REMEDIAL DESIGN WORK PLAN

Prepared for the

Former A.C. Dutton Lumber Yard

NYSDEC Brownfields Program Site: C314081

Located at

1 Dutchess Avenue, City and Town of Poughkeepsie
Dutchess County, New York

May 2011

ESI File: OP08022.50

Prepared By:

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24 Davis Avenue
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Prepared For:

The O'Neill Group – Dutton, LLC
241 Hudson Street
Hackensack, New Jersey 07601

I Philip Bell certify that I am currently a [NYS registered professional engineer and that this Remedial Design, Remedial Action Work Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

Philip Bell, P.E.
Project Engineer

The undersigned has reviewed this Remedial Investigation Report and certifies to O'Neill Group - Dutton, LLC and to the New York State Department of Environmental Conservation (NYSDEC) that the information provided in this document is accurate as of the date of issuance by this office.

The undersigned is a Qualified Environmental Professional as defined by 6NYCRR Part 375-1.2 (aj) and supporting documents. The undersigned possesses sufficient specific education, training, and experience necessary to exercise professional judgment to develop opinions and conclusions regarding the presence of releases or threatened releases to the surface or subsurface of the site or off-site areas, sufficient to meet the objectives and performance factors for the areas of practice identified by this guidance.

Paul H. Ciminello
President

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1.0 INTRODUCTION

1.1 Purpose

Ecosystems Strategies, Inc. (ESI) and Bell Engineering PLLC have prepared this Remedial Design Work Plan (RDWP) in order to provide detailed design specifications for proposed environmental response actions at the former "A.C. Dutton Lumber Yard" property (hereafter referred to as the "Site"), located 1 Dutchess Avenue, City and Town of Poughkeepsie, New York. These proposed environmental response actions address known environmental conditions at the Site documented in the Remedial Investigation Report (RIR), prepared by Fuss and O'Neill of New York, P.C., dated August 2007, and the Supplementary Investigation Report (SIR) prepared by ESI, dated September 2008. The preferred remedy for the Site was presented in the Remedial Alternatives Analysis and Remedial Work Plan (RAA/RWP), issued in September 2008, and approved by the New York State Department of Environmental Conservation (NYSDEC) in January 2009. All work was performed in general conformance with regulations specified in 6 NYCRR Part 375 (Environmental Remediation Programs) and applicable NYSDEC guidance documents (Division of Environmental Remediation-10, Technical Guidance for Site Investigation and Remediation [DER-10] and the Draft Brownfield Cleanup Program Guide [BCP Guide]).

The Remedial Alternatives Analysis identified and evaluated alternatives for mitigating documented contamination and/or controlling the impacts of such contamination. Through a process of identifying potential remedies and screening each relative to a predetermined set of criteria, a remedial response was selected that is technically feasible, protective of human health and the environment, cost-effective, and consistent with the local objectives for the property. The Remedial Work Plan presented a conceptual design for the selected remedial response, which is proposed in order to meet the objectives determined through the alternatives analysis. This RDWP has been prepared in order to fully develop design components and technical specifications to execute the selected remedial response, as identified in the RAA/RWP.

1.2 Site Information

1.2.1 Site Location and Description

The Site is an irregularly-shaped parcel, which has approximately 254 feet of frontage on the northern side of Dutchess Avenue and approximately 192 feet of frontage on the northern side of Hoffman Street. North Water Street extends along the eastern property line along the top of a steep bedrock outcrop, approximately 20 feet above the southeast portions of the Site. State owned land extends along the western edge of the property and a chain-link fence marks the northern boundary. Three vacant structures, including two former lumber pressure treatment plant buildings, are present on-site and much of the remainder of the Site is covered with the foundation remains of former structures, concrete or asphalt pavement. Three buildings have been removed in response to prior vandalism and arson; all demolition work was completed consistent with this RDWP and with NYSDEC approval. The property is comprised of two lots (City of Poughkeepsie Tax ID: 6062-59-766443, and Town of Poughkeepsie Tax ID: 6062-02-763508). Adjoining to the to the south is a former manufactured gas plant property now owned by Central Hudson Gas and Electric Corporation and operated as a natural gas regulation station. A boathouse owned by Vassar College adjoins to the north. A Site Location Map is included as Figure 1 and a survey as Figure 6 (Appendix B).

1.2.2 Site History

The Site was in industrial use between the mid-1800s until 1995. Prior to 1913, Site uses included an iron works and a glass works at the southern end of the parcel. Several kilns were associated with the glass works and kiln ash and slag was reportedly used as fill material on the Site. The on-site pressure treatment of lumber using chromated copper arsenate (CCA) is

reported to have been begun in 1966 by the A.C. Dutton Lumber Corporation and to have continued until at least 1995 and possibly until at least 1999, when on-site operations ceased. During lumber processing activities, raw lumber was brought to the Site by truck, boat, and rail. Lumber was processed in the on-site pressure treatment plants and then allowed to dry outside. Environmental investigations of the Site are summarized in Section 1.3, below.

1.2.3 Proposed Future Usage of the Site

The Site is proposed for use as a mixed use development, which is anticipated to include multi-family residential structures and may include limited retail facilities. All currently existing on-site structures will be demolished.

1.3 Site Environmental Conditions

This section provides a summary of known Site Environmental Conditions. The findings of all previous environmental investigations performed to date are detailed in the Fuss and O'Neill RIR, and ESI's SIR, which was performed according to the NYSDEC approved Remedial Investigation Work Plan (RIWP); and, Supplemental Remedial Investigation Work Plan (SRIWP).

1.3.1 Nature and Extent of Contamination

Data documented in the RIR and SIR provides a comprehensive assessment of existing on-site environmental conditions. The results of field investigation services (including laboratory analyses) are summarized below for on-site soil and groundwater, surface-water and sediments from the Hudson River.

1.3.1.1 Soils

Metals

The historic pressure treatment of lumber using CCA has contaminated on-site soils with arsenic and chromium. Other historic on-site industrial activities and fill of unknown origin, which comprises much of the Site, may be additional sources of documented metals contamination. The following general conclusions regarding arsenic and chromium were documented in prior reports including:

- Based on an analysis of previous data, a Site background level (SBL) of 32 mg/Kg for arsenic was documented for the Site and was intended to be indicative of Site conditions prior to pressure treating operations. Solid media located within the footprints of the two pressure treatment plants and containing concentrations of arsenic above 32 mg/Kg are likely to have been directly impacted by process wastes. Such media are considered categorical hazardous waste and will require management as such.

- Data indicate a strong correlation between concentrations of arsenic and chromium supporting the conclusion that remediation of arsenic-contaminated solid media (i.e. concrete, asphalt, soil, and fill) to 32 mg/Kg will simultaneously reduce chromium concentrations to acceptable levels (i.e. at or below the "Restricted Residential Use" SCOs for trivalent chromium (180 mg/Kg) and hexavalent chromium (110 mg/Kg) per 6 NYCRR Subpart 375, Table 375-6.8[b]). This strong correlation between elevated arsenic and elevated chromium does not eliminate the possibility of areas with elevated chromium extending beyond the areas of proposed remediation. For this reason, post-excavation sampling will be for both arsenic and chromium.

- Solid media located on-site, but outside the two former pressure treatment buildings, have been documented to contain total weight arsenic concentrations above the SBL of 32 mg/Kg. These materials are likely to contain arsenic and chromium from sources unrelated to on-site CCA processing (i.e. fill and/or other former on-site industrial operations and are not therefore categorically hazardous. These materials will be managed as non-hazardous, metals-contaminated waste unless they exhibit one or more of the characteristics of hazardous waste.

Elevated concentrations of arsenic were detected in the following locations:

Northern Pressure Treatment Plant

- Asphalt cores collected from the floor of the Northern Treatment Plant exhibited yellowish-green coloration indicative of CCA saturation throughout and a concrete core from the secondary containment area exhibited staining to a depth of 1'. At this time it is anticipated that entire floor of the Northern Treatment Plant (approximately 850 cubic yards) will require management as hazardous waste.

- Concentrations of arsenic above 32 mg/Kg have been documented in the Northern Pressure Treatment Plant at depths to at least 8'. Spatial distribution of these data indicates that contamination is concentrated towards the southern side of the building, adjacent to the secondary containment area. At this time it is anticipated that approximately 3,500 cubic yards of this material is categorically hazardous and will require management as hazardous waste.

Southern Pressure Treatment Plant

- Concrete cores collected from the floor of the Southern Pressure Treatment Plant indicate yellow/green staining to a depth of approximately ½". This material (approximately 45 cubic yards) will require scarification and off-site disposal as hazardous waste.

- In the Southern Pressure Treatment Plant elevated concentrations of arsenic have been detected in sub-slab soils at locations where the integrity of the slab has *be*en compromised. It is anticipated that approximately 1,000 cubic yards of sub-slab material will require management as hazardous waste.

Remainder of Site (excluding Pressure Treatment Plants)

Clusters of samples containing concentrations of arsenic above the SBL of 32 mg/Kg have been documented to a maximum depth of approximately 3' at the following locations: around the northern pressure treatment plant and northwest of the southern pressure treatment plant (Areas 3 and 4, Figure 2). Arsenic concentrations in excess of 32 mg/Kg have been documented to a maximum depth of approximately 1' at the following locations: an eastern location between the two pressure treatment plants (Area 5, Figure 2); west of the northern pressure treatment plant (Area 6, Figure 2); along the eastern edge and southwest of the southern pressure treatment plant; and, along the entire on-site length of the railroad spur (Area 7, Figure 2).

Petroleum

Four areas of known or suspected petroleum impacted soil have been documented on-site at the locations of known or suspected underground storage tanks (USTs, See Figure 2, Appendix B, Site Remediation Map). Limited associated groundwater contamination has also been documented. Petroleum impacted soils have been document at the following locations: south and southwest of the northern former pressure treatment plant building (area 8);; under and around the large office building (area 10); immediately northeast of the southern former pressure treatment plant building (area 9); and, southwest of the former garage/automotive repair building at the southern end of the Site (area 11). It is anticipated that approximately 450 cubic yards of petroleum-impacted soil will require excavation and removal from the Site. All soils determined to be grossly contaminated will be removed from off-site disposal.

1.3.1.2 Groundwater

Metals

Low level exceedances of the groundwater standard for arsenic (25 µg/L) have been documented west and southwest of the northern former pressure treatment plant building. The peak concentration of arsenic detected in groundwater was 63.8 µg/L in a January 2006 sampling event. No other metals have been documented in on-site groundwater at levels exceeding guidance values. The removal of source material (subgrade material from beneath the pressure treatment plant building) is anticipated to remediate the degradation of groundwater quality documented this location.

Petroleum

Estimated low level exceedances of groundwater standards for three semi-volatile organic compounds (SVOCs) were documented during the August 2007 groundwater sampling event in MW-E8, located west of the northern former pressure treatment plant building. No field evidence of contamination was noted in the sample. The removal of petroleum contaminated soils described above is anticipated to remediate the limited petroleum contamination of groundwater in this portion of the Site.

1.3.2 Exposure Assessment

The SIR included an exposure assessment, which was conducted to qualitatively assess the potential impacts of the existing Site on human health. Both current (existing conditions) and future use (development and operation of the proposed mixed-use waterfront development) scenarios were considered. A summary of this exposure assessment is presented below.

The primary contaminants present on the Site are metals present in solid media that originated with historic on-site pressure treatment of lumber. There is currently the potential for trespassers at the Site to be exposed to contaminants through dermal contact with contaminated dust, equipment, or floor surfaces or through inhalation of contaminated dust and surface soil particles. Depending on future land use conditions at the Site, future residents and construction workers could be exposed to contamination in surface soil through dermal contact or inhalation of soil particles. Dermal contact or inhalation of subsurface soil particles could occur during excavation work conducted at the Site. The implementation of a Health and Safety Plan (HASP), incorporating a Community Health and Safety Plan and Community Air-Monitoring Plan, would mitigate possible impacts to any potential receptor populations. Site-specific remedial actions that involve soil disturbance will require monitoring and mitigation plans to address potential dust generation and increased contaminant migration.

2.0 GENERAL REMEDIAL CONSTRUCTION INFORMATION

2.1 Project Organization

For the purpose of the work detailed in this RDWP, the "Volunteer" is defined as The O'Neill Group - Dutton, LLC, which will contract with an On-Site Coordinator (OSC), (i.e., Ecosystems Strategies, Inc. or another similarly qualified environmental consulting firm) to provide and/or supervise the implementation of the specific environmental services detailed below. The volunteer will hire contractor(s) that have adequate qualifications to perform the remediation, which will be implemented in accordance with the schedule in the approved RDWP (see Table A, below). The general contractor (GC) (to be determined) will be responsible for the implementation of all construction activities and will consult with the OSC to ensure compliance with all requirements of this RDWP. Key participants identified to date are provided in Appendix I.

2.1.1 Remedial Engineer

The Remedial Engineer for this project will be Philip Bell (or another similarly qualified engineer). The Remedial Engineer is a registered professional engineer licensed by the State of New York. The Remedial Engineer will work with the OSC to implement the remedial program for the Site. The Remedial Engineer will certify in the Final Engineering Report (FER), (see Section 3.7 below) that the remedial activities were observed by qualified environmental professionals under his supervision and that the remediation requirements set forth in the RDWP have been achieved in full conformance with this Plan.

The Remedial Engineer will ensure that any pre-remedial plans submitted by contractors are in compliance with this RDWP and will subsequently document the execution of these plans in the FER.

2.1.2 Table A: Remedial Action Construction Schedule

Date	Task #	Description
June 2010	1	Building demolition (not including pressure treatment plant buildings)
July 2011	2	Monitoring well decommissioning; chemical tanks and debris removal from interior of pressure treatment plant buildings and off-site disposal of wastes
August 2011	3	Scarification/removal of floors and interior soil (and concrete) from pressure treatment plant buildings; off-site disposal of wastes; and, backfilling of excavations
September - October 2011	4	Demolition of pressure treatment plant buildings
June 2011	5	Petroleum Bulk Storage Tank removal
–October - November 2011	6	Petroleum and metals-contaminated soil removal and backfilling of excavations
November 2011	8	Cover system installation
January 2012	9	Monitoring well installation
Upon completion of task #8 Feb – May 2012	10	Site Management Plan development, Environmental Easement development and execution, and Final Engineering Report development

For each task, an approximate timeline for completion is included as a general guideline of the magnitude of the task and, therefore, of the length of time expected for completion. The timelines may be subject to change due to unforeseen circumstances and/or changes in the scope of work resulting from encountered conditions and weather. An overview of the remediation to be performed is presented in Section 3, below. Detailed specifications for each remedial task are included as Appendix H of this RDWP.

2.1.3 Work Hours

The hours for operation of remedial construction will conform to the Town and/or City of Poughkeepsie Building Department construction code requirements or according to specific variances issued by those agencies. NYSDEC will be notified by the Volunteer of any variances issued by either of the Building Departments. NYSDEC reserves the right to deny alternate remedial construction hours.

2.1.4 Site Security

Currently (May 2011), fencing exists along the northern and southern boundaries and along most of the eastern boundary (a significant slope impedes access along the unfenced eastern boundary). An estimated four hundred linear feet in the northeast portion of the site has no fence; on-going discussions with the City and Vassar College (the adjoining property owners) are anticipated to result in securing the approvals necessary to install the fence. If no agreement is reached by July 2011, a fence will be installed along the property line (slightly down-slope of the preferred location) or at some elevation across the scope (e.g., mid-slope) to complete Site security. A fence will be installed along the western boundary with the adjoining state land at the completion of remediation. During all remedial activities and at the conclusion of all work, the Site will be fully secured by fencing.

2.1.5 Traffic Control

Traffic control will be provided by the General Contractor (GC) during equipment/truck entrance and egress from the Site. Trucks will follow the approved truck route (see Figure 4, Appendix B). It is noted that the entrance to the site is at the terminus of Dutchess Avenue and therefore truck ingress and egress is not considered to be a significant safety issue. A temporary easement will be required to cross State Lands to enter the property. Should this easement not be secured, an alternate entrance onto Dutchess Avenue will be secured to ensure that the remedial schedule is maintained.

2.1.6 Contingency Plan

If unknown conditions are encountered on-site during sub-grade removal (e.g. previously unidentified UST[s]), the Contingency Plan, contained in Appendix F, and all applicable NYSDEC guidelines will be followed to address the condition.

2.1.7 Worker Training and Monitoring

The Volunteer is responsible for insuring that all Site contractors provide their workers with applicable training (i.e. HAZWOPER, site safety training, and medical monitoring, as necessary).

2.1.8 Agency Approvals

Approvals identified herein refer solely to any approvals that must be secured prior to the implementation of remedial efforts. It is accepted that other (non0stated) approvals may be required prior to Site development. This is an anticipated list of involved agencies:

- New York State Department of Environmental Conservation approval of this RDWP.
- Temporary Easement to cross State Lands.
- County and/or State transportation agencies if any improvements are proposed to off-site roads or bridges.

2.1.9 NYSDEC BCP Signage

A project sign has been erected at the main entrance to the Site consistent with the requirements of the NYSDEC. The sign indicates that the project is being performed under the New York State Brownfield Cleanup Program.

2.1.10 Pre-Construction Meeting with NYSDEC

A pre-construction meeting among NYSDEC, the Volunteer, the Remedial Engineer, and the designated General Contractor will take place prior to the start of major construction activities. In the event that remedial actions are segmented, a meeting will be held prior to the start of each segment.

2.1.11 Emergency Contact Information

An emergency contact sheet with names and telephone numbers that will define the specific project contacts for use by NYSDEC and NYSDOH in the case of a day or night emergency is provided below.

Table B: Emergency Contact Information

Emergency Contact	Phone Number
O'Neill-Dutton LLC Lou Kaufman, Representing the Owner	(201) 488-4455
Emergency Contact Number for O'Neill-Dutton	(201) 488-4455
Ecosystems Strategies, Inc. Paul Ciminello, President	(845) 452-1658
NYSDEC Joshua Cook, Project Manager	(518) 402-9662
Site Superintendant	TBD
Spills Hotline	(800) 457-7362
US Coast Guard Incident Notification	(800) 424-8802
Site Health and Safety Officer Field Personnel, ESI	(845) 452-1658
St Francis Hospital 41 North Road	(845) 485-5087
Police Department	(845) 451-4000 or 911
Fire Department	(845) 451-4081 or 911
City Hall	(845) 451-4200
City Mayor	(845) 451-4073
Water and Sewer Operations	(845) 451-4111

2.2 Site Preparation

2.2.1 Mobilization

Site mobilization will be conducted in a manner such that erosion and sedimentation control, utility markout, and other site preparation tasks are fully instituted before construction begins.

2.2.2 Monitoring Well Decommissioning

All existing on-site groundwater monitoring wells will be decommissioned in accordance with protocols defined in CP-43: Groundwater Monitoring Well Decommissioning Policy. Specifically, the wells will be grouted in-place using the standard grout mixture (one 94-pound bag of Type 1 Portland cement, 3.9 pounds powdered bentonite, and 7.8 gallons potable water). The grout will be placed from the bottom to the top of the well using a tremie and, if possible, the riser will be pulled from the well. The uppermost five feet of the borehole at the land surface will be filled with material physically similar to natural soils and the surface borehole restored to the condition of the area surrounding the borehole.

2.2.3 Erosion and Sedimentation Control Plan

An Erosion and Sedimentation Control Plan prepared by Maser Consulting P. A. is included as Appendix J of this RDWP.

2.2.4 Stabilized Construction Entrance(s)

A stabilized construction entrance will be included as part of the erosion and sedimentation control for the Site. This stabilized construction entrance will be designed such that there is continuity between the truck tire cleaning area and the stone-based egress path so that trucks do not become re-contaminated prior to departure from the Site. A decontamination pad will be located at the construction exit gate. Prior to entering and leaving the site, all vehicles will be inspected. Any such contamination will be removed on the decontamination pad before the truck exits the site using dry decontamination methods when possible. Any generated wash water will be collected for treatment and disposal.

2.2.5 Utility Marker and Easements Layout

The Volunteer and its GC are solely responsible for the identification of utilities that might be affected by work under the RDWP and implementation of all required, appropriate, or necessary health and safety measures during performance of work under this RDWP. There are no active utilities at the site. The Volunteer and its contractors must obtain any local, State or Federal permits or approvals pertinent to such work that may be required to perform work under this RDWP. Approval of this RDWP by NYSDEC does not constitute satisfaction of these requirements.

2.2.6 Sheeting and Shoring

Appropriate management of structural stability of on-site or off-site structures during on-site activities including excavation, is the sole responsibility of the Volunteer and its contractors. Further, the Volunteer and its contractors are solely responsible for the implementation of all required, appropriate, or necessary health and safety measures during performance of work under the approved RDWP, in accordance with all applicable federal OSHA regulations.

2.2.7 Equipment and Material Staging

Equipment and materials staging areas will be provided for on the Site.

2.2.8 Decontamination Area

A vehicle tire decontamination area will be provided as part of the erosion and sedimentation control and will be designed such that there is continuity between the truck wash and the stone-based egress path.

2.2.9 Site Fencing

Currently (May 2011), fencing exists along the northern and southern boundaries and along most of the eastern boundary (a significant slope impedes access along the unfenced eastern boundary). An estimated four hundred linear feet in the northeast portion of the site has no fence; on-going discussions with the City and Vassar College (the adjoining property owners) are anticipated to result in securing the approvals necessary to install the fence. If no agreement is reached by July 2011, a fence will be installed along the property line (slightly down-slope of the preferred location) or at some elevation across the slope (e.g., mid-slope) to complete Site security. A fence will be installed along the western boundary with the adjoining state land at the completion of remediation. During all remedial activities and at the conclusion of all work, the Site will be fully secured by fencing.

2.2.10 Demobilization

Demobilization will address (as applicable):

- Restoration of areas that may have been disturbed to accommodate support areas (e.g., staging areas, decontamination areas, storage areas, temporary water management area[s], and access areas);
- Removal of temporary access areas (whether on-site or off-site) and restoration of disturbed access areas to pre-remediation conditions;
- Removal of sediment and erosion control measures and disposal of materials in accordance with acceptable rules and regulations;
- Equipment decontamination;
- General refuse disposal.

2.3 Reporting

Reports will be submitted by the OSC to the NYSDEC and NYSDOH Project Managers by the 10th day of each month commencing with the month subsequent to the approval of this RDWP and ending with the Termination Date. The monthly reports will include:

- An update of progress made during the reporting period and actions anticipated for the next reporting period;
- All approved activity modifications;
- All results of sampling and testing (including QA/QC data);

- Locations of work and quantities of material imported and exported from the Site;
- References to the Remediation Map for Site activities;
- A summary of any and all complaints with relevant details (names, phone numbers);
- A summary of Community Air Monitoring Plan (CAMP) findings including exceedances and response actions; and,
- An explanation of notable Site conditions.

Monthly reports are not intended to be the mode of communication for notification to the NYSDEC of emergencies (accident, spill), requests for changes to the RDWP or other sensitive or time critical information. Emergency conditions substantive changes to the RDWP and exceedances of CAMP guidance levels will be addressed directly to NYSDEC Project Manager via direct written (e.g., e-mail) or verbal (phone call) communication.

Monthly Reports will include a description of significant activities keyed to an alpha-numeric map for the Site that identifies work areas. A Site Map that shows a predefined alpha-numeric grid for use in identifying locations described in reports submitted to NYSDEC is attached as Figure 3, Appendix B. These reports will include a summary of air sampling results, odor and dust problems and corrective actions, and all complaints received from the public.

In addition to monthly reports, the Volunteer (or the on-Site coordinator) will provide a weekly log of waste removal records to the NYSDEC. Job-Site Recordkeeping for all remedial work will be appropriately documented. These records will be maintained on-site at all times during the project and be available for inspection by NYSDEC and NYSDOH staff.

3.0 OVERVIEW OF PROPOSED REMEDIATION SERVICES

Proposed remediation services consistent with the selected remedial alternative documented in the RAA/RWP are summarized in this section of the RDWP. Detailed specifications for these remedial activities are provided in Appendix H, including: Petroleum Bulk Storage Tank Closure Specifications; Chemical Bulk Storage Tank and Debris Removal Specification; Excavation of and Disposal of Contaminated Material Specifications; Clean Fill Importation Specifications; and Soil Cover Installation Specifications; Remedial activities related to future Site development (e.g., Installation of subslab depressurization systems under proposed buildings) are presented in this document for descriptive purposes only; completion of remedial activities will not include these services at this time.

3.1 Remediation of Former Pressure Treatment Plants

3.1.1 Chemical Bulk Storage Tank and CCA Contaminated Debris Removal

3.1.1.1 General

All chemical bulk storage (CBS) tanks and process vessels will be emptied, cleaned, and disposed of off-site, as detailed in Specifications #2, Appendix H. The following tasks will be performed: all services necessary for the proper removal of nine (9) chemical bulk storage tanks, two (2) process tanks, process residuals, and debris from within the two former pressure treatment plant buildings at the Site. These tasks will include the removal of all drain covers, rail lines, and other metal fittings in the floors of the two former pressure treatment plant buildings. These tasks will be performed to standards that will facilitate the OSC in obtaining 1) NYSDEC closure of the Site as a registered CBS facility (NYSDEC ID#: CBS3-000170), and 2) RCRA Closure of the Site as a Small Quantity Generator of Hazardous Waste (USEPA ID#: NYD006993711).

All operations associated with the handling, sampling, loading, transportation, and disposal of tanks and/or associated metals-contaminated wastes will be performed in compliance with Federal, State, and local regulations.

3.1.1.2 Schedule

It is anticipated that tank closure and debris removal activities will require no more than 20 business days, inclusive of cleaning, cutting, sampling (dust and debris) and off-site disposal.

3.1.1.3 QA/QC

All QA/QC procedures will follow the QA/QC Plan provided in Appendix E of the RDWP.

3.1.1.4 CBS Tank Closure and Debris Removal Preparation

Prior to the initiation of CBS tank closure and debris removal the contractor will provide the following information:

- Name and location of the licensed hazardous waste facility that will receive the waste.
- Method of decontamination and/or removal.
- Means for collection and disposal of decontamination or removal residues (e.g., tank sludges and scarification wastes).
- Types of decontamination solutions to be used.

- All decontamination waters/solutions will be collected. Discharge of hazardous constituents to surrounding or underlying structures, soils, or air during decontamination and/or removal will be prevented.

- Estimate of the volume of decontamination and/or removal residues to be generated.

- Method used to perform a hazardous waste determination on the decontamination and/or removal residues (e.g. tank sludges and scarification wastes),and provide the OSC with the results. Unless otherwise determined to be appropriate, all sludge and scarification wastes will be managed and disposed of as hazardous wastes.

- Name and location of the off-site facility which will receive decontamination and removal residues.

3.1.1.5 CBS Tank Closure and Debris Removal

Liquid and sludge will be removed from the tanks/process vessels and connecting lines. Any waste products removed will be containerized pending sampling and off-site disposal in accordance with all Federal, State, and Local regulations. The following tasks will be performed:

- Cleaning, decontamination and rendering the tanks/process vessels free of hazardous vapors. Provisions will be made for natural breathing of the tank to ensure that the tanks remain free of hazardous vapors.

- All connecting lines will be disconnected and removed or securely capped, locked, or plugged. Manways will be securely locked in place.

- Debris/fittings that will not be handled and disposed of as hazardous waste will be decontaminated.

- Decontamination of the debris and/or tank system will be documented by collecting wipe samples (1:4 nitric acid to deionized water) from tank surfaces. Tank system piping and non-porous debris, will be triple rinsed with an appropriate decontamination solution. The final rinse will be analyzed for COCs to verify closure criteria have been met. Detailed protocols for wipe sampling are included in the QA/QC Plan, Appendix E.

- The date of permanent closure will be stenciled on each tank.

- All closed tanks will be protected from flotation caused by flooding or high groundwater level in accordance with generally accepted engineering practices.

- The tanks will be punched with holes or otherwise make them unfit for storage.

3.1.1.6 Pumping Encountered Water

Water encountered in the tanks and/or secondary containment areas will be sampled for dissolved arsenic and chromium, corrosivity, toxicity, and PCBs to determine appropriate disposal methods. The contractor will provide a written Plan including relevant data to the OSC, the Volunteer, and the NYSDEC justifying a disposal method for this water, which may include on-site settling in frac tanks (if sediment is present) treatment prior to discharge to the sanitary sewer (at the pump house located at Dutchess Avenue, immediately south of the Site), or off-site disposal. This Plan will be submitted to the NYSDOH and the NYSDEC and will be signed and stamped by a Professional Engineer licensed to practice in New York State. No wastewater can be handled or disposed of until and unless NYSDEC approval of this Plan has been received. Any discharges of wastewaters will comply with all applicable laws, regulations and guidance,

including, but not limited to 6NYCRR Parts 703 and 750 and TOGS 1.1.1. Monitoring for arsine gas will be performed during all wastewater sampling and handling activities using a RKI Instruments SC-01 Single Toxic Gas Meter (or equivalent). Work will cease at any time the PEL of 0.05 ppm is detected. After all wastewaters have been disposed of, any residual sludges in the frac tanks will be sampled for waste characterization purposes and containerized for off-site disposal.

3.1.1.7 Air Monitoring

Ambient air monitoring will be performed by the OSC per the Specifications of the CAMP provided in Appendix D of the RDWP. Any additional air monitoring (e.g. for confined space entry) will be the responsibility of the contractor performing the work.

3.1.1.8 Hauling

A permit is required under 6NYCRR Part 364 for hauling of all regulated wastes. Waste will not be delivered to any facility other than the disposal or treatment facility listed on the shipping manifest. All transporters will have a current license to haul the Site-generated wastes (i.e., Part 364 license for hazardous and non-hazardous wastes). Hauling will be performed so as to meet the following conditions:

- Any and all actions necessary to remedy situations involving material spilled in transit or mud and dust tracked off-site will be the responsibility of the contractor.
- Trucks will be 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.
- Only the previously identified transporter will perform the work.
- Contaminated materials from other projects will not be combined with materials from the project Site.

3.1.1.9 Off-site Disposal

Only the facility (or facilities) identified in the CBS Tank Closure and Debris Removal Plan will be used for the performance of the work. The facility will be properly permitted to accept the stated material.

3.1.1.10 Recordkeeping

Record maintenance will meet requirements of 6 NYCRR Parts 364 and 372. Copies of records will be submitted to the Division of Environmental Remediation (DER) as part of project reporting procedures detailed in Section 2.3 above. The copies submitted to DER will be submitted electronically. Final Manifests will be provided to the DER as an appendix to the Final Engineering Report. Recordkeeping by the Volunteer does not obviate the need for recordkeeping by the waste hauler and the repository.

3.1.2 Contaminated Floor and Subgrade Material Removal

3.1.2.1 General

Soils/materials in the footprints of the two pressure treatment buildings will be excavated or scarified and disposed off-site as detailed in Specifications #3, Appendix H. All operations associated with the handling, sampling, loading, transportation, and disposal of metals-contaminated media will be performed in compliance with Federal, State, and local regulations. The following tasks will be performed:

- Concrete floors (the entire southern pressure treatment plant, the secondary containment area of the northern pressure treatment plant, and portions of the floor) will be scarified. During the scarification process, zero dust will be permitted (i.e. scarification will be performed in a fully wetted environment or a wet scarifier will be used).

- The entire asphalt floor of the northern pressure treatment plant will be excavated and disposed of off-site.

- Sub-floor materials from the footprints of both pressure treatment plant buildings will be excavated until endpoint samples show arsenic concentrations below 32 mg/Kg or to bedrock, whichever is shallower (see Section 3.4.3, below). Excavations within the footprints of the pressure treatment plants will also proceed until all grossly contaminated material is removed. Grossly contaminated material includes materials meeting the description of grossly contaminated soils as defined by 6 NYCRR 375-1.2 (u) and material otherwise obviously impacted by site contaminants (e.g., obviously stained yellow, green or blue).

- Confirmatory endpoint samples will be collected to document the effectiveness of contaminant removal activities and the integrity of post-excavation soils.

3.1.2.2 Schedule

It is anticipated that scarification activities will require no more than one week. Drummed wastes (see 4-(d), below) must be removed from the site within 25 business days of the completion of all scarification activities. Active monitoring of the drums to ensure their integrity prior to disposal is the responsibility of the Contractor. Monitoring shall include a visual inspection of the drums no less frequent than once every five calendar days.

3.1.2.3 Health and Safety

The Contractor will, at a minimum, meet the requirements of the HASP (Appendix C of the RDWP). It is anticipated that additional Health and Safety measures will be required during scarification. The specific measures (i.e. the need for local containment and respiratory protection during operations) will be determined by the type of scarification machinery used and the efficiency of integral dust suppression mechanisms (if any). The OSC will co-ordinate with the contractor, the NYSDEC, the NYSDOH, and the Volunteer to ensure that all health and safety requirements associated with scarification are met.

3.1.2.4 Scarification Process

All concrete floor areas in the Pressure Treatment Plant Buildings will be scarified to a depth of ½" or until there is no visible evidence of yellow, green, or blue staining CCA staining, whichever is greater.

3.1.2.5 Air Monitoring

Ambient air monitoring will be performed by the OSC per the Specifications of the CAMP provided in Appendix D of the RDWP. Any additional air monitoring will be the responsibility of the contractor performing the work.

3.1.2.6 Hauling

Hauling will be performed according to the standards and protocols outlined in 3.1.1.8, above.

3.1.2.7 Off-Site Disposal

Waste materials generated during the scarification process will be managed as hazardous waste. Scarification waste will be containerized and staged pending off-site disposal. At the conclusion of concrete scarification activities all equipment used in the process will be decontaminated. Decontamination will involve the physical removal of all accumulated waste and the washing of equipment to remove contaminated fines. Washwater will be collected and managed as potentially hazardous waste, including proper containerization, characterization, and disposal.

