, dated 1991.

- Grading and maintaining the Site so that stormwater runoff from disturbed areas is diverted to the erosion and sediment control facilities.

- Inspection of all measures at least one time per week and within 24 hours of the end of a 0.5-inch or greater storm event. Stabilized areas will be inspected monthly.

- Maintenance of control measures will be completed within 7 calendar days; critical conditions may require immediate correction.

2.5 Proposed Specific Remediation Services

This section of the Phase I Design provides a detailed description of the remedial tasks that will be conducted at the Site. Appropriate measures (e.g., vehicle traffic patterns, stormwater run-off controls, etc.) will be implemented to ensure that contaminated soil is minimally disturbed during the course of all remedial activities.

2.5.1 Demolition of the Existing Single Family Residential Structure

The on-site single family structure, located on the north-central portion of the property to the west of the Red Barn, will be demolished as part of Phase I activities. Asbestos and lead based paint have been detected inside of the structure (see Appendix D, Demolition Survey). During demolition the following activities will be completed:

- All asbestos will be separated and disposed of off-site per all applicable rules and regulations;
- Demolition debris will be sampled for leachable lead and, if present at levels greater than 5 mg/L, debris separation will occur;
- All other materials will be separated based on potential re-use categories as follows: 1) All materials which can be re-used on-site as fill (i.e., brick, concrete, and/or stone) will be separated and stockpiled for re-use; 2) All materials which can be recycled for re-use on other sites will be separated and protected from weather conditions prior to shipment off-site; and, 3) all other materials will be disposed of off-site at a licensed waste disposal or recycling facility.

2.5.2 Community Air Monitoring

A Community Air Monitoring Plan (CAMP) will be initiated during all ground intrusive activities. The implementation of the CAMP will document the presence or absence of specific compounds in the air surrounding the work zone, which may migrate off-site due to fieldwork activities. This plan provides guidance on the need for implementing more stringent dust and emission controls based on air quality data. Air monitoring will be conducted for VOCs and for dust. See Appendix C for a copy of the CAMP.

Ameliorative procedures for controlling dust and emissions may include one or more of the following:

- Misting or Watering exposed soils to reduce fugitive dust;
- Use of dust suppression substances;
- Reducing the surface area of contaminated soil being disturbed at one time; and,
- Stopping excavation activities.

The contractor will be prepared to implement any of the above dust/emissions control strategies at all times while working on-site.

2.5.3 Excavation of Soils and Dewatering Procedures

Contaminated soils will be excavated and removed from the Site. The removal of contaminated soil will be scheduled in conjunction with development activities at the Site (i.e., renovation of the Red Barn and completion of the park). All appropriate disposal documentation will be included in the Phase I Remediation Report (see Section 2.5.6, below).

The limits of excavation areas A, B, and C (see Table 2, below) must be approved by the NYSDEC in the field prior to excavation (see Section 2.5.3.1, below). The number of post-excavation end-point samples will not deviate from the anticipated samples (see Table 3, below) without NYSDEC approval, and the need for additional excavation and off-site disposal of soils, based on end-point sampling, will be subject to review and acceptance by the NYSDEC.

Contaminated soils will be removed in the following areas:

Table 2: Phase I Design Excavation Areas

Area	Area as identified in the RAR/RWP	Location	Contamination	Proposed Excavation Depth (bsg)	Estimated Soil Removal (cy)
A	3	East and southeast of the barn - eastern portion of the Site	Arsenic, Lead, Mercury & PCBs, and PAHs (deep samples in area of SB-1, only) – north of sampling location 2SB-29 Arsenic, Lead & PCBs– south of sampling location 2SB-29	4 feet and 9 feet (deep PAH and arsenic contamination found in the area of SB-01, SB-23, SB-25, and SB-26) 4 feet	2,186 - 2,336 (1,886 to 4 feet and 300-450 to 9 feet deep) See above
B	3	Southeast of the barn - eastern portion of the Site	PCBs	2 feet	93
C	2	West and southwest of the barn - north-central portion of the Site	Arsenic, Lead & PCBs – north of sampling location TP-1 Arsenic & Lead – south of sampling location TP-1	4 feet – north of sampling location TP-1 2 feet – south of sampling location TP-1	1,375

Soils in these three areas (A, B, and C) were sampled for waste characterization (samples A-1, A-2, A-3, B-1, C-1, C-2, and C-3) in December 2009. Acceptable levels of both leachable and total weight metals are present in the samples; no significant levels of PCBs or other organic compounds are present in any of the samples. These results indicate that these soils can be managed as non-hazardous industrialized waste (see Appendix G, Laboratory Reports).

Deeper soils in Area A (PAH and arsenic-contaminated soils referenced in Table 2, above) have not been characterized and therefore cannot be removed from the Site without full waste characterization. These soils will be stockpiled on-Site and a sufficient number of samples will be collected and analyzed (analytes and frequency to be determined by the prospective repository) prior to off-Site disposition.

Area 1 (see Table 1, above) will not be remediated as part of this Phase I Design; however, the northern portion of this area will separated from the park by a fence and the southern portion will be beneath the parking area for the Dutchess Boat Club, preventing contact with these soils. The remaining soils (Area 4 and the former MOSF) will not be remediated as part of this effort; and will be separated from the park by fencing (see Figure 3, Appendix A). This fencing will consist of galvanized wire mesh with wooden posts and is described in Division 32 – Exterior Improvement, Section 323129 Wood Fence and Gate; also described as “wire mesh fence” on design drawing L603. The location of the fencing is depicted on design drawings L200, L201, and L202. See Appendix F for copies of relevant specifications and design drawings. Consistent with previous communications between ESI, the NYSDEC, and the NYSDOH, this fence will be placed at the toe of the slope created by the installation of the soil cover and will be four feet in height.

Limited soils will also be disturbed in the following locations:

- The south-central portion of the Site as part of park development activities associated with beach reconstruction. The area is shown on Figure 3 of this Phase I Design; it is estimated to involve an area no larger than 600 square feet and is anticipated to disturb no more than 100 cubic yards of fill soils. Soils excavated in this area will be visibly inspected for evidence of gross contamination (not anticipated based on previous work). If gross contamination is noted, the soils will be properly stockpiled, sampled, and disposed of (see Section 2.5.3.1 for details). If no evidence of gross contamination is noted, these soils will be stockpiled and sampled (see below) prior to relocation to either portions of the Site behind fencing or under barrier soils in Areas A, B, or C. A demarcation layer, as specified in Section 2.5.4, below, will be placed between remaining site soils and certified clean fill soils.

  Soils from the beach reconstruction will be sampled for VOCs (USEPA Method 8260), PAHs (USEPA Method 8270), target analyte list (TAL) metals (USEPA Methods 6010 and 7471), pesticides (USEPA Method 8081), and polychlorinated biphenyls (PCBs, USEPA Method 8082) and will be compared to the lower of the Restricted Use, Restricted Residential or the Protection of Groundwater SCOs found in 6 NYCRR Part 375, Table 375-6.8(b). If soils meet these SCOs, or are deemed acceptable for reuse on-site as subgrade backfill (below the clean fill cap) by the NYSDEC, they will be managed on-site as described above. If concentrations of contaminants are judged to be unacceptable based on the above criteria the soil will be disposed of off-site as described in Section 2.5.3.3, below.

- Within utility trenches outside of the spatial area defined in Areas A, B, or C above as specified in park construction documents, soils excavated for the purpose of laying underground utilities will be visibly inspected for evidence of gross contamination (not anticipated based on previous work). If gross contamination is noted, the soils will be properly stockpiled, sampled, and disposed of (see Section 2.5.3.1 for details). If no evidence of gross contamination is noted, these soils will be relocated to either portions of the site behind fencing or under barrier soils in Areas A, B, or C. A demarcation layer as specified in Section 2.5.4 below will be placed between remaining site soils and certified clean fill soils.

2.5.3.1 Soil Excavation Procedure

As discussed above, contaminated soils will be excavated for off-site disposal. Specifications for the excavation of soil are attached as part of Appendix E.

Briefly, soil removal is anticipated to follow the process outlined herein:

- An area appropriate for temporarily stockpiling the contaminated soil will be identified and prepared for the temporary storage of this soil, including the use of 6 mil plastic and hay bales to fully segregate this soil;

- Soils will be excavated to the predetermined depth;

- Soil samples from a sufficient number and distribution of locations will be collected and analyzed for specific constituents of concern;

- Should data confirm the need for additional soil removal, such actions will occur and sampling will be repeated; and,

- Once data has confirmed that sufficient removal of contaminated soil has occurred, the area will be graded, a demarcation layer will be laid down and the area will be brought to final grade using certified clean fill.

2.5.3.2 End-Point Soil Sampling

The number of post-excavation end-point soil samples will be determined in the field based on the size and dimensions of the excavations. The anticipated sampling and analysis of the samples are indicated in Table 3, below. Underlying and surrounding soils will be visually inspected and screened with the PID after the soils have been removed from the ground. Wall samples will be collected from a depth consistent with the depth of previously identified contamination; floor samples will be spatially distributed throughout the base of the excavation. Additional samples will be collected, as appropriate, to accommodate an extended or significantly irregular-shaped excavation area.

Soil samples will be collected using decontaminated stainless steel trowels and dedicated, disposable latex gloves. Samples will be place in pre-cleaned jars provided by the laboratory. After sample collection, the sample containers will be placed in a cooler prior to transport to a NYSDOH-certified laboratory for analysis. Appropriate chain of custody procedures will be followed.

Samples will be collected and analyzed as follows:

Table 3: Analysis of End-point Samples

Area	Area as identified in the RAR/RWP	Location	Contamination	Sample Analysis	Anticipated number of Samples	
					Wall	Floor
A	3	East and southeast of the barn - eastern portion of the Site	Arsenic, Lead, Mercury, PCBs, and PAH (deep samples only), – north of sampling location 2SB-29	Arsenic and Lead (6010), Mercury (7471), PCBs (8082), and PAHs (8270, deep samples near SB-1, only)	6 (shallow) 3 (deep)	3 (shallow) 2 (deep)
			Arsenic, Lead & PCBs– south of sampling location 2SB-29	Arsenic and Lead (6010), and PCBs (8082)	3	2
B	3	Southeast of the barn - eastern portion of the Site	PCBs	PCBs (8082)	2	1
C	2	West and southwest of the barn - north-central portion of the Site	Arsenic, Lead & PCBs – north of sampling location TP-1	Arsenic and Lead (6010), and PCBs (8082)	3	1
			Arsenic & Lead – south of sampling location TP-1	Arsenic and Lead (6010)	3	2
				Total:	20	11

Laboratory reports for end-point samples will include detailed Quality Assurance/Quality Control (QA/QC) analyses, which will be provided in the final Phase I Remediation Report (see Section 2.5.6, below). In addition, a Data Usability Summary Report (DUSR) will be prepared by a third, independent party, which maintains NYSDOH ELAP CLP Certification.

2.5.3.3 Soil Disposal Procedures

Soil disposal procedures are detailed in the attached Specifications (see Appendix E). In general, all soils exiting the Site will be considered a regulated waste and will be transported by a licensed hauler. Prior to off-site transport, a licensed repository will be identified. All soil exiting the Site will be properly manifested, with copies of the manifests retained by the OSC for inclusion in the final report (see below, Section 2.5.6). Trucks will be required to utilize the truck route provided on Figure 5 of Appendix A.

If possible, soil will be "live loaded" into trucks for off-site disposal per the attached Specifications. If temporary stockpiles are established, the soil will be managed as a solid waste consistent with the attached Specifications. Soils will be underlain with two layers of 6 mil plastic, properly bermed to prevent water discharge, and covered with plastic for as long as stockpiling occurs.

When soil from the temporary stockpiles are loaded onto trucks for off-site removal, approximately 6 inches of soil from beneath the area of the stockpile will be scraped and removed with the stockpile for off-site disposal.

2.5.3.4 Soil Grading and Capping with Clean Fill

On-site soils that are present outside of the areas of defined contamination (i.e., Areas 1 through 4 in Table 1, above) may be relocated into areas of soil excavation for the purpose of leveling Site grades. These soils have been previously tested and have been determined to be acceptable to remain on-site but unacceptable for use as surface soils.

Soil which will be relocated is generally shown on Figure 4, Appendix A. These soils are located in areas of the Site where elevations are required to be reduced, as per Site development plans. "Borrow" areas are highlighted in green. No areas inside of the fencing around the former MOSF area will be utilized for borrow. Borrow areas on the southeast corner of the Site will be stockpiled and sampled for PAHs (USEPA Method 8270) and total arsenic (USEPA Method 6010) and will be compared to the lower of the Restricted Use, Restricted Residential or the Protection of Groundwater SCOs found in 6 NYCRR Part 375, Table 375-6.8(b). If soils meet these SCOs, or are deemed acceptable for reuse on-site as subgrade backfill (below the clean fill cap) by the NYSDEC, they will be reused on-site. If concentrations of contaminants are judged to be unacceptable for reuse, based on the above criteria, the soil will be disposed of off-site.

Specifications for site excavation, backfilling, and compacting are attached as part of Appendix E. Briefly, soil grading and capping with clean fill are anticipated to follow the process outlined herein:

- The areas of grading will be cleared and grubbed to remove surface vegetation, with the exception of any trees designated for protection;
- Topsoil and material unsuitable for use as fill will be removed;
- Soils surrounding the excavation area will be graded into the excavated areas (see, Table 2, above) as depicted in Figures 4, Appendix A;
- The graded area will then be wetted, as necessary, and compacted;
- A demarcation layer (e.g., orange snow fence) will be placed above the graded soils;
- At least two feet of clean fill will be placed and compacted above the demarcation layer.

2.5.3.5 Dewatering Procedures

Dewatering of the excavation in Area A will occur in order to properly access and remove those soils containing elevated levels of arsenic and PAHs that are located beneath the static groundwater level. A detailed discussion of dewatering procedures is provided in the attached Specifications (Appendix E).

Water removed from the excavation area must be collected in secure storage vessels (e.g., tanks) that prevent this water from being discharged onto the ground at the Site without treatment. Water storage will permit sediment and other suspended material to be filtered out. Water containing a sheen or other visible evidence of contamination will not be permitted to be discharged onto the ground at the Site. Discharge of this water directly into a surface water body is expressly prohibited.

The contractor will utilize frac tanks of sufficient capacity to permit the excavation of contaminated soils currently below the water table to occur in one or two days. Given the known porosity of on-Site soils, "boxing" or other means of reducing infiltration will likely be employed.

Water in the frac tank (or other containment vessels) will be treated with particulate filters to remove sediment and treated with activated carbon to remove organic petroleum compounds. Water cannot be discharged onto the ground at the Site unless water quality data document the absence of any exceedances of NYSDEC Ambient Water Quality Standards (TOGs 1.1.1). Water proposed for discharge will be tested for VOCs (USEPA Method 8260), SVOCs (USEPA Method 8270), TAL metals (USEPA Methods 6010 and 7471), pesticides (USEPA Method 8081), and polychlorinated biphenyls (USEPA Method 8082).

In the event that contamination concentrations are below NYSDEC standards for VOCs, SVOCs, and arsenic, direct discharge onto the surface of the Site within the containment area of the former MOSF will be permitted. The rate of discharge must be consistent with the infiltration rate of the containment area, so that no standing water is present during times of discharge. In addition, a baffle (e.g., hay bale or filter fabric) will be utilized at the discharge point to ensure that erosion does not occur at the point of discharge.

Testing of the effluent (i.e., post treatment water) will occur weekly, with results available and provided to the NYSDEC within the 72 hours of sample collection.

In order to insure that the discharge to the former MOSF area does not mobilize subsurface contamination in that area the following procedures will be followed:

- Prior to start of discharge, the berm will be physically inspected to assess its integrity. Any breaches will be prepared prior to discharge.

- Prior to the start of the discharge, monitoring wells MW-6, MW-7, and MW-8 will be opened, screened with a PID, and water will be removed by bailer to confirm the presence or absence of a sheen or free product in the well. In addition, the Hudson River surface closest to the MOSF will be observed and the condition of the water will be documented.

- Once discharge of water into the MOSF has been initiated, monitoring wells MW-6, MW-7, MW-8, and the surface of the Hudson River will be monitored, as described above, once daily to ensure that the release to the MOSF is not mobilizing the subsurface contamination.

- If free product or a sheen is documented in any of the wells or on the surface of the Hudson River, the release of water to the MOSF will immediately cease and another alternative for disposal of the water (e.g., release to another area or off-site disposal) will be instituted.

2.5.3.6 Areas Outside of Clean Fill Cap

Portions of the Site not covered by clean fill will be covered by a protective cap consisting of several materials including: bituminous concrete paving for access roadways, porous bituminous concrete paving for portions of the parking area, concrete paving for sidewalks, concrete slabs for portions of the parking area, stabilized stone dust paving for portions of the parking area and paths, and gravel paving for the boat club drive and parking. The locations and details of these materials are depicted on design drawings ER100, ER101, L200, L201, L202, L600 and L601. Prior to installation, the site shall be excavated and compacted and shall be backfilled (as necessary) per Division 31 – Earthwork, Section 312300 Site Excavation, Backfilling, and Compacting (see Appendix F). All capping materials will meet minimum NYSDEC requirements of at least two feet for clean soil fill and at least one foot for all other materials, unless expressly identified (see below) and approved by the NYSDEC. A brief description of each of the materials specified in these areas is included below.

- Bituminous Concrete Paving (Section 321216) – this paving will consist of a base course of aggregate (gravel) overlain by a binder course and a top coat of asphaltic concrete. The total thickness of this cover will be 16 inches (see drawing L600).

- Porous Bituminous Concrete Paving (Section 321243) – this paving will consist of a reservoir course of a granular, free draining material, a filter course of gravels, a choker course of a granular, free draining material overlain by a pervious asphaltic paving course. The total thickness of this cover will be between 14 and 35 inches, depending on type of reservoir course installed (see drawing L600).

- Concrete Paving (Section 321313) – this paving will consist of an aggregate base course, steel reinforcement, and Portland cement. The thickness of this paving varies; however, will be between 14 and 24 inches thick (see drawing L601).

- Concrete Slabs (Section 321413) – this material will consist of on-site, salvaged concrete slabs with stone dust joints underlain by an aggregate base. The thickness of the material will depend on the thickness of the slabs of concrete; however, the aggregate base will be a minimum of 8 inches thick and the total thickness of the layer will not be less than 12 inches (see drawing L600).

- Stone Dust Paving (Section 321540) – this paving will consist of an aggregate base of stone, coarse sand, or blast furnace slag with an overlay of granite stone dust mixed with a stabilizer. The areas with stone dust paving will also have steel edging. In parking areas, the aggregate will be 12 inches thick and the stone dust will be 3 inches thick. In pedestrian walkways, the aggregate will be six inches thick and the stone dust will be three inches thick; three inches of clean fill will be placed beneath the aggregate base on the walkways (see drawing L600).

- Gravel Paving (Section 321545) – this paving will consist of an aggregate sub-base, a base course of stone, coarse sand, or blast furnace slag, overlain by a gravel surface course. The thickness of the gravel paving at the boat club will vary between 4 to 6 inches and 18 inches, with the majority being between 4 to 6 inches (see drawing L600). This area has limited access with vehicle parking for boat trailers and seasonal storage for boats, only.

2.5.4 Demarcation Layer and Clean Fill

With the exception of the area to the northeast of the entrance drive (see Figure 3, Appendix A and Appendix G, Laboratory Reports); the Site will be covered with at least two feet of clean fill. Prior to the importation of clean fill to the Site, a demarcation layer will be placed following the soil removal in excavation areas (see Table 1, above) and grading of the Site.

Soils imported to the Site shall be from an acceptable source, which will be determined at a later date, and that is free from potential sources of chemical or petroleum contamination. In order to certify that soil from a specific source is free of contamination, a representative number of samples (as determined by soil volume, see Table 4, below) will be analyzed for the following:

Total Weight Analysis:

Volatile organic compounds (VOCs)	(USEPA Method 8260)
Semi-volatile Organic Compounds (SVOCs)	(USEPA Method 8270)
Target Analyte List (TAL) Metals	(USEPA Methods 6010 and 7471)
Pesticides	(USEPA Method 8081)
Polychlorinated Biphenyls (PCBs)	(USEPA Method 8082)

Table 4: Recommended Number of Soil Samples for Soil Imported to or Exported From a Site

Contaminant	VOCs	SVOCs, Inorganics, & PCBs/Pesticides	
Soil Quantity (cubic yards)	**Discrete Samples**	**Composite**	**Discrete Sample/Composite**
0-50	1	1	3-5 discrete samples from different locations in the fill being provided will comprise a composite sample for analysis
50-100	2	1	
100-200	3	1	
200-300	4	1	
300-400	4	2	
400-500	5	2	
500-800	6	2	
800-1,000	7	2	
>1,000	An additional 2 VOC and 1 composite for each additional 1,000 cubic yards or consult with the NYSDEC		
Notes: As provided in Final DER-10 Technical Guidance for Site Investigation and Remediation, May 2010			

All analyses will be performed by a NYSDOH Environmental Laboratory Approval Program (ELAP) certified laboratory. All imported soils and lightweight fill will meet NYSDEC approved backfill quality objectives for this Site which are included in Table 375-6.8(a) of 6NYCRR Part 375 and 6NYCRR Part 375-6.7(d). Sampling results will be provided to the NYSDEC for approval prior to clean fill placement at the Site.

2.5.5 Post-Remediation Groundwater Monitoring

During soil excavation, monitoring well MW-01 will be destroyed; in addition, MW-05 was damaged during previous on-site activities and may be destroyed during on-site grading. These two wells will be replaced, as described below. Subsequent to remediation, the groundwater monitoring wells MW-01 through MW-10 will be sampled quarterly for the first year as described below. The need for continued quarterly monitoring will be reassessed following the first year of sampling (i.e., bi-annual or annual sampling may be recommended).

2.5.5.1 Monitoring Well Installation

Subsequent to Site development, two borings will be extended on the Site, near the former location of MW-01 and MW-05. These borings will be extended using a hollow-stem, rotary drill rig or comparable equipment to a minimum depth of 15 feet bsg. The OSC will be responsible for identifying any soils which, in the opinion of the OSC, may contain elevated concentrations of contaminants and should, therefore, require stockpiling (on and covered by 6-mil plastic) and/or containerization (inside 55-gallon drums) for characterization and proper disposition. Each boring will be completed as a groundwater monitoring well as described below:

- The well will be constructed of two-inch PVC casing with a ten foot length of 0.01-inch slotted PVC well screening across the water table. No glue will be used to thread the casing lengths. The well will be constructed such that a minimum of 2.0 foot of screening will extend above the water table; approximately 8.0 feet of screening will extend below the water level.

- The annular space between the well screen and the borehole will be backfilled with clean #1 silica sand to a depth of one to two feet above the well screen. A one-foot thick bentonite seal will be poured down the borehole above the sand pack and allowed to hydrate before grouting the remaining annular space.

- A locked cap with vent will be installed at the top of the PVC riser and the well will be protected by a secure “drive over” metal cover. The monitoring well location will be recorded in field logs and indicated on all fieldwork maps.

- The well will be developed a minimum of 48 hours following installation utilizing a pump and dedicated tubing. Well development will begin at the top of the saturated portion of the screened interval to prevent clogging of the pump within the well casing. The well will be developed until the discharge water is visibly free of sediment. Upon completion, the pump assembly will be removed from the well while the pump is still running to avoid discharge of purged water back into the well.

2.5.5.2 Monitoring Well Sampling

Sampling will be conducted using the following protocol:

- Basic climatological data (e.g., temperature, precipitation, etc.) and all field observations will be recorded in the field logbook. Groundwater sampling will begin at the potentially least contaminated well (as determined from well location and/or previous data) and proceed to the potentially most contaminated well. New latex gloves will be worn by the sampler at each well location.

- The protective casing on the well will be unlocked, the air in the well head will be screened with the PID, and the static water level (relative to the top of the PVC casing) will be measured with a decontaminated water-level meter. Each well will be sampled using the USEPA “low-flow” methodology with the pump located near the well bottom. The following equipment (or equivalent) will be utilized: a Grundfos (stainless-steel) submersible pump, Horiba U-22 water quality analyzer, a Grundfos Redi-Flow frequency modulator (pump control), and dedicated tubing. Wells will be sampled after water quality parameters have stabilized, and groundwater will be pumped directly into laboratory-supplied containers. Purge water will be containerized (as appropriate) for proper off-site disposal.

- All groundwater samples will be collected in a manner consistent with New York State Department of Environmental Conservation (NYSDEC) sample collection protocols. All samples will be maintained at appropriate cold temperatures.

- The protective cap on the well will be replaced and locked following sampling, and the field sampling crew will move to the next most contaminated well and the process will be repeated.

2.5.5.3 Analysis of Groundwater Samples

All samples will be accompanied by proper chain of custody documentation and sample information will be recorded in the field logbook. Groundwater samples will be submitted for laboratory analysis of VOCs using USEPA Method 8260, SVOCs using USEPA Method 8270, and TAL Metals using various USEPA Methods. Groundwater analysis for VOCs and SVOCs will include Tentatively Identified Compounds (TICs).

2.5.6 Documentation of Site Remediation

A Phase I Remediation Report, including a Site Management Plan with monitoring and maintenance for the portion of the remedy completed, will be prepared at the completion of all fieldwork services in order to document completed Phase I Site remediation activities, with the exception of quarterly monitoring reports which will be submitted under separate cover. This Phase I Remediation Report will document the proper handling, removal, and off-site disposal of any wastes requiring special handling and will include applicable laboratory reports and maps illustrating Site activities. The Phase I Remediation Report will be submitted to the NYSDEC for review and approval.

3.0 CERTIFICATION STATEMENT

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

Phil Bell	2/1/10	
Professional Engineer	Date	Signature

APPENDIX A

Maps



Figure 1 - Site Location Map
Long Dock Beacon Waterfront Park
Red Flynn Drive
City of Beacon
Dutchess County, New York

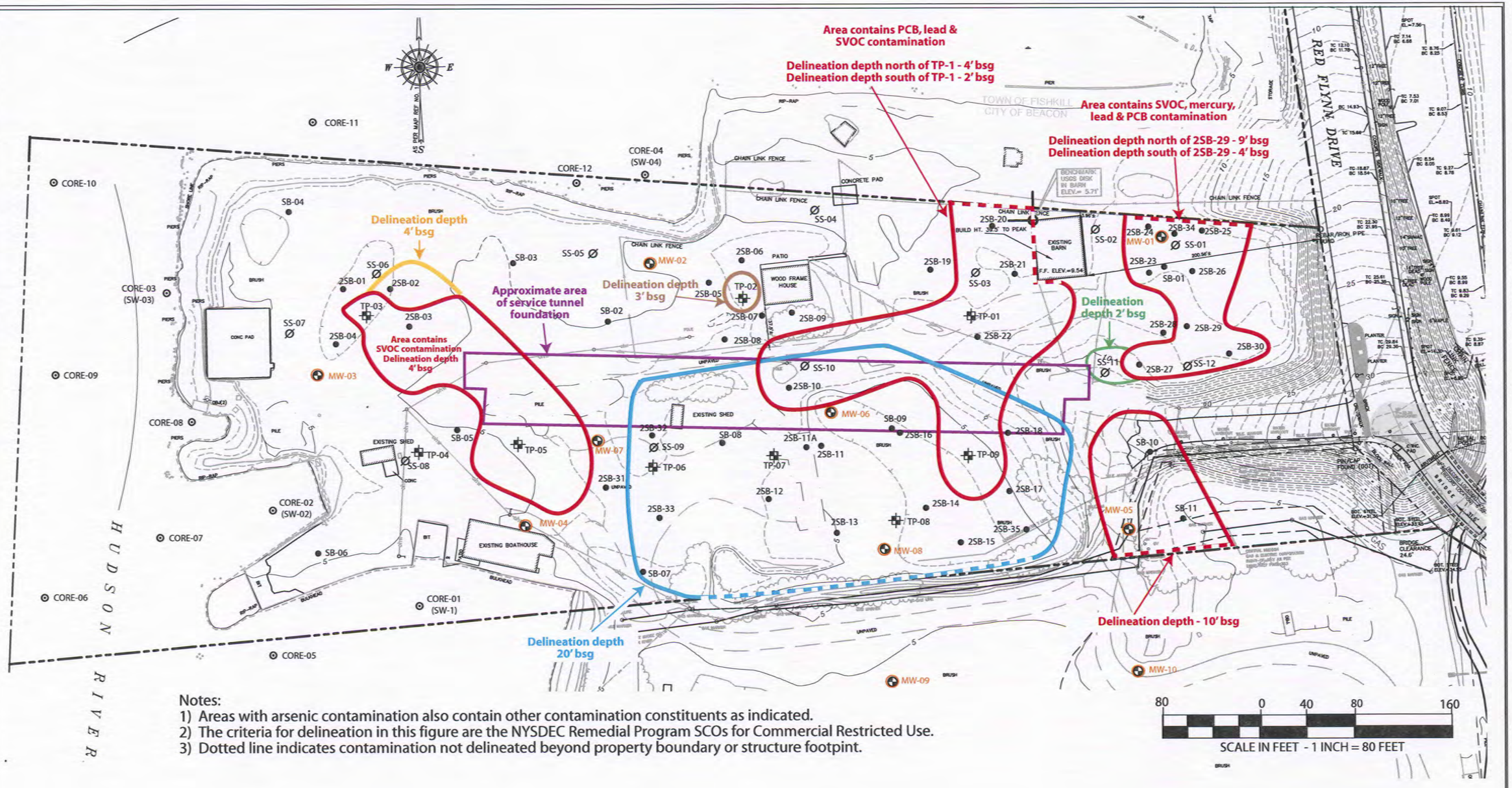
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ESI File: SG96152.81

April 2010

Appendix A

Ecosystems Strategies, Inc.



Notes:
1) Areas with arsenic contamination also contain other contamination constituents as indicated.
2) The criteria for delineation in this figure are the NYSDEC Remedial Program SCOs for Commercial Restricted Use.
3) Dotted line indicates contamination not delineated beyond property boundary or structure footpint.

Figure 2 - Proposed Site Remediation

Long Dock Beacon
Red Flynn Drive
City of Beacon
Dutchess County, New York

Legend:

- Soil Boring
- Test Pit
- Surface Sample
- Sediment Sample
- Monitoring Well
- Area of former MOSF and proposed in-situ remediation (VOC, SVOC and TPH-DRO contamination)
- Boundary of areas with arsenic contamination
- Site Boundary
- Boundary of area with lead contamination and no arsenic contamination
- Boundary of area with PCB contamination and no arsenic contamination
- Boundary of area with significant SVOC contamination and no arsenic contamination

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April 2010

Scale as shown

Appendix A

Ecosystems Strategies, Inc.

Notes:

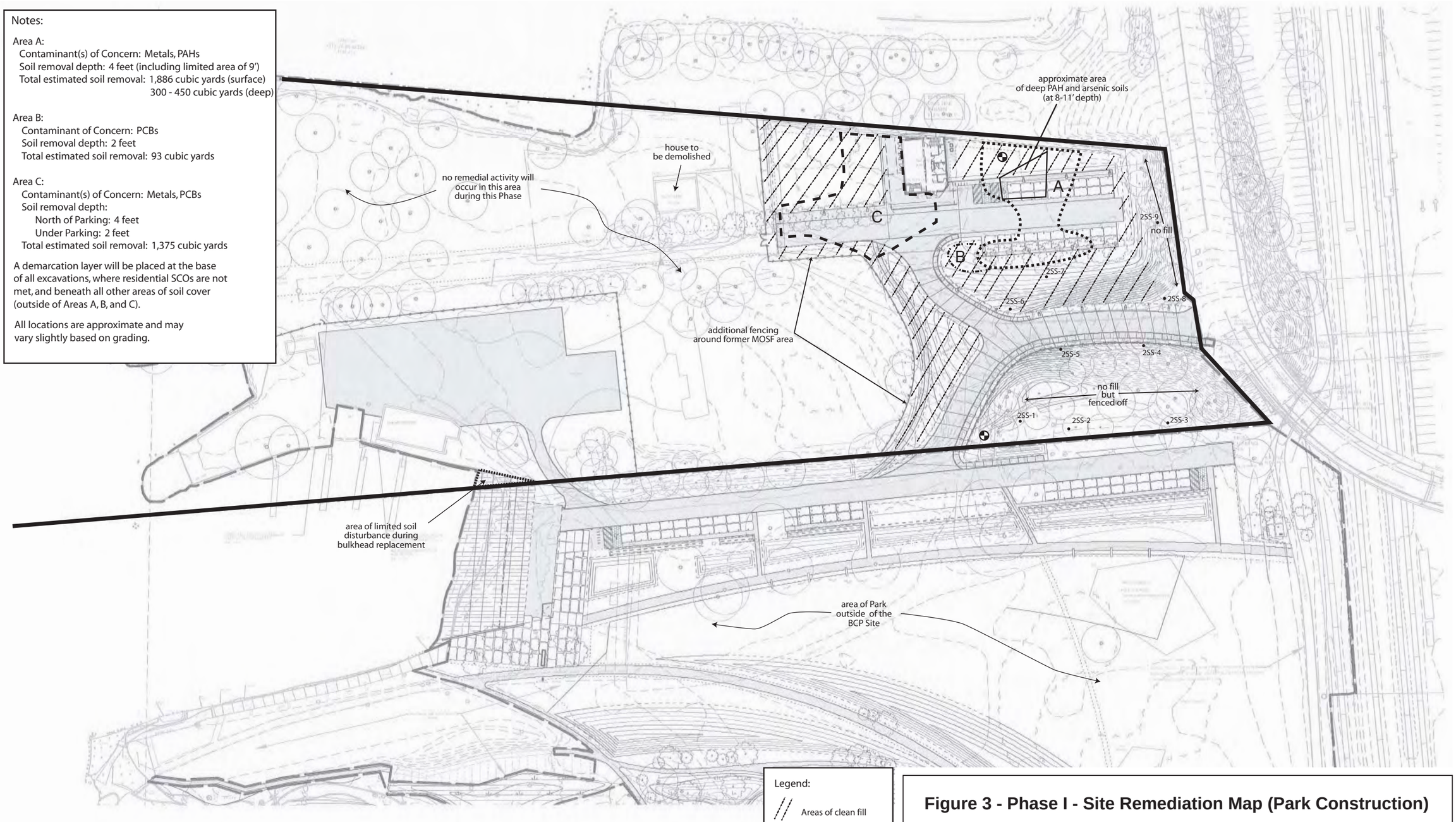
Area A:
Contaminant(s) of Concern: Metals, PAHs
Soil removal depth: 4 feet (including limited area of 9')
Total estimated soil removal: 1,886 cubic yards (surface)
300 - 450 cubic yards (deep)

Area B:
Contaminant of Concern: PCBs
Soil removal depth: 2 feet
Total estimated soil removal: 93 cubic yards

Area C:
Contaminant(s) of Concern: Metals, PCBs
Soil removal depth:
North of Parking: 4 feet
Under Parking: 2 feet
Total estimated soil removal: 1,375 cubic yards

A demarcation layer will be placed at the base of all excavations, where residential SCOs are not met, and beneath all other areas of soil cover (outside of Areas A, B, and C).

All locations are approximate and may vary slightly based on grading.



Legend:
- Areas of clean fill
- Fence
- Approximate location of two replacement wells
- Surface sample location
- BCP Site boundary

Base map provided by Reed Hilderbrand Associates, Inc.

Figure 3 - Phase I - Site Remediation Map (Park Construction)

Scenic Hudson Park at Long Dock
Red Flynn Drive
City of Beacon
Dutchess County, New York

ESI File: SG96152.81

Scale: 1" = 100' (approximately)

April 2010 | Appendix A

Ecosystems Strategies, Inc.

Notes:

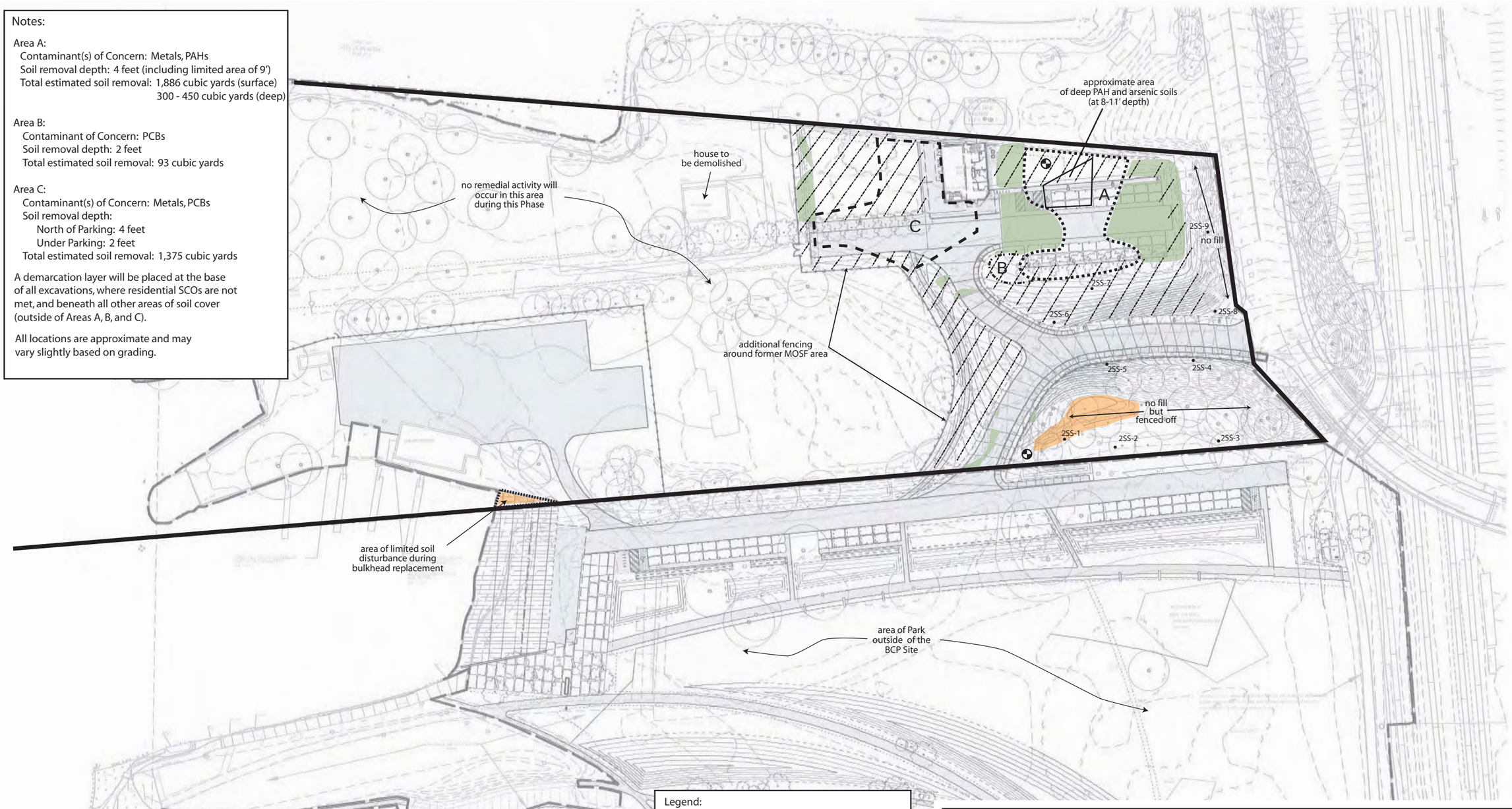
Area A:
Contaminant(s) of Concern: Metals, PAHs
Soil removal depth: 4 feet (including limited area of 9')
Total estimated soil removal: 1,886 cubic yards (surface)
300 - 450 cubic yards (deep)

Area B:
Contaminant of Concern: PCBs
Soil removal depth: 2 feet
Total estimated soil removal: 93 cubic yards

Area C:
Contaminant(s) of Concern: Metals, PCBs
Soil removal depth:
North of Parking: 4 feet
Under Parking: 2 feet
Total estimated soil removal: 1,375 cubic yards

A demarcation layer will be placed at the base of all excavations, where residential SCOs are not met, and beneath all other areas of soil cover (outside of Areas A, B, and C).

All locations are approximate and may vary slightly based on grading.



Legend:
- Areas of clean fill
- Fence
- Approximate location of two replacement wells
- Surface sample location
- BCP Site boundary
- Borrow areas
- Areas subject to further testing prior to reuse of soil as borrow

Base map provided by Reed Hilderbrand Associates, Inc.

Figure 4: Identification of Borrow Areas

Scenic Hudson Park at Long Dock
Red Flynn Drive
City of Beacon
Dutchess County, New York

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Scale: 1" = 100' (approximately)

June 2010 | Appendix A



Figure 5 - Truck Route Map

Long Dock Beacon Waterfront Park
Red Flynn Drive
City of Beacon
Dutchess County, New York

N

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April 2010

Appendix A

APPENDIX B

Health and Safety Plan

HEALTH AND SAFETY PLAN

FOR

PHASE I SITE REMEDIATION

(INCORPORATING COMMUNITY HEALTH AND SAFETY PLAN)

Long Dock Beacon Waterfront Park

Red Flynn Drive
City of Beacon
Dutchess County, New York

NYSDEC Brownfields Cleanup Program Site ID: C314122

February 2010

ESI File: SG96152.81

Prepared By

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Ecosystems Strategies, Inc.

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Site Location Map
Phase I Site Remediation Map (Park Construction)
MSDS for Diesel Fuel, Arsenic, Lead, Mercury, and PCBs

1.0 INTRODUCTION

1.1 Purpose

This Health and Safety Plan for Site Remediation (HASP) has been developed to provide the requirements and general procedures to be followed by Ecosystems Strategies, Inc. (ESI) and on-site subcontractors while performing Phase I remedial activities at the waterfront park portion of the "Long Dock Beacon" property located at Red Flynn Drive, Beacon, Dutchess County, New York. This document supersedes all other health and safety plans prepared by ESI for this Site.

This HASP incorporates policies, guidelines, and procedures that have the objective of protecting the public health of the community during the performance of fieldwork activities, and therefore serves as a Community Health and Safety Plan (CHASP). The objectives of the CHASP are met by establishing guidelines to minimize community exposure to hazards during fieldwork, and by planning for and responding to emergencies affecting the public.

This HASP describes the responsibilities, training requirements, protective equipment, and standard operating procedures to be utilized by all personnel while on the Site. All on-site personnel and visitors shall follow the guidelines, rules, and procedures contained in this safety plan. The Project Manager or Site Health and Safety Officer (SHSO) may impose any other procedures or prohibitions believed to be necessary for safe operations. This HASP incorporates by reference the applicable Occupational Safety and Health Administration (OSHA) requirements in 29 CFR 1910 and 29 CFR 1926.

The requirements and guidelines in this HASP are based on a review of available information and evaluation of potential on-site hazards. This HASP will be discussed with Site personnel and will be available on-site for review while work is underway. On-site personnel will report to the Site Health and Safety Officer (SHSO) in matters of health and safety. The on-site project supervisor(s) are responsible for enforcement and implementation of this HASP, which is applicable to all field personnel, including contractors and subcontractors.

This HASP is specifically intended for the conduct of activities within the defined scope of work in specified areas of the Site. Changes in site conditions and future actions that may be conducted at the Site may necessitate the modification of the requirements of the HASP. Although this HASP can be made available to interested persons for informational purposes, ESI has no responsibility over the interpretations or activities of any other persons or entities other than employees of ESI or ESI's subcontractors.

1.2 Site Location and Description

The Site as defined in this HASP is the eastern and southwestern portion of the Long Dock Beacon property (area around the Red Barn and Dutchess Boat Club), located at Red Flynn Drive, Beacon, New York. A Site Location Map and a Phase I Site Remediation Map [Park Construction] (illustrating the configuration of the Site as well as the areas of proposed fieldwork activities) are included in the Attachments of this HASP.

1.3 Work Activities

Phase I remediation activities are detailed in the Phase I Remedial Action Design (Phase I Design), dated February 2010. The specific tasks detailed in the Phase I Design are wholly incorporated by reference into this HASP. The Phase I Design was prepared as a requirement of the Developers participation in the New York State Department of Environmental Conservation (NYSDEC) Brownfields Cleanup Program (BCP), and describes remedial activities associated with the development of an educational/arts facility and park on the eastern portion of the Site and continued use of the Dutchess Boat Club on the southwestern portion of the Site (Phase I of remedial activities at the property). Existing contamination primarily consists of petroleum, metals, and PCB impacted soils and/or groundwater.

The Scope of Work includes:

- Initiation of air monitoring during ground intrusive activities;
- Excavation and off-site disposal of contaminated on-site soils in conjunction with Site development;
- Post-excavation confirmatory endpoint sampling to document acceptable contaminant levels in remaining soils;
- Importing clean fill onto the Site; and,
- Post-remedial groundwater sampling.

2.0 HEALTH AND SAFETY HAZARDS

2.1 Hazard Overview for On-Site Personnel

The potential exists for the presence of elevated levels of petroleum compounds, metals, and PCBs, in on-site soils and/or groundwater. The possibility exists for on-site personnel to have contact with contaminated soils, groundwater, and/or vapor during site remediation work. Contact with contaminated substances may present a skin contact, inhalation, and/or ingestion hazard. These potential hazards are addressed in Sections 3.0 through 11.0, below. Material Safety Data Sheets (MSDSs) have been provided as an attachment to this HASP.

2.2 Potential Hazards to the Public from Fieldwork Activities

The potential exists for the public to be exposed to contaminated soils, groundwater, and/or vapor, which may present a skin contact, inhalation, and/or ingestion hazard. Additional potential hazards to the public that are associated with fieldwork activities include mechanical/physical hazards, traffic hazards from fieldwork vehicles, and noise impacts associated with operation of mechanical equipment.

Impacts to public health and safety are expected to be limited to hazards that could directly affect on-site visitors and/or trespassers. These effects will be mitigated through site access and control measures (see Section 6.0, below). Specific actions taken to protect the public health (presented in Sections 3.0 through 11, below) are anticipated to minimize any potential off-site impacts from contaminant migration, noise, and traffic hazards.

3.0 PERSONAL PROTECTIVE EQUIPMENT

The levels of protection identified for the services specified in the Phase I Design represent a best estimate of exposure potential and protective equipment needed for that exposure. Determination of levels was based on data provided by previous studies of the Site and information reviewed on current and past Site usage. The SHSO may recommend revisions to these levels based on an assessment of actual exposures and may at any time require Site workers, supervisors, and/or visitors to use specific safety equipment.

The level of protective clothing and equipment selected for this project is Level D. Level D PPE provides minimal skin protection and no respiratory protection, and is used when the atmosphere contains no known hazard, oxygen concentrations are not less than 19.5%, and work activities exclude splashes, immersion, or the potential for unexpected inhalation or contact with hazardous levels of chemicals. Workers will wear Level D protective clothing including, but not limited to, a hard hat, steel-toed boots, nitrile gloves (when handling soils and/or groundwater), hearing protection (foam ear plugs or ear muffs, as required), and safety goggles (in areas of exposed groundwater and when decontaminating equipment). Personal protective equipment (PPE) will be worn at all times, as designated by this HASP. Disposable gloves will be changed immediately following the handling of contaminated soils, water, or equipment. Tyvek suits will be worn during activities likely to excessively expose work clothing to contaminated dust or soil (chemically-resistant over garments will be required in situations where exposures could lead to penetration of clothing and direct dermal contact by contaminants).

The requirement for the use of PPE by official on-site visitors shall be determined by the SHSO, based on the most restrictive PPE requirement for a particular Work Zones (see Section 6 for Work Zone definitions). All on-site visitors shall, at a minimum, be required to wear an approved hardhat and be provided with appropriate hearing protection as necessary.

The need for an upgrade in PPE will be determined based upon encountered Site conditions, including measurements taken in the breathing zone of the work area using a photo-ionization detector (PID). An upgrade to a higher level of protection (Level C) will begin when specific action levels are reached (see Section 5.0, below), or as otherwise required by the SHSO. Level C PPE includes a full-face or half-mask air-purifying respirator (NIOSH approved for the compound[s] of concern), hooded chemical-resistant clothing, outer and inner chemical-resistant gloves, and (as needed) coveralls, outer boots/boot covers, escape mask, and face shield. Level C PPE may be used only when: oxygen concentrations are not less than 19.5%; contaminant contact will not adversely affect any exposed skin; types of air contaminants have been identified, concentrations measured, and a cartridge or canister is available that can remove the contaminant; atmospheric contaminant concentrations do not exceed immediately dangerous to life or health (IDLH) levels; and job functions do not require self-contained breathing apparatus (SCBAs). The need for Level B or Level A PPE is not anticipated for the planned remedial activities at this Site.

If any equipment fails and/or any employee experiences a failure or other alteration of their protective equipment that may affect its protective ability, that person will immediately leave the work area. The Project Manager and the SHSO will be notified and, after reviewing the situation, determine the effect of the failure on the continuation of on-going operations. If the failure affects the safety of personnel, the work site, or the surrounding environment, personnel will be evacuated until appropriate corrective actions have been taken.

4.0 CONTAMINANT CONTROL

Precautions will be taken during dry weather (e.g., wetting or covering exposed soils) to avoid generating and breathing dust-generated from soils. A PID (or equivalent equipment) will be used to monitor potential contaminant levels. Response to the monitoring will be in accordance with the action levels provided in Section 5.0.

5.0 MONITORING AND ACTION LEVELS

Concentrations of petroleum compounds and metals in the air are expected to be below the OSHA Permissible Exposure Limits (PELs). A Community Air Monitoring Plan (CAMP) will be implemented for all fieldwork (a copy of the CAMP is provided in the Phase I Design). Air monitoring will be conducted for VOCs and dust. Monitoring will be conducted at all times that fieldwork activities which are likely to generate emissions are occurring. PID readings consistently in excess of 5 ppm, and dust levels in excess of 100 ug/m^3 of the background level (150 ug/m^3 after mitigation techniques have been instituted), will be used as an indication of the need to initiate personnel monitoring, increase worker protective measures, and/or modify or cease on-site operations in order to mitigate off-site community exposure.

PID and/or dust readings that consistently exceed background in the breathing zone (during any of the proposed tasks) will necessitate moving away from the source or implementing a higher PPE level.

6.0 SITE CONTROL/WORK ZONES

SITE CONTROL/WORK ZONES

Site control procedures will be established to reduce the possibility of worker/visitor contact with compounds present in the soil, to protect the public in the area surrounding the Site and to limit access to the Site to only those persons required to be in the work zone. Notices will be placed near the Site warning the public not to enter fieldwork areas and directing visitors to report to the Project Manager or SHSO. Measures will be taken to limit the entry of unauthorized personnel into the specific areas of field activity and to safely direct and control all vehicular traffic in and near the Site (e.g., placement of traffic cones and warning tape).

The following Work Zone will be established:

Exclusion Zone ("Hot Zone") - The exclusion zone will be that area immediately surrounding the work being performed for remediation purposes (i.e., the area where contaminated media are being handled). It is anticipated that much of the work will be accomplished with heavy equipment in the exclusion zone. Only individuals with appropriate PPE and training are allowed into this zone. It is the responsibility of the Site Health and Safety Officer to prevent unauthorized personnel from entering the exclusion zone. When necessary, such as in high traffic areas, the exclusion zone will be delineated with barricade tape, cones, and/or barricades.

Decontamination Area - A decontamination area for personnel is not anticipated being required during completion of the Phase I Design; however, care will be taken to remove gloves, excess soil from boots, and soiled clothing (if necessary) before entering the Intermediate Zone.

Contamination Reduction Zone and Support Zone - Not anticipated being required during the completion of the Phase I Design.

Intermediate Zone (Decontamination Zone) - The intermediate zone, also known as the decontamination zone, is where patient decontamination should take place, if necessary. A degree of contamination still is found in this zone; thus, some PPE is required, although it is usually of a lesser degree than that required for the hot zone.

Command Zone - The command zone is located outside the decontamination zone. All exposed individuals and equipment from the "hot zone" and decontamination zone should be decontaminated before entering the command zone. Access to all zones must be controlled. Keeping the media and onlookers well away from the Site is critical and will be the responsibility of both the SHSO and the Project Manager, and other Site personnel as appropriate.

7.0 NOISE CONTROL

All fieldwork activities will be conducted in a manner designed to reduce unnecessary noise generation, and to minimize the potential for both on-site and off-site harmful noise levels. The Project Manager and SHSO will establish noise reduction procedures (as appropriate to the Site and the work) to meet these requirements.

8.0 PERSONNEL TRAINING

Work zones that will accomplish the general objective stated above will be established by the Project Manager and the SHSO. Site access will be monitored by the SHSO, who will maintain a log-in sheet for personnel that will include, at the minimum, personnel on the Site, their arrival and departure times, and their destination on the Site. All workers will be properly trained in accordance with OSHA requirements (29 CFR 1910). Personnel exiting the work zone(s) will be decontaminated prior to exiting the Site. Site-specific training will be provided to each employee. Personnel will be briefed by the SHSO as to the potential hazards to be encountered. Topics will include:

- Availability of this HASP;
- General site hazards and specific hazards in the work areas, including those attributable to known of suspect on-site contaminants;
- Selection, use, testing, and care of the body, eye, hand, and foot protection being worn, with the limitations of each;
- Decontamination procedures for personnel, their personal protective equipment, and other equipment used on the Site;
- Emergency response procedures and requirements;
- Emergency alarm systems and other forms of notification, and evacuation routes to be followed; and,
- Methods to obtain emergency assistance and medical attention.

9.0 DECONTAMINATION

The SHSO will establish a decontamination system and decontamination procedures (appropriate to the Site and the work) that will prevent potentially hazardous materials from leaving the Site. Trucks will be brushed to remove materials adhering to their surfaces. Sampling equipment will be segregated and, after decontamination, stored separately from splash protection equipment. Decontaminated or clean sampling equipment not in use will be covered with plastic and stored in a designated storage area in the work zone.

10.0 EMERGENCY RESPONSE

10.1 Notification of Site Emergencies

In the event of an emergency, the SHSO will be immediately notified of the nature and extent of the emergency (the names and contact information for key site safety and management personnel, as well as other site safety contact telephone numbers, shall be posted at the Site).

Table 1 in this HASP contains Emergency Response Telephone Numbers, and immediately following is a map detailing the directions to the nearest hospital emergency room. This information will be maintained

at the work Site by the SHSO. The location of the nearest telephone will be determined prior to the initiation of on-site activities. In addition to any permanent phone lines, a cellular phone will be in the possession of the SHSO, or an authorized designee, at all times.

10.2 Responsibilities

Prior to the initiation of on-site work activities, the SHSO will:

- Notify individuals, authorities, and/or health care facilities of the potentially hazardous activities and potential wastes that may develop as a result of the investigation.
- Confirm that first aid supplies and a fire extinguisher are available on-site.
- Have a working knowledge of safety equipment available.
- Confirm that a map detailing the most direct route to the hospital is prominently posted with the emergency telephone numbers.

The SHSO will be responsible for directing notification, response, and follow-up actions and for contacting outside response personnel (ambulance, fire department, or others). In the case of an evacuation, the SHSO will account for personnel. A log of individuals entering and leaving the Site will be kept so that everyone can be accounted for in an emergency.

Upon notification of an exposure incident, the SHSO will contact the appropriate emergency response personnel for recommended medical diagnosis and, if necessary, treatment. The SHSO will determine whether and at what levels exposure actually occurred, the cause of such exposure, and the means to prevent similar incidents from occurring.

10.3 Accidents and Injuries

In the event of an accident or injury, measures will be taken to assist those who have been injured or exposed and to protect others from hazards. If an individual is transported to a hospital or doctor, a copy of the HASP will accompany the individual.

The SHSO will be notified and will respond according to the severity of the incident. The SHSO will perform an investigation of the incident and prepare a signed and dated report documenting the investigation. An exposure-incident report will also be completed by the SHSO and the exposed individual. The form will be filed with the employee's medical and safety records to serve as documentation of the incident and the actions taken.

10.4 Communication

No special hand signals will be utilized within the work zone. Field personnel will utilize standard hand signals during the operation of heavy equipment.

10.5 Safe Refuge

Vehicles and on-site structures will serve as the immediate place of refuge in the event of an emergency. If evacuation from the area is necessary, project vehicles will be used to transport on-site personnel to safety.

10.6 Site Security and Control

Site security and control during emergencies, accidents, and incidents will be monitored by the SHSO. The SHSO is responsible for limiting access to the Site to authorized personnel and for oversight of reaction activities.

10.7 Emergency Evacuation

In case of an emergency, personnel will evacuate to the safe refuge identified by the SHSO, both for their personal safety and to prevent the hampering of response/rescue efforts.

10.8 Resuming Work

A determination that it is safe to return to work will be made by the SHSO and/or any personnel assisting in the emergency, e.g., fire department, police department, utility company, etc. No personnel will be allowed to return to the work areas until a full determination has been made by the above-identified personnel that all field activities can continue unobstructed. Such a determination will depend upon the nature of the emergency (e.g., downed power lines -- removal of all lines from the property; fire -- extinguished fire; injury -- safe transport of the injured party to a medical facility with either assurance of acceptable medical care present or completion of medical care; etc.).

Before on-site work is resumed following an emergency, necessary emergency equipment will be recharged, refilled, or replaced. Government agencies will be notified as appropriate. An Incident Report Form will be filed.

10.9 Fire Fighting Procedures

A fire extinguisher will be available in the work zone during on-site activities. This extinguisher is intended for small fires. When a fire cannot be controlled with the extinguisher, the area will be evacuated immediately. The SHSO will be responsible for directing notification, response, and follow-up actions and for contacting ambulance and fire department personnel.

10.10 Emergency Decontamination Procedure

The extent of emergency decontamination depends on the severity of the injury or illness and the nature of the contamination. Whenever possible, minimum decontamination will consist of washing, rinsing, and/or removal of contaminated outer clothing and equipment. If time does not permit decontamination, the person will be given first aid treatment and then wrapped in plastic or a blanket prior to transport.

10.11 Emergency Equipment

The following on-site equipment for safety and emergency response will be maintained in the on-site vehicle of the SHSO:

- Fire extinguisher;
- First-aid kit; and,
- Extra copy of this Health and Safety Plan.

11.0 SPECIAL PRECAUTIONS AND PROCEDURES

The activities associated with this investigation may involve potential risks of exposure to both chemical and physical hazards. The potential for chemical exposure to hazardous or regulated substances will be significantly reduced through the use of monitoring, personal protective clothing, engineering controls, and implementation of safe work practices.

11.1 Heat/Cold Stress

Training in prevention of heat/cold stress will be provided as part of the site-specific training. The timing of this project is such that heat/cold stress may pose a threat to the health and safety of personnel. Work/rest regimens will be employed, as necessary, so that personnel do not suffer adverse effects from heat/cold stress. Special clothing and appropriate diet and fluid intake regimens will be recommended to personnel to further reduce this temperature-related hazard. Rest periods will be recommended in the event of high/low temperatures and/or humidity to counter the negative effects of heat/cold stress.

11.2 Heavy Equipment

Working in the vicinity of heavy equipment is the primary safety hazard at the Site. Physical hazards in working near heavy construction equipment include the following: overhead hazards, slips/trip/falls, hand and foot injuries, moving part hazards, improper lifting/back injuries, and noise. All workers will be properly trained in accordance with OSHA requirements (29 CFR 1910). No workers will be permitted within any excavated areas without proper personal protective equipment (PPE), including, as warranted, any necessary Level C equipment (e.g., respirators and protective suits). Air monitoring in excavation areas will be conducted for VOCs in accordance with Section 5.0.