3.1.2.8 Recordkeeping

Manifest forms required by the appropriate agencies for verifying the materials and quantities of each load in unit of volumes or weight will be retained for inclusion in the Final Engineering Report.

3.2 Building Demolition

Demolition of all on-site structures will be conducted in accordance with applicable NYSDOL (12 NYCRR Part 56) and NYSDEC (6 NYCRR Part 360) regulations for asbestos and disposition of resulting debris, respectively. A hazardous waste determination of interior surfaces of the pressure treatment plant buildings will be made prior to demolition and off-site disposal.

3.3 Site-Wide Remediation (excluding Pressure Treatment Plants)

3.3.1 Petroleum Bulk Storage Tank Removal

3.3.1.1 General

All petroleum bulk storage tanks (four aboveground tanks and three underground tanks) will be excavated, if necessary, emptied, cleaned, and disposed of off-site, as detailed in Specifications #1, Appendix H. Any PBS tank(s) subject to regulation under 6 NYCRR Parts 612 through 614 and found not to be registered will be addressed as put forth in 6 NYCRR 375-1.12(e)(2). The following tasks will be performed:

- Removal of seven (7) petroleum bulk storage tanks from the Site will be performed. These services will include draining any product in pipes back into the tanks; monitoring and making safe the tank atmosphere; cutting open the tank; pumping free of product; cleaning, removing of piping, and temporary plugging any holes in the tank; excavation from the ground (as necessary); cutting the tank up, and wrapping it in 6-mil plastic, and stockpiling it on-site; backfilling the tank grave with clean fill (provided on-site); and, off-site disposal of the tanks.

- Excavate and stockpile on-site any encountered petroleum contaminated soil associated with the PBS tanks.

- Perform the above tasks to standards that will facilitate the OSC in obtaining NYSDEC closure of the Site as a registered PBS facility.

All operations associated with the handling, loading, transportation, and disposal of tanks and/or associated piping will be performed in compliance with Federal, State, and local regulations.

3.3.1.2 Schedule

It is anticipated that tank closure activities will require no more than 20 business days, inclusive of cleaning, cutting, confirmatory endpoint sampling and off-site disposal.

3.3.1.3 Tank Closure

Tanks will be removed and disposed of off-site per the steps in 3.4.1.1, above. This section specifies different procedures for ASTs and USTs.

Aboveground Storage Tanks (ASTs):

Tanks will be visually inspected and encountered liquid will be identified (e.g., gasoline, fuel oil, waste oil, etc.) and removed from the tank by a licensed liquid waste transporter. Manifests will be prepared and signed by the OSC as representative of the Volunteer. Each tank will be cleaned of residual product/sludge and wrapped in 6 mil plastic pending off-site disposal or directly loaded onto a truck for off-site disposal. The area immediately beneath the tank will be examined for signs of staining and screened with a properly calibrated PID. In the event that no field evidence is identified, a test pit will be dug below the tank to a depth of at least five feet deep to determine if any contamination is present. One confirmatory sample will be collected from underlying soils for laboratory analysis.

Should contaminated soils be discovered, any impacted material will be excavated and stockpiled (on and under 6-mil plastic pending off-site disposal) until all such soils have been removed (in the opinion of the OSC) or until further excavation is not possible.

Confirmatory end point samples will be collected by the OSC per the protocols outlined in the QA/QC Plan (Appendix E of the RDWP). The walls of the excavation will be sampled at a rate of one sample per 30 feet of exposed wall and one sample per 300 square feet of floor.

Underground Storage Tanks (USTs):

Encountered liquid will be identified (e.g. gasoline, fuel oil, waste oil, etc.) and will be removed from the tank by a licensed liquid waste transporter. Manifests will be prepared and signed by the OSC as representative of the Volunteer. Each tank will be cleaned of residual product/sludge and, upon removal from the ground, wrapped in 6 mil plastic pending off-site disposal or directly loaded onto a truck for off-site disposal. During the excavation of USTs, the OSC will examine soils in the tank grave for any physical evidence of soil contamination and screen these soils with a properly calibrated PID. Confirmatory end point samples will be collected by the OSC per the protocols outlined in the QA/QC Plan (Appendix E of the RDWP).

If there is no evidence of a discharge, soil samples for laboratory analysis will be taken immediately after tank removal using the most appropriate of the following procedures:

- If there is no groundwater in the excavation, discrete center line soil samples will be collected from the bottom of the excavation at a frequency equal to the total length of the tank divided by five (minimum of one sample).

- If there is groundwater in the excavation, soil samples will be taken at a depth from zero to two feet beneath the tank on four foot centers across the length of the excavation. These samples will be field screened with a PID. The four samples with the highest field screening results will be submitted for the appropriate laboratory analysis.

If there is evidence of a discharge, excavation will continue until all contaminated soil is removed or until further excavation is not practical (i.e., bedrock is encountered). Once excavation is complete; soil endpoint samples will be taken to demonstrate that contamination has been removed. A minimum of 5 soil samples will be taken, consisting of 4 sidewall and 1 bottom sample for each 15 linear feet of trench. The samples will be biased based upon field screening towards the suspected location of greatest contamination.

A groundwater sample will be taken if there is evidence of a discharge but insufficient soil to conduct soil remedial action, (e.g., a tank is located in bedrock), or any portion of the tank is located within or immediately above the groundwater table. If there is any evidence of groundwater contamination (i.e., sheen or odor) a groundwater sample will be collected.

If any tank is identified that cannot be removed from the ground, approval will be sought from the NYSDEC for closure in place. Upon approval, the tank to be abandoned in place it will be cleaned and inspected and any areas of questionable integrity, including any cracks or corrosion, or evidence of discharge, will be documented. Upon completion of tank cleaning, soil sampling will be conducted by completing borings through the bottom of the tank, along the centerline, at a frequency equal to the total length of the tank divided by five (minimum of one sample) the tank will then be filled with foam or concrete. The Contractor will be responsible for ensuring that the material used to fill the tank is acceptable per Town and/or City of Poughkeepsie Building and/or Fire codes.

All samples will be analyzed as follows:

For gasoline tanks:	VOCs (USEPA Method 8260), STARS List Only PAHs (USEPA Method 8270)
For fuel oil tanks:	VOCs (USEPA Method 8260), STARS List Only PAHs (USEPA Method 8270)

Note: All laboratory results will include analyses for the 30 (10 VOC and 20 SVOC) highest concentrations of tentatively identified compounds (TICs).

3.3.2 Asphalt Paving Disposal/Reuse

Asphalt paving across the Site will be removed and disposed of off-site or reused on-site below the cover system.

3.3.3 Site-Wide Contaminated Soil Removal

3.3.3.1 General

Previously identified soils/materials contaminated with arsenic from areas outside of the pressure treatment plant buildings containing arsenic concentrations above 32 mg/Kg will be excavated and disposed of off-site (approximately 5,850 cubic yards). Confirmatory endpoint samples will be collected to document the effectiveness of contaminant removal activities and the integrity of post-excavation soils; samples will be analyzed for total weight arsenic and chromium.

Areas of petroleum contaminated soils meeting the definition of grossly contaminated soils as defined in 6 NYCRR 375-1.2 (u) will be excavated and disposed of off-site (approximately 500 cubic yards). Soils in the vicinity of the southwest corner of the Northern Pressure Treatment

Plant Building for which NYSDEC Spill #0206848 was issued will be remediated to 6 NYCRR Subpart 375-6 "restricted residential" standards. Confirmatory endpoint samples analyzed (for arsenic and chromium) will be collected to document the effectiveness of contaminant removal activities and the integrity of post-excavation soils.

All operations associated with the handling, sampling, loading, transportation, and disposal of metals- and petroleum-contaminated soils will be performed in compliance with Federal, State, and local regulations as detailed in Specifications #3, Appendix H.

At all locations where clean imported soils will overlay remaining on-Site soils, a demarcation layer will be placed prior to placement of the clean soils.

3.3.3.2 Schedule

It is anticipated that excavation activities will require no more than 8 weeks, inclusive of sampling, backfilling, and regrading.

Stockpiled soil will be removed from the site within 25 business days of the completion of all excavation activities. Stockpiled soil will be actively monitored to ensure proper coverage.

3.3.3.3 Excavation Process

Excavation will be conducted according to the following procedures:

- The dimensions of soil excavation will be marked in the field by the OSC prior to the commencement of excavation work.

- Excavated materials from within and beneath the two pressure treatment buildings will be managed as hazardous waste. Excavated soils from locations outside the footprints of the two pressure treatment plant buildings will be managed as non-hazardous waste unless they exhibit one or more of the characteristics of hazardous waste.

- In areas of petroleum contamination, the OSC will screen soils proposed for post-excavation sampling with a PID and will record PID readings in Field Notebooks. PID readings in excess of 500 ppmge will be considered adequate justification to continue soil excavation.

- Excavated soils will be stockpiled on 6-mil plastic with proper berming to prevent water accumulation.

- Excavation equipment will be decontaminated 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. Washwater will be collected and managed as potentially hazardous waste, including proper containerization and off-site disposition.

- OSC will sample the soils remaining after excavation. Data documenting the absence of soils with metal and/or 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.

- It is likely that soil present at and below the seasonal groundwater level will require excavation. Although dewatering will be performed where necessary (see Section 3.4.3.4, below), it is anticipated that saturated soils may require stockpiling on-site to dry sufficiently prior to off-site disposal. The stockpiles will be placed on 6-mil plastic and bermed as necessary to prevent runoff.

3.3.3.4 Pumping Encountered Groundwater

Dewatering is expected to be necessary at one location only, in the area of 8' depth excavations in the southern portions of the Northern Pressure Treatment Plant Building. It is anticipated that the excavation will take place in stages so that the whole of the proposed area to be excavated to 8' below surface grade will not be open at one time. The precise division of the area to be excavated will be determined in the field by the contractor or an OSHA-qualified person; however, each stage of the excavation is unlikely to exceed 20' x 20'.

3.3.3.5 General Description

Prior to excavation, the excavation contractor will prepare and submit for NYSDEC approval a Dewatering Plan (Plan). This Plan will provide details and drawings which will adequately describe the procedures to be followed to temporarily lower on-site water levels to elevations that permit excavation of contaminated soils on the Site. Particular concern will be placed on management of groundwater in the area of proposed soil removal under the Northern Pressure Treatment Plan Building, because of the hazardous nature of these soils and the expected depth of excavation.

At a minimum, this Plan (to be prepared by a Project Engineer licensed in New York) will contain the following (provided in greater detail in the Specifications for Soil Removal in Appendix H:

- A description of runoff control procedures to ensure that extracted groundwater does not migrate off the Site onto adjoining properties of the Hudson River.

- A procedures for containerizing the extracted water (sized appropriately based on projected required pumping rates) and for filtering sediment and other suspended solids from the containerized water.

- A procedure for testing the containerized water prior to discharge and contingencies for treating the water to remove dissolved compounds which exceed guidance levels.

- A procedure for discharging the treated water in a manner that will not result in ponding or other surface manifestations.

- A contingency for removing the containerized water in the event that contaminant concentrations cannot be reduced to below guidance levels.

This Plan will be prepared by a Professional Engineer licensed to practice in New York State and will be in accordance with all requirements set forth in 6NYCRR Part 375 and DER-10. This Plan will be submitted to the NYSDEC and the NYSDOH and will not be implemented until written approval from these Agencies is received.

3.3.3.6 Air Monitoring

Ambient air monitoring will be performed by the OSC per the Specifications provided in Appendix D of the RDWP.

3.3.3.7 Sampling of Soils Proposed to Remain

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 lateral extent of the excavation area. At a minimum, one sample will be collected for every 900 square feet of excavation floor, and one wall sample will be collected for every 30 linear feet of excavation wall. Additional samples may be required if the excavation of a particular area of concern extends to the Site boundary.

All samples will be grab samples, with soils in the vicinity of the samples' location screened for overt evidence of contamination (e.g., odors or staining) and using a PID. Where field evidence of petroleum contamination is present, PID readings will be recorded in field notebooks and will be used in selecting sample locations; that is, soils exhibiting higher PID readings will be selected for sampling.

Supplemental Sampling

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 the action level of 32 mg/Kg for arsenic and will be remediated to 6 NYCRR Subpart 375-6 "restricted residential" standards for VOCs and SVOCs where field evidence of petroleum contamination is encountered. The need for additional excavation will be determined by the OSC, the Volunteer, and the NYSDEC.

Supplemental sampling will be restricted to total weight metals unless field screening of soils with the PID identifies PID readings in excess of 100 ppm. Soils exhibiting greater than 100 ppm will be analyzed for volatile organic compounds using USEPA Method 8260 and PAHs using USEPA Method 8270.

Sample Collection Procedures

Sample collection and handling procedures will be performed in accordance with the protocols set forth in the QA/QC Plan included as Appendix E of the RDWP.

3.3.3.8 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.

3.3.3.9 Soil Disposal

Upon receipt of waste characterization laboratory data results, OSC will submit to the Volunteer and the NYSDEC the following information:

- 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.

- 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.

- 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.

3.3.3.10 Disposal Analysis

Disposal of contaminated soil will be conducted in a manner that meets all requirements of applicable state and federal regulations. Documentation of appropriate licensing of the proposed soil depository must be submitted by the OSC to the Volunteer prior to any contaminated soil being removed from the Site. The OSC shall be responsible for collecting representative samples of stockpiled material and having those samples analyzed to gain disposal facility approval. The OSC will notify the Volunteer within 48 hours of sample collection. The list of analytical parameters shall be established at the discretion of the OSC and the disposal facility. A copy of all analytic results shall be submitted to the Volunteer for its record.

3.3.3.11 Hauling

- Waste will not be delivered 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).

- Any and all actions will be performed necessary to remedy situations involving material spilled in transit or mud and dust tracked off-site.

- Trucks will be 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.

- Only the transporter identified in the Soil Disposal Plan will perform the work.

- Contaminated materials from other projects will not be mixed with materials from the project site.

- Trucks approaching and leaving the Site use only the approved truck route. A Truck Route Map is included as Figure 4, Appendix B. The Contractor will further ensure that no truck (empty or loaded) attempts to cross the Hoffman Street Bridge. This bridge has a posted weight limit of 10 tons and no vehicle exceeding that weight is permitted to use the bridge.

3.3.3.12 Recordkeeping

Manifest forms required by the appropriate agencies for verifying the materials and quantities of each load in unit of volumes or weight will be retained for inclusion in the Final Engineering Report.

3.4 Clean Fill Importation

3.4.1 General

A volume of clean fill will be imported to the Site sufficient to complete the following tasks:

a) backfill areas from which contaminated soils have been removed; and

b) for the installation of a barrier layer over vegetated areas will be imported to the Site.

The soils proposed for importation will be subject to sampling and will meet the NYSDEC Division of Environmental Remediation's criteria for soil covers and/or backfill. It is currently estimated that 38,000 cubic yards of clean fill will be required to complete the Site's barrier layer. All clean fill soils will be placed over a demarcation layer.

All operations associated with the handling, loading, transportation, and importation of clean fill will be performed in compliance with Federal, State, and local regulations as detailed in Specifications #4, Appendix H. All work will be performed consistent with the Quality Assurance/Quality Control Plan (Appendix E). The OSC will perform soil sampling and will communicate with the NYSDEC to obtain approval for importation of the sampled soils.

3.4.2 Schedule

Soil importation will occur in accordance with the schedule set forth in Section 2.1.2 above. Soils may be imported onto the Site at any time during Site remediation so long as all of the procedures set forth in this Section are satisfied.

3.4.3 Sampling

Methodology

Soils from each source proposed for importation will be properly characterized in the field and findings will be recorded in logbooks. Material selected for sampling will be obtained in a manner consistent with NYSDEC sample collection protocols. Decontaminated stainless steel trowels and dedicated gloves will be used at each sample location to place the material into laboratory-supplied glassware. Prior to and after the collection of each material sample, the sample collection instrument will be properly decontaminated to avoid cross-contamination between samples.

Analysis and Frequency

Samples will be analyzed for the full Target Compound List/Target Analyte List (TCL/TAL) plus top 10 TICs for VOCs and top 20 TICs for SVOCs:

- Target Compound List for Volatile Compounds (plus top 10 TICs)
- Target Compound List for Semi-volatile Compounds (plus top 20 TICs)
- Target Compound List for Pesticides/Aroclors
- Target Analyte List for Metals and Cyanide

The following Sampling frequency will be adhered to:

Volume (cubic yards)	Sampling and Analysis Requirements	
	VOCs	TCL/TAL
First 1,000	7 grab samples	2 composite samples
Next 4,000	1 grab per 1,000 cubic yards	1 composite per 1,000 cubic yards
Thereafter	1 grab per 5,000 cubic yards	1 composite per 5,000 cubic yards

All sample containers will be placed in a cooler and will be continuously maintained at cold temperatures prior to transport to a New York State Department of Health-certified laboratory for chemical analyses. Appropriate chain of custody procedures will be followed.

The clean-soil for use in back filling and/or creating the soil cover must meet the lower of the Soil Cleanup Objectives (SCOs) for Protection of Public Health, "Restricted Residential" Use, as specified in 6 NYCRR Part 375, Table 375-6.8(b) and the SCOs for the protection of groundwater, as specified in 6 NYCRR Part 375-6.7(d).

3.4.4 Air Monitoring

Ambient air monitoring will be performed at the Site by the OSC per the Community Air Monitoring Plan provided in Appendix D of the RDWP.

3.4.5 Hauling

The Contractor shall not import soil from any source/ facility other than the source approved by the OSC, the Volunteer, and the NYSDEC. All transporters must have a current license to haul the clean fill.

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.

The Contractor shall only use the transporter identified in his bid 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.

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. The Contractor will further ensure that no truck (empty or loaded) attempts to cross the Hoffman Street Bridge. This bridge has a posted weight limit of 10 tons and no vehicle exceeding that weight is permitted to use the bridge.

The Contractor shall not combine materials from other projects with materials to be imported to the Site.

3.4.6 Stockpile Location

Unless otherwise directed, soils imported to the site will be stockpiled at a location to the northeast of the Southern Pressure Treatment plant Building (See Soil Importation Map, part of Attachment A of these Specifications).

3.4.7 Stockpile Maintenance

Secure stockpiled material with 6-mil PVC bottom and top cover in locations indicated by the Volunteer to ensure minimum disruption of Site activities. Active monitoring of the stockpiled soil to ensure proper coverage is the responsibility of the OSC. 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 significant storm event.

3.4.8 Recordkeeping

Manifest forms required by the appropriate agencies for verifying the materials and quantities of each load in unit of volumes or weight will be retained for inclusion in the Final Engineering Report.

3.5 Soil Cover Installation

3.5.1 General

Subsequent to the removal of contaminated soils, a soil cover will be constructed over all vegetated areas to prevent exposure to remaining Site soils as detailed in Specifications #5, Appendix H. Figures showing the extent of the soil cover and cross sections of the cover are included as Appendix B, Figures 5 and 5A, 5B, and 5C. Alternatively, the original soils to the east of the western boundary will be excavated such that at the property boundary, the final grade (i.e. fill soils overlain with a two foot cover) will be the same elevation as the adjoining property. If acceptable to the owner of the adjoining property (State of New York), the preferred action along the western property boundary will be as follows: 2 foot soil cover will be extended onto this adjoining property and gradually reduced in thickness. Upon completion of the installation of the barrier layer, a fence will be installed along this western property boundary. Figures 5D and 5E provide representations of both alternate plans for the western site boundary. The two-foot cover will consist of clean soil underlain by an indicator such as orange plastic snow fence to demarcate the cover soil from the subsurface soil. The top six inches of soil will be of sufficient quality to support vegetation. Non-vegetated areas (buildings, roadways, parking lots etc.) will be covered by a newly installed paving system or concrete at least 6" thick. The two-foot soil cover (with demarcation layer) will be installed across the entire site within three months of the completion of other remedial tasks if Site development activities have not been initiated.

The cover of certified clean soil will be placed as a barrier layer at all areas that are not covered by the proposed on-site structures. The purpose of the cover will be to provide a barrier between the surface and low-level concentrations of metals and/or petroleum contamination, which may remain on the Site following the excavation of grossly impacted materials.

A marker layer consisting of an easily identifiable, non-biodegradable layer such as high visible porous plastic mesh will first be placed on all areas that are targeted for the placement of the barrier layer. After the marker layer has been appropriately placed, a minimum of 24 inches of certified clean soil will be placed on the Site in the designated areas. Soil will be placed and compacted in lifts not exceeding 12 inches compacted depth. For all covered areas having

exposed soils, the top six inches of soil will contain sufficient organic matter to permit re-vegetation. This final layer may be replaced with topsoil in areas where final landscaping has been determined. All finished grades that receive topsoil shall be raked smooth, seeded and mulched, and water periodically as necessary to insure proper stabilization of soil areas.

The 24-inch soil barrier layer may also be substituted by any of the following:

- asphalt or concrete of sufficient thickness
- on-Site buildings

The specific thickness of each of these alternative materials will be dependent on ultimate Site development plans but will not be less than 6". The determination to utilize substitute materials will be made based on design considerations but will not be considered approved until written approval from the NYSDEC is received. A grading and cover plan illustrating the locations of structures, parking areas, landscaping and clean fill or equivalent substitute as well as the depth to contaminated soil will be provided to the NYSDEC after site development plans have been finalized. It will be the responsibility of the Volunteer to provide adequate justification for any and all proposed substitutes.

3.5.2 Schedule

The anticipated schedule for soil importation is set forth in Section 2.1.2 above.

3.5.3 Recordkeeping

Manifest forms required by the appropriate agencies for verifying the materials and quantities of each load in unit of volumes or weight will be retained for inclusion in the Final Engineering Report.

3.6 Vapor Barrier and Subslab Depressurization System

This discussion of a vapor barrier and SSDS is provided for general information purposes only. The proposed remediation at this time does not include these actions, although they will be required if and when Site development and building construction occurs. It is anticipated that remedial excavation activities will result in the removal of all significant sources of volatile organic soil vapors. As a supplemental preventive measure, a vapor barrier underlain by a SSDS will be installed (if necessary) under the proposed on-Site structures in order to eliminate potential vapor migration.

The design and installation of the SSDS will be conducted in accordance with the concepts and practices outlined in (1) the Radon Prevention in the Design and Construction of Schools and Other Large Buildings (RP Document), prepared by the United States Environmental Protection Agency (USEPA) [dated June 1994] and (2) NYSDOH's GESVI, and will consider all soil and vapor sampling data.

3.6.1 System Design and Installation

The sub-slab vapor barrier will consist of a minimum 10 mil plastic liner (or equivalent), which overlies a highly porous substrate (e.g., clean 1 ½" aggregate) containing a horizontal network of SSDS piping (perforated four-inch slotted PVC pipes). The horizontal piping network will be connected to non-perforated vertical piping which extends above the roofline of the proposed building. All vapor barrier penetrations and overlapping sections of plastic liner will be appropriately sealed, as will any penetrations or significant openings in sub-grade portions of foundation slabs or foundation walls. Low-grade vacuum pumps or fans, sized to maintain vacuum beneath the foundation slab, will be connected to the vertical piping system. System discharge points will be located above the roofline and at a sufficient distance from roof-mounted

air intakes to prevent re-entrainment of airborne contaminants. A visual pressure indicator (U-tube manometer or magnehelic gauge) will be installed for regular inspection purposes. In addition, an audible and/or visual fail-safe system will be installed to alert maintenance personnel to conditions of insufficient vacuum, which may be cause by vacuum pump/fan failure. The precise system design will be developed following confirmation of final soil conditions.

3.6.2 System Start-up, Testing and Maintenance

System start-up and initial testing will occur after the concrete slabs of the on-Site structures have been poured. The following activities will be conducted:

1. Prior to system start-up all visible system components will be visually inspected for verification of proper installation. The system will be temporarily started and all vacuum pumps/fans will be inspected for proper functioning. The system will be shut off and documentation of system conditions will be maintained in field logbooks.

2. Temporary monitoring points will be installed throughout the building by drilling ¼ inch – ½ inch diameter holes through the slab. An assessment of sub-lab pressure, both with the system off and with the system temporarily on, will be made at each monitoring point using a digital micro-manometer. A difference in pressure of -0.002 inches of water column at each monitoring point, or a sustained sub-slab pressure of at least -0.01 inches of water column with the system on, will indicate proper system functioning. Observed pressure readings that fall short of these standards may indicate the need for system modification.

3. Carbon filtration will be installed at each system discharge point if field observations indicate the potential for significant vapors in the emission. The system will be operated for a minimum of 12 hours and subsequently, pre- and post carbon filtration effluent air samples will be collected and analyzed for VOCs (USEPA Method TO-15). These data will be used to determine the need for and extent of an air quality permit (including the need for continued air discharge treatment).

4. The system will be permanently engaged following the completion of system modifications, the addition of any effluent air treatment, and the receipt of any necessary permits.

5. After the system has been permanently engaged the Volunteer will be responsible for inspections of the system's pressure. In addition, the system fans will be inspected periodically for signs of wear and/or failure.

3.6.3 Post-Construction Indoor/Outdoor Air Sampling

The Volunteer will conduct post-construction indoor and outdoor air quality sampling to document on-Site air quality both within the on-Site structure(s) and the exterior areas. The Volunteer will consult with the NYSDEC and the NYSDOH prior to sampling. Sampling of indoor air quality will be performed in accordance with established NYSDOH protocols, outlined in the GESVI, and will include analyses for the VOCs previously detected in on-Site soil. All work will be performed consistent with the Sit's Quality Assurance/Quality Control Plan (Appendix E).

Three air samples will be collected to determine external air quality. Prior to sample location, meteorological data on wind velocity and direction will be collected to provide quality assurance to the data set. Measurable precipitation and/or average wind speed in excess of ten miles per hour will be conditions which will necessitate rescheduling of outdoor air quality sampling. The sampling event will consist of one upwind location and two downwind locations. Internal air quality will be determined by collecting and analyzing three air samples at locations inside the structure. Samples will be analyzed for VOCs using USEPA Method TO-15. All sample locations will be shown on a Site map to be provided to the NYSDEC in the Final Report.

3.7 Groundwater Monitoring

Groundwater monitoring wells will be installed subsequent to the installation of the soil cover. The wells will be installed and sampled per the specifications of the Site Management Plan (SMP) to be developed subsequent to the completion of remedial activities.

3.8 Institutional and Engineering Controls

3.8.1 Environmental Easement

An institutional control in the form of an environmental easement will be imposed on the Site that will:

a. Limit the use and development of the property to restricted residential use, which will also permit commercial or industrial uses;
b. Require compliance with the approved SMP;

c. Restrict the use of groundwater and/or surface water as a source of potable or process water, without necessary water quality treatment as determined by Dutchess County Department of Health; and,

d. Require property owner to submit to the NYSDEC a periodic certification of institutional and engineering controls. Per 6 NYCRR Part 375-1.9(f) and (g), the "certificate of completion may be transferred to successors and assigns of the remedial party or parties named in the certificate" and "any party to whom a certificate of completion is transferred shall be responsible for the operation and maintenance of any required engineering controls and compliance with all required in accordance with the approved site management plan and environmental easement." As such, the party that holds the certificate of completion will be responsible for site management and periodic certifications.

3.8.2 Engineering Controls

3.8.2.1 Barrier Layer

The Site will be overlain with a barrier layer that will consist of a minimum thickness of two feet of certified clean fill. A detailed description of all activities necessary to install this barrier layer is provided in Section 3.4 and 3.5 above. The barrier layer may consist of pavement (consistent with thicknesses specified in DER-10) in limited areas near Dutchess Avenue to maintain Site access.

3.8.2.2 Vapor Barrier and Subslab Depressurization System

In conjunction with future building construction, vapor barriers and subslab depressurization systems will be installed, consistent with the detailed description provided in Section 3.6 above.

3.8.3 Site Management Plan

Subsequent to the completion of remedial activities a Site Management Plan (SMP) will be developed for the Site which will include the following institutional and engineering controls:

a. Management of the final cover system to restrict excavation below the soil cover's demarcation layer, pavement, or buildings. Excavated soil will be tested, properly handled to protect the health and safety of workers and the nearby community, and will be properly managed in a manner acceptable by the NYSDEC;

b. Continued evaluation of the potential for vapor intrusion for any buildings developed on the Site, including the provision for mitigation of any impacts identified;

c. Monitoring of groundwater; and,

d. Identification of any use restrictions on the Site.

The property owner will provide a periodic certification of institutional and engineering controls, prepared and submitted by a professional engineer or such other expert acceptable to the Department, until the Department notifies the property owner that this certification is no longer needed. This submittal will:

a. Contain certification that the institutional controls and engineering controls put in place are still in place and are either unchanged from previous certification or are compliant with Department-approved modifications;

b. Allow the Department access to the Site; and,

c. State that nothing has occurred that will impair the ability of the control to protect public health or the environment, or constitute a violation or failure to comply with the Site Management Plan unless otherwise approved by the Department.

3.9 Documentation of Site Remediation and/or Closure

At the completion of all services specified in the RDWP, a Final Engineering Report (FER) will be prepared. The FER will include results of laboratory analyses generated during activities described in the RDWP, waste transport/disposal manifests from all soil excavation and disposal activities, proof of vapor barrier and SSDS installation (e.g., photographs, field notes) and documentation of SSDS effectiveness, and maps illustrating Site closure activities. The FER will include “as-built” drawings stamped and signed by a professional engineer showing the surveyed locations of the extents of excavations; areas of backfill (if different); cover system construction; and sample locations. Also, the FER will be signed, certified and stamped by a PE licensed to practice in the State of New York and will affirmatively document that all remedial measures described in the RDWP have been properly implemented ad will include the following certification language:

"I,_____, am currently a registered professional engineer licensed by the State of New York, I had primary direct responsibility for implementation of remedial activities, and certify that the remedial design was implemented and that all construction activities were completed in substantial conformance with the Department-approved Remedial Design.

I certify that the data submitted to the Department with this Final Engineering Report demonstrates that the remediation requirements set forth in the Remedial Design and in all applicable statutes and regulations have been or will be achieved in accordance with the time frames, if any, established for the remedy.

I certify that the use restrictions, Institutional Controls, Engineering Controls, and/or any operation and maintenance requirements applicable to the Site are contained in an environmental easement created and recorded pursuant ECL 71-3605 and that all affected local governments, as defined in ECL 71-3603, have been notified that such easement has been recorded. I certify that the Site Management Plan has been submitted for the continual and proper operation, maintenance, and monitoring of all Engineering Controls employed at the Site, including the proper maintenance of all remaining monitoring wells, and that such plan has been approved by the Department.

I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.I, [name], of [business address], am certifying as Owners designated Representative."

The FER will be submitted to the NYSDEC for review and approval.

The FER will certify that all data have been submitted in the NYSDEC-approved Electronic Data Delivery (EDD) format.

4.0 GOVERNING DOCUMENTS

All remedial work performed under this RDWP will be in full compliance with governmental requirements, including Site and worker safety requirements mandated by Federal OSHA and with the governing documents described in this section of the RDWP.

4.1 Site Specific Health and Safety Plan

The Site Specific Health and Safety Plan (HASP) incorporating a Community Health and Safety Plan and requirements defined in this RAWP pertain to all remedial and invasive work performed at the Site until the issuance of a Certificate of Completion. A copy of the HASP is provided as Appendix C of this report.

The HASP will be reviewed with Site personnel and appropriate sub-contractors prior to the initiation of fieldwork. All proposed work will be performed in accordance with the HASP.

4.2 Community Air Monitoring Plan

The NYSDOH Generic Community Air Monitoring Plan (CAMP) (provided in Appendix D) will be initiated during all ground intrusive activities, and during any other fieldwork that is reasonably likely to generate significant dust or vapors. The implementation of this CAMP will document the presence or absence of VOCs and dust in the air surrounding the work zone, which may migrate off-site due to fieldwork activities. This CAMP provides minimum requirements for implementing more stringent dust and emission controls based on air quality data.

Ameliorative procedures may include reducing the surface area of contaminated soil being disturbed at one time, watering exposed soils to reduce fugitive odors, or stopping excavation activities. Dust suppression activities will be conducted during construction activities that will disturb on-site soils, including misting, reduction in soil movement, or cessation of excavation.

4.3 Quality Assurance/Quality Control Plan

A Quality Assurance/Quality Control Plan (QA/QC), detailing procedures necessary to generate data of sufficient quality and quantity to represent subsurface conditions at the Site, has been provided as Appendix E of this report.

4.4 Contingency Plan

A Contingency Plan providing general guidance on the handling and disposal of formerly unknown materials that may potentially be encountered during excavation at the Site. Materials governed by this Contingency Plan are those that must be handled differently than all other materials excavated on the site as a result of, but not limited to, specified environmental regulations, including 6NYCRR Part 360 and 6NYCRR Part 612-614. The Contingency Plan is included as Appendix F.

4.5 Erosion and Sedimentation Control Plan

Preventative measures that will be taken to protect the Site and adjacent properties from soil erosion and sedimentation during remedial activities. The E&SC Plan includes a location map including the proximity of the Site to the Hudson River, roads, etc; an existing conditions Site plan; and, a grading plan including finished elevations; erosion prevention and sediment control measures including the location and type of all erosion and sediment controls (i.e., silt fence, stabilized construction entrance, etc.) and sequencing of the controls. The Erosion and Sedimentation Control Plan prepared by Maser Consulting P. A. is included as Appendix J.

4.6 Remedial Task Specifications

Detailed specifications for the following remedial tasks are included as Appendix H:

1 *Petroleum Bulk Storage Tank Closure Specifications*
2 *Chemical Bulk Storage Tank and Debris Removal Specifications*
3 *Excavation and Disposal of Contaminated Material Specifications*
4 *Clean Fill Importation Specifications*
5 *Soil Cover Installation Specifications*

5.0 CERTIFICATION STATEMENT

"I Philip Bell certify that I am currently a NYS registered Professional Engineer and that this Remedial Design Work Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10)."

Philip Bell	6/23/11	
Professional Engineer	Date	Signature

APPENDIX A

Reference

REFERENCES

Abbreviations and Acronyms

BCP	Brownfield Cleanup Program
bsg	below surface grade
CBS	Chemical Bulk Storage
CCA	Chromated Copper Arsenate
QA/QC	Quality Assurance/Quality Control
CY	Cubic Yard
DUSRs	Data Usability Summary Reports
EC	Engineering Controls
ELAP	Environmental Laboratory Approval Program
GC	General Contractor
IC	Institutional Controls
msl	mean sea level
mg/Kg	milligrams per kilogram
mg/m^3	milligrams per cubic meter
NYCRR	New York Codes, Rules, and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYSDOL	New York State Department of Labor
OSC	On-Site Coordinator
OSHA	Occupational Safety and Health Administration
PBS	Petroleum Bulk Storage
PCBs	polychlorinated byphenyls
PE	Professional Engineer
PID	Photo-Ionization Detector
ppb	parts per billion
ppm	parts per million

RD	Remedial Design
SBL	Site Background Level
SCG	Standards, Criteria, and Guidance Values
SCOs	Soil Cleanup Objectives
SPDES	State Pollutant Discharge Elimination System
SSDS	Sub-Slab Depressurization System
SVOCs	Semi-volatile Organic Compounds
TAL	Target Analyte List
TCL	Target Compound List
TPH-DROs	Total Petroleum Hydrocarbons – Diesel Range Organics
USEPA	United States Environmental Protection Agency
VOCs	Volatile Organic Compounds

Documents and Publications

BCP Guide	Draft Brownfield Cleanup Program Guide, prepared by NYSDEC, dated May 2004.
CAMP	Community Air Monitoring Plan, prepared by NYSDOH (included in DER-10), dated December 2002.
DER-10	Division of Environmental Remediation -10, Technical Guidance for Site Investigation and Remediation, prepared by NYSDEC, dated May 2010.
FER	Final Engineering Report
GESVI	Guidance for Evaluating Soil Vapor Intrusion in the State of New York, prepared by NYSDOH, dated October 2006.
HASP	Health and Safety Plan, prepared by ESI, dated September 2009.
QA/QC	Quality Assurance/Quality Control Plan, Prepared by ESI, dated September 2009.
RAA/RWP	Remedial Alternatives Analysis and Remedial Work Plan, prepared by ESI, dated September 2008.
RDWP	Remedial Design Work Plan, prepared by ESI, dated September 2009.
RIR	Remedial Investigation Report, prepared by Fuss & O'Neill, dated August 2007.
RIWP	Remedial Investigation Workplan, prepared by Fuss & O'Neill, dated October 2005.

SIWP Supplementary Investigation Workplan, prepared by ESI, dated March 2008.

SIR Supplementary Investigation Report, prepared by ESI, dated September 2008.

TAGM 4046 Technical and Administrative Guidance Memorandum #4046 including subsequent NYSDEC memoranda, prepared by NYSDEC, dated January 1994.

TOGS 1.1.1 Technical and Operational Guidance Series 1.1.1, Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, prepared by NYSDEC, dated June 1998.

APPENDIX B

Figures

Figure 1 Property Location Map
Former A.C. Dutton Lumber Yard
1 Dutchess Avenue
Poughkeepsie, New York

N

ESI File: OP08022.50

March 2011

Appendix B

N

1
Northern Pressure Treatment Plant
2,000 gallon AST (empty)
3,000 gallon AST (empty
1,000-gallon AST (empty)
2
Southern Pressure Treatment Plant
chemical storage ASTs (unknown capacity)
secondary containment area
3
4
5
6
7
8
9
10
11
20,000-gallon UST
3,000-gallon AST
1,500-gallon vaulted UST
1,000-gallon UST
secondary containment area containing five chemical bulk storage tanks (unknown capacity) and two pressure treatment vessels
former railroad
DUTCHESS AVENUE
Hudson River

100 feet

Legend:

- property outline
- pressure treatment plant buildings
- existing buildings
- area of petroleum impacts
- area of arsenic contamination above 32 mg/Kg (0-1')
- area of arsenic contamination above 32 mg/Kg (0-3')
- former structures

1 = area #

Notes:

Map based on Fuss and O'Neill proposed "Remedial Action Map" (July 2006)

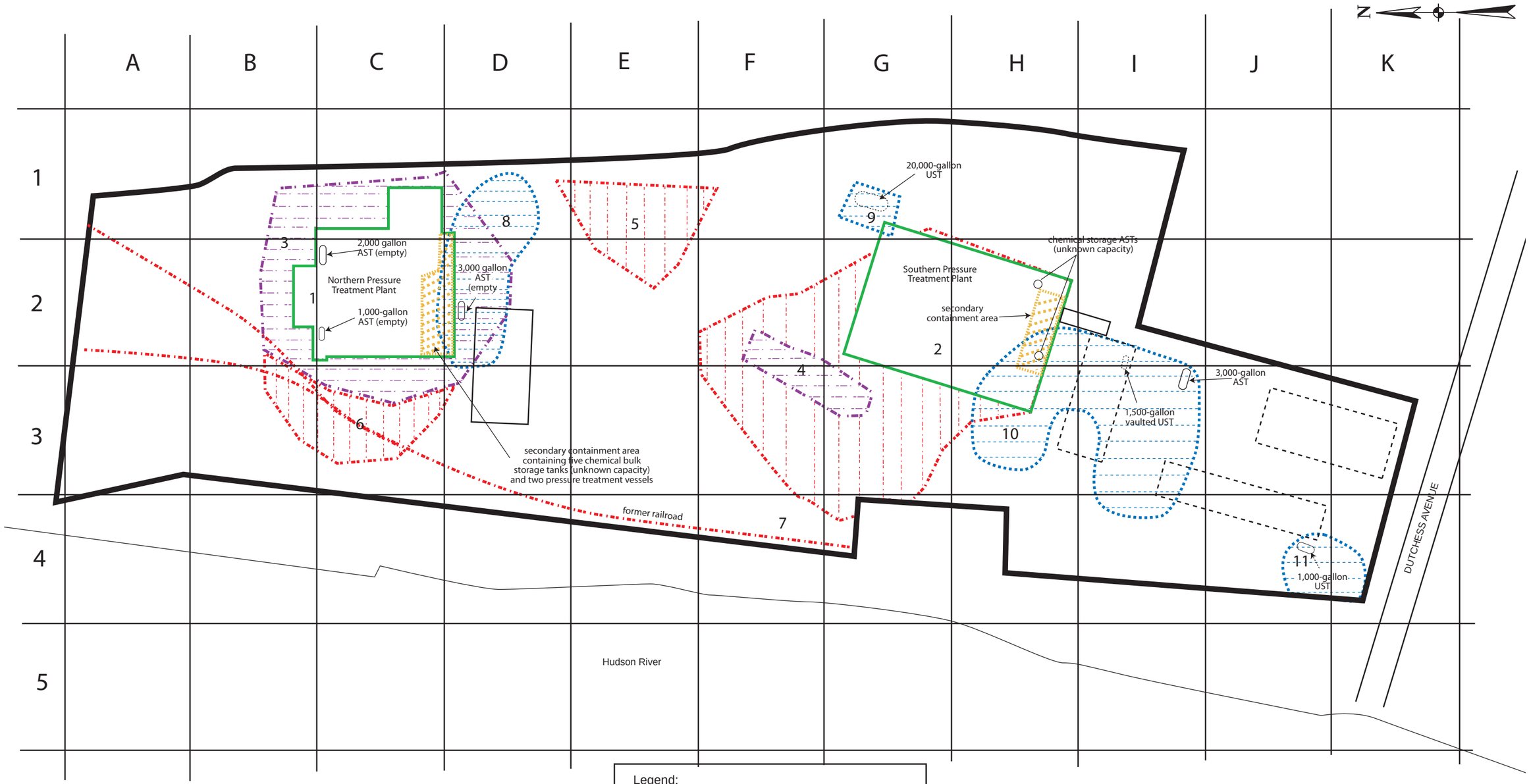
Figure 2 - Site Remediation Map
(Arsenic Remediated to SBL of 32 mg/kg)

Former A.C. Dutton Facility
1 Dutchess Avenue
Poughkeepsie, New York

ESI File: OP08022.50

March 2011 | Appendix B

Ecosystems Strategies, Inc.



Legend:

- property outline
- pressure treatment plant buildings
- existing buildings
- area of petroleum impacts
- area of arsenic contamination above 32 mg/Kg (0-1')
- area of arsenic contamination above 32 mg/Kg (0-3')
- former structures

1 = area #

Notes:

Map based on Fuss and O'Neill proposed "Remedial Action Map" (July 2006)

Figure 3 - Alpha-Numeric Grid Site Map

Former A.C. Dutton Facility
1 Dutchess Avenue
Poughkeepsie, New York

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March 2011 | Appendix B

Ecosystems Strategies, Inc.

Figure 4 - Truck Route Map
Former A.C. Dutton Facility
1 Dutchess Avenue
Poughkeepsie, New York

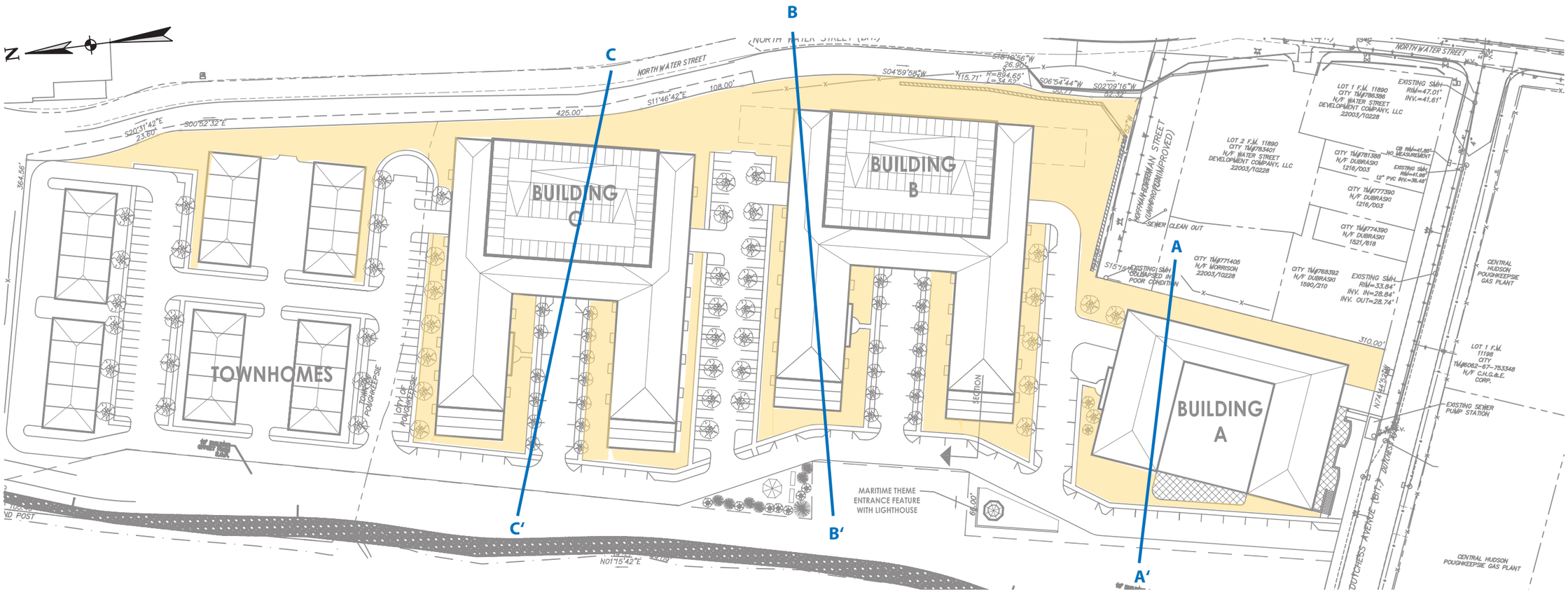
N

ESI File: OP08022.50

March 2011

Appendix B

Ecosystems Strategies, Inc.



area of soil cover

section lines

Proposed Site Plans as shown in this and other drawings within this document are schematic; changes may be made based on reviews by local agencies.

Base map by Minno & Wasko Architects and Planners dated 1/20/2011

Figure 5 - Soil Cover Map

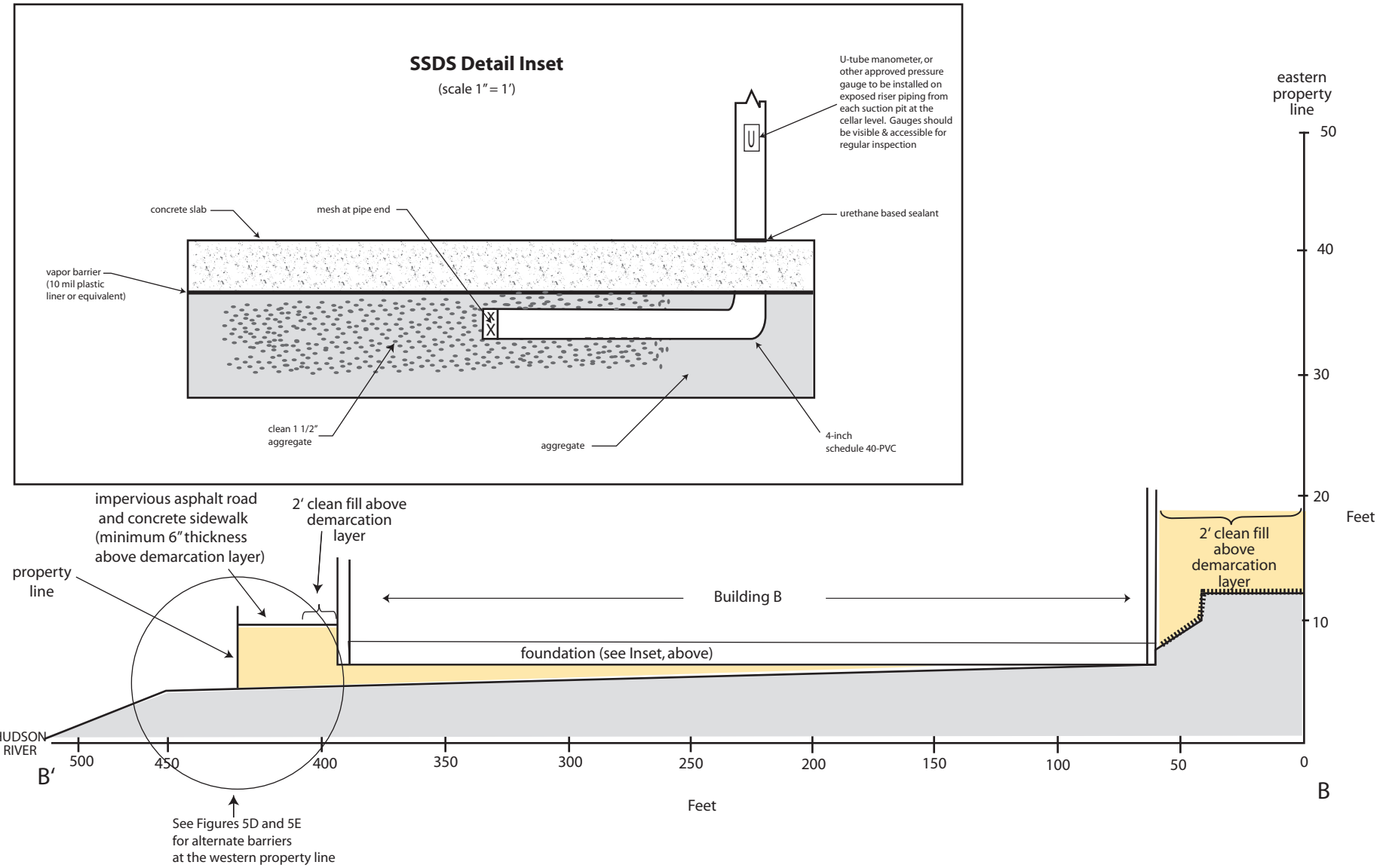
Former A.C. Dutton Facility
1 Dutchess Avenue
Poughkeepsie, New York

ESI File: OP08022.50

Scale as shown

March 2011 | Appendix B

Ecosystems Strategies, Inc.



All feature locations are approximate. This map is intended as a schematic to be used in conjunction with the associated report, and it should not be relied upon as a survey for planning or other activities.

Figure 5B - Cross Section B

Former A.C. Dutton Facility
1 Dutchess Avenue
Poughkeepsie, New York

Legend:

- imported fill
- existing soils
- demarcation layer

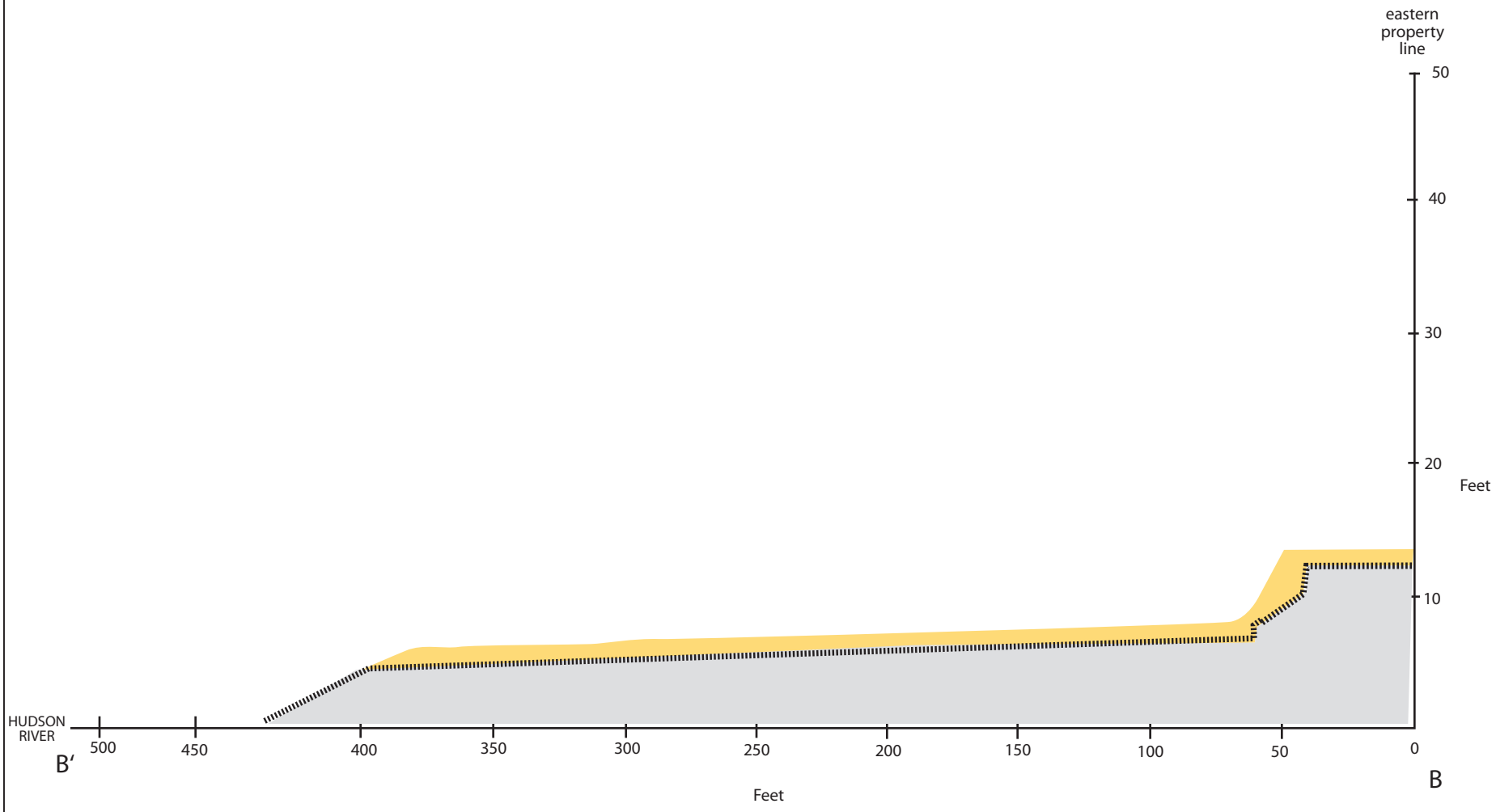
ESI File: OP08022.50

March 2011

Scale as shown

Appendix B

Ecosystems Strategies, Inc.



All feature locations are approximate. This map is intended as a schematic to be used in conjunction with the associated report, and it should not be relied upon as a survey for planning or other activities.

Figure 5B - Cross Section B-1

Former A.C. Dutton Facility
1 Dutchess Avenue
Poughkeepsie, New York

Legend:

- imported fill
- existing soils
- demarcation layer

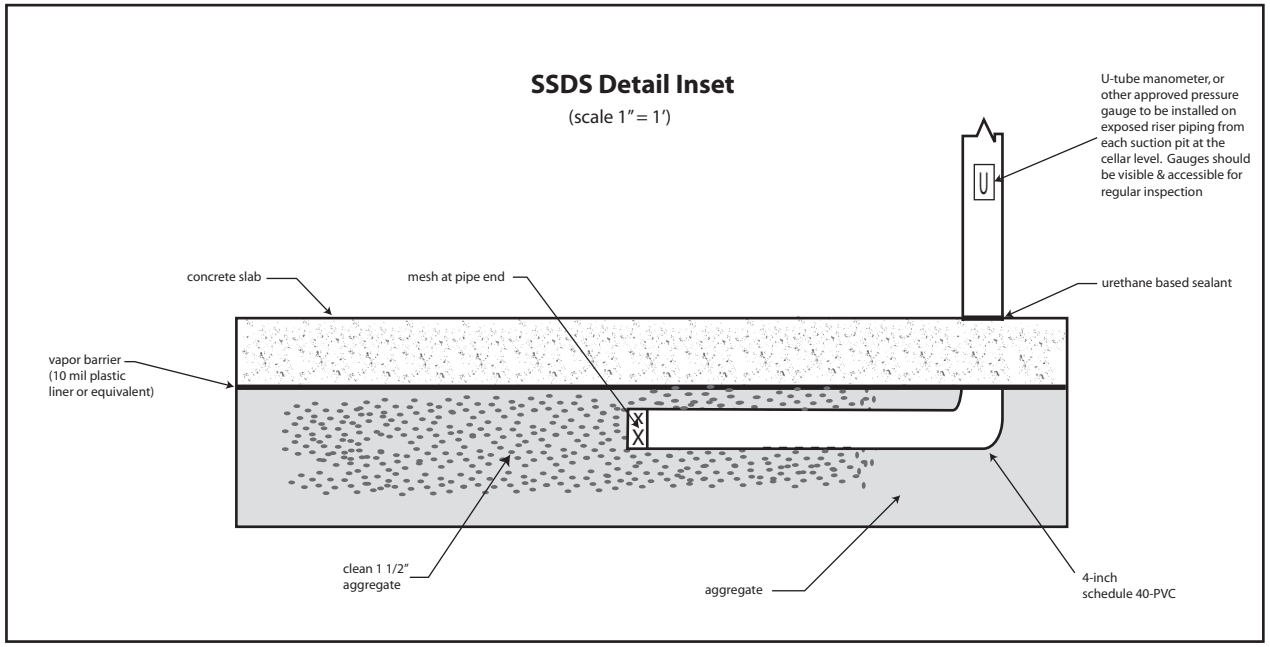
ESI File: OP08022.50

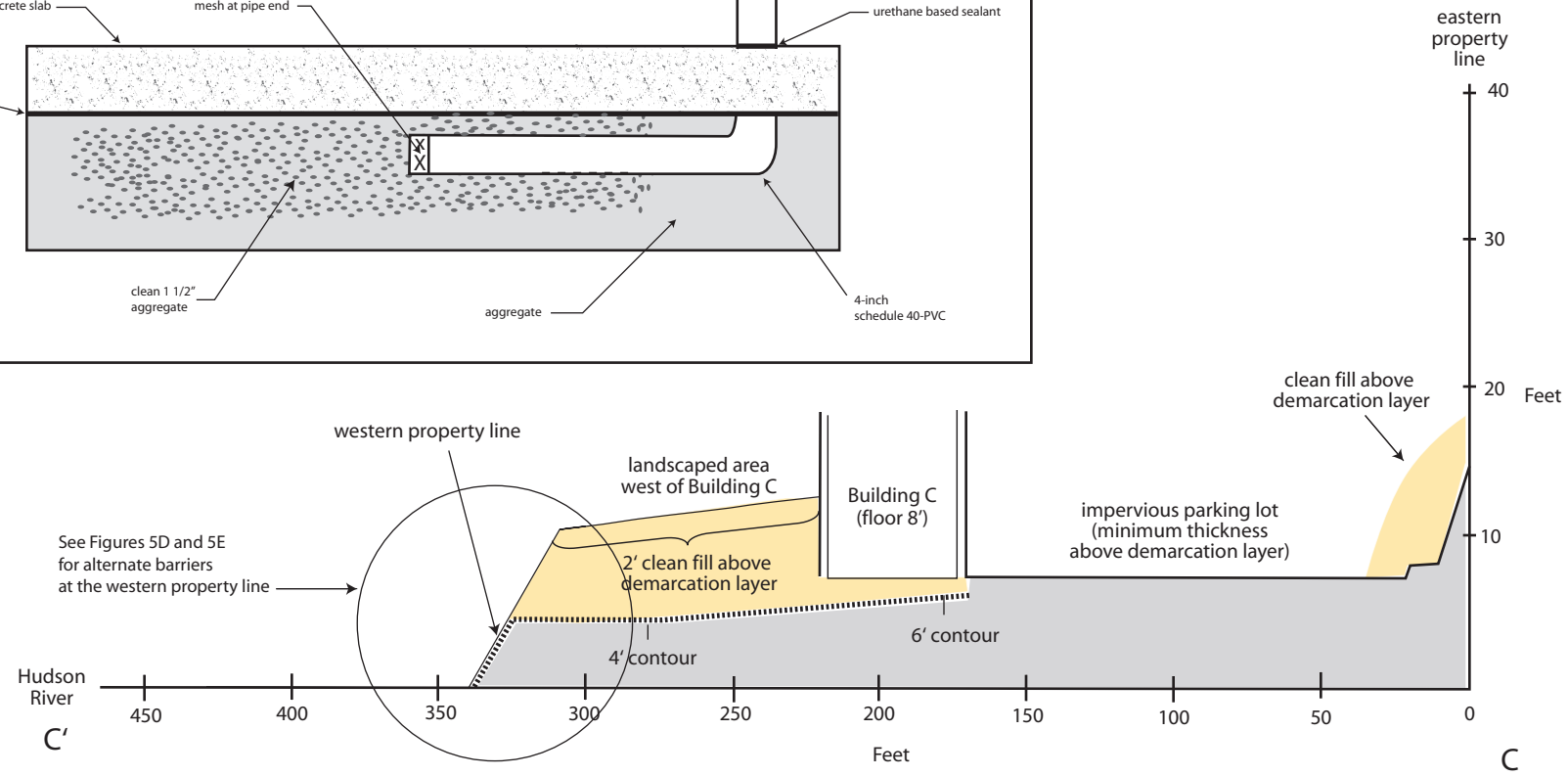
March 2011

Scale as shown

Appendix B

Ecosystems Strategies, Inc.





All feature locations are approximate. This map is intended as a schematic to be used in conjunction with the associated report, and it should not be relied upon as a survey for planning or other activities.

Figure 5C - Cross Section C

Former A.C. Dutton Facility
1 Dutchess Avenue
Poughkeepsie, New York

Legend:

- imported fill
- existing soils
- demarcation layer

ESI File: OP08022.50

March 2011

Scale as shown

Appendix B

Ecosystems Strategies, Inc.

Figure 5D - Cross Section of Cover at Western Property Boundary

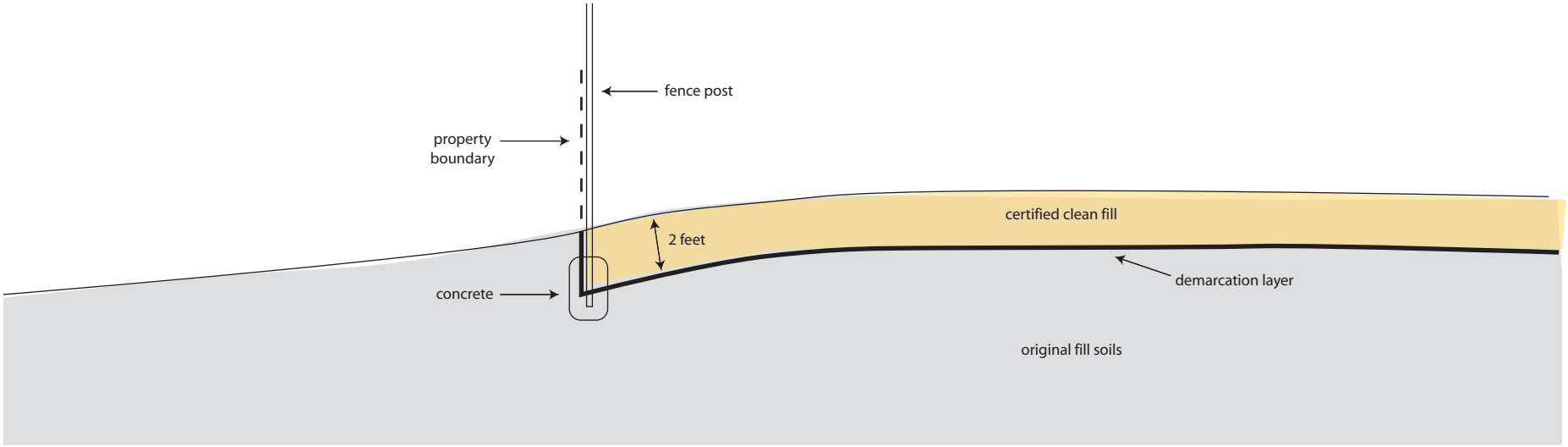


Figure 5E - Alternate Cross Section at Western Property Boundary

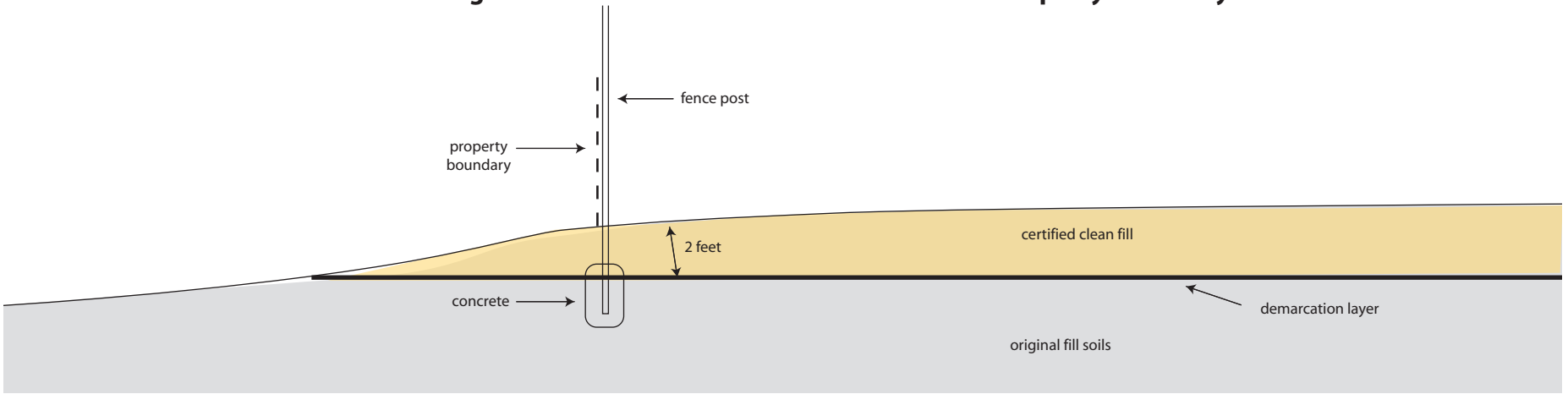
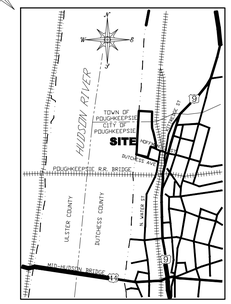


Figure 5D & 5E Cross Section at Western Property Boundary

Former A.C. Dutton Facility
1 Dutchess Avenue
Poughkeepsie, New York

ESI File: OP08022.50
March 2011
Not to scale
Appendix B



LOCATION MAP
1"=2000'±

APPROVED FOR SUBMISSION TO THE STATE BY
THE O'NEILL GROUP-DUTTON, LLC

AUTHORIZED SIGNATURE _____ DATE _____

GRANT DESCRIPTION

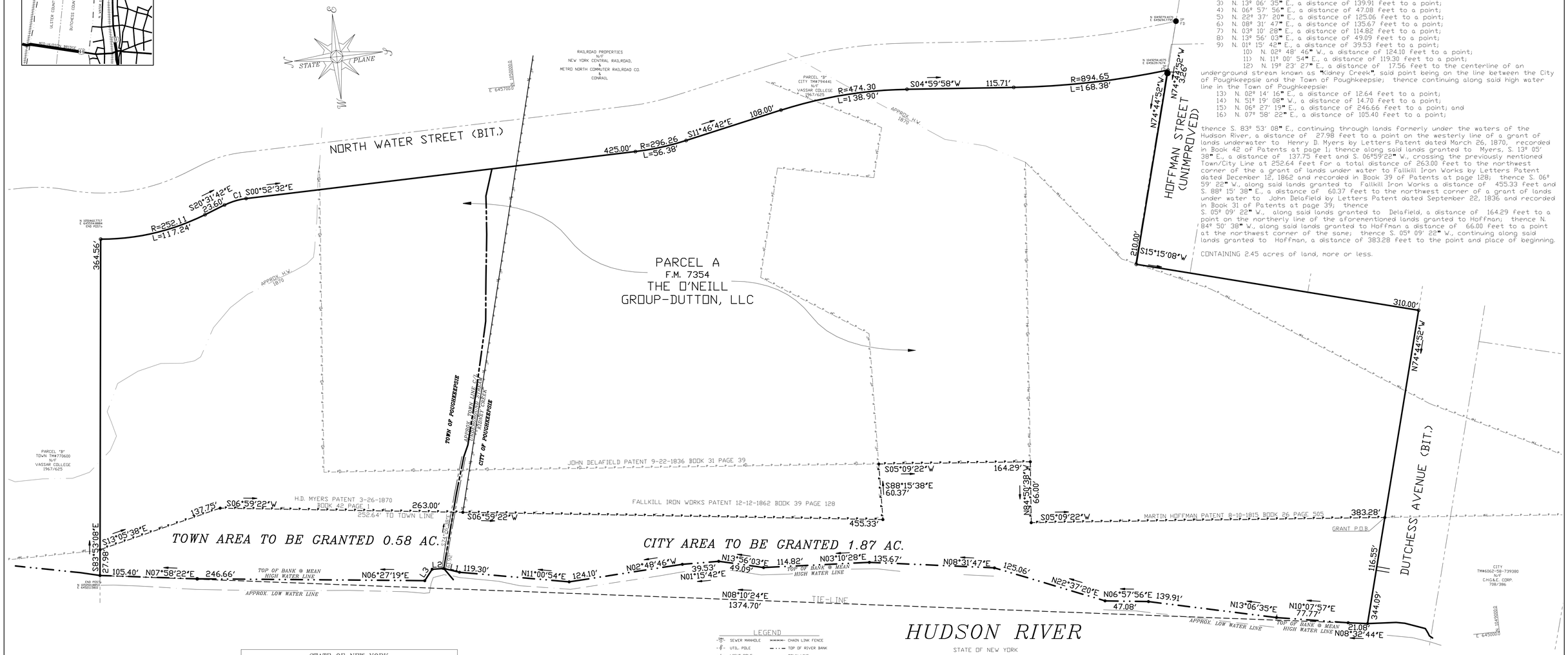
ALL that certain parcel of land now or formerly under the waters of the Hudson River, adjacent to and adjoining the lands of The O'Neill Group-Dutton, LLC, with the buildings and improvements thereon erected, situate, lying and being partially in the Town of Poughkeepsie and partially in the City Of Poughkeepsie, County of Dutchess and State of New York, being bounded and described as follows.