11.3 Additional Safety Practices

The following are important safety precautions which will be enforced during these activities:

- Medicine and alcohol can aggravate the effect of exposure to certain compounds. Controlled substances and alcoholic beverages will not be consumed during investigation activities. Consumption of prescribed drugs will only be at the discretion of a physician familiar with the person's work.
- Eating, drinking, chewing gum or tobacco, smoking, or other practices that increase the probability of hand-to-mouth transfer and ingestion of material is prohibited except in areas designated by the SHSO.
- Contact with potentially contaminated surfaces will be avoided whenever possible. Workers will not unnecessarily walk through puddles, mud, or other discolored surfaces; kneel on the ground; or lean, sit, or place equipment on drums, containers, vehicles, or the ground.
- Personnel and equipment in the work areas will be minimized, consistent with effective site operations.
- Unsafe equipment left unattended will be identified by a "DANGER, DO NOT OPERATE" tag.
- Work areas for various operational activities will be established.

11.4 Daily Log Contents

The SHSO will establish a system appropriate to the Site, the work, and the work zones that will record, at a minimum, the following information:

- Personnel on the Site, their arrival and departure times, and their destination on the Site.
- Incidents and unusual activities that occur on the Site such as, but not limited to, accidents, spills, breaches of security, injuries, equipment failures, and weather-related problems.
- Changes to the HASP.
- Daily information generated such as: changes to work and health and safety plans; work accomplished and the current Site status; and monitoring results.

12.0 TABLE AND FIGURES

Table 1: Emergency Response Telephone Numbers

Table 1: Emergency Response Telephone Numbers

Emergency Agencies	Phone Numbers
EMERGENCY	911
St. Luke's Hospital 70 Dubois Street, Newburgh	(845) 568-2305 - Emergency Room (845) 561-4400 - Main Information
Beacon Police Department	(845) 831-4111 or 911
Beacon Fire Department	(845) 831-2121 or 911
City Hall	(845) 838-5000
City Mayor	(845) 838-5010
Water and Sewer	(845) 831-3136
Site Health and Safety Officer – Paul Ciminello and/or on-site ESI personnel	(845) 452-1658

Figure 1: Directions to Hospital / Map

		Dist	Turn		Road	Exit	Total Time	Total Dist
			Start	at	Red Flynn Dr		00:00:00	0.00 mi
			Go straight (S)	on	Red Flynn Dr		00:00:00	0.00 mi
	in	0.11 mi	Turn left (E)	on to	Long Dock Rd		00:00:27	0.11 mi
	in	0.02 mi	Go straight (ENE)	on to	<unnamed>		00:00:31	0.13 mi
	in	0.05 mi	Keep left (NE)	on to	Beekman St		00:00:42	0.18 mi
	in	0.34 mi	Keep right (NE)	on to	Beekman Rd		00:02:02	0.52 mi
	in	0.13 mi	Turn left (N)	on to	North Ave		00:02:33	0.65 mi
	in	0.20 mi	Keep right (NNE)	on to	SR 9D (North Ave)		00:03:04	0.85 mi
	in	0.54 mi	Turn left (W)	on to	I-84 W (SR 52|Newburgh Beacon Brg) ramp		00:04:31	1.39 mi
	in	2.28 mi	Go straight (WNW)	on to	SR 32 (Albany Post Rd) ramp	10N	00:07:26	3.66 mi
	in	0.21 mi	Turn left (SSE)	on to	SR 32 (Albany Post Rd)		00:07:58	3.87 mi
	in	0.18 mi	Go straight (S)	on to	US 9W (SR 32|N Robinson Ave)		00:08:24	4.06 mi
	in	0.99 mi	Turn left (E)	on to	Carter St		00:10:45	5.04 mi
	in	0.31 mi	Turn right (S)	on to	Dubois St		00:11:58	5.35 mi
	in	0.02 mi	Finish	at	70 Dubois St		00:12:03	5.37 mi

Total Time: 00:12:03 Total Distance: 5.37 mi

Figure 2 – Map to Hospital





Site Location Map Long Dock Beacon Waterfront Park Red Flynn Drive City of Beacon Dutchess County, New York	N	ESI File: SG96152.81 February 2010 Attachment

Ecosystems Strategies, Inc.

Notes:

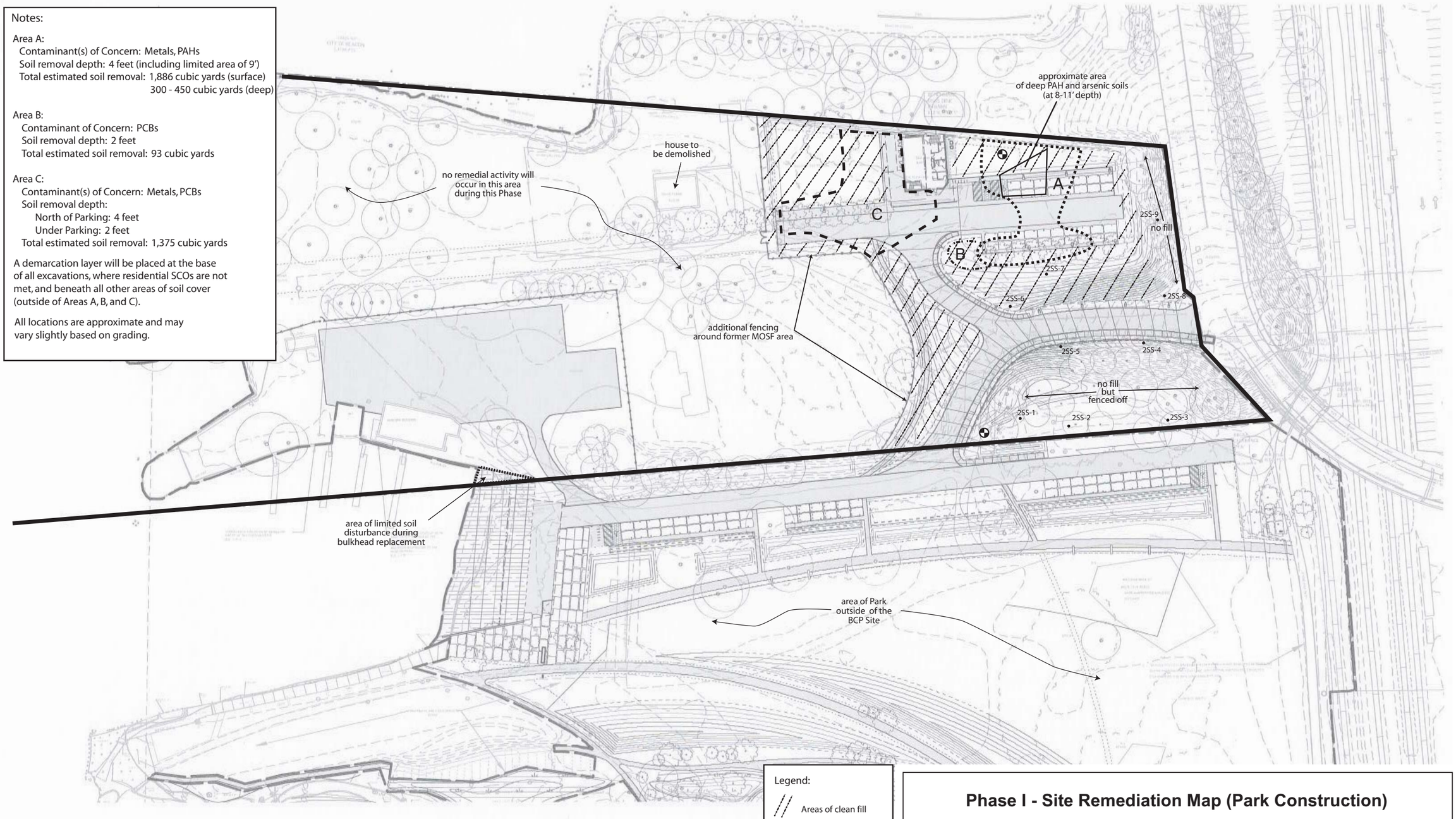
Area A:
Contaminant(s) of Concern: Metals, PAHs
Soil removal depth: 4 feet (including limited area of 9')
Total estimated soil removal: 1,886 cubic yards (surface)
300 - 450 cubic yards (deep)

Area B:
Contaminant of Concern: PCBs
Soil removal depth: 2 feet
Total estimated soil removal: 93 cubic yards

Area C:
Contaminant(s) of Concern: Metals, PCBs
Soil removal depth:
North of Parking: 4 feet
Under Parking: 2 feet
Total estimated soil removal: 1,375 cubic yards

A demarcation layer will be placed at the base of all excavations, where residential SCOs are not met, and beneath all other areas of soil cover (outside of Areas A, B, and C).

All locations are approximate and may vary slightly based on grading.



Legend:
- Areas of clean fill
- Fence
- Approximate location of two replacement wells
- Surface sample location
- BCP Site boundary

Base map provided by Reed Hilderbrand Associates, Inc.

Phase I - Site Remediation Map (Park Construction)

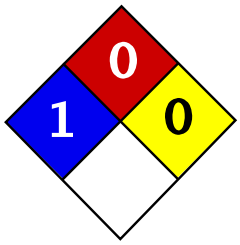
Scenic Hudson Park at Long Dock
Red Flynn Drive
City of Beacon
Dutchess County, New York

ESI File: SG96152.81

Scale: 1" = 100' (approximately)

April 2010 | Attachment





Health	1
Fire	0
Reactivity	0
Personal Protection	E

Material Safety Data Sheet
Lead MSDS

Section 1: Chemical Product and Company Identification

Product Name: Lead

Catalog Codes: SLL1291, SLL1669, SLL1081, SLL1459, SLL1834

CAS#: 7439-92-1

RTECS: OF7525000

TSCA: TSCA 8(b) inventory: Lead

CI#: Not available.

Synonym: Lead Metal, granular; Lead Metal, foil; Lead Metal, sheet; Lead Metal, shot

Chemical Name: Lead

Chemical Formula: Pb

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call: 1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Lead	7439-92-1	100

Toxicological Data on Ingredients: Lead LD50: Not available. LC50: Not available.

Section 3: Hazards Identification

Potential Acute Health Effects: Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation.

Potential Chronic Health Effects:
Slightly hazardous in case of skin contact (permeator).
CARCINOGENIC EFFECTS: Classified A3 (Proven for animal.) by ACGIH, 2B (Possible for human.) by IARC.
MUTAGENIC EFFECTS: Not available.
TERATOGENIC EFFECTS: Not available.
DEVELOPMENTAL TOXICITY: Not available.
The substance may be toxic to blood, kidneys, central nervous system (CNS).
Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:
Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.

Skin Contact: Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops.

Serious Skin Contact: Not available.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation: Not available.

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: Not available.

Flash Points: Not available.

Flammable Limits: Not available.

Products of Combustion: Some metallic oxides.

Fire Hazards in Presence of Various Substances: Non-flammable in presence of open flames and sparks, of shocks, of heat.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available.
Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:
SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards: When heated to decomposition it emits highly toxic fumes of lead.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill:
Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill:
Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. Be careful that the product is not

present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep locked up.. Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection: Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
TWA: 0.05 (mg/m3) from ACGIH (TLV) [United States]
TWA: 0.05 (mg/m3) from OSHA (PEL) [United States]
TWA: 0.03 (mg/m3) from NIOSH [United States]
TWA: 0.05 (mg/m3) [Canada]Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid. (Metal solid.)

Odor: Not available.

Taste: Not available.

Molecular Weight: 207.21 g/mole

Color: Bluish-white. Silvery. Gray

pH (1% soln/water): Not applicable.

Boiling Point: 1740°C (3164°F)

Melting Point: 327.43°C (621.4°F)

Critical Temperature: Not available.

Specific Gravity: 11.3 (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: Not available.

Solubility: Insoluble in cold water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Incompatible materials, excess heat

Incompatibility with various substances: Reactive with oxidizing agents.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity:
Can react vigorously with oxidizing materials.
Incompatible with sodium carbide, chlorine trifluoride, trioxane + hydrogen peroxide, ammonium nitrate, sodium azide, disodium acetylide, sodium acetylide, hot concentrated nitric acid, hot concentrated hydrochloric acid, hot concentrated sulfuric acid, zirconium.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Inhalation. Ingestion.

Toxicity to Animals:
LD50: Not available.
LC50: Not available.

Chronic Effects on Humans:
CARCINOGENIC EFFECTS: Classified A3 (Proven for animal.) by ACGIH, 2B (Possible for human.) by IARC.
May cause damage to the following organs: blood, kidneys, central nervous system (CNS).

Other Toxic Effects on Humans: Slightly hazardous in case of skin contact (irritant), of ingestion, of inhalation.

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans:
Acute Potential:
Skin:
Lead metal granules or dust: May cause skin irritation by mechanical action.
Lead metal foil, shot or sheets: Not likely to cause skin irritation
Eyes:
Lead metal granules or dust: Can irritate eyes by mechanical action.

Lead metal foil, shot or sheets: No hazard. Will not cause eye irritation.
Inhalation:
In an industrial setting, exposure to lead mainly occurs from inhalation of dust or fumes.
Lead dust or fumes: Can irritate the upper respiratory tract (nose, throat) as well as the bronchi and lungsby mechanical action. Lead dust can be absorbed through the respiratory system. However, inhaled lead does not accumulate in the lungs. All of an inhaled dose is eventually abssorbed or transferred to the gastrointestinal tract. Inhalation effects of exposure to fumes or dust of inorganic lead may not develop quickly. Symptoms may include metallic taste, chest pain, decreased physical fitness, fatigue, sleep disturbance, headache, irritability, reduces memory, mood and personality changes, aching bones and muscles, constipation, abdominal pains, decreasing appetite. Inhalation of large amounts may lead to ataxia, deliriuim, convulsions/seizures, coma, and death.
Lead metal foil, shot, or sheets: Not an inhalation hazard unless metal is heated. If metal is heated, fumes will be released. Inhalation of these fumes may cause "fume metal fever", which is characterized by flu-like symptoms. Symptoms may include metallic taste, fever, nausea, vomiting, chills, cough, weakness, chest pain, generalized muscle pain/aches, and increased white blood cell count.
Ingestion:
Lead metal granules or dust: The symptoms of lead poisoning include abdominal pain or cramps (lead cholic), spasms, nausea, vomiting, headache, muscle weakness, hallucinations, distorted perceptions, "lead line" on the gums, metallic taste, loss of appetite, insomnia, dizziness and other symptoms similar to that of inhalation. Acute poisoning may result in high lead levels in the blood and urine, shock, coma and death in extreme cases.
Lead metal foil, shot or sheets: Not an ingestion hazard for usual industrial handling.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: Not a DOT controlled material (United States).

Identification: Not applicable.

Special Provisions for Transport: Not applicable.

Section 15: Other Regulatory Information

Federal and State Regulations:
California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Lead
California prop. 65: This product contains the following ingredients for which the State of California has found to cause reproductive harm (female) which would require a warning under the statute: Lead
California prop. 65: This product contains the following ingredients for which the State of California has found to

cause reproductive harm (male) which would require a warning under the statute: Lead
California prop. 65 (no significant risk level): Lead: 0.0005 mg/day (value)
California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: Lead
California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Lead
Connecticut hazardous material survey.: Lead
Illinois toxic substances disclosure to employee act: Lead
Illinois chemical safety act: Lead
New York release reporting list: Lead
Rhode Island RTK hazardous substances: Lead
Pennsylvania RTK: Lead

Other Regulations:
OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).
EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada): CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC):
R20/22- Harmful by inhalation and if swallowed.
R33- Danger of cumulative effects.
R61- May cause harm to the unborn child.
R62- Possible risk of impaired fertility.
S36/37- Wear suitable protective clothing and gloves.
S44- If you feel unwell, seek medical advice (show the label when possible).
S53- Avoid exposure - obtain special instructions before use.

HMIS (U.S.A.):

Health Hazard: 1

Fire Hazard: 0

Reactivity: 0

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 1

Flammability: 0

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves.
Lab coat.
Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.

Safety glasses.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

Created: 10/10/2005 08:21 PM

Last Updated: 11/06/2008 12:00 PM

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall ScienceLab.com be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if ScienceLab.com has been advised of the possibility of such damages.

MATERIAL SAFETY DATA SHEET

Diesel Fuel (All Types) **MSDS No. 9909**

EMERGENCY OVERVIEW
CAUTION!
OSHA/NFPA COMBUSTIBLE LIQUID - SLIGHT TO MODERATE IRRITANT
EFFECTS CENTRAL NERVOUS SYSTEM
HARMFUL OR FATAL IF SWALLOWED
Moderate fire hazard. Avoid breathing vapors or mists. May cause dizziness and drowsiness. May cause moderate eye irritation and skin irritation (rash). Long-term, repeated exposure may cause skin cancer.
If ingested, do NOT induce vomiting, as this may cause chemical pneumonia (fluid in the lungs).



NFPA 704 (Section 16)

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Hess Corporation
1 Hess Plaza
Woodbridge, NJ 07095-0961

EMERGENCY TELEPHONE NUMBER (24 hrs): **CHEMTREC (800) 424-9300**
COMPANY CONTACT (business hours): Corporate Safety (732) 750-6000
MSDS INTERNET WEBSITE: www.hess.com (See Environment, Health, Safety & Social Responsibility)

SYNONYMS: Ultra Low Sulfur Diesel (ULSD); Low Sulfur Diesel; Motor Vehicle Diesel Fuel; Diesel Fuel #2; Dyed Diesel Fuel; Non-Road, Locomotive and Marine Diesel Fuel; Tax-exempt Diesel Fuel

See Section 16 for abbreviations and acronyms.

2. COMPOSITION and CHEMICAL INFORMATION ON INGREDIENTS

INGREDIENT NAME (CAS No.)	CONCENTRATION PERCENT BY WEIGHT
Diesel Fuel (68476-34-6)	100
Naphthalene (91-20-3)	Typically < 0.01

A complex mixture of hydrocarbons with carbon numbers in the range C9 and higher. Diesel fuel may be dyed (red) for tax purposes. May contain a multifunctional additive.

3. HAZARDS IDENTIFICATION

EYES
Contact with liquid or vapor may cause mild irritation.

SKIN
May cause skin irritation with prolonged or repeated contact. Practically non-toxic if absorbed following acute (single) exposure. Liquid may be absorbed through the skin in toxic amounts if large areas of skin are repeatedly exposed.

INGESTION
The major health threat of ingestion occurs from the danger of aspiration (breathing) of liquid drops into the lungs, particularly from vomiting. Aspiration may result in chemical pneumonia (fluid in the lungs), severe lung damage, respiratory failure and even death.

Ingestion may cause gastrointestinal disturbances, including irritation, nausea, vomiting and diarrhea, and central nervous system (brain) effects similar to alcohol intoxication. In severe cases, tremors, convulsions, loss of consciousness, coma, respiratory arrest, and death may occur.

INHALATION
Excessive exposure may cause irritations to the nose, throat, lungs and respiratory tract. Central nervous system (brain) effects may include headache, dizziness, loss of balance and coordination, unconsciousness, coma, respiratory failure, and death.

WARNING: the burning of any hydrocarbon as a fuel in an area without adequate ventilation may result in hazardous levels of combustion products, including carbon monoxide, and inadequate oxygen levels, which may cause unconsciousness, suffocation, and death.

CHRONIC EFFECTS and CARCINOGENICITY
Similar products produced skin cancer and systemic toxicity in laboratory animals following repeated applications. The significance of these results to human exposures has not been determined - see Section 11 Toxicological Information.

IARC classifies whole diesel fuel exhaust particulates as probably carcinogenic to humans (Group 2A). NIOSH regards whole diesel fuel exhaust particulates as a potential cause of occupational lung cancer based on animal studies and limited evidence in humans.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
Irritation from skin exposure may aggravate existing open wounds, skin disorders, and dermatitis (rash).

4. FIRST AID MEASURES

EYES
In case of contact with eyes, immediately flush with clean, low-pressure water for at least 15 min. Hold eyelids open to ensure adequate flushing. Seek medical attention.

SKIN
Remove contaminated clothing. Wash contaminated areas thoroughly with soap and water or waterless hand cleanser. Obtain medical attention if irritation or redness develops.

INGESTION
DO NOT INDUCE VOMITING. Do not give liquids. Obtain immediate medical attention. If spontaneous vomiting occurs, lean victim forward to reduce the risk of aspiration. Monitor for breathing difficulties. Small amounts of material which enter the mouth should be rinsed out until the taste is dissipated.

INHALATION
Remove person to fresh air. If person is not breathing provide artificial respiration. If necessary, provide additional oxygen once breathing is restored if trained to do so. Seek medical attention immediately.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES:

FLASH POINT: >	125 ^{o}F (> 52 ^{o}C) minimum PMCC
AUTOIGNITION POINT:	494 ^{o}F (257 ^{o}C)
OSHA/NFPA FLAMMABILITY CLASS:	2 (COMBUSTIBLE)
LOWER EXPLOSIVE LIMIT (%):	0.6
UPPER EXPLOSIVE LIMIT (%):	7.5

FIRE AND EXPLOSION HAZARDS
Vapors may be ignited rapidly when exposed to heat, spark, open flame or other source of ignition. When mixed with air and exposed to an ignition source, flammable vapors can burn in the open or explode in confined spaces. Being heavier than air, vapors may travel long distances to an ignition source and flash back. Runoff to sewer may cause fire or explosion hazard.

EXTINGUISHING MEDIA
SMALL FIRES: Any extinguisher suitable for Class B fires, dry chemical, CO2, water spray, fire fighting foam, or Halon.

LARGE FIRES: Water spray, fog or fire fighting foam. Water may be ineffective for fighting the fire, but may be used to cool fire-exposed containers.

FIRE FIGHTING INSTRUCTIONS

Small fires in the incipient (beginning) stage may typically be extinguished using handheld portable fire extinguishers and other fire fighting equipment.

Firefighting activities that may result in potential exposure to high heat, smoke or toxic by-products of combustion should require NIOSH/MSHA- approved pressure-demand self-contained breathing apparatus with full facepiece and full protective clothing.

Isolate area around container involved in fire. Cool tanks, shells, and containers exposed to fire and excessive heat with water. For massive fires the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied fire fighting foam.

See Section 16 for the NFPA 704 Hazard Rating.

6. ACCIDENTAL RELEASE MEASURES

ACTIVATE FACILITY'S SPILL CONTINGENCY OR EMERGENCY RESPONSE PLAN.

Evacuate nonessential personnel and remove or secure all ignition sources. Consider wind direction; stay upwind and uphill, if possible. Evaluate the direction of product travel, diking, sewers, etc. to confirm spill areas. Spills may infiltrate subsurface soil and groundwater; professional assistance may be necessary to determine the extent of subsurface impact.

Carefully contain and stop the source of the spill, if safe to do so. Protect bodies of water by diking, absorbents, or absorbent boom, if possible. Do not flush down sewer or drainage systems, unless system is designed and permitted to handle such material. The use of fire fighting foam may be useful in certain situations to reduce vapors. The proper use of water spray may effectively disperse product vapors or the liquid itself, preventing contact with ignition sources or areas/equipment that require protection.

Take up with sand or other oil absorbing materials. Carefully shovel, scoop or sweep up into a waste container for reclamation or disposal - caution, flammable vapors may accumulate in closed containers. Response and clean-up crews must be properly trained and must utilize proper protective equipment (see Section 8).

7. HANDLING and STORAGE

HANDLING PRECAUTIONS

Handle as a combustible liquid. Keep away from heat, sparks, and open flame! Electrical equipment should be approved for classified area. Bond and ground containers during product transfer to reduce the possibility of static-initiated fire or explosion.

Diesel fuel, and in particular low and ultra low sulfur diesel fuel, has the capability of accumulating a static electrical charge of sufficient energy to cause a fire/explosion in the presence of lower flashpoint products such as gasoline. The accumulation of such a static charge occurs as the diesel flows through pipelines, filters, nozzles and various work tasks such as tank/container filling, splash loading, tank cleaning; product sampling; tank gauging; cleaning, mixing, vacuum truck operations, switch loading, and product agitation. There is a greater potential for static charge accumulation in cold temperature, low humidity conditions.

Documents such as 29 CFR OSHA 1910.106 "Flammable and Combustible Liquids, NFPA 77 Recommended Practice on Static Electricity, API 2003 "Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents and ASTM D4865 "Standard Guide for Generation and Dissipation of Static

Electricity in Petroleum Fuel Systems" address special precautions and design requirements involving loading rates, grounding, bonding, filter installation, conductivity additives and especially the hazards associated with "switch loading." ["Switch Loading" is when a higher flash point product (such as diesel) is loaded into tanks previously containing a low flash point product (such as gasoline) and the electrical charge generated during loading of the diesel results in a static ignition of the vapor from the previous cargo (gasoline).]

Note: When conductivity additives are used or are necessary the product should achieve 25 picosiemens/meter or greater at the handling temperature.

STORAGE PRECAUTIONS

Keep away from flame, sparks, excessive temperatures and open flame. Use approved vented containers. Keep containers closed and clearly labeled. Empty product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose such containers to sources of ignition.

Store in a well-ventilated area. This storage area should comply with NFPA 30 "Flammable and Combustible Liquid Code". Avoid storage near incompatible materials. The cleaning of tanks previously containing this product should follow API Recommended Practice (RP) 2013 "Cleaning Mobile Tanks In Flammable and Combustible Liquid Service" and API RP 2015 "Cleaning Petroleum Storage Tanks".

WORK/HYGIENIC PRACTICES

Emergency eye wash capability should be available in the near proximity to operations presenting a potential splash exposure. Use good personal hygiene practices. Avoid repeated and/or prolonged skin exposure. Wash hands before eating, drinking, smoking, or using toilet facilities. Do not use as a cleaning solvent on the skin. Do not use solvents or harsh abrasive skin cleaners for washing this product from exposed skin areas. Waterless hand cleaners are effective. Promptly remove contaminated clothing and launder before reuse. Use care when laundering to prevent the formation of flammable vapors which could ignite via washer or dryer. Consider the need to discard contaminated leather shoes and gloves.

8. EXPOSURE CONTROLS and PERSONAL PROTECTION

EXPOSURE LIMITS

Components (CAS No.)	Source	Exposure Limits TWA/STEL	Note
Diesel Fuel: (68476-34-6)	OSHA	5 mg/m, as mineral oil mist	
	ACGIH	100 mg/m^3 (as totally hydrocarbon vapor) TWA	A3, skin
Naphthalene (91-20-3)	OSHA	10 ppm TWA	
	ACGIH	10 ppm TWA / 15 ppm STEL	A4, Skin

ENGINEERING CONTROLS

Use adequate ventilation to keep vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces.

EYE/FACE PROTECTION

Safety glasses or goggles are recommended where there is a possibility of splashing or spraying.

SKIN PROTECTION

Gloves constructed of nitrile, neoprene, or PVC are recommended. Chemical protective clothing such as of E.I. DuPont TyChem®, Saranex® or equivalent recommended based on degree of exposure. Note: The resistance of specific material may vary from product to product as well as with degree of exposure. Consult manufacturer specifications for further information.

RESPIRATORY PROTECTION
A NIOSH/MSHA-approved air-purifying respirator with organic vapor cartridges or canister may be permissible under certain circumstances where airborne concentrations are or may be expected to exceed exposure limits or for odor or irritation. Protection provided by air-purifying respirators is limited. Refer to OSHA 29 CFR 1910.134, NIOSH Respirator Decision Logic, and the manufacturer for additional guidance on respiratory protection selection.

Use a positive pressure, air-supplied respirator if there is a potential for uncontrolled release, exposure levels are not known, in oxygen-deficient atmospheres, or any other circumstance where an air-purifying respirator may not provide adequate protection.

9. PHYSICAL and CHEMICAL PROPERTIES

APPEARANCE
Clear, straw-yellow liquid. Dyed fuel oil will be red or reddish-colored.

ODOR
Mild, petroleum distillate odor

BASIC PHYSICAL PROPERTIES

BOILING RANGE:	320 to 690 oF (160 to 366 ^{o}C)
VAPOR PRESSURE:	0.009 psia @ 70 ^{o}F (21 ^{o}C)
VAPOR DENSITY (air = 1):	> 1.0
SPECIFIC GRAVITY (H_2O = 1):	0.83 to 0.88 @ 60 ^{o}F (16 ^{o}C)
PERCENT VOLATILES:	100 %
EVAPORATION RATE:	Slow; varies with conditions
SOLUBILITY (H_2O):	Negligible

10. STABILITY and REACTIVITY

STABILITY: Stable. Hazardous polymerization will not occur.

CONDITIONS TO AVOID and INCOMPATIBLE MATERIALS
Avoid high temperatures, open flames, sparks, welding, smoking and other ignition sources. Keep away from strong oxidizers; Viton ®; Fluorel ®

HAZARDOUS DECOMPOSITION PRODUCTS
Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke).

11. TOXICOLOGICAL PROPERTIES

ACUTE TOXICITY
Acute dermal LD50 (rabbits): > 5 ml/kg
Acute oral LD50 (rats): 9 ml/kg
Primary dermal irritation: extremely irritating (rabbits)
Draize eye irritation: non-irritating (rabbits)
Guinea pig sensitization: negative

CHRONIC EFFECTS AND CARCINOGENICITY
Carcinogenic: OSHA: NO IARC: NO NTP: NO ACGIH: A3

Studies have shown that similar products produce skin tumors in laboratory animals following repeated applications without washing or removal. The significance of this finding to human exposure has not been determined. Other studies with active skin carcinogens have shown that washing the animal's skin with soap and water between applications reduced tumor formation.

MUTAGENICITY (genetic effects)
This material has been positive in a mutagenicity study.

12. ECOLOGICAL INFORMATION

Keep out of sewers, drainage areas, and waterways. Report spills and releases, as applicable, under Federal and State regulations.

13. DISPOSAL CONSIDERATIONS

Consult federal, state and local waste regulations to determine appropriate disposal options.

14. TRANSPORTATION INFORMATION

PROPER SHIPPING NAME:	Diesel Fuel	Placard (International Only):
HAZARD CLASS and PACKING GROUP:	3, PG III	
DOT IDENTIFICATION NUMBER:	NA 1993 (Domestic)	
UN	1202 (International)	
DOT SHIPPING LABEL:	None	



Use shipping

Combustible Placard if in bulk domestically

15. REGULATORY INFORMATION

U.S. FEDERAL, STATE, and LOCAL REGULATORY INFORMATION

This product and its constituents listed herein are on the EPA TSCA Inventory. Any spill or uncontrolled release of this product, including any substantial threat of release, may be subject to federal, state and/or local reporting requirements. This product and/or its constituents may also be subject to other regulations at the state and/or local level. Consult those regulations applicable to your facility/operation.

CLEAN WATER ACT (OIL SPILLS)

Any spill or release of this product to "navigable waters" (essentially any surface water, including certain wetlands) or adjoining shorelines sufficient to cause a visible sheen or deposit of a sludge or emulsion must be reported immediately to the National Response Center (1-800-424-8802) as required by U.S. Federal Law. Also contact appropriate state and local regulatory agencies as required.

CERCLA SECTION 103 and SARA SECTION 304 (RELEASE TO THE ENVIRONMENT)

The CERCLA definition of hazardous substances contains a “petroleum exclusion” clause which exempts crude oil, refined, and unrefined petroleum products and any indigenous components of such. However, other federal reporting requirements (e.g., SARA Section 304 as well as the Clean Water Act if the spill occurs on navigable waters) may still apply.

SARA SECTION 311/312 - HAZARD CLASSES

ACUTE HEALTH	CHRONIC HEALTH	FIRE	SUDDEN RELEASE OF PRESSURE	REACTIVE
X	X	X	--	--

SARA SECTION 313 - SUPPLIER NOTIFICATION

This product may contain listed chemicals below the *de minimis* levels which therefore are not subject to the supplier notification requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and of 40 CFR 372. If you may be required to report releases of chemicals listed in 40 CFR 372.28, you may contact Hess Corporate Safety if you require additional information regarding this product.

CALIFORNIA PROPOSITON 65 LIST OF CHEMICALS

This product contains the following chemicals that are included on the Proposition 65 "List of Chemicals" required by the California Safe Drinking Water and Toxic Enforcement Act of 1986:

INGREDIENT NAME (CAS NUMBER)	Date Listed
Diesel Engine Exhaust (no CAS Number listed)	10/01/1990

CANADIAN REGULATORY INFORMATION (WHMIS)

Class B, Division 3 (Combustible Liquid) and Class D, Division 2, Subdivision B (Toxic by other means)

16. OTHER INFORMATION

NFPA® HAZARD RATING HEALTH: 0
FIRE: 2
REACTIVITY: 0

Refer to NFPA 704 "Identification of the Fire Hazards of Materials" for further information

HMIS® HAZARD RATING HEALTH: 1 * * Chronic
FIRE: 2
PHYSICAL: 0

SUPERSEDES MSDS DATED: 02/28/2001

ABBREVIATIONS:

AP = Approximately < = Less than > = Greater than
N/A = Not Applicable N/D = Not Determined ppm = parts per million

ACRONYMS:

ACGIH	American Conference of Governmental Industrial Hygienists
AIHA	American Industrial Hygiene Association
ANSI	American National Standards Institute (212) 642-4900
API (202)	American Petroleum Institute 682-8000
CERCLA	Comprehensive Emergency Response, Compensation, and Liability Act
DOT	U.S. Department of Transportation [General info: (800) 467-4922]
EPA	U.S. Environmental Protection Agency
HMIS	Hazardous Materials Information System
IARC	International Agency For Research On Cancer
MSHA	Mine Safety and Health Administration
NFPA	National Fire Protection Association (617)770-3000
NIOSH	National Institute of Occupational Safety and Health
NOIC	Notice of Intended Change (proposed change to ACGIH TLV)
NTP	National Toxicology Program
OPA	Oil Pollution Act of 1990
OSHA	U.S. Occupational Safety & Health Administration
PEL	Permissible Exposure Limit (OSHA)
RCRA	Resource Conservation and Recovery Act
REL	Recommended Exposure Limit (NIOSH)
SARA	Superfund Amendments and Reauthorization Act of 1986 Title III
SCBA	Self-Contained Breathing Apparatus
SPCC	Spill Prevention, Control, and Countermeasures
STEL	Short-Term Exposure Limit (generally 15 minutes)
TLV	Threshold Limit Value (ACGIH)
TSCA	Toxic Substances Control Act
TWA	Time Weighted Average (8 hr.)
WEEL	Workplace Environmental Exposure Level (AIHA)
WHMIS	Canadian Workplace Hazardous Materials Information System

DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES

Information presented herein has been compiled from sources considered to be dependable, and is accurate and reliable to the best of our knowledge and belief, but is not guaranteed to be so. Since conditions of use are beyond our control, we make no warranties, expressed or implied, except those that may be contained in our written contract of sale or acknowledgment.

Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, vendor assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material, even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in their use of the material.

MATERIAL SAFETY DATA SHEET

(POLYCHLORINATED BIPHENYLS)

COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients Name: polychlorinated biphenyls (PCBs)

HAZARD IDENTIFICATION

Reports of Carcinogenicity: YES

HEALTH HAZARDS ACUTE AND CHRONIC

- **Eyes**: Moderately irritating to eye tissues.
- **Skin**: Can be absorbed through intact skin, may cause de-fatting, potential for chloracne.
- **Inhalation**: Possible liver injury.
- **Ingestion**: Slightly toxic; reasonably anticipated to be carcinogenic.

EFFECTS OF OVER-EXPOSURE

Can cause dermatological symptoms; however, these are reversible upon removal of exposure source.

FIRST AID MEASURES

- **Eyes**: Irrigate immediately with copious quantities of running water for at least 15 minutes if liquid or solid PCBs get into them.
- **Skin:** Contaminated clothing should be removed and the skin washed thoroughly with soap and water. Hot PCBs may cause thermal burns.
- **Inhalation**: Remove to fresh air; if skin rash or respiratory irritation persists, consult a physician (if electrical equipment arcs over, PCBs may decompose to produce hydrochloric acid).
- **Ingestion**: Consult a physician. Do not induce vomiting or give any oily laxatives. (If large amounts are ingested, gastric lavage is suggested).

FIRE FIGHTING MEASURES: Flash Point: >141 ^{o}C (285.8 ^{o}F)

EXTINGUISHING MEDIA: PCBs are fire-resistant compounds.

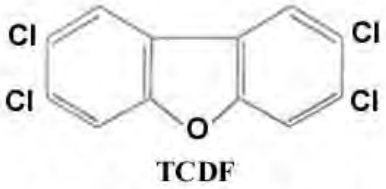
FIRE-FIGHTING PROCEDURES

Standard fire-fighting wearing apparel and self-contained breathing apparatus should be worn when fighting fires that involve possible exposure to chemical combustion products. Fire fighting equipment should be thoroughly cleaned and decontaminated after use.

UNUSUAL FIRE/EXPLOSION HAZARD

If a PCB transformer is involved in a fire-related incident, the owner of the transformer is required to report the incident. Consult and follow appropriate federal, provincial and local regulations.

***Note**: When askarel liquid becomes involved in a fire, toxic by-products of combustion are typically produced including polychlorinated dibenzofurans and polychlorinated dibenzodioxins, both known carcinogens. The structures of these chemical species are as follows:*

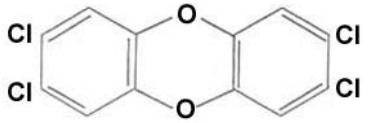


$C_{12}H_{8-n}Cl_nO$

$n = 4 - 8$

TCDF

2,3,7,8-tetrachlorodibenzofuran



$C_{12}H_{8-n}Cl_nO_2$

$n = 4 - 8$

TCDD

2,3,7,8-tetrachloro-dibenzo-p-dioxin

***Note**: 2,3,7,8-tetrachloro-dibenzo-p-dioxin is one of the most potent teratogenic, mutagenic and carcinogenic agents known to man.*

SPILL RELEASE PROCEDURES

Cleanup & disposal of liquid PCBs are strictly regulated by the federal government. Ventilate area. Contain spill/leak. Remove spill by means of absorptive material. Spill clean-up personnel should use proper protective clothing. All wastes and residues containing PCBs should be collected, containerized, marked and disposed of in the manner prescribed by applicable federal, provincial and local laws.

HANDLING AND STORAGE PRECAUTIONS

Care should be taken to prevent entry into the environment through spills, leakage, use, vaporization, or disposal of liquid. Avoid prolonged breathing of vapours or mists. Avoid contact with eyes or prolonged contact with skin. Comply with all federal, provincial and local regulations.

OTHER PRECAUTIONS

Federal regulations require PCBs, PCB items, storage areas, transformer vaults, and transport vehicles to be appropriately labelled.

RESPIRATORY PROTECTION

Use OHSA approved equipment when airborne exposure limits are exceeded. Full facepiece equipment is recommended and, if used, replaces need for face shield and/or chemical splash goggles. The respirator use limitations specified by the manufacturer must be observed.

VENTILATION

Provide natural or mechanical ventilation to control exposure levels below airborne exposure levels.

PROTECTIVE GLOVES: Wear appropriate chemical resistant gloves to prevent skin contact.

EYE PROTECTION: Wear chemical splash goggles and have eye baths available.

OTHER PROTECTIVE EQUIPMENT

Wear appropriate protective clothing. Provide a safety shower at any location where skin contact can occur.

WORK HYGIENIC PRACTICES

Wash thoroughly after handling. Supplemental safety and health : none

PHYSICAL/CHEMICAL PROPERTIES

- **Vapour pressure:** (mm Hg @100 ^{o}F) 0.005 - 0.00006
- **Viscosity:** (CENTISTOKES) 3.6 - 540
- **Stability indicator/materials to avoid:** Yes
- **Stability Condition to Avoid:** PCBs are very stable, fire-resistant compounds.

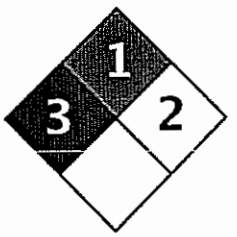
HAZARDOUS DECOMPOSITION PRODUCTS

Carbon monoxide, carbon dioxide, hydrogen chloride, phenolics, aldehydes, furans, dioxins

WASTE DISPOSAL METHODS

Consult the applicable PCB regulations prior to any disposal of PCBs or PCB-contaminated items.

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Chemicals & Laboratory Equipment



Health	3
Fire	1
Reactivity	2
Personal Protection	E

Material Safety Data Sheet
Arsenic MSDS

Section 1: Chemical Product and Company Identification

Product Name: Arsenic

Catalog Codes: SLA1006

CAS#: 7440-38-2

RTECS: CG0525000

TSCA: TSCA 8(b) inventory: Arsenic

CI#: Not applicable.

Synonym:

Chemical Name: Arsenic

Chemical Formula: As

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Arsenic	7440-38-2	100

Toxicological Data on Ingredients: Arsenic: ORAL (LD50): Acute: 763 mg/kg [Rat]. 145 mg/kg [Mouse].

Section 3: Hazards Identification

Potential Acute Health Effects:
Very hazardous in case of ingestion, of inhalation. Slightly hazardous in case of skin contact (irritant), of eye contact (irritant).

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: Classified A1 (Confirmed for human.) by ACGIH.
MUTAGENIC EFFECTS: Not available.
TERATOGENIC EFFECTS: Not available.
DEVELOPMENTAL TOXICITY: Not available.
The substance is toxic to kidneys, lungs, the nervous system, mucous membranes.
Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:
Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.

Skin Contact: Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops.

Serious Skin Contact: Not available.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: Not available.

Flash Points: Not available.

Flammable Limits: Not available.

Products of Combustion: Some metallic oxides.

Fire Hazards in Presence of Various Substances: Flammable in presence of open flames and sparks, of heat, of oxidizing materials.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available.
Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:
SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards:
Material in powder form, capable of creating a dust explosion. When heated to decomposition it emits highly toxic fumes.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill: Use appropriate tools to put the spilled solid in a convenient waste disposal container.

Large Spill:
Use a shovel to put the material into a convenient waste disposal container. Be careful that the product is not

present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep locked up.. Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents, acids, moisture.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection: Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
TWA: 0.01 from ACGIH (TLV) [United States] [1995]
Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid. (Lustrous solid.)

Odor: Not available.

Taste: Not available.

Molecular Weight: 74.92 g/mole

Color: Silvery.

pH (1% soln/water): Not applicable.

Boiling Point: Not available.

Melting Point: Sublimation temperature: 615°C (1139°F)

Critical Temperature: Not available.

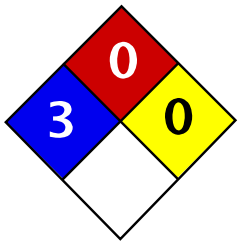
Specific Gravity: 5.72 (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.





Health	3
Fire	0
Reactivity	0
Personal Protection	

Material Safety Data Sheet
Mercury MSDS

Section 1: Chemical Product and Company Identification

Product Name: Mercury

Catalog Codes: SLM3505, SLM1363

CAS#: 7439-97-6

RTECS: OV4550000

TSCA: TSCA 8(b) inventory: Mercury

CI#: Not applicable.

Synonym: Quick Silver; Colloidal Mercury; Metallic Mercury; Liquid Silver; Hydragyrum

Chemical Name: Mercury

Chemical Formula: Hg

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call: 1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Mercury	7439-97-6	100

Toxicological Data on Ingredients: Mercury LD50: Not available. LC50: Not available.

Section 3: Hazards Identification

Potential Acute Health Effects:
Very hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Hazardous in case of skin contact (corrosive, permeator). Liquid or spray mist may produce tissue damage particularly on mucous membranes of eyes, mouth and respiratory tract. Skin contact may produce burns. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Severe over-exposure can result in death. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Potential Chronic Health Effects:
Hazardous in case of skin contact (permeator).
CARCINOGENIC EFFECTS: Classified A5 (Not suspected for human.) by ACGIH. 3 (Not classifiable for human.) by IARC.
MUTAGENIC EFFECTS: Not available.
TERATOGENIC EFFECTS: Not available.

DEVELOPMENTAL TOXICITY: Not available.
The substance may be toxic to blood, kidneys, liver, brain, peripheral nervous system, central nervous system (CNS).
Repeated or prolonged exposure to the substance can produce target organs damage. Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Section 4: First Aid Measures

Eye Contact:
Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. WARM water MUST be used. Get medical attention immediately.

Skin Contact:
In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

Serious Skin Contact:
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Non-flammable.

Auto-Ignition Temperature: Not applicable.

Flash Points: Not applicable.

Flammable Limits: Not applicable.

Products of Combustion: Not available.

Fire Hazards in Presence of Various Substances: Not applicable.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available.
Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions: Not applicable.

Special Remarks on Fire Hazards:
When thrown into mercury vapor, boron phosphodiiodide ignites at once.
Flame forms with chlorine jet over mercury surface at 200 deg to 300 deg C.
Mercury undergoes hazardous reactions in the presence of heat and sparks or ignition.

Special Remarks on Explosion Hazards:
A violent exothermic reaction or possible explosion occurs when mercury comes in contact with lithium and rubidium.
CHLORINE DIOXIDE & LIQUID HG, WHEN MIXED, EXPLODE VIOLENTLY.
Mercury and Ammonia can produce an explosive compound.
A mixture of the dry carbonyl and oxygen will explode on vigorous shaking with mercury.
Methyl azide in the presence of mercury was shown to be potentially explosive.

Section 6: Accidental Release Measures

Small Spill: Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Large Spill:
Corrosive liquid. Poisonous liquid.
Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Use water spray curtain to divert vapor drift. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep locked up.. Keep container dry. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Never add water to this product. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, metals.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area. Do not store above 25°C (77°F).

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:
Face shield. Full suit. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves. Boots.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
TWA: 0.025 from ACGIH (TLV) [United States] SKIN
TWA: 0.05 CEIL: 0.1 (mg/m3) from OSHA (PEL) [United States] Inhalation
TWA: 0.025 (mg/m3) [United Kingdom (UK)]
Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid. (Heavy liquid)

Odor: Odorless.

Taste: Not available.

Molecular Weight: 200.59 g/mole

Color: Silver-white

pH (1% soln/water): Not available.

Boiling Point: 356.73°C (674.1°F)

Melting Point: -38.87°C (-38°F)

Critical Temperature: 1462°C (2663.6°F)

Specific Gravity: 13.55 (Water = 1)

Vapor Pressure: Not available.

Vapor Density: 6.93 (Air = 1)

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: Not available.

Solubility: Very slightly soluble in cold water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Incompatible materials

Incompatibility with various substances: Reactive with oxidizing agents, metals.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity:
Ground mixtures of sodium carbide and mercury, aluminum, lead, or iron can react vigorously.
A violent exothermic reaction or possible explosion occurs when mercury comes in contact with lithium and rubidium.
Incompatible with boron diiodophosphide; ethylene oxide; metal oxides, metals(aluminum, potassium, lithium, sodium, rubidium); methyl azide; methylsilane, oxygen; oxidants(bromine, peroxyformic acid, chlorine dioxide, nitric acid, tetracarbonynickel, nitromethane, silver perchlorate, chlorates, sulfuric acid, nitrates,); tetracarbonylnickel, oxygen, acetylinic compounds, ammonia, ethylene oxide, methylsiliane, calcium,

Special Remarks on Corrosivity:
The high mobility and tendency to dispersion exhibited by mercury, and the ease with which it forms alloys

(amalga) with many laboratory and electrical contact metals, can cause severe corrosion problems in laboratories.
Special precautions: Mercury can attack copper and copper alloy materials.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion.

Toxicity to Animals:
LD50: Not available.
LC50: Not available.

Chronic Effects on Humans:
CARCINOGENIC EFFECTS: Classified A5 (Not suspected for human.) by ACGIH. 3 (Not classifiable for human.) by IARC.
May cause damage to the following organs: blood, kidneys, liver, brain, peripheral nervous system, central nervous system (CNS).

Other Toxic Effects on Humans:
Very hazardous in case of skin contact (irritant), of ingestion, of inhalation.
Hazardous in case of skin contact (corrosive, permeator).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans:
May affect genetic material.
May cause cancer based on animal data.
Passes through the placental barrier in animal.
May cause adverse reproductive effects(paternal effects- spermatogenesis; effects on fertility - fetotoxicity, post-implantation mortality), and birth defects.

Special Remarks on other Toxic Effects on Humans:

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: Class 8: Corrosive material

Identification: : Mercury UNNA: 2809 PG: III

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:
California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Mercury
California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: Mercury
Connecticut hazardous material survey.: Mercury
Illinois toxic substances disclosure to employee act: Mercury
Illinois chemical safety act: Mercury
New York acutely hazardous substances: Mercury
Rhode Island RTK hazardous substances: Mercury
Pennsylvania RTK: Mercury
Minnesota: Mercury
Massachusetts RTK: Mercury
New Jersey: Mercury
New Jersey spill list: Mercury
Louisiana spill reporting: Mercury
California Director's List of Hazardous Substances.: Mercury
TSCA 8(b) inventory: Mercury
SARA 313 toxic chemical notification and release reporting: Mercury
CERCLA: Hazardous substances.: Mercury: 1 lbs. (0.4536 kg)

Other Regulations:
OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).
EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada):
CLASS D-1A: Material causing immediate and serious toxic effects (VERY TOXIC).
CLASS D-2A: Material causing other toxic effects (VERY TOXIC).
CLASS E: Corrosive liquid.

DSCL (EEC):
R23- Toxic by inhalation.
R33- Danger of cumulative effects.
R38- Irritating to skin.
R41- Risk of serious damage to eyes.
R50/53- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
S2- Keep out of the reach of children.
S7- Keep container tightly closed.
S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S39- Wear eye/face protection.
S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S46- If swallowed, seek medical advice immediately and show this container or label.
S60- This material and its container must be disposed of as hazardous waste.

S61- Avoid release to the environment. Refer to special instructions/Safety data sheets.

HMIS (U.S.A.):

Health Hazard: 3

Fire Hazard: 0

Reactivity: 0

Personal Protection:

National Fire Protection Association (U.S.A.):

Health: 3

Flammability: 0

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves.
Full suit.
Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.
Face shield.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

Created: 10/10/2005 08:22 PM

Last Updated: 11/06/2008 12:00 PM

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APPENDIX C

Community Air Monitoring Plan

New York State Department of Health
Generic Community Air Monitoring Plan

A Community Air Monitoring Plan (CAMP) requires real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air.

The generic CAMP presented below will be sufficient to cover many, if not most, sites. Specific requirements should be reviewed for each situation in consultation with NYSDOH to ensure proper applicability. In some cases, a separate site-specific CAMP or supplement may be required. Depending upon the nature of contamination, chemical- specific monitoring with appropriately-sensitive methods may be required. Depending upon the proximity of potentially exposed individuals, more stringent monitoring or response levels than those presented below may be required. Special requirements will be necessary for work within 20 feet of potentially exposed individuals or structures and for indoor work with co-located residences or facilities. These requirements should be determined in consultation with NYSDOH.

Reliance on the CAMP should not preclude simple, common-sense measures to keep VOCs, dust, and odors at a minimum around the work areas.

Community Air Monitoring Plan

Depending upon the nature of known or potential contaminants at each site, real-time air monitoring for volatile organic compounds (VOCs) and/or particulate levels at the perimeter of the exclusion zone or work area will be necessary. Most sites will involve VOC and particulate monitoring; sites known to be contaminated with heavy metals alone may only require particulate monitoring. If radiological contamination is a concern, additional monitoring requirements may be necessary per consultation with appropriate NYSDEC/NYSDOH staff.

Continuous monitoring will be required for all <u>ground intrusive</u> activities and during the demolition of contaminated or potentially contaminated structures. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells.

Periodic monitoring for VOCs will be required during <u>non-intrusive</u> activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. “Periodic” monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or overturning soil, monitoring during well baling/purging, and taking a reading prior to

leaving a sample location. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence.

VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) must be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis or as otherwise specified. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions. The monitoring work should be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment should be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

- If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.

- If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.

- If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.

All 15-minute readings must be recorded and be available for State (DEC and DOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

Particulate Monitoring, Response Levels, and Actions

Particulate concentrations should be monitored **continuously** at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring should be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment must be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

- If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mcg/m^3 above the upwind level and provided that no visible dust is migrating from the work area.

- If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m^3 above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m^3 of the upwind level and in preventing visible dust migration.

All readings must be recorded and be available for State (DEC and DOH) personnel to review.

APPENDIX D

Demolition Survey

Adelaide Environmental Health Associates, Inc.

DEMOLITION SURVEY FOR ASBESTOS AND LEAD BASED PAINT

PERFORMED AT:

Beacon Waterfront
Red Flynn Drive
Beacon, New York
Adelaide Project No. ECOS: 09174.00-IN

PREPARED FOR:

Ecosystems Strategies, Inc.
24 Davis Avenue
Poughkeepsie, New York 12603

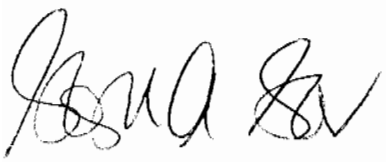
PREPARED BY:

Adelaide Environmental Health Associates, Inc.
1511 Route 22, Suite C24
Brewster, New York 10509

DATED:

January 15, 2010
February 2, 2010 *updated*

Submitted by:



Stephanie A. Soter
President

DEMOLITION SURVEY FOR ASBESTOS AND LEAD BASED PAINT
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1.0 BACKGROUND/PURPOSE

Adelaide Environmental Health Associates, Inc. (Adelaide) was retained by Ecosystems Strategies, Inc. to perform an investigative asbestos and lead based paint demo survey at The Beacon Waterfront Property, Red Flynn Drive, in Beacon, New York. The building is a two-story house which is unoccupied and scheduled for demolition. This survey was based on the scope of work provided by Ecosystems. The inspection was performed on January 11, 2010 by Adelaide representative James J. Reber (certified asbestos inspector/project designer and EPA Lead Paint Inspector) and the roof inspection occurred on January 26, 2010 by Adelaide representative John DiVernieri (certified asbestos inspector)

2.0 EXECUTIVE SUMMARY OF INSPECTION RESULTS

Following the scope of work that was given to us, Adelaide inspected the entire structure. Samples were taken at locations throughout the building to identify all homogenous areas of suspect ACM contained within the structure. Adelaide collected sixty three (63) asbestos samples and twenty eight (28) XRF readings from the above-mentioned areas on 1/11/2010 and an additional fourteen (14) roof samples on 1/26/10. Two (2) samples/homogenous areas came back positive for asbestos and two (2) XRF readings tested positive for lead.

Summary of ACM and Lead Based Paint

Sample #	*Sample Location*	*Material Sampled*	*Approximate Quantity*	*Good, Damaged, Sig. Damaged*	*Comments*
52	1st Floor – Open Space	Brown Linoleum Flooring	400 SF	Damaged	
54	1st Floor – Bedroom	Green Linoleum Flooring	220 SF	Damaged	
XRF Sample 13	2nd Floor Bathroom	Wall Tiles – Lt. Yellow – Ceramic	-	-	5.2 mg/cm2
XRF Sample 17	1st Floor Bathroom	Wall Tiles – Yellow – Ceramic	-	-	1.6 mg/cm2

Negative Material List

The following is a list of the homogeneous areas that tested negative during this inspection:

- Joint Compound
- Drywall
- 4in Brown Covebase and Mastic
- Kitchen Linoleum Flooring
- Kitchen Sink – Black sink coating
- Textured Ceiling Application
- Brown Formica Countertop
- White Formica Countertop
- Bathroom Floor Tile Grout 1st and 2nd Floors
- Bathroom Wall Tile Grout and Mastic 1st and 2nd floors
- Floral Design Wallpaper
- Black Formica Sink Countertop
- Window Glazing Compound
- Green/Blue Wall Panel in Bathroom
- Boiler Burner Gasket
- Boiler Flue Packing
- Mastic for wooden wall panels
- Main Entry Linoleum(brown and green)
- Brick Mortar
- Concrete on east and west exterior walls
- Gray Caulking on Doors and windows
- Wooden window glazing compound
- All Roofing materials

3.0 ASBESTOS FIELD PROCEDURES AND ANALYSIS METHODOLOGY

3.1 INSPECTION

Guidelines used for the inspection were established by the U.S. Environmental Protection Agency (EPA) in the Guidance for Controlling Asbestos Containing Materials in Buildings, Office of Pesticides and Toxic Substances, DOC# 560/5-85-024 and 40 CFR Part 763, Asbestos Hazard Emergency Response Act (AHERA). Field information was organized as per the AHERA concept of a homogeneous area (HA); that is, suspect Asbestos Containing Materials (ACM) with similar age, appearance, and texture were grouped together, sampled and assessed for condition.

For the purposes of this inspection, suspect ACM has been placed in three material categories: thermal, surfacing, and miscellaneous.

Surfacing materials are those that are sprayed on, troweled on or otherwise applied to surfaces for fireproofing, acoustical, or decorative purposes (e.g., wall and ceiling plaster).

Thermal materials are those applied to heat pipes or other structural components to prevent heat loss or gain or prevent water condensation (e.g., pipe and fitting insulation, duct insulation, boiler flue).

Miscellaneous materials are interior building materials on structural components, structural members or fixtures, such as floor and ceiling tiles, etc. and do not include surfacing material or thermal system insulation.

3.2 SAMPLING

SURFACING MATERIALS

Surfacing materials were grouped into homogeneous sampling areas. A homogeneous area contains material that is uniform in color and texture and appears identical in every other respect. Materials installed at different times belong to different sampling areas. Homogeneous areas were determined on per floor basis.

The following protocol was used for determining the number of samples to be collected:

- At least three bulk samples were collected from each homogeneous area that is 1,000 square feet or less.
- At least five bulk samples were collected from each homogeneous area that is greater than 1,000 square feet but less than or equal to 5,000 square feet.
- At least seven bulk samples were collected from each homogeneous area that is greater than 5,000 square feet.

THERMAL SYSTEM INSULATION (TSI)

The concept of homogeneous sampling areas applies equally well to thermal insulation as to surfacing material. A "typical" building may contain multiple insulated pipe runs from any combination of the following categories:

- Hot water supply and/or return
- Cold water supply
- Chilled water supply
- Steam supply and/or return
- Roof or system drain

The following protocol was used for determining the number of samples to be collected.

- Collect at least three bulk samples from each homogeneous area of thermal system insulation.
- Collect at least one bulk sample from each homogeneous area of patched thermal system insulation if the patched section is less than 6 linear or square feet.
- In a manner sufficient to determine whether the material is ACM or not ACM, collect a minimum of three bulk samples from each homogeneous insulated mechanical system tee, elbow, and valve.

Bulk samples are not collected from any homogeneous area where the certified inspector has determined that the thermal system insulation is fiberglass, foam glass, or rubber.

MISCELLANEOUS MATERIALS

Miscellaneous materials are grouped into different homogeneous areas and at least two bulk samples are collected from each homogeneous area as per the clarification letter from the EPA and the Professional Abatement Contractors of New York, Inc in November of 2007.

3.3 ANALYSIS

Bulk samples of suspect ACM were analyzed by Polarized Light Microscopy (PLM) with dispersion staining, as described in 40CFR Part 763 and the National Emissions Standard for Hazardous Air Pollutants (NESHAPS).

The New York State (NYS) Department of Health has recently revised the PLM Stratified Point Counting Method. The new method, Polarized Light Microscopy for Identifying and Quantitating Asbestos in Bulk Samples can be found as Item 198.1 in the Environmental Laboratory Accreditation Program (ELAP) Certification manual.

The State of New York ELAP has determined that analysis of NOB materials is not reliably performed by PLM. Therefore, if PLM yields negative results for a non-friable material, it must be confirmed by Transmission Electron Microscopy (TEM) analysis.

All NOB samples were initially analyzed by utilizing PLM methodology.

4.0 CONCLUSIONS AND RECOMMENDATIONS

This survey concluded that the materials listed in Section 1.0 Executive Summary tested ***positive for the presence of***:

Asbestos: *These areas must be abated prior to building demolition or renovation if they are to be disturbed.*

Lead: *These areas must be either abated or Lead safe work practices must be implemented during the renovation or demolition activities if these areas are to be disturbed.*

5.0 AREAS NOT ACCESSIBLE

Adelaide Environmental Health Associates inspected and sampled materials which were visible and/or accessible to the survey team. Adelaide does not inspect physically inaccessible areas, such as between walls, above fixed ceilings, under concrete slabs, etc. This report makes no representations as to the content of these areas or materials.

All materials present in those not accessible areas shall be assumed positive until tested.

6.0 REPORT CERTIFICATIONS

Adelaide Environmental Health Associates certifies that the information contained herein is based on the physical and visual inspections conducted by Adelaide and data collected during the inspection survey.

7.0 TRANSMITTAL OF BUILDING/STRUCTURE ASBESTOS SURVEY

One (1) copy of the results of the building/structure asbestos survey shall be immediately transmitted by the building/structure owner as follows:

(1) One (1) copy of the completed asbestos survey shall be sent by the owner or their agent to the local government entity charged with issuing a permit for such demolition, renovation, remodeling or repair work under applicable State or local laws.

(2) The completed asbestos survey for controlled demolition (as per Subpart 56-11.5) or pre-demolition asbestos projects shall also be submitted to the appropriate Asbestos Control Bureau district office.

(3) The completed asbestos survey shall be kept on the construction site with the asbestos notification and variance, if required, throughout the duration of the asbestos project and any associated demolition, renovation, remodeling or repair project.

APPENDIX A

ASBESTOS ANALYTICAL RESULTS

AND CHAIN OF CUSTODY FORMS

AmeriSci New York
117 EAST 30TH ST.
NEW YORK, NY 10016
TEL: (212) 679-8600 • FAX: (212) 679-3114

PLM Bulk Asbestos Report

Adelaide Environmental Health
Attn: John Soter
1511 Rte. 22 Suite C24

Brewster, NY 10509

Date Received 01/12/10 **AmeriSci Job #** 210011744
Date Examined 01/13/10 **P.O. #**
ELAP # 11480 **Page** 1 **of** 11
RE: ECOS-09174.00.IN; Beaconwater Front; Red Flynn Dr., Beacon, NY

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
1	210011744-01	*Yes*	Trace (<0.25 % pc)
1	**Location:** 2nd Fl, Kitchen - Joint Compound		(ELAP 198.1; 400pc) by Albert Grohmann on 01/13/10
Analyst Description: White, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** Chrysotile <0.25 % pc **Other Material:** Fibrous Talc Trace, Non-fibrous 100 %			
2	210011744-02	*Yes*	Trace (<0.25 % pc)
1	**Location:** 1st Fl, Main Entry - Joint Compound		(ELAP 198.1; 400pc) by Albert Grohmann on 01/13/10
Analyst Description: White, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** Chrysotile <0.25 % pc **Other Material:** Fibrous Talc Trace, Non-fibrous 100 %			
3	210011744-03	*Yes*	Trace (<0.25 % pc)
1	**Location:** 1st Fl, Boiler Rm - Joint Compound		(ELAP 198.1; 400pc) by Albert Grohmann on 01/13/10
Analyst Description: White, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** Chrysotile <0.25 % pc **Other Material:** Fibrous Talc Trace, Non-fibrous 100 %			
4	210011744-04	*No*	NAD
2	**Location:** 2nd Fl, Kitchen - Drywall		(by NYS ELAP 198.1) by Albert Grohmann on 01/13/10
Analyst Description: White, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Cellulose 5 %, Non-fibrous 95 %			
5	210011744-05	*No*	NAD
2	**Location:** 1st Fl, Boiler Rm - Drywall		(by NYS ELAP 198.1) by Albert Grohmann on 01/13/10
Analyst Description: Tan/Off White, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Cellulose 25 %, Non-fibrous 75 %			

See Reporting notes on last page

PLM Bulk Asbestos Report

ECOS-09174.00.IN; Beaconwater Front; Red Flynn Dr., Beacon, NY

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
6 3	210011744-06 **Location:** 2nd Fl, Kitchen - 4 In Brown Covebase	***No***	NAD (by NYS ELAP 198.6) by Albert Grohmann on 01/13/10
Analyst Description: Brown, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 1.4 %			
7 3	210011744-07 **Location:** 2nd Fl, Kitchen - 4 In Brown Covebase	***No***	NAD (by NYS ELAP 198.6) by Albert Grohmann on 01/13/10
Analyst Description: Brown, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 0.5 %			
8 4	210011744-08 **Location:** 2nd Fl, Kitchen - 4 In Brown Covebase - Mastic (Yellow)	***No***	NAD (by NYS ELAP 198.6) by Albert Grohmann on 01/13/10
Analyst Description: Yellow, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 37.7 %			
9 4	210011744-09 **Location:** 2nd Fl, Kitchen - 4 In Brown Covebase - Mastic (Yellow)	***No***	NAD (by NYS ELAP 198.6) by Albert Grohmann on 01/13/10
Analyst Description: Yellow, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 38.5 %			
10 5	210011744-10 **Location:** 2nd Fl, Kitchen - Linoleum Flooring	***No***	NAD (by NYS ELAP 198.6) by Albert Grohmann on 01/13/10
Analyst Description: Beige, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 19.3 %			
11 5	210011744-11 **Location:** 2nd Fl, Kitchen - Linoleum Flooring	***No***	NAD (by NYS ELAP 198.6) by Albert Grohmann on 01/13/10
Analyst Description: Beige, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 20.8 %			

See Reporting notes on last page

PLM Bulk Asbestos Report

ECOS-09174.00.IN; Beaconwater Front; Red Flynn Dr., Beacon, NY

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
12 6	210011744-12 **Location:** 2nd Fl, Kitchen - Kitchen Sink - Black Sink Coating	***Yes***	Trace (<0.25 % pc) (ELAP 198.6; 400pc) by Albert Grohmann on 01/13/10
	Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** Chrysotile <0.25 % pc **Other Material:** Non-fibrous 7 %		
13 6	210011744-13 **Location:** 2nd Fl, Kitchen - Kitchen Sink - Black Sink Coating	***Yes***	Trace (<0.25 % pc) (ELAP 198.6; 400pc) by Albert Grohmann on 01/13/10
	Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** Chrysotile <0.25 % pc **Other Material:** Non-fibrous 7.4 %		
14 7	210011744-14 **Location:** 2nd Fl, Kitchen - Textured Ceiling Application	***No***	NAD (by NYS ELAP 198.1) by Albert Grohmann on 01/13/10
	Analyst Description: White, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Cellulose Trace, Non-fibrous 100 %		
15 7	210011744-15 **Location:** 2nd Fl, Kitchen - Textured Ceiling Application	***No***	NAD (by NYS ELAP 198.1) by Albert Grohmann on 01/13/10
	Analyst Description: White, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Cellulose Trace, Non-fibrous 100 %		
16 7	210011744-16 **Location:** 2nd Fl, Kitchen - Textured Ceiling Application	***No***	NAD (by NYS ELAP 198.1) by Albert Grohmann on 01/13/10
	Analyst Description: White, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Cellulose Trace, Non-fibrous 100 %		
17 8	210011744-17 **Location:** 2nd Fl, Kitchen - Brown Formica Counter Top	***No***	NAD (by NYS ELAP 198.6) by Albert Grohmann on 01/13/10
	Analyst Description: Brown, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 0.6 %		

See Reporting notes on last page

PLM Bulk Asbestos Report

ECOS-09174.00.IN; Beaconwater Front; Red Flynn Dr., Beacon, NY

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
18 8	210011744-18 **Location:** 2nd Fl, Kitchen - Brown Formica Counter Top	***No***	NAD (by NYS ELAP 198.6) by Albert Grohmann on 01/13/10
Analyst Description: Brown, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 0.7 %			
19 9	210011744-19 **Location:** 2nd Fl, Kitchen - White Formica Counter Top	***No***	NAD (by NYS ELAP 198.6) by Albert Grohmann on 01/13/10
Analyst Description: White, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 1.5 %			
20 9	210011744-20 **Location:** 2nd Fl, Kitchen - White Formica Counter Top	***No***	NAD (by NYS ELAP 198.6) by Albert Grohmann on 01/13/10
Analyst Description: White, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 0.5 %			
21 10	210011744-21 **Location:** 2nd Fl, Bathroom - Floor Tile Grout	***No***	NAD (by NYS ELAP 198.1) by Albert Grohmann on 01/13/10
Analyst Description: OffWhite, Heterogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 100 %			
22 10	210011744-22 **Location:** 2nd Fl, Bathroom - Floor Tile Grout	***No***	NAD (by NYS ELAP 198.1) by Albert Grohmann on 01/13/10
Analyst Description: OffWhite, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 100 %			
23 11	210011744-23 **Location:** 2nd Fl, Bathroom - Wall Tile Grout	***No***	NAD (by NYS ELAP 198.1) by Albert Grohmann on 01/13/10
Analyst Description: White, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 100 %			

See Reporting notes on last page

PLM Bulk Asbestos Report

ECOS-09174.00.IN; Beaconwater Front; Red Flynn Dr., Beacon, NY

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
24 11	210011744-24 **Location:** 2nd Fl, Bathroom - Wall Tile Grout	***No***	NAD (by NYS ELAP 198.1) by Albert Grohmann on 01/13/10
Analyst Description: White, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 100 %			
25 12	210011744-25 **Location:** 2nd Fl, Bathroom - Wall Tile Mastic	***No***	NAD (by NYS ELAP 198.6) by Albert Grohmann on 01/13/10
Analyst Description: Yellow, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 17.9 %			
26 12	210011744-26 **Location:** 2nd Fl, Bathroom - Wall Tile Mastic	***No***	NAD (by NYS ELAP 198.6) by Albert Grohmann on 01/13/10
Analyst Description: Yellow, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 26.1 %			
27 13	210011744-27 **Location:** 2nd Fl, Bathroom - Floral Design Wallpaper	***No***	NAD (by NYS ELAP 198.6) by Albert Grohmann on 01/13/10
Analyst Description: Multicolor, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 7.4 %			
28 13	210011744-28 **Location:** 2nd Fl, Bathroom - Floral Design Wallpaper	***No***	NAD (by NYS ELAP 198.6) by Albert Grohmann on 01/13/10
Analyst Description: Multicolor, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 5.8 %			
29 14	210011744-29 **Location:** 2nd Fl, Bathroom - Black Formica Sink Countertop	***No***	NAD (by NYS ELAP 198.6) by Albert Grohmann on 01/13/10
Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 0.5 %			

See Reporting notes on last page

PLM Bulk Asbestos Report

ECOS-09174.00.IN; Beaconwater Front; Red Flynn Dr., Beacon, NY

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
30 14	210011744-30 **Location:** 2nd Fl, Bathroom - Black Formica Sink Countertop	***No***	NAD (by NYS ELAP 198.6) by Albert Grohmann on 01/13/10
Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 0.5 %			
31 15	210011744-31 **Location:** 2nd Fl, Living Room - Window Glazing Compound	***No***	NAD (by NYS ELAP 198.6) by Albert Grohmann on 01/13/10
Analyst Description: OffWhite, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 27 %			
32 15	210011744-32 **Location:** 2nd Fl, Living Room - Window Glazing Compound	***No***	NAD (by NYS ELAP 198.6) by Albert Grohmann on 01/13/10
Analyst Description: OffWhite, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 27.6 %			
33 16	210011744-33 **Location:** 1st Fl, Bathroom - Green/Blue Wall Panel	***No***	NAD (by NYS ELAP 198.1) by Albert Grohmann on 01/13/10
Analyst Description: Green/Blue, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Cellulose 85 %, Non-fibrous 15 %			
34 16	210011744-34 **Location:** 1st Fl, Bathroom - Green/Blue Wall Panel	***No***	NAD (by NYS ELAP 198.1) by Albert Grohmann on 01/13/10
Analyst Description: Green/Blue, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Cellulose 85 %, Non-fibrous 15 %			
35 17	210011744-35 **Location:** 1st Fl, Bathroom - Yellow Tile Grout	***No***	NAD (by NYS ELAP 198.1) by Albert Grohmann on 01/13/10
Analyst Description: White, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 100 %			

See Reporting notes on last page

PLM Bulk Asbestos Report

ECOS-09174.00.IN; Beaconwater Front; Red Flynn Dr., Beacon, NY

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
36 17	210011744-36 **Location:** 1st Fl, Bathroom - Yellow Tile Grout	***No***	NAD (by NYS ELAP 198.1) by Albert Grohmann on 01/13/10
Analyst Description: White, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 100 %			
37 18	210011744-37 **Location:** 1st Fl, Bathroom - Yellow Tile Mastic	***No***	NAD (by NYS ELAP 198.6) by Albert Grohmann on 01/13/10
Analyst Description: Yellow, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 32.9 %			
38 18	210011744-38 **Location:** 1st Fl, Bathroom - Yellow Tile Mastic	***No***	NAD (by NYS ELAP 198.6) by Albert Grohmann on 01/13/10
Analyst Description: Yellow, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 35.4 %			
39 19	210011744-39 **Location:** 1st Fl, Bathroom - Floor Tile Grout	***No***	NAD (by NYS ELAP 198.1) by Albert Grohmann on 01/13/10
Analyst Description: OffWhite, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 100 %			
40 19	210011744-40 **Location:** 1st Fl, Bathroom - Floor Tile Grout	***No***	NAD (by NYS ELAP 198.1) by Albert Grohmann on 01/13/10
Analyst Description: OffWhite, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 100 %			
41 20	210011744-41 **Location:** 1st Fl, Bathroom - Floor Tile Mastic	***No***	NAD (by NYS ELAP 198.6) by Albert Grohmann on 01/13/10
Analyst Description: Tan, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 59.9 %			

See Reporting notes on last page

PLM Bulk Asbestos Report

ECOS-09174.00.IN; Beaconwater Front; Red Flynn Dr., Beacon, NY

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
42 20	210011744-42 **Location:** 1st Fl, Bathroom - Floor Tile Mastic	***No***	NAD (by NYS ELAP 198.6) by Albert Grohmann on 01/13/10
Analyst Description: Tan, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 63.3 %			
43 21	210011744-43 **Location:** 1st Fl, Boiler Room - Boiler Burner Gasket	***No***	NAD (by NYS ELAP 198.1) by Albert Grohmann on 01/13/10
Analyst Description: OffWhite, Homogeneous, Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Cellulose 45 %, Non-fibrous 55 %			
44 21	210011744-44 **Location:** 1st Fl, Boiler Room - Boiler Burner Gasket	***No***	NAD (by NYS ELAP 198.1) by Albert Grohmann on 01/13/10
Analyst Description: OffWhite, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Cellulose 45 %, Non-fibrous 55 %			
45 22	210011744-45 **Location:** 1st Fl, Boiler Room - Boiler Flue Packing	***No***	NAD (by NYS ELAP 198.1) by Albert Grohmann on 01/13/10
Analyst Description: Grey, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 100 %			
46 22	210011744-46 **Location:** 1st Fl, Boiler Room - Boiler Flue Packing	***No***	NAD (by NYS ELAP 198.1) by Albert Grohmann on 01/13/10
Analyst Description: Grey, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 100 %			
47 22	210011744-47 **Location:** 1st Fl, Boiler Room - Boiler Flue Packing	***No***	NAD (by NYS ELAP 198.1) by Albert Grohmann on 01/13/10
Analyst Description: Grey, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 100 %			

See Reporting notes on last page

PLM Bulk Asbestos Report

ECOS-09174.00.IN; Beaconwater Front; Red Flynn Dr., Beacon, NY

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
48	210011744-48	***No***	NAD
23	**Location:** 1st Fl, Bottom Wall Of Stairs - Wooden Wall Panel Mastic		(by NYS ELAP 198.6) by Albert Grohmann on 01/13/10
Analyst Description: Yellow, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 33.8 %			
49	210011744-49	***No***	NAD
23	**Location:** 1st Fl, Bottom Wall Of Stairs - Wooden Wall Panel Mastic		(by NYS ELAP 198.6) by Albert Grohmann on 01/13/10
Analyst Description: Yellow, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 34.1 %			
50	210011744-50	***No***	NAD
24	**Location:** 1st Fl, Main Entry - Linoleum Floor (Brown + Green)		(by NYS ELAP 198.6) by Albert Grohmann on 01/13/10
Analyst Description: Brown/Green, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 18.9 %			
51	210011744-51	***No***	NAD
24	**Location:** 1st Fl, Main Entry - Linoleum Floor (Brown + Green)		(by NYS ELAP 198.6) by Albert Grohmann on 01/13/10
Analyst Description: Brown/Green, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 25.5 %			
52	210011744-52	***Yes***	11.5 %
25	**Location:** 1st Fl, Open Space - Brown Linoleum Flooring		(by NYS ELAP 198.6) by Albert Grohmann on 01/13/10
Analyst Description: Brown, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** Chrysotile 11.5 % **Other Material:** Non-fibrous 23.1 %			
53	210011744-53		NA/PS
25	**Location:** 1st Fl, Open Space - Brown Linoleum Flooring		
Analyst Description: Bulk Material **Asbestos Types:** **Other Material:**			

See Reporting notes on last page

PLM Bulk Asbestos Report

ECOS-09174.00.IN; Beaconwater Front; Red Flynn Dr.,
Beacon, NY

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
54 26	210011744-54 **Location:** 1st Fl, Bedroom - Green Linoleum Flooring	***Yes***	12.2 % (by NYS ELAP 198.6) by Albert Grohmann on 01/13/10
Analyst Description: Green, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** Chrysotile 12.2 % **Other Material:** Non-fibrous 18.3 %			
55 26	210011744-55 **Location:** 1st Fl, Bedroom - Green Linoleum Flooring		NA/PS
Analyst Description: Bulk Material **Asbestos Types:** **Other Material:**			
56 27	210011744-56 **Location:** Ground Fl, Exterior - Brick Mortar	***No***	NAD (by NYS ELAP 198.1) by Albert Grohmann on 01/13/10
Analyst Description: Grey, Homogeneous, Non-Fibrous, Cementitious, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 100 %			
57 27	210011744-57 **Location:** Ground Fl, Exterior - Brick Mortar	***No***	NAD (by NYS ELAP 198.1) by Albert Grohmann on 01/13/10
Analyst Description: Grey, Homogeneous, Non-Fibrous, Cementitious, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 100 %			
58 28	210011744-58 **Location:** Ground Fl, Exterior - Concrete On East/West Walls	***No***	NAD (by NYS ELAP 198.1) by Albert Grohmann on 01/13/10
Analyst Description: OffWhite, Homogeneous, Non-Fibrous, Cementitious, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 100 %			
59 28	210011744-59 **Location:** Ground Fl, Exterior - Concrete On East/West Walls	***No***	NAD (by NYS ELAP 198.1) by Albert Grohmann on 01/13/10
Analyst Description: OffWhite, Homogeneous, Non-Fibrous, Cementitious, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 100 %			

See Reporting notes on last page

PLM Bulk Asbestos Report

ECOS-09174.00.IN; Beaconwater Front; Red Flynn Dr.,
Beacon, NY

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
60	210011744-60	***No***	NAD
29	**Location:** Ground Fl, Exterior - Entry Door - Gray Caulking		(by NYS ELAP 198.6) by Albert Grohmann on 01/13/10
Analyst Description: Grey, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 10.2 %			
61	210011744-61	***No***	NAD
29	**Location:** Ground Fl, Exterior - Entry Door - Gray Caulking		(by NYS ELAP 198.6) by Albert Grohmann on 01/13/10
Analyst Description: Grey, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 17.1 %			
62	210011744-62	***Yes***	Trace (<0.25 % pc)
30	**Location:** Ground Fl, Exterior - West Wooden Windows - Glazing Compound		(ELAP 198.6; 400pc) by Albert Grohmann on 01/13/10
Analyst Description: OffWhite, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** Chrysotile <0.25 % pc **Other Material:** Non-fibrous 11.2 %			
63	210011744-63	***Yes***	Trace (<0.25 % pc)
30	**Location:** Ground Fl, Exterior - West Wooden Windows - Glazing Compound		(ELAP 198.6; 400pc) by Albert Grohmann on 01/13/10
Analyst Description: OffWhite, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** Chrysotile <0.25 % pc **Other Material:** Non-fibrous 30.3 %			

Reporting Notes:

Analyzed by: Albert Grohmann

*NAD/NSD =no asbestos detected; NA =not analyzed; NA/PS=not analyzed/positive stop; PLM Bulk Asbestos Analysis by EPA 600/M4-82-020 per 40 CFR 763 (NVLAP Lab Code 200546-0), ELAP PLM Method 198.1 for NY friable samples or 198.6 for NOB samples (NY ELAP Lab ID11480); Note:PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. NAD or Trace results by PLM are inconclusive, TEM is currently the only method that can be used to determine if this material can be considered or treated as non asbestos-containing in NY State (also see EPA Advisory for floor tile,FR 59,146,38970,8/1/94). National Institute of Standards and Technology Accreditation requirements mandate that this report must not be reproduced except in full without the approval of the lab. This PLM report relates ONLY to the items tested. AIHA Lab # 102843.

Reviewed By:

END OF REPORT

Table I
Summary of Bulk Asbestos Analysis Results
ECOS-09174.00.IN; Beaconwater Front; Red Flynn Dr., Beacon, NY

AmeriSci Sample #	Client Sample#	HG Area	Sample Weight (gram)	Heat Sensitive Organic %	Acid Soluble Inorganic %	Insoluble Non-Asbestos Inorganic %	** Asbestos % by PLM/DS	** Asbestos % by TEM
01	1	1	----	----	----	----	Chrysotile <0.25	NA
Location: 2nd Fl, Kitchen - Joint Compound								
02	2	1	----	----	----	----	Chrysotile <0.25	NA
Location: 1st Fl, Main Entry - Joint Compound								
03	3	1	----	----	----	----	Chrysotile <0.25	NA
Location: 1st Fl, Boiler Rm - Joint Compound								
04	4	2	----	----	----	----	NAD	NA
Location: 2nd Fl, Kitchen - Drywall								
05	5	2	----	----	----	----	NAD	NA
Location: 1st Fl, Boiler Rm - Drywall								
06	6	3	0.293	55.3	43.3	1.4	NAD	NAD
Location: 2nd Fl, Kitchen - 4 In Brown Covebase								
07	7	3	0.198	53.0	46.5	0.5	NAD	NAD
Location: 2nd Fl, Kitchen - 4 In Brown Covebase								
08	8	4	0.355	55.5	6.8	37.7	NAD	NAD
Location: 2nd Fl, Kitchen - 4 In Brown Covebase - Mastic (Yellow)								
09	9	4	0.821	54.1	7.4	38.5	NAD	NAD
Location: 2nd Fl, Kitchen - 4 In Brown Covebase - Mastic (Yellow)								
10	10	5	0.166	55.4	25.3	19.3	NAD	NAD
Location: 2nd Fl, Kitchen - Linoleum Flooring								
11	11	5	0.207	50.7	28.5	20.8	NAD	NAD
Location: 2nd Fl, Kitchen - Linoleum Flooring								
12	12	6	0.313	25.2	67.7	6.8	Chrysotile <0.25	Chrysotile <1.0
Location: 2nd Fl, Kitchen - Kitchen Sink - Black Sink Coating								
13	13	6	0.593	23.3	69.3	7.3	Chrysotile <0.25	Chrysotile Trace
Location: 2nd Fl, Kitchen - Kitchen Sink - Black Sink Coating								
14	14	7	----	----	----	----	NAD	NA
Location: 2nd Fl, Kitchen - Textured Ceiling Application								
15	15	7	----	----	----	----	NAD	NA
Location: 2nd Fl, Kitchen - Textured Ceiling Application								
16	16	7	----	----	----	----	NAD	NA
Location: 2nd Fl, Kitchen - Textured Ceiling Application								

See Reporting notes on last page

Table I
Summary of Bulk Asbestos Analysis Results
ECOS-09174.00.IN; Beaconwater Front; Red Flynn Dr., Beacon, NY

AmeriSci Sample #	Client Sample#	HG Area	Sample Weight (gram)	Heat Sensitive Organic %	Acid Soluble Inorganic %	Insoluble Non-Asbestos Inorganic %	** Asbestos % by PLM/DS	** Asbestos % by TEM
17	17	8	0.180	98.3	1.1	0.6	NAD	NAD
Location: 2nd Fl, Kitchen - Brown Formica Counter Top								
18	18	8	0.138	97.1	2.2	0.7	NAD	NAD
Location: 2nd Fl, Kitchen - Brown Formica Counter Top								
19	19	9	0.205	96.6	2.0	1.5	NAD	NAD
Location: 2nd Fl, Kitchen - White Formica Counter Top								
20	20	9	0.210	96.7	2.9	0.5	NAD	NAD
Location: 2nd Fl, Kitchen - White Formica Counter Top								
21	21	10	----	----	----	----	NAD	NA
Location: 2nd Fl, Bathroom - Floor Tile Grout								
22	22	10	----	----	----	----	NAD	NA
Location: 2nd Fl, Bathroom - Floor Tile Grout								
23	23	11	----	----	----	----	NAD	NA
Location: 2nd Fl, Bathroom - Wall Tile Grout								
24	24	11	----	----	----	----	NAD	NA
Location: 2nd Fl, Bathroom - Wall Tile Grout								
25	25	12	0.515	68.7	13.4	17.9	NAD	NAD
Location: 2nd Fl, Bathroom - Wall Tile Mastic								
26	26	12	0.510	71.0	2.9	26.1	NAD	NAD
Location: 2nd Fl, Bathroom - Wall Tile Mastic								
27	27	13	0.282	87.2	5.3	7.4	NAD	NAD
Location: 2nd Fl, Bathroom - Floral Design Wallpaper								
28	28	13	0.154	88.3	5.8	5.8	NAD	NAD
Location: 2nd Fl, Bathroom - Floral Design Wallpaper								
29	29	14	0.196	98.0	1.5	0.5	NAD	NAD
Location: 2nd Fl, Bathroom - Black Formica Sink Countertop								
30	30	14	0.218	98.2	1.4	0.5	NAD	NAD
Location: 2nd Fl, Bathroom - Black Formica Sink Countertop								
31	31	15	0.495	63.6	9.4	27.0	NAD	NAD
Location: 2nd Fl, Living Room - Window Glazing Compound								
32	32	15	0.424	63.4	9.0	27.6	NAD	NAD
Location: 2nd Fl, Living Room - Window Glazing Compound								

See Reporting notes on last page

Table I
Summary of Bulk Asbestos Analysis Results
ECOS-09174.00.IN; Beaconwater Front; Red Flynn Dr., Beacon, NY

AmeriSci Sample #	Client Sample#	HG Area	Sample Weight (gram)	Heat Sensitive Organic %	Acid Soluble Inorganic %	Insoluble Non-Asbestos Inorganic %	** Asbestos % by PLM/DS	** Asbestos % by TEM
33	33	16	----	----	----	----	NAD	NA
Location:	1st Fl, Bathroom - Green/Blue Wall Panel							
34	34	16	----	----	----	----	NAD	NA
Location:	1st Fl, Bathroom - Green/Blue Wall Panel							
35	35	17	----	----	----	----	NAD	NA
Location:	1st Fl, Bathroom - Yellow Tile Grout							
36	36	17	----	----	----	----	NAD	NA
Location:	1st Fl, Bathroom - Yellow Tile Grout							
37	37	18	0.301	54.2	13.0	32.9	NAD	NAD
Location:	1st Fl, Bathroom - Yellow Tile Mastic							
38	38	18	0.333	49.8	14.7	35.4	NAD	NAD
Location:	1st Fl, Bathroom - Yellow Tile Mastic							
39	39	19	----	----	----	----	NAD	NA
Location:	1st Fl, Bathroom - Floor Tile Grout							
40	40	19	----	----	----	----	NAD	NA
Location:	1st Fl, Bathroom - Floor Tile Grout							
41	41	20	0.491	18.3	21.8	59.9	NAD	NAD
Location:	1st Fl, Bathroom - Floor Tile Mastic							
42	42	20	0.381	14.2	22.6	63.3	NAD	NAD
Location:	1st Fl, Bathroom - Floor Tile Mastic							
43	43	21	----	----	----	----	NAD	NA
Location:	1st Fl, Boiler Room - Boiler Burner Gasket							
44	44	21	----	----	----	----	NAD	NA
Location:	1st Fl, Boiler Room - Boiler Burner Gasket							
45	45	22	----	----	----	----	NAD	NA
Location:	1st Fl, Boiler Room - Boiler Flue Packing							
46	46	22	----	----	----	----	NAD	NA
Location:	1st Fl, Boiler Room - Boiler Flue Packing							
47	47	22	----	----	----	----	NAD	NA
Location:	1st Fl, Boiler Room - Boiler Flue Packing							
48	48	23	0.275	49.1	17.1	33.8	NAD	NAD
Location:	1st Fl, Bottom Wall Of Stairs - Wooden Wall Panel Mastic							

See Reporting notes on last page

Table I
Summary of Bulk Asbestos Analysis Results
ECOS-09174.00.iN; Beaconwater Front; Red Flynn Dr., Beacon, NY

AmeriSci Sample #	Client Sample#	HG Area	Sample Weight (gram)	Heat Sensitive Organic %	Acid Soluble Inorganic %	Insoluble Non-Asbestos Inorganic %	** Asbestos % by PLM/DS	** Asbestos % by TEM
49	49	23	0.417	57.1	8.9	34.1	NAD	NAD
Location:	1st Fl, Bottom Wall Of Stairs - Wooden Wall Panel Mastic							
50	50	24	0.159	73.6	7.5	18.9	NAD	NAD
Location:	1st Fl, Main Entry - Linoleum Floor (Brown + Green)							
51	51	24	0.157	66.2	8.3	25.5	NAD	NAD
Location:	1st Fl, Main Entry - Linoleum Floor (Brown + Green)							
52	52	25	0.214	55.1	10.3	23.1	Chrysotile 11.5	NA
Location:	1st Fl, Open Space - Brown Linoleum Flooring							
53	53	25	0.208	49.0	10.1	40.9	NA/PS	NA
Location:	1st Fl, Open Space - Brown Linoleum Flooring							
54	54	26	0.285	62.1	7.4	18.3	Chrysotile 12.2	NA
Location:	1st Fl, Bedroom - Green Linoleum Flooring							
55	55	26	0.250	55.6	9.6	34.8	NA/PS	NA
Location:	1st Fl, Bedroom - Green Linoleum Flooring							
56	56	27	----	----	----	----	NAD	NA
Location:	Ground Fl, Exterior - Brick Mortar							
57	57	27	----	----	----	----	NAD	NA
Location:	Ground Fl, Exterior - Brick Mortar							
58	58	28	----	----	----	----	NAD	NA
Location:	Ground Fl, Exterior - Concrete On East/West Walls							
59	59	28	----	----	----	----	NAD	NA
Location:	Ground Fl, Exterior - Concrete On East/West Walls							
60	60	29	0.482	84.0	5.8	10.2	NAD	NAD
Location:	Ground Fl, Exterior - Entry Door - Gray Caulking							
61	61	29	0.444	76.8	6.1	17.1	NAD	NAD
Location:	Ground Fl, Exterior - Entry Door - Gray Caulking							
62	62	30	0.365	15.3	73.4	11.1	Chrysotile <0.25	Chrysotile Trace
Location:	Ground Fl, Exterior - West Wooden Windows - Glazing Compound							
63	63	30	0.228	18.9	50.9	30.2	Chrysotile <0.25	Chrysotile Trace
Location:	Ground Fl, Exterior - West Wooden Windows - Glazing Compound							

See Reporting notes on last page

Table I
Summary of Bulk Asbestos Analysis Results
ECOS-09174.00.IN; Beaconwater Front; Red Flynn Dr., Beacon, NY

AmeriSci Sample #	Client Sample#	HG Area	Sample Weight (gram)	Heat Sensitive Organic %	Acid Soluble Inorganic %	Insoluble Non-Asbestos Inorganic %	** Asbestos % by PLM/DS	** Asbestos % by TEM

Analyzed by: Roman Peysakhov; Date Analyzed 1/13/2010

**Quantitative Analysis (Semi/Full); Bulk Asbestos Analysis - PLM by EPA 600/M4-82-020 per 40 CFR or ELAP 198.1 for New York friable samples or ELAP 198.6 for New York NOB samples; TEM (Semi/Full) by EPA 600/R-93/116 (not covered by NVLAP Bulk accreditation); or ELAP 198.4 for New York samples; NAD = no asbestos detected during a quantitative analysis; NA = not analyzed; Trace = <1%; Quantitation for beginning weights of <0.1 grams should be considered as qualitative only; Qualitative Analysis: Asbestos analysis results of "Present" or "NVA = No Visible Asbestos" represents results for Qualitative PLM or TEM Analysis only (no accreditation coverage available from any regulatory agency for qualitative analyses); AIHA Lab # 102843, NVLAP Lab Code 200546-0, NYSDOH ELAP LAB ID 11480.

Warning Note: PLM limitation, only TEM will resolve fibers <0.25 micrometers in diameter. TEM bulk analysis is representative of the fine grained matrix material and may not be representative of non-uniformly dispersed debris for which PLM evaluation is recommended (i.e. soils and other heterogenous materials).

Reviewed By:

Adelaide Environmental Health Associates, Inc
1454 Rte. 22, Suite B202
Brewster, NY 10509
845-278-7710
845-278-7750 - fax

Site Address:	Date:	Inspector(s)
BEACON WATER FRONT RED FLYNN DR. BEACON, NY	1/11/10	JAMES REBER
	Project #: ECOS-09174.00-1N	

Sample ID #	Homogeneous Area	Floor Level	Sample Location/Description	Quantity (In Feet)	Friable NonFriable	Condition g, d, sd
1	1	2	KITCHEN - JOINT COMPOUND	5000 SF	F	D
2	1	1	MAIN ENTRY -	"	"	"
3	1	1	BOILER RM -	"	"	"
4	2	2	KITCHEN - DRYWALL 210011744	"	"	"
5	2	1	BOILER RM -	"	"	"
6	3	2	KITCHEN - 4IN BROWN COVEBASE	15 LF	NF	SD
7	3	2	"	"	"	"
8	4	2	" - MASTIC (YELLOW)	"	"	"
9	4	2	" "	"	"	"
10	5	2	- LINOLEUM FLOORING	240 SF	NF	D
11	5	2	"	"	"	"
12	6	2	- KITCHEN SINK - BLACK SINK COATING	3 SF	NF	G
13	6	2	" "	"	"	"

Special Instructions/ Turnaround Time:

24hr TAT

Stop at 1st Positive per Homogenous Area
Fax Results to 845-278-7750

Relinquished by:
Received by:
Relinquished by:
Received by:

1/12 1206

Adelaide Environmental Health Associates, Inc
1454 Rte. 22, Suite B202
Brewster, NY 10509
845-278-7710
845-278-7750 - fax

Site Address:	Date:	Inspector(s)
BEACON WATERFRONT CAD FLYNN DR. BEACON, NY	1/11/10	JAMES KEBER
	Project #: ECOS-09174.01-N.	

Sample ID #	Homogeneous Area	Floor Level	Sample Location/Description	Quantity (In Feet)	Friable NonFriable	Condition g, d, sd
14	7	2	KITCHEN – TEXTURED CEILING APPLICATION	700 SF	F	G
15	7	2	–	"	"	"
16	7	2	–	"	"	"
17	8	2	– BROWN FORMICA COUNTER TOP	20 SF	NF	G
18	8	2	–	"	"	"
19	9	2	– WHITE FORMICA COUNTER TOP	15 SF	NF	G
20	9	2	–	"	"	"
21	10	2	BATHROOM – FLOOR TILE GROUT	30 SF	F	G
22	10	2	–	"	"	"
23	11	2	– WALL TILE GROUT 210011744	200 SF	F	D
24	11	2	–	"	"	"
25	12	2	– WALL TILE MASTIC	"	"	"
26	12	2	–	"	"	"

Special Instructions/ Turnaround Time: 24 hr TAT

Stop at 1st Positive per Homogenous Area
Fax Results to 845-278-7750

Relinquished by:
Received by:
Relinquished by:
Received by: 1/12 1206

Adelaide Environmental Health Associates, Inc
1454 Rte. 22, Suite B202
Brewster, NY 10509
845-278-7710
845-278-7750 - fax

Site Address: BEACON WATERFRONT
RED FLYNN PL
BEACON NY

Date: 1/11/10

Inspector(s): JAMES REGAN

Project #: ECOS-09174.00-IN

Sample ID #	Homogeneous Area	Floor Level	Sample Location/Description	Quantity (In Feet)	Friable NonFriable	Condition g, d, sd
27	13	2	BATHROOM – FLORAL DESIGN WALL PAPER	120SF	NF	D
28	13	2	" – "	"	"	"
29	14	2	" – BLACK FORMICA SINK COUNTERTOP	24SF	NF	G
30	14	2	" – "	"	"	"
31	15	2	LIVING ROOM – WINDOW GLAZING COMPOUND	300LF	NF	G
32	15	2	" – "	"	"	"
33	16	1	BATHROOM – GREEN/BLUE WALL PANEL	100SF	F	D
34	16	1	" – "	"	"	"
35	17	1	" – YELLOW TILE GROUT	100SF	F	D
36	17	1	" – "	"	"	"
37	19	1	" – YELLOW TILE MASTIC	"	NF	"
38	19	1	" – "	"	"	"
39	19	1	" – FLOOR TILE-GROUT	40	F	D

2100011744

Special Instructions/ Turnaround Time: 24 hr TAT

Stop at 1st Positive per Homogenous Area
Fax Results to 845-278-7750

Relinquished by:
Received by:
Relinquished by:
Received by: 1/12 1206

Adelaide Environmental Health Associates, Inc
1454 Rte. 22, Suite B202
Brewster, NY 10509
845-278-7710
845-278-7750 - fax

Site Address:	Date:	Inspector(s)
BEACON WATERFRONT RED FLYNN DR. BEACON, NY	1/11/10	J. REBER
	Project #: ECOS-09174.00-IN	

Sample ID #	Homogeneous Area	Floor Level	Sample Location/Description	Quantity (In Feet)	Friable NonFriable	Condition g, d, sd
40	19	1	BATHROOM - FLOOR TILE - GROUT	40 SF	F	D
41	20	1	" - " - MASTIC	"	"	"
42	20	1	" - " - "	"	"	"
43	21	1	BOILER ROOM - BOILER BURNER GASKET	1 SF	F	G
44	21	1	" - "	"	"	"
45	22	1	" - BOILER FLUE PACKING	2 SF	F	G
46	22	1	" - 21001174	"	"	"
47	22	1	" - "	"	"	"
48	23	1	BOTTOM WALL OF STAIRS - WOODEN WALL PANEL MASTIC	300 SF	NF	G
49	23	1	" - "	"	"	"
50	24	1	MAIN ENTRY - LINOLEUM FLOOR (BROWN + GREEN)	20 SF	NF	D
51	24	1	" - "	"	"	"
52	25	1	OPEN SPACE - BROWN LINOLEUM FLOORING	400 SF	NF	D

Special Instructions/ Turnaround Time:

Stop at 1st Positive per Homogenous Area
Fax Results to 845-278-7750

24 hr

Relinquished by:

Received by:

Relinquished by:

Received by:

1/12 1206

Adelaide Environmental Health Associates, Inc
1454 Rte. 22, Suite B202
Brewster, NY 10509
845-278-7710
845-278-7750 - fax

Site Address:	Date:	Inspector(s)
BEACON WATERFRONT RED FLYNN DR BEACON, NY	1/11/10	JAMES KERR
	Project #: ECOS-09174.00-IN	

Sample ID #	Homogeneous Area	Floor Level	Sample Location/Description	Quantity (In Feet)	Friable NonFriable	Condition g, d, sd
53	25	1	OPEN SPACE - BROWN LINOLEUM FLOORING	400	NF	D
54	26	1	BEDROOM - GREEN LINOLEUM FLOORING	220	"	"
55	26	1	↓ - ↓	"	"	"
56	27	6	EXTERIOR - BRICK MORTAR	1000	F	D
57	27	6	- ↓	"	"	"
58	28	6	- CONCRETE ON EAST/WEST WALLS	1000	F	G
59	28	6	- ↓	"	"	"
60	29	6	- ENTRY DOOR - GRAY CAULKING	300LF	NF	D
61	29	6	- ↓ - ↓	"	"	"
62	30	6	- WEST WOODEN WINDOWS - GLAZING COMPOUND	100LF	F	SD
63	30	6	- ↓ - ↓	"	"	"
			210011744			

Special Instructions/ Turnaround Time:

24 hr TAT

Stop at 1st Positive per Homogenous Area
Fax Results to 845-278-7750

Relinquished by:
Received by:
Relinquished by:
Received by:

1/12 1206

01/27/2010 10:53 2126793114 AMERISCI PAGE 02/05

Table I
Summary of Bulk Asbestos Analysis Results
ECOS:09174.00-IN; Beacon Waterfront; Red Flynn Drive, Beacon, NY

AmeriSci Sample #	Client Sample#	HG Area	Sample Weight (gram)	Heat Sensitive Organic %	Acid Soluble Inorganic %	Insoluble Non-Asbestos Inorganic %	** Asbestos % by PLM/DS	** Asbestos % by TEM
01	1	1	0.663	24.7	12.7	62.6	NAD	NAD
Location: Roof, White 3 Tab Asphalt Shingles Top Layer On Roof								
02	2	1	0.588	23.5	7.8	68.7	NAD	NAD
Location: Roof, White 3 Tab Asphalt Shingles Top Layer On Roof								
03	3	1	0.518	22.6	69.9	7.5	NAD	NAD
Location: Roof, White 3 Tab Asphalt Shingles Top Layer On Roof								
04	4	2	0.683	42.2	9.1	48.8	NAD	NAD
Location: Roof, Black 3 Tab Asphalt Shingles Next Layer Under Top White Shingle Layer								
05	5	2	0.733	35.7	13.1	51.2	NAD	NAD
Location: Roof, Black 3 Tab Asphalt Shingles Next Layer Under Top White Shingle Layer								
06	6	2	0.514	34.6	11.1	54.3	NAD	NAD
Location: Roof, Black 3 Tab Asphalt Shingles Next Layer Under Top White Shingle Layer								
07	7	3	0.265	97.7	0.8	1.5	NAD	NAD
Location: Roof, Black Roofing Asphalt Paper Under Black Asphalt Shingles On Top Of Roof Decking								
08	8	3	0.227	96.9	1.3	1.8	NAD	NAD
Location: Roof, Black Roofing Asphalt Paper Under Black Asphalt Shingles On Top Of Roof Decking								
09	9	3	0.302	97.4	0.7	2.0	NAD	NAD
Location: Roof, Black Roofing Asphalt Paper Under Black Asphalt Shingles On Top Of Roof Decking								
10	10	4	0.536	25.0	6.4	68.6	NAD	NAD
Location: Roof, Brown Starter Asphalt Shingles Around Perimeter Of Bldg								
11	11	4	0.722	27.4	11.1	61.5	NAD	NAD
Location: Roof, Brown Starter Asphalt Shingles Around Perimeter Of Bldg								
12	12	5	0.852	30.2	46.6	23.2	NAD	NAD
Location: Roof, White Caulk Used @ Step Flashing At Chimney, Plumbing Vents, Antenna Bases & Guide Wire Anchors								
13	13	5	0.688	35.2	51.5	13.4	NAD	NAD
Location: Roof, White Caulk Used @ Step Flashing At Chimney, Plumbing Vents, Antenna Bases & Guide Wire Anchors								
14	14	5	0.351	17.9	74.1	8.0	NAD	NAD
Location: Roof, White Caulk Used @ Step Flashing At Chimney, Plumbing Vents, Antenna Bases & Guide Wire Anchors								

See Reporting notes on last page

01/27/2010 10:53 2126793114 AMERISCI PAGE 03/05

Table I
Summary of Bulk Asbestos Analysis Results
ECOS:09174.00-IN; Beacon Waterfront; Red Flynn Drive, Beacon, NY

AmeriSci Sample #	Client Sample#	HG Area	Sample Weight (gram)	Heat Sensitive Organic %	Acid Soluble Inorganic %	Insoluble Non-Asbestos Inorganic %	** Asbestos % by PLM/DS	** Asbestos % by TEM

Analyzed by: Roman Paysakhov_____; Date Analyzed 1/27/2010

**Quantitative Analysis (Semi/Full); Bulk Asbestos Analysis - PLM by EPA 600/M4-82-020 per 40 CFR or ELAP 198.1 for New York friable samples or ELAP 198.6 for New York NOB samples; TEM (Semi/Full) by EPA 600/R-93/116 (not covered by NVLAP Bulk accreditation); or ELAP 198.4 for New York samples; NAD = no asbestos detected during a quantitative analysis; NA = not analyzed; Trace = <1%; Quantitation for beginning weights of <0.1 grams should be considered as qualitative only; Qualitative Analysis: Asbestos analysis results of "Present" or "NVA = No Visible Asbestos" represents results for Qualitative PLM or TEM Analysis only (no accreditation coverage available from any regulatory agency for qualitative analyses); AIHA Lab # 102843, NVLAP Lab Code 200546-0, NYSDOH ELAP LAB ID 11480.

Warning Note: PLM limitation, only TEM will resolve fibers <0.25 micrometers in diameter. TEM bulk analysis is representative of the fine grained matrix material and may not be representative of non-uniformly dispersed debris for which PLM evaluation is recommended (i.e. soils and other heterogenous materials).

Reviewed By:_____

Adelaide Environmental Health Associates, Inc
1511 Route 22, Suite C24
Brewster, NY 10509
845-278-7710
845-278-7750 - fax

210013307

Site Address: Beacon Waterfront	Date: 01/26/10	Inspector(s) John DiVernieri
Red Flynn Drive		
Beacon, NY	Project #: ECOS:09174.00-IN	

Sample ID #	Homogeneous Area	Floor Level	Sample Location/Description	Quantity (In Feet)	Friable NonFriable	Condition g, d, sd
1	1	Roof	White 3 Tab asphalt Shingles. Top Layer on Roof	1720 SF	NF	d
2	1	Roof	↓	1720 SF	NF	d
3	1	Roof	↓	1720 SF	NF	d
4	2	Roof	Black 3 tab asphalt shingles. Next Layer under Top white shingle layer	1720 SF	NF	d
5	2	Roof	↓	1720 SF	NF	d
6	2	Roof	↓	1720 SF	NF	d
7	3	Roof	Black, Roofing Asphalt paper, under Black Asphalt Shingles on top of Roof Decking	1720 SF	NF	d
8	3	Roof	↓	1720 SF	NF	d
9	3	Roof	↓	1720 SF	NF	d
10	4	Roof	Brown Starter Asphalt Shingles. Around perimeter of Bldg	150 LF	NF	d
11	4	Roof	↓	150 LF	NF	d
12	5	Roof	White caulk used @ step flashing at chimney, plumb. vents, antenna bases, & Guide wire anchors.	8 LF	NF	d
13	5	Roof	↓	8 LF	NF	d

Special Instructions/ Turnaround Time:

Test NOB's by PLM first
Stop at 1st Positive per Homogenous Area
Fax Results to 845-278-7750
E-Mail Results to AdelaideLabResults@adelaidellc.com
24 hr TAT

Relinquished by: [signature] 1-26-10
Received by:
Relinquished by:
Received by: [signature] 1/26 1647

1 of 2

01/27/2010 10:53 2126743114 AMERISCI PAGE 04/05

Adelaide Environmental Health Associates, Inc
1511 Route 22, Suite C24
Brewster, NY 10509
845-278-7710
845-278-7750 - fax

Site Address:		Date:	Inspector(s)
Beacon Waterfront		01/26/10	John DiVernieri
Red Flynn Drive			
Beacon, NY		Project #: ECOS:09174.00-IN	

Sample ID #	Homogeneous Area	Floor Level	Sample Location/Description	Quantity (In Feet)	Friable NonFriable	Condition g, d, sd
14	5	Roof	white caulk used at Step flashing at chimney, plumbing vents, Antenna bases, & Guide wire anchors.	8 LF	NF	d
			210013307			

Special Instructions/ Turnaround Time:

Test NOB's by PLM first
Stop at 1st Positive per Homogenous Area
Fax Results to 845-278-7750
24 hr TAT
E-Mail Results to AdelaideLabResults@adelaidellc.com

Relinquished by: 1-26-10
Received by:
Relinquished by:
Received by: 1/26 1647

2 of 2

01/27/2010 10:53 2126753114 AMERISCI PAGE 05/05

AmeriSci New York
117 EAST 30TH ST.
NEW YORK, NY 10016
TEL: (212) 679-8600 • FAX: (212) 679-3114

PLM Bulk Asbestos Report

Adelaide Environmental Health
Attn: John Soter
1511 Rte. 22 Suite C24

Brewster, NY 10509

Date Received 01/26/10 **AmeriSci Job #** 210013307
Date Examined 01/27/10 **P.O. #**
ELAP # 11480 **Page** 1 **of** 3
RE: ECOS:09174.00-IN; Beacon Waterfront; Red Flynn Drive, Beacon, NY

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
1	210013307-01	*No*	NAD
1	**Location:** Roof, White 3 Tab Asphalt Shingles Top Layer On Roof		(by NYS ELAP 198.6) by Karol H. Lu on 01/27/10
Analyst Description: Black, Homogeneous, Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Fibrous glass 2 %, Non-fibrous 60.6 %			
2	210013307-02	*No*	NAD
1	**Location:** Roof, White 3 Tab Asphalt Shingles Top Layer On Roof		(by NYS ELAP 198.6) by Karol H. Lu on 01/27/10
Analyst Description: Black, Homogeneous, Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Fibrous glass 2 %, Non-fibrous 66.7 %			
3	210013307-03	*No*	NAD
1	**Location:** Roof, White 3 Tab Asphalt Shingles Top Layer On Roof		(by NYS ELAP 198.6) by Karol H. Lu on 01/27/10
Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 7.5 %			
4	210013307-04	*No*	NAD
2	**Location:** Roof, Black 3 Tab Asphalt Shingles Next Layer Under Top White Shingle Layer		(by NYS ELAP 198.6) by Karol H. Lu on 01/27/10
Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 48.8 %			
5	210013307-05	*No*	NAD
2	**Location:** Roof, Black 3 Tab Asphalt Shingles Next Layer Under Top White Shingle Layer		(by NYS ELAP 198.6) by Karol H. Lu on 01/27/10
Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 51.2 %			

See Reporting notes on last page

PLM Bulk Asbestos Report

ECOS:09174.00-IN; Beacon Waterfront; Red Flynn Drive, Beacon, NY

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
6	210013307-06	***No***	NAD
2	**Location:** Roof, Black 3 Tab Asphalt Shingles Next Layer Under Top White Shingle Layer		(by NYS ELAP 198.6) by Karol H. Lu on 01/27/10
Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 54.3 %			
7	210013307-07	***No***	NAD
3	**Location:** Roof, Black Roofing Asphalt Paper Under Black Asphalt Shingles On Top Of Roof Decking		(by NYS ELAP 198.6) by Karol H. Lu on 01/27/10
Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 1.5 %			
8	210013307-08	***No***	NAD
3	**Location:** Roof, Black Roofing Asphalt Paper Under Black Asphalt Shingles On Top Of Roof Decking		(by NYS ELAP 198.6) by Karol H. Lu on 01/27/10
Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 1.8 %			
9	210013307-09	***No***	NAD
3	**Location:** Roof, Black Roofing Asphalt Paper Under Black Asphalt Shingles On Top Of Roof Decking		(by NYS ELAP 198.6) by Karol H. Lu on 01/27/10
Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 2 %			
10	210013307-10	***No***	NAD
4	**Location:** Roof, Brown Starter Asphalt Shingles Around Perimeter Of Bldg		(by NYS ELAP 198.6) by Karol H. Lu on 01/27/10
Analyst Description: Black, Homogeneous, Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Fibrous glass 1 %, Non-fibrous 67.6 %			
11	210013307-11	***No***	NAD
4	**Location:** Roof, Brown Starter Asphalt Shingles Around Perimeter Of Bldg		(by NYS ELAP 198.6) by Karol H. Lu on 01/27/10
Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 61.5 %			

See Reporting notes on last page

AmeriSci Job #: **210013307**
Client Name: Adelaide Environmental Health

PLM Bulk Asbestos Report

ECOS:09174.00-IN; Beacon Waterfront; Red Flynn Drive, Beacon, NY

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
12	210013307-12	***No***	NAD
5	**Location:** Roof, White Caulk Used @ Step Flashing At Chimney, Plumbing Vents, Antenna Bases & Guide Wire Anchors		(by NYS ELAP 198.6) by Karol H. Lu on 01/27/10
	Analyst Description: White, Homogeneous, Non-Fibrous, Bulk Material		
	Asbestos Types:		
	Other Material: Non-fibrous 23.2 %		
13	210013307-13	***No***	NAD
5	**Location:** Roof, White Caulk Used @ Step Flashing At Chimney, Plumbing Vents, Antenna Bases & Guide Wire Anchors		(by NYS ELAP 198.6) by Karol H. Lu on 01/27/10
	Analyst Description: White, Homogeneous, Non-Fibrous, Bulk Material		
	Asbestos Types:		
	Other Material: Non-fibrous 13.4 %		
14	210013307-14	***No***	NAD
5	**Location:** Roof, White Caulk Used @ Step Flashing At Chimney, Plumbing Vents, Antenna Bases & Guide Wire Anchors		(by NYS ELAP 198.6) by Karol H. Lu on 01/27/10
	Analyst Description: White, Homogeneous, Non-Fibrous, Bulk Material		
	Asbestos Types:		
	Other Material: Non-fibrous 8 %		

Reporting Notes:

Analyzed by: Karol H. Lu

*NAD/NSD =no asbestos detected; NA =not analyzed; NA/PS=not analyzed/positive stop; PLM Bulk Asbestos Analysis by EPA 600/M4-82-020 per 40 CFR 763 (NVLAP Lab Code 200546-0), ELAP PLM Method 198.1 for NY friable samples or 198.6 for NOB samples (NY ELAP Lab ID11480); Note:PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. NAD or Trace results by PLM are inconclusive, TEM is currently the only method that can be used to determine if this material can be considered or treated as non asbestos-containing in NY State (also see EPA Advisory for floor tile,FR 59,146,38970,8/1/94). National Institute of Standards and Technology Accreditation requirements mandate that this report must not be reproduced except in full without the approval of the lab. This PLM report relates ONLY to the items tested. AIHA Lab # 102843.

Reviewed By:

END OF REPORT

PAGE 05/06
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2126793114
01/27/2010 08:35

Adelaide Environmental Health Associates, Inc
1511 Route 22, Suite C24
Brewster, NY 10509
845-278-7710
845-278-7750 - fax

210013307

Site Address: Beacon Waterfront	Date: 01/26/10	Inspector(s) John DiVernieri
Red Flynn Drive		
Beacon, NY	Project #: ECOS:09174.00-IN	

Sample ID #	Homogeneous Area	Floor Level	Sample Location/Description	Quantity (In Feet)	Friable NonFriable	Condition g, d, sd
1	1	Roof	White 3 Tab asphalt Shingles. Top Layer on Roof	1720 SF	NF	d
2	1	Roof	↓	1720 SF	NF	d
3	1	Roof	↓	1720 SF	NF	d
4	2	Roof	Black 3 Tab asphalt shingles. Next Layer under Top white Shingle layer	1720 SF	NF	d
5	2	Roof	↓	1720 SF	NF	d
6	2	Roof	↓	1720 SF	NF	d
7	3	Roof	Black, Roofing Asphalt paper, under Black Asphalt Shingles on top of Roof Decking	1720 SF	NF	d
8	3	Roof	↓	1720 SF	NF	d
9	3	Roof	↓	1720 SF	NF	d
10	4	Roof	Brown Starter Asphalt Shingles. Around perimeter of Bldg	180 LF	NF	d
11	4	Roof	↓	180 LF	NF	d
12	5	Roof	White caulk used @ step flashing at chimneys, plumb. vents, antenna bases, & Guide wire anchors.	8 LF	NF	d
13	5	Roof	↓	8 LF	NF	d

Special Instructions/ Turnaround Time:

Test NOB's by PLM first
Stop at 1st Positive per Homogenous Area **24 hr TAT**
Fax Results to 845-278-7750
E-Mail Results to AdelaideLabResults@adelaidellc.com

Relinquished by: [signature] 1-26-10
Received by:
Relinquished by:
Received by: [signature] 1/26 1647

PAGE 05/06
AMERISCI
2126793114
01/27/2010 08:35

Adelaide Environmental Health Associates, Inc
1511 Route 22, Suite C24
Brewster, NY 10509
845-278-7710
845-278-7750 - fax

Site Address: Beacon Waterfront	Date: 01/26/10	Inspector(s) John DiVernieri
Red Flynn Drive		
Beacon, NY	Project #: ECOS:09174.00-IN	

Sample ID #	Homogeneous Area	Floor Level	Sample Location/Description	Quantity (In Feet)	Friable NonFriable	Condition g. d. sd
14	5	Roof	white caulk used at Step flashing at chimney, plumbing vents, Antenna bases, & Guide wire anchors.	8 LF	NF	d

21001330 7

Special Instructions/ Turnaround Time:

Test NOB's by PLM first
Stop at 1st Positive per Homogenous Area ***24 hr TAT***
Fax Results to 845-278-7750
E-Mail Results to AdelaideLabResults@adelaidellc.com

Relinquished by: 1-26-10
Received by:
Relinquished by:
Received by: 1600 1647

APPENDIX B

LEAD BASED PAINT DATA SHEETS

Adelaide

Environmental Health Associates,Inc
1454 Route 22, #B202, Brewster, NY 10509
Phone:845.278.7710 Fax:845.278.7750

LBP TESTING DATA SHEET

Address: BEACON WATER FRONT, RIDGE FLYNN DR., BEACON, NY
Project#: ECOS-09179.00-LN
Date: 1/11/10
Work Area:
Inspector: JAMES REGER

Assay #	Room	Component	Color	Substrate	XRF Reading (mg/cm2)	Classification (Pos, Neg, Inc)
1		CALIBRATE			1.0	
2					1.0	
3					1.0	
4	KITCHEN	WALL	GREEN	DRYWALL	0.2	NEG
5	"	CEILING	WHITE	"	0.1	NEG
6	LIVING RM	"	"	"	0.2	NEG
7	"	WINDOW FRAME	"	WOOD	0.0	
8	"	WALL	"	DRYWALL	0.2	
9	BEDROOM	"	PEACH	"	0.2	
10	"	WINDOW FRAME	"	WOOD	0.1	
11	"	CEILING	WHITE	DRYWALL	0.0	
12	BATHROOM	FLOOR TILES	BLUE	CERAMIC	0.1	
13	"	WALL TILES	LT. YELLOW	"	5.2	POS
14	BEDROOM	WALL	PINK	DRYWALL	0.0	NEG
15	ENTRY	WALL	WHITE	"	0.1	
16	OPEN SPACE	CEILING	"	"	0.1	
17	BATHROOM	WALL TILE	YELLOW	CERAMIC	1.6	POS
18	"	FLOOR TILE	TAN/BROWN	"	0.1	NEG
19	EXTERIOR	WEST WINDOW FRAME	WHITE	WOOD	0.0	
20	"	"	"	"	0.0	
21	1ST FLOOR	RADIATOR	BROWN	STEEL	0.1	
22	2ND FLR.	"	WHITE	"	0.0	
23	KITCHEN	BASEBOARD	GREEN	WOOD	0.1	
24	"	WINDOW FRAME	"	"	0.0	
25	BED ROOM	RADIATOR	BRASS	STEEL	0.1	
26		CALIBRATE			1.0	
27					1.1	
28					1.0	

APPENDIX C

PHOTOS OF ASBESTOS CONTAINING MATERIAL



Brown Linoleum Flooring – Chrysotile 11.5%



Green Linoleum Flooring – Chrysotile 12.2%

APPENDIX D

PERSONNEL AND LABORATORY CERTIFICATIONS

NEW YORK STATE - DEPARTMENT OF LABOR
DIVISION OF SAFETY AND HEALTH
LICENSE AND CERTIFICATE UNIT
STATE CAMPUS BUILDING 12
ALBANY, NY 12240

ASBESTOS HANDLING LICENSE

Adelaide Environmental Health Associates, Inc.
Suite C24
1511 Route 22

Brewster, NY 10509

FILE NUMBER: 99-0656
LICENSE NUMBER: 29305
LICENSE CLASS: RESTRICTED
DATE OF ISSUE: 07/08/2009
EXPIRATION DATE: 07/31/2010

Duly Authorized Representative – John Soter

This license has been issued in accordance with applicable provisions of Article 30 of the Labor Law of New York State and of the New York State Codes, Rules and Regulations (12 NYCRR Part 56). It is subject to suspension or revocation for a (1) serious violation of state, federal or local laws with regard to the conduct of an asbestos project, or (2) demonstrated lack of responsibility in the conduct of any job involving asbestos or asbestos material.