BEGINNING at a point on the northerly line of Dutchess Avenue in the City of Poughkeepsie at the southwesterly corner of a grant of lands underwater to Martin Hoffman by Letters Patent dated August 10, 1815 and recorded in the New York State Department of State in Book 26 of Patents at page 505; thence from said point of beginning N. 74° 44' 52" W., along a projection of the northerly line of Dutchess Avenue and through lands formerly under the waters of the Hudson River, a distance of 116.55 Feet to a point at the high water line on the easterly bank of the Hudson River as surveyed in 2008; thence northerly along said high water line, the following 16 courses:

1) N. 08° 32' 44" E., a distance of 21.08 feet to a point;
2) N. 10° 07' 57" E., a distance of 77.77 feet to a point;
3) N. 13° 06' 35" E., a distance of 139.91 feet to a point;
4) N. 06° 57' 56" E., a distance of 47.08 feet to a point;
5) N. 22° 37' 20" E., a distance of 125.06 feet to a point;
6) N. 08° 31' 47" E., a distance of 135.67 feet to a point;
7) N. 03° 10' 28" E., a distance of 114.82 feet to a point;
8) N. 13° 56' 03" E., a distance of 49.09 feet to a point;
9) N. 01° 15' 42" E., a distance of 39.53 feet to a point;
10) N. 02° 48' 46" W., a distance of 124.10 feet to a point;
11) N. 11° 00' 54" E., a distance of 119.30 feet to a point;
12) N. 19° 23' 27" E., a distance of 17.56 feet to the centerline of an underground stream known as "Clancy Creek", said point being on the line between the City of Poughkeepsie and the Town of Poughkeepsie; thence continuing along said high water line in the Town of Poughkeepsie:
13) N. 02° 14' 16" E., a distance of 12.64 feet to a point;
14) N. 51° 19' 08" W., a distance of 14.70 feet to a point;
15) N. 06° 27' 19" E., a distance of 246.66 feet to a point; and
16) N. 07° 58' 22" E., a distance of 105.40 feet to a point;

thence S. 83° 53' 08" E., continuing through lands formerly under the waters of the Hudson River, a distance of 27.98 feet to a point on the westerly line of a grant of lands underwater to Henry D. Myers by Letters Patent dated March 26, 1870, recorded in Book 42 of Patents at page 1; thence along said lands granted to Myers, S. 13° 05' 38" E., a distance of 137.75 feet and S. 06°59'22" W., crossing the previously mentioned Town/City Line at 252.64 Feet for a total distance of 263.00 Feet to the northwest corner of the a grant of lands under water to Fallkill Iron Works by Letters Patent dated December 12, 1862 and recorded in Book 39 of Patents at page 128; thence S. 06° 59' 22" W., along said lands granted to Fallkill Iron Works a distance of 455.33 Feet and S. 88° 15' 38" E., a distance of 60.37 feet to the northwest corner of a grant of lands under water to John Delafield by Letters Patent dated September 22, 1836 and recorded in Book 31 of Patents at page 39; thence
S. 05° 09' 22" W., along said lands granted to Delafield, a distance of 164.29 feet to a point on the northerly line of the aforementioned lands granted to Hoffman; thence N. 84° 50' 38" W., along said lands granted to Hoffman a distance of 66.00 Feet to a point at the northwest corner of the same; thence S. 05° 09' 22" W., continuing along said lands granted to Hoffman, a distance of 383.28 feet to the point and place of beginning.

CONTAINING 2.45 acres of land, more or less.



COORDINATE SYSTEM NOTES:
1. STATE PLANE NEW YORK EAST, NAD 83 ZONE 3001 WAS USED FOR THIS PROJECT. BEARINGS WERE ADJUSTED TO GRID NORTH.

2) MAJORITY OF PARCEL WAS SURVEYED USING SURVEY GRADE GPS EQUIPMENT. NYS CDR STATION #039 (NEWBURGH) WAS USED AS A BASE. THE DATA FOR THAT STATION IS:
PROJECTION SCALE FACTOR = 0.99991930561
ELEVATION FACTOR = 0.99999963235
GEIDD SEPARATION = -103.9863'

STATE OF NEW YORK

REVIEWED BY:

_____, DATE:_____
JOHN M. HERNICK, L.S., NO. 049858
PUBLIC LANDS SURVEYOR EXAMINER

NOTES:

LINE TABLE

LINE	BEARING	DISTANCE
L1	N19°23'27"E	17.56'
L2	N02°14'16"E	12.64'
L3	N51°19'08"W	14.70'

CURVE TABLE

CURVE	LENGTH	RADIUS
C1	24.43'	71.25'

LEGEND

SMH	SEWER MANHOLE	CLF	CHAIN LINK FENCE
UP	UTIL. POLE	TOB	TOP OF RIVER BANK
LP	LIGHT POLE	TOWN	TOWN LINE
SMH	STORM MANHOLE		PROPERTY LINE
HYD	HYDRANT	GR	GUIDE RAIL
WV	WATER VALVE		PATENT LINES
GV	GAS VALVE		PATENT LINES (DELAFIELD)
SV	SEWER VALVE		PATENT LINES (FALLKILL I.W.)
CB	CATCH BASIN		PATENT LINES (HOFFMAN)
MW	MONITORING WELL		PATENT LINES (MEYERS)
UMH	UNKNOWN MANHOLE		RAILROAD TRACKS
	PROPERTY CORNER	ESMT	EASEMENT LINE
1577/162	DEED LIBER/PAGE	I.P.	IRON PIN
N/F	NOW OR FORMERLY	FD	FOUND
FM	FILED MAP	EOP	EDGE OF PAVEMENT
CONC.	CONCRETE	GRVL.	GRAVEL
BIT.	BITUMINOUS (ASPHALT)	TM	TAX MAP

PARCEL AREAS
TOTAL PARCEL TO PATENT LINES = 11.87 A.C.
CITY OF POUGHKEEPSIE = 8.65 A.C.
TOWN OF POUGHKEEPSIE = 3.22 A.C.

TOTAL AREA TO BE GRANTED = 2.45 AC
CITY OF POUGHKEEPSIE = 1.87 A.C.
TOWN OF POUGHKEEPSIE = 0.58 A.C.

NEW PARCEL TOTAL = 14.32 A.C.

0' 25' 50' 100'
SCALE: 1"=50'

SUBMISSION MAP O.G.S.# 2287
STATE OF NEW YORK
OFFICE OF GENERAL SERVICES
SUBMERGED LAND APPLICATION MAP
IN THE APPLICATION OF
THE O'NEILL GROUP-DUTTON, LLC
FOR GRANT OF LANDS UNDER THE WATERS OF THE HUDSON RIVER
SITUATE IN
THE CITY & TOWN OF POUGHKEEPSIE
COUNTY OF DUTCHESS
STATE OF NEW YORK
MARCH 14, 2008
SHEET 2 OF 2

LLL
27-22

THIS SURVEY IS ACCURATE AND CORRECT BY:
LARRY L. LYNN, L.S.

WAPPINGERS FALLS, NY
N.Y.S.R.L.S. No. 050531

FOR THIS MAP AND COPIES THERE OF ONLY IF SAID MAP OR COPIES BEAR THE IMPRESSED SEAL OF THE SURVEYOR WHOSE SIGNATURE APPEARS HEREON.

PREPARED BY LARRY L. LYNN, LS, SERALD L. LYNN, LAND SURVEYOR, P.C., 1575 RTE. 376 WAPPINGERS FALLS, NY 12590, (845) 463-2733
SITE PLAN COMPLETED BY ME OR UNDER MY DIRECT SUPERVISION ON MARCH 14, 2008. BASED ON A FIELD SURVEY COMPLETED BY ME OR UNDER MY DIRECT SUPERVISION ON MARCH 13, 2007.
UNAUTHORIZED ALTERATION OR ADDITIONS TO THIS PLOT PLAN IS A VIOLATION OF SECTION 7209(2) OF THE NEW YORK STATE EDUCATION LAW.

PROPERTY NOTES:
1. PARCEL IS AS SHOWN ON A CERTAIN MAP ENTITLED, "SUBDIVISION OF PROPERTY, A.C. DUTTON LUMBER CORPORATION" AND FILED AS MAP NO. 7354 PAGE 2.

2) TAX GRID, 131300-6062-59-766443 (CITY PORTION).

3) TAX GRID, 134689-6062-02-763508 (TOWN PORTION).

4) SUBJECT TO EASEMENTS OF RECORD.

5) A 20' WIDE EASEMENT AND PARCEL C ARE SHOWN ON FILED MAP 7354 & OMITTED FROM THIS PLAN DUE TO UNCERTAINTY OF THEIR EXECUTION.

6) A RAILROAD TRACK & SPUR AGREEMENT & EASEMENT EXISTS FOR THE TRACKS THAT CROSS THE PROPERTY, SEE LIBER 1656 AT PAGE 311.

SPECIAL NOTES:
1) THE INTENTION OF THIS MAP IS TO SHOW THE LANDS THAT HAVE NOT BEEN PREVIOUSLY GRANTED TO THE OWNER OR PREVIOUS OWNERS BY THE STATE OF NEW YORK. THIS MAP SHALL BE SUBMITTED TO THE STATE OF NEW YORK AS PART OF THE APPLICATION FOR THE GRANT OF SAID LANDS. THE FINAL APPROVED MAP SHALL BE PLACED ON PERMANENT RECORD TO SHOW THE GRANTED LANDS.

2) PATENT LINES AND TOWN LINE ARE AS SHOWN ON FILED MAP NO. 7354 PAGE 2 AND DESCRIBED IN FILED LETTERS OF PATENT.

3) GRANT LINES COMPUTED AT TOP OF RIVER BANK AT HIGH WATER LINE.

REVISIONS:
1. ADDED ADDITIONAL PATENT LINES 5/30/08.
2. REVISED NORTH LINE DISTANCE 11/14/08.
3. ADDED MAP# & P.O.B. 12/12/08.

FIGURE 6

APPENDIX C

Site Specific Health and Safety Plan
For Site Remediation
(incorporating a Community Health and Safety Plan)

HEALTH AND SAFETY PLAN

FOR

SITE REMEDIATION

(INCORPORATING COMMUNITY HEALTH AND SAFETY PLAN)

Former A.C. Dutton Lumber Yard

1 Dutchess Avenue, City and Town of Poughkeepsie
Dutchess County, New York

NYSDEC Brownfields Program Site: C314081

March 2011

ESI File: OP08022.50

Prepared By

Ecosystems Strategies, Inc.
24 Davis Avenue, Poughkeepsie, NY 12603
phone 845.452.1658 | fax 845.485.7083 | ecosystemsstrategies.com

TABLE OF CONTENTS

1.0 INTRODUCTION

1.1 Purpose

This Community Health and Safety Plan for Site Remediation (CHASP) has been developed to provide the requirements and general procedures to be followed by the On-Site Coordinator (OSC) and on-site subcontractors while performing remedial services at the property located at 1 Dutchess Avenue, City and Town of Poughkeepsie, Dutchess County, New York.

This CHASP incorporates policies, guidelines, and procedures that have the objective of protecting the public health of the community during the performance of remedial 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 remedial activities, and by planning for and responding to emergencies affecting the public.

This CHASP 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 during specific remedial tasks. This CHASP 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 CHASP are based on a review of available information and evaluation of potential on-site hazards. This CHASP 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 CHASP, which is applicable to all field personnel, including contractors and subcontractors.

This CHASP 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 CHASP. Although this CHASP can be made available to interested persons for informational purposes, OSC has no responsibility over the interpretations or activities of any other persons or entities other than employees of the OSC or the OSC's subcontractors.

1.2 Site Location and Description

The Site as defined in this CHASP is the property located at 1 Dutchess Avenue, City and Town of Poughkeepsie, New York. A Remediation Map (illustrating the configuration of the Site as well as the areas of proposed remedial activities) are included in the Attachments of this CHASP.

1.3 Work Activities

Environmental remediation activities are detailed in the Remedial Design Work Plan (RDWP), dated March 2011. The specific tasks detailed in the RDWP are wholly incorporated by reference into this CHASP. The RDWP was prepared to remediate metals and petroleum contamination at the Site contamination associated with New York State Department of Environmental Conservation (NYSDEC) Brownfields Program Site: C314081, and describes tasks required to adequately remediate documented on-site environmental conditions. Existing contamination primarily consists of arsenic and chromium impacted soils contaminated by the historic on-site industrial use of chromated copper arsenate.

The Scope of Work includes:

- Closure of on-site (Petroleum Bulk Storage) PBS tanks;
- Closure of on-site (Chemical Bulk Storage) CBS tanks and removal of CCA impacted debris;
- Excavation and off-site disposal of contaminated materials (including soils, concrete and asphalt debris);
- The importation of clean fill to the site; and,
- The installation of a 2' soil cover across all portions of the site not covered with impervious surfaces.

2.0 HEALTH AND SAFETY HAZARDS

2.1 Hazard Overview for On-Site Personnel

The potential exists for the presence of elevated levels of metals (i.e., arsenic and chromium) and petroleum compounds in on-site soils. The possibility exists for on-site personnel to have contact with contaminated soils, dust, groundwater, and/or vapor during site investigative 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 (MSDS) for the CCA historically used on-site, and for gasoline and fuel oil have been provided as an attachment to this CHASP.

2.2 Potential Hazards to the Public from Remedial 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 remedial activities include mechanical/physical hazards, traffic hazards from 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 RDWP 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 CHASP.

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 remediation 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 in the air are expected to be below the OSHA Permissible Exposure Limits (PELs). Air monitoring will be conducted for VOCs. Monitoring will be conducted at all times that remedial activities which are likely to generate emissions are occurring. PID readings consistently in excess of 5 ppm 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 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 procedures will be established to reduce the possibility of worker/visitor contact with contaminants 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 remedial task 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 and equipment is not anticipated being required during completion of the RDWP; 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 RDWP.

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 SSHO and the Project Manager, and other Site personnel as appropriate.

7.0 NOISE CONTROL

All remedial 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 CHASP;
- 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 specific work areas and 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 CHASP 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 remediation.
- 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 CHASP 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 remediation 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 the remedial activities:

- Medicine and alcohol can aggravate the effect of exposure to certain compounds. Controlled substances and alcoholic beverages will not be consumed during remediation 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 CHASP.
- 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

Emergency Agencies	Phone Numbers
EMERGENCY	911
St. Francis Hospital 41 North Road	(845) 485-5087
Poughkeepsie Police Department	(845) 451-4000 or 911
Poughkeepsie Fire Department	(845) 451-4081 or 911
City Hall	(845) 451-4200
City Mayor	(845) 451-4073

Figure 1: Directions to Hospital

1. Start going east on Hoffman Street
2. Turn right onto Talmadge Street
3. Turn left onto Bain Avenue
4. Turn Left onto Washington Street
5. Turn Right onto Baker Avenue

Figure 2: Map to Hospital (overview)

N

1
Northern Pressure Treatment Plant
2,000 gallon AST (empty)
3,000 gallon AST (empty
1,000-gallon AST (empty)
2
Southern Pressure Treatment Plant
chemical storage ASTs (unknown capacity)
secondary containment area
3
4
5
6
7
8
9
10
11
20,000-gallon UST
3,000-gallon AST
1,500-gallon vaulted UST
1,000-gallon UST
secondary containment area containing five chemical bulk storage tanks (unknown capacity) and two pressure treatment vessels
former railroad
DUTCHESS AVENUE
Hudson River

100 feet

Legend:

- property outline
- pressure treatment plant buildings
- existing buildings
- area of petroleum impacts
- area of arsenic contamination above 32 mg/Kg (0-1')
- area of arsenic contamination above 32 mg/Kg (0-3')
- former structures

1 = area #

Notes:

Map based on Fuss and O'Neill proposed "Remedial Action Map" (July 2006)

Site Remediation Map
(Arsenic Remediated to SBL of 32 mg/kg)

Former A.C. Dutton Facility
1 Dutchess Avenue
Poughkeepsie, New York

ESI File: OP08022.50

March 2011 | Attachment

Ecosystems Strategies, Inc.

MATERIAL SAFETY DATA SHEET

("essentially similar" to OSHA - 20)

Notice: The information herein is given in good faith but no warranty, express or implied, is m.

SECTION I — PRODUCT IDENTIFICATION

MANUFACTURER'S NAME OSMOSE WOOD PRESERVING CO. OF AMERICA, INC.	EMERGENCY TELEPHONE NO (404) 228-8434
ADDRESS Southern/Western Division 1016 Everee Inn Road, Griffin, GA 30224	DATE FORM WRITTEN 5/1/80
TRADE NAME K-33-C (50%)	SYNONYMS CCA Type C

SECTION II — HAZARDOUS INGREDIENTS[2]

MATERIAL AND COMPONENT	%	TLV
Arsenic Acid (expressed as As_2O_5)	17	0.5 mg/M^3 as As *
Chromic Acid (water soluble)	23.75	0.1 mg/M^3 as Cr
Cupric Oxide	9.25	1.0 mg/M^3 as Cu
* Pesticide applicators are exempt from the OSHA		
arsenic standard 29 CFR 1910.1018		

SECTION III — PHYSICAL DATA

BOILING POINT, 760 MM HG	100°C	MELTING POINT	
SPECIFIC GRAVITY (H_2O = 1)	1.64	VAPOR PRESSURE	
VAPOR DENSITY (AIR = 1)		SOLUBILITY IN H_2O % BY WT	100%
% VOLATILES BY VOL.	50	EVAPORATION RATE (BUYLY ACETATE = 1)	
APPEARANCE AND ODOR	Dark red-orange liquid No odor	Ph (AS IS) 1.0	Ph (1% SOLN) 1.8 - 2.0

SECTION IV — FIRE AND EXPLOSION DATA

FLASH POINT (TEST METHOD)	N.A.	AUTOIGNITION TEMPERATURE	
FLAMMABLE LIMITS IN AIR, % BY VOL.	LOWER		UPPER
EXTINGUISHING MEDIA	☐ WATER FOG ☐ FOAM ☐ ALCOHOL FOAM ☐ CO_2 ☐ DRY CHEMICAL ☐ OTHER		
SPECIAL FIRE FIGHTING PROCEDURES	This product will not burn. 50% aqueous solution.		
UNUSUAL FIRE AND EXPLOSION HAZARD			

SECTION V — HEALTH HAZARD DATA

IRESHOLD LIMIT VALUE	See Section II; Oral LD_{50} >50 mg/kg; Dermal LD_{50} <200 mg/kg
FFECTS OF OVEREXPOSURE	Highly irritating to skin and eyes. Repeated dermal exposure may cause dermatitis. Toxic by ingestion, causes gastroenteritis, esphageal pain, vomiting and anuria or oligania.
ERGENCY AND FIRST D PROCEDURES	Dermal: Wash thoroughly with soap and water. Eyes: Flush with plenty of water for 15 minutes. Ingestion: CALL A PHYSICIAN. If conscious, induce vomiting (finger or blunt instrument to back of throat). Give water and then induce vomiting again.

SECTION VI — REACTIVITY DATA

ABILITY	UNSTABLE		CONDITIONS TO AVOID Reducing agents.
	STABLE	X	

OMPATABILITY (Materials to avoid) Strong reducing agents. Aluminum and zinc in an acid medium..

ZARDOUS DECOMPOSITION PRODUCTS
Under certain conditions where aluminum & zinc are present, arsine gas may be generated.

ZARDOUS YMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII — SPILL OR LEAK PROCEDURES

EPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Avoid contact. Dike and recover excess liquid. Absorb remainder with Osmose neutralizing compound or sawdust. Dispose absorbent and contaminated soil in an approved hazardous waste landfill.

STE DISPOSAL METHOD
ose in accordance with all Federal, State and Local laws. This product is toxic to fish - Do not contaminate water. Excess chemical and sludge must go to an approved hazardous waste landfill. Containers: triple rinse and bury in sanitary landfill or take to drum reclaimer.

SECTION VIII — SPECIAL PROTECTION INFORMATION

SPIRATORY PROTECTION (Specify type)
Normally not needed. See 29 CFR 1910.1018. Respiratory protection required if used as a spray or mist.

NTILATION	LOCAL EXHAUST Sufficient	SPECIAL
	MECHANICAL (General)	OTHER

OTECTIVE GLOVES Plastic or rubber.	EYE PROTECTION Chemical goggles.

HER PROTECTIVE EQUIPMENT
As necessary to avoid dermal contact.

SECTION IX — SPECIAL PRECAUTIONS OR OTHER PRECAUTIONS

ECAUTIONS TO BE TAKEN IN HANDLING AND STORING
E LABEL: Read Osmose Operating Manual. Do not use as spray or mist without respiratory protection. Launder contaminated clothing before reuse. If interior of shoes is contaminated, discard.

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 Combustible Placard if shipping 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	American Petroleum Institute (202) 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

AMERADA HESS CORPORATION

MATERIAL SAFETY DATA SHEET

Gasoline, All Grades **MSDS No. 9950**

EMERGENCY OVERVIEW
DANGER!
EXTREMELY FLAMMABLE - EYE AND MUCOUS MEMBRANE IRRITANT - EFFECTS CENTRAL NERVOUS SYSTEM - HARMFUL OR FATAL IF SWALLOWED - ASPIRATION HAZARD

NFPA 704 (Section 16)

High fire hazard. Keep away from heat, spark, open flame, and other ignition sources.

If ingested, do NOT induce vomiting, as this may cause chemical pneumonia (fluid in the lungs). Contact may cause eye, skin and mucous membrane irritation. Harmful if absorbed through the skin. Avoid prolonged breathing of vapors or mists. Inhalation may cause irritation, anesthetic effects (dizziness, nausea, headache, intoxication), and respiratory system effects.

Long-term exposure may cause effects to specific organs, such as to the liver, kidneys, blood, nervous system, and skin. Contains benzene, which can cause blood disease, including anemia and leukemia.

1. CHEMICAL PRODUCT and COMPANY INFORMATION (rev. Jan-04)

Amerada 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/about/environ.html

SYNONYMS: Hess Conventional (Oxygenated and Non-oxygenated) Gasoline; Reformulated Gasoline (RFG); Reformulated Gasoline Blendstock for Oxygenate Blending (RBOB); Unleaded Motor or Automotive Gasoline

See Section 16 for abbreviations and acronyms.

2. COMPOSITION and INFORMATION ON INGREDIENTS * (rev. Jan-04)

INGREDIENT NAME (CAS No.)	CONCENTRATION PERCENT BY WEIGHT
Gasoline (86290-81-5)	100
Benzene (71-43-2)	0.1 - 4.9 (0.1 - 1.3 reformulated gasoline)
n-Butane (106-97-8)	< 10
Ethyl Alcohol (Ethanol) (64-17-5)	0 - 10
Ethyl benzene (100-41-4)	< 3
n-Hexane (110-54-3)	0.5 to 4
Methyl-tertiary butyl ether (MTBE) (1634-04-4)	0 to 15.0
Tertiary-amyl methyl ether (TAME) (994-05-8)	0 to 17.2
Toluene (108-88-3)	1 - 25
1,2,4- Trimethylbenzene (95-63-6)	< 6
Xylene, mixed isomers (1330-20-7)	1 - 15

A complex blend of petroleum-derived normal and branched-chain alkane, cycloalkane, alkene, and aromatic hydrocarbons. May contain antioxidant and multifunctional additives. Non-oxygenated Conventional Gasoline and RBOB do not have oxygenates (Ethanol or MTBE and/or TAME). Oxygenated Conventional and Reformulated Gasoline will have oxygenates for octane enhancement or as legally required.

3. HAZARDS IDENTIFICATION (rev. Dec-97)

EYES
Moderate irritant. Contact with liquid or vapor may cause irritation.

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

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
Contains benzene, a regulated human carcinogen. Benzene has the potential to cause anemia and other blood diseases, including leukemia, after repeated and prolonged exposure. Exposure to light hydrocarbons in the same boiling range as this product has been associated in animal studies with systemic toxicity. See also Section 11 - Toxicological Information.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
Irritation from skin exposure may aggravate existing open wounds, skin disorders, and dermatitis (rash). Chronic respiratory disease, liver or kidney dysfunction, or pre-existing central nervous system disorders may be aggravated by exposure.

4. FIRST AID MEASURES (rev. Dec-97)

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. 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, ensure an open airway and 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 (rev. Dec-97)

FLAMMABLE PROPERTIES:

FLASH POINT:	-45 °F (-43°C)
AUTOIGNITION TEMPERATURE:	highly variable; > 530 °F (>280 °C)
OSHA/NFPA FLAMMABILITY CLASS:	1A (flammable liquid)
LOWER EXPLOSIVE LIMIT (%):	1.4%
UPPER EXPLOSIVE LIMIT (%):	7.6%

FIRE AND EXPLOSION HAZARDS

Vapors may be ignited rapidly when exposed to heat, spark, open flame or other source of ignition. Flowing product may be ignited by self-generated static electricity. 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.

During certain times of the year and/or in certain geographical locations, gasoline may contain MTBE and/or TAME. Firefighting foam suitable for polar solvents is recommended for fuel with greater than 10% oxygenate concentration - refer to NFPA 11 “Low Expansion Foam - 1994 Edition.”

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 (rev. Dec-97)

ACTIVATE FACILITY SPILL CONTINGENCY or EMERGENCY 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 (rev. Dec-97)

HANDLING PRECAUTIONS

******USE ONLY AS A MOTOR FUEL******
******DO NOT SIPHON BY MOUTH******

Handle as a flammable 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.

Special slow load procedures for "switch loading" must be followed to avoid the static ignition hazard that can exist when higher flash point material (such as fuel oil) is loaded into tanks previously containing low flash point products (such as this product) - see API Publication 2003, "Protection Against Ignitions Arising Out Of Static, Lightning and Stray Currents.

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 (rev. Jan-04)

EXPOSURE LIMITS

Component (CAS No.)	Exposure Limits			
	Source	TWA (ppm)	STEL (ppm)	Note
Gasoline (86290-81-5)	ACGIH	300	500	A3
Benzene (71-43-2)	OSHA	1	5	Carcinogen
	ACGIH	0.5	2.5	A1, skin
	USCG	1	5	
n-Butane (106-97-8)	ACGIH	800	--	2003 NOIC: 1000 ppm (TWA) Aliphatic Hydrocarbon Gases Alkane (C1-C4)
Ethyl Alcohol (ethanol) (64-17-5)	OSHA	1000	--	
	ACGIH	1000	--	A4
Ethyl benzene (100-41-4)	OSHA	100	--	
	ACGIH	100	125	A3

Component (CAS No.)	Exposure Limits			
	Source	TWA (ppm)	STEL (ppm)	Note
n-Hexane (110-54-3)	OSHA	500	--	
	ACGIH	50	--	skin
Methyl-tertiary butyl ether [MTBE] (1634-04-4)	ACGIH	50		A3
Tertiary-amyl methyl ether [TAME] (994-05-8)				None established
Toluene (108-88-3)	OSHA	200		Ceiling: 300 ppm; Peak: 500 ppm (10 min.)
	ACGIH	50	--	A4 (skin)
1,2,4- Trimethylbenzene (95-63-6)	ACGIH	25	--	
Xylene, mixed isomers (1330-20-7)	OSHA	100	--	
	ACGIH	100	150	A4

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 or neoprene are recommended. Chemical protective clothing such as that made of of E.I. DuPont Tychem ®, products or equivalent is 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-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 and limitations.

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 (rev. Jan-04)

APPEARANCE

A translucent, straw-colored or light yellow liquid

ODOR

A strong, characteristic aromatic hydrocarbon odor. Oxygenated gasoline with MTBE and/or TAME may have a sweet, ether-like odor and is detectable at a lower concentration than non-oxygenated gasoline.

ODOR THRESHOLD

	Odor Detection	Odor Recognition
Non-oxy genated gasoline:	0.5 - 0.6 ppm	0.8 - 1.1 ppm
Gasoline with 15% MTBE:	0.2 - 0.3 ppm	0.4 - 0.7 ppm
Gasoline with 15% TAME:	0.1 ppm	0.2 ppm

BASIC PHYSICAL PROPERTIES

BOILING RANGE:	85 to 437 °F (39 to 200 °C)
VAPOR PRESSURE:	6.4 - 15 RVP @ 100 °F (38 °C) (275-475 mm Hg @ 68 °F (20 °C)
VAPOR DENSITY (air = 1):	AP 3 to 4
SPECIFIC GRAVITY (H_2O = 1):	0.70 – 0.78
EVAPORATION RATE:	10-11 (n-butyl acetate = 1)
PERCENT VOLATILES:	100 %

SOLUBILITY (H_2O): Non-oxygenated gasoline - negligible (< 0.1% @ 77 °F). Gasoline with 15% MTBE - slight (0.1 - 3% @ 77 °F); ethanol is readily soluble in water

10. STABILITY and REACTIVITY (rev. Dec-94)

STABILITY: Stable. Hazardous polymerization will not occur.

CONDITIONS TO AVOID

Avoid high temperatures, open flames, sparks, welding, smoking and other ignition sources

INCOMPATIBLE MATERIALS

Keep away from strong oxidizers.

HAZARDOUS DECOMPOSITION PRODUCTS

Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke). Contact with nitric and sulfuric acids will form nitrocresols that can decompose violently.

11. TOXICOLOGICAL PROPERTIES (rev. Dec-97)

ACUTE TOXICITY

Acute Dermal LD50 (rabbits): > 5 ml/kg
Acute Oral LD50 (rat): 18.75 ml/kg
Primary dermal irritation (rabbits): slightly irritating
Draize eye irritation (rabbits): non-irritating
Guinea pig sensitization: negative

CHRONIC EFFECTS AND CARCINOGENICITY

Carcinogenicity: OSHA: NO IARC: YES - 2B NTP: NO ACGIH: YES (A3)

IARC has determined that gasoline and gasoline exhaust are possibly carcinogenic in humans. Inhalation exposure to completely vaporized unleaded gasoline caused kidney cancers in male rats and liver tumors in female mice. The U.S. EPA has determined that the male kidney tumors are species-specific and are irrelevant for human health risk assessment. The significance of the tumors seen in female mice is not known. Exposure to light hydrocarbons in the same boiling range as this product has been associated in animal studies with effects to the central and peripheral nervous systems, liver, and kidneys. The significance of these animal models to predict similar human response to gasoline is uncertain.

This product contains benzene. Human health studies indicate that prolonged and/or repeated overexposure to benzene may cause damage to the blood-forming system (particularly bone marrow), and serious blood disorders such as aplastic anemia and leukemia. Benzene is listed as a human carcinogen by the NTP, IARC, OSHA and ACGIH.

This product may contain methyl tertiary butyl ether (MTBE): animal and human health effects studies indicate that MTBE may cause eye, skin, and respiratory tract irritation, central nervous system depression and neurotoxicity. MTBE is classified as an animal carcinogen (A3) by the ACGIH.

12. ECOLOGICAL INFORMATION (rev. Jan-04)

Keep out of sewers, drainage areas and waterways. Report spills and releases, as applicable, under Federal and State regulations. If released, oxygenates such as ethers and alcohols will be expected to exhibit fairly high mobility in soil, and therefore may leach into groundwater. The API (www.api.org) provides a number of useful references addressing petroleum and oxygenate contamination of groundwater.

13. DISPOSAL CONSIDERATIONS (rev. Dec-97)

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

14. TRANSPORTATION INFORMATION (rev. Jan-04)

DOT PROPER SHIPPING NAME:	Gasoline
DOT HAZARD CLASS and PACKING GROUP:	3, PG II
DOT IDENTIFICATION NUMBER:	UN 1203
DOT SHIPPING LABEL:	FLAMMABLE LIQUID

PLACARD:

15. REGULATORY INFORMATION (rev. Jan-04)

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 federal, state, or local regulations; 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) or, if not practical, the U.S. Coast Guard with follow-up to the National Response Center, 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 contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and of 40 CFR 372:

INGREDIENT NAME (CAS NUMBER)	CONCENTRATION WT. PERCENT
Benzene (71-43-2)	0.1 to 4.9 (0.1 to 1.3 for reformulated gasoline)
Ethyl benzene (100-41-4)	< 3
n-Hexane (110-54-3)	0.5 to 4
Methyl-tertiary butyl ether (MTBE) (1634-04-4)	0 to 15.0
Toluene (108-88-3)	1 to 15
1,2,4- Trimethylbenzene (95-63-6)	< 6
Xylene, mixed isomers (1330-20-7)	1 to 15

US EPA guidance documents (www.epa.gov/tri) for reporting Persistent Bioaccumulating Toxics (PBTs) indicate this product may contain the following deminimis levels of toxic chemicals subject to Section 313 reporting:

INGREDIENT NAME (CAS NUMBER)	CONCENTRATION - Parts per million (ppm) by weight
Polycyclic aromatic compounds (PACs)	17
Benzo (g,h,i) perylene (191-24-2)	2.55
Lead (7439-92-1)	0.079

CANADIAN REGULATORY INFORMATION (WHMIS)

Class B, Division 2 (Flammable Liquid)
Class D, Division 2A (Very toxic by other means) and Class D, Division 2B (Toxic by other means)

16. OTHER INFORMATION (rev. Jan-04)

NFPA® HAZARD RATING	HEALTH:	1	Slight
	FIRE:	3	Serious
	REACTIVITY:	0	Minimal
HMIS® HAZARD RATING	HEALTH:	1 *	Slight
	FIRE:	3	Serious
	REACTIVITY:	0	Minimal
	* CHRONIC		

SUPERSEDES MSDS DATED: 12/30/97

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	American Petroleum Institute (202)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	Workplace Hazardous Materials Information System (Canada)

APPENDIX D

Community Air Monitoring Plan

Former A.C. Dutton Lumber Yard
1 Dutchess Avenue, City and Town of Poughkeepsie
Dutchess County, New York
ESI File: OP08022.50
NYSDEC Brownfields Program Site: C314081

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.

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

Continuous monitoring will be required for all ground intrusive 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 non-intrusive 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. Monitoring will be performed using a Minirae 300 photo ionization detector. 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 using a Dust Trak TSI monitors. 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 wind is calm, the monitors should be placed between each work area and the nearest sensitive receptors (i.e. the boathouse property/and or the adjacent residential properties). If the wind is variable, the monitors must be placed so as to ensure there is a monitor downwind of each work area at all times.

- 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.

- The presence of odors at the Site Boundary will be considered an exceedance of the CAMP and must result in an appropriate response. It is anticipated that the only significant odors encountered at the site will be petroleum-related and standard odor-suppressant products will be used to eliminate/reduce odors.

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

APPENDIX E

Quality Assurance/Quality Control

QUALITY ASSURANCE/QUALITY CONTROL PLAN

For

Former A.C. Dutton Lumber Yard

NYSDEC Brownfields Program Site: C314081

Located at

1 Dutchess Avenue, City and Town of Poughkeepsie
Dutchess County, New York

Date of Preparation: March 2011

ESI File: OP08022.50

Ecosystems Strategies, Inc.
24 Davis Avenue, Poughkeepsie, NY 12603
phone 845.452.1658 | fax 845.485.7083 | ecosystemsstrategies.com

TABLE OF CONTENTS

1.0 PROJECT MANAGEMENT

1.1 Project/Task Organization

The NYSDEC and the OSC are major participants in the project.

1.2 Principal Data Users

The principal users of the generated data in this project are listed below.

a. Residents of the City and Town of Poughkeepsie, especially those residing in the vicinity of the Site.

b. The Volunteer

c. NYSDEC

1.3 Problem Definition/Background

The primary objective of the Remedial Design Work Plan (RDWP) is to provide a detailed description of remedial actions to be performed at the Site in order to achieve NYSDEC Track 4 Soil Cleanup Objectives.

1.4 Quality Objectives and Criteria

The data collected in this project will be to document the post-remediation integrity of on-site soils and groundwater.

1.5 Documents and Records

Electronic copies of all data/measurements will be retained by the On-Site Coordinator (OSC). Paper copies will be included in the Final Engineering Report to be generated at the conclusion of remedial activities.

2.0 Data Generation and Acquisition

2.1 Sampling Methods

2.1.1. Soil Samples

Soil and surface material samples will be collected in appropriately-sized glass jars provided by the laboratory. Subsequent to the sampling procedure, samples will be stored in a cooler prior to transport to the approved laboratory.

2.1.2 Wipe Samples

Wipe samples will be collected using the National Institute for Occupational Safety and Health (NIOSH) sampling method 9102 (Elements on Wipes):

- Manufacturer foil wrapped, distilled water (or alternative COC-appropriate solvent recommended by the laboratory) soaked disposable pads (e.g. Ghostwipes^{TM}) and dedicated powder less gloves will be used.

- A 100 cm^2 disposable template will be placed over the sample area and the entire surface within the template wiped with a pad using vertical S-strokes.

- The pad will be folded inward, and using the once-folded media the wiping will be repeated horizontally (at right angles to the first wipe).

- The exposed side of the wipe will be folded inwards. Using the twice-folded media, wiping with S-strokes will be performed in the original direction.

- The wipe media will be placed in a laboratory supplied plastic bag or vial.

- Field blanks: 10% of samples, at least three per batch.

2.2 Sample Handling and Custody

After each sample is collected, it will be placed in a sample cooler that is maintained at approximately 4°C. For each sampling day, sampling personnel will be required to complete a sampling custody worksheet indicating all pertinent information about the samples collected, handling methods, name of the collector, and chain of custody. Upon the completion of each day of sample collection activities, all samples will be shipped via either courier or overnight delivery

(per laboratory requirements) to a NYSDOH ELAP approved laboratory. Laboratory personnel will record the cooler temperature (approximately 4°C) upon receipt and analyze the samples within applicable hold times based on the analysis being performed.

2.3 Analytical Methods

Soil samples will be analyzed for total weight arsenic and chromium (USEPA 6010). At locations where petroleum contamination is identified, samples will be sampled for PAHs (USEPA 8270) and VOCs (STARS List only) (USEPA 8260). Analysis of samples for imported backfill will include all analytes listed at 6 NYCRR375-6.8.

2.4 Quality Control

Accuracy and precision will be determined by repeated analysis of laboratory standards, and matrix effects and recovery will be determined through use of spiked samples. With each sample run, standards, blanks, and spiked samples will be run.

One QA/QC sample for every 20 samples per medium (soil and surface) will be duplicated by the OSC. One in 20 samples per medium will also be submitted for Matrix spike (MS) and Matrix Spike Duplicate (MSD) analysis. One rinse blank will be prepared for each given piece of sampling equipment for every 20 analytical samples collected using that piece of equipment. For each day of sampling, a trip blank will be included with each sample cooler.

2.5 Inspection/Acceptance of Supplies and Consumables

The following supplies and consumables will be used:

- One 4-oz clear glass jar will be used for each soil/surface sample. Duplicate soil will each require one additional sample volume. MS/MSD soil/sediment samples will each require two additional sample volumes;
- Disposable gloves (nitrile or equivalent); and,
- Distilled water (for decontamination and the preparation of rinse blanks).

All supplies and consumables will be inspected and tested (if necessary) by the QA manager upon receipt.

2.6 Data Management

For the purpose of data management, the data can be divided into field and laboratory data. Field data will be recorded at the time of measurement on written field logs. Deliverables for endpoint samples will conform to the Department's Analytical Services Protocol (ASP) Category B deliverables.

3.0 Assessment and Oversight

3.1 Reports to Management

The results of the assessments described above (surveillance, inspection, and performance evaluations) will be reported to the principal data users after the completion of fieldwork.

4.0 Data Validation and Usability

4.1 Data Review, Verification, and Validation

As a NYSDOH ELAP-certified certified laboratory, the approved laboratory will follow standard procedures regarding data validation and verification.

4.2 Verification and Validation Methods

4.2.1 Verification Method

Once collected, all data will go to the QA manager for review and verification. Review will involve determining that all data has been collected at the proper locations by the proper persons and that all field and laboratory logs are complete. Data will be validated by an independent data validator.

4.2.2 Authority for Verification

Authority for verification, validation, and resolution of data issues will be distributed among the investigators. Authority to resolve issues regarding verification of field measurements will rest with the QA manager.

4.2.3 Transmittal to Users

Following review, validation, and verification, all data will be conveyed to users via the Final Engineering Report. If data submission is required by the Department prior to submission of the FER, it must be submitted in accordance with the requirements of Paragraph XI of the Brownfields Cleanup Agreement (BCA, see RDWP Section 2.3).

4.2.4 Calculations

There are no project specific calculations required.

APPENDIX F

Contingency Plan

CONTINGENCY PLAN
March 2011
Former A.C. Dutton Lumber
1 Dutchess Avenue, City and Town of Poughkeepsie
Dutchess County, New York

NYSDEC Brownfields Program Site: C314081

1.0 GENERAL CONSIDERATIONS

1.1 Scope of Plan

This Contingency Plan (Plan) provides general guidance on the handling and disposal of previously unknown materials that may potentially be encountered during excavation at the former "A.C. Dutton Lumber Yard" property (Site), 1 Dutchess Avenue, City and Town of Poughkeepsie, New York. Materials governed by this Plan are those that must be handled differently than all other materials excavated on the site as a result of, but not limited to, specified environmental regulations, including 6NYCRR Part 360 and 6NYCRR Part 612-614.

1.2 Time Period of Enforcement

This Plan will provide guidance during the remedial phase of construction activities on the Site. This Plan will no longer be in effect after all remedial activities have been completed.

1.3 Objective of the Protocol

The stated objectives of this Plan are as follows:

1. To identify previously unknown material on the Site which, by virtue of its composition or characteristics, requires handling and disposition in a manner different from the handling and disposition of other material as described in the Remedial Design Work Plan (RDWP).

2. To ensure that such material is handled in a proper manner in a way that, to the extent practicable, does not significantly delay or disrupt normal Site development.

3. To minimize the likelihood that this material will expose Site workers to unhealthy or unsafe conditions.

4. To document handling and disposal practices of material consistent with federal, state and local waste management regulations.

1.4 Unknown Materials that may be Encountered

For construction monitoring purposes, on-site personnel should be prepared to respond appropriately should the following previously unknown materials be encountered (if encountered, this material could result in a recommendation from the OSC (see Section 1.5) that an immediate temporary shutdown of excavation activities occur):

- Drums or tanks containing a liquid product that is not likely to be water and is likely to present a threat to worker health or safety;
- previously unknown demolition debris, which could contain significant quantities of asbestos, the disturbance of which is determined, based on field observations, to violate or likely to violate federal, state, or local asbestos regulations;
- explosive materials;
- leachate from an unidentified source, which is likely to contain hazardous compounds and is likely to present an immediate risk to the health and safety of workers; and/or,
- any other potentially hazardous substance.

1.5 On-Site Coordinator

1.5.1 Relationship of the On-Site Coordinator to other Site Personnel

Ecosystems Strategies, Inc. (ESI) will provide an On-Site Coordinator (OSC) to oversee all excavations and will be supported on an "as needed basis" by additional OSC technical staff and/or other specified environmental professionals.

1.5.2 Responsibilities of the OSC at the Site

The OSC will be present on the Site during all activities undertaken under the contingency plan. During this time, the specific responsibilities of the OSC will be to:

- prepare accurate and detailed field notes (including photographs, as appropriate) summarizing observations of the material being excavated at the Site;
- communicate on a regular basis with the Volunteer and NYSDEC;
- monitor adherence to the procedures outlined in this document and the RAWP;
- coordinate the separation of suspect material and isolate such material;

- collect soil and/or material samples as appropriate, based on the amount and varying characteristics of the encountered suspect material; specify analyses to be performed by the laboratory; transport or arrange for the transportation of these samples to a NYS Department of Health approved laboratory for analysis; and interpret analytical results for the purposes of facilitating material disposition;

- coordinate with licensed haulers for the proper disposal of all encountered material requiring special handling and compile all necessary disposal documentation; and,

- interact, upon consultation with other OSC technical staff and only after authorization from the Volunteer, with regulatory agencies regarding the handling and/or disposition of the separated material.

1.5.3 Responsibilities of the OSC upon Completion of Site Work

All documents for any materials disposed of under this Plan, including field notes, test results, permits, and records of regulatory agency correspondence, will be included in the Final Engineering Report, which will be prepared after completion of remedial activities at the Site.

2.0 ON-SITE MONITORING PROCEDURES

Prior to actual excavation activities, the OSC will designate an area to be used for stockpiling of suspect materials (if encountered). This area will be of sufficient size to store a sizable quantity of contaminated materials and will be located to minimize the likelihood that their presence will delay the excavation schedule. The stockpile area will be clearly demarcated.

2.1 Procedures for Encountered Underground Storage Tanks

Any encountered, previously unknown underground storage tanks (USTs) will be visually inspected by the OSC to determine if liquids are present in the tank. Liquids/sludge encountered in underground storage tanks will be removed and properly managed. Empty tanks will be separated from other stockpiled material and will be considered to be scrap metal. Excavated tanks will be stored away from all excavation activities so as not to interfere with the debris removal.

2.2 Procedures for Encountered Demolition Debris

To the extent practical, all clearly identifiable material suspected of containing asbestos will be removed from the waste stream and handled separately (if encountered). The OSC will recommend that asbestos material visible in the waste stream be separated and analyzed to determine the percent of asbestos present. All applicable federal, state, and local asbestos handling regulations will be followed.

Depending on the amount of asbestos material identified in the waste stream, the OSC may recommend to the Client's Representative that an asbestos inspector licensed by New York State be retained to manage the handling and disposition of asbestos material. Approval to retain an asbestos inspector will be made by the Client's Representative. Samples may be collected by either the OSC or the asbestos inspector and submitted to a NYSDOH approved laboratory for analysis, depending on the amount and type of material encountered.

Minor amounts of asbestos may be removed from the waste stream and disposed of in accordance with applicable state and local asbestos remediation requirements. An asbestos abatement firm will be retained to properly handle and remove minor amounts of asbestos.

The presence of significant quantities of asbestos will result in a temporary shutdown of the Site.

2.3 Procedures for Encountered Unknown Material

Material which cannot be readily identified by the OSC, but which is considered by the OSC, based on visual and/or odorous characteristics, to be material not suitable for disposal as construction debris will be stockpiled on plastic in an area separate from all other stockpiled material. A minimum gage of 6 mil plastic will be used on a smooth area; plastic will overlap at least one foot at all seams and a minimum of three feet of plastic will remain unused as a buffer between the stockpiled material and the surrounding edge of plastic.

Unknown material will be screened with a photo-ionization detector (PID) and all recorded levels will be documented. Samples will be collected and analyzed for a wide range of compounds, as determined necessary, to identify the compounds present and to assist in determining appropriate disposal practices. Until determined by laboratory analysis otherwise, this material will be considered a hazardous substance.

APPENDIX G

Asbestos Abatement

R.C. Enterprise, Inc.
85-27 65th Road
Rego Park, New York 11374
718-997-0555
Fax 718-730-9033

Asbestos Abatement Project
1 Dutchess Avenue
Poughkeepsie, New York

Project Documents

Asbestos Project Notifications
Certificate of Completion
NYS DOL Asbestos Handling License
Waste Manifest
Certificate of Insurance
Waste Transporter Documentation
Landfill Documentation

R.C. Enterprise, Inc.
85-27 65th Road
Rego Park, New York 11374
718-997-0555
Fax 718-730-9033

Asbestos Abatement Project
1 Dutchess Avenue
Poughkeepsie, New York

Asbestos Project Notifications

RECEIVED

US Environmental Protection Agency - Region 2
Division of Enforcement & Compliance Assistance
Air Compliance Branch (DECA-ACB)
290 Broadway - 21st Floor
New York, NY 10007-1866

ASBESTOS NESHAP NOTIFICATION OF DEMOLITION AND RENOVATION

OPERATOR PROJECT #	POSTMARK 11.4.09	DATE RECEIVED 11.10.09	NOTIFICATION #

I. TYPE OF NOTIFICATION (O) - ORIGINAL (C) - CANCELLED) (R) – REVISION – WRITE REVISION)
Original

II. FACILITY INFORMATION (IDENTIFY OWNER, REMOVAL CONTRACTOR, AND OTHER OPERATOR)

OWNER NAME:
The O'Neill Group-Dutton, LLC

ADDRESS:
241 Hudson Street

CITY:	COUNTY:	STATE:	ZIP CODE:
Hackensack	Bergen	NJ	07601

CONTACT:	TELEPHONE:
Louis Kaufman	201-488-4455

ASBESTOS REMOVAL CONTRACTOR:
R.C. Enterprise, Inc.

ADDRESS:
85-27 65th Road

CITY:	STATE:	ZIP:
Rego Park	NY	11374

CONTACT:	TELEPHONE:	TITLE:
Marek Budzewski	(718) 997-0555	President

III. TYPE OF OPERATION: (D) - DEMO (O) - ORDERED DEMO (R) -RENOVATION (E) -EMERGENCY RENOVATION):
Demolition

IV. IS ASBESTOS PRESENT? (YES / NO)	LIST TYPE OF ASBESTOS MATERIAL (S) TO BE REMOVED:
Yes	Pipe Related, Mastic, Roofing, Siding, Vessel Covering

V. FACILITY DESCRIPTION (INCLUDE BUILDING NAME, NUMBER AND FLOOR OR ROOM NUMBER)
1 Dutchess Avenue, Poughkeepsie, NY – Western Brick Building, Maintenance Building & Office Building

BUILDING SIZE:	NUMBER OF FLOORS:	AGE IN YEARS:
13,400SF	Two	40+/-

PRESENT USE:	PRIOR USE:
Commercial	Commercial

VI. PROCEDURE, INCLUDING ANALYTICAL METHOD, IF APPROPRIATE, USED TO DETECT THE PRESENCE OF ASBESTOS MATERIAL:
N/A

VII. APPROXIMATE AMOUNT OF ASBESTOS, INCLUDING: 1. REGULATED ACM TO BE REMOVED 2. CATEGORY I ACM NOT REMOVED 3. CATEGORY II ACM NOT REMOVED	RACM TO BE REMOVED	NONFRIABLE ASBESTOS MATERIAL TO BE REMOVED		NONFRIABLE ASBESTOS MATERIAL NOT TO BE BEREMOVED	
		CAT I	CAT II	CAT I	CAT II
PIPES: (LINEAR FEET)	300				
SURFACE AREA: (SQUARE FEET)	600	1200			
VOL. RACM OFF FACILITY COMPONENT: (CUBIC FEET)					

VIII. SCHEDULED DATES DEMO/RENOVATION (MM/DD/YY) START: COMPLETE:

IX. SCHEDULED DATES ASBESTOS REMOVAL (MM/DD/YY) START: 11/16/09 COMPLETE: 2/27/10

8:00 AM TO 4:00 PM WEEKDAYS WORK HOURS: AM TO PM WEEKEND WORK HOURS:

X. DESCRIPTION OF PLANNED DEMOLITION OR RENOVATION WORK, AND METHOD(S) TO BE USED:

XI. DESCRIPTION OF WORK PRACTICES AND ENGINEERING CONTROLS TO BE USED TO PREVENT EMISSIONS OF ASBESTOS AT THE DEMOLITION AND RENOVATION SITE:

US EPA (CFR) Title 40, Part 61 (Subparts A & M (revised Subpart B) & Part 763 (subpart G); OSHA (CFR) Title 29, Part 1910 (Sections 20, 134, 145, 1001 & 1200) & Part 1926(Section 58; NYS DOL Industrial Code Rule 56; NYS DEC Title 6, Part 364 (6NYCRR364; DOT Final Rule Regulation 49 CFR, Part 171 & 172; NYC DEP Local Law 21, 70 & 76

XII. WASTE TRANSPORTER:
Cody Transport LTD.

ADDRESS:
72 Allen Blvd.

CITY:	STATE	ZIP
Farmingdale	NY	11735

CONTACT PERSON:	TELEPHONE:
Louis Martinez	(631) 694-6001

XIII. WASTE DISPOSAL SITE:

NAME:
Southern Alleghenies

LOCATION:
843 Miller Picking Road

CITY:	STATE:	ZIP:
Davidsville	PA	15928

TELEPHONE:
(814) 479-2483

XIV. IF DEMOLITION ORDERED BY A GOVERNMENT AGENCY, PLEASE IDENTIFY THE AGENCY BELOW:

NAME:	TITLE:

AUTHORITY:

DATE OF ORDER (MM/DD/YY):	DATE ORDERED TO BEGIN: (MM/DD/YY):

XV. FOR EMERGENCY RENOVATIONS:

a) DATE AND HOUR OF EMERGENCY: (MM/DD/YY):

b) DESCRIPTION OF THE SUDDEN, UNEXPECTED EVENT:

c) EXPLANATION OF HOW THE EVENT CAUSED UNSAFE CONDITIONS OR WOULD CAUSE EQUIPMENT DAMAGE OR AN UNREASONABLE FINANCIAL BURDEN:

XVI. DESCRIPTION OF PROCEDURES TO BE FOLLOWED IN THE EVENT THAT UNEXPECTED ASBESTOS IS FOUND OR PREVIOUSELY NONFRIABLE ASBESTOS MATERIAL BECOMES CRUMBLED, PULVERIZED, OR REDUCED TO POWDER.

The area will be immediately isolated by installing a full containment with worker decontamination enclosure system utilizing negative pressure ventilation equipment

XVII. I CERTIFY THAT AN INDIVIDUAL TRAINED IN THE PROVISIONS OF THIS REGULATION (40 CFR PART 61, SUBPART M) WILL BE ON-SITE DURING THE DEMOLITION OR RENOVATION AND EVIDENCE THAT THE REQUIRED TRAINING HAS BEEN ACCOMPLISHED BY THIS PERSON WILL BE AVAILABLE FOR INSPECTION DURING NORMAL BUSINESS HOURS (REQUIRED 1 YEAR AFTER PROMULGATION).

Maureen E. Heuman — (SIGNATURE OF OWNER/OPERATOR)

11/2/09 — (DATE)

XVIII. I CERTIFY THAT THE ABOVE INFORMATION IS CORRECT.

Maureen E. Heuman — (SIGNATURE OF OWNER/OPERATOR)

11/2/09 — (DATE)

Asbestos Project Notification

Project Reference Number:	25749416	Type:	Amended Notification
Status:	Notification Received	Notification Received:	11/2/2009
Payment Status:	Paid in full	Number of amendments:	4
Notification Entered By:	R.C. Enterprise, Inc.		

Contractor Information

FEIN:113468245

R.C. Enterprise, Inc.

85-27 65th Road

Rego Park NY 11374

Asbestos License Number: 28749

Mailing Address

2nd Floor

85-27 65th Road

Rego Park NY 11374

Duly Authorized Representative

Marek Budzewski, Officer

Phone Number: 718-997-0555

E-mail Address: rcenterprise1@verizon.net

Project Information

Project Start Date:	11/16/2009
Project End Date:	2/27/2010
Project Location County:	Dutchess

Project Location

Building Name:	office bldg.
Room or Location:	
Bridge ID#:	
Address Line 1:	1 Dutchess Avenue
Address Line 2:	
City Town or Village:	Poughkeepsie
State:	New York
Zip Code:	12601

Building Information

Current Use:	Commercial
Prior Use:	Commercial
Approximate Year Built:	1969
Size(sq.ft):	13400
Is this fee exempt project?:	NO
Reason:	

Building Representative/Site Contact

Name: Louis Kaufman
Phone Number: 201-488-4455
E-mail Address:
Cell Phone Number:

Phase Details

Phase #	Phase Start Date	Phase End Date	Phase Location	Phase Scope

Sub-Contractor Details

Name:	Asbestos License Number:

Night/Weekend/Shift Work Details

Party for Whom Work is being Performed

First Name:		Last Name:	
Organization:	The O'Neill Group-Dutton, LLC		
Apt./Suite:		Address Line 1:	241 Hudson Street
Address Line 2:		City Town or Village:	Hackensack
Province:		State:	NJ
Zip Code:	07601	Country:	United States
Contract Dollar Amount:	$48,000.00		

Variance Information

Procedures and Type of Equipment and Ventilation Systems Used

Full Containment & Tent & Glovebag - Showers, Negative Filtration Systems, Hot Water Heaters, Water Pumps with Filtration Systems, Half Face Respirators, Full Face Respirators PAPR, GFCI Panels, HEPA Vacuums

Air Monitoring Firm

Name:	Asbestos License Number:
Parker House Services, Inc.	28878

Laboratory Performing Analysis

Name:	ELAP Registration Number:
AmeriSci	11480

Type of Asbestos Work

Pipe Related:	Yes	Siding:	Yes
Clean up:	No	Vessel covering:	Yes
Caulking/mastic:	Yes	Spray-on insulation:	No
Roofing/flashing:	Yes	VAT:	No
Demolition:	No	Demolition Ref#:	
Other-specify:			

Waste Transporter

Name:	Codi Transport LTD
NYS DEC or EPA Permit Number:	1A-688
Phone Number:	631-694-6001
Apt./Suite:	
Address Line 1:	72 Allen Boulevard
Address Line 2:	
City Town or Village:	Farmingdale
Province:	
State:	NY
Zip Code:	11735
Country:	United States

Landfill

Name:	Southern Alleganies
Phone Number:	814-479-2483
Apt./Suite:	
Address Line 1:	843 Miller Picking Road
Address Line 2:	
City Town or Village:	Davidsville
Province:	
State:	PA
Zip Code:	15928
Country:	United States

Type and Amount of Asbestos Containing Material

Friable linear feet:	300	Friable square feet:	600
Non-friable linear feet:	0	Non-friable square feet:	350

Fee

Total linear feet:	300.0
Total square feet:	950.0
Total Fee:	1200.0

Project Fee Schedule

If the notification was submitted prior to 4/7/09, the actual project fee is one half of the amount shown on the fee schedule

Linear Feet:	Fee	Square Feet:	Fee
0 - 259 feet:	$0	0 - 159 feet:	$0
260 - 429 feet:	$200	160 - 259 feet:	$200
430 - 824 feet:	$400	260 - 499 feet:	$400
825 - 1649 feet:	$1000	500 - 999 feet:	$1000
1650 or more feet:	$2000	1000 or more feet:	$2000

Remarks

Office Building - Cellar & Roof

Asbestos Project Notification

Project Reference Number:	25752613	Type:	Initial Notification
Status:	Notification Received	Notification Received:	11/20/2009
Payment Status:	No Fee	Number of amendments:	0
Notification Entered By:	R.C. Enterprise, Inc.		

Contractor Information

FEIN:113468245

R.C. Enterprise, Inc.

85-27 65th Road

Rego Park NY 11374

Asbestos License Number: 28749

Mailing Address

2nd Floor

85-27 65th Road

Rego Park NY 11374

Duly Authorized Representative

Marek Budzewski, Officer

Phone Number: 718-997-0555

E-mail Address: rcenterprise1@verizon.net

Project Information

Project Start Date:	11/24/2009
Project End Date:	2/27/2010
Project Location County:	Dutchess

Project Location

Building Name:	See Remarks
Room or Location:	See Remarks
Bridge ID#:	
Address Line 1:	1 Dutchess Avenue
Address Line 2:	
City Town or Village:	Poughkeepsie
State:	New York
Zip Code:	12601

Building Information

Current Use:	Commercial
Prior Use:	Commercial
Approximate Year Built:	1969
Size(sq.ft):	13400
Is this fee exempt project?:	NO
Reason:	

Building Representative/Site Contact

Name: Louis Kaufman
Phone Number: 201-488-4455
E-mail Address:
Cell Phone Number:

Phase Details

Phase #	Phase Start Date	Phase End Date	Phase Location	Phase Scope

Sub-Contractor Details

Name:	Asbestos License Number:

Night/Weekend/Shift Work Details

Party for Whom Work is being Performed

First Name:		Last Name:	
Organization:	The O'Neill Group-Dutton, LLC		
Apt./Suite:		Address Line 1:	241 Hudson Street
Address Line 2:		City Town or Village:	Hackensack
Province:		State:	NY
Zip Code:	07601	Country:	United States
Contract Dollar Amount:	$48,000.00		

Variance Information

Procedures and Type of Equipment and Ventilation Systems Used

Showers, Hot Water Heaters, Water Pumps with Filtration Systems, Half Faced Respirators, GFCI Panels, HEPA Vacuums

Air Monitoring Firm

Name:	Asbestos License Number:
Parker House Services, Inc.	28878

Laboratory Performing Analysis

Name:	ELAP Registration Number:
AmeriSci	11480

Type of Asbestos Work

Pipe Related:	No	Siding:	No
Clean up:	No	Vessel covering:	No
Caulking/mastic:	No	Spray-on insulation:	No
Roofing/flashing:	Yes	VAT:	No
Demolition:	No	Demolition Ref#:	
Other-specify:			

Waste Transporter

Name:	Codi Transport LTD
NYS DEC or EPA Permit Number:	1A-688
Phone Number:	631-694-6001
Apt./Suite:	
Address Line 1:	72 Allen Boulevard
Address Line 2:	
City Town or Village:	Farmingdale
Province:	
State:	NY
Zip Code:	11735
Country:	United States

Landfill

Name:	Southern Alleganies
Phone Number:	814-479-2483
Apt./Suite:	
Address Line 1:	843 Miller Picking Road
Address Line 2:	
City Town or Village:	Davidsville
Province:	
State:	NY
Zip Code:	15928
Country:	United States

Type and Amount of Asbestos Containing Material

Friable linear feet:	0	Friable square feet:	0
Non-friable linear feet:	0	Non-friable square feet:	125

Fee

Total linear feet:	0.0
Total square feet:	125.0
Total Fee:	0.0

Project Fee Schedule

If the notification was submitted prior to 4/7/09, the actual project fee is one half of the amount shown on the fee schedule

Linear Feet:	Fee	Square Feet:	Fee
0 - 259 feet:	$0	0 - 159 feet:	$0
260 - 429 feet:	$200	160 - 259 feet:	$200
430 - 824 feet:	$400	260 - 499 feet:	$400
825 - 1649 feet:	$1000	500 - 999 feet:	$1000
1650 or more feet:	$2000	1000 or more feet:	$2000

Remarks

Western Brick Building - Roof

Asbestos Project Notification

Project Reference Number:	25752605	Type:	Initial Notification
Status:	Notification Received	Notification Received:	11/20/2009
Payment Status:	Paid in full	Number of amendments:	0
Notification Entered By:	R.C. Enterprise, Inc.		

Contractor Information

FEIN:113468245

R.C. Enterprise, Inc.

85-27 65th Road

Rego Park NY 11374

Asbestos License Number: 28749

Mailing Address

2nd Floor

85-27 65th Road

Rego Park NY 11374

Duly Authorized Representative

Marek Budzewski, Officer

Phone Number: 718-997-0555

E-mail Address: rcenterprise1@verizon.net

Project Information

Project Start Date:	11/30/2009
Project End Date:	2/27/2010
Project Location County:	Dutchess

Project Location

Building Name:	See Remarks
Room or Location:	See Remarks
Bridge ID#:	
Address Line 1:	1 Dutchess Avenue
Address Line 2:	
City Town or Village:	Poughkeepsie
State:	New York
Zip Code:	12601

Building Information

Current Use:	Commercial
Prior Use:	Commercial
Approximate Year Built:	1969
Size(sq.ft):	13400
Is this fee exempt project?:	NO
Reason:	

Building Representative/Site Contact

Name: Louis Kaufman
Phone Number: 201-488-4455
E-mail Address:
Cell Phone Number:

Phase Details

Phase #	Phase Start Date	Phase End Date	Phase Location	Phase Scope

Sub-Contractor Details

Name:	Asbestos License Number:

Night/Weekend/Shift Work Details

Party for Whom Work is being Performed

First Name:		Last Name:	
Organization:	The O'Neill Group-Dutton, LLC		
Apt./Suite:		Address Line 1:	241 Hudson Street
Address Line 2:		City Town or Village:	Hackensack
Province:		State:	NJ
Zip Code:	07601	Country:	United States
Contract Dollar Amount:	$48,000.00		

Variance Information

Procedures and Type of Equipment and Ventilation Systems Used

Showers, Negative Filtration Systems, Hot Water Heaters, Water Pumps with Filtration Systems, Half Face Respirators, GFCI Panels, HEPA Vacuums

Air Monitoring Firm

Name:	Asbestos License Number:
Parker House Services, Inc.	28878

Laboratory Performing Analysis

Name:	ELAP Registration Number:
AmeriSci	11480

Type of Asbestos Work

Pipe Related:	No	Siding:	Yes
Clean up:	No	Vessel covering:	No
Caulking/mastic:	No	Spray-on insulation:	No
Roofing/flashing:	Yes	VAT:	No
Demolition:	No	Demolition Ref#:	
Other-specify:			

Waste Transporter

Name:	Codi Transport LTD
NYS DEC or EPA Permit Number:	1A-688
Phone Number:	631-694-6001
Apt./Suite:	
Address Line 1:	72 Allen Boulevard
Address Line 2:	
City Town or Village:	Farmingdale
Province:	
State:	NY
Zip Code:	11735
Country:	United States

Landfill

Name:	Southern Alleganies
Phone Number:	814-479-2483
Apt./Suite:	
Address Line 1:	843 Miller Picking Road
Address Line 2:	
City Town or Village:	Davidsville
Province:	
State:	NY
Zip Code:	15928
Country:	United States

Type and Amount of Asbestos Containing Material

Friable linear feet:	0	Friable square feet:	0
Non-friable linear feet:	0	Non-friable square feet:	725

Fee

Total linear feet:	0.0
Total square feet:	725.0
Total Fee:	1000.0

Project Fee Schedule

If the notification was submitted prior to 4/7/09, the actual project fee is one half of the amount shown on the fee schedule

Linear Feet:	Fee	Square Feet:	Fee
0 - 259 feet:	$0	0 - 159 feet:	$0
260 - 429 feet:	$200	160 - 259 feet:	$200
430 - 824 feet:	$400	260 - 499 feet:	$400
825 - 1649 feet:	$1000	500 - 999 feet:	$1000
1650 or more feet:	$2000	1000 or more feet:	$2000

Remarks

Maintenance Building - Siding & Roof Flashing

R.C. Enterprise, Inc.
85-27 65th Road
Rego Park, New York 11374
718-997-0555
Fax 718-730-9033

Asbestos Abatement Project
1 Dutchess Avenue
Poughkeepsie, New York

Certificate of Completion

R. C. Enterprise Inc.

85-27 65th Road
Rego Park, New York 11374
TEL – (718)-997-0555 FAX – (718) 730-9033

CERTIFICATE OF COMPLETION

To: Mr. Lou Kaufman
Onekey LLC
241 Hudson Street
Hackensack, New Jersey 07601

From: R.C. Enterprise, Inc.
85-27 65th Road
Rego Park, New York 11374

Project: Asbestos Abatement Project
1 Dutchess Avenue
Poughkeepsie, New York 12601

Location: Western Brick Building
Maintenance Building
Office Building

The undersigned Contractor certifies that the removal of asbestos containing materials in accordance with Parker House Services, Inc. report dated September 28,2009 and as indicated in the Asbestos NESHAP Notification and the New York State Department of Labor Asbestos Project Notification(s) in the above referenced locations has been completed, and has been performed in accordance with applicable requirements of the U.S. Environmental Protection Agency, The Occupational Safety and Health Administration, the National Institute for Occupational Safety and Health, and state, county and local agencies.