This license is valid only for the contractor named above and this license or a photocopy must be prominently displayed at the asbestos project worksite. This license verifies that all persons employed by the licensee on an asbestos project in New York State have been issued an Asbestos Certificate, appropriate for the type of work they perform, by the New York State Department of Labor.

Maureen A. Cox, Director
FOR THE COMMISSIONER OF LABOR

SH 432 (4-07)

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER
RICHARD F. DAINES, M.D.

Expires 12:01 AM April 01, 2010
Issued April 01, 2009

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. PAUL MUCHA
AMERICA SCIENCE TEAM NEW YORK INC
117 EAST 30TH ST
NEW YORK, NY 10016

NY Lab Id No: 11480
EPA Lab Code: NY01378

is hereby APPROVED as an Environmental Laboratory for the category
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved subcategories and/or analytes are listed below:

Miscellaneous

Asbestos in Friable Material	EPA 600/M4/82/020
	Item 198.1 of Manual
Asbestos in Non-Friable Material-PLM	Item 198.6 of Manual (NOB by PLM)
Asbestos in Non-Friable Material-TEM	ITEM 198.4 OF MANUAL

Serial No.: 38968

Property of the New York State Department of Health. Valid only at the address shown. Must be conspicuously posted. Valid certificates have a raised seal. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify laboratory's accreditation status.

STATE OF NEW YORK - DEPARTMENT OF LABOR

ASBESTOS CERTIFICATE



JAMES J REBER
CLASS(EXPIRES)
C ATEC(02/10) D INSP(02/10)
H PM (02/10) I PD (02/10)

(06-03268)
[illegible] 751422435

MUST BE CARRIED ON ASBESTOS PROJECTS

EYES BRO
HAIR BRO
HGT 5' 11"

IF FOUND RETURN TO:
NYSDOL - L&C UNIT
ROOM 161A BUILDING 12
STATE OFFICE CAMPUS
ALBANY NY 12240

STATE OF NEW YORK - DEPARTMENT OF LABOR

ASBESTOS CERTIFICATE



JOHN A DIVERNIERI JR
CLASS(EXPIRES)
D INSP(09/10)

CERT# 06-0514
DMV# 382278841

MUST BE CARRIED ON ASBESTOS PROJECTS

United States Environmental Protection Agency

This is to certify that

Adelaide Environmental Health Associates Inc

has fulfilled the requirements of the Toxic Substances Control Act (TSCA) Section 402(a)(1), and has received certification to conduct lead-based paint activities pursuant to 40 CFR Part 745.226.

In the Jurisdiction of:

New York

This certification is valid from the date of issuance and expires March 6, 2010

NY-15081-1

Certification #

FEB 22 2007

Issued On

Kenneth S. Stoller, P.E., QEP, DEE, Chief

Pesticides & Toxic Substances Branch

RMD

44 Hunt Street Watertown, MA 02472

Leak Test Certificate

Customer: Adelaide Env,Health Assoc.

System: LPA-1 **Serial Number:** 2695 **Test Date:** 31 Dec 09

Source Manufacturer: IPL. **Source Model:** CUS
Active Material: CO^{57} **Source Activity:** 444 MBq
Source Serial Num.: G5-406
Assay Date: 31 Dec 09
Source Enclosure: Stainless Steel in Tungsten Holder

Type of Test: Wipe

Areas Tested and Results: Front and Sides of Bezel

Results:
All Below .005 µCi

Test Performed By:

MC170C

RMD Instruments, LLC

CERTIFICATION

Dear Customer:

This is to certify that the old radioactive source, previously installed in your LPA-1 XRF analyzer, has been removed for decommissioning as part of the resource process of your unit.

The old source, Co-57, will be disposed in accordance with all applicable rules and regulations.

Model: LPA-1 ✓ LTR1000_____

LPA-1 Serial Number: 2695

Source Model: IPL

Source Serial Number F2-313

Date of Removal: 12/29/09

Performed By: JN

If you have any question please do not hesitate to contact us at 617-668-6901 or lpa@rmdinc.com.

Sincerely,
Radiation Safety Department
RMD Instruments, LLC

44 Hunt Street, Watertown, MA 02472-4699 ◦ (617) 668-6901 ◦ Fax (617) 926-9743 ◦ www.rmdinc.com

RMD Instruments, LLC

Change in the Leak Test interval requirements

To: All RMD Customers
From: RMD's Radiation Safety Department
Date: July 30, 2007
Re: Changes in Leak Test interval requirements

As a part of the requirements for the possession of a device containing a sealed radioactive source, a licensee must perform scheduled leak tests of such device (source) at specified intervals per the device's SS&D certification.

The State of Massachusetts, the licensing authority, has amended the LPA-1 analyzer's SS&D certification, MA-0573-D-103-B.

Per RMD's request, based on the number of sources used over the years and the safety track record of the LPA-1, the State has modified the required interval for a Leak Test from 6 months to 12 months.

This change in the Leak Test interval requirement applies to all LPA-1 XRF analyzers shipped from RMD as of August 1, 2007.

If there is a question regarding this notification, please contact RMD's radiation safety department at Service@RMDInc.com or call us at 617-668-6901.

Respectfully,
Radiation Safety Department
RMD Instruments, LLC

44 Hunt Street, Watertown, MA 02472-4699 • (617) 668-6900 • Fax (617) 926-9743 • www.rmd-lpa1.com

RMD Instruments, LLC

LPA-1 XRF Analyzer Package Shipment

This is to certify that this package conforms to all packaging requirements of the U.S. Department of Transportation (DOT) and International Air Transport Association rules and regulations regarding the shipment of Radioactive Materials.

This package confirms to the conditions and limitations specified in 49 CFR 173.424 for Excepted Package, Radioactive Material, Instruments and Articles, UN 2911 and also IATA Section 10.5.9.5.

The radiation level at the surface of this package is less than 5 μSv (0.5 mRem/hr).

No label is required.

This letter should accompany the package during transportation at all times.

For Hazard Material Emergency Call

RMD Instruments, LLC

800-476-0652

44 Hunt Street, Watertown, MA 02472-4699 • (617) 668-6901 • Fax (617) 926-9743 • www.rmdinc.com

User Manual Attachment for the new Firmware version

Time Corrected Mode:

The LPA-1 can now operate in either of three measurement modes, Standard Mode, Quick Mode, or Time Corrected Mode (TC). Time Corrected Mode is a Standard Mode 30-Secs measurement corrected for the decay of the source. The user can use this mode for Calibration shots at the beginning and at the end of a job.

Example: After 9 months the measurement time in the TIME CORRECTED MODE will be 60-Secs.

To Set the LPA-1 in the Time Corrected Mode:

1. Pull the trigger briefly or press any key to obtain a READY message.
2. Press SELECT MODE key. LPA-1 will display "QUICK MODE", "STD MODE XX" or "TIME CORRECTED" depending on the present setting.
3. Press the Select Mode key (toggle between the operation modes) until the TIME CORRECTED mode is displayed. on the analyzer
4. The LPA-1 is now set to TIME CORRECTED Mode and ready to take measurement.

Changing the Abatement Level:

Changing the abatement level should be accomplished at the beginning of a job prior taking any measurement. An attempt to change the abatement level after a measurement is taken will result in an analyzer prompt message "ACCESS DENIED" and return to the "READY" mode.

Changing the Date & Time:

Setting the date and time in the LPA-1 analyzer is only possible after a system RESET. An attempt to change the date and time at any other condition, will result in an analyzer prompt message "ACCESS DENIED" and return to the "READY" mode.

Changing the Measurement Mode in Average:

Changing the Measurement Mode (STD, QM, TC) is not possible in the middle of an average set measurements. The user may change the operation mode after completion of the measurements and display of the average value on the screen.

Starting a New Unit in Average:

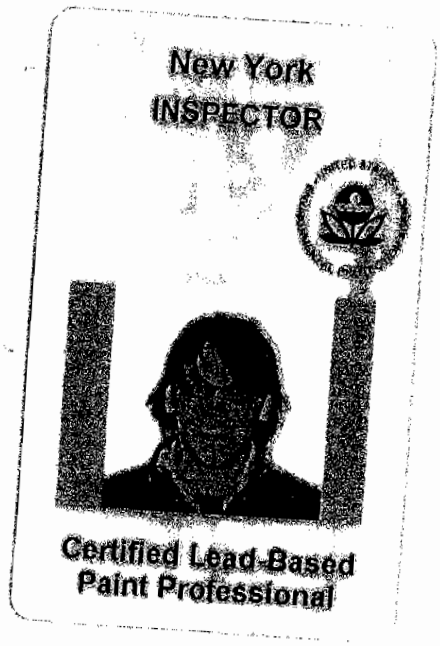
Starting a NEW UNIT is not possible when the LPA-1 is in the Average Mode. The Analyzer will display the prompt message "ACCESS DENIED" in this condition. To start a New Unit the Average Mode should be deactivated, by pressing the Average key.

Deleting Readings in Average Mode:

Deleting one reading in Average Mode is no longer possible. The Delete function during an average mode measurement will result in deleting the entire set of readings. Deleting more than one reading or one set of readings in Average Mode is still not possible. The message "DELETE DENIED" will be displayed.

Time Out in Standard Mode Measurement:

LPA-1 analyzer now shows the remaining time for the completion of a measurement in the Standard Mode. For example; for a 30 second measurement in Standard Mode 30-Secs the analyzer displays TIME LEFT 29 OF 30 and counts down to TIME LEFT 1 OF 30, end of measurement.



Certification No NY-I-16155-1

Date of Birth	Expiration Date
02/21/1982	02/01/2011

Address
412 Franklin St
Buffalo, NY 14202

Badge Holder's Name
James J. Reber

Badge Holder's Signature

If found, drop in any mailbox
Postmaster: Please return to:
US EPA
1200 Pennsylvania Ave, NW
(MC-7404OT)
Washington, DC 20460
or call 1-800-424-LEAD

APPENDIX E

Specifications for Park Construction and Bid Set (Provided on CD)

APPENDIX F

Copies of Relevant Specifications and Design Drawings

SECTION 026100

EXCAVATION AND DISPOSAL OF CONTAMINATED SOILS

SECTION 1 - SUMMARY OF WORK

1.1 PROJECT SUMMARY

A. Purpose

Ecosystems Strategies, Inc. (ESI) has prepared these "Specifications for Excavation and Disposal of Contaminated Soils" as part of a Phase I Remedial Action Design that includes detailed design specifications for the proposed environmental response actions at the Long Dock Beacon Waterfront Park, Red Flynn Drive, City of Beacon, New York (Brownfield Site: C314112). All work at the Site is being performed in general conformance with regulations specified in 6 NYCRR Part 375 (Environmental Remediation Programs) and applicable NYSDEC guidance documents (Draft Division of Environmental Remediation-10, Technical Guidance for Site Investigation and Remediation [DER-10] and Draft Brownfield Cleanup Program Guide [BCP Guide]).

B. Definitions

These "Specifications for Excavation and Disposal of Contaminated Soils" are hereafter referred to as the "Specifications". The contracting entity will be The Scenic Hudson Land Trust, Inc., hereafter referred to as "the Volunteer". The corporate entity awarded this contract and, therefore, responsible for the appropriate and complete implementation of these Specifications is hereafter referred to as the "Contractor". The Volunteer will engage Ecosystems Strategies, Inc., (or another similarly qualified environmental consulting firm) as On-Site Coordinator hereafter referred to as the "OSC", to represent the Volunteer in technical matters with the Contractor.

C. Project Location

The general location of all services detailed in these Specifications is the Long Dock Beacon Waterfront Park, Red Flynn Drive, City of Beacon, New York. The location is shown on the attached Site Location Map, Attachment A of these Specifications, and hereafter referred to as the "Site". The approximate location of contaminated soil requiring removal is shown on the Phase I Site Remediation Map, Attachment B of these Specifications. A Truck Route Map is included as Attachment C of these Specifications.

Soils will be excavated in the following areas, as depicted on the Phase I Site Remediation Map:

Table 1: Phase I Remedial Action Design Excavation Areas

Area	Location	Contamination	Proposed Excavation Depth (bsg)	Estimated Soil Removal (cy)
A	East and southeast of the barn - eastern portion of the Site	Arsenic, Lead, Mercury, PCBs, and PAHs (deep samples in area of SB-1, only)	4 feet and 9 feet (deep PAHs and arsenic contamination found in the center of Area A beneath the groundwater table, see the Phase I Site Remediation Map)	2,186 – 2,336 (1,886 to 4 feet and 300 – 450 9 feet deep)
B	Southeast of the barn - eastern portion of the Site	PCBs	2 feet	93
C	West and southwest of the barn - north-central portion of the Site	Arsenic, Lead & PCBs – north of sampling location TP-1 Arsenic & Lead – south of sampling location TP-1	4 feet – north of parking area (see the Phase I Site Remediation Map) 2 feet – south of parking area (see the Phase I Site Remediation Map)	1,375
PCBs = Polychlorinated biphenyls, PAHs = polycyclic aromatic hydrocarbons				

Limited soils will also be disturbed in the south-central portion of the Site as part of park development activities associated with beach reconstruction. The area is shown on the Phase I Site Remediation Map; it is estimated to involve an area no larger than 600 square feet and is anticipated to disturb no more than 100 cubic yards of fill soils.

D. Summary of Services

The Volunteer seeks a qualified Contractor to assist the Volunteer in performing all services necessary for the proper removal of soils contaminated with metals, polychlorinated biphenyls (PCBs), and limited areas of polycyclic aromatic hydrocarbons (PAHs) at the Site. This work includes the following tasks:

Task 1: Removal and stockpiling and/or off-site disposal (as an exempt waste) of surface material such as concrete, metal and other miscellaneous materials. Any subsurface debris encountered during the excavation of on-site soils will be disposed of in a manner consistent with applicable Part 360 regulations.

Task 2: Installation of appropriate erosion and sediment controls and stormwater management prior to on-site excavation activities. Sediment and erosion controls may include the use of stabilized construction entrances, silt fencing, and hay bale checks, as needed, to minimize migration of sediment to groundwater or adjacent surface water.

Task 3 Excavation of soils in a manner consistent with field conditions and technical observations from the OSC. Any excavated soils temporarily stored on-site will be placed on double-lined, 6-mil plastic sheeting and covered with a single sheet of 6-mil plastic. If possible, the stockpile will be located within the limits of the excavation. The stockpile will be located to minimize the likelihood of direct contact with standing water or water resulting from a storm event. The integrity of the overlaying plastic will be periodically inspected, and replacement of the plastic will occur when appropriate until such time as all soils are removed from the Site. To the extent feasible, approvals will be secured to permit direct loading of trucks.

Task 4 Installation and maintenance of a complete dewatering system(s), as required, to lower and control water levels during excavation of soils beneath the groundwater table (See Table1, above).

Task 5 All contaminated materials will be removed from the property by an appropriately licensed hauler who will be responsible for exiting the Site and traveling on a pre-determined truck route. Trucks will be covered and appropriate measures will be taken to control the generation of fugitive dust and/or leaking from the trucks during transport.

Task 6 All soils removed from the Site will be documented with appropriate transportation manifests and weight tickets, as well as documentation from the off-site facility.

Task 7: Restoration of the Site to approximate original grades and compaction to requirements as set forth in "Site Excavating, Backfilling and Compacting" specifications, set forth in Section 312300 of the bid set dated April 12, 2010 for Scenic Hudson's Long Dock Park, Beacon, New York. Restoration will entail both the relocation of on-site soils (in general, proximal regrading of surface soils into excavated areas) and the importation and installation of certified clean soils.

Task 8: Placement of a demarcation layer between all on-site soils requiring a cover layer and the overlying certified clean fill as specified in the Phase I Remedial Action Design document.

If any underground storage tanks are encountered during excavation, appropriate regulatory agencies will be notified and the tank(s) will be properly drained and cleaned prior to removal and off-site disposal. All tank closure activities will be properly documented, including tank condition, removal and disposal of the tank(s) and any wastes, and disposal of any encountered contaminated soils.

All confirmatory endpoint and waste characterization sampling and submission of samples for laboratory analysis will be performed by the OSC. Decisions regarding the need for additional excavations, based on laboratory results, will be made by the OSC in consultation with the Volunteer and the NYSDEC. See Section 2, Technical Specifications, for additional information regarding the Tasks specified above.

E. Limitations

The Contractor is responsible for every part of the work indicated in the Contract Documents whether or not included in the following Specifications. Refer to every part of the Contract Documents for the total work included in this Contract. The award of this Contract is based upon the review, confirmation, and acceptance of the Contractor's Qualifications and the acceptance of the Contractor's written bid.

F. Relevant Documents

These Specifications are based on Site conditions as detailed in the Remedial Investigation Report (RIR), dated November 2007. The remedial tasks described in these Specifications have been selected based on the Remedial Alternatives Analysis and Remedial Work Plan (RAR/RWP), dated February 2008. All Phase I remedial activities are described in the Phase I Remedial Action Design, dated February 2010 (Revised April 2010).

1.2 KNOWN ENVIRONMENTAL CONDITIONS

The Site conditions are known to the NYSDEC and all services outlined in these Specifications will be implemented with the expressed intent of removing from the Site contaminated soils required by the Phase I Remedial Action Design, which is the first phase of remediation as

detailed in the RAR/RWP. Communication with the NYSDEC will be the responsibility of the Volunteer and/or the OSC.

The following environmental history and conditions are identified as being relevant to these Specifications:

- The Long Dock Beacon property was used as a salvage/scrap yard and major oil storage facility (MOSF), among other historical industrial uses. Current environmental data documents soil contamination by metals (primarily arsenic and lead), PCBs, and PAHs in the areas to be excavated as Phase I of the remediation.

- Arsenic contamination is present in the northeastern portion of the Site, particularly east of the barn. Arsenic contamination generally extends vertically from the surface to approximately 4 feet below surface grade (bsg), with the exception of the deep excavation to the east of the Red Barn where arsenic is present from approximately 6 to 9 feet bsg.

- Lead contamination is present in surface soils located east and west of the barn, with a maximum depth of 3 feet bsg.

- PCB contamination is present in limited areas immediately west, east, and southeast of the barn, (northeast portion of the Site) at 0 to 3 feet bsg.

- A limited area of PAH contamination exists to the east of the barn in deeper soils on the western portion of the deep excavation (see the Phase I Site Remediation Map, Attachment B).

1.3. CONTRACTOR USE OF SITE AND PREMISES

The Work of this Contract shall be done in a manner which easily permits continued access to existing facilities (the on-site boat club and the park to the south of the property) and causes the least possible interference with any other activities concurrently being conducted on the Site by the Volunteer.

Controlled access to the Site will be the responsibility of the Construction Manager for the duration of Site remediation services. Any and all locks or security features installed by the Contractor will be shared with the Volunteer such that the Volunteer can maintain unrestricted Site access.

1.4. PROJECT OVERSIGHT AND MANAGEMENT

The Volunteer will retain an OSC as an independent representative to act on its behalf with regard to the interpretation and implementation of these Specifications.

Modification by the Contractor of substantive activities detailed in these Specifications is prohibited unless the Contractor obtains approval of such modifications in writing from the Volunteer.

1.5 STANDARDS WHICH APPLY TO THIS WORK

- 6NYCRR, Part 360, et al.
- 6NYCRR, Part 364, et al.
- 6NYCRR, Part 375, et al.
- 6NYCRR, Part 376, et al.

1.6 BIDDING CONSIDERATIONS

A. All bid response forms, as well as requested additional information, must be submitted in order for the bid to be considered complete.

B. All bid response forms are provided in the general bid set dated April 12, 2010 for Scenic Hudson's Long Dock Park.

1.7 ADDITIONAL BID SUBMITTAL REQUIREMENTS

The Contractor shall submit with the bid the following items:

A. Documentation showing that all workers are familiar with applicable codes and standards and are familiar with all procedures concerning their intended purposes on the project.

B. Documentation showing that the Contractor is both familiar with the Site-specific Health and Safety Plan and intends to fully comply with this HASP. The Contractor shall also submit with the Contractor's bid a roster of all payroll employees who have received OSHA-required 40-hour training as defined in 29CFR 1910.120 (e), the date of the last 8-hour refresher training course each employee attended, a list of all employees who have received an 8-hour supervisor's training course, the name of the employee who was last

given a physical which meets the 19CFR 1910.120 (f) medical monitoring requirements, and the date of that physical. The Contractor shall present this item in tabular format for easy bid review.

1.8 BID SCHEDULE

The Bid schedule is fully set forth in the general bid set dated April 12, 2010 for Scenic Hudson's Long Dock Park.

1.9 AWARD CRITERIA

The award criteria is fully set forth in the general bid set dated April 12, 2010 for Scenic Hudson's Long Dock Park.

1.10 REJECTION OF BIDS

Information regarding rejection of bids is provided elsewhere in documents available to bidders.

1.11 SPECIFICATION LANGUAGE

These special conditions are the abbreviated type and include incomplete sentences. Omissions of words or phrases such as "The Contractor shall", "in conformity with", "shall be", "as noted in the Drawings", shall be supplied by inference in the same manner as they would be supplied by inference when a colon (:) is used within sentences or phrases.

1.12 COORDINATION AND PROJECT CONDITIONS

1. The Contractor will coordinate scheduling, submittals, and work to ensure efficient and orderly sequence of services.

2. The Contractor will coordinate completion and clean-up of the work area on an "as needed" basis to ensure Site safety.

1.13 PRE-BID MEETING

A Pre-Bid conference meeting will be held as specified in the Advertisement and Notice to Bidders.

1.14 PROJECT MEETINGS

A. The Contractor will attend meetings as required in Section 010000, "General Requirements".

B. The Contractor may at any time schedule additional meetings with the Volunteer to discuss the provision of services.

1.15 PROGRESS AND COMPLETION

A. Normal working hours and normal working days shall be as specified in Section 010000 "General Requirements".

B. The Volunteer may require that part of the Work be done after normal working hours or on other than normal working days.

C. Confine activities at the Site to normal working hours and normal working days unless the Volunteer requires or approves other times or days.

D. Should the Contractor desire to carry out part of the Work at times other than normal working hours or days, the Contractor will submit a written request to do so to the Volunteer together with specific calendar days and hours the Contractor wishes to work and description of activities the Contractor proposes to carry out during those times. Construction activities will not be permitted at times other than those specified or subsequently approved in writing by the Volunteer. Only those activities specifically approved by the Volunteer are permitted during hours or on days other than those stipulated as normal working days or hours.

E. If necessary to complete Work within Contract Time, as adjusted by Change Orders, the Contractor will request the Volunteer's approval to work during days or times other than those designated as normal working days or hours, and if the Volunteer approves, perform work during such additional times on such days as have been approved at no additional cost. Work during such additional times and on such additional days shall continue only as long as is necessary to complete the Work within the stipulated time period.

1.16 REPORTS

A. The OSC will submit copies of all soil/waste disposal analytical data to the Volunteer in copy form when submitting said data to the disposal facility for disposal approval.

1.17 WORK PHOTOGRAPHS

A. The OSC will maintain a photographic record of soil removal, documenting activities conducted by the Contractor to complete these Specifications. The photographic record will include (but not be limited to):

- initial conditions
- soil excavation procedures
- soil stockpile conditions
- soil sampling
- soil removal activities
- final Site conditions

B. The OSC will identify photographs with date, time, orientation, and project identification.

1.18 ANTICIPATED PROJECT SCHEDULE

A. Information regarding the anticipated schedule is provided in the Instruction to Bidders.

B. It is anticipated that all soil removal activities detailed in these specifications will be completed within four weeks of the Contractor initiating such services.

1.19 QUALITY CONTROL

The Contractor shall adhere to the following:

A. Monitor quality control over suppliers, manufacturers, products, services, Site conditions, and workmanship to produce Work of specified quality.

B. Should regulatory agency or the Volunteer's Representative instructions conflict with Contract documents, request clarification from the Volunteer before proceeding.

C. Comply with specific standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.

D. Perform Work by persons qualified to produce required and specified quality.

E. Contractor to record field measurements of excavation size (width, length, and depth), materials removed, and backfill placed. These measurements are to be verified with Volunteer prior to demobilizing from the Site at the completion of work.

F. Secure stockpiled material with 6-mil plastic bottom and top cover in locations indicated by the OSC to ensure minimum disruption of Site activities.

1.20 INSPECTION/TESTING SERVICES

A. The Volunteer will appoint, employ, and pay for specified services of the OSC to perform inspection/testing.

B. The OSC will perform inspections/testing and other services specified in individual specification sections and as required by the Volunteer.

C. Reports will be submitted by the OSC to the Volunteer and Contractor, documenting inspection observations and indicating compliance or non-compliance with Contract Documents.

D . Inspecting does not relieve the Contractor to perform work to Contract requirements.

1.21 CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

A. Temporary Sanitary Facilities

Temporary sanitary facilities will be provided by the Construction Manager.

B. Barriers

1. The Contractor will provide barriers to prevent unauthorized entry to construction areas to allow for the Volunteer's use of Site and to protect existing facilities and adjacent properties from damage from construction operations and demolition.

2. The Contractor will protect vehicular and pedestrian traffic, stored materials, Site and structures from damage.

C. Progress Cleaning and Waste Removal

1. The Contractor will keep and maintain areas free of waste materials, debris, and rubbish and will maintain the Site in a clean and orderly condition.

2. The Contractor will conform to the waste management program coordinated by the Construction Manager for all wastes other than the regulated wastes, which are the subject of this Specification.

D. Removal of Utilities, Facilities, and Controls

It is the expressed responsibility of the Contractor to:

1. Remove temporary utilities, equipment, facilities, and materials prior to Final Application for Payment inspection.

2. Clean and repair damage caused by installation or use of temporary work.

3. Restore existing facilities used during construction to original condition and, if appropriate, restore permanent facilities used during construction to specified condition.

4. Where needed, the Contractor shall hand dig to expose buried utilities.

SECTION 2 - TECHNICAL SPECIFICATIONS

2.1 SITE PREPARATION SERVICES

A. Health and Safety Plan (HASP)

The OSC will be responsible for maintaining, implementing, and enforcing the Health and Safety Plan ("HASP") provided in Appendix C of the Phase I Remedial Action Design (See Section 1.7, above). The OSC will review the HASP with the contractor prior to the initiation of services to determine what, if any, task-specific health and safety issues will require modification. Any substantive modifications to this HASP will be subject to NYSDEC review and approval.

B. Agency Notification

The OSC will be responsible for notifying the NYSDEC in writing at the following times:

- Five days prior to the initiation of Site Work.
- Prior to engaging in any substantive variations to the activities detailed in these Specifications.

The contractor will not engage in any work on the Brownfield Site without proper notification having been provided to the NYSDEC. It is the responsibility of the Contractor to provide adequate notification to the OSC.

2.2 CONTAMINATED SOIL MANAGEMENT

A. Soil Excavation

1. General

The Contractor shall ensure that all operations associated with the handling, sampling, loading, transportation, and disposal of contaminated soils are in compliance with Federal, State, and local regulations. The Contractor is expected to coordinate the sampling and load-out work with the OSC and the Construction Manager so as not to interfere with Volunteer activities.

2. Schedule

It is anticipated that excavation activities will require no more than 4 weeks, inclusive of sampling, backfilling, and regrading. Stockpiled soil must be removed from the Site within 25 business days of the completion of all excavation activities. Active monitoring of the stockpiled soil to ensure proper coverage is the responsibility of the Contractor. Monitoring shall include a visual inspection of the pile no less frequent than once every five calendar days and a visual inspection of the pile within 24 hours of a storm event.

3. Excavation Process

a. The dimensions of soil excavation will be marked in the field by the OSC.

b. The Contractor will manage excavated materials as non-hazardous waste.

c. The Contractor will live-load soil for removal from the Site, if possible. Laboratory data are available which document that the soils can be managed as a non-hazardous solid waste. These data are included in the Phase I Remedial Action Design.

However, if soils are stockpiled, stockpiling will occur on two layers of 6-mil plastic with proper berming to prevent water accumulation. Any seams in the plastic must overlap by at least one foot and the stockpile will be covered with one layer of 6-mil plastic (see below). The Contractor will exercise due care to minimize on-site transport and/or handling of contaminated soils. The proposed location of the stockpiled soil will be identified by the Contractor prior to the initiation of excavation activities. Approval by the Volunteer of the proposed stockpile area is required.

When soil from the temporary stockpiles are loaded onto trucks for off-site removal, approximately 6 inches of soil from beneath the area of the stockpile will be scraped and removed with the stockpile for off-site disposal.

d. The Contractor will cover any stockpiled soils on a daily basis with 6-mil plastic properly anchored to prevent soil exposure. All plastic used for cover will be properly secured to prevent wind or rain from transporting

contaminated soils from these secured stockpiles. Stockpiles will be regularly inspected (see Subsection 2.2 (A) #2, above) and any necessary repairs or replacement to the plastic cover will be made promptly.

e. The Contractor will decontaminate excavation equipment at the conclusion of the soil excavation activities. Decontamination will involve the physical removal of all accumulated dirt (to be added to the stockpiled soil) and the washing of equipment to remove contaminated fines. Wash water will be collected and managed, including proper containerization and off-site disposition, as necessary.

f. The OSC will sample the soils remaining after excavation. Data documenting the absence of soils with concentrations exceeding Site guidance levels will be obtained before backfilling can occur (See Subsection 6 (a), below). **Laboratory data documenting contaminant concentrations exceeding Site guidance levels may necessitate additional excavation to remove these soils.**

g. The Contractor should anticipate excavating contaminated soil present at and below the seasonal groundwater level in Area "A". Actions to ensure that contaminated water is controlled will be implemented by the Contractor (see Subsection 4, below). Actions will include maintaining absorbent materials to control run-off from the stockpiled soil, lining of transport vehicles to control off-site wastewater discharges during soil removal, and monitoring of stockpile to ensure the integrity of the plastic cover. Dewatering of stockpiled soil will not be permitted without expressed written approval by the Volunteer.

4. Pumping Encountered Groundwater

Water, is expected to be encountered at only one location, in excavation area "A". Dewatering will be conducted per Subsection 2.5, below. Visibly contaminated water cannot be discharged.

5. Air Monitoring

Ambient air monitoring will be performed by the OSC per the Specifications provided in Appendix B and C of the Phase I Remedial Action Design.

6. Sampling of Soils Proposed to Remain

a. Number of Samples and Location

The total number of samples collected to document the integrity of the soils proposed to remain on-site will be determined by the OSC in the field. The anticipated number of samples and locations are summarized in Section 2.5.3.2 of the Phase I Remedial Action Design; the number of post-excavation end-point samples will not deviate from the anticipated number of samples without approval of the NYSDEC. All samples will be grab samples, with soils in the vicinity of the samples' location screened for overt evidence of contamination using a PID.

b. Supplemental Sampling

Limited soils will be disturbed on the south-central portion of the Site as part of park development activities associated with beach reconstruction. The area is estimated to involve an area no larger than 600 square feet and is anticipated to disturb no more than 100 cubic yards of fill soils. Soils excavated in this area will be visibly inspected for evidence of gross contamination (not anticipated based on previous work). If gross contamination is noted, the soils will be properly disposed of off-site (see Subsection D, below). If no evidence of gross contamination is noted, these soils will be stockpiled and sampled prior to relocation to either portions of the Site behind fencing or under barrier soils in Areas A, B, or C. A demarcation layer will be placed between remaining Site soils and certified clean fill soils.

Soils from the beach reconstruction will be sampled as specified in Section 2.5.3 of the Phase I Remedial Action Design and will be compared to the lower of the Restricted Use, Restricted Residential or the Protection of Groundwater soil cleanup objectives (SCOs) found in 6 NYCRR Part 375, Table 375-6.8(b). If soils meet these SCOs, or are

deemed acceptable for reuse on-site as subgrade backfill (below the clean fill cap) by the NYSDEC, they will be managed on-site as described above. If concentrations of contaminants are judged to be unacceptable based on the above criteria the soil will be disposed of off-site as described in Subsection D, below.

The OSC will be prepared to collect and have analyzed additional soil samples in the event that post-excavation integrity sample data document the continued presence of concentrations above restricted residential soil cleanup objectives (SCOs). The need for additional excavation will be determined by the OSC, the Volunteer, and the NYSDEC.

c. Sample Collection Procedures

Sample collection and handling procedures will be performed in accordance with the protocols set forth in the Phase I Remedial Action Design.

B. Determination of Site Integrity

Site integrity is defined as the process of assessing the need for additional remedial action. The determination of Site integrity will be made by the OSC and the Volunteer in consultation with the NYSDEC, based on field observations and laboratory data.

C. Soil Disposal Preparation

Waste characterization sampling has been conducted for the areas of excavation and laboratory data results are included as Appendix F of the Phase I Remedial Action Design, the OSC will submit to the Volunteer the following information:

1. A copy of any and all agreements between the OSC, the contractor, and the selected disposal and/or treatment facility(ies) to accept either the Volunteer's provided analytical data or additional data requirements necessary to gain disposal approval and a schedule associated with collection of such data.

2. A copy of any and all agreements between Contractor and the selected loading subcontractor if one is to be used. The Contractor should indicate the type of loading equipment to be used on-site.

3. Identification of and information on the proposed treatment and/or disposal facility(ies) to include: facility name, address, contact person, signed letter of agreement from the facility of intent to accept the waste as specified in this Contract, and listing of all facility operating permits, licenses, and letters of approval authorizing the disposal of wastes of this description at the designated facility as they pertain to this Contract.

4. Identification of and information on the proposed waste transporter is to include: name, address, telephone number, contact person, USEPA and NYS Transporter ID numbers, and any and all necessary permit authorizations for waste to be transported from the Site to treatment/disposal facilities.

D. Off-Site Transportation to Disposal or Treatment Facility

The Contractor shall furnish and be responsible for all labor, equipment, supplies, and incidental costs required to transport contaminated soil from the load-out location to the off-site disposal and/or treatment facility(ies) and to acquire the necessary transportation permits and any other items and services required for transporting contaminated materials for disposal at an approved off-site facility.

E. Hauling

1. The Contractor shall not deliver waste to any facility other than the disposal or treatment facility listed on the shipping manifest. All transporters must have a current license to haul the Site-generated wastes (i.e., Part 364 license for non-hazardous wastes).

2. The Contractor shall be held responsible for any and all actions necessary to remedy situations involving material spilled in transit or mud and dust tracked off-site. This cleanup shall be accomplished at the Contractor's expense.

3. The Contractor shall ensure that trucks are protected against contamination by properly covering and lining them with compatible material (such as polyethylene) or by decontaminating them prior to any use other than hauling contaminated materials. All loaded trucks will be covered to prevent dust/debris dispersal from the trucks.

4. The Contractor shall only use the transporter identified in his soil handling plan to perform the work. Any use of substitute or additional transporters must have previous written approval from the Volunteer and if substituted must not increase the Volunteer's cost.

5. The Contractor shall not combine contaminated materials from other projects with materials from the Site.

6. The Contractor will ensure that trucks approaching and leaving the Site use only the approved truck route. A Truck Route Map is included as part of Attachment C of these Specifications.

F. Off-Site Disposal

1. The Contractor shall use only the approved facility (see Subsection 2.2 (C), above) for the performance of the Work. Substitutions or additions shall not be permitted without prior written approval from the Volunteer and if approved shall be at no extra cost to the Volunteer.

2. The Contractor shall be responsible for acceptance of the material at the approved facility, ensuring that the facility is properly permitted to accept the stated material, and ensuring that the facility provides the stated treatment and/or disposal services.

3. The Volunteer reserves the right to contact and visit the disposal and/or treatment facility(ies) and regulatory agencies to verify the agreement to accept the waste material and to verify any other information provided. This does not in any way relieve the Contractor of his responsibilities under this Contract.

4. In the event that the identified and approved facility ceases to accept the stated materials, it is the Contractor's responsibility to locate an alternative approved and permitted facility for accepting materials. The Contractor is responsible for making the necessary arrangements to utilize the facility, and any alternative facility must be approved in writing by the Volunteer in the same manner and with the same requirements as for the original facility. This shall be done with no extra cost or delays to the Volunteer.

G. Recordkeeping

The Contractor shall obtain manifest forms and complete the shipment manifest records as required by the appropriate agencies for verifying the materials and quantities of each load in unit of volumes or weight.

Copies of each manifest shall be submitted to the Volunteer within four (4) business days following shipment and within three (3) business days after notification of receipt of the facility. Any manifest discrepancies shall be reported immediately to the Volunteer and shall be resolved by the Contractor to the satisfaction of the Volunteer.

H. NYSDEC Communication

The Contractor will minimize contact with the NYSDEC. No written communication will be issued by the Contractor to the NYSDEC unless expressly authorized by the Volunteer.

2.4 SITE BACKFILLING AND GRADING

A. Relocation of On-site Soils

On-site soils will be relocated into the areas of excavation by grading nearby surface soils into the excavated areas and compacting these soils as necessary to meet compaction requirements, prior to the installation of the demarcation layer and filling to final grade with clean fill (see below). These on-site soils will come from nearby portions of the Site where Site design considerations (i.e., final elevations) make soil relocation an appropriate regrading activity. Any debris encountered in these fill soils will be removed and segregated for proper disposal.

B. Backfilling

1. Description

a. Unless otherwise directed, excavations shall be backfilled and regraded as soon as possible. Immediately prior to regrading, all rubbish, debris, forms, and similar materials shall be removed from the excavations. Subsequent to removal of debris and regarding a demarcation layer (e.g., orange snow fence) will be placed at the base of the excavation.

b. The Contractor will furnish all labor and equipment necessary to excavate, place, compact, and grade all backfill specified herein. The extent of necessary compaction is provided in Section 312300 (Site Excavation, Backfilling and Compacting).

2. Source of Backfill Material

Unless otherwise specified, backfill shall consist of non-contaminated imported soils already present on the Site. The importation and sampling of clean fill to the Site is described in Section 2.5.4 of the Phase I Remedial Action Design document.

3. Backfilling Below Static Groundwater Level

It is anticipated that backfilling below the static groundwater level will occur in limited areas on the Site; specifically, it is anticipated in Area A (east of the Barn). Backfilling below static water levels will consist of pea stone (or similar material) until filling has reached the static water level (in this area, estimated at five feet below surface grade). Above this level, backfilling will occur consistent with the requirements set forth in Section 2.4(B)(1), above.

C. Final Grading

1. The Contractor shall restore all excavated areas disturbed by construction activities. The areas shall be uniformly graded to the lines, grades, and elevations consistent with the surrounding ground surface elevations. Finished surfaces shall be reasonably smooth, compacted, and free from irregular surface changes. Unless otherwise specified, the degree of finish shall be that ordinarily obtainable from either blade or grader or scraper operations. Regrading will be considered incomplete by the Volunteer if excessive ponding is evident or will reasonably occur. The Contractor may be required to regrade the Site.

2. All work areas will be graded to the satisfaction of the Volunteer.

2.5 Excavation Dewatering

A. General

The Contractor shall furnish, install, operate, and maintain all machinery appliances, and equipment to maintain all excavations free from water during soil removal activities and shall dewater and manage water so as not to cause injury to public or private property, or to cause a nuisance or menace to the public. Dewatering is expected to be necessary at one location only, in excavation area A (see Table 1, above and the Phase I Site Remediation Map, Attached).

The dewatering system shall be installed and operated so that the groundwater levels outside of the excavation is not reduced to the extent which would cause damage or endanger on-site structures.

B. Dewatering Process

1. Excavation shall be conducted in a manner so that water entering the excavation can be collected and removed from the excavation area.

2. The dewatering operations shall be directed to a sediment control device or devices.

3. The Contractor shall control surface water to prevent entry into excavations.

4. Flow to the sediment control device (or devices) may not exceed the sediment removal device's capacity to settle and filter flow or the devices' volume capacity.

5. Water collected in the sediment control device shall be tested prior to release or off-site disposal (see Subsection 2.5 (C), below).

6. The dewatering system shall remain active during all excavation and filling of the excavations with clean fill below the water table.

7. Upon completion of the dewatering activities the Contractor shall remove all dewatering measures.

C. Testing of Water from Sediment Control Device(s)

Water from the sediment control device shall be allowed to remain inside of the device so that sediment is removed from the water prior to testing. Subsequent to sediment removal but prior to discharge, the water shall be tested as follows:

1. Water from the sediment control device will be collected and submitted for laboratory analysis of volatile organic compounds (USEPA Method 8260), semi-volatile organic compounds (USEPA Method 8270), TAL metals (USEPA Methods 6010 and 7471), pesticides (USEPA Method 8081), and polychlorinated biphenyls (USEPA Method 8082). Water testing will occur once per week, with results provided to the OSC within 48 hours of sample collection.

2. Sampling results will be compared to the NYSDEC Division of Water Technical & Operational Guidance Series 1.1.1 Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations (TOGs 1.1.1), June 1998 Edition (as modified through June 2004).

3. If the effluent from the sediment control device is at or below the guidance levels in TOGs 1.1.1, it can be released on-site (see Subsection 2.5 (D), below

4. If the effluent from the sediment control device is above the guidance levels in TOGs 1.1.1, it must be transported for off-site disposal (see Subsection 2.5 (E), below.

5. Sediment must be removed from the sediment control device(s) as recommended by the manufacturer. Removal of sediment must be scheduled so that it does not interfere with excavation activities.

6. Sediment will be collected and submitted for laboratory analysis for PAHs (USEPA Method 8270) and arsenic (USEPA Method 6010). If the sediment meets restricted residential soil cleanup objectives (SCOs) it may be re-used on-site as sub-grade fill. If the fill does not meet SCOs, it must be transported for off-site disposal (see Subsection 2.5 (E), below.

D. On-site Release of Water

The Contractor shall furnish and be responsible for all labor, equipment, supplies, and incidental costs required to transport treated groundwater from the sediment control device to the area of the former MOSF.

During the de-watering operations, the Contractor must provide adequate protection from erosion at the discharge area (e.g. hay bale, filter fabric, or other suitable material). The discharge of water from the pumping operations shall be undertaken so as to prevent erosion of soils and the downgradient introduction of sediment. The release of groundwater shall be performed in such a manner to prevent disturbance of existing backfill, structures, and utilities.

Release of treated water shall be performed in a manner so that the water remains on the Site in the former MOSF, that is, no water shall be allowed to exit the Site either to other properties or the Hudson River.

In order to insure that the discharge to the former MOSF area does not mobilize subsurface contamination in that area the following procedures will be followed:

Prior to start of discharge, the berm will be physically inspected to assess its integrity. Any breaches will be prepared prior to discharge.

Prior to the start of the discharge, monitoring wells MW-6, MW-7, and MW-8 will be opened, screened with a PID, and water will be removed by bailer to confirm the presence or absence of a sheen or free product in the well. In addition, the Hudson River surface closest to the MOSF will be observed and the condition of the water will be documented.

Once discharge of water into the MOSF has been initiated, monitoring wells MW-6, MW-7, MW-8, and the surface of the Hudson River will be monitored, as described above, once daily to ensure that the release to the MOSF is not mobilizing the subsurface contamination.

If free product or a sheen is documented in any of the wells or on the surface of the Hudson River, the release of water to the MOSF will immediately cease and another alternative for disposal of the water (e.g., release to another area or off-site disposal) will be instituted.

E. Off-Site Transportation to Disposal or Treatment Facility

The Contractor shall furnish and be responsible for all labor, equipment, supplies, and incidental costs required to transport contaminated groundwater and/or sediment from the sediment control device to the off-site disposal and/or treatment facility(ies) and to acquire the necessary transportation permits and any other items and services required for transporting contaminated materials for disposal at an approved off-site facility.

F. Hauling

1. The Contractor shall not deliver waste to any facility other than the disposal or treatment facility listed on the shipping manifest. All transporters must have a current license to haul the site-generated wastes (i.e., Part 364 license for non-hazardous wastes).

2. The Contractor shall be held responsible for any and all actions necessary to remedy situations involving material spilled in transit or mud and dust tracked off-site. This cleanup shall be accomplished at the Contractor's expense.

3. The Contractor shall ensure that trucks are protected against contamination by properly covering and lining them with compatible material (such as polyethylene) or by decontaminating them prior to any use other than hauling contaminated materials. All loaded trucks will be covered to prevent dust/debris dispersal from the trucks.

4. The Contractor shall only use an approved transporter to perform the work. Any use of substitute or additional transporters must have previous written approval from the Volunteer and if substituted must not increase the Volunteer's cost.

5. The contractor shall not combine contaminated materials from other projects with materials from the Site.

6. The Contractor will ensure that trucks approaching and leaving the Site use only the approved truck route. A Truck Route Map is included as part of Appendix B of these Specifications.

G. Off-Site Disposal

1. The Contractor shall use only the approved facility for the performance of the Work. Substitutions or additions shall not be permitted without prior written approval from the Volunteer and if approved shall be at no extra cost to the Volunteer.

2. The Contractor shall be responsible for acceptance of the material at the approved facility, ensuring that the facility is properly permitted to accept the stated material, and ensuring that the facility provides the stated treatment and/or disposal services.

3. The Volunteer reserves the right to contact and visit the disposal and/or treatment facility(ies) and regulatory agencies to verify the agreement to accept the waste material and to verify any other information provided. This does not in any way relieve the Contractor of his responsibilities under this Contract.

4. In the event that the identified and approved facility ceases to accept the stated materials, it is the Contractor's responsibility to locate an alternative approved and permitted facility for accepting materials. The Contractor is responsible for making the necessary arrangements to utilize the facility, and any alternative facility must be approved in writing by the Volunteer in the same manner and with the same requirements as for the original facility. This shall be done with no extra cost or delays to the Volunteer.

H. Recordkeeping

The Contractor shall obtain manifest forms and complete the shipment manifest records as required by the appropriate agencies for verifying the materials and quantities of each load in unit of volumes or weight.

Copies of each manifest shall be submitted to the Volunteer within four (4) business days following shipment and within three (3) business days after notification of receipt of the facility. Any manifest discrepancies shall be reported immediately to the Volunteer and shall be resolved by the Contractor to the satisfaction of the Volunteer.

END OF SECTION



Site Location Map Long Dock Beacon Waterfront Park Red Flynn Drive City of Beacon Dutchess County, New York	N	ESI File: SG96152.81 April 2010 Attachment A

Ecosystems Strategies, Inc.

Notes:

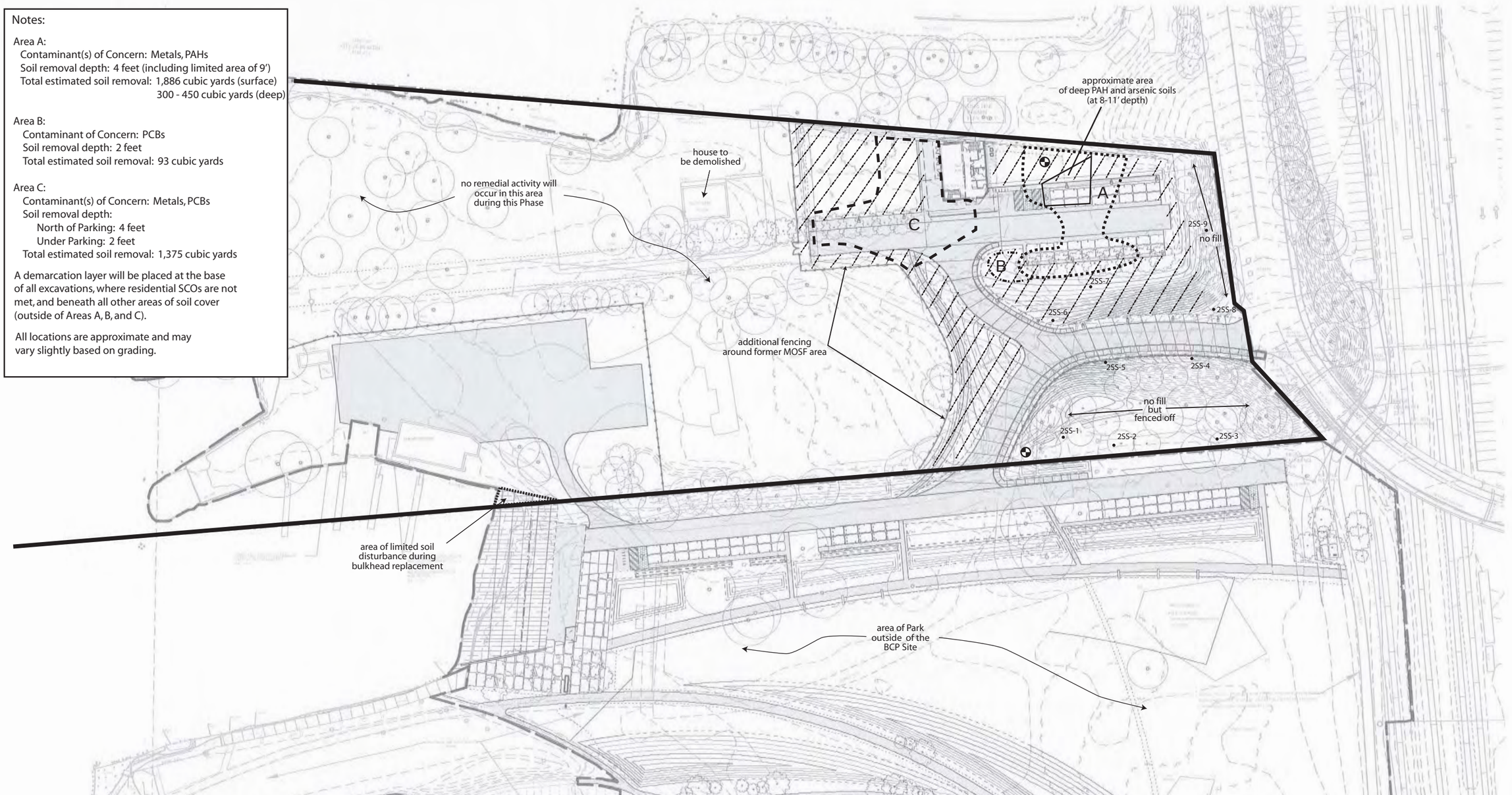
Area A:
Contaminant(s) of Concern: Metals, PAHs
Soil removal depth: 4 feet (including limited area of 9')
Total estimated soil removal: 1,886 cubic yards (surface)
300 - 450 cubic yards (deep)

Area B:
Contaminant of Concern: PCBs
Soil removal depth: 2 feet
Total estimated soil removal: 93 cubic yards

Area C:
Contaminant(s) of Concern: Metals, PCBs
Soil removal depth:
North of Parking: 4 feet
Under Parking: 2 feet
Total estimated soil removal: 1,375 cubic yards

A demarcation layer will be placed at the base of all excavations, where residential SCOs are not met, and beneath all other areas of soil cover (outside of Areas A, B, and C).

All locations are approximate and may vary slightly based on grading.



Legend:
- Areas of clean fill
- Fence
- Approximate location of two replacement wells
- Surface sample location
- BCP Site boundary

Base map provided by Reed Hilderbrand Associates, Inc.

Phase I - Site Remediation Map (Park Construction)

Scenic Hudson Park at Long Dock
Red Flynn Drive
City of Beacon
Dutchess County, New York

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Scale: 1" = 100' (approximately)

2010 | Attachment B



Truck Route Map

Long Dock Beacon Waterfront Park
Red Flynn Drive
City of Beacon
Dutchess County, New York

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ESI File: SG96152.81

June 2010

Attachment C

SECTION 311300

SELECTIVE TREE AND SHRUB REMOVAL AND TRIMMING

PART 1 GENERAL

1.1 GENERAL REQUIREMENTS

A. Work of this Section, as shown or specified, shall be in accordance with the requirements of the Contract Documents.

1.2 WORK INCLUDED

A. Provide all work necessary to perform selective clearing within the limits indicated on the Drawings and as specified herein. Selective clearing work shall include, but not be limited to, the following:

1. Tree pruning.
2. Removal of vines from trees.
3. Cabling and guying of trees.
4. Flush cutting shrubs and trees, and grinding of stumps and backfilling of holes with clean fill and topdress with 6 in. loam.
5. Removal of deadwood and brush.
6. Removal of all rubbish, debris, and other materials to be disposed of as a result of the work of this section.
7. Tree and shrub removal.

B. Sustainable Design Intent: Comply with project requirements intended to achieve certification, measured and documented according to the LEED Green Building Rating System, of the US Green Building Council. Refer to Section 010000 GENERAL REQUIREMENTS for certification level and certification requirements.

1.3 RELATED WORK

A. Examine Contract Documents for requirements that affect work of this Section. Other Specification Sections that directly relate to work of this Section include, but are not limited to:

1. Section 010000, GENERAL REQUIREMENTS; LEED Submittals, Sustainable Design Requirements and Construction Waste Management.
2. Section 024110, SITE PREPARATION; Clearing and grubbing and removal and disposal of felled trees and stumps outside of the work limits of this section: .

1.4 REFERENCES

A. Comply with applicable requirements of the following standards. Where these standards conflict with other specified requirements, the most restrictive requirements shall govern.

1. American National Standards Institute (ANSI):

A300	Best management practices Tree Support Systems: Cabling, Bracing, and Guying
Z133.1	Safety Requirements for Pruning, Trimming, Repairing, Maintaining and Removing Trees, and for Cutting Brush
Z133A	Best Management Practices Tree and Shrub Fertilization

2. Tree Care Industry Association, 3537 Stratford Rd., Wantagh, NY 11793 (TCIA):

Ref. 1	Pruning Standards for Shade Trees
Ref. 2	Standard for Fertilizing Shade and Ornamental Trees
Ref. 3	Bracing, Cabling and Guying Standard for Shade Trees.

1.5 SUBMITTALS

A. The Contractor shall submit to the Landscape Architect for review, proposed methods and materials for selective clearing, including a schedule indicating specific dates for implementing specific work items in each major work area.

B. Progress reviews: Contractor shall submit weekly progress reviews outlining the type and location of pruning that has taken place for Architect's review and approval.

1.6 PRECONSTRUCTION CONFERENCE

A. A pre-construction meeting will be required between the Contractor and Architect. Issues of degree of pruning, pruning schedules and phasing, and general coordination will be discussed and coordinated.

1.7 QUALITY ASSURANCE

A. Selective Clearing Work: Contractor shall have a minimum of five years experience in work of the type required by this Section and which is certified and/or trained by the manufacturer of the primary materials used in completion of the Work.

B. Selective pruning methods shall conform to the applicable requirements of ANSI Z133.1.

1. Pruning Work of this section shall be completed by a professional Certified Arborist with a minimum five years experience, who has successfully completed a certification program similar to the Massachusetts Certified Arborist (MCA) program/examination sponsored by the Massachusetts Arborists Association, 8-D Pleasant Street, South Natick, MA 01760; (508) 653-3320; FAX: (508) 653-4112; E-mail: MaarbAssn@aol.com.

PART 2 PRODUCTS

2.1 CABLES AND GUYING MATERIALS:

A. Materials for guying and cabling trees shall conform to TCIA Ref. 2.

PART 3 EXECUTION

3.1 TREE PRUNING

A. Means and methods shall follow ANSI Z133.1 Guidelines.

B. Tree pruning shall be "Class II Medium Pruning" conforming to TCIA Ref. 1.

C. Schedule of trees to be pruned and extent of pruning shall be as indicated on the Drawings. Tree pruning shall be as directed and approved by the Landscape Architect.

3.2 TREE REMOVAL

A. Trees to be removed shall be tagged in the field by Landscape Architect and reviewed with Contractor prior to removal operations. Stumps shall be routed out to a minimum depth of 12 in. below finished grade. Holes shall be backfilled with clean fill and topdressed with 6 in. loam unless otherwise noted on the Drawings.

3.3 TREE CABLING AND GUYING

A. Cabling and guying methods shall conform to ANSI A300, Best Management Practices Tree Support Systems: Cabling, Bracing, and Guying.

1. Provide cabling and guying systems to accomplish structural support of the tree as scheduled on the Drawings.

3.4 PRUNING GIRDLING ROOTS

A. Where required, the Contractor shall remove girdling roots from base of trees.

3.5 VINE REMOVAL

A. Vines shall be removed from trees.

3.6 DEADWOOD AND BRUSH REMOVAL

A. Deadwood and brush within the limits of work indicated on the Drawings shall be disposed of as follows:

1. Brush, limbs, and other material less than 6 in. in diameter shall be chipped and removed from the site.

2. All deadwood shall be chipped and stockpiled as specified above.

3. Limbs 6 in. and larger shall, at the Contractor's option, be disposed of as follows:

a. Material shall become the property of the Contractor and be disposed of off-site, or;

B. All debris material not otherwise indicated shall be legally disposed of off-site.

3.7 CONSTRUCTION WASTE MANAGEMENT

A. Comply with the requirements of Section 010000, GENERAL REQUIREMENTS for removal and disposal of construction debris and waste.

END OF SECTION

SECTION 312300

SITE EXCAVATING, BACKFILLING, AND COMPACTING

PART 1 GENERAL

1.1 GENERAL REQUIREMENTS

A. Work of this Section, as shown or specified, shall be in accordance with the requirements of the Contract Documents.

1.2 WORK INCLUDED

A. Provide all equipment and materials, and do all work necessary for site excavating, backfilling, and compacting, as indicated on the Drawings and as specified.

B. The work of this section shall include, but is not necessarily limited to the following:

1. Site excavation, filling, and grading.

2. Excavation and backfill for site structures and utilities.

3. Preparation of subgrade for slabs, pavements, and landscaping, including geotextile fabric for soil stabilization.

4. Sheeting, bracing, and support of excavations as necessary.

5. Drainage and dewatering as necessary to perform work in the dry.

6. Placement and compaction of fills, including lightweight fill material.

C. Sustainable Design Intent: Comply with project requirements intended to achieve certification, measured and documented according to the LEED Green Building Rating System, of the US Green Building Council. Refer to Section 010000 GENERAL REQUIREMENTS for certification level and certification requirements.

1.3 RELATED WORK

A. Examine Contract Documents for requirements that affect work of this Section. Other Specification Sections that directly relate to work of this Section include, but are not limited to:

1. Section 010000, GENERAL REQUIREMENTS; LEED Submittals, Sustainable Design Requirements and Construction Waste Management.

2. Section 024110, SITE PREPARATION.

3. Section 026100, EXCAVATION AND DISPOSAL OF CONTAMINATED SOILS

4. Section 329100, PLANTING SOILS, Furnishing and installing planting soils, including lightweight fill.

5. Aggregate base courses beneath paving is included under the applicable paving specification section.

1.4 REFERENCES

A. Comply with applicable requirements of the following standards. Where these standards conflict with other specified requirements, the most restrictive requirements shall govern.

1. American Society for Testing and Materials (ASTM):

D 422	Particle - Size Analysis of Soils
D 1556	Density of Soil In Place by the Sand-Cone Method
D 1557	Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft^3 (2,700 kN-m/m^3))
D 2487	Classification of Soils for Engineering Purposes
D 3017	Moisture Content of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth)
D 4318	Liquid Limit, Plastic Limit, and Plasticity Index of Soils

2. Associated General Contractors of America, Inc.(AGC):

Manual	Manual of Accident Prevention in Construction

3. New York State Department of Transportation (NYSDOT):

Specifications	Standard Specifications-Construction and Materials

1.5 EXISTING CONDITIONS

A. Excavation and disposal of contaminated soils is specified under "Specifications for the Excavation and Disposal of Contaminated Soils", prepared for Long Dock Beacon Waterfront Park, Red Flynn Drive, City of Beacon, Dutchess County, New York; NYSDEC BCP Site: C314112, prepared by Ecosystems Strategies, Inc., 24 Davis Avenue, Poughkeepsie, NY 12603, dated February 2010.

B. The Contractor shall become thoroughly familiar with the site, consult records and drawings of adjacent structures and of existing utilities and their connections, and note all conditions which may influence the work of this Section.

C. By submitting a bid, the Contractor affirms that he has carefully examined the site and all conditions affecting work under this Section including work which has been let for construction under previous bid packages. No claim for additional costs will be allowed because of lack of full knowledge of existing conditions.

D. The Contractor may, at his own expense, conduct additional subsurface testing as required for his own information.

1.6 INFORMATION NOT GUARANTEED

A. Information on the Drawings and in the Specifications relating to subsurface conditions, natural phenomena, and existing utilities and structures is from the best sources presently available. Such information is furnished only for the information and convenience of the Contractor, and the accuracy or completeness of this information is not guaranteed.

B. Plans, surveys, measurements, and dimensions under which the work is to be performed are believed to be correct, but the Contractor shall have examined them for himself during the bidding period, as no additional compensation will be made for errors and inaccuracies that may be found therein.

1.7 QUALITY CONTROL

A. The Owner reserves the right to retain a Testing Laboratory, at the Owner's expense, to perform on-site observation and testing in accordance with Section 010000, GENERAL REQUIREMENTS.

B. Contractor shall select and pay for an independent testing agency to perform on-site observation and testing during the following phases of the construction operations. The services of the Testing Laboratory and/or Soils Engineer shall include, but not be limited to the following:

1. Observation during placement and compaction of fills.

2. Laboratory testing and analysis of fill and bedding materials specified, as required.

3. Observe construction and perform water content, gradation, and compaction tests at a frequency and at locations determined by the Testing Laboratory. The results of these tests will be submitted to the Landscape Architect, copy to the Contractor, on a timely basis so that the Contractor can take such action as is required to remedy indicated deficiencies. During the course of construction, the Testing Laboratory will advise the Landscape Architect in writing with copy to Contractor if, at any time, in his opinion, the work is not in substantial conformity with the Contract Documents.

4. Observation of fills following interruptions by rains or other inclement weather.

C. Contractor shall perform field density tests in accordance with ASTM D 1556 or D 3017.

1. Make at least one field density test of subgrade at concrete retaining walls for every 10 linear ft. of wall.

2. Make at least one field density test of the subgrade for every 2000 sq. ft. of paved area, but in no case less than three tests.

3. In each compacted fill layer, make one field density test for every 2000 sq. ft. of overlaying paved areas, but in no case less than three tests.

D. The Testing Laboratory's presence does not include supervision or direction of the actual work by the Contractor, his employees, or agents. Neither the presence of the Testing Laboratory, nor any observations and testing performed by him shall excuse the Contractor from defects discovered in his work.

E. The Owner reserves the right to modify or waive Testing Laboratory services.

F. Testing of soils shall be in accordance with the following:

Property	ASTM Test Method
Particle-Size Analysis	D 422
Liquid Limit	D 4318
Plasticity Index	D 4318

1. Off-site materials: One soil test shall be performed for every 2000 cy of material imported, or more frequent if the material varies from previous samples.

1.8 SUBMITTALS

A. Source of any off-site material shall be identified and the results of material tests identified in 1.7.F of this Section shall be submiited for Architect review and apprroval prior to delivering any material on-site.

B. A 10 lb. sample of each off-site material proposed for use, and of any on-site material when so requested by the Landscape Architect or Testing Laboratory, shall be submitted for approval.

1. Samples shall be delivered to office of the Landscape Architect or Testing Laboratory, as directed.

2. Samples required in connection with compaction tests will be taken and transported by the Testing Laboratory.

C. Proposed methods and materials to be employed for dewatering shall be submitted for approval.

1.9 PROTECTION OF EXISTING STRUCTURES AND UTILITIES

A. The work shall be executed in such manner as to prevent any damage to adjacent property and any other property and existing improvements such as, but not limited to: streets, curbs, paving, utility lines and structures, monuments, bench marks and other public and private property. Protect existing structures and foundations from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.

B. In case of any damage or injury caused in the performance of the work, the Contractor shall, at his own expense, make good such damage or injury to the satisfaction of, and without cost to the Owner. Existing roads, sidewalks, and curbs damaged during the project work shall be repaired or replaced to their original condition at the completion of operations. The Contractor shall replace, at his own cost, existing bench marks, monuments, and other reference points which are disturbed or destroyed.

C. Buried structures, utility lines, etc., including those which project less than 18 in. above grade, which are subject to damage from construction equipment shall be clearly marked to indicate the hazard. Markers shall indicate limits of danger areas, by means which will be clearly visible to operators of trucks and other construction equipment, and shall be maintained at all times until completion of Project.

1.10 DRAINAGE AND DEWATERING

A. The Contractor shall provide, at his own expense, adequate pumping and drainage facilities to keep excavated areas sufficiently dry from groundwater and/or surface runoff so as not to adversely affect construction procedures or cause excessive disturbance of underlying natural ground or excavation bottom.

B. The Contractor shall grade and ditch the site as necessary to direct surface runoff away from open excavations and subgrade surfaces. Positive drainage (minimum 1.0% slope) shall be maintained at all times.

C. Water from trenches and excavations shall be disposed of in such a manner as will not cause injury to public health nor to public or private property, nor to existing work, nor to the work completed or in progress, nor to the surface of roads, walks, and streets, nor cause any interference with the use of the same by the public. Methods of disposal of pumped effluent shall not cause erosion or siltation, and shall conform to requirements of Section 01000, GENERAL REQUIREMENTS.

D. Under no circumstances place fills, pour concrete, or install piping and appurtenances in excavations containing free water.

E. There shall be sufficient pumping equipment, in good working order, available at all times to remove water.

F. Where, in the opinion of the Testing Laboratory, pumping of excavations is not effective in maintaining a dry firm subgrade, other dewatering methods acceptable to the Testing Laboratory, shall be employed. This may include the use of well points or deep well dewatering.

1.11 FROST PROTECTION

A. Do not excavate to full indicated depth when freezing temperatures may be expected, unless footings or slabs can be poured immediately after the excavation has been completed. Protect the excavation from frost if placing of concrete is delayed.

B. Completed foundations which have not been backfilled shall be protected from freezing by temporary additional earth cover, insulating blankets, heaters, or other methods acceptable to the Landscape Architect.

C. Frozen material shall not be placed as fill or backfill.

1.12 SHORING AND SHEETING

A. Provide shoring, sheeting and/or bracing at excavations, as required, to prevent collapse of earth at side of excavations.

B. Comply with federal, state, and local regulations, or in the absence of such regulations, comply with the requirements contained in the AGC Manual.

C. Remove sheeting and shoring and the like, as backfilling operations progress, taking all necessary precautions to prevent collapse of excavation sides.

1.13 DEFINITIONS

A. Subgrade - shall be that portion of the soil or rock which remains after stripping of topsoil, excavation, and prior to filling or placement of roadway base course.

B. Embankment - shall be defined as any area on the site to raise grades to proposed subgrade elevations. Embankments are placed in layers to a predetermined elevation and cross section.

C. Structural Backfill - shall be the designated material as indicated on the Drawings to attain the proposed grades abutting or adjacent to site structures.

D. Utility Trench Backfill - is the area bounded by the proposed finished subgrade and the cover material over the respective pipe or conduit. This material shall conform with applicable requirements for embankment or structural backfill depending on the area or zone into which the utility is installed.

E. Unsuitable Material - material which is classified as "unsuitable" shall be material having at least one of the following properties:

1. Material with a maximum unit dry weight per cubic foot less than 90 lb., as determined by ASTM D 1557.

2. Material containing visible organic matter, topsoil, organic silt, peat, construction debris, roots, and stumps.

3. Material which has a Liquid Limit greater than 55 when tested in accordance with ASTM D 4318.

4. Material designated in the field by the Testing Laboratory.

F. Topsoil - The upper layer of the soil profile which is supporting the growth of vegetation as evidenced by the existence therein of numerous roots and other organic matter.

G. Soil - all earth materials, organic or inorganic, which have resulted from natural processes such as weathering, decay, and chemical action of in situ rock or the deposition of unconsolidated material.

H. Rock (Ledge) - shall be defined as sound and solid mass, layer, or ledge of mineral matter in place of such hardness and texture that it:

1. Mechanical Definition of Rock:

   Cannot be effectively loosened or broken down by ripping in a single pass with a late model tractor-mounted hydraulic ripper equipped with one digging point of standard manufacturer's design adequately sized for use with and propelled by a crawler type tractor rated between 210-and 240-net flywheel horsepower, operating in low gear, or

2. Manual Definition of Rock:

   In areas where the use of the ripper described above is impracticable, rock defined as sound material of such hardness and texture that it cannot be loosened or broken by a 6 lb. drifting pick. The drifting pick shall have a handle not less than 34 in. in length.

I. Flowable Fill - shall be cementitious material used for backfill with a compressive strength of 80 psi.

1.14 COORDINATION

A. Prior to start of earthwork the Contractor shall arrange an on-site meeting with the Landscape Architect for the purpose of establishing Contractor's schedule of operations and scheduling inspection procedures and requirements.

B. As construction proceeds, the Contractor shall be responsible for notifying the Landscape Architect prior to start of earthwork operations requiring inspection and/or testing.

C. The Contractor shall be responsible for obtaining test samples of soil materials proposed to be used and transporting them to the site sufficiently in advance of time planned for use of these materials for testing of materials to be completed. Use of these proposed materials by the Contractor prior to testing and approval or rejection, shall be at the Contractor's risk.

1.15 PROTECTION OF EXISTING LANDSCAPE

A. The Contractor shall exercise care to preserve the natural landscape and shall conduct his construction operations so as to prevent any unnecessary destruction, scarring, or defacing of the natural surroundings in the vicinity of the Work.

1. Except where clearing is required for permanent works, for approved construction roads, and for excavation operations, the costal dune and all trees, native shrubbery, and vegetation shall be preserved and shall be protected from damage which may be caused by the Contractor's construction operations and equipment. Existing trees to remain shall be suitably protected from damage with fencing or other means acceptable to the Landscape Architect.

2. Movement of crews and equipment within the right-of-way and over routes provided for access to the work shall be performed in a manner to prevent damage to property. Where unnecessary destruction, scarring, damage, or defacing may occur as a result of the Contractor's operations the same shall be repaired, replanted, reseeded, or otherwise corrected at the Contractor's expense.

B. Where indicated on the Drawings and as directed by the Landscape Architect, disturbed areas shall be temporary seeded in accordance with Section 312500, EROSION CONTROL AND PROTECTION WORK.

1.16 WORK WITHIN AND CONTIGUOUS WITH NATURAL RESOURCES

A. The Owner has filed a Notice of Intent pursuant to the State of New York Wetland Protection Act with the Town of Beacon Conservation Commission and has received an Order of Conditions for the work of this Project. All work on this Project must be in strict compliance with the terms stated therein. A copy of the Order of Conditions will be issued as part of the 100% Project Manual.

PART 2 PRODUCTS

2.1 SOURCE OF MATERIALS

A. Material shall be obtained from required on-site excavations, to the extent that suitable material is available, and from offsite sources, to the extent that suitable material is not available from on-site excavations.

1. No recycled material derived from asphalt or concrete pavements, brick or concrete building materials, glass or other similar building materials shall be permitted as fill or backfill on the site unless specifically approved in writing by the Owner.

2.2 EMBANKMENT MATERIALS

A. Embankment material shall be a granular material conforming to the following:

1. Liquid Limit shall not exceed 35%.

2. Plasticity Index shall be in the range of 2 to 10.

3. Gradation shall conform to the following:

Sieve Size	% Passing by Weight
2 in.	100
3/4 in.	80-100
No. 4	60-85
No. 40	35-60
No. 100	15-40
No. 200	0-12

2.3 BACKFILL MATERIALS

A. On-site material for use in compacted backfill shall be natural, inorganic, granular soil, taken from areas of excavation after stripping of topsoil and removal of unsuitable material.

B. Material containing organic matter, topsoil, organic silt, peat, or soft or frost-susceptible soil is unsuitable for any of the following uses:

Backfill beneath site structures
Backfill beneath pavement and within 5 ft. of subgrade
Bearing strata material
Bedding
Fill for meadow berm construction

1. NOTE: Material resulting from excavation operations within wetland areas containing organic matter, topsoil, organic silt, peat, or soft or frost-susceptible soil is unsuitable for any use on Project and shall be removed and legally disposed of off-site.

C. Backfill materials shall be free from rocks greater than 8 in. in diameter or length, having largest dimension greater than 3/4 lift thickness, or greater than 1/2 $ft.^3$ in volume, and foreign matter, such as construction debris, trash, wood, roots, leaves, sod, organic matter, or soft clay and silt. Backfill shall be clean, non-organic material, of non-swelling character, capable of being readily compacted to form a solid, stable embankment. Materials containing ice or frozen lumps shall not be employed.

D. Backfill material shall be compacted clean washed sand with less than 10% passing the No. 200 sieve. Maximum diameter shall be 1-1/2 in. Testing laboratory shall examine and approve material before backfilling.

E. Structural fill material shall be soils containing less than 5% (by weight) fibrous organic materials with Plasticity Index less than 30. Plasticity Index less than 15 is preferred. On-site materials may be used only if approved by Testing Laboratory.

F. Backfill material shall be well graded within the specified limits. Gradation of materials shall be determined in accordance with ASTM C 136.

1. Granular Fill **(for over-excavation)** shall be sand-gravel mixture, graded within the following limits:

Sieve Size	% Passing by Weight
1-1/2 in.	100
No. 4	20-60
No. 40	10-35
No. 200	0-8

2. Gravel Bedding **(for utilities)** shall be gravel, crushed quarry rock or crushed gravel, from off-site sources graded within the following limits:

Sieve Size	% Passing by Weight
1 in.	100
3/4 in.	90-100
3/8 in.	20-55
No. 4	0-10
No. 8	0-5

3. Common Fill (i**n landscaped areas)** shall be bankrun sand, gravel, or mixture thereof, graded within the following limits:

Sieve Size	% Passing by Weight
6 in.	100
No. 4	30-95
No. 200	0-15

4. Sand Fill for sleeve beds shall be sand, graded within the following limits:

Sieve Size	% Passing by Weight
No. 4	100
No. 200	0-8

5. Lightweight Fill material shall be a lightweight aggregate fill produced by the rotary kiln process equal to "Solite" coarse size 3/4 in. - #4 manufactured by Northeast Solite Corp., Mount Marion, NY 12456 or approved equal, and shall meet all requirements of recently completed (within 2 years max.) ASTM C 330 certification. No by product slags or cinders shall be permitted.

   a. Lightweight aggregate shall have proven track record of durability and be non-corrosive.
   b. Dry loose unit weight shall be less than 55 pcf. Lightweight aggregate producer shall submit verification of a compacted density of less than 60 pcf when measured by a one point test conducted in accordance with ASTM D 698.
   c. Lightweight aggregate producer shall submit verification that the angle of internal friction shall be greater than 40 degrees when measured in triaxle compression test on a laboratory sample with a minimum diameter of 10 in.
   d. The maximum Los Angeles Abrasion loss when tested in accordance with ASTM C 131 (B grading) shall be 50%.

2.4 SLEEVES

A. Sleeves for installing future pipe or wiring shall be Schedule 40 PVC pipe, minimum 4 in. diameter unless otherwise noted.

   1. Sleeve locations for future electrical conduit shall be coordinated with the Owner and Landscape Architect.

2.5 GEOTEXTILE - SOIL STABILIZATION

A. Geotextile for soil stabilization: for placement over newly prepared subgrades beneath pavement aggregate bases and over existing subgrade at access roads and construction entrance shall be a woven high modulus fabric equal to Mirafi 600X, manufactured by Mirafi, Inc., Charlotte, NC 28224, or approved equal.

   1. Access roads and construction entrance: See Drawings for surface material requirements.

PART 3 EXECUTION

3.1 EXCAVATION

A. Sheeting, shoring, bracing, pumping, bailing, and other incidental work necessary to make and maintain excavations and keep them free from water at all times during placing of concrete, utility lines, and fill and backfill materials, shall be performed or supplied as required. Fill and backfill shall be placed in dry or dewatered areas only.

B. Sheeting shall be installed where required to maintain safe and workable conditions in excavations. Sheeting, including necessary wales and struts, shall be selected and designed by the Contractor. Use of sheeting shall equal or exceed minimum required for safety and/or conformance to law.

C. Structures, pipes, pavement, earth, and other property liable to damage from excavation operations shall be braced, underpinned, and supported as required to prevent damage and movement.

D. As excavation approaches underground utilities and structures, excavation shall be done by hand tools. Such manual excavation is incidental to normal excavation and no special payment will be made.

E. Excavation shall include satisfactory disposal of excavated material not employed as backfill or fill materials.

1. Excavation material, other than topsoil, which is not required for or is unsuitable for backfill or fill materials, shall be legally disposed of off-site.

F. Excavation for pipe and other items shall be carried far enough below underside of item to accommodate bedding material.

G. Excavations which extend below indicated or specified levels ("over-excavation"), shall be filled to those levels with compacted Structural Backfill Material if within the areas of structures and General Site Fill for areas beyond the structures limits.

H. If bearing surface of subgrade which is to receive fill, structure, concrete, or other construction becomes softened, disturbed, or unstable, unsuitable material shall be removed down to a firm bearing surface and replaced with suitable material. Subgrade shall then be protected from further disturbance until construction item is placed.

I. Excavations shall not be wider than required to set, brace, and remove forms for concrete, install structures, piping, or perform other necessary work. Width of trench at 12 in. above top of pipe or conduit shall not be greater than the sum of outside diameter of the pipe or the conduit plus 2 ft. (pipe O.D. + 2 ft.). Sides of trench above this level shall be sloping, at an angle 30 degrees or less from vertical, from this level to grade. In materials where sloping walls are not stable, trench walls shall be sheeted.

J. Rock, if encountered, may be excavated by blasting. Blasting shall be done in strict accordance with applicable laws and ordinances. Explosives shall be stored on-site only when blasting is in progress. When the need for explosives has passed, they shall be removed from the site.

1. Surfaces of rock foundation shall be sufficiently rough to bond well with the masonry and embankments to be built and, if required, shall be cut to rough benches or steps.

2. Before masonry is built upon rock, the rock shall be freed from all vegetation, dirt, clay, shale, excessively cracked rock, water, ice, and other objectionable substances. Picking, wedging, streams of water under high pressure, stream jets, and other effective means shall be used to clean exposed rock.

3. Except as otherwise indicated on the Drawings, rock shall be excavated to a depth 6 in. or more below bottom of structures.

K. Below-ground Demolition

1. Underground items, not indicated on the Drawings, which impede construction of new work indicated, shall be abandoned, demolished, and/or removed only with the approval of the Landscape Architect.

L. Proofroll areas to support pavements with a 35 ton rubber tired roller in four passes in two perpendicular directions. Undercut to level of stable soils in unstable areas. Perform work in presence of Testing laboratory.

3.2 FILLING

A. Filling shall be done in any area only after the Testing Laboratory has reviewed subgrade.

B. Benching: Fills placed on existing slopes which exceed 6 ft. horizontal to 1 ft. vertical shall be keyed or benched into the existing slope not less than 5 ft. to prevent the formation of slippage planes.

C. Compaction at End of Day: Areas undergoing filling shall be smooth-rolled before the end of the work day to seal and protect these areas from rainfall infiltration during the night.

3.3 FILL, BACKFILL, AND COMPACTION

A. Excavation below finished grades shall be backfilled. Temporary planking, timbering, forms, debris, and refuse shall be removed before backfill is placed.

B. Backfilling shall be done in any area only after the Landscape Architect or Testing Laboratory has inspected and approved subgrade, or other work in excavations. Notice that the work is ready for inspection shall be given promptly, and sufficient time shall be allowed for making necessary examinations.

C. General Site Fill: General Site Fill for use in areas beyond the building limits and beyond structures shall be placed in lifts not exceeding 12 in. in loose thickness and compacted to 90% of maximum density, determined by ASTM D 1557.

1. NOTE: Material resulting from excavation operations within wetland areas containing organic matter, topsoil, organic silt, peat, or soft or frost-susceptible soil is unsuitable for any use on Project and shall be removed and legally disposed of off-site.

D. Lightweight Fill: shall be used within 40 ft. perimeter of the Red Barn as part of a soil remediation operation. Refer to Drawings and Section 026100, EXCAVATION AND DISPOSAL OF CONTAMINATED SOILS.

E. Where pumping of excavations is not effective and where permitted by the Landscape Architect or Testing Laboratory, Stone Fill may be placed below water without compaction in lieu of General Site Fill or Structural Backfill. There will be no adjustment in Contract price.

F In order to prevent lateral movement, care shall be exercised in placing backfill adjacent to foundation wall, footing, utility line and other structures. Backfill on opposite sides of such items shall be kept at approximately the same elevation as backfilling progresses to prevent unbalanced earth pressure. During backfilling the difference in elevation of backfill on opposite sides of the structure shall not exceed 12 in.

1. Shoring shall be employed as necessary to protect such items.

2. Foundation walls and footings have been designed to act with other portions of the structure to withstand the loads they will bear in completed project; they have not been designed to withstand construction loads or unbalanced earth or equipment loadings.

G. Except as otherwise noted, tolerance of top surface of completed backfill shall be $\pm$2 in. from true grade indicated, and variations from indicated tolerance shall approximately compensate within each 100 $ft.^2$ area.

H. Subgrade and backfill of indicated areas or structures shall be compacted in accordance with requirements of ASTM D 1557, and as specified in the following table:

COMPACTION TABLE

Area or Structure	Subgrade Compaction Minimum %	Max. Compacted Thickness Per Lift - in.	Compaction of Each Lift Minimum %
Above pipe cover to subgrade	85	12	90
Area or structure not otherwise noted	85	12	90
Concrete equipment pad	90	8	95
Footing, foundation, manhole, or similar structure, and within 2 ft. horizontally	90	8	95
Pavement, including 1 ft. beyond edge	90	8	95
Pipe cover	--	6	95
Granular Fill	95	6	95
Fine grained or cohesive soils	95	9	95

I. Compaction requirements shall apply to material directly below the indicated supported item (base course, footing, or structure), and to all material above the undisturbed earth beneath fill, and enclosed by the following planes:

1. Horizontal plane at the elevation of the bottom of the supported item (base course, footing, or structure), within a perimeter line located 2 ft. beyond the exterior face or edge of item.

2. Flat planes extending from the perimeter line downward and outward at 45^{o} angle with the horizontal, to where the planes intersect undisturbed earth. Where zones of higher and lower percentages of compaction overlap, that of the higher percentage shall apply.

J. Compaction of backfill in excavation shall be to a density not less than that required of the surrounding area fill.

K. Equipment and methods employed to achieve specified compaction shall be subject to the approval of the Landscape Architect and Testing Laboratory, and equipment shall be replaced and methods revised as directed until specified compaction is obtained.

L. Compaction of each lift shall be completed before compaction of the next lift is started.

M. Backfill adjacent to wall, conduit, pipe, and similar item, and in other areas where wheeled equipment cannot safely be employed, shall be placed in 4 in. thick layers, to the specified compaction, using mechanical tampers.

3.4 GEOTEXTILE – SOIL STABILIZATION

A. Geotextile for soil stabilization at pavement construction shall be placed on prepared subgrade, in strict accordance with manufacturer'r printed instructions. Adjacent layers of geotextile shall be overlapped a minimum of 12 in.

3.5 MOISTURE CONTROL

A. Variation of moisture content in fill and backfill materials shall be limited to Optimum Moisture (-1% to +3%). Moisture content shall be as uniformly distributed as practicable within each lift, and shall be adjusted as necessary to obtain the specified compaction.

B. Material which does not contain sufficient moisture to be compacted to the specified densities shall be moisture conditioned by sprinkling, disking, windrowing, or other method approved by the Testing Laboratory.

1. Material conditioned by sprinkling shall have water added before compaction. Uniformly apply water to surface of subgrade or layer of soil material to obtain sufficient moisture content. The Contractor shall maintain sufficient hoses and/or water distributing equipment at the site for this purpose.

C. Material containing excess moisture shall be dried to required Optimum Moisture Content before it is placed and compacted. Excessively moist soils shall be removed and replaced or shall be scarified by use of plows, discs, or other approved methods, and air-dried to meet the above requirements.

D. Materials which are within the moisture requirements specified above, but which display pronounced elasticity or deformation under the action of earthmoving and compaction equipment, shall be reduced to Optimum Moisture Content, or below, to secure stability.

E. In the event of sudden downpours or other inclement weather, exposed subgrades and fills which, in the opinion of the Testing Laboratory, become inundated or excessively moistened shall have excess water removed and soil dried as specified above.

3.6 CONSTRUCTION WASTE MANAGEMENT

A. Comply with the requirements of Section 010000, GENERAL REQUIREMENTS for removal and disposal of construction debris and waste.

END OF SECTION

SECTION 312500
EROSION CONTROL AND PROTECTION OF WORK

PART 1 – GENERAL

1.1 WORK INCLUDED:

A. Provide all materials and equipment, and do all work required to complete the erosion control and protection of work, as indicated on the Drawings and as specified. The Stormwater Pollution Prevention Plan (SWPPP) dated February 11, 2010 is herewith included in these specifications by reference. The Contractor shall become familiar with its contents and requirements to provide adequate erosion and sedimentation control during all construction activities.

1.2 DESCRIPTION OF WORK:

Provide all means necessary to install, inspect and maintain, and remove temporary erosion and sediment control measures as shown on the drawings and as required by Engineer, Owner's Representative or City Inspector to minimize the erosion and unspecified transport of soil from the site.

1.3 QUALITY ASSURANCE:

A. General:

1. Install in accordance with the drawings or *New York: Guidelines for Urban Erosion & Sediment Control*, Third Printing, 1991 (N.Y. Guidelines) or latest printing.

2. Grade and maintain site at all times such that all storm water runoff from disturbed areas is diverted to soil erosion and sedimentation control facilities.

3. The Contractor shall comply with applicable Federal, State and local regulations relating to the prevention and abatement of pollution.

4. Construction Waste Management: Comply with the requirements of Section 010000, GENERAL REQUIREMENTS for removal and disposal of construction debris and waste.

B. Product Data:

Submit manufacturer's catalogue cuts, specifications and installation instructions for silt fences and filter fabrics.

1.4 WORK SCHEDULE:

A. Inspections:

Provide qualified personnel to inspect measures at least once a week and within 24 hours of the end of a 0.5-inch or greater storm event. Stabilized areas will be inspected monthly until the entire site is stabilized.

B. Maintenance:

Maintenance will be completed within 7 calendar days of determining its need. Critical conditions may require immediate attention and correction.

PART 2 – PRODUCTS

2.1 MATERIALS:

A. Silt Fence:

Silt fence fabric shall be Mirafi 100X or equal. Wood posts shall be of sound quality hardwood, a minimum of 36 inches long and 2 inches square. Metal posts shall be standard T and U section weighing not less than one pound per linear foot. Wire fence backing shall be a minimum 14-½ gage with a maximum 6-inch mesh opening and securely attached to fence posts. Posts shall extend a minimum of 16 inches into the ground.

B. Hay Bale Barriers:

Bales shall be securely anchored by metal posts or wood posts of sound quality hardwood, a minimum of 36 inches long. Metal posts shall be standard T and U section weighing not less than one pound per linear foot.

C. Temporary Stabilization:

1. Establishment of Temporary Grass Cover: Prepare seed bed, scarify if compacted, remove debris and obstacles such as rocks and stumps, and seed within 24 hours. Amend soil, lime soil to pH of 6.0 and fertilize at a rate of 14 pounds per 1,000 square feet with a 5-10-10 or equivalent fertilizer. Work amendments a minimum of 4 inches into soil. If seeding in October/November, seed shall be Certified Aroostook winter rye at 100 pounds per acre, otherwise seed shall be ryegrass (annual or perennial) at 30 pounds per acre.

PART 3 – EXECUTION

3.1 INSTALLATION:

A. Prior to any earthwork, install all silt fences, tree protection devices and sediment traps where shown on plans and where directed by the Engineer. Refer to details on plans.

B. Divert, where necessary, storm water to the sediment devices to minimize the transport of sediment off-site.

C. In the event the Contractor's work has caused sediment loss off-site, all efforts will be undertaken to immediately correct the condition. The Contractor shall be responsible to clean or repair any property damaged by his or her actions during construction.

D. All soil stockpile areas shall be seeded with grass cover. Temporary seeding or mulching must be used on areas which will be exposed for more than 14 days.

E. Upon completion of the project and all exposed soil areas have been stabilized, all sediment devices will be removed.

F. Construction Vehicles:

If necessary, wash down all construction vehicles in location indicated on plans and cover with tarpaulins as necessary to prevent vehicle transport of sediment off-site. Direct wastewater from wash down operations to a hay bale erosion protection sump or sediment trap.

END OF SECTION

SECTION 323129

WOOD FENCE AND GATE

PART 1 GENERAL

1.1 GENERAL REQUIREMENTS

A. Work of this Section, as shown or specified, shall be in accordance with the requirements of the Contract Documents.

1.2 WORK INCLUDED

A. Provide all equipment and materials, and do all work necessary to construct the wood fence and gate, including steel gate frames, as indicated on the Drawings and as specified herein.

B. Sustainable Design Intent: Comply with project requirements intended to achieve certification, measured and documented according to the LEED Green Building Rating System, of the US Green Building Council. Refer to Section 010000 GENERAL REQUIREMENTS for certification level and certification requirements.

1.3 RELATED WORK

A. Examine Contract Documents for requirements that affect work of this Section. Other Specification Sections that directly relate to work of this Section include, but are not limited to:

1. Section 010000, GENERAL REQUIREMENTS; LEED Submittals, Sustainable Design Requirements and Construction Waste Management.

2. Section 024110, SITE PREPARATION; Remove and salvage existing driftwood pieces for reuse under work of this Section.

3. Section 033013, CAST-IN-PLACE CONCRETE; Concrete footings.

1.4 REFERENCES

A. Comply with applicable requirements of the following standards. Where these standards conflict with other specified requirements, the most restrictive requirement shall govern.

1. American Society for Testing and Materials (ASTM):

A 153	Zinc - Coating (Hot-Dip) on Iron and Steel Hardware
F 537	Design, Fabrication, and Installation of Fences Constructed of Wood and Related Materials

1.5 SUBMITTALS

A. Shop drawings of wood fence and gate shall be submitted.

B. Submit duplicate samples of fence posts, boxwire, and each gate type with hinges, for Architect's approval.

C. LEED Submittal:

1. Certificates for Credit MR 7: Chain-of-custody certificates certifying that wood products comply with forest certification requirements. Include evidence that manufacturer is certified for chain of custody by an FSC-accredited certification body.

1.6 GREEN BUILDING REQUIREMENTS AND PERFORMANCE CRITERIA

A. Green Building Performance Criteria

1. Green Building Focus Materials for this Section
   a. Solid wood

2. Green Building Focus Materials shall be FSC-certified products which have been harvested in accordance with the "FSC Principles and Criteria" for well-managed forests developed by the Forest Stewardship Council (FSC). Acceptable certification organizations include Scientific Certification Systems (SCS) of Oakland, CA and the Rainforest Alliance Smart Wood of New York, NY.

B. Green Building Submittal Requirements : The Contractor and their sub-contractors shall submit the GREEN BUILDING CERTIFICATION items listed herein.

1. GBMCF: Submit a completed GREEN BUILDING MATERIALS CERTIFICATION FORM. Information to be supplied for this form shall include:
   a. Cost breakdowns for the materials included in the Contractor or sub-contractor's work. Cost breakdowns shall include total cost plus itemized material costs for Green Building Focus Materials and VOC containing products.
   b. The amount of post-consumer and/or post-industrial recycled content in the Green Building Focus Materials.
   c. Identification of materials manufactured within a 500-mile radius of the project site.
   d. Identification of raw materials harvested or extracted within a 500-mile radius of the project site.

2. Validation: Published product literature or manufacturer's letter of certification (on the manufacturer's letterhead) validating all information, other than costs, provided in the GBMCF.

3. Cut Sheets: Product cut sheets for materials listed in the GBMCF. Cut sheets shall be submitted with the Contractor or Trade Contractor's stamp, confirming that the submitted products are the products installed in the Project.

4. VOC Content: Material Safety Data Sheets (MSDS), published product literature, or manufacturer's signed certification (on manufacturer's letterhead) stating the VOC content of all applicable products.

5. FSC-certified wood products: Provide chain-of-custody certification, per Forest Stewardship Council criteria. Provide copies of vendor invoices for each certified wood product, indicating total cost, material cost, and vendor chain-of-custody number.

6. Submittal Package: The GREEN BUILDING submittal information shall be assembled into one (1) package per Section or trade, and sent to the Consultant for review. Incomplete or inaccurate Green Building submittals may be used as the basis for rejecting the submitted products or assemblies.

1.7 QUALITY ASSURANCE

A. Provide lumber and plywood bearing the grade-trademark of the association under the rules or standards of which it was produced. Grade-trademarks shall conform to the rule or standard under which the material is produced, including requirements for qualifications and authority of the inspection organization, usage of authorized identification, and information included in the identification.

1. Lumber shall bear the grade mark of an American Lumber Standards Committee, Board of Review-approved agency. Lumber shall conform to USDC PS 20.

2. Lumber shall bear a mark of mill identification.

B. Forest Certification: Provide wood products obtained from forests certified by an FSC-accredited certification body to comply with FSC STD-01-001, "FSC Principles and Criteria for Forest Stewardship."

PART 2 PRODUCTS

2.1 GENERAL

A. All welding shall be done in accordance with the standards of the American Welding Society.

B. All welds shall be ground smooth and flush to match and blend with adjoining surfaces.

2.2 WOOD FENCE

A. Fence lumber shall be selected Northern White Cedar or Western Red Cedar of sound stock, conforming to ASTM F 537, Architectural Class I Sawn Posts and Rails.

1. Western Red Cedar: WRCLA "No. 2 and Better Clear grade".

B. Lumber shall bear a mark of mill identification and shall bear the grade - trademark of the association under the rules or standards of which they were produced.

1. Posts shall be 8 ft. in length. Posts sghall be 4 in . x 4 in..

C. Boxwire shall be galvanized steel core wire. Boxwire Mesh: 12.5 finished gage welded galvanized wire mesh, woven into 4 in. x 4 in. dimension boxwire indicated on the Drawings.

1. Zinc for galvanized coating shall conform to ASTM B 6, galvanized by hot dipped method AISI Type I, before vinyl coating; coating shall be smooth. Minimum weight of zinc coating shall be 1.2 oz. per sq. ft.

2.3 SWING GATES

A. Gate Frames: Fabricate swing gate using galvanized steel members.

1. Steel Frames: Galvanized square steel tubular members manufactured per ASTM A787 having a 45,000 psi (310 MPa) yield strength and G90 zinc coating, 0.90 oz/ft^2). Minimum size 1.5 "

B. Bracing: Provide diagonal adjustable length truss rods on gates to prevent sag.

C. Hardware Materials: Galvanized steel or malleable iron shapes to suit gate size. Hinges shall be stainless steel inside with specified painted finish outside.

1. Hinges: Structurally capable of supporting gate leaf and allow opening and closing without binding. Non-lift-off type hinge design shall permit gate to swing 180° (3.14 rad). Provide 1-1/2 pair of hinges for each leaf over 1.83 m nominal height.

2. Latch: Capable of retaining gate in closed position and have provision for padlock.

3. Keeper: Provide keeper for each gate leaf over 5' (1500 mm) wide. Gate keeper shall consist of mechanical device for securing free end of gate when in full open position.

4. Service Gates: Provide drop rod to hold inactive leaf. Provide gate stop pipe to engage center drop rod. Provide locking device and padlock eyes as an integral part of latch, requiring one padlock for locking gate.

2.4 FASTENERS AND ACCESSORIES

A. Stainless Steel: Comply with following standards and requirements for stainless steel components:

1. All metal components shall be Marine grade Type 316 Stainless Steel.

2. Welds: Architectural quality throughout.

3. Fasteners and Hardware: Marine grade Type 316 stainless steel.

B. Provide stainless steel hardware required to complete this work and to attach this work in a secure and rigid manner to work of this and other trades, including all brackets, anchors, thru bolts, washers, nuts, nails, screws and other hardware. Rough hardware shall comply in all respects with requirements of the governing laws and codes.

C. Fastening screws for seating shall be Swaneze self drilling #7 trim head stainless steel screws (1-800-847-4714), or approved equal.

PART 3 EXECUTION

3.1 WOOD FENCE

A. Unless otherwise indicated, installation of wood fence and gate shall conform to ASTM F 537.

B. Fence shall be installed by experienced fence erection crews. Fence shall be straight, true, and plumb, with a straight top line, installed to a height of 4 ft. above grade.

D. Following erection of fence, all posts shall be cut off on a level line such that all points are removed.

3.2 GATE INSTALLATION

A. Install gates plumb, level and secure for full opening without interference.

B. Attach hardware by means which will prevent unauthorized removal.

3.3 ADJUSTING

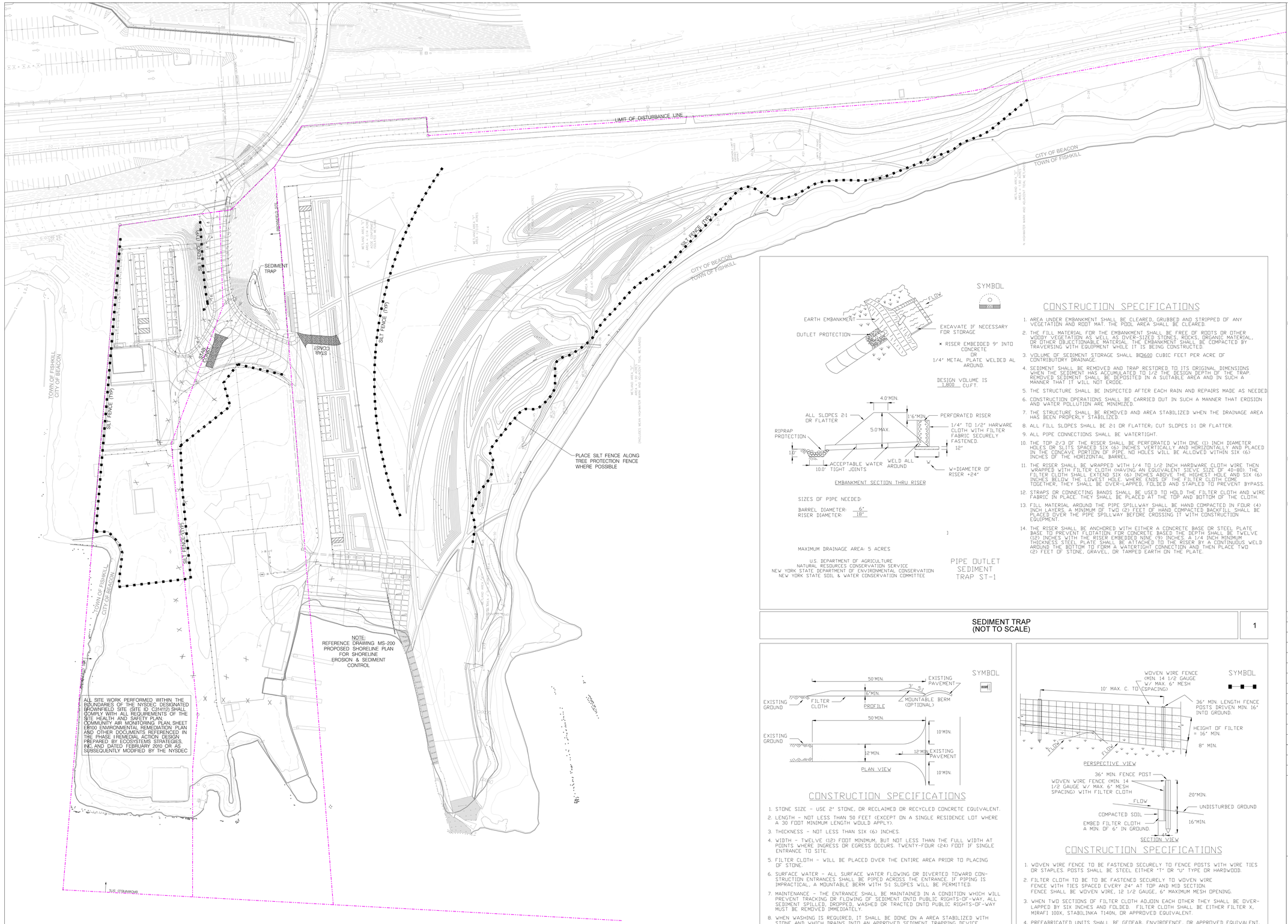
A. Gates: Adjust gates to operate smoothly, easily, and quietly, free of binding, warp, excessive deflection, distortion, nonalignment, misplacement, disruption, or malfunction, throughout entire operational range. Confirm that latches and locks engage accurately and securely without forcing or binding.

B. Lubricate hardware and other moving parts.

3.4 CONSTRUCTION WASTE MANAGEMENT

A. Comply with the requirements of Section 010000, GENERAL REQUIREMENTS for removal and disposal of construction debris and waste.

END OF SECTION



THE STATE OF NEW YORK REQUIRES NOTIFICATION BY EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN THE STATE. (1-800-962-7962)

LEGAL NOTICE:
IT IS A VIOLATION OF ARTICLE 145 OF THE NEW YORK STATE EDUCATION LAW FOR ANY PERSON TO ALTER THIS DOCUMENT IN ANY WAY EXCEPT AS PROVIDED IN SECTION 7209 (2), ARTICLE 145, NEW YORK STATE EDUCATION LAW.

CONSTRUCTION SPECIFICATIONS

1. AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED AND STRIPPED OF ANY VEGETATION AND ROOT MAT. THE POOL AREA SHALL BE CLEARED.
2. THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS OR OTHER WOODY VEGETATION AS WELL AS OVER-SIZED STONES, ROCKS, ORGANIC MATERIAL, OR OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED.
3. VOLUME OF SEDIMENT STORAGE SHALL BE 3600 CUBIC FEET PER ACRE OF CONTRIBUTORY DRAINAGE.
4. SEDIMENT SHALL BE REMOVED AND TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
5. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED
6. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION ARE MINIMIZED.
7. THE STRUCTURE SHALL BE REMOVED AND AREA STABILIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.
8. ALL FILL SLOPES SHALL BE 2:1 OR FLATTER; CUT SLOPES 1:1 OR FLATTER.
9. ALL PIPE CONNECTIONS SHALL BE WATERTIGHT.
10. THE TOP 2/3 OF THE RISER SHALL BE PERFORATED WITH ONE (1) INCH DIAMETER HOLES OR SLITS SPACED SIX (6) INCHES VERTICALLY AND HORIZONTALLY AND PLACED IN THE CONCAVE PORTION OF PIPE. NO HOLES WILL BE ALLOWED WITHIN SIX (6) INCHES OF THE HORIZONTAL BARREL.
11. THE RISER SHALL BE WRAPPED WITH 1/4 TO 1/2 INCH HARDWARE CLOTH WIRE THEN WRAPPED WITH FILTER CLOTH HAVING AN EQUIVALENT SIEVE SIZE OF 40-80. THE FILTER CLOTH SHALL EXTEND SIX (6) INCHES ABOVE THE HIGHEST HOLE AND SIX (6) INCHES BELOW THE LOWEST HOLE. WHERE ENDS OF THE FILTER CLOTH COME TOGETHER, THEY SHALL BE OVER-LAPPED, FOLDED AND STAPLED TO PREVENT BYPASS.
12. STRAPS OR CONNECTING BANDS SHALL BE USED TO HOLD THE FILTER CLOTH AND WIRE FABRIC IN PLACE. THEY SHALL BE PLACED AT THE TOP AND BOTTOM OF THE CLOTH.
13. FILL MATERIAL AROUND THE PIPE SPILLWAY SHALL BE HAND COMPACTED IN FOUR (4) INCH LAYERS. A MINIMUM OF TWO (2) FEET OF HAND COMPACTED BACKFILL SHALL BE PLACED OVER THE PIPE SPILLWAY BEFORE CROSSING IT WITH CONSTRUCTION EQUIPMENT.
14. THE RISER SHALL BE ANCHORED WITH EITHER A CONCRETE BASE OR STEEL PLATE BASE TO PREVENT FLOTATION. FOR CONCRETE BASED THE DEPTH SHALL BE TWELVE (12) INCHES WITH THE RISER EMBEDDED NINE (9) INCHES. A 1/4 INCH MINIMUM THICKNESS STEEL PLATE SHALL BE ATTACHED TO THE RISER BY A CONTINUOUS WELD AROUND THE BOTTOM TO FORM A WATERTIGHT CONNECTION AND THEN PLACE TWO (2) FEET OF STONE, GRAVEL, OR TAMPED EARTH ON THE PLATE.

SEDIMENT TRAP
(NOT TO SCALE)

1

CONSTRUCTION SPECIFICATIONS

1. STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
3. THICKNESS - NOT LESS THAN SIX (6) INCHES.
4. WIDTH - TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.
5. FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACTED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON A AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

U.S. DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE

STABILIZED CONSTRUCTION ENTRANCE

STABILIZED CONSTRUCTION ENTRANCE
(NOT TO SCALE)

CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER "T" OR "U" TYPE OR HARDWOOD.
2. FILTER CLOTH TO BE TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 12 1/2 GAUGE, 6" MAXIMUM MESH OPENING.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
4. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUIVALENT.
5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

U.S. DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE

SILT FENCE

SILT FENCE
(NOT TO SCALE)

3

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Revisions

Number	Date	Description
	06.14.10	Bid Set

Job number 2391	
Drawn by	Checked by
Scale 1"=60'	Date 14 JUNE 2010

Stamp

Sheet Title

EROSION AND SEDIMENT CONTROL PLAN

Sheet Number

C-100

SEE ENLARGEMENT 1/ES100 FOR REMEDIATION PLAN

NYSDEC DESIGNATED BROWNFIELD SITE
(SITE ID C314112)

37' - 0"

BROWNFIELD:
ALL SITE WORK PERFORMED WITHIN THE BOUNDARIES OF THE NYSDEC DESIGNATED BROWNFIELD SITE (SITE ID C314112) SHALL COMPLY WITH ALL REQUIREMENTS OF THE SITE HEALTH AND SAFETY PLAN, COMMUNITY AIR MONITORING PLAN, SHEET ER100 ENVIRONMENTAL REMEDIATION PLAN AND OTHER DOCUMENTS REFERENCED IN THE PHASE I REMEDIAL ACTION DESIGN PREPARED BY ECOSYSTEMS STRATEGIES, INC. AND DATED FEBRUARY 2010.

0' 25' 50' 100'

GENERAL NOTES

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NOTE:
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Ecosystems Strategies, Inc.

REMEDIATION LEGEND

- Area for Contaminated Soil Removal
- Area for Deeper Contaminated Soil Removal
- Area to Receive 2' Cap of Imported Clean Fill
- Area to Receive Pavement Cap

NO FILL IN VEGETATED AREA

PAVEMENT CAP - SEE SHEET L201 BARN ENLARGMENT FOR PAVEMENT MATERIAL AND SHEET L301 BARN GRADING FOR FINISHED GRADE ELEVATIONS

FENCE - SEE SHEET L201 BARN ENLARGEMENT FOR WOOD FENCE LOCATION

APPROX. AREA OF DEEP PAH SOILS (8-11' DEPTH)

A

B

C'

EXISTING BARN

Notes:
Area A:
Contaminant(s) of Concern: Metals, PAHs
Soil removal depth: 4 feet (including limited area of 9')
Total estimated soil removal: 1,886 cubic yards (surface)
150 cubic yards (deep)

Area B:
Contaminant of Concern: PCBs
Soil removal depth: 2 feet
Total estimated soil removal: 93 cubic yards

Area C:
Contaminant(s) of Concern: Metals, PCBs
Soil removal depth:
North of Parking: 4 feet
Under Parking: 2 feet
Total estimated soil removal: 1,375 cubic yards

A demarcation layer will be placed at the base of all excavations, where residential SCOs are not met, and beneath all other areas of soil cover (outsite of Areas A, B, and C).

All locations are approximate and may vary slightly based on grading.

1 ENVIRONMENTAL REMEDIATION PLAN
1" = 30'-0"

0' 15' 30' 60'

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NYS Department of State grants:
#C006303
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Empire State Development Corp. Grant W117

Revisions

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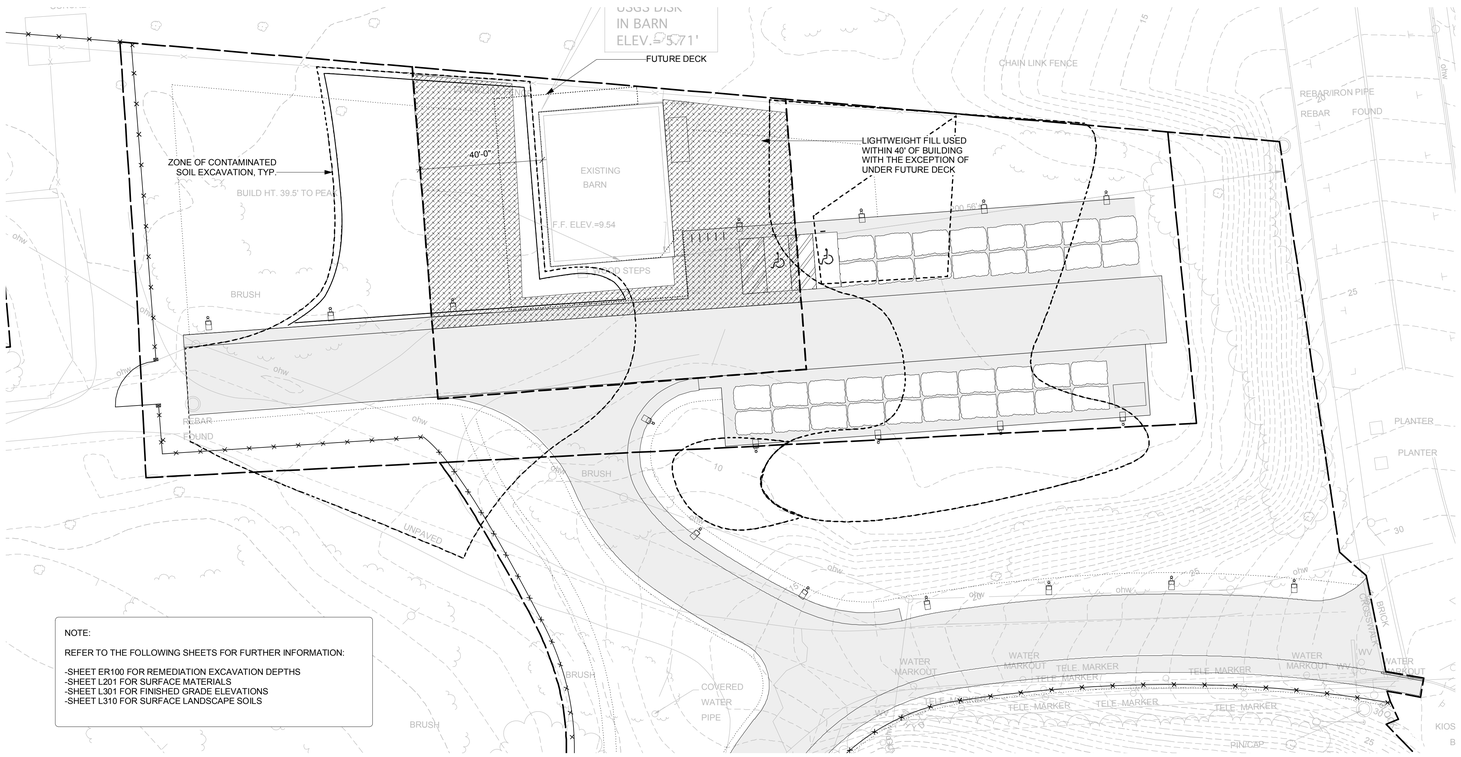
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Sheet Title

BROWNFIELD CONTEXT AND ENVIRONMENTAL REMEDIATION PLAN

Sheet Number

ER100

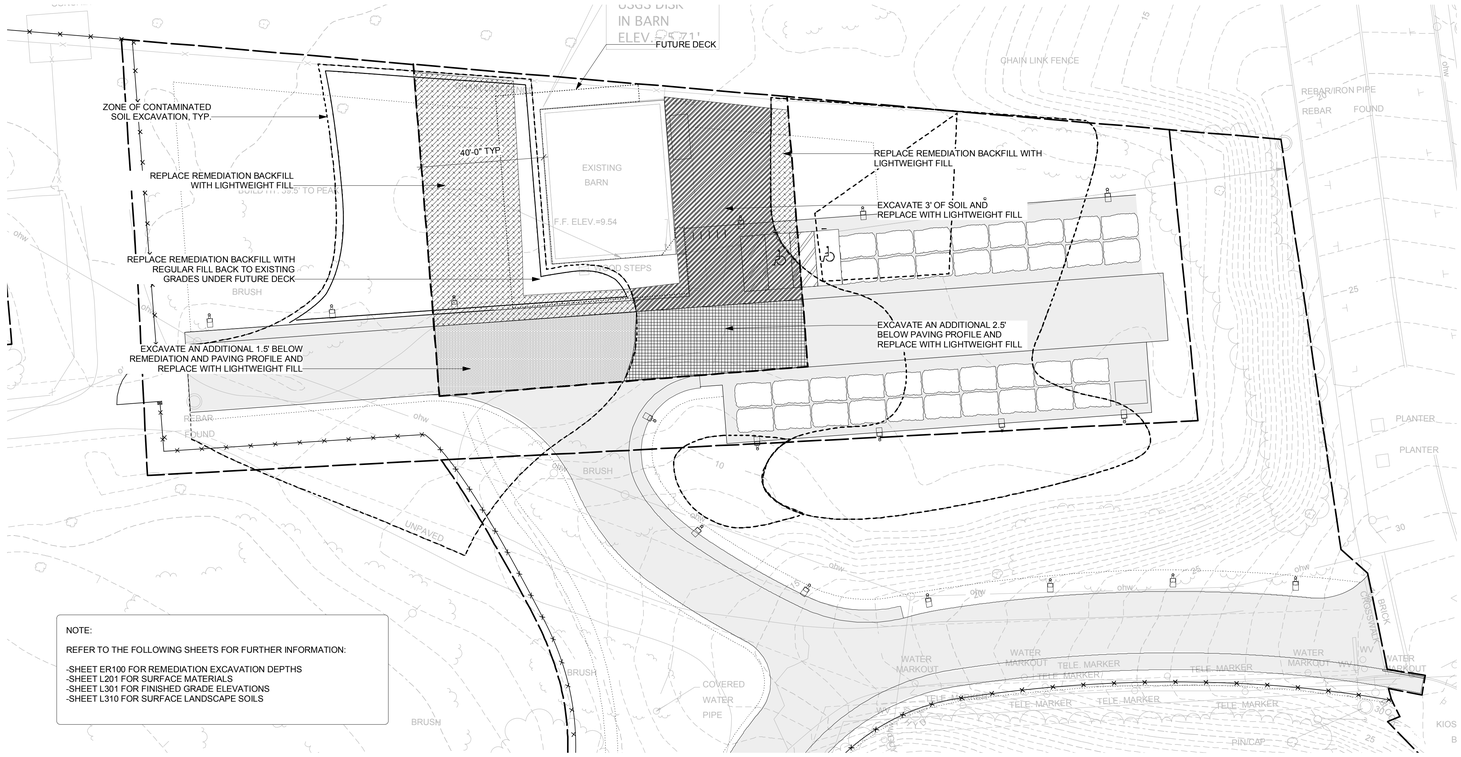


NOTE:

REFER TO THE FOLLOWING SHEETS FOR FURTHER INFORMATION:

-SHEET ER100 FOR REMEDIATION EXCAVATION DEPTHS
-SHEET L201 FOR SURFACE MATERIALS
-SHEET L301 FOR FINISHED GRADE ELEVATIONS
-SHEET L310 FOR SURFACE LANDSCAPE SOILS

1 LIGHTWEIGHT FILL - ALTERNATE 5
1" = 20'-0"



NOTE:

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-SHEET L310 FOR SURFACE LANDSCAPE SOILS

2 LIGHTWEIGHT FILL - ALTERNATE 6
1" = 20'-0"

0' 10' 20' 40'

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Sheet Title

ENVIRONMENTAL REMEDIATION ALTERNATES 5 & 6

Sheet Number

ER101



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Sheet Title

SITE PLAN
LAYOUT AND
MATERIALS

Sheet Number

L200

LAYOUT & MATERIAL LEGEND

- Limit Of Work/Work Zones
- Brownfield Area
- Mean High Water
- Mean Low Water
- Stabilized Stonedust with stainless steel edge-pedestrian
- Stabilized Stonedust with weathered steel edge-vehicular
- Bituminous Concrete Paving
- Porous Bituminous Concrete Paving
- Concrete Slabs
- Concrete
- Gravel Paving: 12" compacted aggregate
- Top Coat Gravel Paving
- Wetland / Wet Meadow
- Pebble Beach
- Light Post
- Wood Bench
- Concrete Bench
- Driftwood Bench-Alternate 4

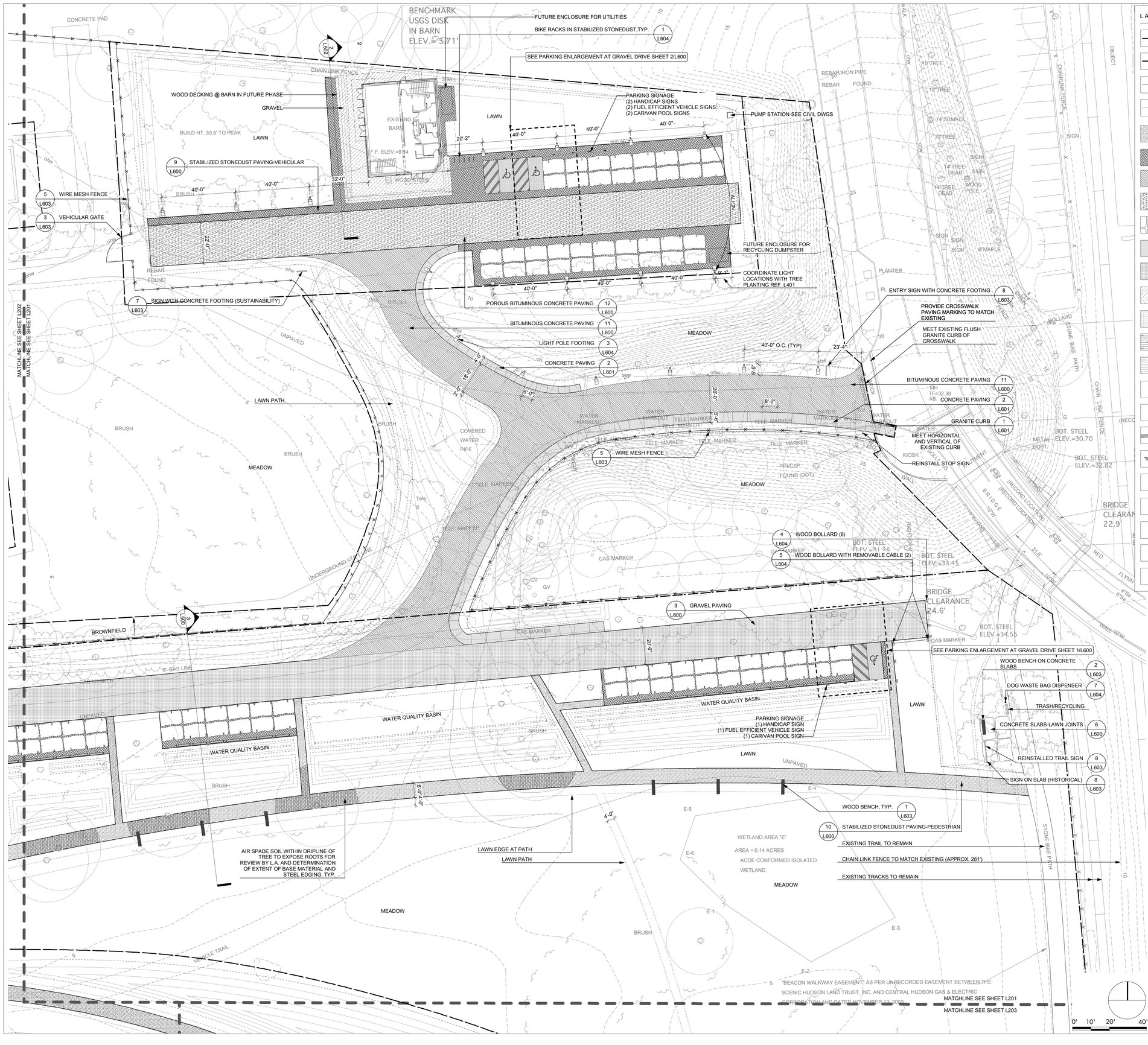
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LAYOUT NOTES

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4. All dimensions from structure are from face of finish of exterior wall unless otherwise stated.
5. All angles are assumed to be 90 degrees unless otherwise stated.
6. See planting plans for location of trees and shrubs, planting beds and extent of seeding.
7. See architectural drawings for all building dimensions.
8. Dimensions at curbs of pavement edging are given from outside face of curb to outside face of curb unless otherwise stated.
9. Any changes proposed to dimensions shown on this drawing shall be approved by the Landscape Architect prior to construction.