DATED: December 4, 2009

NAME OF CONTRACTOR:
R.C. Enterprise, Inc.

By: _____
Authorized Representative

R.C. Enterprise, Inc.
85-27 65th Road
Rego Park, New York 11374
718-997-0555
Fax 718-730-9033

Asbestos Abatement Project
1 Dutchess Avenue
Poughkeepsie, New York

NYS DOL Asbestos Handling License

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

R.C. Enterprise, Inc.
2nd Floor
85-27 65th Road
Rego Park, NY 11374

FILE NUMBER: 03-0571
LICENSE NUMBER: 28749
LICENSE CLASS: FULL
DATE OF ISSUE: 09/10/2009
EXPIRATION DATE: 09/30/2010

Duly Authorized Representative – Marek Budzewski:

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

Maureen A. Cox, Director
FOR THE COMMISSIONER OF LABOR

SH 432 (4-07)

R.C. Enterprise, Inc.
85-27 65th Road
Rego Park, New York 11374
718-997-0555
Fax 718-730-9033

Asbestos Abatement Project
1 Dutchess Avenue
Poughkeepsie, New York

Waste Manifest(s)

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CODI TRANSPORT LTD.

NYDEC 1A - 688
PADEP WH0081

72 Allen Boulevard, Farmingdale, NY 11735
Tel: (631) 694-6001 Fax: (631) 694-6002

D/O 11-19-09
W/L
O/W
S/B
N/L
X/M
E/W
OOA
CDO

WASTE MANIFEST

Manifest No.: 11725
Date: 12-3-09
Truck No.: 27
Contractor I.D.: RCENT
Container No.: 408
Load No.:

Owner's Name: The O'Neill Group-Duttenlle
Address: 241 Hudson St. Hackensack, NJ

Work Site: 1 Dutchess Ave Poughkeepsie, NY

Site Supervisor: Diana
Site Tel: 917-520-8262

Name and Address of Responsible NESHAPS Agency ☐ Other
U.S. EPA REGION II, 290 BROADWAY, NEW YORK, NY 10007

This Is To Certify That This Is A True And Accurate Copy Of The Original
By: [signature]
CODI TRANSPORT, LTD.

Description of Materials

☐ RQ Waste White Asbestos, Class 9, NA2212, PGIII
☒ RQ Waste White Asbestos, Class 9, UN2590, PGIII
☐ Other

Bags | Cubic Yds. 20 | Drums or Tons | Other

Boiler/Pipe ???/Transite/Roofing/Tar
Special Handling Instructions and Additional Information

SITE OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified packed, marked and labeled and are in all respects in proper condition for transport by highway according to applicable international government regulations.

Print / Type Name: DANA
Title: SUPERVISOR
Signature: [signature]
Date: 12/3/09

Transporter 1 (Acknowledgement of Receipt of Materials)

Company Name and Address
CODI TRANSPORT LTD.
72 Allen Boulevard
Farmingdale, NY 11735

Signature: [signature]
Print Name: Tony Gagliardi
Title: DRIVER
Telephone No: 631-694-6001
Date: 12-3-09

Transporter 2 (Acknowledgement of Receipt of Materials)

Company Name and Address
CODI TRANSPORT LTD.
72 Allen Boulevard
Farmingdale, NY 11735

Signature
Print Name
Title: DRIVER
Telephone No: 631-694-6001
Date

Discrepancy Indication Space

Waste Disposal Site Owner or Operator's Certification (Receipt of Above Waste Accepted

Company Name and Address
SOUTHERN ALLEGHENIES
843 Miller Picking Road
Davidsville, PA 15928
814-479-2483

Signature
Printed Name
Title
Telephone No.
Date

R.C. Enterprise, Inc.
85-27 65th Road
Rego Park, New York 11374
718-997-0555
Fax 718-730-9033

Asbestos Abatement Project
1 Dutchess Avenue
Poughkeepsie, New York

Certificate of Insurance

ACORD CERTIFICATE OF LIABILITY INSURANCE

OP ID AB RCENT-1 | DATE (MM/DD/YYYY) 11/12/09

PRODUCER
J.J. Farber-Lottman Co. Inc.
200 RT 5
P.O. Box 613
Palisades Park NJ 07650

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

INSURED

RC Enterprise Inc.
(718) 730-9033
85-27 65th Rd.
Rego Park NY 11374

INSURERS AFFORDING COVERAGE		NAIC #
INSURER A:	American International Group	
INSURER B:	First Rehab Insurance Co.-DBL	
INSURER C:		
INSURER D:		
INSURER E:		

COVERAGES

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	ADD'L INSRD	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS	
A		GENERAL LIABILITY COMMERCIAL GENERAL LIABILITY CLAIMS MADE / OCCUR X GEN'L AGGREGATE LIMIT APPLIES PER: X POLICY / PROJECT / LOC	PROP4634309	04/25/09	04/25/10	EACH OCCURRENCE	$ 1,000,000
						DAMAGE TO RENTED PREMISES (Ea occurence)	$ 50,000
						MED EXP (Any one person)	$ 5,000
						PERSONAL & ADV INJURY	$ 1,000,000
						GENERAL AGGREGATE	$ 2,000,000
						PRODUCTS - COMP/OP AGG	$ 2,000,000
		AUTOMOBILE LIABILITY ANY AUTO ALL OWNED AUTOS SCHEDULED AUTOS HIRED AUTOS NON-OWNED AUTOS				COMBINED SINGLE LIMIT (Ea accident)	$
						BODILY INJURY (Per person)	$
						BODILY INJURY (Per accident)	$
						PROPERTY DAMAGE (Per accident)	$
		GARAGE LIABILITY ANY AUTO				AUTO ONLY - EA ACCIDENT	$
						OTHER THAN AUTO ONLY: EA ACC	$
						AGG	$
		EXCESS/UMBRELLA LIABILITY OCCUR / CLAIMS MADE DEDUCTIBLE RETENTION $				EACH OCCURRENCE	$
						AGGREGATE	$
							$
							$
							$
A		WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? If yes, describe under SPECIAL PROVISIONS below	WC 683-66-46	04/15/09	04/15/10	WC STATU-TORY LIMITS / OTH-ER	
						E.L. EACH ACCIDENT	$ 1,000,000
						E.L. DISEASE - EA EMPLOYEE	$ 1,000,000
						E.L. DISEASE - POLICY LIMIT	$ 1,000,000
B		OTHER Disability	DBL 308 796	12/02/08	12/02/09	STATURY	LIMITS

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES / EXCLUSIONS ADDED BY ENDORSEMENT / SPECIAL PROVISIONS

Additional Insured: See Attached.

CERTIFICATE HOLDER

ONEKEYL

ONEKEY L.L.C.
241 Hudson Street
Hackensack NJ 07601

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE

IMPORTANT

If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

DISCLAIMER

The Certificate of Insurance on the reverse side of this form does not constitute a contract between the issuing insurer(s), authorized representative or producer, and the certificate holder, nor does it affirmatively or negatively amend, extend or alter the coverage afforded by the policies listed thereon.

Project Location: AC Dutton, 1 Dutchess Avenue Poughkeepsie NY; Onekey LLC; and affiliated companies; their respective officers; agents and employees are included as additional insureds with regard to liability and defense suits arising from operations and uses performed by or on behalf of the named insured. Also named as additional insured under General Liability with respects to this project is the O'Neil Group Dutton LLC 241 Hudson Street Hackensack NJ 07601.

ACORD CERTIFICATE OF LIABILITY INSURANCE

OP ID AB RCENT-1

DATE (MM/DD/YYYY) 12/02/09

PRODUCER
J.J. Farber-Lottman Co. Inc.
200 RT 5
P.O. Box 613
Palisades Park NJ 07650

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

INSURERS AFFORDING COVERAGE		NAIC #
INSURER A:	American International Group	
INSURER B:	First Rehab Insurance Co.-DBL	
INSURER C:		
INSURER D:		
INSURER E:		

INSURED

RC Enterprise Inc.
(718) 730-9033
85-27 65th Rd.
Rego Park NY 11374

COVERAGES

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	ADD'L INSRD	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS	
		GENERAL LIABILITY				EACH OCCURRENCE	$
		COMMERCIAL GENERAL LIABILITY				DAMAGE TO RENTED PREMISES (Ea occurence)	$
		CLAIMS MADE ☐ OCCUR ☐				MED EXP (Any one person)	$
						PERSONAL & ADV INJURY	$
						GENERAL AGGREGATE	$
		GEN'L AGGREGATE LIMIT APPLIES PER:				PRODUCTS - COMP/OP AGG	$
		POLICY ☐ PRO-JECT ☐ LOC ☐					
		AUTOMOBILE LIABILITY				COMBINED SINGLE LIMIT (Ea accident)	$
		ANY AUTO				BODILY INJURY (Per person)	$
		ALL OWNED AUTOS					
		SCHEDULED AUTOS				BODILY INJURY (Per accident)	$
		HIRED AUTOS					
		NON-OWNED AUTOS				PROPERTY DAMAGE (Per accident)	$
		GARAGE LIABILITY				AUTO ONLY - EA ACCIDENT	$
		ANY AUTO				OTHER THAN AUTO ONLY: EA ACC	$
						AGG	$
A		EXCESS/UMBRELLA LIABILITY				EACH OCCURRENCE	$ 2,000,000
		X OCCUR ☐ CLAIMS MADE	BND 090311	11/30/09	04/25/10	AGGREGATE	$ 2,000,000
							$
		DEDUCTIBLE					$
		RETENTION $					$
		WORKERS COMPENSATION AND EMPLOYERS' LIABILITY				WC STATU-TORY LIMITS ☐ OTH-ER ☐	
		ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED?				E.L. EACH ACCIDENT	$
		If yes, describe under SPECIAL PROVISIONS below				E.L. DISEASE - EA EMPLOYEE	$
						E.L. DISEASE - POLICY LIMIT	$
		OTHER					

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES / EXCLUSIONS ADDED BY ENDORSEMENT / SPECIAL PROVISIONS

Additional Insured: See Attached.
Project: AC Dutton, 1 Dutchess Avenue, Poughkeepsie NY.

CERTIFICATE HOLDER

ONEKEYL

ONEKEY L.L.C.
241 Hudson Street
Hackensack NJ 07601

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE

NOTEPAD: HOLDER CODE [illegible] INSURED'S NAME [illegible] OP ID [illegible] DATE [illegible]

Additional Insured: Onekey LLC and affiliated companies; their respective officers; agents and employees are included as additional insured with regard to liability and defense suits arising from operations and uses performed bu or on behalf of the named insured. Also named as additional insured under General Liability with respects to this project is the O'neil Group Dutton LLC 241 Hudson Street Hacknesack NJ 07601.

IMPORTANT

If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

DISCLAIMER

The Certificate of Insurance on the reverse side of this form does not constitute a contract between the issuing insurer(s), authorized representative or producer, and the certificate holder, nor does it affirmatively or negatively amend, extend or alter the coverage afforded by the policies listed thereon.

R.C. Enterprise, Inc.
85-27 65th Road
Rego Park, New York 11374
718-997-0555
Fax 718-730-9033

Asbestos Abatement Project
1 Dutchess Avenue
Poughkeepsie, New York

Waste Transporter Documentation

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SOLID & HAZARDOUS MATERIALS

PART 364
WASTE TRANSPORTER PERMIT NO. 1A-688

Pursuant to Article 27, Titles 3 and 15 of the Environmental Conservation Law and 6 NYCRR 364

PERMIT ISSUED TO:

CODI TRANSPORT, LTD
72 ALLEN BOULEVARD
FARMINGDALE, NY 11735

PERMIT TYPE:

☐ NEW
■ RENEWAL
☐ MODIFICATION

CONTACT NAME: TONY GAGLIARDI
COUNTY: SUFFOLK
TELEPHONE NO: (631)694-6001

EFFECTIVE DATE: 08/24/2009
EXPIRATION DATE: **08/23/2010**
US EPA ID NUMBER:

AUTHORIZED WASTE TYPES BY DESTINATION FACILITY:
The Permittee is Authorized to Transport the Following Waste Type(s) to the Destination Facility listed :

Destination Facility	Location	Waste Type(s)
110 Sand Company Clean Fill Disposal Site	Melville , NY	Non-Hazardous Industrial/Commercial
CLEAN EARTH OF CARTERET	CARTERET , NJ	Petroleum Contaminated Soil
JAMAICA RECYCLING	ELMONT , NY	Petroleum Contaminated Soil
RESIDUAL MANAGEMENT SERVICES, INC.	DEER PARK , NY	Petroleum Contaminated Soil
SOUTHERN ALLEGHENIES LANDFILL	DAVIDSVILLE , PA	Non-Hazardous Industrial/Commercial Asbestos

AUTHORIZED VEHICLES:
The Permittee is Authorized to Operate the Following Vehicles to Transport Waste:
(Vehicles enclosed in <>'s are authorized to haul Residential Raw Sewage and/or Septage only)

7 (Seven) Permitted Vehicle(s)

NY 35670JX
NY 89331JU
NY 80227JN
NY 83553JA
NY AA70277
NY AF30174
NY AH46785
End of List

NOTE: By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with the Environmental Conservation Law, all applicable regulations, and the General Conditions printed on the back of this page.

ADDRESS: New York State Department of Environmental Conservation
Division of Solid & Hazardous Materials - Waste Transporter Program
625 Broadway, 9th Floor
Albany, NY 12233-7253

AUTHORIZED SIGNATURE: Robert M. Davis Date: JUL 07 2009

NOTICE

This renewed permit is not valid until the effective date listed on the permit

Document No
B 4968

CITY OF NEW YORK
BUSINESS INTEGRITY COMMISSION
100 CHURCH STREET, NEW YORK, NY 10007

The issuance and retention of this license or registration is contingent upon the licensee's or registrant's compliance with the laws of the State of New York and the City of New York, the rules, regulations, and orders of the Business Integrity Commission, and the rules, regulations and orders of all Federal, State, and City agencies, now in effect or hereafter enacted.

Type: **CL.2-EXEMPT REGISTRATION**

TW# 1554

Issued: **07/28/2009** Expires: **07/31/2011**

Start Date: **08/01/2009** End-Date: **07/31/2011**

Entity Name: **CODI TRANSPORT LTD.**

Trade-Name (D/B/A): **CODI TRANSPORT LTD.**

Principal Office: **72 ALLEN BOULEVARD, FARMINGDALE, NY 11735**

Principal Garage Office: **72 ALLEN BOULEVARD, FARMINGDALE, NY 11735**

Mailing Address: **72 ALLEN BOULEVARD, FARMINGDALE, NY 11735**

Chair, Business Integrity Commission

NOT TRANSFERABLE

THIS LICENSE OR REGISTRATION MUST BE CONSPICUOUSLY DISPLAYED IN PRINCIPAL OFFICE

R.C. Enterprise, Inc.
85-27 65th Road
Rego Park, New York 11374
718-997-0555
Fax 718-730-9033

Asbestos Abatement Project
1 Dutchess Avenue
Poughkeepsie, New York

Landfill Documentation

Pennsylvania Department of Environmental Protection

400 Waterfront Drive
Pittsburgh, PA 15222-4745
August 7, 2006

Southwest Regional Office

412-442-4000
Fax 412-442-4194

CERTIFIED MAIL NO. 7003 2260 0000 3133 4402

Darrel Klink
Southern Alleghenies Landfill, Inc.
843 Miller Picking Road
Davidsville, PA 15928

Re: Southern Alleghenies Landfill
Conemaugh Township
Somerset County
I.D. No. 100081
APS No. 17855
Authorization No. 626519

Dear Mr. Klink:

Enclosed is a permit renewal to Solid Waste Permit No. 100081 for the operation of the Southern Alleghenies Landfill, issued in accordance with Article V of the Solid Waste Management Act, 35 P.S. Sections 6018.101, et seq. This approval authorizes solid waste disposal activities until June 18, 2016.

Compliance with the terms and conditions set forth in the permit is mandatory. You have the right to file an appeal as to the modified terms and conditions.

Any person aggrieved by this action may appeal, pursuant to Section 4 of the Environmental Hearing Board Act, 35 P.S. Section 7514, and the Administrative Agency Law, 2 Pa.C.S. Chapter 5A, to the Environmental Hearing Board, Second Floor, Rachel Carson State Office Building, 400 Market Street, P.O. Box 8457, Harrisburg, PA 17105-8457, 717-787-3483. TDD users may contact the Board through the Pennsylvania Relay Service, 800-654-5984. Appeals must be filed with the Environmental Hearing Board within 30 days of receipt of written notice of this action unless the appropriate statute provides a different time period. Copies of the appeal form and the Board's rules of practice and procedure may be obtained from the Board. The appeal form and the Board's rules of practice and procedure are also available in braille or on audiotape from the Secretary to the Board at 717-787-3483. This paragraph does not, in and of itself, create any right of appeal beyond that permitted by applicable statutes and decisional law.

IF YOU WANT TO CHALLENGE THIS ACTION, YOUR APPEAL MUST REACH THE BOARD WITHIN 30 DAYS. YOU DO NOT NEED A LAWYER TO FILE AN APPEAL WITH THE BOARD.

IMPORTANT LEGAL RIGHTS ARE AT STAKE, HOWEVER, SO YOU SHOULD SHOW THIS DOCUMENT TO A LAWYER AT ONCE. IF YOU CANNOT AFFORD A LAWYER, YOU MAY QUALIFY FOR FREE PRO BONO REPRESENTATION. CALL THE SECRETARY TO THE BOARD (717-787-3483) FOR MORE INFORMATION.

If you have any questions about the enclosed permit or requirements of the Solid Waste Management Act, please contact Elizabeth Bertha at 412-442-4345.

Sincerely,

Michael G. Forbeck, P.E.
Regional Manager
Waste Management

Enclosure

cc: Somerset County (w/enclosure) **CERTIFIED MAIL NO. 7003 2260 0000 3133 4419**
Conemaugh Township (w/enclosure) **CERTIFIED MAIL NO. 7003 2260 0000 3133 4426**

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
WASTE MANAGEMENT

FORM NO. 13-A
MODIFICATION TO SOLID WASTE DISPOSAL AND/OR PROCESSING PERMIT

Under the provisions of Act 97, the Pennsylvania Solid Waste Management Act, the Act of July 7, 1980, P.L. 380, 35 P.S. §§ 6018.101, et seq., Solid Waste Permit Number 100081 issued on April 18, 1990, reissued to Southern Alleghenies Landfill, Inc. on March 21, 2000, 843 Miller Picking Road, Davidsville, PA 15928 for the operation of the Southern Alleghenies Landfill located in Conemaugh Township, Somerset County is modified as follows:

1. This permit modifies Solid Waste Permit No. 100081 originally issued April 18, 1990. It is issued in response to Solid Waste Management Authorization Request No. 626519 for a permit renewal dated March 27, 2006. Subsequent revisions and addendum(s) submitted to the initial application are approved by the Department and are a part of this permit amendment.

   This permit is issued based on the assumption that the information submitted in Solid Waste Management Authorization Request No. 626519, referenced in Permit Condition No. 2, is accurate. Any inaccuracies found in this information may be grounds for the revocation or modification of this permit and potential enforcement action.

2. This approved application consists of the following documents:

Form No./Letter	Form Title	Date (Revision)
Form GIF	Permit Application - General Information	03/2006
Form A	Application for Municipal or Residual Waste Permit	03/2006
Form B	Professional Certification	03/2006
Form B1	Application Form Certification	03/2006
Form HW-C	Compliance History	03/2006
Form E	Contractual Consent of Landowner	03/2006
Form I	Facility Plan	03/2006
Form 46	Relationship Between Municipal Waste Management Plans and Permits	03/2006

3. This approval authorizes solid waste disposal activities until June 18, 2016.

4. Unless amended by this permit modification or previously approved modification, all design and operational requirements stipulated in Solid Waste Permit No. 100081, issued April 18, 1990 remain valid for this permit modification.

This modification shall be attached to the existing Solid Waste Permit described above and shall become a part thereof effective on August 7, 2006.

FOR THE DEPARTMENT OF ENVIRONMENTAL PROTECTION

A. All previous versions of the Southern Alleghenies Landfill WACP and permit modifications issued relative thereto, are hereby superseded unless referenced in this permit.

B. The permittee is hereby authorized to accept and dispose of residual and special handling municipal wastes at the Southern Alleghenies Landfill associated with the following general categories:

General Category or Category Code*	Generic Waste Type
Special Handling Waste (Municipal)	Processed Infectious/Chemotherapeutic Waste (ICW)
Special Handling Waste (Municipal)	Sewage Sludges (including incinerated sewage sludges)
Special Handling Waste (Municipal)	Municipal Waste Ash (MWA) from Resource Recovery Facilities
Residual Waste Category 000	Combustion Residues
Residual Waste Category 100	Metallurgical Process Residues
Residual Waste Category 200	Sludges, Scales
Residual Waste Category 300	Chemical Wastes
Residual Waste Category 400	Generic Wastes
Residual Waste Category 500	Special Handling Residues
Residual Waste Category 700	Industrial Equipment, Scrap
Residual Waste Category 800	Non-Coal Mining Waste
Residual Waste Category 900	Other (specify) A) Auto Shredder Fluff (901) B) Nonhazardous Residue from the Treatment of Hazardous Waste (902)

General Category or Category Code*	Generic Waste Type
Generic Residual Waste as listed in Table No. 2	Formerly "Municipal-Like Residual Waste" (does not include treated wood wastes from the manufacture of treated wood or freshly treated wood waste).
Special Handling Waste (Residual)	Asbestos Containing Waste (ACW)
Special Handling Waste (Residual)	Soil Contaminated with Virgin Petroleum Fuel

*Includes all residual waste codes listed under each specific general category and the specific special handling waste listed herein with the following exceptions:

1. any waste stream having a flash point of less than 140°F or 60°C as referenced in 40 CFR § 261.21, even if it is an excluded hazardous waste;
2. any excluded hazardous waste, which would otherwise meet the requirements for a reactive waste as referenced in 40 CFR § 261.23;
3. waste oil (RWC 509);

April 23, 2009

Codi Transport

RE: Acceptable waste

To Whom It May Concern:

Southern Alleghenies Landfill, Inc. will accept for disposal materials listed below, provided such waste is in accordance with all Federal, State, and Local guidelines, requirements, and/or permit regulations as governed by the Pennsylvania Department of Environmental Protection or other supervisory agencies and all mandated forms, applications, approvals have been established prior to delivery. Southern Alleghenies Landfill is regulated by PA D.E.P. permit # 100081.

In addition, the materials accepted at Southern Alleghenies Landfill, Inc. must be managed and transported according to all guidelines, requirements and/or regulations governed by Local, State and Federal agencies.

The following generated waste streams are permitted for acceptance:

Municipal solid waste, including Construction / Demolition / Remediation like waste.

Refractory waste: including Foundry Sands, Grindings, Sandblast, Ferrous/Non-Ferrous Dust, Slag, etc.

Waste Water Treatment Plant Sludge, Grits & Screenings, Industrial WWTPS, etc

General Manufacturing waste including Laminates, Textiles, Wood waste, Plastic, Paper, Spent Filters, Resin, Ceramic, etc.

Contaminated Soil including Virgin/Non-Virgin Fuel and Oil contamination

Asbestos Containing Waste

Please note this is a generic listing of approved waste accepted for disposal into Southern Alleghenies Landfill, Inc.

Please contact our office at 814) 479-2537 for further assistance or any questions you may have regarding the disposal of a particular generated waste stream

Respectfully,

Loren Stahl, Jr.
Environmental / Safety Compliance
Southern Alleghenies Landfill, Inc.

APPENDIX H

Remedial Task Specifications

SPECIFICATIONS

FOR

PETROLEUM BULK STORAGE TANK CLOSURE

1

May 2011

Site Identification:

Former A.C. Dutton Lumber Yard

1 Dutchess Avenue, City and Town of Poughkeepsie
Dutchess County, New York

ESI File: OP08022.50

NYSDEC Brownfields Program Site: C314081

Prepared By:

Ecosystems Strategies, Inc.
24 Davis Avenue, Poughkeepsie, NY 12603
phone 845.452.1658 | fax 845.485.7083 | ecosystemsstrategies.com

SECTION 1 - SUMMARY OF WORK

1.1 PROJECT SUMMARY

A. Purpose

Ecosystems Strategies, Inc. (ESI) has prepared these "Specifications for Petroleum Bulk Storage Tank Closure" as part of a Remedial Design Work Plan (RDWP) that includes detailed design specifications for all the proposed environmental response actions at the former A.C. Dutton Lumber Yard property located at 1 Dutchess Avenue, City and Town of Poughkeepsie, New York (Brownfields Site: C314081). All work at the Site is being performed in general conformance with regulations specified in 6 NYCRR Part 375 (Environmental Remediation Programs) and applicable New York Department of Environmental Conservation (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 Petroleum Bulk Storage Tank Closure" are hereafter referred to as the "Specifications". The contracting entity will be The O'Neill Group - Dutton, LLC, 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 former AC Dutton Lumber Yard located at 1 Dutchess Avenue, City and Town of Poughkeepsie, 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 locations of PBS tanks requiring removal is shown on the PBS Tank Closure Map, Attachment B of these Specifications.

D. Summary of Services

O'Neill - Dutton seeks a qualified Contractor to assist O'Neill - Dutton in performing the following tasks:

Task 1.0: Conduct services necessary for the proper removal of seven (7) petroleum bulk storage tanks from the Site. These services will include cutting open the tanks, pumping free of product, cleaning, excavation from the ground (as necessary), wrapping in 6-mil plastic and stockpiling on-site, backfilling the tank grave with clean fill (provided on-site) and off-site disposal of the tanks.

Task 2.0: To excavate and stockpile on-site any encountered petroleum contaminated soil associated with the PBS tanks.*

Task 3.0: Perform the above tasks to standards that will facilitate the OSC in obtaining NYSDEC closure of the Site as a registered PBS facility.

All confirmatory endpoint and waste characterization sampling, 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.

* The off-site disposal of contaminated soils generated during tank closure is not included in these Specifications. The procedures for off-site disposal of contaminated soil are described in Specifications #3 "Specifications for the Excavation and Disposal of Contaminated Materials" included in Appendix H of the RDWP.

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), prepared by Fuss and O'Neill, dated August 2007, and the Supplementary Investigation Report (SIR) prepared by ESI, dated September 2008. The remedial tasks described in these Specifications have been selected based on the Remedial Alternatives Analysis and Remedial Work Plan (RAA/RWP), prepared by ESI, dated September 2008. Environmental conditions and the conceptual remedy for the Site are also summarized in the January 2008 Brownfield Cleanup Program Decision Document prepared by the New York State Department of Environmental Conservation (NYSDEC).

1.2 KNOWN ENVIRONMENTAL CONDITIONS

Site conditions are detailed in the above-referenced RIR and SIR; however, the Contractor is hereby notified that conditions may have changed between the time of this investigatory work and the actual date of contract award. Furthermore, conditions unknown at the time of the August 2007 RIR and September 2008 SIR may be present which may materially affect this Contract.

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 all petroleum bulk storage tanks in accordance with applicable NYSDEC regulations. As discussed below, communication with the NYSDEC will be the responsibility of O'Neill - Dutton and/or the OSC.

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

- The on-site pressure treatment of lumber using chromate copper arsenate (CCA) is reported to have begun on-site in 1966. Previous investigations have documented extensive arsenic and chromium contamination within and beneath the two former pressure treatment plant buildings.

- Seven known petroleum bulk storage tanks are present on-site including three (3) underground storage tanks (USTs) and four (4) aboveground storage tanks (ASTs). At this time it is anticipated that all the tanks will be closed/removed, i.e. none will be abandoned in place.

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 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 Contractor 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 the OSC as an independent representative to act on its behalf with regard to the interpretation and implementation of these Specifications. The OSC will provide qualified personnel to be present during remedial work and to conduct sampling and monitoring as detailed in 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

DER-10

NYCRR Part 612 - Registration of Petroleum Storage Facilities (February 1992).

NYCRR Part 613 - Handling and Storage of Petroleum (February 1992).

NYCRR Part 614 - Standards for New and Substantially Modified Petroleum Storage Tanks (February 1992).

NYCRR Part 371 - Identification and Listing of Hazardous Wastes (November 1998).

NYCRR Subpart 374-2 - Standards for the Management of Used Oil (November 1998).

NYCRR Parts 375-1 and -3

NYCRR Parts 700-706 - Water Quality Standards (June 1998).

40 CFR Part 280 - Technical Standards and Corrective Action Requirements for Owners and Operators of Underground Storage Tanks.

STARS #1 - Petroleum-Contaminated Soil Guidance Policy.

SPOTS #14 - Site Assessments at Bulk Storage Facilities (August 1994).

Spill Response Guidance Manual.

Permanent Closure of Petroleum Storage Tanks (July 1988), including most recent guidance.

TOGS 1.1.1 - Ambient Water Quality Standards & Guidance Values and Groundwater Effluent Limitations.

Air Guide 1 - Guidelines for the Control of Toxic Ambient Air Contaminants.

1.6 BIDDING CONSIDERATIONS

A. General

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

B. Return of Bid Documents

All bid documents must be returned to the Volunteer in a sealed manila envelope with the words:

"*Bid for PBS Tank Closure*
from the former AC Dutton Lumber Yard,
Town and City of Poughkeepsie, NY"

clearly written on the outside. Unlabeled envelopes will be determined incomplete and will not be considered by the Volunteer.

C. Return Address

All bids must be submitted to the address shown in the Advertisement and Notice to Bidders.

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. The Contractor shall list the percentage of the overall project work performed by the prime Contractor forces.

C. The Contractor shall submit with this bid a copy of the Contractor's Site-specific Health and Safety Plan which conforms with 29 CFR 1910.120 and 29 CFR 1926. 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.

D. Submit a copy of the prime Contractor's standard qualifications form for this type of work.

E. All submitted bids will become the property of the Volunteer.

1.8 BID SCHEDULE

A. All bid documents must be received by the Volunteer in accordance with the schedule set forth in the Advertisement and Notice to Bidders. Bids received after that time or received in a manner determined by the Volunteer to be incomplete will be returned to the bidder unopened.

B. Bids will be opened by the Volunteer in a timely manner after the submittal deadline, and all bids will be read aloud and tabulated. The lowest cost bidder, as established by charges specified in the bid response forms, will be selected by the Volunteer.

C. The Volunteer retains the right to question any and all bidders.

D. Selection of the Contractor will be at the sole discretion of the Volunteer.

1.9 AWARD CRITERIA

The project will be awarded to the lowest cost-responsive, responsible bidder.

1.10 REJECTION OF BIDS

The Volunteer reserves the right to reject any or all bids for reasonable cause.

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 MEETINGS

A. Coordination and Project Conditions

1. The Contractor will coordinate scheduling, submittals, and work on the various portions and phases of the Project 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 MANDATORY PRE-BID MEETING

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

1.14 PROJECT MEETINGS

The Contractor will be prepared to attend and participate in a minimum of two meetings scheduled by O'Neill - Dutton to inform O'Neill - Dutton of the project's status. At a minimum, the initial pre-removal conference will be held at least two weeks prior to the initiation of services. The second mandatory meeting will be scheduled after the removal of the tanks. The intent of this meeting is to review the work completed and to agree on a schedule for resolution of outstanding issues with the NYSDEC.

1.15 PROGRESS AND COMPLETION

A. Normal working hours and normal working days for the Contractor's Work on this Project shall be between the hours of 7:30 a.m. and 4:30 p.m. (or as determined appropriate by the City of Poughkeepsie), Monday through Friday, excluding holidays, except as otherwise specified.