0' 25' 50' 100'



LAYOUT & MATERIAL LEGEND

- Limit Of Work/Work Zone
- Brownfield Area
- Mean High Water
- Mean Low Water
- Stabilized Stonedust with stainless steel edge-pedestrian
- Stabilized Stonedust with weathered steel edge-vehicular
- Bituminous Concrete Paving
- Porous Bituminous Concrete Paving
- Concrete Slabs
- Concrete
- Gravel Paving: 12" compacted aggregate
- Alt #9 - Porous Bituminous Paving Type 2
- Alt #3 - Peastone Paving
- Wetland / Wet Meadow
- Pebble Beach
- Light Post
- Wood Bench
- Concrete Bench
- Alt #4 - Driftwood Bench/ Alt #10 - Driftwood Wheelstop
- Bike Rib
- Wood Bollard
- Trash/Recycling
- Dog Waste Bag Dispenser
- Signage

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LIGHTING NOTES

1. General contractor to provide and install all sleeving and conduits for all electrical work. Electrical contractor shall provide all wiring, switches, fixtures and transformers for installation of all exterior lighting and electrical work. An As-Built plan shall be produced by the contractor after final installation.
2. Lighting design shall be installed by a certified licensed electrician. Installation methods shall comply with all manufacturers, state and local code.
3. Down lighting attached to any plantings or trees shall be attached as not to harm or disfigure the normal habit and growth of the tree. Method of attachment shall be approved by architect.
4. Lamp adjustment and fixture locations must be laid out in field prior to installation for landscape architects approval. Final lamp adjustment to take place in the field at night with the electrical contractor, landscape architect and client.
5. Contractor to care for any plantings in and around lighting installation operations. Any damage to root zones or limbs of any plantings and existing trees may result in replacement of plant material by the contractor and subcontractors.

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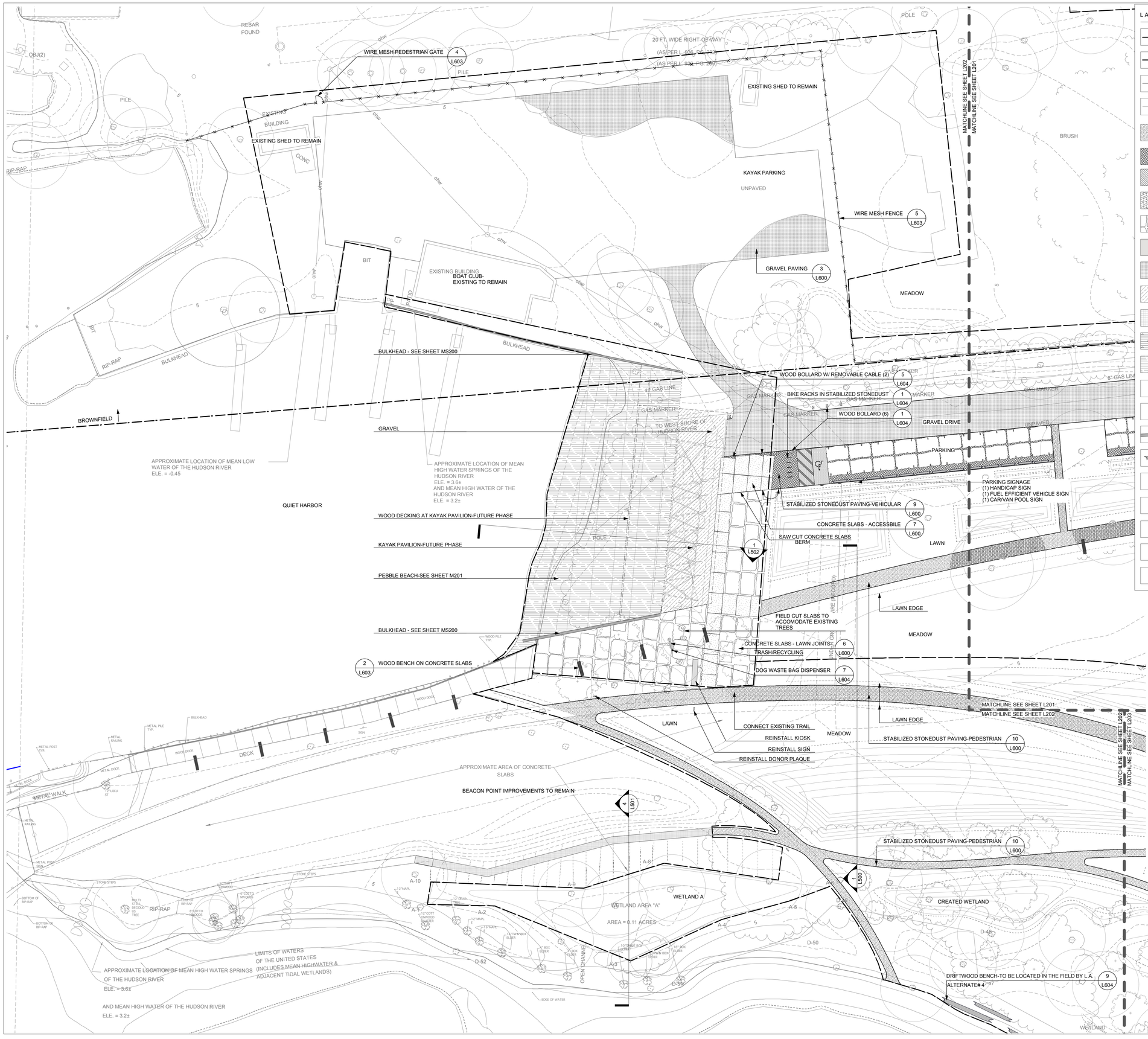
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Sheet Title

BARN ENLARGEMENT PLAN

Sheet Number

L201



LAYOUT & MATERIAL LEGEND

- Limit Of Work/Work Zone
- Brownfield Area
- Mean High Water
- Mean Low Water
- Stabilized Stonedust with stainless steel edge-pedestrian
- Stabilized Stonedust with weathered steel edge-vehicular
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- Porous Bituminous Concrete Paving
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Scale 1" = 20'-0" | Date 14 JUNE 2010

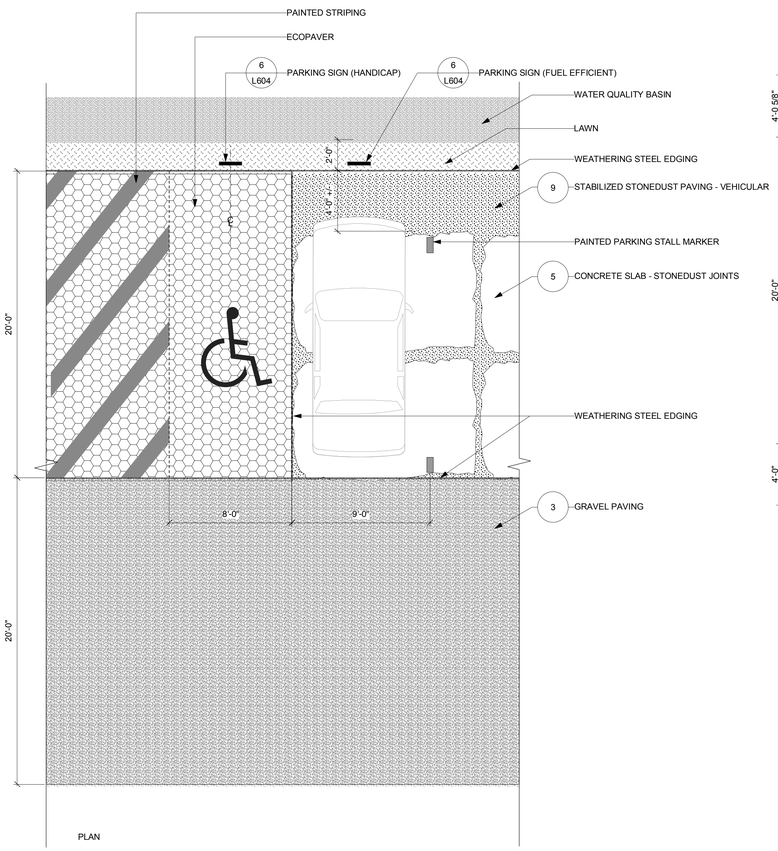
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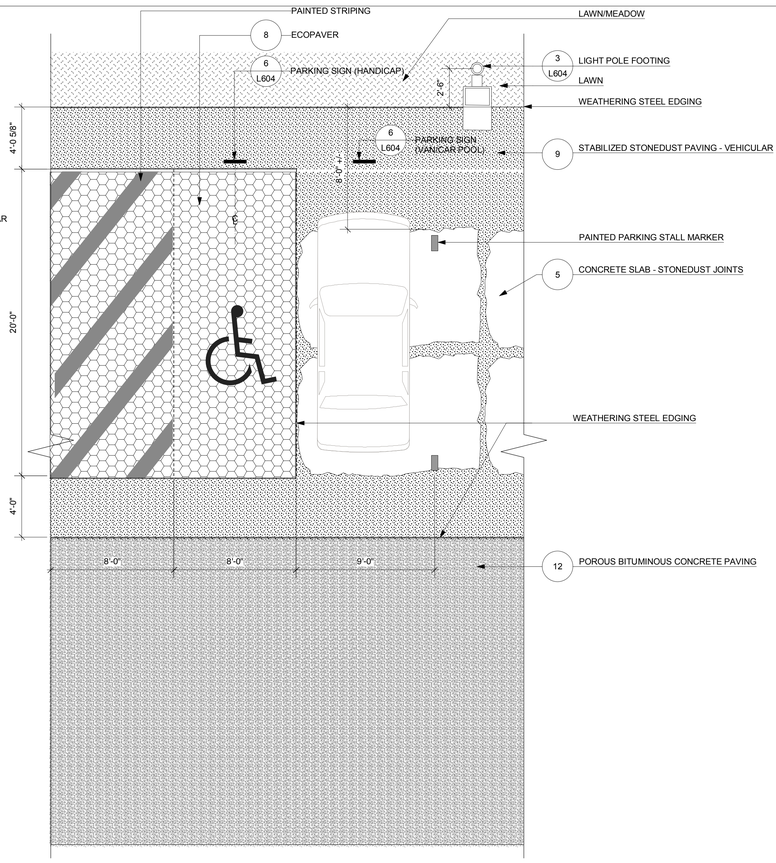
KAYAK ENLARGEMENT PLAN

Sheet Number

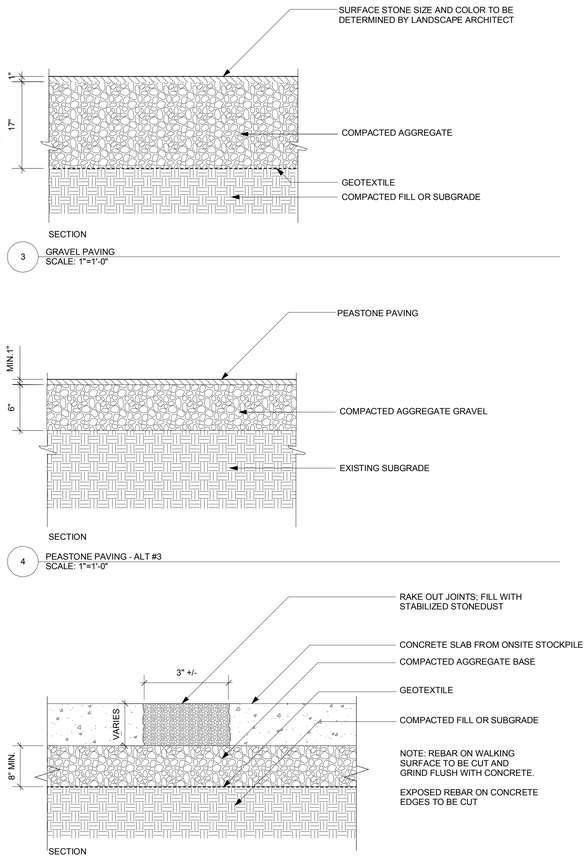
L202



1 PARKING ENLARGEMENT AT GRAVEL DRIVE
SCALE: 1/4"=1'-0"



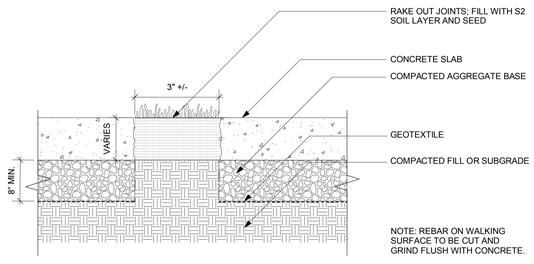
2 PARKING ENLARGEMENT AT RED BARN
SCALE: 1/4"=1'-0"



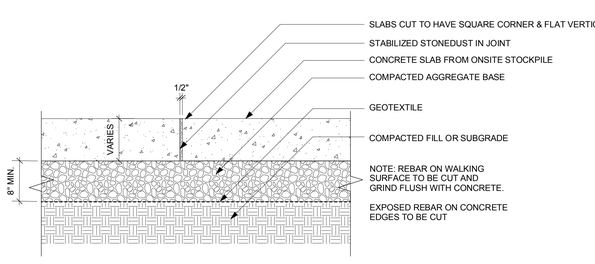
3 GRAVEL PAVING
SCALE: 1"=1'-0"

4 PEASTONE PAVING - ALT #3
SCALE: 1"=1'-0"

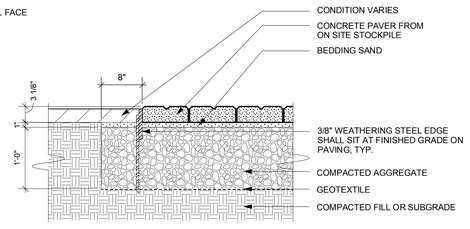
5 CONCRETE SLAB - STONEDUST JOINTS
SCALE: 1"=1'-0"



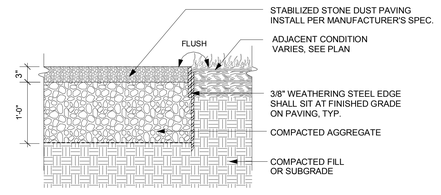
6 CONCRETE SLAB-LAWN JOINTS
SCALE: 1"=1'-0"



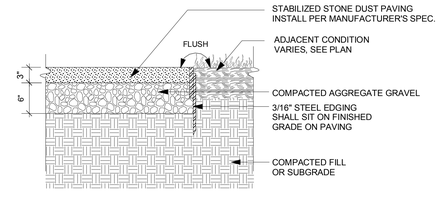
7 CONCRETE SLAB-ACCESSIBLE PATH
SCALE: 1"=1'-0"



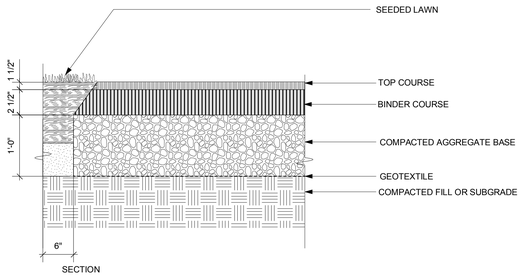
8 ECO PAVER
SCALE: 1"=1'-0"



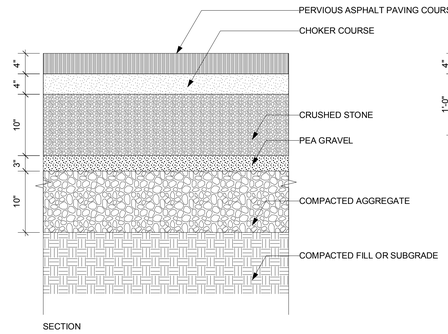
9 STABILIZED STONEDUST PAVING - VEHICULAR
SCALE: 1"=1'-0"



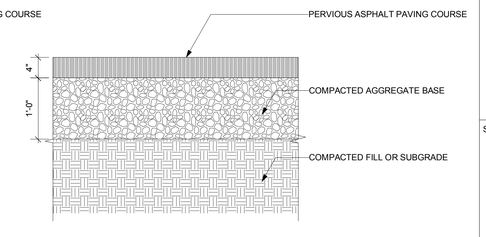
10 STABILIZED STONEDUST PAVING - PEDESTRIAN
SCALE: 1"=1'-0"



11 BITUMINOUS CONCRETE PAVING
SCALE: 1"=1'-0"



12 POROUS BITUMINOUS CONCRETE PAVING
SCALE: 1"=1'-0"



13 POROUS BITUMINOUS PAVING TYPE 2 - ALT #9
SCALE: 1"=1'-0"

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NYS Department of State grants:
#C006303
#C006605
#C006701

Empire State Development Corp. Grant W117

Revisions

Number	Date	Description
	06.14.10	Bid Set

Job number 2391

Drawn by BM | Checked by CM

Scale AS NOTED | Date 14 JUNE 2010

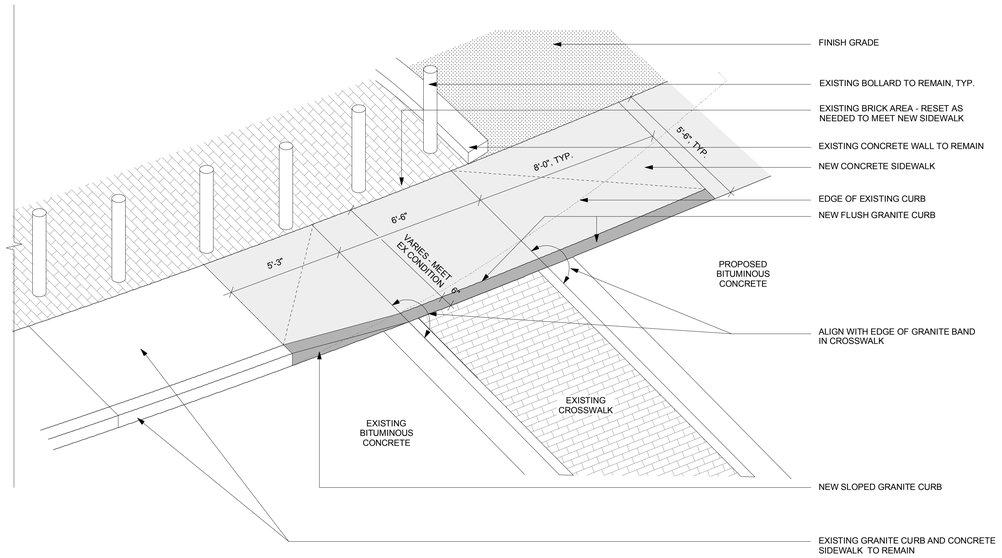
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Sheet Title

SITE PAVING DETAILS

Sheet Number

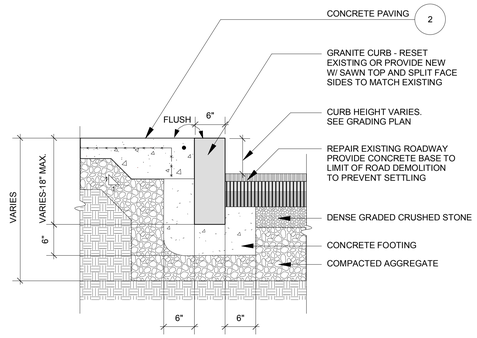
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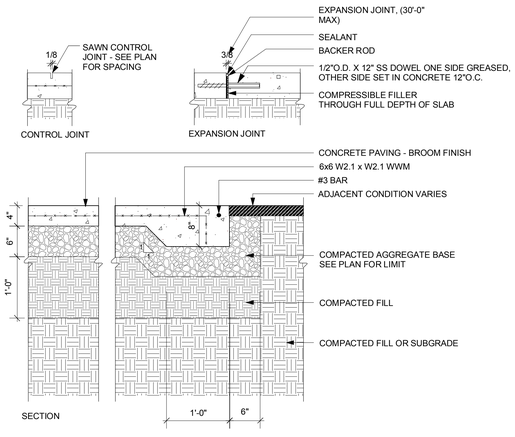


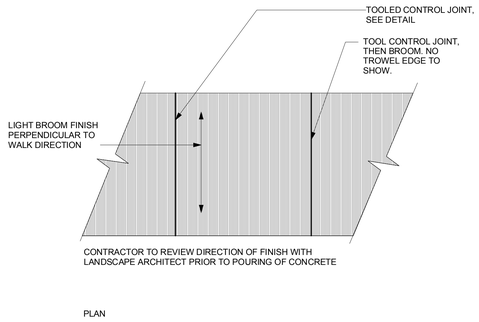
AXON

SECTION

1 GRANITE CURB
SCALE: 3/8"=1'-0"







2 CONCRETE PAVING
SCALE: 2"=1'-0"

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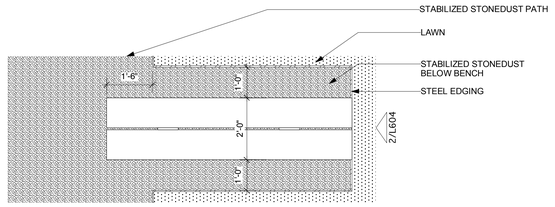
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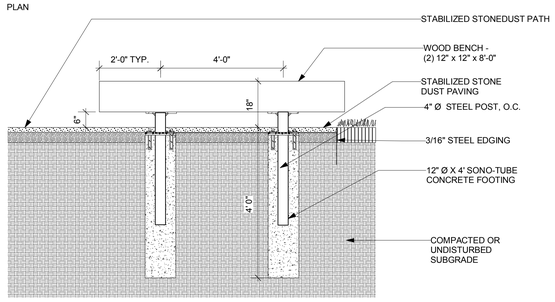
SITE PAVING DETAILS

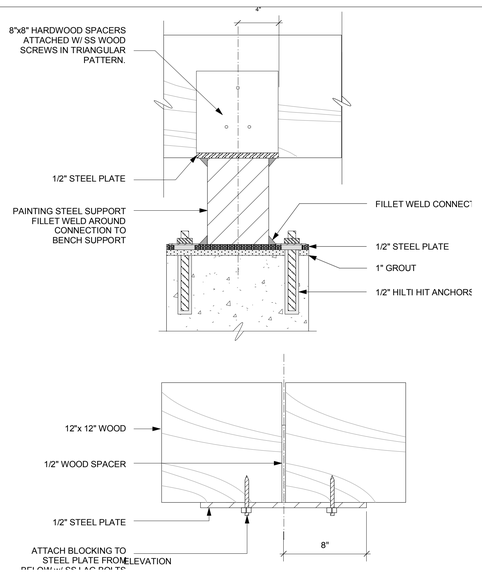
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L601

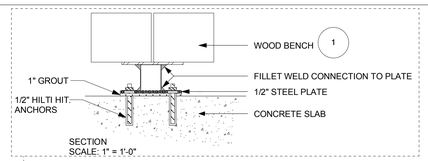


PLAN

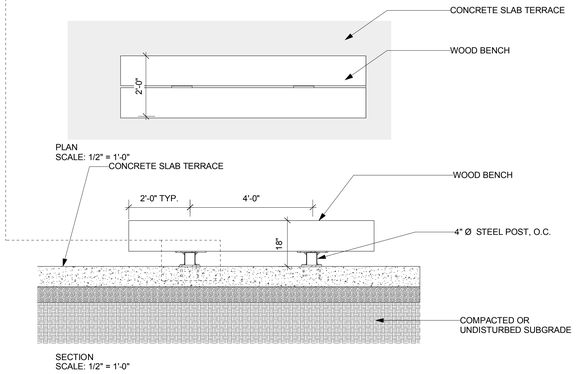




ELEVATION



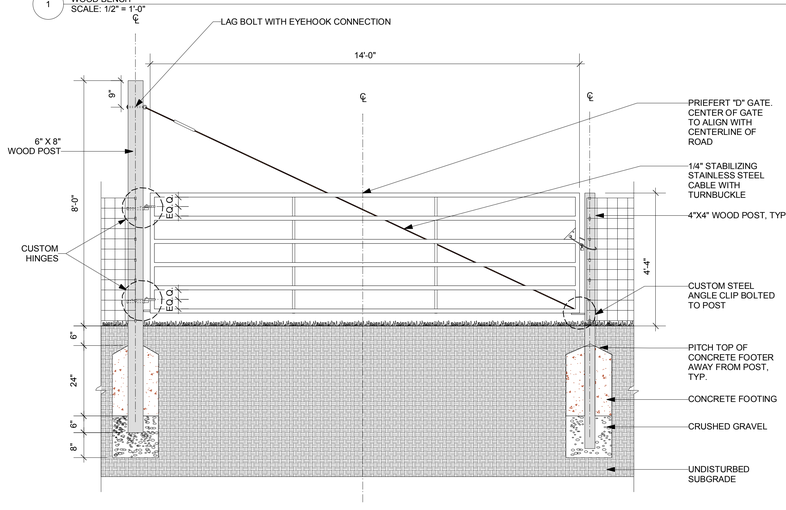
SECTION
SCALE: 1" = 1'-0"



SECTION
SCALE: 1/2" = 1'-0"

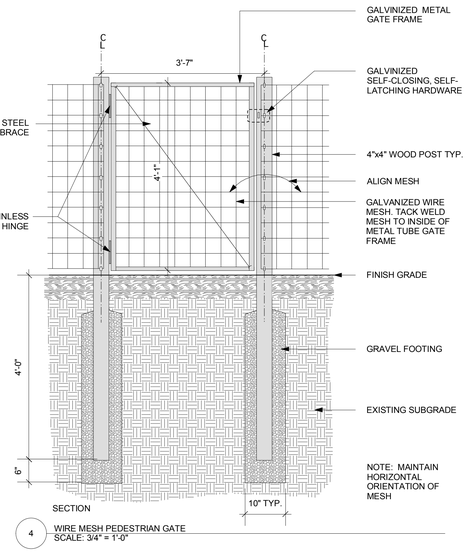
2 WOOD BENCH ON CONCRETE SLABS
SCALE: AS NOTED

1 SECTION
WOOD BENCH
SCALE: 1/2" = 1'-0"



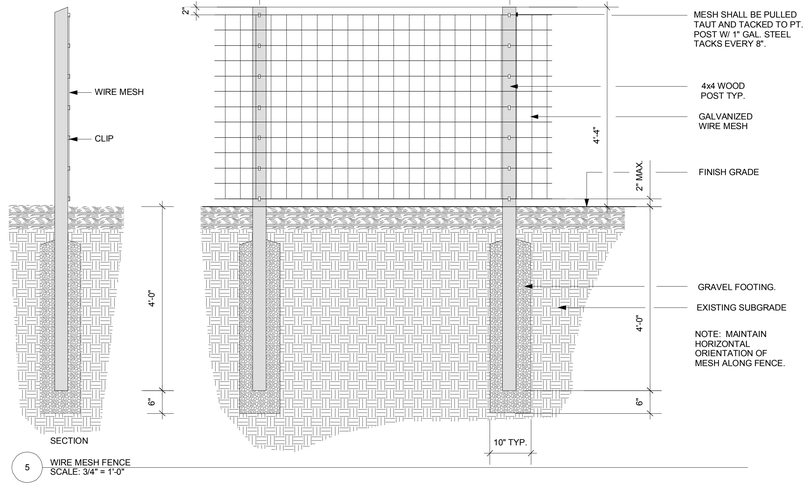
SECTION

3 VEHICULAR GATE
SCALE: 1/2" = 1'-0"



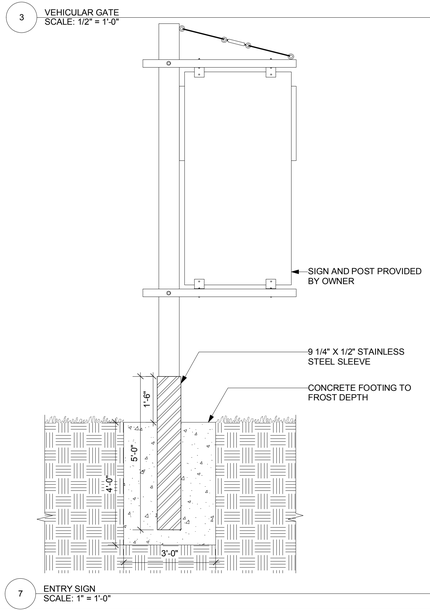
SECTION

4 WIRE MESH PEDESTRIAN GATE
SCALE: 3/4" = 1'-0"

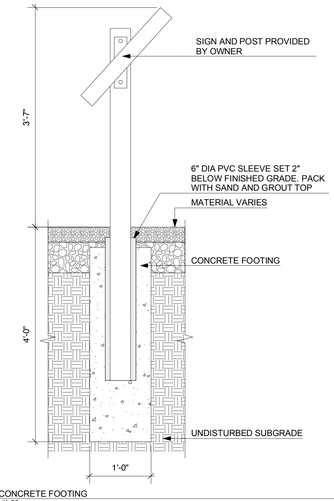


SECTION

5 WIRE MESH FENCE
SCALE: 3/4" = 1'-0"

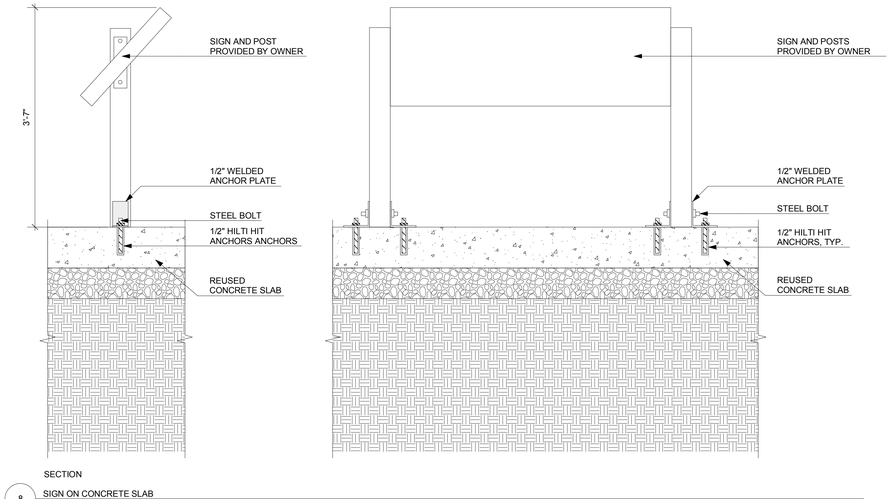


7 ENTRY SIGN
SCALE: 1" = 1'-0"



SECTION

7 SIGN WITH CONCRETE FOOTING
SCALE: 1" = 1'-0"



SECTION

8 SIGN ON CONCRETE SLAB
SCALE: 1" = 1'-0"

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Scale AS NOTED | Date 14 JUNE 2010
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Sheet Title

SITE DETAILS AND FURNISHING

Sheet Number

L603

APPENDIX G

Laboratory Reports

YORK
ANALYTICAL LABORATORIES, INC.

Technical Report

prepared for:

Ecosystems Strategies, Inc.
24 Davis Avenue
Poughkeepsie, NY 12603
Attention: Emery Lawson

Report Date: 1/13/2010
Re: Client Project ID: SG96152.81
York Project No.: 10010140

CT License No. PH-0723 New Jersey License No. CT-005 New York License No. 10854 PA Reg. 68-04440

120 RESEARCH DRIVE STRATFORD, CT 06615 (203) 325-1371 FAX (203) 357-0166

Report Date: 1/13/2010
Client Project ID: SG96152.81
York Project No.: 10010140

Ecosystems Strategies, Inc.
24 Davis Avenue
Poughkeepsie, NY 12603
Attention: Emery Lawson

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on 12/30/09. The project was identified as your project "SG96152.81".

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the NELAC acceptance requirements for environmental samples except those indicated under the Notes section of this report.

All the analyses met the method and laboratory standard operating procedure requirements except as indicated under the Notes section of this report, or as indicated by any data flags, the meaning of which is explained in the attachment to this report, if applicable.

The results of the analyses, which are all reported on an as-received basis unless otherwise noted, are summarized in the following table(s).

Analysis Results

Client Sample ID			2SS-1 (0-2 inches)		
York Sample ID			10010140-01		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
Pesticides, 8081 List	SW846-3550B/8081	ug/Kg	---	---	---
4,4'-DDD			Not detected		3.71
4,4'-DDE			Not detected		3.71
4,4'-DDT			Not detected		3.71
Aldrin			Not detected		1.86
alpha Chlordane			Not detected		1.86
alpha-BHC			Not detected		1.86
beta-BHC			Not detected		1.86
delta-BHC			Not detected		1.86
Dieldrin			Not detected		0.766
Endosulfan I			Not detected		1.86
Endosulfan II			Not detected		3.71
Endosulfan sulfate			Not detected		3.71
Endrin			Not detected		3.71
Endrin aldehyde			Not detected		3.71

YORK

Client Sample ID			2SS-1 (0-2 inches)		
York Sample ID			10010140-01		
Matrix			SOIL		
Parameter	**Method**	**Units**	**Result**	**Qualifier**	**RL**
gamma Chlordane			Not detected		1.86
gamma-BHC (Lindane)			Not detected		1.86
Heptachlor			Not detected		1.86
Heptachlor epoxide			Not detected		1.86
Methoxychlor			Not detected		18.6
Toxaphene			Not detected		23.2
Volatiles, 8260 List	SW846-8260	ug/Kg	---	---	---
1,1,1,2-Tetrachloroethane			Not detected		23
1,1,1-Trichloroethane			Not detected		23
1,1,2,2-Tetrachloroethane			Not detected		23
1,1,2-Trichloroethane			Not detected		23
1,1-Dichloroethane			Not detected		23
1,1-Dichloroethylene			Not detected		23
1,1-Dichloropropylene			Not detected		23
1,2,3-Trichlorobenzene			Not detected		23
1,2,3-Trichloropropane			Not detected		23
1,2,4-Trichlorobenzene			Not detected		23
1,2,4-Trimethylbenzene			35		23
1,2-Dibromo-3-chloropropane			Not detected		23
1,2-Dibromoethane			Not detected		23
1,2-Dichlorobenzene			Not detected		23
1,2-Dichloroethane			Not detected		23
1,2-Dichloropropane			Not detected		23
1,3,5-Trimethylbenzene			9	J	23
1,3-Dichlorobenzene			Not detected		23
1,3-Dichloropropane			Not detected		23
1,4-Dichlorobenzene			Not detected		23
2,2-Dichloropropane			Not detected		23
2-Chlorotoluene			Not detected		23
4-Chlorotoluene			Not detected		23
Benzene			Not detected		23
Bromobenzene			Not detected		23
Bromochloromethane			Not detected		23
Bromodichloromethane			Not detected		23
Bromoform			Not detected		23
Bromomethane			Not detected		23
Carbon tetrachloride			Not detected		23
Chlorobenzene			Not detected		23
Chloroethane			Not detected		23
Chloroform			11	J	23
Chloromethane			Not detected		23
cis-1,2-Dichloroethylene			Not detected		23
cis-1,3-Dichloropropylene			Not detected		23
Dibromochloromethane			Not detected		23
Dibromomethane			Not detected		23
Dichlorodifluoromethane			Not detected		23
Ethylbenzene			8	J	23
Hexachlorobutadiene			Not detected		23

Client Sample ID			2SS-1 (0-2 inches)		
York Sample ID			10010140-01		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
Isopropylbenzene			Not detected		23
Methylene chloride			100	B	46
MTBE			Not detected		23
Naphthalene			7	JB	23
n-Butylbenzene			Not detected		23
n-Propylbenzene			6	J	23
o-Xylene			21	J	23
p- & m-Xylenes			44	J	46
p-Isopropyltoluene			Not detected		23
sec-Butylbenzene			Not detected		23
Styrene			Not detected		23
tert-Butylbenzene			Not detected		23
Tetrachloroethylene			Not detected		23
Toluene			Not detected		23
trans-1,2-Dichloroethylene			Not detected		23
trans-1,3-Dichloropropylene			Not detected		23
Trichloroethylene			Not detected		23
Trichlorofluoromethane			Not detected		23
Vinyl chloride			Not detected		23
BNA, 8270 List	SW846-8270C	ug/Kg	---	---	---
1,2,4-Trichlorobenzene			Not detected		770
1,2-Dichlorobenzene			Not detected		770
1,3-Dichlorobenzene			Not detected		770
1,4-Dichlorobenzene			Not detected		770
2,4,5-Trichlorophenol			Not detected		770
2,4,6-Trichlorophenol			Not detected		770
2,4-Dichlorophenol			Not detected		770
2,4-Dimethylphenol			Not detected		770
2,4-Dinitrophenol			Not detected		770
2,4-Dinitrotoluene			Not detected		770
2,6-Dinitrotoluene			Not detected		770
2-Chloronaphthalene			Not detected		770
2-Chlorophenol			Not detected		770
2-Methylnaphthalene			Not detected		770
2-Methylphenol			Not detected		770
2-Nitroaniline			Not detected		770
2-Nitrophenol			Not detected		770
3,3'-Dichlorobenzidine			Not detected		770
3-Nitroaniline			Not detected		770
4,6-Dinitro-2-methylphenol			Not detected		770
4-Bromophenyl phenyl ether			Not detected		770
4-Chloro-3-methyl phenol			Not detected		770
4-Chloroaniline			Not detected		770
4-Chlorophenyl phenyl ether			Not detected		770
4-Methylphenol			Not detected		770
4-Nitroaniline			Not detected		770
4-Nitrophenol			Not detected		770
Acenaphthene			Not detected		770

Client Sample ID			2SS-1 (0-2 inches)		
York Sample ID			10010140-01		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
Acenaphthylene			450	J	770
Aniline			Not detected		770
Anthracene			Not detected		770
Benzidine			Not detected		770
Benzo(a)anthracene			1300		770
Benzo(a)pyrene			1400		770
Benzo(b)fluoranthene			1300		770
Benzo(g,h,i)perylene			670	J	770
Benzo(k)fluoranthene			1500		770
Benzyl alcohol			Not detected		770
Bis(2-chloroethoxy)methane			Not detected		770
Bis(2-chloroethyl)ether			Not detected		770
Bis(2-chloroisopropyl)ether			Not detected		770
Bis(2-ethylhexyl)phthalate			Not detected		770
Butyl benzyl phthalate			Not detected		770
Chrysene			2200		770
Dibenz(a,h)anthracene			Not detected		770
Dibenzofuran			Not detected		770
Diethylphthalate			Not detected		770
Dimethylphthalate			Not detected		770
Di-n-butylphthalate			Not detected		770
Di-n-octylphthalate			Not detected		770
Fluoranthene			3600		770
Fluorene			Not detected		770
Hexachlorobenzene			Not detected		770
Hexachlorobutadiene			Not detected		770
Hexachlorocyclopentadiene			Not detected		770
Hexachloroethane			Not detected		770
Indeno(1,2,3-cd)pyrene			570	J	770
Isophorone			Not detected		770
Naphthalene			Not detected		770
Nitrobenzene			Not detected		770
N-Nitrosodi-n-propylamine			Not detected		770
N-Nitrosodiphenylamine			Not detected		770
Pentachlorophenol			Not detected		770
Phenanthrene			1300		770
Phenol			Not detected		770
Pyrene			3400		770
Pyridine			Not detected		770
Total Solids	SM 2540B	%	43.1	---	1.0

Client Sample ID			2SS-2 (0-2 inches)		
York Sample ID			10010140-02		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
Pesticides, 8081 List	SW846-3550B/8081	ug/Kg	---	---	---
4,4'-DDD			Not detected		2.21

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Client Sample ID			2SS-2 (0-2 inches)		
York Sample ID			10010140-02		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
4,4'-DDE			Not detected		2.21
4,4'-DDT			Not detected		2.21
Aldrin			Not detected		1.10
alpha Chlordane			Not detected		1.10
alpha-BHC			Not detected		1.10
beta-BHC			Not detected		1.10
delta-BHC			Not detected		1.10
Dieldrin			Not detected		0.455
Endosulfan I			Not detected		1.10
Endosulfan II			Not detected		2.21
Endosulfan sulfate			Not detected		2.21
Endrin			Not detected		2.21
Endrin aldehyde			Not detected		2.21
gamma Chlordane			Not detected		1.10
gamma-BHC (Lindane)			Not detected		1.10
Heptachlor			Not detected		1.10
Heptachlor epoxide			Not detected		1.10
Methoxychlor			Not detected		11.0
Toxaphene			Not detected		13.8
Volatiles, 8260 List	SW846-8260	ug/Kg	---	---	---
1,1,1,2-Tetrachloroethane			Not detected		14
1,1,1-Trichloroethane			Not detected		14
1,1,2,2-Tetrachloroethane			Not detected		14
1,1,2-Trichloroethane			Not detected		14
1,1-Dichloroethane			Not detected		14
1,1-Dichloroethylene			Not detected		14
1,1-Dichloropropylene			Not detected		14
1,2,3-Trichlorobenzene			Not detected		14
1,2,3-Trichloropropane			Not detected		14
1,2,4-Trichlorobenzene			Not detected		14
1,2,4-Trimethylbenzene			15		14
1,2-Dibromo-3-chloropropane			Not detected		14
1,2-Dibromoethane			Not detected		14
1,2-Dichlorobenzene			Not detected		14
1,2-Dichloroethane			Not detected		14
1,2-Dichloropropane			Not detected		14
1,3,5-Trimethylbenzene			6	J	14
1,3-Dichlorobenzene			Not detected		14
1,3-Dichloropropane			Not detected		14
1,4-Dichlorobenzene			Not detected		14
2,2-Dichloropropane			Not detected		14
2-Chlorotoluene			Not detected		14
4-Chlorotoluene			Not detected		14
Benzene			Not detected		14
Bromobenzene			Not detected		14
Bromochloromethane			Not detected		14
Bromodichloromethane			Not detected		14
Bromoform			Not detected		14

Client Sample ID			2SS-2 (0-2 inches)		
York Sample ID			10010140-02		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
Bromomethane			Not detected		14
Carbon tetrachloride			Not detected		14
Chlorobenzene			Not detected		14
Chloroethane			Not detected		14
Chloroform			5	J	14
Chloromethane			Not detected		14
cis-1,2-Dichloroethylene			Not detected		14
cis-1,3-Dichloropropylene			Not detected		14
Dibromochloromethane			Not detected		14
Dibromomethane			Not detected		14
Dichlorodifluoromethane			Not detected		14
Ethylbenzene			4	J	14
Hexachlorobutadiene			Not detected		14
Isopropylbenzene			Not detected		14
Methylene chloride			85	B	28
MTBE			Not detected		14
Naphthalene			4	JB	14
n-Butylbenzene			Not detected		14
n-Propylbenzene			Not detected		14
o-Xylene			10	J	14
p- & m-Xylenes			16	J	28
p-Isopropyltoluene			Not detected		14
sec-Butylbenzene			Not detected		14
Styrene			Not detected		14
tert-Butylbenzene			Not detected		14
Tetrachloroethylene			Not detected		14
Toluene			Not detected		14
trans-1,2-Dichloroethylene			Not detected		14
trans-1,3-Dichloropropylene			Not detected		14
Trichloroethylene			Not detected		14
Trichlorofluoromethane			Not detected		14
Vinyl chloride			Not detected		14
BNA, 8270 List	SW846-8270C	ug/Kg	---	---	---
1,2,4-Trichlorobenzene			Not detected		230
1,2-Dichlorobenzene			Not detected		230
1,3-Dichlorobenzene			Not detected		230
1,4-Dichlorobenzene			Not detected		230
2,4,5-Trichlorophenol			Not detected		230
2,4,6-Trichlorophenol			Not detected		230
2,4-Dichlorophenol			Not detected		230
2,4-Dimethylphenol			Not detected		230
2,4-Dinitrophenol			Not detected		230
2,4-Dinitrotoluene			Not detected		230
2,6-Dinitrotoluene			Not detected		230
2-Chloronaphthalene			Not detected		230
2-Chlorophenol			Not detected		230
2-Methylnaphthalene			Not detected		230
2-Methylphenol			Not detected		230

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Client Sample ID			2SS-2 (0-2 inches)		
York Sample ID			10010140-02		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
2-Nitroaniline			Not detected		230
2-Nitrophenol			Not detected		230
3,3'-Dichlorobenzidine			Not detected		230
3-Nitroaniline			Not detected		230
4,6-Dinitro-2-methylphenol			Not detected		230
4-Bromophenyl phenyl ether			Not detected		230
4-Chloro-3-methyl phenol			Not detected		230
4-Chloroaniline			Not detected		230
4-Chlorophenyl phenyl ether			Not detected		230
4-Methylphenol			Not detected		230
4-Nitroaniline			Not detected		230
4-Nitrophenol			Not detected		230
Acenaphthene			Not detected		230
Acenaphthylene			Not detected		230
Aniline			Not detected		230
Anthracene			Not detected		230
Benzidine			Not detected		230
Benzo(a)anthracene			100	J	230
Benzo(a)pyrene			120	J	230
Benzo(b)fluoranthene			130	J	230
Benzo(g,h,i)perylene			Not detected		230
Benzo(k)fluoranthene			160	J	230
Benzyl alcohol			Not detected		230
Bis(2-chloroethoxy)methane			Not detected		230
Bis(2-chloroethyl)ether			Not detected		230
Bis(2-chloroisopropyl)ether			Not detected		230
Bis(2-ethylhexyl)phthalate			Not detected		230
Butyl benzyl phthalate			Not detected		230
Chrysene			180	J	230
Dibenz(a,h)anthracene			Not detected		230
Dibenzofuran			Not detected		230
Diethylphthalate			Not detected		230
Dimethylphthalate			Not detected		230
Di-n-butylphthalate			Not detected		230
Di-n-octylphthalate			Not detected		230
Fluoranthene			280		230
Fluorene			Not detected		230
Hexachlorobenzene			Not detected		230
Hexachlorobutadiene			Not detected		230
Hexachlorocyclopentadiene			Not detected		230
Hexachloroethane			Not detected		230
Indeno(1,2,3-cd)pyrene			Not detected		230
Isophorone			Not detected		230
Naphthalene			Not detected		230
Nitrobenzene			Not detected		230
N-Nitrosodi-n-propylamine			Not detected		230
N-Nitrosodiphenylamine			Not detected		230
Pentachlorophenol			Not detected		230

Client Sample ID			2SS-2 (0-2 inches)		
York Sample ID			10010140-02		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
Phenanthrene			130	J	230
Phenol			Not detected		230
Pyrene			210	J	230
Pyridine			Not detected		230
Total Solids	SM 2540B	%	72.3	---	1.0

Client Sample ID			2SS-3 (0-2 inches)		
York Sample ID			10010140-03		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
Pesticides, 8081 List	SW846-3550B/8081	ug/Kg	---	---	---
4,4'-DDD			Not detected		1.98
4,4'-DDE			Not detected		1.98
4,4'-DDT			Not detected		1.98
Aldrin			Not detected		0.992
alpha Chlordane			Not detected		0.992
alpha-BHC			Not detected		0.992
beta-BHC			Not detected		0.992
delta-BHC			Not detected		0.992
Dieldrin			Not detected		0.409
Endosulfan I			Not detected		0.992
Endosulfan II			Not detected		1.98
Endosulfan sulfate			Not detected		1.98
Endrin			Not detected		1.98
Endrin aldehyde			Not detected		1.98
gamma Chlordane			Not detected		0.992
gamma-BHC (Lindane)			Not detected		0.992
Heptachlor			Not detected		0.992
Heptachlor epoxide			Not detected		0.992
Methoxychlor			Not detected		9.92
Toxaphene			Not detected		12.4
Volatiles, 8260 List	SW846-8260	ug/Kg	---	---	---
1,1,1,2-Tetrachloroethane			Not detected		12
1,1,1-Trichloroethane			Not detected		12
1,1,2,2-Tetrachloroethane			Not detected		12
1,1,2-Trichloroethane			Not detected		12
1,1-Dichloroethane			Not detected		12
1,1-Dichloroethylene			Not detected		12
1,1-Dichloropropylene			Not detected		12
1,2,3-Trichlorobenzene			Not detected		12
1,2,3-Trichloropropane			Not detected		12
1,2,4-Trichlorobenzene			Not detected		12
1,2,4-Trimethylbenzene			15		12
1,2-Dibromo-3-chloropropane			Not detected		12
1,2-Dibromoethane			Not detected		12
1,2-Dichlorobenzene			Not detected		12
1,2-Dichloroethane			Not detected		12

Client Sample ID			2SS-3 (0-2 inches)		
York Sample ID			10010140-03		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
1,2-Dichloropropane			Not detected		12
1,3,5-Trimethylbenzene			4	J	12
1,3-Dichlorobenzene			Not detected		12
1,3-Dichloropropane			Not detected		12
1,4-Dichlorobenzene			Not detected		12
2,2-Dichloropropane			Not detected		12
2-Chlorotoluene			Not detected		12
4-Chlorotoluene			Not detected		12
Benzene			Not detected		12
Bromobenzene			Not detected		12
Bromochloromethane			Not detected		12
Bromodichloromethane			Not detected		12
Bromoform			Not detected		12
Bromomethane			Not detected		12
Carbon tetrachloride			Not detected		12
Chlorobenzene			Not detected		12
Chloroethane			Not detected		12
Chloroform			Not detected		12
Chloromethane			Not detected		12
cis-1,2-Dichloroethylene			Not detected		12
cis-1,3-Dichloropropylene			Not detected		12
Dibromochloromethane			Not detected		12
Dibromomethane			Not detected		12
Dichlorodifluoromethane			Not detected		12
Ethylbenzene			3	J	12
Hexachlorobutadiene			Not detected		12
Isopropylbenzene			Not detected		12
Methylene chloride			29	B	25
MTBE			Not detected		12
Naphthalene			Not detected		12
n-Butylbenzene			Not detected		12
n-Propylbenzene			Not detected		12
o-Xylene			7	J	12
p- & m-Xylenes			17	J	25
p-Isopropyltoluene			Not detected		12
sec-Butylbenzene			Not detected		12
Styrene			Not detected		12
tert-Butylbenzene			Not detected		12
Tetrachloroethylene			Not detected		12
Toluene			Not detected		12
trans-1,2-Dichloroethylene			Not detected		12
trans-1,3-Dichloropropylene			Not detected		12
Trichloroethylene			Not detected		12
Trichlorofluoromethane			Not detected		12
Vinyl chloride			Not detected		12
BNA, 8270 List	SW846-8270C	ug/Kg	---	---	---
1,2,4-Trichlorobenzene			Not detected		200
1,2-Dichlorobenzene			Not detected		200

Client Sample ID			2SS-3 (0-2 inches)		
York Sample ID			10010140-03		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
1,3-Dichlorobenzene			Not detected		200
1,4-Dichlorobenzene			Not detected		200
2,4,5-Trichlorophenol			Not detected		200
2,4,6-Trichlorophenol			Not detected		200
2,4-Dichlorophenol			Not detected		200
2,4-Dimethylphenol			Not detected		200
2,4-Dinitrophenol			Not detected		200
2,4-Dinitrotoluene			Not detected		200
2,6-Dinitrotoluene			Not detected		200
2-Chloronaphthalene			Not detected		200
2-Chlorophenol			Not detected		200
2-Methylnaphthalene			Not detected		200
2-Methylphenol			Not detected		200
2-Nitroaniline			Not detected		200
2-Nitrophenol			Not detected		200
3,3'-Dichlorobenzidine			Not detected		200
3-Nitroaniline			Not detected		200
4,6-Dinitro-2-methylphenol			Not detected		200
4-Bromophenyl phenyl ether			Not detected		200
4-Chloro-3-methyl phenol			Not detected		200
4-Chloroaniline			Not detected		200
4-Chlorophenyl phenyl ether			Not detected		200
4-Methylphenol			Not detected		200
4-Nitroaniline			Not detected		200
4-Nitrophenol			Not detected		200
Acenaphthene			Not detected		200
Acenaphthylene			Not detected		200
Aniline			Not detected		200
Anthracene			Not detected		200
Benzidine			Not detected		200
Benzo(a)anthracene			Not detected		200
Benzo(a)pyrene			Not detected		200
Benzo(b)fluoranthene			Not detected		200
Benzo(g,h,i)perylene			Not detected		200
Benzo(k)fluoranthene			Not detected		200
Benzyl alcohol			Not detected		200
Bis(2-chloroethoxy)methane			Not detected		200
Bis(2-chloroethyl)ether			Not detected		200
Bis(2-chloroisopropyl)ether			Not detected		200
Bis(2-ethylhexyl)phthalate			Not detected		200
Butyl benzyl phthalate			Not detected		200
Chrysene			Not detected		200
Dibenz(a,h)anthracene			Not detected		200
Dibenzofuran			Not detected		200
Diethylphthalate			Not detected		200
Dimethylphthalate			Not detected		200
Di-n-butylphthalate			Not detected		200
Di-n-octylphthalate			Not detected		200

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Client Sample ID			2SS-3 (0-2 inches)		
York Sample ID			10010140-03		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
Fluoranthene			Not detected		200
Fluorene			Not detected		200
Hexachlorobenzene			Not detected		200
Hexachlorobutadiene			Not detected		200
Hexachlorocyclopentadiene			Not detected		200
Hexachloroethane			Not detected		200
Indeno(1,2,3-cd)pyrene			Not detected		200
Isophorone			Not detected		200
Naphthalene			Not detected		200
Nitrobenzene			Not detected		200
N-Nitrosodi-n-propylamine			Not detected		200
N-Nitrosodiphenylamine			Not detected		200
Pentachlorophenol			Not detected		200
Phenanthrene			Not detected		200
Phenol			Not detected		200
Pyrene			Not detected		200
Pyridine			Not detected		200
Total Solids	SM 2540B	%	80.7	---	1.0

Client Sample ID			2SS-4 (0-2 inches)		
York Sample ID			10010140-04		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
Pesticides, 8081 List	SW846-3550B/8081	ug/Kg	---	---	---
4,4'-DDD			Not detected		3.10
4,4'-DDE			Not detected		3.10
4,4'-DDT			Not detected		3.10
Aldrin			Not detected		1.55
alpha Chlordane			Not detected		1.55
alpha-BHC			Not detected		1.55
beta-BHC			Not detected		1.55
delta-BHC			Not detected		1.55
Dieldrin			Not detected		0.640
Endosulfan I			Not detected		1.55
Endosulfan II			Not detected		3.10
Endosulfan sulfate			Not detected		3.10
Endrin			Not detected		3.10
Endrin aldehyde			Not detected		3.10
gamma Chlordane			Not detected		1.55
gamma-BHC (Lindane)			Not detected		1.55
Heptachlor			Not detected		1.55
Heptachlor epoxide			Not detected		1.55
Methoxychlor			Not detected		15.5
Toxaphene			Not detected		19.4
Volatiles, 8260 List	SW846-8260	ug/Kg	---	---	---
1,1,1,2-Tetrachloroethane			Not detected		19
1,1,1-Trichloroethane			Not detected		19

YORK

Client Sample ID			2SS-4 (0-2 inches)		
York Sample ID			10010140-04		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
1,1,2,2-Tetrachloroethane			Not detected		19
1,1,2-Trichloroethane			Not detected		19
1,1-Dichloroethane			Not detected		19
1,1-Dichloroethylene			Not detected		19
1,1-Dichloropropylene			Not detected		19
1,2,3-Trichlorobenzene			Not detected		19
1,2,3-Trichloropropane			Not detected		19
1,2,4-Trichlorobenzene			Not detected		19
1,2,4-Trimethylbenzene			8	J	19
1,2-Dibromo-3-chloropropane			Not detected		19
1,2-Dibromoethane			Not detected		19
1,2-Dichlorobenzene			Not detected		19
1,2-Dichloroethane			Not detected		19
1,2-Dichloropropane			Not detected		19
1,3,5-Trimethylbenzene			Not detected		19
1,3-Dichlorobenzene			Not detected		19
1,3-Dichloropropane			Not detected		19
1,4-Dichlorobenzene			Not detected		19
2,2-Dichloropropane			Not detected		19
2-Chlorotoluene			Not detected		19
4-Chlorotoluene			Not detected		19
Benzene			Not detected		19
Bromobenzene			Not detected		19
Bromochloromethane			Not detected		19
Bromodichloromethane			Not detected		19
Bromoform			Not detected		19
Bromomethane			Not detected		19
Carbon tetrachloride			Not detected		19
Chlorobenzene			Not detected		19
Chloroethane			Not detected		19
Chloroform			6	J	19
Chloromethane			Not detected		19
cis-1,2-Dichloroethylene			Not detected		19
cis-1,3-Dichloropropylene			Not detected		19
Dibromochloromethane			Not detected		19
Dibromomethane			Not detected		19
Dichlorodifluoromethane			Not detected		19
Ethylbenzene			Not detected		19
Hexachlorobutadiene			Not detected		19
Isopropylbenzene			Not detected		19
Methylene chloride			81	B	39
MTBE			Not detected		19
Naphthalene			Not detected		19
n-Butylbenzene			Not detected		19
n-Propylbenzene			Not detected		19
o-Xylene			7	J	19
p- & m-Xylenes			10	J	39
p-Isopropyltoluene			Not detected		19

Client Sample ID			2SS-4 (0-2 inches)		
York Sample ID			10010140-04		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
sec-Butylbenzene			Not detected		19
Styrene			Not detected		19
tert-Butylbenzene			Not detected		19
Tetrachloroethylene			Not detected		19
Toluene			Not detected		19
trans-1,2-Dichloroethylene			Not detected		19
trans-1,3-Dichloropropylene			Not detected		19
Trichloroethylene			Not detected		19
Trichlorofluoromethane			Not detected		19
Vinyl chloride			Not detected		19
BNA, 8270 List	SW846-8270C	ug/Kg	---	---	---
1,2,4-Trichlorobenzene			Not detected		1600
1,2-Dichlorobenzene			Not detected		1600
1,3-Dichlorobenzene			Not detected		1600
1,4-Dichlorobenzene			Not detected		1600
2,4,5-Trichlorophenol			Not detected		1600
2,4,6-Trichlorophenol			Not detected		1600
2,4-Dichlorophenol			Not detected		1600
2,4-Dimethylphenol			Not detected		1600
2,4-Dinitrophenol			Not detected		1600
2,4-Dinitrotoluene			Not detected		1600
2,6-Dinitrotoluene			Not detected		1600
2-Chloronaphthalene			Not detected		1600
2-Chlorophenol			Not detected		1600
2-Methylnaphthalene			Not detected		1600
2-Methylphenol			Not detected		1600
2-Nitroaniline			Not detected		1600
2-Nitrophenol			Not detected		1600
3,3'-Dichlorobenzidine			Not detected		1600
3-Nitroaniline			Not detected		1600
4,6-Dinitro-2-methylphenol			Not detected		1600
4-Bromophenyl phenyl ether			Not detected		1600
4-Chloro-3-methyl phenol			Not detected		1600
4-Chloroaniline			Not detected		1600
4-Chlorophenyl phenyl ether			Not detected		1600
4-Methylphenol			Not detected		1600
4-Nitroaniline			Not detected		1600
4-Nitrophenol			Not detected		1600
Acenaphthene			Not detected		1600
Acenaphthylene			Not detected		1600
Aniline			Not detected		1600
Anthracene			680	J	1600
Benzidine			Not detected		1600
Benzo(a)anthracene			2000		1600
Benzo(a)pyrene			1700		1600
Benzo(b)fluoranthene			1300	J	1600
Benzo(g,h,i)perylene			Not detected		1600
Benzo(k)fluoranthene			2100		1600

Client Sample ID			2SS-4 (0-2 inches)		
York Sample ID			10010140-04		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
Benzyl alcohol			Not detected		1600
Bis(2-chloroethoxy)methane			Not detected		1600
Bis(2-chloroethyl)ether			Not detected		1600
Bis(2-chloroisopropyl)ether			Not detected		1600
Bis(2-ethylhexyl)phthalate			Not detected		1600
Butyl benzyl phthalate			Not detected		1600
Chrysene			2400		1600
Dibenz(a,h)anthracene			Not detected		1600
Dibenzofuran			Not detected		1600
Diethylphthalate			Not detected		1600
Dimethylphthalate			Not detected		1600
Di-n-butylphthalate			Not detected		1600
Di-n-octylphthalate			Not detected		1600
Fluoranthene			4500		1600
Fluorene			Not detected		1600
Hexachlorobenzene			Not detected		1600
Hexachlorobutadiene			Not detected		1600
Hexachlorocyclopentadiene			Not detected		1600
Hexachloroethane			Not detected		1600
Indeno(1,2,3-cd)pyrene			Not detected		1600
Isophorone			Not detected		1600
Naphthalene			Not detected		1600
Nitrobenzene			Not detected		1600
N-Nitrosodi-n-propylamine			Not detected		1600
N-Nitrosodiphenylamine			Not detected		1600
Pentachlorophenol			Not detected		1600
Phenanthrene			2400		1600
Phenol			Not detected		1600
Pyrene			3700		1600
Pyridine			Not detected		1600
Total Solids	SM 2540B	%	51.5	---	1.0

Client Sample ID			2SS-5 (0-2 inches)		
York Sample ID			10010140-05		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
Pesticides, 8081 List	SW846-3550B/8081	ug/Kg	---	---	---
4,4'-DDD			Not detected		1.98
4,4'-DDE			Not detected		1.98
4,4'-DDT			Not detected		1.98
Aldrin			Not detected		0.992
alpha Chlordane			Not detected		0.992
alpha-BHC			Not detected		0.992
beta-BHC			Not detected		0.992
delta-BHC			Not detected		0.992
Dieldrin			Not detected		0.409
Endosulfan I			Not detected		0.992

Client Sample ID			2SS-5 (0-2 inches)		
York Sample ID			10010140-05		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
Endosulfan II			Not detected		1.98
Endosulfan sulfate			Not detected		1.98
Endrin			Not detected		1.98
Endrin aldehyde			Not detected		1.98
gamma Chlordane			Not detected		0.992
gamma-BHC (Lindane)			Not detected		0.992
Heptachlor			Not detected		0.992
Heptachlor epoxide			Not detected		0.992
Methoxychlor			Not detected		9.92
Toxaphene			Not detected		12.4
Volatiles, 8260 List	SW846-8260	ug/Kg	---	---	---
1,1,1,2-Tetrachloroethane			Not detected		12
1,1,1-Trichloroethane			Not detected		12
1,1,2,2-Tetrachloroethane			Not detected		12
1,1,2-Trichloroethane			Not detected		12
1,1-Dichloroethane			Not detected		12
1,1-Dichloroethylene			Not detected		12
1,1-Dichloropropylene			Not detected		12
1,2,3-Trichlorobenzene			Not detected		12
1,2,3-Trichloropropane			Not detected		12
1,2,4-Trichlorobenzene			Not detected		12
1,2,4-Trimethylbenzene			12		12
1,2-Dibromo-3-chloropropane			Not detected		12
1,2-Dibromoethane			Not detected		12
1,2-Dichlorobenzene			Not detected		12
1,2-Dichloroethane			Not detected		12
1,2-Dichloropropane			Not detected		12
1,3,5-Trimethylbenzene			Not detected		12
1,3-Dichlorobenzene			Not detected		12
1,3-Dichloropropane			Not detected		12
1,4-Dichlorobenzene			Not detected		12
2,2-Dichloropropane			Not detected		12
2-Chlorotoluene			Not detected		12
4-Chlorotoluene			Not detected		12
Benzene			Not detected		12
Bromobenzene			Not detected		12
Bromochloromethane			Not detected		12
Bromodichloromethane			Not detected		12
Bromoform			Not detected		12
Bromomethane			Not detected		12
Carbon tetrachloride			Not detected		12
Chlorobenzene			Not detected		12
Chloroethane			Not detected		12
Chloroform			3	J	12
Chloromethane			Not detected		12
cis-1,2-Dichloroethylene			Not detected		12
cis-1,3-Dichloropropylene			Not detected		12
Dibromochloromethane			Not detected		12

Client Sample ID			2SS-5 (0-2 inches)		
York Sample ID			10010140-05		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
Dibromomethane			Not detected		12
Dichlorodifluoromethane			Not detected		12
Ethylbenzene			Not detected		12
Hexachlorobutadiene			Not detected		12
Isopropylbenzene			Not detected		12
Methylene chloride			37	B	25
MTBE			Not detected		12
Naphthalene			Not detected		12
n-Butylbenzene			Not detected		12
n-Propylbenzene			Not detected		12
o-Xylene			7	J	12
p- & m-Xylenes			11	J	25
p-Isopropyltoluene			Not detected		12
sec-Butylbenzene			Not detected		12
Styrene			Not detected		12
tert-Butylbenzene			Not detected		12
Tetrachloroethylene			Not detected		12
Toluene			Not detected		12
trans-1,2-Dichloroethylene			Not detected		12
trans-1,3-Dichloropropylene			Not detected		12
Trichloroethylene			Not detected		12
Trichlorofluoromethane			Not detected		12
Vinyl chloride			Not detected		12
BNA, 8270 List	SW846-8270C	ug/Kg	---	---	---
1,2,4-Trichlorobenzene			Not detected		200
1,2-Dichlorobenzene			Not detected		200
1,3-Dichlorobenzene			Not detected		200
1,4-Dichlorobenzene			Not detected		200
2,4,5-Trichlorophenol			Not detected		200
2,4,6-Trichlorophenol			Not detected		200
2,4-Dichlorophenol			Not detected		200
2,4-Dimethylphenol			Not detected		200
2,4-Dinitrophenol			Not detected		200
2,4-Dinitrotoluene			Not detected		200
2,6-Dinitrotoluene			Not detected		200
2-Chloronaphthalene			Not detected		200
2-Chlorophenol			Not detected		200
2-Methylnaphthalene			Not detected		200
2-Methylphenol			Not detected		200
2-Nitroaniline			Not detected		200
2-Nitrophenol			Not detected		200
3,3'-Dichlorobenzidine			Not detected		200
3-Nitroaniline			Not detected		200
4,6-Dinitro-2-methylphenol			Not detected		200
4-Bromophenyl phenyl ether			Not detected		200
4-Chloro-3-methyl phenol			Not detected		200
4-Chloroaniline			Not detected		200
4-Chlorophenyl phenyl ether			Not detected		200

Client Sample ID			2SS-5 (0-2 inches)		
York Sample ID			10010140-05		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
4-Methylphenol			Not detected		200
4-Nitroaniline			Not detected		200
4-Nitrophenol			Not detected		200
Acenaphthene			Not detected		200
Acenaphthylene			Not detected		200
Aniline			Not detected		200
Anthracene			Not detected		200
Benzidine			Not detected		200
Benzo(a)anthracene			290		200
Benzo(a)pyrene			460		200
Benzo(b)fluoranthene			430		200
Benzo(g,h,i)perylene			210		200
Benzo(k)fluoranthene			390		200
Benzyl alcohol			Not detected		200
Bis(2-chloroethoxy)methane			Not detected		200
Bis(2-chloroethyl)ether			Not detected		200
Bis(2-chloroisopropyl)ether			Not detected		200
Bis(2-ethylhexyl)phthalate			Not detected		200
Butyl benzyl phthalate			Not detected		200
Chrysene			440		200
Dibenz(a,h)anthracene			Not detected		200
Dibenzofuran			Not detected		200
Diethylphthalate			Not detected		200
Dimethylphthalate			Not detected		200
Di-n-butylphthalate			Not detected		200
Di-n-octylphthalate			Not detected		200
Fluoranthene			810		200
Fluorene			Not detected		200
Hexachlorobenzene			Not detected		200
Hexachlorobutadiene			Not detected		200
Hexachlorocyclopentadiene			Not detected		200
Hexachloroethane			Not detected		200
Indeno(1,2,3-cd)pyrene			190	J	200
Isophorone			Not detected		200
Naphthalene			Not detected		200
Nitrobenzene			Not detected		200
N-Nitrosodi-n-propylamine			Not detected		200
N-Nitrosodiphenylamine			Not detected		200
Pentachlorophenol			Not detected		200
Phenanthrene			190	J	200
Phenol			Not detected		200
Pyrene			610		200
Pyridine			Not detected		200
Total Solids	SM 2540B	%	80.6	---	1.0

YORK

Client Sample ID			2SS-6 (0-2 inches)		
York Sample ID			10010140-06		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
Pesticides, 8081 List	SW846-3550B/8081	ug/Kg	---	---	---
4,4'-DDD			Not detected		7.82
4,4'-DDE			Not detected		7.82
4,4'-DDT			Not detected		7.82
Aldrin			Not detected		3.91
alpha Chlordane			Not detected		3.91
alpha-BHC			Not detected		3.91
beta-BHC			Not detected		3.91
delta-BHC			Not detected		3.91
Dieldrin			Not detected		1.61
Endosulfan I			Not detected		3.91
Endosulfan II			Not detected		7.82
Endosulfan sulfate			Not detected		7.82
Endrin			Not detected		7.82
Endrin aldehyde			Not detected		7.82
gamma Chlordane			Not detected		3.91
gamma-BHC (Lindane)			Not detected		3.91
Heptachlor			Not detected		3.91
Heptachlor epoxide			Not detected		3.91
Methoxychlor			Not detected		39.1
Toxaphene			Not detected		48.9
Volatiles, 8260 List	SW846-8260	ug/Kg	---	---	---
1,1,1,2-Tetrachloroethane			Not detected		16
1,1,1-Trichloroethane			Not detected		16
1,1,2,2-Tetrachloroethane			Not detected		16
1,1,2-Trichloroethane			Not detected		16
1,1-Dichloroethane			Not detected		16
1,1-Dichloroethylene			Not detected		16
1,1-Dichloropropylene			Not detected		16
1,2,3-Trichlorobenzene			Not detected		16
1,2,3-Trichloropropane			Not detected		16
1,2,4-Trichlorobenzene			Not detected		16
1,2,4-Trimethylbenzene			8	J	16
1,2-Dibromo-3-chloropropane			Not detected		16
1,2-Dibromoethane			Not detected		16
1,2-Dichlorobenzene			Not detected		16
1,2-Dichloroethane			Not detected		16
1,2-Dichloropropane			Not detected		16
1,3,5-Trimethylbenzene			Not detected		16
1,3-Dichlorobenzene			Not detected		16
1,3-Dichloropropane			Not detected		16
1,4-Dichlorobenzene			Not detected		16
2,2-Dichloropropane			Not detected		16
2-Chlorotoluene			Not detected		16
4-Chlorotoluene			Not detected		16
Benzene			Not detected		16
Bromobenzene			Not detected		16
Bromochloromethane			Not detected		16

Client Sample ID			2SS-6 (0-2 inches)		
York Sample ID			10010140-06		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
Bromodichloromethane			Not detected		16
Bromoform			Not detected		16
Bromomethane			Not detected		16
Carbon tetrachloride			Not detected		16
Chlorobenzene			Not detected		16
Chloroethane			Not detected		16
Chloroform			6	J	16
Chloromethane			Not detected		16
cis-1,2-Dichloroethylene			Not detected		16
cis-1,3-Dichloropropylene			Not detected		16
Dibromochloromethane			Not detected		16
Dibromomethane			Not detected		16
Dichlorodifluoromethane			Not detected		16
Ethylbenzene			Not detected		16
Hexachlorobutadiene			Not detected		16
Isopropylbenzene			Not detected		16
Methylene chloride			110	B	33
MTBE			Not detected		16
Naphthalene			Not detected		16
n-Butylbenzene			Not detected		16
n-Propylbenzene			Not detected		16
o-Xylene			7	J	16
p- & m-Xylenes			11	J	33
p-Isopropyltoluene			Not detected		16
sec-Butylbenzene			Not detected		16
Styrene			Not detected		16
tert-Butylbenzene			Not detected		16
Tetrachloroethylene			Not detected		16
Toluene			Not detected		16
trans-1,2-Dichloroethylene			Not detected		16
trans-1,3-Dichloropropylene			Not detected		16
Trichloroethylene			Not detected		16
Trichlorofluoromethane			Not detected		16
Vinyl chloride			Not detected		16
BNA, 8270 List	SW846-8270C	ug/Kg	---	---	---
1,2,4-Trichlorobenzene			Not detected		400
1,2-Dichlorobenzene			Not detected		400
1,3-Dichlorobenzene			Not detected		400
1,4-Dichlorobenzene			Not detected		400
2,4,5-Trichlorophenol			Not detected		400
2,4,6-Trichlorophenol			Not detected		400
2,4-Dichlorophenol			Not detected		400
2,4-Dimethylphenol			Not detected		400
2,4-Dinitrophenol			Not detected		400
2,4-Dinitrotoluene			Not detected		400
2,6-Dinitrotoluene			Not detected		400
2-Chloronaphthalene			Not detected		400
2-Chlorophenol			Not detected		400

Client Sample ID			2SS-6 (0-2 inches)		
York Sample ID			10010140-06		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
2-Methylnaphthalene			Not detected		400
2-Methylphenol			Not detected		400
2-Nitroaniline			Not detected		400
2-Nitrophenol			Not detected		400
3,3'-Dichlorobenzidine			Not detected		400
3-Nitroaniline			Not detected		400
4,6-Dinitro-2-methylphenol			Not detected		400
4-Bromophenyl phenyl ether			Not detected		400
4-Chloro-3-methyl phenol			Not detected		400
4-Chloroaniline			Not detected		400
4-Chlorophenyl phenyl ether			Not detected		400
4-Methylphenol			Not detected		400
4-Nitroaniline			Not detected		400
4-Nitrophenol			Not detected		400
Acenaphthene			Not detected		400
Acenaphthylene			Not detected		400
Aniline			Not detected		400
Anthracene			Not detected		400
Benzidine			Not detected		400
Benzo(a)anthracene			Not detected		400
Benzo(a)pyrene			Not detected		400
Benzo(b)fluoranthene			Not detected		400
Benzo(g,h,i)perylene			Not detected		400
Benzo(k)fluoranthene			Not detected		400
Benzyl alcohol			Not detected		400
Bis(2-chloroethoxy)methane			Not detected		400
Bis(2-chloroethyl)ether			Not detected		400
Bis(2-chloroisopropyl)ether			Not detected		400
Bis(2-ethylhexyl)phthalate			Not detected		400
Butyl benzyl phthalate			Not detected		400
Chrysene			Not detected		400
Dibenz(a,h)anthracene			Not detected		400
Dibenzofuran			Not detected		400
Diethylphthalate			Not detected		400
Dimethylphthalate			Not detected		400
Di-n-butylphthalate			Not detected		400
Di-n-octylphthalate			Not detected		400
Fluoranthene			Not detected		400
Fluorene			Not detected		400
Hexachlorobenzene			Not detected		400
Hexachlorobutadiene			Not detected		400
Hexachlorocyclopentadiene			Not detected		400
Hexachloroethane			Not detected		400
Indeno(1,2,3-cd)pyrene			Not detected		400
Isophorone			Not detected		400
Naphthalene			Not detected		400
Nitrobenzene			Not detected		400
N-Nitrosodi-n-propylamine			Not detected		400

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Client Sample ID			2SS-6 (0-2 inches)		
York Sample ID			10010140-06		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
N-Nitrosodiphenylamine			Not detected		400
Pentachlorophenol			Not detected		400
Phenanthrene			Not detected		400
Phenol			Not detected		400
Pyrene			Not detected		400
Pyridine			Not detected		400
Total Solids	SM 2540B	%	61.3	---	1.0

Client Sample ID			2SS-7 (0-2 inches)		
York Sample ID			10010140-07		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
Pesticides, 8081 List	SW846-3550B/8081	ug/Kg	---	---	---
4,4'-DDD			Not detected		8.86
4,4'-DDE			Not detected		8.86
4,4'-DDT			Not detected		8.86
Aldrin			Not detected		4.43
alpha Chlordane			Not detected		4.43
alpha-BHC			Not detected		4.43
beta-BHC			Not detected		4.43
delta-BHC			Not detected		4.43
Dieldrin			Not detected		1.83
Endosulfan I			Not detected		4.43
Endosulfan II			Not detected		8.86
Endosulfan sulfate			Not detected		8.86
Endrin			Not detected		8.86
Endrin aldehyde			Not detected		8.86
gamma Chlordane			Not detected		4.43
gamma-BHC (Lindane)			Not detected		4.43
Heptachlor			Not detected		4.43
Heptachlor epoxide			Not detected		4.43
Methoxychlor			Not detected		44.3
Toxaphene			Not detected		55.4
Volatiles, 8260 List	SW846-8260	ug/Kg	---	---	---
1,1,1,2-Tetrachloroethane			Not detected		18
1,1,1-Trichloroethane			Not detected		18
1,1,2,2-Tetrachloroethane			Not detected		18
1,1,2-Trichloroethane			Not detected		18
1,1-Dichloroethane			Not detected		18
1,1-Dichloroethylene			Not detected		18
1,1-Dichloropropylene			Not detected		18
1,2,3-Trichlorobenzene			Not detected		18
1,2,3-Trichloropropane			Not detected		18
1,2,4-Trichlorobenzene			Not detected		18
1,2,4-Trimethylbenzene			9	J	18

Client Sample ID			2SS-7 (0-2 inches)		
York Sample ID			10010140-07		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
1,2-Dibromo-3-chloropropane			Not detected		18
1,2-Dibromoethane			Not detected		18
1,2-Dichlorobenzene			Not detected		18
1,2-Dichloroethane			Not detected		18
1,2-Dichloropropane			Not detected		18
1,3,5-Trimethylbenzene			Not detected		18
1,3-Dichlorobenzene			Not detected		18
1,3-Dichloropropane			Not detected		18
1,4-Dichlorobenzene			Not detected		18
2,2-Dichloropropane			Not detected		18
2-Chlorotoluene			Not detected		18
4-Chlorotoluene			Not detected		18
Benzene			Not detected		18
Bromobenzene			Not detected		18
Bromochloromethane			Not detected		18
Bromodichloromethane			Not detected		18
Bromoform			Not detected		18
Bromomethane			Not detected		18
Carbon tetrachloride			Not detected		18
Chlorobenzene			Not detected		18
Chloroethane			Not detected		18
Chloroform			4	J	18
Chloromethane			Not detected		18
cis-1,2-Dichloroethylene			Not detected		18
cis-1,3-Dichloropropylene			Not detected		18
Dibromochloromethane			Not detected		18
Dibromomethane			Not detected		18
Dichlorodifluoromethane			Not detected		18
Ethylbenzene			Not detected		18
Hexachlorobutadiene			Not detected		18
Isopropylbenzene			Not detected		18
Methylene chloride			120	B	37
MTBE			Not detected		18
Naphthalene			Not detected		18
n-Butylbenzene			Not detected		18
n-Propylbenzene			Not detected		18
o-Xylene			5	J	18
p- & m-Xylenes			9	J	37
p-Isopropyltoluene			14	J	18
sec-Butylbenzene			Not detected		18
Styrene			Not detected		18
tert-Butylbenzene			Not detected		18
Tetrachloroethylene			Not detected		18
Toluene			Not detected		18
trans-1,2-Dichloroethylene			Not detected		18
trans-1,3-Dichloropropylene			Not detected		18
Trichloroethylene			Not detected		18
Trichlorofluoromethane			Not detected		18

Client Sample ID			2SS-7 (0-2 inches)		
York Sample ID			10010140-07		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
Vinyl chloride			Not detected		18
BNA, 8270 List	SW846-8270C	ug/Kg	---	---	---
1,2,4-Trichlorobenzene			Not detected		460
1,2-Dichlorobenzene			Not detected		460
1,3-Dichlorobenzene			Not detected		460
1,4-Dichlorobenzene			Not detected		460
2,4,5-Trichlorophenol			Not detected		460
2,4,6-Trichlorophenol			Not detected		460
2,4-Dichlorophenol			Not detected		460
2,4-Dimethylphenol			Not detected		460
2,4-Dinitrophenol			Not detected		460
2,4-Dinitrotoluene			Not detected		460
2,6-Dinitrotoluene			Not detected		460
2-Chloronaphthalene			Not detected		460
2-Chlorophenol			Not detected		460
2-Methylnaphthalene			Not detected		460
2-Methylphenol			Not detected		460
2-Nitroaniline			Not detected		460
2-Nitrophenol			Not detected		460
3,3'-Dichlorobenzidine			Not detected		460
3-Nitroaniline			Not detected		460
4,6-Dinitro-2-methylphenol			Not detected		460
4-Bromophenyl phenyl ether			Not detected		460
4-Chloro-3-methyl phenol			Not detected		460
4-Chloroaniline			Not detected		460
4-Chlorophenyl phenyl ether			Not detected		460
4-Methylphenol			Not detected		460
4-Nitroaniline			Not detected		460
4-Nitrophenol			Not detected		460
Acenaphthene			Not detected		460
Acenaphthylene			Not detected		460
Aniline			Not detected		460
Anthracene			Not detected		460
Benzidine			Not detected		460
Benzo(a)anthracene			Not detected		460
Benzo(a)pyrene			Not detected		460
Benzo(b)fluoranthene			Not detected		460
Benzo(g,h,i)perylene			Not detected		460
Benzo(k)fluoranthene			Not detected		460
Benzyl alcohol			Not detected		460
Bis(2-chloroethoxy)methane			Not detected		460
Bis(2-chloroethyl)ether			Not detected		460
Bis(2-chloroisopropyl)ether			Not detected		460
Bis(2-ethylhexyl)phthalate			220	J	460
Butyl benzyl phthalate			Not detected		460
Chrysene			210	J	460
Dibenz(a,h)anthracene			Not detected		460
Dibenzofuran			Not detected		460

YORK

Client Sample ID			2SS-7 (0-2 inches)		
York Sample ID			10010140-07		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
Diethylphthalate			Not detected		460
Dimethylphthalate			Not detected		460
Di-n-butylphthalate			Not detected		460
Di-n-octylphthalate			Not detected		460
Fluoranthene			260	J	460
Fluorene			Not detected		460
Hexachlorobenzene			Not detected		460
Hexachlorobutadiene			Not detected		460
Hexachlorocyclopentadiene			Not detected		460
Hexachloroethane			Not detected		460
Indeno(1,2,3-cd)pyrene			Not detected		460
Isophorone			Not detected		460
Naphthalene			Not detected		460
Nitrobenzene			Not detected		460
N-Nitrosodi-n-propylamine			Not detected		460
N-Nitrosodiphenylamine			Not detected		460
Pentachlorophenol			Not detected		460
Phenanthrene			Not detected		460
Phenol			Not detected		460
Pyrene			230	J	460
Pyridine			Not detected		460
Total Solids	SM 2540B	%	54.1	---	1.0

Client Sample ID			2SS-8 (0-2 inches)		
York Sample ID			10010140-08		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
Pesticides, 8081 List	SW846-3550B/8081	ug/Kg	---	---	---
4,4'-DDD			Not detected		8.58
4,4'-DDE			Not detected		8.58
4,4'-DDT			Not detected		8.58
Aldrin			Not detected		4.29
alpha Chlordane			Not detected		4.29
alpha-BHC			Not detected		4.29
beta-BHC			Not detected		4.29
delta-BHC			Not detected		4.29
Dieldrin			Not detected		1.77
Endosulfan I			Not detected		4.29
Endosulfan II			Not detected		8.58
Endosulfan sulfate			Not detected		8.58
Endrin			Not detected		8.58
Endrin aldehyde			Not detected		8.58
gamma Chlordane			Not detected		4.29
gamma-BHC (Lindane)			Not detected		4.29
Heptachlor			Not detected		4.29
Heptachlor epoxide			Not detected		4.29
Methoxychlor			Not detected		42.9

Client Sample ID			2SS-8 (0-2 inches)		
York Sample ID			10010140-08		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
Toxaphene			Not detected		53.6
Volatiles, 8260 List	SW846-8260	ug/Kg	---	---	---
1,1,1,2-Tetrachloroethane			Not detected		18
1,1,1-Trichloroethane			Not detected		18
1,1,2,2-Tetrachloroethane			Not detected		18
1,1,2-Trichloroethane			Not detected		18
1,1-Dichloroethane			Not detected		18
1,1-Dichloroethylene			Not detected		18
1,1-Dichloropropylene			Not detected		18
1,2,3-Trichlorobenzene			Not detected		18
1,2,3-Trichloropropane			Not detected		18
1,2,4-Trichlorobenzene			Not detected		18
1,2,4-Trimethylbenzene			21		18
1,2-Dibromo-3-chloropropane			Not detected		18
1,2-Dibromoethane			Not detected		18
1,2-Dichlorobenzene			Not detected		18
1,2-Dichloroethane			Not detected		18
1,2-Dichloropropane			Not detected		18
1,3,5-Trimethylbenzene			6	J	18
1,3-Dichlorobenzene			Not detected		18
1,3-Dichloropropane			Not detected		18
1,4-Dichlorobenzene			Not detected		18
2,2-Dichloropropane			Not detected		18
2-Chlorotoluene			Not detected		18
4-Chlorotoluene			Not detected		18
Benzene			Not detected		18
Bromobenzene			Not detected		18
Bromochloromethane			Not detected		18
Bromodichloromethane			Not detected		18
Bromoform			Not detected		18
Bromomethane			Not detected		18
Carbon tetrachloride			Not detected		18
Chlorobenzene			Not detected		18
Chloroethane			Not detected		18
Chloroform			Not detected		18
Chloromethane			Not detected		18
cis-1,2-Dichloroethylene			Not detected		18
cis-1,3-Dichloropropylene			Not detected		18
Dibromochloromethane			Not detected		18
Dibromomethane			Not detected		18
Dichlorodifluoromethane			Not detected		18
Ethylbenzene			4	J	18
Hexachlorobutadiene			Not detected		18
Isopropylbenzene			Not detected		18
Methylene chloride			70	B	36
MTBE			Not detected		18
Naphthalene			Not detected		18
n-Butylbenzene			Not detected		18

YORK

Client Sample ID			2SS-8 (0-2 inches)		
York Sample ID			10010140-08		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
n-Propylbenzene			Not detected		18
o-Xylene			18		18
p- & m-Xylenes			23	J	36
p-Isopropyltoluene			Not detected		18
sec-Butylbenzene			Not detected		18
Styrene			Not detected		18
tert-Butylbenzene			Not detected		18
Tetrachloroethylene			Not detected		18
Toluene			Not detected		18
trans-1,2-Dichloroethylene			Not detected		18
trans-1,3-Dichloropropylene			Not detected		18
Trichloroethylene			Not detected		18
Trichlorofluoromethane			Not detected		18
Vinyl chloride			Not detected		18
BNA, 8270 List	SW846-8270C	ug/Kg	---	---	---
1,2,4-Trichlorobenzene			Not detected		300
1,2-Dichlorobenzene			Not detected		300
1,3-Dichlorobenzene			Not detected		300
1,4-Dichlorobenzene			Not detected		300
2,4,5-Trichlorophenol			Not detected		300
2,4,6-Trichlorophenol			Not detected		300
2,4-Dichlorophenol			Not detected		300
2,4-Dimethylphenol			Not detected		300
2,4-Dinitrophenol			Not detected		300
2,4-Dinitrotoluene			Not detected		300
2,6-Dinitrotoluene			Not detected		300
2-Chloronaphthalene			Not detected		300
2-Chlorophenol			Not detected		300
2-Methylnaphthalene			Not detected		300
2-Methylphenol			Not detected		300
2-Nitroaniline			Not detected		300
2-Nitrophenol			Not detected		300
3,3'-Dichlorobenzidine			Not detected		300
3-Nitroaniline			Not detected		300
4,6-Dinitro-2-methylphenol			Not detected		300
4-Bromophenyl phenyl ether			Not detected		300
4-Chloro-3-methyl phenol			Not detected		300
4-Chloroaniline			Not detected		300
4-Chlorophenyl phenyl ether			Not detected		300
4-Methylphenol			Not detected		300
4-Nitroaniline			Not detected		300
4-Nitrophenol			Not detected		300
Acenaphthene			Not detected		300
Acenaphthylene			Not detected		300
Aniline			Not detected		300
Anthracene			Not detected		300
Benzidine			Not detected		300
Benzo(a)anthracene			Not detected		300

Client Sample ID			2SS-8 (0-2 inches)		
York Sample ID			10010140-08		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
Benzo(a)pyrene			Not detected		300
Benzo(b)fluoranthene			Not detected		300
Benzo(g,h,i)perylene			Not detected		300
Benzo(k)fluoranthene			Not detected		300
Benzyl alcohol			Not detected		300
Bis(2-chloroethoxy)methane			Not detected		300
Bis(2-chloroethyl)ether			Not detected		300
Bis(2-chloroisopropyl)ether			Not detected		300
Bis(2-ethylhexyl)phthalate			Not detected		300
Butyl benzyl phthalate			Not detected		300
Chrysene			Not detected		300
Dibenz(a,h)anthracene			Not detected		300
Dibenzofuran			Not detected		300
Diethylphthalate			Not detected		300
Dimethylphthalate			Not detected		300
Di-n-butylphthalate			Not detected		300
Di-n-octylphthalate			Not detected		300
Fluoranthene			Not detected		300
Fluorene			Not detected		300
Hexachlorobenzene			Not detected		300
Hexachlorobutadiene			Not detected		300
Hexachlorocyclopentadiene			Not detected		300
Hexachloroethane			Not detected		300
Indeno(1,2,3-cd)pyrene			Not detected		300
Isophorone			Not detected		300
Naphthalene			Not detected		300
Nitrobenzene			Not detected		300
N-Nitrosodi-n-propylamine			Not detected		300
N-Nitrosodiphenylamine			Not detected		300
Pentachlorophenol			Not detected		300
Phenanthrene			Not detected		300
Phenol			Not detected		300
Pyrene			Not detected		300
Pyridine			Not detected		300
Total Solids	SM 2540B	%	56.0	---	1.0

Client Sample ID			2SS-9 (0-2 inches)		
York Sample ID			10010140-09		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
Pesticides, 8081 List	SW846-3550B/8081	ug/Kg	---	---	---
4,4'-DDD			Not detected		7.94
4,4'-DDE			Not detected		7.94
4,4'-DDT			Not detected		7.94
Aldrin			Not detected		3.97
alpha Chlordane			Not detected		3.97
alpha-BHC			Not detected		3.97

Client Sample ID			2SS-9 (0-2 inches)		
York Sample ID			10010140-09		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
beta-BHC			Not detected		3.97
delta-BHC			Not detected		3.97
Dieldrin			Not detected		1.64
Endosulfan I			Not detected		3.97
Endosulfan II			Not detected		7.94
Endosulfan sulfate			Not detected		7.94
Endrin			Not detected		7.94
Endrin aldehyde			Not detected		7.94
gamma Chlordane			Not detected		3.97
gamma-BHC (Lindane)			Not detected		3.97
Heptachlor			Not detected		3.97
Heptachlor epoxide			Not detected		3.97
Methoxychlor			Not detected		39.7
Toxaphene			Not detected		49.6
Volatiles, 8260 List	SW846-8260	ug/Kg	---	---	---
1,1,1,2-Tetrachloroethane			Not detected		17
1,1,1-Trichloroethane			Not detected		17
1,1,2,2-Tetrachloroethane			Not detected		17
1,1,2-Trichloroethane			Not detected		17
1,1-Dichloroethane			Not detected		17
1,1-Dichloroethylene			Not detected		17
1,1-Dichloropropylene			Not detected		17
1,2,3-Trichlorobenzene			Not detected		17
1,2,3-Trichloropropane			Not detected		17
1,2,4-Trichlorobenzene			Not detected		17
1,2,4-Trimethylbenzene			12	J	17
1,2-Dibromo-3-chloropropane			Not detected		17
1,2-Dibromoethane			Not detected		17
1,2-Dichlorobenzene			Not detected		17
1,2-Dichloroethane			Not detected		17
1,2-Dichloropropane			Not detected		17
1,3,5-Trimethylbenzene			4	J	17
1,3-Dichlorobenzene			Not detected		17
1,3-Dichloropropane			Not detected		17
1,4-Dichlorobenzene			Not detected		17
2,2-Dichloropropane			Not detected		17
2-Chlorotoluene			Not detected		17
4-Chlorotoluene			Not detected		17
Benzene			Not detected		17
Bromobenzene			Not detected		17
Bromochloromethane			Not detected		17
Bromodichloromethane			Not detected		17
Bromoform			Not detected		17
Bromomethane			Not detected		17
Carbon tetrachloride			Not detected		17
Chlorobenzene			Not detected		17
Chloroethane			Not detected		17
Chloroform			Not detected		17

YORK

Client Sample ID			2SS-9 (0-2 inches)		
York Sample ID			10010140-09		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
Chloromethane			Not detected		17
cis-1,2-Dichloroethylene			Not detected		17
cis-1,3-Dichloropropylene			Not detected		17
Dibromochloromethane			Not detected		17
Dibromomethane			Not detected		17
Dichlorodifluoromethane			Not detected		17
Ethylbenzene			Not detected		17
Hexachlorobutadiene			Not detected		17
Isopropylbenzene			Not detected		17
Methylene chloride			46	B	33
MTBE			Not detected		17
Naphthalene			Not detected		17
n-Butylbenzene			Not detected		17
n-Propylbenzene			Not detected		17
o-Xylene			8	J	17
p- & m-Xylenes			10	J	33
p-Isopropyltoluene			9	J	17
sec-Butylbenzene			Not detected		17
Styrene			Not detected		17
tert-Butylbenzene			Not detected		17
Tetrachloroethylene			Not detected		17
Toluene			Not detected		17
trans-1,2-Dichloroethylene			Not detected		17
trans-1,3-Dichloropropylene			Not detected		17
Trichloroethylene			Not detected		17
Trichlorofluoromethane			Not detected		17
Vinyl chloride			Not detected		17
BNA, 8270 List	SW846-8270C	ug/Kg	---	---	---
1,2,4-Trichlorobenzene			Not detected		270
1,2-Dichlorobenzene			Not detected		270
1,3-Dichlorobenzene			Not detected		270
1,4-Dichlorobenzene			Not detected		270
2,4,5-Trichlorophenol			Not detected		270
2,4,6-Trichlorophenol			Not detected		270
2,4-Dichlorophenol			Not detected		270
2,4-Dimethylphenol			Not detected		270
2,4-Dinitrophenol			Not detected		270
2,4-Dinitrotoluene			Not detected		270
2,6-Dinitrotoluene			Not detected		270
2-Chloronaphthalene			Not detected		270
2-Chlorophenol			Not detected		270
2-Methylnaphthalene			Not detected		270
2-Methylphenol			Not detected		270
2-Nitroaniline			Not detected		270
2-Nitrophenol			Not detected		270
3,3'-Dichlorobenzidine			Not detected		270
3-Nitroaniline			Not detected		270
4,6-Dinitro-2-methylphenol			Not detected		270

Client Sample ID			2SS-9 (0-2 inches)		
York Sample ID			10010140-09		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
4-Bromophenyl phenyl ether			Not detected		270
4-Chloro-3-methyl phenol			Not detected		270
4-Chloroaniline			Not detected		270
4-Chlorophenyl phenyl ether			Not detected		270
4-Methylphenol			Not detected		270
4-Nitroaniline			Not detected		270
4-Nitrophenol			Not detected		270
Acenaphthene			Not detected		270
Acenaphthylene			Not detected		270
Aniline			Not detected		270
Anthracene			Not detected		270
Benzidine			Not detected		270
Benzo(a)anthracene			Not detected		270
Benzo(a)pyrene			Not detected		270
Benzo(b)fluoranthene			Not detected		270
Benzo(g,h,i)perylene			Not detected		270
Benzo(k)fluoranthene			Not detected		270
Benzyl alcohol			Not detected		270
Bis(2-chloroethoxy)methane			Not detected		270
Bis(2-chloroethyl)ether			Not detected		270
Bis(2-chloroisopropyl)ether			Not detected		270
Bis(2-ethylhexyl)phthalate			Not detected		270
Butyl benzyl phthalate			Not detected		270
Chrysene			Not detected		270
Dibenz(a,h)anthracene			Not detected		270
Dibenzofuran			Not detected		270
Diethylphthalate			Not detected		270
Dimethylphthalate			Not detected		270
Di-n-butylphthalate			Not detected		270
Di-n-octylphthalate			Not detected		270
Fluoranthene			Not detected		270
Fluorene			Not detected		270
Hexachlorobenzene			Not detected		270
Hexachlorobutadiene			Not detected		270
Hexachlorocyclopentadiene			Not detected		270
Hexachloroethane			Not detected		270
Indeno(1,2,3-cd)pyrene			Not detected		270
Isophorone			Not detected		270
Naphthalene			Not detected		270
Nitrobenzene			Not detected		270
N-Nitrosodi-n-propylamine			Not detected		270
N-Nitrosodiphenylamine			Not detected		270
Pentachlorophenol			Not detected		270
Phenanthrene			Not detected		270
Phenol			Not detected		270
Pyrene			Not detected		270
Pyridine			Not detected		270
Total Solids	SM 2540B	%	60.5	---	1.0

YORK

Report Date: 1/13/2010
Client Project ID: SG96152.81
York Project No.: 10010140

Units Key: For Waters/Liquids: mg/L = ppm ; ug/L = ppb For Soils/Solids: mg/kg = ppm ; ug/kg = ppb

Notes for York Project No. 10010140

1. The "RL" is the REPORTING LIMIT and is adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. This REPORTING LIMIT is based upon the lowest standard utilized for calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All samples were received in proper condition for analysis with proper documentation.
6. All analyses conducted met method or Laboratory SOP requirements.
7. It is noted that no analyses reported herein were subcontracted to another laboratory.
8. Other attachments to this report, including Chain-of-custody documentation and Case narratives are hereby made a part of this report.

Approved By: Robert Q. Bradley
Managing Director

Date: 1/13/2010

YORK

YORK
ANALYTICAL LABORATORIES, INC.
120 RESEARCH DRIVE
STRATFORD, CT 06615
203.325.1371 FAX 203.357-0166

100140

Company Name	Report to:	Invoice to:	Project ID/No.	Samples Collected by (signature)
Ecosystems Strategies, Inc.	Emery Lawson	Brenda	SG96152.81	Brian Brannick (Name printed)

Sample No.	Location/ID	Date Sampled	Sample Matrix				Analyses Requested	Container Desc.
			Water	Soil	Air	Other		
1	2SS-1 (0-2")	12/29/2009		X			VOCs (8260), SVOCs (8270), Pesticides (8081)	8 oz glass 2 oz glass
2	2SS-2 (0-2")	12/29/2009		X			VOCs (8260), SVOCs (8270), Pesticides (8081)	8 oz glass 2 oz glass
3	2SS-3 (0-2")	12/29/2009		X			VOCs (8260), SVOCs (8270), Pesticides (8081)	8 oz glass 2 oz glass
4	2SS-4 (0-2")	12/29/2009		X			VOCs (8260), SVOCs (8270), Pesticides (8081)	8 oz glass 2 oz glass
5	2SS-5 (0-2")	12/29/2009		X			VOCs (8260), SVOCs (8270), Pesticides (8081)	8 oz glass 2 oz glass
8	2SS-8 (0-2")	12/29/2009		X			VOCs (8260), SVOCs (8270), Pesticides (8081)	8 oz glass 2 oz glass
9	2SS-9 (0-2")	12/29/2009		X			VOCs (8260), SVOCs (8270), Pesticides (8081)	8 oz glass 2 oz glass

Chain-of-Custody Record

Bottles Relinquished from Lab by	Date/Time	Samples Relinquished by	Date/Time	Samples received by	Date/Time
Bottles received in field by	Date/Time	Samples Relinquished by	Date/Time	Samples received in LAB by	Date/Time

Comments/Special Instructions ***Please Produce Class B Deliverables***

Turn-Around Time Requested- Specify Date Expected
If RUSH Requested: DATE DUE FOR RUSH:

___ STANDARD _X_RUSH(Define)__**5 Days**

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YORK
ANALYTICAL LABORATORIES, INC.

120 RESEARCH DRIVE
STRATFORD, CT 06615
203.325.1371 FAX 203.357-0166

~~09~~ 10010140

09121001 Old Job #

Company Name	Report to:	Invoice to:	Project ID/No.	Samples Collected by (signature)
Ecosystems Strategies, Inc.	Emery Lawson	Brenda	SG96152.81	Brian Brannick Name (printed)

Sample No.	Location/ID	Date Sampled	Sample Matrix				Analyses Requested	Container Desc.
			Water	Soil	Air	Other		
1	2SS-1 (0-2")	12/29/2009		X			VOCs (8260), SVOCs (8270), Pesticides (8081)	8 oz glass 2 oz glass
2	2SS-2 (0-2")	12/29/2009		X			VOCs (8260), SVOCs (8270), Pesticides (8081)	8 oz glass 2 oz glass
3	2SS-3 (0-2")	12/29/2009		X			VOCs (8260), SVOCs (8270), Pesticides (8081)	8 oz glass 2 oz glass
4	2SS-4 (0-2")	12/29/2009		X			VOCs (8260), SVOCs (8270), Pesticides (8081)	8 oz glass 2 oz glass
5	2SS-5 (0-2")	12/29/2009		X			VOCs (8260), SVOCs (8270), Pesticides (8081)	8 oz glass 2 oz glass
8	2SS-8 (0-2")	12/29/2009		X			VOCs (8260), SVOCs (8270), Pesticides (8081)	8 oz glass 2 oz glass
9	2SS-9 (0-2")	12/29/2009		X			VOCs (8260), SVOCs (8270), Pesticides (8081)	8 oz glass 2 oz glass

Chain-of-Custody Record

Bottles Relinquished from Lab by	Date/Time	Samples Relinquished by	Date/Time	Samples received by	Date/Time
Bottles received in field by	Date/Time	Samples Relinquished by	Date/Time	Samples received in LAB by	Date/Time

Comments/Special Instructions ***Please Produce Class B Deliverables***

Turn-Around Time Requested- Specify Date Expected
If RUSH Requested: DATE DUE FOR RUSH:

__ STANDARD _X_ RUSH(Define) __5 Days

01/06/2010 15:17 4857083 PAGE 02

Emery Ecosystems Strategies

Ecosystems Strategies, Inc.
24 Davis Avenue, Poughkeepsie, NY 12603
phone 845.452.1658 | fax 845.485.7083 | ecosystemsstrategies.com

10010140

TRANSMITTAL COVER SHEET

TO: Phil Murphy **PAGES:** 2 (including cover sheet)

FAX: (203)357-0166

FROM: Emery Lawson, Project Manager; Ecosystems Strategies

DATE: January 6, 2010

RE: Chain of Custody – SG96152.81

COMMENTS:

Please see page #2 for additional testing for samples received by the laboratory on 12-30-09.

Thank you

Emery

cc: File

If you do not receive all transmitted pages, please contact us immediately at (845) 452-1658.

This transmission is confidential and intended solely for the individual or entity to which it is addressed. This transmittal may contain information which is privileged. If the reader is not the intended recipient, please destroy this communication. You are hereby notified that any disclosure, dissemination or distribution of this communication is strictly prohibited.

01/06/2010 15:17 4857083 PAGE 01

YORK
ANALYTICAL LABORATORIES, INC.

Technical Report

prepared for:

Ecosystems Strategies, Inc.
24 Davis Avenue
Poughkeepsie, NY 12603
Attention: Emery Lawson

Report Date: 1/5/2010
Re: Client Project ID: SG96152.81
York Project No.: 09121001

CT License No. PH-0723 New Jersey License No. CT-005 New York License No. 10854 PA Reg. 68-04440

120 RESEARCH DRIVE STRATFORD, CT 06615 (203) 325-1371 FAX (203) 357-0166

Report Date: 1/5/2010
Client Project ID: SG96152.81
York Project No.: 09121001

Ecosystems Strategies, Inc.
24 Davis Avenue
Poughkeepsie, NY 12603
Attention: Emery Lawson

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on 12/30/09. The project was identified as your project "SG96152.81".

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the NELAC acceptance requirements for environmental samples except those indicated under the Notes section of this report.

All the analyses met the method and laboratory standard operating procedure requirements except as indicated under the Notes section of this report, or as indicated by any data flags, the meaning of which is explained in the attachment to this report, if applicable.

The results of the analyses, which are all reported on an as-received basis unless otherwise noted, are summarized in the following table(s).

Analysis Results

Client Sample ID			**2SS-1 (0-2 inches)**		
York Sample ID			**09121001-01**		
Matrix			**SOIL**		
Parameter	**Method**	**Units**	**Result**	**Qualifier**	**RL**
PCB	SW846-3550B/8082	mg/Kg	---	---	---
PCB 1016			Not detected		0.0411
PCB 1221			Not detected		0.0411
PCB 1232			Not detected		0.0411
PCB 1242			Not detected		0.0411
PCB 1248			Not detected		0.0411
PCB 1254			Not detected		0.0411
PCB 1260			Not detected		0.0411
Metals, Target Analyte List (TAL)	SW846-6010	mg/kg	---	---	---
Aluminum			6870		2.42
Antimony			Not detected		2.42
Arsenic			18.1		2.42
Barium			77.4		2.42
Beryllium			Not detected		1.21
Cadmium			1.60		1.21

YORK

Client Sample ID			2SS-1 (0-2 inches)		
York Sample ID			09121001-01		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
Calcium			17800		4.84
Chromium			11.5		1.21
Cobalt			8.47		2.42
Copper			82.6		2.42
Iron			24100		2.42
Lead			84.0		2.42
Magnesium			6590		4.84
Manganese			495		2.42
Nickel			22.3		2.42
Potassium			1340		7.26
Selenium			Not detected		2.42
Silver			Not detected		2.42
Sodium			130		12.1
Thallium			Not detected		2.42
Vanadium			16.9		4.84
Zinc			132		4.84
Mercury	SW846-7471	mg/kG	Not detected	---	0.242
Total Solids	SM 2540B	%	41.3	---	1.0

Client Sample ID			2SS-2 (0-2 inches)		
York Sample ID			09121001-02		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
PCB	SW846-3550B/8082	mg/Kg	---	---	---
PCB 1016			Not detected		0.0243
PCB 1221			Not detected		0.0243
PCB 1232			Not detected		0.0243
PCB 1242			Not detected		0.0243
PCB 1248			Not detected		0.0243
PCB 1254			Not detected		0.0243
PCB 1260			Not detected		0.0243
Metals, Target Analyte List (TAL)	SW846-6010	mg/kg	---	---	---
Aluminum			6690		1.43
Antimony			3.92		1.43
Arsenic			19.4		1.43
Barium			84.2		1.43
Beryllium			Not detected		0.714
Cadmium			1.40		0.714
Calcium			6710		2.85
Chromium			11.6		0.714
Cobalt			8.36		1.43
Copper			114		1.43
Iron			32200		1.43
Lead			150		1.43
Magnesium			3310		2.85
Manganese			428		1.43
Nickel			22.3		1.43

YORK

Client Sample ID			2SS-2 (0-2 inches)		
York Sample ID			09121001-02		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
Potassium			801		4.28
Selenium			Not detected		1.43
Silver			Not detected		1.43
Sodium			94.8		7.14
Thallium			Not detected		1.43
Vanadium			17.5		2.85
Zinc			111		2.85
Mercury	SW846-7471	mg/kG	Not detected	---	0.143
Total Solids	SM 2540B	%	70.1	---	1.0

Client Sample ID			2SS-3 (0-2 inches)		
York Sample ID			09121001-03		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
PCB	SW846-3550B/8082	mg/Kg	---	---	---
PCB 1016			Not detected		0.0221
PCB 1221			Not detected		0.0221
PCB 1232			Not detected		0.0221
PCB 1242			Not detected		0.0221
PCB 1248			Not detected		0.0221
PCB 1254			Not detected		0.0221
PCB 1260			Not detected		0.0221
Metals, Target Analyte List (TAL)	SW846-6010	mg/kg	---	---	---
Aluminum			10400		1.30
Antimony			Not detected		1.30
Arsenic			8.15		1.30
Barium			61.2		1.30
Beryllium			Not detected		0.652
Cadmium			0.98		0.652
Calcium			10300		2.61
Chromium			14.4		0.652
Cobalt			11.8		1.30
Copper			41.7		1.30
Iron			23900		1.30
Lead			21.8		1.30
Magnesium			6610		2.61
Manganese			1180		1.30
Nickel			24.8		1.30
Potassium			1130		3.91
Selenium			Not detected		1.30
Silver			Not detected		1.30
Sodium			71.1		6.52
Thallium			Not detected		1.30
Vanadium			13.6		2.61
Zinc			71.6		2.61
Mercury	SW846-7471	mg/kG	Not detected	---	0.131
Total Solids	SM 2540B	%	76.6	---	1.0

YORK

Client Sample ID			2SS-4 (0-2 inches)		
York Sample ID			09121001-04		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
PCB	SW846-3550B/8082	mg/Kg	---	---	---
PCB 1016			Not detected		0.0359
PCB 1221			Not detected		0.0359
PCB 1232			Not detected		0.0359
PCB 1242			Not detected		0.0359
PCB 1248			Not detected		0.0359
PCB 1254			Not detected		0.0359
PCB 1260			Not detected		0.0359
Metals, Target Analyte List (TAL)	SW846-6010	mg/kg	---	---	---
Aluminum			8720		2.11
Antimony			Not detected		2.11
Arsenic			19.7		2.11
Barium			148		2.11
Beryllium			Not detected		1.06
Cadmium			1.75		1.06
Calcium			12200		4.23
Chromium			13.8		1.06
Cobalt			11.0		2.11
Copper			82.4		2.11
Iron			28600		2.11
Lead			194		2.11
Magnesium			4240		4.23
Manganese			530		2.11
Nickel			29.4		2.11
Potassium			1310		6.34
Selenium			Not detected		2.11
Silver			Not detected		2.11
Sodium			181		10.6
Thallium			Not detected		2.11
Vanadium			26.7		4.23
Zinc			237		4.23
Mercury	SW846-7471	mg/kG	Not detected	---	0.211
Total Solids	SM 2540B	%	47.3	---	1.0

Client Sample ID			2SS-5 (0-2 inches)		
York Sample ID			09121001-05		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
PCB	SW846-3550B/8082	mg/Kg	---	---	---
PCB 1016			Not detected		0.0258
PCB 1221			Not detected		0.0258
PCB 1232			Not detected		0.0258
PCB 1242			Not detected		0.0258
PCB 1248			Not detected		0.0258
PCB 1254			0.04		0.0258

YORK

Client Sample ID			2SS-5 (0-2 inches)		
York Sample ID			09121001-05		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
PCB 1260			Not detected		0.0258
Metals, Target Analyte List (TAL)	SW846-6010	mg/kg	---	---	---
Aluminum			10900		1.51
Antimony			Not detected		1.51
Arsenic			6.27		1.51
Barium			50.9		1.51
Beryllium			Not detected		0.757
Cadmium			0.94		0.757
Calcium			5890		3.03
Chromium			13.6		0.757
Cobalt			10.5		1.51
Copper			44.1		1.51
Iron			24700		1.51
Lead			56.5		1.51
Magnesium			5000		3.03
Manganese			610		1.51
Nickel			24.7		1.51
Potassium			1070		4.55
Selenium			Not detected		1.51
Silver			Not detected		1.51
Sodium			65.3		7.57
Thallium			Not detected		1.51
Vanadium			18.1		3.03
Zinc			103		3.03
Mercury	SW846-7471	mg/kG	Not detected	---	0.152
Total Solids	SM 2540B	%	66.0	---	1.0

Client Sample ID			2SS-6 (0-2 inches)		
York Sample ID			09121001-06		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
PCB	SW846-3550B/8082	mg/Kg	---	---	---
PCB 1016			0.07		0.0337
PCB 1221			Not detected		0.0337
PCB 1232			Not detected		0.0337
PCB 1242			Not detected		0.0337
PCB 1248			Not detected		0.0337
PCB 1254			0.57		0.0337
PCB 1260			Not detected		0.0337
Metals, Target Analyte List (TAL)	SW846-6010	mg/kg	---	---	---
Aluminum			5810		1.98
Antimony			7.59		1.98
Arsenic			9.76		1.98
Barium			203		1.98
Beryllium			Not detected		0.988
Cadmium			3.40		0.988
Calcium			7980		3.95

YORK

Client Sample ID			2SS-6 (0-2 inches)		
York Sample ID			09121001-06		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
Chromium			15.2		0.988
Cobalt			7.23		1.98
Copper			633		1.98
Iron			22700		1.98
Lead			621		1.98
Magnesium			1610		3.95
Manganese			177		1.98
Nickel			26.3		1.98
Potassium			715		5.93
Selenium			Not detected		1.98
Silver			Not detected		1.98
Sodium			166		9.88
Thallium			Not detected		1.98
Vanadium			27.4		3.95
Zinc			658		3.95
Mercury	SW846-7471	mg/kG	Not detected	---	0.198
Total Solids	SM 2540B	%	50.6	---	1.0

Client Sample ID			2SS-7 (0-2 inches)		
York Sample ID			09121001-07		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
PCB	SW846-3550B/8082	mg/Kg	---	---	---
PCB 1016			0.07		0.0308
PCB 1221			Not detected		0.0308
PCB 1232			Not detected		0.0308
PCB 1242			Not detected		0.0308
PCB 1248			Not detected		0.0308
PCB 1254			1.21		0.0308
PCB 1260			Not detected		0.0308
Metals, Target Analyte List (TAL)	SW846-6010	mg/kg	---	---	---
Aluminum			7320		1.81
Antimony			3.98		1.81
Arsenic			11.0		1.81
Barium			215		1.81
Beryllium			Not detected		0.904
Cadmium			4.47		0.904
Calcium			7780		3.62
Chromium			63.2		0.904
Cobalt			8.30		1.81
Copper			191		1.81
Iron			32700		1.81
Lead			594		1.81
Magnesium			1710		3.62
Manganese			250		1.81
Nickel			43.9		1.81
Potassium			724		5.42

YORK

Client Sample ID			2SS-7 (0-2 inches)		
York Sample ID			09121001-07		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
Selenium			2.78		1.81
Silver			Not detected		1.81
Sodium			156		9.04
Thallium			Not detected		1.81
Vanadium			26.0		3.62
Zinc			367		3.62
Mercury	SW846-7471	mg/kG	Not detected	---	0.181
Total Solids	SM 2540B	%	55.3	---	1.0

Client Sample ID			2SS-8 (0-2 inches)		
York Sample ID			09121001-08		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
PCB	SW846-3550B/8082	mg/Kg	---	---	---
PCB 1016			0.02	J	0.0308
PCB 1221			Not detected		0.0308
PCB 1232			Not detected		0.0308
PCB 1242			Not detected		0.0308
PCB 1248			Not detected		0.0308
PCB 1254			0.05		0.0308
PCB 1260			Not detected		0.0308
Metals, Target Analyte List (TAL)	SW846-6010	mg/kg	---	---	---
Aluminum			10900		1.81
Antimony			Not detected		1.81
Arsenic			4.47		1.81
Barium			59.6		1.81
Beryllium			Not detected		0.906
Cadmium			Not detected		0.906
Calcium			3530		3.62
Chromium			11.5		0.906
Cobalt			7.92		1.81
Copper			36.1		1.81
Iron			20300		1.81
Lead			49.5		1.81
Magnesium			3900		3.62
Manganese			440		1.81
Nickel			19.1		1.81
Potassium			860		5.44
Selenium			Not detected		1.81
Silver			Not detected		1.81
Sodium			66.9		9.06
Thallium			Not detected		1.81
Vanadium			15.9		3.62
Zinc			91.3		3.62
Mercury	SW846-7471	mg/kG	Not detected	---	0.181
Total Solids	SM 2540B	%	55.2	---	1.0

Client Sample ID			2SS-9 (0-2 inches)		
York Sample ID			09121001-09		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
PCB	SW846-3550B/8082	mg/Kg	---	---	---
PCB 1016			Not detected		0.024
PCB 1221			Not detected		0.024
PCB 1232			Not detected		0.024
PCB 1242			Not detected		0.024
PCB 1248			Not detected		0.024
PCB 1254			Not detected		0.024
PCB 1260			Not detected		0.024
Metals, Target Analyte List (TAL)	SW846-6010	mg/kg	---	---	---
Aluminum			9660		1.41
Antimony			Not detected		1.41
Arsenic			4.16		1.41
Barium			50.2		1.41
Beryllium			Not detected		0.705
Cadmium			Not detected		0.705
Calcium			4760		2.82
Chromium			11.0		0.705
Cobalt			7.33		1.41
Copper			29.0		1.41
Iron			18300		1.41
Lead			41.8		1.41
Magnesium			4630		2.82
Manganese			447		1.41
Nickel			17.6		1.41
Potassium			885		4.23
Selenium			Not detected		1.41
Silver			Not detected		1.41
Sodium			59.3		7.05
Thallium			Not detected		1.41
Vanadium			15.2		2.82
Zinc			73.3		2.82
Mercury	SW846-7471	mg/kG	Not detected	---	0.141
Total Solids	SM 2540B	%	70.9	---	1.0

Units Key: For Waters/Liquids: mg/L = ppm ; ug/L = ppb For Soils/Solids: mg/kg = ppm ; ug/kg = ppb

YORK

Report Date: 1/5/2010
Client Project ID: SG96152.81
York Project No.: 09121001

Notes for York Project No. 09121001

1. The "RL" is the REPORTING LIMIT and is adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. This REPORTING LIMIT is based upon the lowest standard utilized for calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All samples were received in proper condition for analysis with proper documentation.
6. All analyses conducted met method or Laboratory SOP requirements.
7. It is noted that no analyses reported herein were subcontracted to another laboratory.
8. Other attachments to this report, including Chain-of-custody documentation and Case narratives are hereby made a part of this report.

Approved By: for Robert Q. Bradley
Managing Director

Date: 1/5/2010

YORK

YORK

Analytical Laboratories, Inc.