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 WORK PHOTOGRAPHS

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

- tank excavation and cleaning
- final Site conditions

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

1.17 ANTICIPATED PROJECT SCHEDULE

A. At the initial preconstruction conference, the Contractor will prepare a schedule identifying a timetable for performing all services detailed in the specifications.

This schedule will be submitted to the Volunteer in writing and once revised through mutual consent of the Volunteer and the Contractor will be relied upon to assess Contractor responsiveness. Lack of completion of services in accordance with the approved schedule may be considered by the Volunteer as lack of responsiveness by the Contractor and, therefore, cause for possible dismissal.

B. It is anticipated that a schedule of services will be similar to the following:

Week 1:	Tank pump out, removal, cleaning, staging.
Weeks 2-3:	Removal of tanks and debris from Site.
Week 4:	Submittal of manifests

1.18 QUALITY CONTROL

Quality Assurance - Control of Removal Work

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

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

1.19 INSPECTION/TESTING SERVICES

A. O'Neill -Dutton 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.

1.20 CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

A. <u>Temporary Sanitary Facilities</u>

Temporary sanitary facilities will be the responsibility of the Contractor to provide and maintain. Costs associated with temporary sanitary facilities will not be borne by the Volunteer.

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, 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 collect and remove waste materials, debris, and rubbish from the Site weekly and dispose said materials off-site in accordance with all applicable Federal, State and local regulations.

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.

1.21 SITE-SPECIFIC CLOSE-OUT BILLING PROCEDURES

A. Close-out Procedures

1. The Contractor will submit written certification that Contract Documents have been reviewed, Work has been inspected, and Work is complete in accordance with Contract Documents and ready for the Volunteer's review.

   Note: Project Close-out will not occur until the Volunteer's Representative provides written notice to the NYSDEC certifying project completion.

2. The Contractor will provide submittals to the Volunteer that are required by governing or other authorities.

B. Final Cleaning

1. Final cleaning, prior to final project assessment, will be executed by the Contractor.

2. Prior to final inspection, the Contractor shall clean all construction debris.

3. The Site shall be cleaned, and construction materials, tools, equipment, sheds, barricades, tree protection, and other temporary construction measures shall be removed. Lawn areas shall be neat and free of debris of any kind.

4. Contractor's payment may be withheld if the Site is not cleaned up to the Volunteer's satisfaction.

5. Requirements of this section shall be in addition to and not in limitation of any special cleaning requirements specified in other sections.

6. The Contractor shall be responsible for the removal and disposal from the Site of all trash and debris that resulted from the Contractor's work.

C. Project Record Documents

The Contractor will:

1. Maintain on the Site one set of the following documents:

   a. Health and Safety Plan (s)
   b. Specifications and drawings
   c. Addenda
   d. Change Orders and other modifications to the Contract

2. Ensure entries are complete and accurate, enabling future reference by the Volunteer.

3. Store record documents separate from documents used for construction.

4. Record information concurrent with construction progress.

5. Submit documents to the Volunteer with claim for Final Application for Payment.

SECTION 2 - TECHNICAL SPECIFICATIONS

2.1 SITE PREPARATION SERVICES

A. Health and Safety Plan

The OSC will be responsible for maintaining, implementing, and enforcing a Health and Safety Plan ("HASP") for the Site provided in Appendix C of the RDWP. The Contractor will provide a task-specific HASP (See Section 1.7, above). The OSC and the Contractor will review both HASPs with the Contractor prior to the initiation of services to determine what, if any, task-specific health and safety issues will require implementation. The Contractor will be responsible for implementing and overseeing any task-specific HASP procedures.

B. Agency Notification

The Contractor will be responsible for obtaining all necessary local permits (i.e. City and/or Town of Poughkeepsie Fire Department) for tank closure.

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

- Prior to the initiation of Site Work to identify the proposed location of the tank stockpile area and the name (and certifications) of the proposed analytical laboratory.

- At least seven days prior to initiation of fieldwork activities, pre-bid meetings, job progress meetings, substantial completion meetings and inspection, and final inspection and meeting.

- Prior to engaging in any substantive variations to the activities detailed in these Specifications.

2.2 TANK CLOSURE PROCEDURES

A. General

The Contractor shall ensure that all operations associated with the handling, loading, transportation, and disposal of tanks and/or associated piping are in compliance with Federal, State, and local regulations. The Contractor is expected to coordinate the load-out work with O'Neill - Dutton supervisory personnel so as not to interfere with other Site activities.

B. Schedule

It is anticipated that tank closure activities will require no more than 20 business days, inclusive of cleaning, cutting, confirmatory endpoint sampling and off-site disposal.

C. Tank Closure

1. Under OSC supervision, the Contractor will deactivate or remove the tank and ancillary equipment, if practically feasible, per NYSDEC guidelines. Any product lines connected to the tank will be drained back into the tank prior to removal of any tank bottoms (e.g. sludges, sediment etc.). the tank atmosphere will be monitored and made safe prior to being cut open, pumped of any liquid, and cleaned. Any associated piping will be detached from the tank and stockpiled on 6 mil plastic pending off-site disposal.

2. During tank and pipe line removal, THE OSC will make a description and photographic documentation of tank and pipe line condition (e.g. pitting, holes or leak points).

   If the tank is an AST, the following procedure will be used (procedures for UST closure are presented in paragraphs 5 through 10, below):

3. The AST will be visually inspected. Encountered liquid will be identified (e.g. gasoline, fuel oil, waste oil, etc.) and will be removed from the tank by a licensed liquid waste transporter. Proper manifests will be prepared and signed by the OSC as representative of the Volunteer. Each tank will be cleaned of residual product/sludge and wrapped in 6 mil plastic pending off-site disposal or directly loaded onto a truck for off-site disposal. The area immediately beneath the tank will be examined for signs if staining and screened with a properly calibrated PID. In the event that no field evidence is identified, a test pit will be dug beneath the tank to a depth of at least five feet to determine if there is contamination present. One confirmatory sample will be collected from soils at the bottom of the test pit for laboratory analysis.

4. Should contaminated soils be discovered:

    a. any stained material will be excavated and stockpiled on and under 6-mil plastic pending off-site disposal until all such soils have been removed (in the opinion of the OSC) or until further excavation is not possible.

    b. Confirmatory end point samples will be collected by the OSC per the protocols outlined in the QA/QC Plan (Appendix E of the RDWP). The walls of the excavation will be sampled at a rate of one sample per 30 feet of exposed wall and one sample per 300 square feet of floor.

    If the tank is a UST, the following procedure will be used:

5. Encountered liquid will be identified (e.g. gasoline, fuel oil, waste oil, etc.) and will be removed from the tank by a licensed liquid waste transporter. Proper manifests will be prepared and signed by the OSC as representative of the Volunteer. Each tank will be cleaned of residual product/sludge and, upon removal from the ground, wrapped in 6 mil plastic pending off-site disposal or directly loaded onto a truck for off-site disposal. During the excavation of USTs, THE OSC will examine soils in the tank grave for any physical evidence of soil contamination and screen these soils with a properly calibrated PID. If there is no evidence of a discharge, soil samples for laboratory analysis will be taken immediately after tank removal as follows:

6. If there is no groundwater in the excavation, discrete center line soil samples will be collected from the bottom of the excavation at a frequency equal to the total length of the tank divided by five (minimum of one sample).

7. If there is groundwater in the excavation, soil samples will be taken at a depth from zero to two feet beneath the tank on four foot centers across the length of the excavation. These samples will be field screened with a PID. The four samples with the highest field screening results will be submitted for the appropriate laboratory analysis.

8. If there is evidence of a discharge, excavation will continue until all contaminated soil is removed or until further excavation is not practical. Once excavation is complete soil samples will be taken to demonstrate that contamination has been removed. A minimum of 5 soil samples will be taken, consisting of 4 sidewall and 1 bottom sample for each 15 linear feet of trench. The samples will be biased based upon field screening towards the suspected location of greatest contamination.

9. If there is evidence of a discharge, but there is insufficient soil to conduct soil remedial action, (e.g., a tank is located in bedrock), or any portion of the tank is located within or immediately above the groundwater table, a groundwater sample will be taken.

10. If there is any evidence of groundwater contamination (i.e., sheen or odor) a groundwater sample will be collected.

11. For a tank to be abandoned in place it will be cleaned, the tank will be inspected and any areas of questionable integrity, including any cracks or corrosion, or evidence of discharge, will be documented.

12. Upon completion of tank cleaning, soil sampling will be conducted by completing borings through the bottom of the tank, along the centerline, at a frequency equal to the total length of the tank divided by five (minimum of one sample) the tank will then be filled with foam or concrete. The Contractor will be responsible for ensuring that the material used to fill the tank is acceptable per Town and/or City of Poughkeepsie Building and/or Fire codes.

13. All samples will be analyzed as follows:

For gasoline tanks:	VOCs (USEPA Method 8260), STARS List Only) PAHs (USEPA Method 8270)
For fuel oil tanks:	VOCs (USEPA Method 8260), STARS List Only) PAHs (USEPA Method 8270)

Note: All laboratory results will include analyses for the 30 (10 VOC and 20 SVOC) highest concentrations of tentatively identified compounds (TICs).

2.3 CONTAMINATED SOIL MANAGEMENT

A. Soil Excavation

1. General

The Contractor shall ensure that all operations associated with the handling, and stockpiling of contaminated soils are in compliance with Federal, State, and local regulations. The off-site disposal of contaminated soils generated during tank closure activities is not part of these Specifications. The procedures for off-site disposal of these materials are described in Specifications #3 "Specifications for the Excavation and Disposal of Contaminated Materials" included in Appendix H of the RDWP.

2. Air Monitoring

Ambient air monitoring will be performed by THE OSC per the Community Air Monitoring Plan provided in Appendix D of the RDWP.

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. 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. 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 and a demarcation layer shall be placed.

b. Furnish all labor and equipment necessary to excavate, place, compact (to 95% of maximum dry density), and grade all backfill specified herein.

2. Source of Backfill Material

Unless otherwise specified, backfill shall consist of non-contaminated imported soils already present on the Site. The importation of clean fill to the Site is described under Specifications #4 Clean Fill Importation in Appendix H of the RDWP.

B. Site Grading

1. The Contractor shall restore all excavated areas disturbed by tank removal 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. Site grading will be considered incomplete by the Volunteer if excessive ponding is evident or will reasonable occur. The Contractor may be required to regrade the Site.

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

3. Site grading may be determined to be unnecessary if the Volunteer determines that Site development activities will be occurring in a timely manner.

Property Location Map
Former A.C. Dutton Lumber Yard
1 Dutchess Avenue
Poughkeepsie, New York

N

ESI File: OP08022.50

March 2011

Attachment

N

Northern Pressure Treatment Plant

3,000 gallon AST (empty

20,000-gallon UST

Southern Pressure Treatment Plant

3,000-gallon AST

1,500-gallon vaulted UST

1,000-gallon UST

1,000-gallon UST

DUTCHESS AVENUE

Hudson River

100 feet

Legend:

property outline

existing buildings

former structures

Notes:

Map based on Fuss and O'Neill proposed "Remedial Action Map" (July 2006)

Petroleum UST Removal Map

Former A.C. Dutton Facility
1 Dutchess Avenue
Poughkeepsie, New York

ESI File: OP08022

March 2011 | Attachment

Ecosystems Strategies, Inc.

SPECIFICATIONS

FOR

REMOVAL OF CHEMICAL BULK STORAGE TANKS, PROCESS VESSELS, AND DEBRIS FROM FORMER PRESSURE TREATMENT BUILDINGS

#2

May 2011

Site Identification:

Former A.C. Dutton Lumber Yard

1 Dutchess Avenue, Town of Poughkeepsie
Dutchess County, New York

ESI File: OP08022.50

NYSDEC Brownfields Program Site: C314081

Prepared By:

Ecosystems Strategies, Inc.
24 Davis Avenue, Poughkeepsie, NY 12603
phone 845.452.1658 | fax 845.485.7083 | ecosystemsstrategies.com

SECTION 1 - SUMMARY OF WORK

1.1 PROJECT SUMMARY

A. Purpose

Ecosystems Strategies, Inc. (ESI) has prepared these "Specifications for Removal of Chemical Bulk Storage Tanks, Process Vessels and Debris from Former Pressure Treatment Buildings" as part of a Remedial Design Work Plan (RDWP) that includes detailed design Specifications for all the proposed environmental response actions at the former A.C. Dutton Lumber Yard Property located at 1 Dutchess Avenue, City and Town of Poughkeepsie, New York (NYSDEC Brownfields Site: C314081). 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 Chemical Bulk Storage Tank Closure" are hereafter referred to as the "Specifications". The contracting entity will be The O'Neill Group - Dutton, LLC, 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 location of all services detailed in these Specifications is the former AC Dutton Lumber Yard located at 1 Dutchess Avenue, City and Town of Poughkeepsie, New York. The location is shown on the Site Location Map, part of Attachment A of these Specifications, and is hereafter referred to as the "Site". The approximate location of tanks requiring removal is shown on the Debris Removal & CBS Tank Removal Map, part of Attachment B of these Specifications.

D. Summary of Services

The Volunteer seeks a qualified Contractor to assist the Volunteer in performing the following tasks:

Task 1.0: Conduct all services necessary for the proper removal of nine (9) chemical bulk storage tanks, two (2) process tanks, process residuals, and debris from within the two former pressure treatment plant buildings at the Site. For the purposes of these specifications "debris" includes all garbage, dust, chemicals, furniture and fittings as well as all drain covers, railroad lines, and/or other metal fittings in the floors of the two pressure treatment buildings. A Debris Removal & CBS Tank Map is appended to these Specifications as part of Attachment A.

Task 2.0: Perform the above tasks to standards that will facilitate THE OSC in obtaining 1) NYSDEC closure of the Site as a registered CBS facility (NYSDEC ID#: CBS3-000170), and 2) RCRA Closure of the Site as a Small Quantity Generator of Hazardous Waste (USEPA ID#: NYD006993711).

Other tasks, including the removal of the secondary containment areas, floors, and chromated copper arsenate (CCA) contaminated soil will be required to obtain RCRA closure. The performance of these tasks is not considered part of this contract and is described in a separate document "Specifications for the Excavation and Removal of Metals and Petroleum-Contaminated Soils".

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. Any item left open will reveal the bid not responsive.

F. Relevant Documents

These Specifications are based on Site conditions as detailed in the Remedial Investigation Report (RIR), prepared by Fuss and O'Neill, dated August 2007, and the Supplementary Investigation Report (SIR) prepared by ESI, dated September 2008. The remedial tasks described in these Specifications have been selected based on the Remedial Alternatives Analysis and Remedial Work Plan (RAA/RWP), prepared by ESI, and dated September 2008. Environmental conditions and the conceptual remedy for the Site are also summarized in the January 2008 Brownfield Cleanup Program Decision Document prepared by the New York State Department of Environmental Conservation (NYSDEC).

1.2 KNOWN ENVIRONMENTAL CONDITIONS

Site conditions are detailed in the above-referenced RIR and SIR; however, the Contractor is hereby notified that conditions may have changed between the time of this investigatory work and the actual date of contract award. Furthermore, conditions unknown at the time of the August 2007 RIR and September 2008 SIR may be present which may materially affect this Contract.

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 all chemical bulk storage tanks, process tanks, and process residuals. As discussed below, communication with the NYSDEC will be the responsibility of the Volunteer and/or the OSC.

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

- The on-site pressure treatment of lumber using CCA is reported to have begun on-site in 1966. Previous investigations have documented extensive arsenic and chromium contamination within and beneath the two former pressure treatment plant buildings. Concentrations of arsenic in part of the secondary containment area of the Northern Pressure Treatment Plant of 138,000 parts per million (ppm) with chromium detected in the same sample at 98,600 ppm have been documented.

- CCA wastes are defined by the United States Environmental Protection Agency (USEPA) as a "Listed hazardous waste from a non-specific source" per 40 CFR 261.31and are identified by USEPA Hazardous Waste Number F035 as:

  > "Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that use inorganic preservatives containing arsenic or chromium."

- All CBS tanks, process vessels, and debris inside the two pressure treatment plants should be assumed to have been in direct contact with CCA wastes and will require management in accordance with 6NYCRR, Part 598 regulations and 40 CFR Part 265.

- For the purposes of these Specifications the contaminants of concern (COCs) are arsenic and chromium. Cleanup criteria for the COCs are non-detect for all media and, unless sampling demonstrates otherwise, all CBS tanks, process vessels, process residuals, and debris in the pressure treatment buildings should be handled, managed and disposed of as arsenic and chromium-contaminated hazardous solid waste.

- CCA waste is present in and beneath the secondary containment areas and floors both treatment plants. The floors will be entirely removed in the Northern Pressure Treatment Plant and scarified to remove visible CCA staining in the Southern Pressure Treatment Plant. **The removal of these floors is not considered to be part of this contract. This information is provided for the sole purpose of making the Contractor fully aware of on-site environmental conditions.**

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 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 Contractor 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 Site access.

1.4. PROJECT OVERSIGHT AND MANAGEMENT

The Volunteer will retain an On-Site Coordinator (OSC) as an independent representative to act on its behalf with regard to the interpretation and implementation of these Specifications. The OSC will provide qualified personnel to be present during remedial work and to conduct sampling and monitoring as detailed in 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

- Resource Conservation and Recovery Act 40 CFR Parts 260-265.
- 6NYCRR. Part 595-599
- 6NYCRR, Part 360, et al.
- 6NYCRR, Part 370, et al.
- 6NYCRR. Part 375-1.12 (e) (2)

1.6 BIDDING CONSIDERATIONS

A. <u>General</u>

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

B. Return of Bid Documents

All bid documents must be returned to the Volunteer in a sealed manila envelope with the words

"*Bid for CBS Tank, Process Vessels, and Debris Removal At the former AC Dutton Lumber Yard, Town and City of Poughkeepsie, NY"*

clearly written on the outside. Unlabeled envelopes will be determined incomplete and will not be considered by the Volunteer.

C. Return Address

All bids must be submitted to the address shown in the Advertisement and Notice to Bidders.

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. The Contractor shall list the percentage of the overall project work performed by the prime Contractor forces.

C. The Contractor shall submit with this bid a copy of the Contractor's task-specific Health and Safety Plan which conforms with 29 CFR 1910.120 and 29 CFR 1926. 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.

D. Submit a copy of the prime Contractor's standard qualifications form for this type of work.

E. All submitted bids will become the property of the Volunteer.

1.8 BID SCHEDULE

A. All bid documents must be received by the Volunteer in accordance with the schedule set forth in the Advertisement and Notice to Bidders. Bids received after that time or received in a manner determined by the Volunteer to be incomplete will be returned to the bidder unopened.

B. Bids will be opened by the Volunteer in a timely manner after the submittal deadline, and all bids will be read aloud and tabulated. The lowest cost bidder, as established by charges specified in the bid response forms, will be selected by the Volunteer.

C. The Volunteer retains the right to question any and all bidders.

D. Selection of the Contractor will be at the sole discretion of the Volunteer.

1.9 AWARD CRITERIA

The project will be awarded to the lowest cost-responsive, responsible bidder.

1.10 REJECTION OF BIDS

The Volunteer reserves the right to reject any or all bids for reasonable cause.

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 MEETINGS

A. Coordination and Project Conditions

1. The Contractor will coordinate scheduling, submittals, and work on the various portions and phases of the Project 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 MANDATORY PRE-BID MEETING

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

1.14 PROJECT MEETINGS

The Contractor will be prepared to attend and participate in a minimum of two meetings scheduled by the Volunteer to inform the Volunteer of the project's status. At a minimum, the initial pre-removal conference will be held at least two weeks prior to the initiation of services. The second mandatory meeting will be scheduled after the removal of the tanks, process vessels, and debris from inside the two former pressure treatment plant buildings. The intent of this meeting is to review the work completed and to agree on a schedule for resolution of outstanding issues with the NYSDEC.

1.15 PROGRESS AND COMPLETION

A. Normal working hours and normal working days for the Contractor's Work on this Project shall be between the hours of 7:30 a.m. and 4:30 p.m. (or as determined appropriate by the City of Poughkeepsie), Monday through Friday, excluding holidays, except as otherwise specified.

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 project 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 TEST REPORTS

A. The Contractor will submit a copy of all test results (including all laboratory-provided quality control documentation) to the OSC within 72 hours of receipt.

B. The Contractor will submit copies of all waste disposal analytical data to THE OSC 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 tank removal, documenting activities conducted by the Contractor to complete these Specifications. The photographic record will include (but not be limited to):

- initial conditions
- tank cleaning
- tank disconnection
- debris segregation

- tank and debris removal
- final Site conditions

B. Copies of all photographs taken by the Contractor will be provided to the Volunteer.

C. The Contractor will identify photographs with date, time, orientation, and project identification.

1.18 ANTICIPATED PROJECT SCHEDULE

A. Tank removal activities detailed herein will be initiated subsequent to the substantial completion of asbestos abatement and prior to demolition services.

B. At the initial preconstruction conference, the Contractor will prepare a schedule identifying a timetable for performing all services detailed in the Specifications. This schedule will be submitted to the Volunteer in writing and once revised through mutual consent of the Volunteer and the Contractor will be relied upon to assess Contractor responsiveness. Lack of completion of services in accordance with the approved schedule may be considered by the Volunteer as lack of responsiveness by the Contractor and, therefore, cause for possible dismissal.

C. It is anticipated that a schedule of services will be similar to the following:

Week 1:	Site preparation and tank cleaning and disconnection
Weeks 2-4:	Tank removal, staging,
	Debris sampling and containerization.
Weeks 6-9:	Removal of tanks and debris from Site.
Week 10:	Submittal of manifests

1.19 QUALITY CONTROL

Quality Assurance - Control of Removal Work

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 OSC 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.

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 Water Service

1. The Contractor may connect to existing water sources for construction operations at the time of project mobilization.

2. The Volunteer will pay cost of water used. The Contractor will exercise measures to conserve water.

B. Temporary Sanitary Facilities

Provision and maintenance of temporary sanitary facilities will be the responsibility of the Contractor. Costs associated with temporary sanitary facilities will not be borne by the Volunteer.

C. Barriers

1. The Contractor will provide barriers to prevent unauthorized entry to construction areas and to protect existing facilities and adjacent properties from damage from construction operations and demolition. The Volunteer will be provided with access to the Site at all times (See Section 1.3)

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

D. 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 collect and remove waste materials, debris, and rubbish from the Site weekly and dispose of said materials off-site in accordance with all applicable Federal, State, and local regulations.

E. 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.

1.22 SITE-SPECIFIC CLOSE-OUT BILLING PROCEDURES

A. Close-out Procedures

1. The Contractor will submit written certification that contract documents have been reviewed, work has been inspected, and work is complete in accordance with contract documents and ready for the Volunteer's review.

   Note: Project close-out will not occur until the OSC provides written notice to the NYSDEC certifying project completion.

2. The Contractor will provide submittals to the Volunteer that are required by governing or other authorities.

B. Final Cleaning

1. Final cleaning prior to final project assessment will be executed by the Contractor.

2. Immediately prior to final inspection, the Contractor shall clean all work-generated debris.

3. The Site shall be cleaned, and construction materials, tools, equipment, sheds, barricades, tree protection, and other temporary construction shall be removed.

4. Contractor's payment may be withheld if the Site is not cleaned up to the Volunteer's satisfaction.

5. Requirements of this section shall be in addition to and not in limitation of any special cleaning requirements specified in other sections.

6. The Contractor shall be responsible for the removal and disposal from the Site of all trash and debris that resulted from the Contractor's work.

C. Project Record Documents

The Contractor will:

1. Maintain on the Site one set of the following documents and will record actual revisions to the work:

    a. Site-specific Health and Safety Plan
    b. Specifications and drawings
    c. Addenda
    d. Change Orders and other modifications to the Contract

2. Ensure entries are complete and accurate, enabling future reference by the Volunteer.

3. Store record documents separate from documents used for construction.

4. Record information concurrent with construction progress.

5. Submit documents to the Volunteer with claim for final application for payment.

SECTION 2 - TECHNICAL SPECIFICATIONS

2.1 SITE PREPARATION SERVICES

A. Health and Safety Plan

The OSC will be responsible for maintaining, implementing, and enforcing a Health and Safety Plan ("HASP") for the Site provided in Appendix C of the RDWP. The Contractor will provide a task-specific HASP (See Section 1.7, above). The OSC and the Contractor will review both HASPs with the Contractor prior to the initiation of services to determine what, if any, task-specific health and safety issues will require implementation. The Contractor will be responsible for implementing and overseeing any task-specific HASP procedures.

B. Equipment Calibration

The Contractor is responsible for maintaining properly operating field screening and health/safety equipment on the Site during field work. A complete calibration log will be maintained on the Site, available for inspection by the NYSDEC and/or the Volunteer.

C. Agency Notification

The OSC is responsible for notifying the NYSDEC and the Volunteer in writing at the following times:

- Five working days prior to the initiation of clean-up activities
- Prior to engaging in any substantive variations to the activities detailed in these Specifications (See Section 1.14).
- Within 24 hours of receipt of written laboratory data

2.2 CBS TANK/VESSEL CLOSURE AND DEBRIS REMOVAL

A. General

The Contractor shall ensure that all operations associated with the handling, sampling, loading, transportation, and disposal of tanks and/or associated metals-contaminated wastes are in compliance with Federal, State, and local regulations. The Contractor is expected to coordinate the sampling and load-out work with the Volunteer supervisory personnel so as not to interfere with other Site activities.

B. Schedule

It is anticipated that tank closure and debris removal activities will require no more than 20 business days, inclusive of cleaning, cutting, sampling (dust and debris) and off-site disposal (See Section 1.18)

C. QA/QC

All QA/QC procedures will follow the QA/QC Plan provided in Appendix E of the RDWP.

D. CBS Tank Closure and Debris Removal Preparation

Prior to the initiation tank closure and debris removal services of services the Contractor will provide the following information:

1. Provide the name and location of the licensed hazardous waste facility that will receive the waste.

2. Specify the method of decontamination and/or removal.

3. Specify the means for collection and disposal of decontamination or removal residues.

4. Specify the types of decontamination solutions to be used.

5. Specify the method to be used to prevent the release of hazardous constituents to surrounding or underlying structures, soils, or air during decontamination and/or removal.

6. Provide an estimate of the volume of decontamination and/or removal residues to be generated.

7. The Contractor will specify the method used to perform a hazardous waste determination on the decontamination and/or removal residues (e.g. tank sludges and scarification wastes) and provide the OSC with the results. If appropriate, the OSC will obtain permission from the NYSDEC to dispose of decontamination and/or removal residues as non-hazardous waste.

8. Provide the name and location of the off-site facility which will receive decontamination and removal residues.

E. <u>CBS Tank Closure and Debris Removal</u>

1. The Contractor will remove liquid and sludge from the tanks/process vessels and connecting lines. Any waste products removed must be containerized pending sampling and off-site disposal in accordance with all State, local and Federal regulations.

2. The Contractor will clean, decontaminate and render the tanks/process vessels free of hazardous vapors. Provisions must be made for natural breathing of the tank to ensure that the tank remains free of hazardous vapors.

3. The Contractor will ensure that all connecting lines are disconnected and removed or securely capped locked, or plugged. Manways must be securely locked in place.

4. Any debris/fittings that will not be handled and disposed of as hazardous waste must be decontaminated.

5. The Contractor will verify that decontamination of the debris and/or tank system was successful by collecting wipe samples (1:4 nitric acid to deionized water) from tank surfaces. For tank system piping and non-porous debris, triple rinse with an appropriate decontamination solution and analyze the final rinse for COCs to verify closure criteria have been met. All decontamination waters/solutions will be collected. Releases of hazardous constituents to surrounding or underlying structures, soils, or air during decontamination or removal will not be permitted.

6. The Contractor will stencil the date of permanent closure on each tank.

7. The Contractor will protect all closed tanks from flotation caused by flooding or high groundwater level in accordance with generally accepted engineering practices.

8. The Contractor will punch the tanks with holes or otherwise make them unfit for storage.

F. Pumping Encountered Water

Water encountered in the tanks and/or secondary containment areas will be pumped out, containerized, and sampled for dissolved arsenic, chromium corrosivity, toxicity, and PCBs. The Contractor will provide a written Plan (including relevant data) to the Volunteer and the NYSDEC justifying a disposal method for this water, which may include on-site settling in frac tanks prior to discharge to the sanitary sewer or off-site disposal. This Plan will be submitted to the NYSDEC and NYSDOH prior to handling of any wastewater and will be signed and stamped by a Professional Engineer licensed to practice in New York State. No wastewater can be handled or disposed of until and unless NYSDEC approval of this Plan is received. Proposed discharges to the sanitary sewer must meet all applicable City of Poughkeepsie requirements.

For budgetary purposes, the Contractor should anticipate pumping 30,000 gallons of liquids from the tanks and secondary containment areas. On-site containerization is required. Disposition of this water is required within 30 days of generation.

G. Air Monitoring

Ambient air monitoring will be performed by the OSC per the Specifications of the CAMP provided in Appendix D of the RDWP. Any additional air monitoring (e.g. for confined space entry) will be the responsibility of the Contractor.

H. 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/permit to haul the Site-generated wastes (i.e., Part 364 license for hazardous and 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.

4. The Contractor shall only use the transporter identified in the CBS Tank Closure and Debris Removal 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 project Site.

I. Off-site Disposal

1. The Contractor shall use only the facility identified in the CBS Tank Closure and Debris Removal Plan 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 an approved facility, ensure that the facility is properly permitted to accept the stated material, and ensure 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.

J. Recordkeeping

1. 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.

2. 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.

K. NYSDEC Communication

It is anticipated that the Contractor will provide to the OSC all information and documentation necessary for CBS and RCRA Closure (See Section 1.1, Subpart D). Communication with the NYSDEC will be maintained by the OSC and the Volunteer, and 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.

Property Location Map
Former A.C. Dutton Lumber Yard
1 Dutchess Avenue
Poughkeepsie, New York

N

ESI File: OP08022.50

March 2011

Attachment

N

2,000 gallon AST (empty)

Northern Pressure Treatment Plant

Area 1

1,000-gallon AST (empty)

secondary containment area containing five chemical bulk storage tanks (unknown capacity) and two process vessels (see INSET)

chemical storage ASTs (unknown capacity)

Southern Pressure Treatment Plant

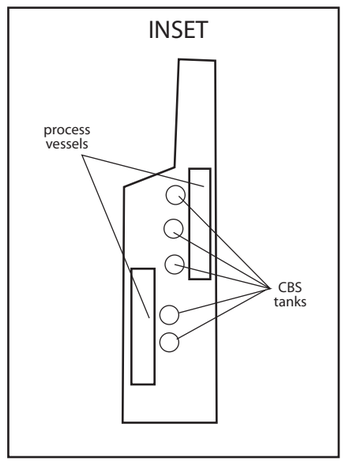
secondary containment area

Area 2

DUTCHESS AVENUE

Hudson River

INSET



100 feet

Legend:

- property outline
- pressure treatment plant buildings
- other existing buildings
- debris removal
- former structures

Notes:

Map based on Fuss and O'Neill proposed "Remedial Action Map" (July 2006)

Debris Removal & CBS Tank Map

Former A.C. Dutton Facility
1 Dutchess Avenue
Poughkeepsie, New York

ESI File: OP08022

March 2011 | Attachment

Ecosystems Strategies, Inc.

SPECIFICATIONS

FOR

EXCAVATION AND DISPOSAL OF CONTAMINATED MATERIALS

#3

May 2011

Site Identification:

Former A.C. Dutton Lumber Yard

1 Dutchess Avenue, City and Town of Poughkeepsie
Dutchess County, New York

ESI File: OP08022.50

NYSDEC Brownfields Program Site: C314081

Prepared By:

Ecosystems Strategies, Inc.
24 Davis Avenue, Poughkeepsie, NY 12603
phone 845.452.1658 | fax 845.485.7083 | ecosystemsstrategies.com

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 Materials" as part of a Remedial Design Work Plan (RDWP) that includes detailed design specifications for all the proposed environmental response actions at the former A.C. Dutton Lumber Yard Property located at 1 Dutchess Avenue, City and Town of Poughkeepsie, New York (Brownfields Site: C314081). 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 Materials" are hereafter referred to as the "Specifications". The contracting entity will be The O'Neill Group - Dutton, LLC, 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 former AC Dutton Lumber Yard located at 1 Dutchess Avenue, City and Town of Poughkeepsie, 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 Contaminated Soil Excavation Map, part of Attachment B of these Specifications. A Truck Route Map is included as part of Appendix B of these Specifications.

D. Summary of Services

The Volunteer seeks a qualified Contractor to assist the Volunteer in performing all services necessary for the proper removal of petroleum- and metals-contaminated soil, asphalt, and concrete at the Site. This work includes the following tasks:

Task 1.0: The scarification of the top ½" of the entire floor of the Southern Pressure Treatment Plant and concrete portions of the floor of the Northern Pressure Treatment Plant. This work will be performed so as to generate zero dust. It is estimated that 187 tons of waste will be generated. These wastes will be managed and handled as hazardous waste. The remainder of the concrete floors will be excavated and stockpiled for reuse on-site.

Task 2.0: The excavation of the asphalt floor areas of the Northern Pressure Treatment Plant. It is estimated that 1,575 tons of waste will be generated. These materials will be managed and handled as hazardous waste.

Task 3.0: The excavation of arsenic-contaminated media beneath the floors of two former pressure treatment plant buildings. It is estimated that 5,489 tons of waste will be generated. These materials will be managed and handled as hazardous waste.

Task 4.0: Installation and maintenance of a dewatering system in those limited areas of the Site where excavation of contaminated soil will occurr, as required, to lower and control water levels during excavation of soils beneath the groundwater table.

Task 5.0: The proper off-site disposal of waste materials generated during the execution of Tasks 1, 2, and 3 as hazardous waste.