120 Research Drive
Stratford, CT 06615
203.325.1371 FAX 203.357-0166

09/21001

Company Name	Report to:	Invoice to:	Project ID/No.	Samples Collected by (signature)
Ecosystems Strategies, Inc.	Emery Lawson	Brenda	SG96152.81	Emery Lawson (for Brian Brannick)
				Brian Brannick (Name printed)

Sample No.	Location/ID	Date Sampled	Sample Matrix				Analyses Requested	Container Desc.
			Water	Soil	Air	Other		
1	2SS-1 (0-2")	12/29/2009		X			PCBs and TAL Metals	8 oz glass 2 oz glass (hold)
2	2SS-2 (0-2")	12/29/2009		X			PCBs and TAL Metals	8 oz glass 2 oz glass (hold)
3	2SS-3 (0-2")	12/29/2009		X			PCBs and TAL Metals	8 oz glass 2 oz glass (hold)
4	2SS-4 (0-2")	12/29/2009		X			PCBs and TAL Metals	8 oz glass 2 oz glass (hold)
5	2SS-5 (0-2")	12/29/2009		X			PCBs and TAL Metals	8 oz glass 2 oz glass (hold)
6	2SS-6 (0-2")	12/29/2009		X			PCBs and TAL Metals	8 oz glass 2 oz glass (hold)
7	2SS-7 (0-2")	12/29/2009		X			PCBs and TAL Metals	8 oz glass 2 oz glass (hold)
8	2SS-8 (0-2")	12/29/2009		X			PCBs and TAL Metals	8 oz glass 2 oz glass (hold)
9	2SS-9 (0-2")	12/29/2009		X			PCBs and TAL Metals	8 oz glass 2 oz glass (hold)

Chain-of-Custody Record

Bottles Relinquished from Lab by	Date/Time	Samples Relinquished by	Date/Time: 12/30/09 1630
Bottles received in field by	Date/Time	Samples Relinquished by	Date/Time
Samples received by	Date/Time: 12-30-09 11:30		
Samples received in LAB by: PGmc 12/30/09 1559	Date/Time: 3.8°C		

Comments/Special Instructions ***Please Produce Class B Deliverables***

Turn-Around Time Requested- Specify Date Expected if RUSH Requested: DATE DUE FOR RUSH:

___ STANDARD _X_ RUSH(Define)__

YORK
ANALYTICAL LABORATORIES, INC.

Technical Report

prepared for:

Ecosystems Strategies, Inc.
24 Davis Avenue
Poughkeepsie, NY 12603
Attention: Richard Hooker

Report Date: 1/5/2010
Re: Client Project ID: SG96152.81
York Project No.: 09120923

CT License No. PH-0723 New Jersey License No. CT-005 New York License No. 10854 PA Reg. 68-04440

120 RESEARCH DRIVE STRATFORD, CT 06615 (203) 325-1371 FAX (203) 357-0166

Report Date: 1/5/2010
Client Project ID: SG96152.81
York Project No.: 09120923

Ecosystems Strategies, Inc.
24 Davis Avenue
Poughkeepsie, NY 12603
Attention: Richard Hooker

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on 12/24/09. The project was identified as your project "SG96152.81".

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the NELAC acceptance requirements for environmental samples except those indicated under the Notes section of this report.

All the analyses met the method and laboratory standard operating procedure requirements except as indicated under the Notes section of this report, or as indicated by any data flags, the meaning of which is explained in the attachment to this report, if applicable.

The results of the analyses, which are all reported on an as-received basis unless otherwise noted, are summarized in the following table(s).

Analysis Results

Client Sample ID			A-1		
York Sample ID			09120923-01		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
Metals, NJ Target List	SW846-6010	mg/kg	---	---	---
Aluminum			9270		1.08
Antimony			Not detected		1.08
Arsenic			8.98		1.08
Barium			49.4		1.08
Beryllium			Not detected		0.540
Cadmium			1.29		0.540
Chromium			12.6		1.08
Cobalt			9.98		1.08
Copper			47.4		1.08
Lead			64.3		1.08
Manganese			428		1.08
Nickel			24.7		1.08

YORK

Client Sample ID			A-1		
York Sample ID			09120923-01		
Matrix			SOIL		
Parameter	**Method**	**Units**	**Result**	**Qualifier**	**RL**
Selenium			Not detected		1.08
Silver			Not detected		1.08
Thallium			Not detected		1.08
Vanadium			17.6		2.16
Zinc			107		2.16
Mercury	SW846-7471	mg/kG	Not detected	---	0.10
Pesticides, NJ Target List	SW846-3550B/8081	ug/Kg	---	---	---
4,4'-DDD			Not detected		17.3
4,4'-DDE			Not detected		17.3
4,4'-DDT			Not detected		17.3
Aldrin			Not detected		8.64
alpha Chlordane			Not detected		8.64
alpha-HCH (alpha-BHC)			Not detected		8.64
beta-HCH (beta-BHC)			Not detected		8.64
Dieldrin			Not detected		3.56
Endosulfan I			Not detected		8.64
Endosulfan II			Not detected		17.3
Endosulfan sulfate			Not detected		17.3
Endrin			Not detected		17.3
gamma Chlordane			Not detected		8.64
Heptachlor			Not detected		8.64
Heptachlor epoxide			Not detected		8.64
Lindane (gamma-BHC)			Not detected		8.64
Methoxychlor			Not detected		86.4
Toxaphene			Not detected		108
BNA, NJ target List	SW846-8270C	ug/Kg	---	---	---
1,1'-Biphenyl			Not detected		165
1,2-Diphenylhydrazine			Not detected		165
2,4,5-Trichlorophenol			Not detected		165
2,4,6-Trichlorophenol			Not detected		165
2,4-Dichlorophenol			Not detected		165
2,4-Dimethyl phenol			Not detected		165
2,4-Dinitrophenol			Not detected		165
2,4-Dinitrotoluene			Not detected		165
2,6-Dinitrotoluene			Not detected		165
2-Chlorophenol			Not detected		165
2-Methylnaphthalene			Not detected		165
2-Methylphenol			Not detected		165
2-Nitroaniline			Not detected		165
3,3'-Dichlorobenzidine			Not detected		165
4,6-Dinitro-2-methylphenol			Not detected		165
4-Methylphenol			Not detected		165
Acenaphthene			Not detected		165
Acenaphthylene			Not detected		165
Acetophenone			Not detected		165
Anthracene			Not detected		165
Atrazine			Not detected		165
Benzaldehyde			Not detected		165

Client Sample ID			A-1		
York Sample ID			09120923-01		
Matrix			SOIL		
Parameter	**Method**	**Units**	**Result**	**Qualifier**	**RL**
Benzidine			Not detected		165
Benzo(a)anthracene			Not detected		165
Benzo(a)pyrene			88	J	165
Benzo(b)fluoranthene			Not detected		165
Benzo(ghi)perylene			Not detected		165
Benzo(k)fluoranthene			Not detected		165
Bis(2-chloroethyl)ether			Not detected		165
Bis(2-chloroisopropyl)ether			Not detected		165
Bis(2-ethylhexyl) phthalate			Not detected		165
Butyl benzyl phthalate			Not detected		165
Caprolactam			Not detected		165
Carbazole			Not detected		165
Chrysene			120	J	165
Dibenz(a,h)anthracene			Not detected		165
Diethyl phthalate			Not detected		165
Di-n-butyl phthalate			Not detected		165
Di-n-octyl phthalate			Not detected		165
Fluoranthene			190		165
Fluorene			Not detected		165
Hexachloro-1,3-butadiene			Not detected		165
Hexachlorobenzene			Not detected		165
Hexachlorocyclopentadiene			Not detected		165
Hexachloroethane			Not detected		165
Indeno(1,2,3-cd)pyrene			Not detected		165
Isophorone			Not detected		165
Naphthalene			Not detected		165
Nitrobenzene			Not detected		165
N-Nitrosodimethylamine			Not detected		165
N-Nitrosodi-n-propylamine			Not detected		165
N-Nitrosodiphenylamine			Not detected		165
Pentachlorophenol			Not detected		165
Phenanthrene			73	J	165
Phenol			Not detected		165
Pyrene			180		165
Volatiles, NJ Target List	SW846-8260	ug/kg	---	---	---
1,1,1-Trichloroethane			Not detected		10.8
1,1,2,2-Tetrachloroethane			Not detected		10.8
1,1,2-Trichloroethane			Not detected		10.8
1,1-Dichloroethane			Not detected		10.8
1,1-Dichloroethene			Not detected		10.8
1,2-Dibromo-3-chloropropane			Not detected		10.8
1,2-Dibromoethane			Not detected		10.8
1,2-Dichlorobenzene			Not detected		10.8
1,2-Dichloroethane			Not detected		10.8
1,2-Dichloropropane			Not detected		10.8
1,3-Dichlorobenzene			Not detected		10.8
1,4-Dichlorobenzene			Not detected		10.8
Acetone			Not detected		21.6

Client Sample ID			A-1		
York Sample ID			09120923-01		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
Acrolein			Not detected		21.6
Acrylonitrile			Not detected		10.8
Benzene			Not detected		10.8
Bromodichloromethane			Not detected		10.8
Bromoform			Not detected		10.8
Bromomethane			Not detected		10.8
Butanone			Not detected		21.6
Carbon disulfide			Not detected		10.8
Carbon tetrachloride			Not detected		10.8
Chlorobenzene			Not detected		10.8
Chloroethane			Not detected		10.8
Chloroform			2	J	10.8
Chloromethane			Not detected		10.8
cis-1,2-Dichloroethene			Not detected		10.8
cis-1,3-Dichloropropene			Not detected		10.8
Dibromochloromethane			Not detected		10.8
Dichlorodifluoromethane			Not detected		10.8
Ethyl benzene			Not detected		10.8
Methyl acetate			Not detected		21.6
Methyl tert-butyl ether (MTBE)			Not detected		10.8
Methylene chloride			Not detected		10.8
Styrene			Not detected		10.8
Tertiary butyl alcohol (TBA)			Not detected		216
Tetrachloroethene			Not detected		10.8
Toluene			Not detected		10.8
trans-1,2-Dichloroethene			Not detected		10.8
trans-1,3-Dichloropropene			Not detected		10.8
Trichloroethene			Not detected		10.8
Trichlorofluoromethane			Not detected		10.8
Vinyl chloride			Not detected		10.8
Xylenes, total			6	J	21.6
PCB	SW846-3550B/8082	mg/Kg	---	---	---
PCB 1016			Not detected		0.0184
PCB 1221			Not detected		0.0184
PCB 1232			Not detected		0.0184
PCB 1242			Not detected		0.0184
PCB 1248			Not detected		0.0184
PCB 1254			Not detected		0.0184
PCB 1260			0.04		0.0184
Reactivity-Cyanide	SW846 Ch. 7.3.3	mg/kg	Not detected	---	0.25
Reactivity-Sulfide	SW846 Ch. 7.3.4	mg/kg	Not detected	---	15
Cyanide, Total	SW 9013A/9010C	mg/kg	Not detected	---	1.00

YORK

Client Sample ID			A-1		
York Sample ID			09120923-01		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
Hexavalent Chromium	SW846-7196A	mg/kg	Not detected	---	0.50
Trivalent Chromium	SM	mg/kg	12.6	---	0.50
Flash Point	EPA 1010M	Degrees F	<200	---	---
Paint Filter Test	SW846-9095A	---	No free liquid	---	---
pH	EPA 150.1	units	8.60	---	---
Total Solids	SM 2540B	%	92.6	---	1.0

Client Sample ID			A-2		
York Sample ID			09120923-02		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
Metals, NJ Target List	SW846-6010	mg/kg	---	---	---
Aluminum			9780		1.14
Antimony			Not detected		1.14
Arsenic			9.69		1.14
Barium			53.3		1.14
Beryllium			Not detected		0.570
Cadmium			0.95		0.570
Chromium			5.05		1.14
Cobalt			6.72		1.14
Copper			27.4		1.14
Lead			37.3		1.14
Manganese			440		1.14
Nickel			14.3		1.14
Selenium			Not detected		1.14
Silver			Not detected		1.14
Thallium			Not detected		1.14
Vanadium			9.01		2.28
Zinc			45.5		2.28
Mercury	SW846-7471	mg/kG	Not detected	---	0.10
Pesticides, NJ Target List	SW846-3550B/8081	ug/Kg	---	---	---
4,4'-DDD			Not detected		18.2
4,4'-DDE			Not detected		18.2
4,4'-DDT			Not detected		18.2
Aldrin			Not detected		9.12
alpha Chlordane			Not detected		9.12
alpha-HCH (alpha-BHC)			Not detected		9.12
beta-HCH (beta-BHC)			Not detected		9.12
Dieldrin			Not detected		3.76
Endosulfan I			Not detected		9.12
Endosulfan II			Not detected		18.2
Endosulfan sulfate			Not detected		18.2
Endrin			Not detected		18.2
gamma Chlordane			Not detected		9.12
Heptachlor			Not detected		9.12

Client Sample ID			A-2		
York Sample ID			09120923-02		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
Heptachlor epoxide			Not detected		9.12
Lindane (gamma-BHC)			Not detected		9.12
Methoxychlor			Not detected		91.2
Toxaphene			Not detected		114
BNA, NJ target List	SW846-8270C	ug/Kg	---	---	---
1,1'-Biphenyl			Not detected		165
1,2-Diphenylhydrazine			Not detected		165
2,4,5-Trichlorophenol			Not detected		165
2,4,6-Trichlorophenol			Not detected		165
2,4-Dichlorophenol			Not detected		165
2,4-Dimethyl phenol			Not detected		165
2,4-Dinitrophenol			Not detected		165
2,4-Dinitrotoluene			Not detected		165
2,6-Dinitrotoluene			Not detected		165
2-Chlorophenol			Not detected		165
2-Methylnaphthalene			Not detected		165
2-Methylphenol			Not detected		165
2-Nitroaniline			Not detected		165
3,3'-Dichlorobenzidine			Not detected		165
4,6-Dinitro-2-methylphenol			Not detected		165
4-Methylphenol			Not detected		165
Acenaphthene			Not detected		165
Acenaphthylene			Not detected		165
Acetophenone			Not detected		165
Anthracene			Not detected		165
Atrazine			Not detected		165
Benzaldehyde			Not detected		165
Benzidine			Not detected		165
Benzo(a)anthracene			Not detected		165
Benzo(a)pyrene			Not detected		165
Benzo(b)fluoranthene			Not detected		165
Benzo(ghi)perylene			Not detected		165
Benzo(k)fluoranthene			Not detected		165
Bis(2-chloroethyl)ether			Not detected		165
Bis(2-chloroisopropyl)ether			Not detected		165
Bis(2-ethylhexyl) phthalate			Not detected		165
Butyl benzyl phthalate			Not detected		165
Caprolactam			Not detected		165
Carbazole			Not detected		165
Chrysene			Not detected		165
Dibenz(a,h)anthracene			Not detected		165
Diethyl phthalate			Not detected		165
Di-n-butyl phthalate			Not detected		165
Di-n-octyl phthalate			Not detected		165
Fluoranthene			Not detected		165
Fluorene			Not detected		165
Hexachloro-1,3-butadiene			Not detected		165
Hexachlorobenzene			Not detected		165

Client Sample ID			A-2		
York Sample ID			09120923-02		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
Hexachlorocyclopentadiene			Not detected		165
Hexachloroethane			Not detected		165
Indeno(1,2,3-cd)pyrene			Not detected		165
Isophorone			Not detected		165
Naphthalene			Not detected		165
Nitrobenzene			Not detected		165
N-Nitrosodimethylamine			Not detected		165
N-Nitrosodi-n-propylamine			Not detected		165
N-Nitrosodiphenylamine			Not detected		165
Pentachlorophenol			Not detected		165
Phenanthrene			Not detected		165
Phenol			Not detected		165
Pyrene			Not detected		165
Volatiles, NJ Target List	SW846-8260	ug/kg	---	---	---
1,1,1-Trichloroethane			Not detected		11.4
1,1,2,2-Tetrachloroethane			Not detected		11.4
1,1,2-Trichloroethane			Not detected		11.4
1,1-Dichloroethane			Not detected		11.4
1,1-Dichloroethene			Not detected		11.4
1,2-Dibromo-3-chloropropane			Not detected		11.4
1,2-Dibromoethane			Not detected		11.4
1,2-Dichlorobenzene			Not detected		11.4
1,2-Dichloroethane			Not detected		11.4
1,2-Dichloropropane			Not detected		11.4
1,3-Dichlorobenzene			Not detected		11.4
1,4-Dichlorobenzene			Not detected		11.4
Acetone			Not detected		22.8
Acrolein			Not detected		22.8
Acrylonitrile			Not detected		11.4
Benzene			Not detected		11.4
Bromodichloromethane			Not detected		11.4
Bromoform			Not detected		11.4
Bromomethane			Not detected		11.4
Butanone			Not detected		22.8
Carbon disulfide			Not detected		11.4
Carbon tetrachloride			Not detected		11.4
Chlorobenzene			Not detected		11.4
Chloroethane			Not detected		11.4
Chloroform			3	J	11.4
Chloromethane			Not detected		11.4
cis-1,2-Dichloroethene			Not detected		11.4
cis-1,3-Dichloropropene			Not detected		11.4
Dibromochloromethane			Not detected		11.4
Dichlorodifluoromethane			Not detected		11.4
Ethyl benzene			2	J	11.4
Methyl acetate			Not detected		22.8
Methyl tert-butyl ether (MTBE)			Not detected		11.4
Methylene chloride			Not detected		11.4

Client Sample ID			A-2		
York Sample ID			09120923-02		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
Styrene			Not detected		11.4
Tertiary butyl alcohol (TBA)			Not detected		228
Tetrachloroethene			Not detected		11.4
Toluene			Not detected		11.4
trans-1,2-Dichloroethene			Not detected		11.4
trans-1,3-Dichloropropene			Not detected		11.4
Trichloroethene			Not detected		11.4
Trichlorofluoromethane			Not detected		11.4
Vinyl chloride			Not detected		11.4
Xylenes, total			16	J	22.8
PCB	SW846-3550B/8082	mg/Kg	---	---	---
PCB 1016			Not detected		0.0194
PCB 1221			Not detected		0.0194
PCB 1232			Not detected		0.0194
PCB 1242			Not detected		0.0194
PCB 1248			Not detected		0.0194
PCB 1254			Not detected		0.0194
PCB 1260			Not detected		0.0194
Reactivity-Cyanide	SW846 Ch. 7.3.3	mg/kg	Not detected	---	0.25
Reactivity-Sulfide	SW846 Ch. 7.3.4	mg/kg	Not detected	---	15
Cyanide, Total	SW 9013A/9010C	mg/kg	1.50	---	1.00
Hexavalent Chromium	SW846-7196A	mg/kg	Not detected	---	0.50
Trivalent Chromium	SM	mg/kg	5.05	---	0.50
Flash Point	EPA 1010M	Degrees F	>200	---	---
Paint Filter Test	SW846-9095A	---	No free liquid	---	---
pH	EPA 150.1	units	8.98	---	---
Total Solids	SM 2540B	%	87.7	---	1.0

Client Sample ID			A-3		
York Sample ID			09120923-03		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
Metals, NJ Target List	SW846-6010	mg/kg	---	---	---
Aluminum			4060		1.19
Antimony			1.81		1.19
Arsenic			45.6		1.19
Barium			190		1.19
Beryllium			Not detected		0.596
Cadmium			2.29		0.596
Chromium			15.1		1.19
Cobalt			4.26		1.19
Copper			145		1.19
Lead			271		1.19
Manganese			149		1.19
Nickel			21.8		1.19
Selenium			3.93		1.19
Silver			Not detected		1.19

YORK

Client Sample ID			A-3		
York Sample ID			09120923-03		
Matrix			SOIL		
Parameter	**Method**	**Units**	**Result**	**Qualifier**	**RL**
Thallium			Not detected		1.19
Vanadium			24.0		2.39
Zinc			269		2.39
Mercury	SW846-7471	mg/kG	Not detected	---	0.10
Pesticides, NJ Target List	SW846-3550B/8081	ug/Kg	---	---	---
4,4'-DDD			Not detected		19.0
4,4'-DDE			Not detected		19.0
4,4'-DDT			Not detected		19.0
Aldrin			Not detected		9.52
alpha Chlordane			Not detected		9.52
alpha-HCH (alpha-BHC)			Not detected		9.52
beta-HCH (beta-BHC)			Not detected		9.52
Dieldrin			Not detected		3.93
Endosulfan I			Not detected		9.52
Endosulfan II			Not detected		19.0
Endosulfan sulfate			Not detected		19.0
Endrin			Not detected		19.0
gamma Chlordane			Not detected		9.52
Heptachlor			Not detected		9.52
Heptachlor epoxide			Not detected		9.52
Lindane (gamma-BHC)			Not detected		9.52
Methoxychlor			Not detected		95.2
Toxaphene			Not detected		119
BNA, NJ target List	SW846-8270C	ug/Kg	---	---	---
1,1'-Biphenyl			Not detected		165
1,2-Diphenylhydrazine			Not detected		165
2,4,5-Trichlorophenol			Not detected		165
2,4,6-Trichlorophenol			Not detected		165
2,4-Dichlorophenol			Not detected		165
2,4-Dimethyl phenol			Not detected		165
2,4-Dinitrophenol			Not detected		165
2,4-Dinitrotoluene			Not detected		165
2,6-Dinitrotoluene			Not detected		165
2-Chlorophenol			Not detected		165
2-Methylnaphthalene			Not detected		165
2-Methylphenol			Not detected		165
2-Nitroaniline			Not detected		165
3,3'-Dichlorobenzidine			Not detected		165
4,6-Dinitro-2-methylphenol			Not detected		165
4-Methylphenol			Not detected		165
Acenaphthene			75	J	165
Acenaphthylene			Not detected		165
Acetophenone			Not detected		165
Anthracene			140	J	165
Atrazine			Not detected		165
Benzaldehyde			Not detected		165
Benzidine			Not detected		165
Benzo(a)anthracene			450		165

Client Sample ID			A-3		
York Sample ID			09120923-03		
Matrix			SOIL		
Parameter	**Method**	**Units**	**Result**	**Qualifier**	**RL**
Benzo(a)pyrene			Not detected		165
Benzo(b)fluoranthene			210		165
Benzo(ghi)perylene			Not detected		165
Benzo(k)fluoranthene			200		165
Bis(2-chloroethyl)ether			Not detected		165
Bis(2-chloroisopropyl)ether			Not detected		165
Bis(2-ethylhexyl) phthalate			160	J	165
Butyl benzyl phthalate			210		165
Caprolactam			Not detected		165
Carbazole			86	J	165
Chrysene			530		165
Dibenz(a,h)anthracene			Not detected		165
Diethyl phthalate			Not detected		165
Di-n-butyl phthalate			Not detected		165
Di-n-octyl phthalate			Not detected		165
Fluoranthene			800		165
Fluorene			Not detected		165
Hexachloro-1,3-butadiene			Not detected		165
Hexachlorobenzene			Not detected		165
Hexachlorocyclopentadiene			Not detected		165
Hexachloroethane			Not detected		165
Indeno(1,2,3-cd)pyrene			Not detected		165
Isophorone			Not detected		165
Naphthalene			Not detected		165
Nitrobenzene			Not detected		165
N-Nitrosodimethylamine			Not detected		165
N-Nitrosodi-n-propylamine			Not detected		165
N-Nitrosodiphenylamine			Not detected		165
Pentachlorophenol			Not detected		165
Phenanthrene			590		165
Phenol			Not detected		165
Pyrene			630		165
Volatiles, NJ Target List	SW846-8260	ug/kg	---	---	---
1,1,1-Trichloroethane			Not detected		12.0
1,1,2,2-Tetrachloroethane			Not detected		12.0
1,1,2-Trichloroethane			Not detected		12.0
1,1-Dichloroethane			Not detected		12.0
1,1-Dichloroethene			Not detected		12.0
1,2-Dibromo-3-chloropropane			Not detected		12.0
1,2-Dibromoethane			Not detected		12.0
1,2-Dichlorobenzene			Not detected		12.0
1,2-Dichloroethane			Not detected		12.0
1,2-Dichloropropane			Not detected		12.0
1,3-Dichlorobenzene			Not detected		12.0
1,4-Dichlorobenzene			Not detected		12.0
Acetone			Not detected		23.9
Acrolein			Not detected		23.9
Acrylonitrile			Not detected		12.0

Client Sample ID			A-3		
York Sample ID			09120923-03		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
Benzene			Not detected		12.0
Bromodichloromethane			Not detected		12.0
Bromoform			Not detected		12.0
Bromomethane			Not detected		12.0
Butanone			Not detected		23.9
Carbon disulfide			Not detected		12.0
Carbon tetrachloride			Not detected		12.0
Chlorobenzene			Not detected		12.0
Chloroethane			Not detected		12.0
Chloroform			7	J	12.0
Chloromethane			Not detected		12.0
cis-1,2-Dichloroethene			Not detected		12.0
cis-1,3-Dichloropropene			Not detected		12.0
Dibromochloromethane			Not detected		12.0
Dichlorodifluoromethane			Not detected		12.0
Ethyl benzene			7	J	12.0
Methyl acetate			Not detected		23.9
Methyl tert-butyl ether (MTBE)			Not detected		12.0
Methylene chloride			Not detected		12.0
Styrene			Not detected		12.0
Tertiary butyl alcohol (TBA)			Not detected		239
Tetrachloroethene			Not detected		12.0
Toluene			9	J	12.0
trans-1,2-Dichloroethene			Not detected		12.0
trans-1,3-Dichloropropene			Not detected		12.0
Trichloroethene			Not detected		12.0
Trichlorofluoromethane			Not detected		12.0
Vinyl chloride			Not detected		12.0
Xylenes, total			35		23.9
PCB	SW846-3550B/8082	mg/Kg	---	---	---
PCB 1016			Not detected		0.0202
PCB 1221			Not detected		0.0202
PCB 1232			Not detected		0.0202
PCB 1242			Not detected		0.0202
PCB 1248			Not detected		0.0202
PCB 1254			0.18		0.0202
PCB 1260			Not detected		0.0202
Reactivity-Cyanide	SW846 Ch. 7.3.3	mg/kg	Not detected	---	0.25
Reactivity-Sulfide	SW846 Ch. 7.3.4	mg/kg	Not detected	---	15
Cyanide, Total	SW 9013A/9010C	mg/kg	Not detected	---	1.00
Hexavalent Chromium	SW846-7196A	mg/kg	Not detected	---	0.50
Trivalent Chromium	SM	mg/kg	15.1	---	0.50
Flash Point	EPA 1010M	Degrees F	>200	---	---
Paint Filter Test	SW846-9095A	---	No free liquid	---	---
pH	EPA 150.1	units	5.95	---	---
Total Solids	SM 2540B	%	83.8	---	1.0

YORK

Client Sample ID			B-1		
York Sample ID			09120923-04		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
Metals, NJ Target List	SW846-6010	mg/kg	---	---	---
Aluminum			7390		1.17
Antimony			Not detected		1.17
Arsenic			7.35		1.17
Barium			307		1.17
Beryllium			Not detected		0.584
Cadmium			Not detected		0.584
Chromium			3.22		1.17
Cobalt			5.64		1.17
Copper			29.4		1.17
Lead			32.1		1.17
Manganese			8.95		1.17
Nickel			15.9		1.17
Selenium			Not detected		1.17
Silver			Not detected		1.17
Thallium			Not detected		1.17
Vanadium			23.4		2.34
Zinc			145		2.34
Mercury	SW846-7471	mg/kG	Not detected	---	0.10
Pesticides, NJ Target List	SW846-3550B/8081	ug/Kg	---	---	---
4,4'-DDD			Not detected		18.7
4,4'-DDE			Not detected		18.7
4,4'-DDT			Not detected		18.7
Aldrin			Not detected		9.36
alpha Chlordane			Not detected		9.36
alpha-HCH (alpha-BHC)			Not detected		9.36
beta-HCH (beta-BHC)			Not detected		9.36
Dieldrin			Not detected		3.86
Endosulfan I			Not detected		9.36
Endosulfan II			Not detected		18.7
Endosulfan sulfate			Not detected		18.7
Endrin			Not detected		18.7
gamma Chlordane			Not detected		9.36
Heptachlor			Not detected		9.36
Heptachlor epoxide			Not detected		9.36
Lindane (gamma-BHC)			Not detected		9.36
Methoxychlor			Not detected		93.6
Toxaphene			Not detected		117
BNA, NJ target List	SW846-8270C	ug/Kg	---	---	---
1,1'-Biphenyl			Not detected		165
1,2-Diphenylhydrazine			Not detected		165
2,4,5-Trichlorophenol			Not detected		165
2,4,6-Trichlorophenol			Not detected		165
2,4-Dichlorophenol			Not detected		165
2,4-Dimethyl phenol			Not detected		165
2,4-Dinitrophenol			Not detected		165
2,4-Dinitrotoluene			Not detected		165
2,6-Dinitrotoluene			Not detected		165

Client Sample ID			B-1		
York Sample ID			09120923-04		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
2-Chlorophenol			Not detected		165
2-Methylnaphthalene			Not detected		165
2-Methylphenol			Not detected		165
2-Nitroaniline			Not detected		165
3,3'-Dichlorobenzidine			Not detected		165
4,6-Dinitro-2-methylphenol			Not detected		165
4-Methylphenol			Not detected		165
Acenaphthene			Not detected		165
Acenaphthylene			Not detected		165
Acetophenone			Not detected		165
Anthracene			Not detected		165
Atrazine			Not detected		165
Benzaldehyde			Not detected		165
Benzidine			Not detected		165
Benzo(a)anthracene			Not detected		165
Benzo(a)pyrene			Not detected		165
Benzo(b)fluoranthene			Not detected		165
Benzo(ghi)perylene			Not detected		165
Benzo(k)fluoranthene			Not detected		165
Bis(2-chloroethyl)ether			Not detected		165
Bis(2-chloroisopropyl)ether			Not detected		165
Bis(2-ethylhexyl) phthalate			Not detected		165
Butyl benzyl phthalate			Not detected		165
Caprolactam			Not detected		165
Carbazole			Not detected		165
Chrysene			Not detected		165
Dibenz(a,h)anthracene			Not detected		165
Diethyl phthalate			Not detected		165
Di-n-butyl phthalate			Not detected		165
Di-n-octyl phthalate			Not detected		165
Fluoranthene			Not detected		165
Fluorene			Not detected		165
Hexachloro-1,3-butadiene			Not detected		165
Hexachlorobenzene			Not detected		165
Hexachlorocyclopentadiene			Not detected		165
Hexachloroethane			Not detected		165
Indeno(1,2,3-cd)pyrene			Not detected		165
Isophorone			Not detected		165
Naphthalene			Not detected		165
Nitrobenzene			Not detected		165
N-Nitrosodimethylamine			Not detected		165
N-Nitrosodi-n-propylamine			Not detected		165
N-Nitrosodiphenylamine			Not detected		165
Pentachlorophenol			Not detected		165
Phenanthrene			Not detected		165
Phenol			Not detected		165
Pyrene			Not detected		165

Client Sample ID			B-1		
York Sample ID			09120923-04		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
Volatiles, NJ Target List	SW846-8260	ug/kg	---	---	---
1,1,1-Trichloroethane			Not detected		11.7
1,1,2,2-Tetrachloroethane			Not detected		11.7
1,1,2-Trichloroethane			Not detected		11.7
1,1-Dichloroethane			Not detected		11.7
1,1-Dichloroethene			Not detected		11.7
1,2-Dibromo-3-chloropropane			Not detected		11.7
1,2-Dibromoethane			Not detected		11.7
1,2-Dichlorobenzene			4	J	11.7
1,2-Dichloroethane			Not detected		11.7
1,2-Dichloropropane			Not detected		11.7
1,3-Dichlorobenzene			Not detected		11.7
1,4-Dichlorobenzene			35		11.7
Acetone			Not detected		23.4
Acrolein			Not detected		23.4
Acrylonitrile			Not detected		11.7
Benzene			Not detected		11.7
Bromodichloromethane			Not detected		11.7
Bromoform			Not detected		11.7
Bromomethane			Not detected		11.7
Butanone			Not detected		23.4
Carbon disulfide			Not detected		11.7
Carbon tetrachloride			Not detected		11.7
Chlorobenzene			Not detected		11.7
Chloroethane			Not detected		11.7
Chloroform			6	J	11.7
Chloromethane			Not detected		11.7
cis-1,2-Dichloroethene			Not detected		11.7
cis-1,3-Dichloropropene			Not detected		11.7
Dibromochloromethane			Not detected		11.7
Dichlorodifluoromethane			Not detected		11.7
Ethyl benzene			5	J	11.7
Methyl acetate			Not detected		23.4
Methyl tert-butyl ether (MTBE)			Not detected		11.7
Methylene chloride			Not detected		11.7
Styrene			Not detected		11.7
Tertiary butyl alcohol (TBA)			Not detected		234
Tetrachloroethene			Not detected		11.7
Toluene			5	J	11.7
trans-1,2-Dichloroethene			Not detected		11.7
trans-1,3-Dichloropropene			Not detected		11.7
Trichloroethene			Not detected		11.7
Trichlorofluoromethane			Not detected		11.7
Vinyl chloride			Not detected		11.7
Xylenes, total			20		23.4

Client Sample ID			B-1		
York Sample ID			09120923-04		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
PCB	SW846-3550B/8082	mg/Kg	---	---	---
PCB 1016			Not detected		0.0199
PCB 1221			Not detected		0.0199
PCB 1232			Not detected		0.0199
PCB 1242			Not detected		0.0199
PCB 1248			Not detected		0.0199
PCB 1254			Not detected		0.0199
PCB 1260			Not detected		0.0199
TCLP Metals, RCRA List	SW846-1311/6010	mg/L	---	---	---
TCLP Arsenic			Not detected		0.010
TCLP Barium			1.72		0.010
TCLP Cadmium			Not detected		0.005
TCLP Chromium			0.008		0.005
TCLP Lead			0.015		0.005
TCLP Selenium			Not detected		0.010
TCLP Silver			Not detected		0.005
TCLP Mercury	SW846-1311/7470	mg/L	Not detected	---	0.0005
Reactivity-Cyanide	SW846 Ch. 7.3.3	mg/kg	Not detected	---	0.25
Reactivity-Sulfide	SW846 Ch. 7.3.4	mg/kg	Not detected	---	15
Cyanide, Total	SW 9013A/9010C	mg/kg	Not detected	---	1.00
Hexavalent Chromium	SW846-7196A	mg/kg	Not detected	---	0.50
Trivalent Chromium	SM	mg/kg	3.22	---	0.50
Flash Point	EPA 1010M	Degrees F	>200	---	---
Paint Filter Test	SW846-9095A	---	No free liquid	---	---
pH	EPA 150.1	units	6.18	---	---
Total Solids	SM 2540B	%	85.6	---	1.0

Client Sample ID			C-1		
York Sample ID			09120923-05		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
Metals, NJ Target List	SW846-6010	mg/kg	---	---	---
Aluminum			3020		1.17
Antimony			Not detected		1.17
Arsenic			11.6		1.17
Barium			97.1		1.17
Beryllium			Not detected		0.586
Cadmium			Not detected		0.586
Chromium			4.90		1.17
Cobalt			5.31		1.17
Copper			38.0		1.17
Lead			87.8		1.17
Manganese			141		1.17
Nickel			13.3		1.17
Selenium			Not detected		1.17
Silver			Not detected		1.17

YORK

Client Sample ID			C-1		
York Sample ID			09120923-05		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
Thallium			Not detected		1.17
Vanadium			11.7		2.34
Zinc			87.7		2.34
Mercury	SW846-7471	mg/kG	Not detected	---	0.10
Pesticides, NJ Target List	SW846-3550B/8081	ug/Kg	---	---	---
4,4'-DDD			Not detected		18.7
4,4'-DDE			Not detected		18.7
4,4'-DDT			Not detected		18.7
Aldrin			Not detected		9.36
alpha Chlordane			Not detected		9.36
alpha-HCH (alpha-BHC)			Not detected		9.36
beta-HCH (beta-BHC)			Not detected		9.36
Dieldrin			Not detected		3.86
Endosulfan I			Not detected		9.36
Endosulfan II			Not detected		18.7
Endosulfan sulfate			Not detected		18.7
Endrin			Not detected		18.7
gamma Chlordane			Not detected		9.36
Heptachlor			Not detected		9.36
Heptachlor epoxide			Not detected		9.36
Lindane (gamma-BHC)			Not detected		9.36
Methoxychlor			Not detected		93.6
Toxaphene			Not detected		117
BNA, NJ target List	SW846-8270C	ug/Kg	---	---	---
1,1'-Biphenyl			Not detected		165
1,2-Diphenylhydrazine			Not detected		165
2,4,5-Trichlorophenol			Not detected		165
2,4,6-Trichlorophenol			Not detected		165
2,4-Dichlorophenol			Not detected		165
2,4-Dimethyl phenol			Not detected		165
2,4-Dinitrophenol			Not detected		165
2,4-Dinitrotoluene			Not detected		165
2,6-Dinitrotoluene			Not detected		165
2-Chlorophenol			Not detected		165
2-Methylnaphthalene			Not detected		165
2-Methylphenol			Not detected		165
2-Nitroaniline			Not detected		165
3,3'-Dichlorobenzidine			Not detected		165
4,6-Dinitro-2-methylphenol			Not detected		165
4-Methylphenol			Not detected		165
Acenaphthene			Not detected		165
Acenaphthylene			Not detected		165
Acetophenone			Not detected		165
Anthracene			Not detected		165
Atrazine			Not detected		165
Benzaldehyde			Not detected		165
Benzidine			Not detected		165
Benzo(a)anthracene			94	J	165

YORK

Client Sample ID			C-1		
York Sample ID			09120923-05		
Matrix			SOIL		
Parameter	**Method**	**Units**	**Result**	**Qualifier**	**RL**
Benzo(a)pyrene			Not detected		165
Benzo(b)fluoranthene			Not detected		165
Benzo(ghi)perylene			Not detected		165
Benzo(k)fluoranthene			Not detected		165
Bis(2-chloroethyl)ether			Not detected		165
Bis(2-chloroisopropyl)ether			Not detected		165
Bis(2-ethylhexyl) phthalate			Not detected		165
Butyl benzyl phthalate			Not detected		165
Caprolactam			Not detected		165
Carbazole			Not detected		165
Chrysene			140	J	165
Dibenz(a,h)anthracene			Not detected		165
Diethyl phthalate			Not detected		165
Di-n-butyl phthalate			Not detected		165
Di-n-octyl phthalate			Not detected		165
Fluoranthene			240		165
Fluorene			Not detected		165
Hexachloro-1,3-butadiene			Not detected		165
Hexachlorobenzene			Not detected		165
Hexachlorocyclopentadiene			Not detected		165
Hexachloroethane			Not detected		165
Indeno(1,2,3-cd)pyrene			Not detected		165
Isophorone			Not detected		165
Naphthalene			Not detected		165
Nitrobenzene			Not detected		165
N-Nitrosodimethylamine			Not detected		165
N-Nitrosodi-n-propylamine			Not detected		165
N-Nitrosodiphenylamine			Not detected		165
Pentachlorophenol			Not detected		165
Phenanthrene			210		165
Phenol			Not detected		165
Pyrene			250		165
Volatiles, NJ Target List	SW846-8260	ug/kg	---	---	---
1,1,1-Trichloroethane			Not detected		11.7
1,1,2,2-Tetrachloroethane			Not detected		11.7
1,1,2-Trichloroethane			Not detected		11.7
1,1-Dichloroethane			Not detected		11.7
1,1-Dichloroethene			Not detected		11.7
1,2-Dibromo-3-chloropropane			Not detected		11.7
1,2-Dibromoethane			Not detected		11.7
1,2-Dichlorobenzene			Not detected		11.7
1,2-Dichloroethane			Not detected		11.7
1,2-Dichloropropane			Not detected		11.7
1,3-Dichlorobenzene			Not detected		11.7
1,4-Dichlorobenzene			Not detected		11.7
Acetone			Not detected		23.4
Acrolein			Not detected		23.4
Acrylonitrile			Not detected		11.7

Client Sample ID			C-1		
York Sample ID			09120923-05		
Matrix			SOIL		
Parameter	**Method**	**Units**	**Result**	**Qualifier**	**RL**
Benzene			Not detected		11.7
Bromodichloromethane			Not detected		11.7
Bromoform			Not detected		11.7
Bromomethane			Not detected		11.7
Butanone			Not detected		23.4
Carbon disulfide			Not detected		11.7
Carbon tetrachloride			Not detected		11.7
Chlorobenzene			Not detected		11.7
Chloroethane			Not detected		11.7
Chloroform			5	J	11.7
Chloromethane			Not detected		11.7
cis-1,2-Dichloroethene			Not detected		11.7
cis-1,3-Dichloropropene			Not detected		11.7
Dibromochloromethane			Not detected		11.7
Dichlorodifluoromethane			Not detected		11.7
Ethyl benzene			4	J	11.7
Methyl acetate			Not detected		23.4
Methyl tert-butyl ether (MTBE)			Not detected		11.7
Methylene chloride			Not detected		11.7
Styrene			Not detected		11.7
Tertiary butyl alcohol (TBA)			Not detected		234
Tetrachloroethene			3	J	11.7
Toluene			Not detected		11.7
trans-1,2-Dichloroethene			Not detected		11.7
trans-1,3-Dichloropropene			Not detected		11.7
Trichloroethene			Not detected		11.7
Trichlorofluoromethane			Not detected		11.7
Vinyl chloride			Not detected		11.7
Xylenes, total			20		23.4
PCB	SW846-3550B/8082	mg/Kg	---	---	---
PCB 1016			Not detected		0.0199
PCB 1221			Not detected		0.0199
PCB 1232			Not detected		0.0199
PCB 1242			Not detected		0.0199
PCB 1248			Not detected		0.0199
PCB 1254			Not detected		0.0199
PCB 1260			Not detected		0.0199
Reactivity-Cyanide	SW846 Ch. 7.3.3	mg/kg	Not detected	---	0.25
Reactivity-Sulfide	SW846 Ch. 7.3.4	mg/kg	27.6	---	15
Cyanide, Total	SW 9013A/9010C	mg/kg	Not detected	---	1.00
Hexavalent Chromium	SW846-7196A	mg/kg	Not detected	---	0.50
Trivalent Chromium	SM	mg/kg	4.90	---	0.50
Flash Point	EPA 1010M	Degrees F	>200	---	---
Paint Filter Test	SW846-9095A	---	No free liquid	---	---
pH	EPA 150.1	units	5.56	---	---
Total Solids	SM 2540B	%	85.3	---	1.0

YORK

Client Sample ID			C-2		
York Sample ID			09120923-06		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
Metals, NJ Target List	SW846-6010	mg/kg	---	---	---
Aluminum			8870		1.26
Antimony			12.9		1.26
Arsenic			17.7		1.26
Barium			172		1.26
Beryllium			Not detected		0.632
Cadmium			3.51		0.632
Chromium			16.5		1.26
Cobalt			6.38		1.26
Copper			1420		1.26
Lead			1140		1.26
Manganese			301		1.26
Nickel			27.7		1.26
Selenium			1.72		1.26
Silver			Not detected		1.26
Thallium			Not detected		1.26
Vanadium			20.2		2.53
Zinc			538		2.53
Mercury	SW846-7471	mg/kG	Not detected	---	0.10
Pesticides, NJ Target List	SW846-3550B/8081	ug/Kg	---	---	---
4,4'-DDD			Not detected		20.2
4,4'-DDE			Not detected		20.2
4,4'-DDT			Not detected		20.2
Aldrin			Not detected		10.1
alpha Chlordane			Not detected		10.1
alpha-HCH (alpha-BHC)			Not detected		10.1
beta-HCH (beta-BHC)			Not detected		10.1
Dieldrin			Not detected		4.16
Endosulfan I			Not detected		10.1
Endosulfan II			Not detected		20.2
Endosulfan sulfate			Not detected		20.2
Endrin			Not detected		20.2
gamma Chlordane			Not detected		10.1
Heptachlor			Not detected		10.1
Heptachlor epoxide			Not detected		10.1
Lindane (gamma-BHC)			Not detected		10.1
Methoxychlor			Not detected		101
Toxaphene			Not detected		126
BNA, NJ target List	SW846-8270C	ug/Kg	---	---	---
1,1'-Biphenyl			Not detected		165
1,2-Diphenylhydrazine			Not detected		165
2,4,5-Trichlorophenol			Not detected		165
2,4,6-Trichlorophenol			Not detected		165
2,4-Dichlorophenol			Not detected		165
2,4-Dimethyl phenol			Not detected		165
2,4-Dinitrophenol			Not detected		165
2,4-Dinitrotoluene			Not detected		165
2,6-Dinitrotoluene			Not detected		165

Client Sample ID			C-2		
York Sample ID			09120923-06		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
2-Chlorophenol			Not detected		165
2-Methylnaphthalene			Not detected		165
2-Methylphenol			Not detected		165
2-Nitroaniline			Not detected		165
3,3'-Dichlorobenzidine			Not detected		165
4,6-Dinitro-2-methylphenol			Not detected		165
4-Methylphenol			Not detected		165
Acenaphthene			Not detected		165
Acenaphthylene			Not detected		165
Acetophenone			Not detected		165
Anthracene			110	J	165
Atrazine			Not detected		165
Benzaldehyde			Not detected		165
Benzidine			Not detected		165
Benzo(a)anthracene			330		165
Benzo(a)pyrene			240		165
Benzo(b)fluoranthene			260		165
Benzo(ghi)perylene			Not detected		165
Benzo(k)fluoranthene			260		165
Bis(2-chloroethyl)ether			Not detected		165
Bis(2-chloroisopropyl)ether			Not detected		165
Bis(2-ethylhexyl) phthalate			Not detected		165
Butyl benzyl phthalate			Not detected		165
Caprolactam			Not detected		165
Carbazole			95	J	165
Chrysene			400		165
Dibenz(a,h)anthracene			Not detected		165
Diethyl phthalate			Not detected		165
Di-n-butyl phthalate			Not detected		165
Di-n-octyl phthalate			Not detected		165
Fluoranthene			760		165
Fluorene			Not detected		165
Hexachloro-1,3-butadiene			Not detected		165
Hexachlorobenzene			Not detected		165
Hexachlorocyclopentadiene			Not detected		165
Hexachloroethane			Not detected		165
Indeno(1,2,3-cd)pyrene			Not detected		165
Isophorone			Not detected		165
Naphthalene			Not detected		165
Nitrobenzene			Not detected		165
N-Nitrosodimethylamine			Not detected		165
N-Nitrosodi-n-propylamine			Not detected		165
N-Nitrosodiphenylamine			Not detected		165
Pentachlorophenol			Not detected		165
Phenanthrene			560		165
Phenol			Not detected		165
Pyrene			630		165

Client Sample ID			C-2		
York Sample ID			09120923-06		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
Volatiles, NJ Target List	SW846-8260	ug/kg	---	---	---
1,1,1-Trichloroethane			Not detected		12.6
1,1,2,2-Tetrachloroethane			Not detected		12.6
1,1,2-Trichloroethane			Not detected		12.6
1,1-Dichloroethane			Not detected		12.6
1,1-Dichloroethene			Not detected		12.6
1,2-Dibromo-3-chloropropane			Not detected		12.6
1,2-Dibromoethane			Not detected		12.6
1,2-Dichlorobenzene			Not detected		12.6
1,2-Dichloroethane			Not detected		12.6
1,2-Dichloropropane			Not detected		12.6
1,3-Dichlorobenzene			Not detected		12.6
1,4-Dichlorobenzene			Not detected		12.6
Acetone			Not detected		25.3
Acrolein			Not detected		25.3
Acrylonitrile			Not detected		12.6
Benzene			Not detected		12.6
Bromodichloromethane			Not detected		12.6
Bromoform			Not detected		12.6
Bromomethane			Not detected		12.6
Butanone			Not detected		25.3
Carbon disulfide			Not detected		12.6
Carbon tetrachloride			Not detected		12.6
Chlorobenzene			Not detected		12.6
Chloroethane			Not detected		12.6
Chloroform			6	J	12.6
Chloromethane			Not detected		12.6
cis-1,2-Dichloroethene			Not detected		12.6
cis-1,3-Dichloropropene			Not detected		12.6
Dibromochloromethane			Not detected		12.6
Dichlorodifluoromethane			Not detected		12.6
Ethyl benzene			7	J	12.6
Methyl acetate			Not detected		25.3
Methyl tert-butyl ether (MTBE)			Not detected		12.6
Methylene chloride			Not detected		12.6
Styrene			Not detected		12.6
Tertiary butyl alcohol (TBA)			Not detected		253
Tetrachloroethene			2	J	12.6
Toluene			6	J	12.6
trans-1,2-Dichloroethene			Not detected		12.6
trans-1,3-Dichloropropene			Not detected		12.6
Trichloroethene			Not detected		12.6
Trichlorofluoromethane			Not detected		12.6
Vinyl chloride			Not detected		12.6
Xylenes, total			42		25.3

YORK

Client Sample ID			C-2		
York Sample ID			09120923-06		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
PCB	SW846-3550B/8082	mg/Kg	---	---	---
PCB 1016			Not detected		0.0214
PCB 1221			Not detected		0.0214
PCB 1232			Not detected		0.0214
PCB 1242			Not detected		0.0214
PCB 1248			Not detected		0.0214
PCB 1254			0.23		0.0214
PCB 1260			0.06		0.0214
Reactivity-Cyanide	SW846 Ch. 7.3.3	mg/kg	Not detected	---	0.25
Reactivity-Sulfide	SW846 Ch. 7.3.4	mg/kg	27.6	---	15
Cyanide, Total	SW 9013A/9010C	mg/kg	Not detected	---	1.00
Hexavalent Chromium	SW846-7196A	mg/kg	Not detected	---	0.50
Trivalent Chromium	SM	mg/kg	16.5	---	0.50
Flash Point	EPA 1010M	Degrees F	>200	---	---
Paint Filter Test	SW846-9095A	---	No free liquid	---	---
pH	EPA 150.1	units	6.68	---	---
Total Solids	SM 2540B	%	79.2	---	1.0

Client Sample ID			C-3		
York Sample ID			09120923-07		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
Metals, NJ Target List	SW846-6010	mg/kg	---	---	---
Aluminum			5370		1.27
Antimony			1.35		1.27
Arsenic			7.55		1.27
Barium			43.5		1.27
Beryllium			Not detected		0.637
Cadmium			Not detected		0.637
Chromium			7.11		1.27
Cobalt			6.43		1.27
Copper			66.9		1.27
Lead			102		1.27
Manganese			355		1.27
Nickel			15.9		1.27
Selenium			Not detected		1.27
Silver			Not detected		1.27
Thallium			Not detected		1.27
Vanadium			12.5		2.55
Zinc			93.9		2.55
Mercury	SW846-7471	mg/kG	Not detected	---	0.10
Pesticides, NJ Target List	SW846-3550B/8081	ug/Kg	---	---	---
4,4'-DDD			Not detected		20.3
4,4'-DDE			Not detected		20.3
4,4'-DDT			Not detected		20.3
Aldrin			Not detected		10.2

Client Sample ID			C-3		
York Sample ID			09120923-07		
Matrix			SOIL		
Parameter	**Method**	**Units**	**Result**	**Qualifier**	**RL**
alpha Chlordane			Not detected		10.2
alpha-HCH (alpha-BHC)			Not detected		10.2
beta-HCH (beta-BHC)			Not detected		10.2
Dieldrin			Not detected		4.19
Endosulfan I			Not detected		10.2
Endosulfan II			Not detected		20.3
Endosulfan sulfate			Not detected		20.3
Endrin			Not detected		20.3
gamma Chlordane			Not detected		10.2
Heptachlor			Not detected		10.2
Heptachlor epoxide			Not detected		10.2
Lindane (gamma-BHC)			Not detected		10.2
Methoxychlor			Not detected		102
Toxaphene			Not detected		127
BNA, NJ target List	SW846-8270C	ug/Kg	---	---	---
1,1'-Biphenyl			Not detected		165
1,2-Diphenylhydrazine			Not detected		165
2,4,5-Trichlorophenol			Not detected		165
2,4,6-Trichlorophenol			Not detected		165
2,4-Dichlorophenol			Not detected		165
2,4-Dimethyl phenol			Not detected		165
2,4-Dinitrophenol			Not detected		165
2,4-Dinitrotoluene			Not detected		165
2,6-Dinitrotoluene			Not detected		165
2-Chlorophenol			Not detected		165
2-Methylnaphthalene			Not detected		165
2-Methylphenol			Not detected		165
2-Nitroaniline			Not detected		165
3,3'-Dichlorobenzidine			Not detected		165
4,6-Dinitro-2-methylphenol			Not detected		165
4-Methylphenol			Not detected		165
Acenaphthene			Not detected		165
Acenaphthylene			Not detected		165
Acetophenone			Not detected		165
Anthracene			Not detected		165
Atrazine			Not detected		165
Benzaldehyde			Not detected		165
Benzidine			Not detected		165
Benzo(a)anthracene			Not detected		165
Benzo(a)pyrene			Not detected		165
Benzo(b)fluoranthene			Not detected		165
Benzo(ghi)perylene			Not detected		165
Benzo(k)fluoranthene			Not detected		165
Bis(2-chloroethyl)ether			Not detected		165
Bis(2-chloroisopropyl)ether			Not detected		165
Bis(2-ethylhexyl) phthalate			Not detected		165
Butyl benzyl phthalate			Not detected		165
Caprolactam			Not detected		165

Client Sample ID			C-3		
York Sample ID			09120923-07		
Matrix			SOIL		
Parameter	**Method**	**Units**	**Result**	**Qualifier**	**RL**
Carbazole			Not detected		165
Chrysene			Not detected		165
Dibenz(a,h)anthracene			Not detected		165
Diethyl phthalate			Not detected		165
Di-n-butyl phthalate			Not detected		165
Di-n-octyl phthalate			Not detected		165
Fluoranthene			87	J	165
Fluorene			Not detected		165
Hexachloro-1,3-butadiene			Not detected		165
Hexachlorobenzene			Not detected		165
Hexachlorocyclopentadiene			Not detected		165
Hexachloroethane			Not detected		165
Indeno(1,2,3-cd)pyrene			Not detected		165
Isophorone			Not detected		165
Naphthalene			Not detected		165
Nitrobenzene			Not detected		165
N-Nitrosodimethylamine			Not detected		165
N-Nitrosodi-n-propylamine			Not detected		165
N-Nitrosodiphenylamine			Not detected		165
Pentachlorophenol			Not detected		165
Phenanthrene			Not detected		165
Phenol			Not detected		165
Pyrene			89	J	165
Volatiles, NJ Target List	SW846-8260	ug/kg	---	---	---
1,1,1-Trichloroethane			Not detected		12.8
1,1,2,2-Tetrachloroethane			Not detected		12.8
1,1,2-Trichloroethane			Not detected		12.8
1,1-Dichloroethane			Not detected		12.8
1,1-Dichloroethene			Not detected		12.8
1,2-Dibromo-3-chloropropane			Not detected		12.8
1,2-Dibromoethane			Not detected		12.8
1,2-Dichlorobenzene			Not detected		12.8
1,2-Dichloroethane			Not detected		12.8
1,2-Dichloropropane			Not detected		12.8
1,3-Dichlorobenzene			Not detected		12.8
1,4-Dichlorobenzene			Not detected		12.8
Acetone			Not detected		25.5
Acrolein			Not detected		25.5
Acrylonitrile			Not detected		12.8
Benzene			Not detected		12.8
Bromodichloromethane			Not detected		12.8
Bromoform			Not detected		12.8
Bromomethane			Not detected		12.8
Butanone			Not detected		25.5
Carbon disulfide			Not detected		12.8
Carbon tetrachloride			Not detected		12.8
Chlorobenzene			Not detected		12.8
Chloroethane			Not detected		12.8

Client Sample ID			C-3		
York Sample ID			09120923-07		
Matrix			SOIL		
Parameter	Method	Units	Result	Qualifier	RL
Chloroform			3	J	12.8
Chloromethane			Not detected		12.8
cis-1,2-Dichloroethene			Not detected		12.8
cis-1,3-Dichloropropene			Not detected		12.8
Dibromochloromethane			Not detected		12.8
Dichlorodifluoromethane			Not detected		12.8
Ethyl benzene			3	J	12.8
Methyl acetate			Not detected		25.5
Methyl tert-butyl ether (MTBE)			Not detected		12.8
Methylene chloride			Not detected		12.8
Styrene			Not detected		12.8
Tertiary butyl alcohol (TBA)			Not detected		255
Tetrachloroethene			Not detected		12.8
Toluene			Not detected		12.8
trans-1,2-Dichloroethene			Not detected		12.8
trans-1,3-Dichloropropene			Not detected		12.8
Trichloroethene			Not detected		12.8
Trichlorofluoromethane			Not detected		12.8
Vinyl chloride			Not detected		12.8
Xylenes, total			13		25.5
PCB	SW846-3550B/8082	mg/Kg	---	---	---
PCB 1016			Not detected		0.0216
PCB 1221			Not detected		0.0216
PCB 1232			Not detected		0.0216
PCB 1242			Not detected		0.0216
PCB 1248			Not detected		0.0216
PCB 1254			Not detected		0.0216
PCB 1260			Not detected		0.0216
Reactivity-Cyanide	SW846 Ch. 7.3.3	mg/kg	Not detected	---	0.25
Reactivity-Sulfide	SW846 Ch. 7.3.4	mg/kg	22.7	---	15
Cyanide, Total	SW 9013A/9010C	mg/kg	Not detected	---	1.00
Hexavalent Chromium	SW846-7196A	mg/kg	Not detected	---	0.50
Trivalent Chromium	SM	mg/kg	7.11	---	0.50
Flash Point	EPA 1010M	Degrees F	>200	---	---
Paint Filter Test	SW846-9095A	---	No free liquid	---	---
pH	EPA 150.1	units	6.63	---	---
Total Solids	SM 2540B	%	78.5	---	1.0

Units Key: For Waters/Liquids: mg/L = ppm ; ug/L = ppb For Soils/Solids: mg/kg = ppm ; ug/kg = ppb

YORK

Report Date: 1/5/2010
Client Project ID: SG96152.81
York Project No.: 09120923

Notes for York Project No. 09120923

1. The "RL" is the REPORTING LIMIT and is adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. This REPORTING LIMIT is based upon the lowest standard utilized for calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All samples were received in proper condition for analysis with proper documentation.
6. All analyses conducted met method or Laboratory SOP requirements.
7. It is noted that no analyses reported herein were subcontracted to another laboratory.
8. Other attachments to this report, including Chain-of-custody documentation and Case narratives are hereby made a part of this report.

Approved By: for Robert Q. Bradley
Managing Director

Date: 1/5/2010

YORK

YORK
ANALYTICAL LABORATORIES, INC.

120 RESEARCH DRIVE
STRATFORD, CT 06615
203.325.1371 FAX 203.357-0166

Field Chain-of-Custody Record

09/20923

Company Name	Report to:	Invoice to:	Project ID/No.	Samples Collected by (signature) / Name (printed)
Ecosystems Strategies	Richard	Brenda	SG96152.81	Richard Hooker

Sample No.	Location/ID	Date Sampled	Sample Matrix: Water	Soil	Air	Other	Analyses Requested	Container Desc.
	A-1	Dec 23 2009		x			NJSCC, Flash Point, Ph, reactivity, paint filter	1 x 2 oz + 3 x 8 oz jar
	A-2	Dec 23 2009		x			NJSCC, Flash Point, Ph, reactivity, paint filter	1 x 2 oz + 3 x 8 oz jar
	A-3	Dec 23 2009		x			NJSCC, Flash Point, Ph, reactivity, paint filter	1 x 2 oz + 3 x 8 oz jar
	B-1	Dec 23 2009		x			TCLP metals, PCBs, NJSCC, Flash Point, Ph, reactivity, paint filter	1 x 2 oz + 3 x 8 oz jar
	C-1	Dec 23 2009		x			NJSCC, Flash Point, Ph, reactivity, paint filter	1 x 2 oz + 3 x 8 oz jar
	C-2	Dec 23 2009		x			NJSCC, Flash Point, Ph, reactivity, paint filter	1 x 2 oz + 3 x 8 oz jar
	C-3	Dec 23 2009		x			NJSCC, Flash Point, Ph, reactivity, paint filter	1 x 2 oz + 3 x 8 oz jar

Chain-of-Custody Record

Bottles Relinquished from Lab by	Date/Time	Samples Relinquished by	12/24/09 10 — Date/Time
Bottles received in field by	Date/Time	Samples Relinquished by	Date/Time

Samples received by	12-24-09 10:20 — Date/Time
Samples received in LAB by P. Grace	12/24/09 1300 — 3.5 C — Date/Time

Comments/Special Instructions

Turn-Around Time Requested- Specify Date Expected if RUSH Requested: DATE DUE FOR RUSH:

_____ STANDARD _____ RUSH(Define)_____