Task 6.0: The excavation and off-site disposal of the majority of soils outside the pressure treatment buildings containing elevated concentrations of arsenic (above the Site Background Level of 32 mg/Kg). It is estimated that 5,805 tons of waste will be generated. These soils will not be considered F035 wastes, but may be hazardous for other reasons (e.g., if they exhibit one or more of the characteristics of hazardous waste). Unless laboratory data confirm these soils to be hazardous, they will be disposed of as non-hazardous contaminated wastes.

Task 7.0: The excavation and off-site disposal of grossly contaminated soils and soils containing individual SVOCs at concentrations above Restricted Residential Use Soil Cleanup Objectives (SCOs). It is estimated that 450 tons of waste will be generated. These soils will be disposed of as non-hazardous contaminated wastes.

Task 8.0: Restore the excavations to approximate original grade using clean fill already at the site. A demarcation barrier will be placed at the extent of all excavations, prior to backfilling with clean fill.

All confirmatory endpoint and waste characterization sampling, 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.

Figures 1 and 2 depicting the expected depth of excavations beneath the two pressure treatment plant buildings are appended to these specifications as Attachments 1 and 2.

Other tasks, including the importation of clean fill to the Site, are not considered part of this contract and are described in a separate specification documents appended to the RDWP.

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), prepared by Fuss and O'Neill, dated August 2007, and the Supplementary Investigation Report (SIR) prepared by ESI, dated September 2008. The remedial tasks described in these Specifications have been selected based on the Remedial Alternatives Analysis and Remedial Work Plan (RAA/RWP), prepared by ESI, dated September 2008. Environmental conditions and the conceptual remedy for the Site are also summarized in the

January 2008 Brownfield Cleanup Program Decision Document prepared by the New York State Department of Environmental Conservation (NYSDEC).

1.2 KNOWN ENVIRONMENTAL CONDITIONS

Site conditions are detailed in the above-referenced RIR and SIR; however, the Contractor is hereby notified that conditions may have changed between the time of this investigatory work and the actual date of contract award. Furthermore, conditions unknown at the time of the August 2007 RIR and September 2008 SIR may be present which may materially affect this Contract.

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 all metals and petroleum contaminated soils required by the RAA/RWP. Communication with the NYSDEC will be the responsibility of the Volunteer and/or the OSC.

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

- The historic on-site pressure treatment of lumber using chromated copper arsenate (CCA) has contaminated on-site soils with arsenic and chromium. Other historic on-site industrial activities and fill of unknown origin, which comprises much of the Site, may be additional sources of documented metals contamination.

- Solid media located within the footprints of the two pressure treatment plants containing concentrations of arsenic above 32 mg/Kg have been identified by the NYSDEC as likely to have been directly impacted by CCA process wastes. CCA wastes are defined by the United States Environmental protection Agency (USEPA) as a “Listed hazardous waste from a non-specific source” per 40 CFR 261.31 and are identified by USEPA Hazardous Waste Number F035 as:

> *"Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that use inorganic preservatives containing arsenic or chromium."*

Such media are considered categorical hazardous waste and will require management as such.

- Based on an analysis of previous data, a Site background level (SBL) of 32 mg/Kg for arsenic was proposed in the SIR and has been accepted by the NYSDEC as an appropriate cleanup level for arsenic at the Site. Upon completion of work and prior to or in conjunction with Site development, a low-permeability cover will be placed on the portions of the Site that will not be covered by paved areas or building footprints. **The installation of this cover is not considered to be part of this contract. This information is provided for the sole purpose of making the Contractor fully aware of future remedial actions which will occur subsequent to the completion of the Contract.**

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 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 Contractor 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

- Resource Conservation and Recovery Act 40 CFR Parts 260-265.
- 6NYCRR, Part 612-614.
- 6NYCRR, Parts 360 & 364.
- 6NYCRR, Parts 370, 371, 372, 375, 376.
- 6 NYCRR Subpart 217-3.

1.6 BIDDING CONSIDERATIONS

A. General

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

B. Return of Bid Documents

All bid documents must be returned to the Volunteer in a sealed manila envelope with the words:

> "*Bid for Contaminated Soil Removal*
> *At the former AC Dutton Lumber Yard, Town and City of Poughkeepsie, NY"*

clearly written on the outside. Unlabeled envelopes will be determined incomplete and will not be considered by the Volunteer.

C. Return Address

All bids must be submitted to the address shown in the Advertisement and Notice to Bidders.

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. The Contractor shall list the percentage of the overall project work performed by the prime Contractor forces.

C. The Contractor shall submit with this bid a copy of the Contractor's Site-specific Health and Safety Plan which conforms with 29 CFR 1910.120 and 29 CFR 1926. 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.

D. Submit a copy of the prime Contractor's standard qualifications form for this type of work.

E. All submitted bids will become the property of the Volunteer.

1.8 BID SCHEDULE

A. All bid documents must be received by the Volunteer in accordance with the schedule set forth in the Advertisement and Notice to Bidders. Bids received after that time or received in a manner determined by the Volunteer to be incomplete will be returned to the bidder unopened.

B. Bids will be opened by the Volunteer in a timely manner after the submittal deadline, and all bids will be read aloud and tabulated. The lowest cost bidder, as established by charges specified in the bid response forms, will be selected by the Volunteer.

C. The Volunteer retains the right to question any and all bidders.

D. Selection of the Contractor will be at the sole discretion of the Volunteer.

1.9 AWARD CRITERIA

The project will be awarded to the lowest cost-responsive, responsible bidder.

1.10 REJECTION OF BIDS

The Volunteer reserves the right to reject any or all bids for reasonable cause.

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 MEETINGS

A. Coordination and Project Conditions

1. The Contractor will coordinate scheduling, submittals, and work on the various portions and phases of the Project 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 MANDATORY PRE-BID MEETING

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

1.14 PROJECT MEETINGS

The Contractor will attend a minimum of three meetings scheduled by the Volunteer to inform the Volunteer of the project's status. At a minimum, the initial pre-construction conference will be held at least two weeks prior to the initiation of services. The second mandatory meeting will be scheduled after the removal of the contaminated media and the receipt of endpoint samples and is intended to provide the Volunteer with more definitive information on the presence or absence of additional soil warranting removal. The final mandatory meeting will be scheduled upon completion of all field work and to agree on a schedule for resolution of outstanding issues with the NYSDEC.

1.15 PROGRESS AND COMPLETION

A. Normal working hours and normal working days for the Contractor's Work on this Project shall be between the hours of 7:30 a.m. and 4:30 p.m. (or as determined appropriate by the City of Poughkeepsie), Monday through Friday, excluding holidays, except as otherwise specified.

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. At the initial preconstruction conference, the Contractor will prepare a schedule identifying a timetable for performing all services detailed in the specifications. This schedule will be submitted to the Volunteer in writing and once revised through mutual consent of the Volunteer and the Contractor will be relied upon to assess Contractor responsiveness. Lack of completion of services in accordance with the approved schedule may be considered by Volunteer as lack of responsiveness by the Contractor and, therefore, cause for possible dismissal.

B. It is anticipated that a schedule of services will be similar to the following:

Week 1:	Site Preparation and Clearing
Weeks 2-10:	Scarification, Excavation, Stockpiling, Sampling
Weeks 11-13:	Removal of Stockpiled Materials
Weeks 14:	Submittal of Manifests

1.19 QUALITY CONTROL

Quality Assurance - Control of Removal Work

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, 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 PVC bottom and top cover in locations indicated by the Volunteer 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 Water Service

1. The Contractor may connect to existing water sources for construction operations at the time of project mobilization.

2. The Volunteer will pay cost of water used. The Contractor will exercise measures to conserve water.

B. Temporary Sanitary Facilities

Temporary sanitary facilities will be the responsibility of the Contractor to provide and maintain. Costs associated with temporary sanitary facilities will not be borne by the Volunteer.

C. 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.

D. 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 collect and remove waste materials, debris, and rubbish from Site weekly and dispose said materials off-site in accordance with all applicable Federal, State and local regulations.

E. 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.

1.22 SITE-SPECIFIC CLOSE-OUT BILLING PROCEDURES

A. Close-out Procedures

1. The Contractor will submit written certification that Contract Documents have been reviewed, Work has been inspected, and Work is complete in accordance with Contract Documents and ready for the Volunteer's review.

Note: Project Close-out will not occur until the Volunteer's Representative provides written notice to the NYSDEC certifying project completion.

2. The Contractor will provide submittals to the Volunteer that are required by governing or other authorities.

B. Final Cleaning

1. Final cleaning, prior to final project assessment, will be executed by the Contractor.

2. Prior to final inspection, the Contractor shall clean all construction debris.

3. The Site shall be cleaned, and construction materials, tools, equipment, sheds, barricades, tree protection, and other temporary construction shall be removed. Lawn areas shall be neat and free of debris of any kind.

4. Contractor's payment may be withheld if the Site is not cleaned up to the Volunteer's satisfaction.

5. Requirements of this section shall be in addition to and not in limitation of any special cleaning requirements specified in other sections.

6. The Contractor shall be responsible for the removal and disposal from the Site of all trash and debris that resulted from the Contractor's work.

C. Project Record Documents

The Contractor will:

1. Maintain on the Site one set of the following documents; record actual revisions to the Work:

a. Site-specific Health and Safety Plan
b. Specifications and drawings
c. Addenda
d. Change Orders and other modifications to the Contract

2. Ensure entries are complete and accurate, enabling future reference by the Volunteer.

3. Store record documents separate from documents used for construction.

4. Record information concurrent with construction progress.

5. Submit documents to the Volunteer with claim for Final Application for Payment.

SECTION 2 - TECHNICAL SPECIFICATIONS

2.1 SITE PREPARATION SERVICES

A. Health and Safety Plan

The OSC will be responsible for maintaining, implementing, and enforcing a Health and Safety Plan ("HASP") provided in Appendix C of the RDWP (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 implementation.

B. Agency Notification

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

- Prior to the initiation of Site Work to identify the proposed location of the soil stockpile area and the name (and certifications) of the proposed analytical laboratory.

- Three working days prior to the initiation of excavation activities.

- Prior to engaging in any substantive variations to the activities detailed in these Specifications.

2.2 CONTAMINATED CONCRETE FLOOR MANAGEMENT

A Concrete Scarification

1. General

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

2. Schedule

It is anticipated that scarification activities will require no more than one week.

Drummed wastes (see 4-(d), below) must be removed from the site within 25 business days of the completion of all scarification activities. Active monitoring of the drums to ensure their integrity prior to disposal is the responsibility of the Contractor. Monitoring shall include a visual inspection of the drums no less frequent than once every five calendar days.

3. Health and Safety

The Contractor will, at a minimum, meet the requirements of the HASP (Appendix C of the RDWP). It is anticipated that additional Health and Safety measures will be required during scarification. The specific measures (i.e. the need for local containment and respiratory protection during operations) will be determined by the type of scarification machinery used and the efficiency of integral dust suppression mechanisms (if any). The OSC will co-ordinate with the contractor, the NYSDEC, the NYSDOH, and the Volunteer to ensure that all health and safety requirements associated with scarification are met.

4. Scarification Process

a. All concrete floor areas in the Pressure Treatment Plant Buildings will be scarified.

b. The Contractor will manage scarified concrete waste materials from the floors of the two pressure treatment buildings as hazardous waste. Any water generated during the scarification process (e.g. for dust suppression) will be contained to prevent spreading to areas outside the treatment plant buildings and to minimize spread to areas previously scarified. The water will be containerized, treated as necessary and disposed or discharged in accordance with all applicable laws, regulations and guidance.

c. The depth of scarification will be to ½" or until there is no visible evidence CCA staining.

d. The Contractor will drum scarification waste and exercise due care to minimize on-site transport and/or handling of contaminated materials. The proposed staging location of the waste drums will be identified by the Contractor prior to the initiation of scarification. Approval by the Volunteer of the proposed stockpile area is required.

e. The Contractor will decontaminate scarification equipment at the conclusion of the concrete scarification activities. Decontamination will involve the physical removal of all accumulated waste and the washing of equipment to remove contaminated fines. Washwater will be collected and managed as potentially hazardous waste, including proper containerization, characterization, and disposal.

2.3 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 metals- and petroleum-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 so as not to interfere with Volunteer activities.

2. Schedule

It is anticipated that excavation activities will require no more than 8 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 from within and beneath the two pressure treatment buildings as hazardous waste. Excavated soils from locations outside the footprints of the two pressure treatment plant buildings will be managed as non-hazardous waste. These soils will not be considered F035 wastes, but may be hazardous for other reasons (e.g., if they exhibit one or more of the characteristics of hazardous waste).

Unless laboratory data confirm these soils to be hazardous, they will be disposed of as non-hazardous contaminated wastes.

c. In areas of petroleum contamination, the OSC will screen soils proposed for post-excavation sampling with a PID and will record PID readings in Field Notebooks. PID readings in excess of 500 ppmge and/or visible/olfactory evidence of contamination will be considered adequate justification to continue soil excavation.

d. The Contractor will stockpile soil on 6-mil plastic with proper berming to prevent water accumulation. 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.

e. The Contractor will cover stockpiled soils on a daily basis with 6-mil plastic properly anchored to prevent soil exposure.

f. 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. Washwater will be collected and managed as potentially hazardous waste, including proper containerization and off-site disposition.

g. The OSC will sample the soils remaining after excavation. Data documenting the absence of soils with metal and/or 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.

h. The Contractor should anticipate excavating contaminated soil present at and below the seasonal groundwater level. Actions to ensure that contaminated water is controlled will be implemented by the Contractor (see Section 2.4 Excavation Dewatering 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. Air Monitoring

Ambient air monitoring will be performed by the OSC per the Specifications provided in Appendix D of the RDWP.

5. 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 lateral extent of the excavation area. At a minimum, one sample will be collected for every 900 square feet of excavation floor, and one wall sample will be collected for every 30 linear feet of excavation wall.

All samples will be grab samples, with soils in the vicinity of the samples' location screened for overt evidence of contamination using a PID. Where field evidence of petroleum contamination is present, PID readings will be recorded in field notebooks and will

be used in selecting sample locations; that is, soils exhibiting higher PID readings will be selected for sampling.

b. Supplemental Sampling

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 the action level of 32 mg/Kg for arsenic and 6 NYCRR Subpart 375-6 “restricted residential” guidance levels for VOCs and SVOCs where field evidence of petroleum contamination (e.g., odors/staining and/or Positive PID readings) is encountered. The need for additional excavation will be determined by the OSC, the Volunteer, and the NYSDEC.

Supplemental sampling will be restricted to total weight metals unless field screening of soils with the PID identifies PID readings in excess of 100 ppm. Soils exhibiting greater than 100 ppm will be analyzed for volatile organic compounds using USEPA Method 8260 and PAHs using USEPA Method 8270.

c. Sample Collection Procedures

Sample collection and handling procedures will be performed in accordance with the protocols set forth in the QA/QC Plan included as Appendix E of the RDWP

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

Upon receipt of waste characterization laboratory data results, 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. Disposal Analysis

Disposal of contaminated soil will be conducted in a manner that meets all requirements of applicable state and federal regulations. Documentation of appropriate licensing of the proposed soil depository must be submitted by the OSC to the Volunteer prior to any contaminated soil being removed from the Site.

The OSC shall be responsible for collecting representative samples of stockpiled material and having those samples analyzed to gain disposal facility approval. The OSC will notify the Volunteer within 48 hours of sample collection. The list of analytical parameters shall be established at the discretion of the OSC and the disposal facility and, at a minimum will include TCLP testing for arsenic and chromium. A copy of all analytic results shall be submitted to the Volunteer for its record.

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 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.

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/permit to haul the site-generated wastes (i.e., Part 364 license for hazardous and/or 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 project 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. The Contractor will further ensure that no truck (empty or loaded) attempts to cross the Hoffman Street Bridge. This bridge has a posted weight limit of 10 tons and no vehicle exceeding that weight is permitted to use the bridge.

G. Off-Site Disposal

1. The Contractor shall use only the facility identified in the soil disposal plan 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 an approved facility, ensure that the facility is properly permitted to accept the stated material, and ensure that the facility provides the stated treatment and/or disposal services.

3. 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.

I. 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 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 the area of 8' deep excavation in the Northern Pressure Treatment Plant Building (see Attachment 2).

Prior to excavation of these soils, the Contractor will prepare a Dewatering Plan (Plan) which incorporates the specifications detailed below. This Plan will be signed by a Professional Engineer and will be submitted and approved by the NYSDEC prior to any excavation in this portion of the Site.
This Plan will be prepared by a Professional Engineer licensed to practice in New York State and will be in accordance with all requirements set forth in 6NYCRR Part 375 and DER-10. This Plan will be submitted to the NYSDEC and the NYSDOH and will not be implemented until written approval from these Agencies is received.

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 2.4 (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 will be sampled for dissolved arsenic and chromium, corrosivity, toxicity, and PCBs. Water testing will occur once per week.

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).

2. 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 2.4 (D), below.

3. If the water meets City of Poughkeepsie sewage discharge standards, it may be discharged into the City of Poughkeepsie sewer system. All appropriate permits must be obtained from the City (see Subsection 2.4 (E), 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 2.4 (F), 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 will be sampled for dissolved arsenic and chromium, corrosivity, toxicity, and PCBs. 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 2.4 (E), below.

D. On-site Release of Water

During the de-watering operations, the Contractor must provide adequate protection from erosion at the discharge area. 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. The release of treated water will occur in a manner that does not result in ponding or other surface manifestations.

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

E. Release of water into the City of Poughkeepsie Sanitary Sewer

A City of Poughkeepsie sewage pump station is located immediately south of the southern property line. The sewage pump station has a discharge capacity of 80 gallons per minute. Any discharges to the sewage pump station must be performed in coordination with the City of Poughkeepsie and must meet all permitting requirements.

F. 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.

G. 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.

For budgetary purposes, the Contractor should anticipate pumping 10,000 gallons from the excavation areas.

2.5 SITE BACKFILLING AND GRADING

A. 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.

b. Furnish all labor and equipment necessary to excavate, place, compact, and grade all backfill specified herein.

2. Source of Backfill Material

Unless otherwise specified, backfill shall consist of non-contaminated imported soils already present on the Site. The importation of clean fill to the Site is described under specifications #4 in Appendix H of the RDWP.

B. Site 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 (95% of maximum dry density), 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.

3. Regrading may be determined to be unnecessary if the Volunteer determines that Site development activities will be occurring in a timely manner.

Property Location Map
Former A.C. Dutton Lumber Yard
1 Dutchess Avenue
Poughkeepsie, New York

N

ESI File: OP08022.50

March 2011

Attachment

N

Northern Pressure Treatment Plant

Southern Pressure Treatment Plant

secondary containment area

secondary containment area containing five chemical bulk storage tanks (unknown capacity) and two pressure treatment vessels

former railroad

DUTCHESS AVENUE

Hudson River

1 2 3 4 5 6 7 8 9 10 11

100 feet

Legend:

- property outline
- pressure treatment plant buildings
- existing buildings
- area of petroleum impacts
- area of arsenic contamination above 32 mg/Kg (0-1')
- area of arsenic contamination above 32 mg/Kg (0-3')
- former structures

1 = area #

Notes:

Map based on Fuss and O'Neill proposed "Remedial Action Map" (July 2006)

Contaminated Soil Excavation Map
(Arsenic Remediated to SBL of 32 mg/kg)

Former A.C. Dutton Facility
1 Dutchess Avenue
Poughkeepsie, New York

ESI File: OP08022

March 2011 | Attachment

Ecosystems Strategies, Inc.

Map based on Survey Map Lands of AC Dutton Lumber Corp. to be conveyed to Scenic Hudson Inc. prepared by Chazen Environmental and Land Surveying Co., Inc. dated August 20, 2003.

Figure 1 - Proposed Remediation Map

Northern Treatment Plant
former A.C. Dutton Property
1 Dutchess Avenue
Poughkeepsie, New York

Legend:

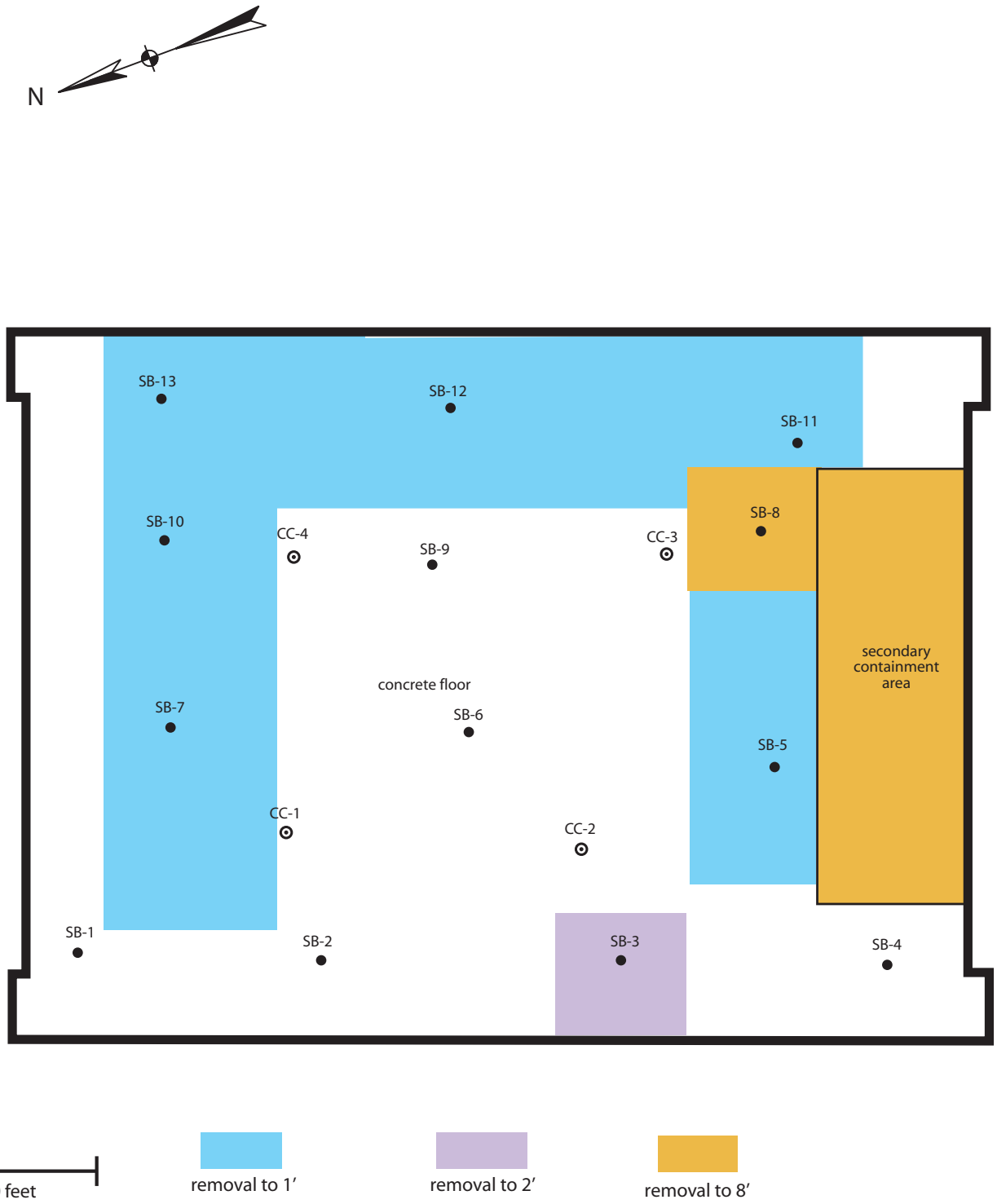
- building outline
- machine boring location
- asphalt/concrete core sample location

ESI File: OP08022.50

March 2011

Scale: 1" = 40'

Attachment



Map based on Survey Map Lands of AC Dutton Lumber Corp. to be conveyed to Scenic Hudson Inc. prepared by Chazen Environmental and Land Surveying Co., Inc. dated August 20, 2003.

Figure 2 - Proposed Remediation Map

Southern Treatment Plant
former A.C. Dutton Property
1 Dutchess Avenue
Poughkeepsie, New York

Legend:

- building outline
- machine boring location
- concrete core sample location

ESI File: OP08022.50

March 2011

Scale: 1" = 40'

Attachment

Property Location Map
Former A.C. Dutton Lumber Yard
1 Dutchess Avenue
Poughkeepsie, New York

N

ESI File: OP08022.50

March 2011

Attachment

SPECIFICATIONS

FOR

IMPORTATION OF CLEAN FILL

#4

May 2011

Site Identification:

Former A.C. Dutton Lumber Yard

1 Dutchess Avenue, City and Town of Poughkeepsie
Dutchess County, New York

ESI File: OP08022.50

NYSDEC Brownfields Program Site: C314081

Prepared By:

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24 Davis Avenue, Poughkeepsie, NY 12603
phone 845.452.1658 | fax 845.485.7083 | ecosystemsstrategies.com

SECTION 1 - SUMMARY OF WORK

1.1 PROJECT SUMMARY

A. Purpose

Ecosystems Strategies, Inc. (ESI) has prepared these "Specifications for Importation of Clean Fill" as part of a Remedial Design Work Plan (RDWP) that includes detailed design Specifications for all the proposed environmental response actions at the former A.C. Dutton Lumber Yard property located at 1 Dutchess Avenue, City and Town of Poughkeepsie, New York (NYSDEC Brownfields Site: C314081). All work at the Site is being performed in general conformance with regulations specified in 6 NYCRR Part 375 (Environmental Remediation Programs) and applicable New York Department of Environmental Conservation (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 Importation of Clean Fill" are hereafter referred to as the "Specifications". The contracting entity will be The O'Neill Group - Dutton, LLC, 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 ESI, (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 former AC Dutton Lumber Yard located at 2 Hoffman Street and 1 Dutchess Avenue, City and Town of Poughkeepsie, 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 for on-site stockpiling of clean Fill is shown on the Soil Importation Map, Attachment B of these Specifications.

D. Summary of Services

The Volunteer seeks a qualified Contractor to assist the Volunteer in performing all services necessary for the proper importation of clean fill soils to the Site. All clean fill will meet the "Restricted Residential" SCOs as specified in 6 NYCRR Part 375, Table 375-6.8(b). The top six inches of this cover must be of sufficient organic content to support vegetation. For the purposes of this bid, the Contractor should assume a total volume of 38,000 cubic yards of clean fill will be imported and stockpiled on-site.

This work includes the following tasks:

Task 1.0: Documentation of the integrity of soils to be imported to the Site per NYSDEC specifications (to be performed by the OSC).

Task 2.0: Loading and hauling clean fill soils to the Site along pre-approved truck routes (See Truck Route Map, Attachment B of these Specifications)

Task 3.0: Stockpiling clean fill soils at the Site.

Task 4.0 : Cleaning trucks tires prior to departure from the Site and departure from the Site along pre-approved truck routes.

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. Any item left open will reveal the bid not responsive.

F. Relevant Documents

These Specifications are based on Site conditions as detailed in the Remedial Investigation Report (RIR), prepared by Fuss and O'Neill, dated August 2007, and the Supplementary Investigation Report (SIR) prepared by the OSC, dated September 2008. The remedial tasks described in these Specifications have been selected based on the Remedial Alternatives Analysis and Remedial Work Plan (RAA/RWP), prepared by the OSC, dated September 2008. Environmental conditions and the conceptual remedy for the Site are also summarized in the January 2008 Brownfield Cleanup Program Decision Document prepared by the New York State Department of Environmental Conservation (NYSDEC).

1.2 KNOWN ENVIRONMENTAL CONDITIONS

Site conditions are detailed in the above-referenced RIR, SIR, and RAA/RWP; however, the Contractor is hereby notified that conditions may have changed between the time of this investigatory work and the actual date of contract award. Furthermore, conditions unknown at the time of the August 2007 RIR and September 2008 SIR may be present which may materially affect this Contract.

The Site conditions are known to the NYSDEC and all services outlined in these Specifications will be implemented with the expressed intent of importing to the Site all clean fill required by the RAA/RWP. As discussed below, communication with the NYSDEC will be the responsibility of the Volunteer and/or the OSC.

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

- The historic on-site pressure treatment of lumber using chromate copper arsenate (CCA) has contaminated on-site soils with arsenic and chromium. Paved surfaces

and surface soils have been documented to contain elevated concentrations of arsenic and chromium.

- Upon completion of all remedial work and prior to or in conjunction with Site development, a low-permeability cover will be placed on the portions of the Site that will not be covered by paved areas or building footprints using Certified Clean Fill. **The installation of this cover is not considered to be part of this contract. This information is provided for the sole purpose of making the Contractor fully aware of future remedial actions which will occur subsequent to the completion of the Contract.**

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 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 Contractor 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 On-Site Coordinator (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

- 6 NYCRR, Part 375-6.7 (d)
- 6 NYCRR Part 375-6.8
- 6 NYCRR Subpart 217-3

1.6 BIDDING CONSIDERATIONS

A. General

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

B. Return of Bid Document

All bid documents must be returned to the Volunteer in a sealed manila envelope with the words:

"*Bid for Clean Fill Importation*
To the former AC Dutton Lumber Yard, Town and City of Poughkeepsie, NY"

clearly written on the outside. Unlabeled envelopes will be determined incomplete and will not be considered by the Volunteer.

C. Return Address

All bids must be submitted to the address shown in the Advertisement and Notice to Bidders.

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. The Contractor shall list the percentage of the overall project work performed by the prime Contractor forces.

Submit a copy of the prime Contractor's standard qualifications form for this type of work.

C. All submitted bids will become the property of the Volunteer.

1.8 BID SCHEDULE

A. All bid documents must be received by the Volunteer in accordance with the schedule set forth in the Advertisement and Notice to Bidders. Bids received after that time or received in a manner determined by the Volunteer to be incomplete will be returned to the bidder unopened.

B. Bids will be opened by the Volunteer in a timely manner after the submittal deadline, and all bids will be read aloud and tabulated. The lowest cost bidder, as established by charges specified in the bid response forms, will be selected by the Volunteer.

C. The Volunteer retains the right to question any and all bidders.

D. Selection of the Contractor will be at the sole discretion of the Volunteer.

1.9 AWARD CRITERIA

The project will be awarded to the lowest cost-responsive, responsible bidder.

1.10 REJECTION OF BIDS

The Volunteer reserves the right to reject any or all bids for reasonable cause.

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 MEETINGS

A. Coordination and Project Conditions

1. The Contractor will coordinate scheduling, submittals, and Work on the various portions and phases of the Project 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 MANDATORY PRE-BID MEETING

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

1.14 PROJECT MEETINGS

The Contractor will be prepared to attend and participate in a meeting at the Site scheduled by the Volunteer. At a minimum, an initial pre-importation conference will be held at least two weeks prior to the initiation of services. The intent of this meeting is to review the work proposed and to agree on a schedule for resolution of outstanding issues with the NYSDEC.

1.15 PROGRESS AND COMPLETION

A. Normal working hours and normal working days for the Contractor's Work on this Project shall be between the hours of 7:30 a.m. and 4:30 p.m. (or as determined appropriate by the City of Poughkeepsie), Monday through Friday, excluding holidays, except as otherwise specified.

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 Project 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 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 stockpile conditions

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

1.17 ANTICIPATED PROJECT SCHEDULE

A. At the initial pre-importation conference, the Contractor will prepare a schedule identifying a timetable for performing all services detailed in the Specifications. This schedule will be submitted to the Volunteer in writing and once revised through mutual consent of the Volunteer and the Contractor will be relied upon to assess Contractor responsiveness. Lack of completion of services in accordance with the approved schedule may be considered by the Volunteer as lack of responsiveness by the Contractor and, therefore, cause for possible dismissal.

B. It is anticipated that a schedule of services will be similar to the following:

Week 1-2:	Soil Sample Collection and Laboratory Analysis
Weeks 2-4:	Soil Importation
Weeks 5:	Submittal of Manifests

1.18 QUALITY CONTROL

Quality Assurance - Control of Work

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. Secure stockpiled material with 6-mil PVC bottom and top cover in locations indicated by the Volunteer to ensure minimum disruption of site activities.

1.19 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 services.

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 of performing work to Contract requirements.

1.20 SITE-SPECIFIC CLOSE-OUT BILLING PROCEDURES

A. Close-out Procedures

1. The Contractor will submit written certification that Contract Documents have been reviewed, Work has been inspected, and Work is complete in accordance with Contract Documents and ready for the Volunteer's review.

   Note: Project Close-out will not occur until the Volunteer's Representative provides written notice to the NYSDEC certifying project completion.

2. The Contractor will provide submittals to the Volunteer that are required by governing or other authorities.

B. Project Record Documents

The OSC will:

1. Maintain on the Site one set of the following documents on which to record actual revisions to the Work:

   a. Site-specific Health and Safety Plan
   b. Specifications and drawings
   c. Addenda
   d. Change Orders and other modifications to the Contract

2. Ensure entries are complete and accurate, enabling future reference by the Volunteer.

3. Submit documents to the Volunteer with claim for Final Application for Payment.

SECTION 2 - TECHNICAL SPECIFICATIONS

2.1 SITE PREPARATION SERVICES

A. Health and Safety Plan

The OSC will be responsible for maintaining, implementing, and enforcing a Health and Safety Plan ("HASP") provided in Appendix C of the RDWP.

B. Agency Notification

The OSC is responsible for notifying the NYSDEC and the Volunteer in writing at the following times:

- Within 24 Hours of the receipt of laboratory data documenting the integrity of soils slated for importation to the Site.
- Prior to the initiation of soil importation to identify the proposed location of the soil stockpile area.
- Prior to engaging in any substantive variations to the activities detailed in these Specifications

2.2 SOIL MANAGEMENT

A. Soil Importation

1. General

The Contractor shall ensure that all operations associated with the handling, loading, transportation, and importation of clean fill are in compliance with Federal, State, and local regulations. The OSC will perform soil sampling and will communicate with the NYSDEC to obtain approval for importation of the sampled soils. The Contractor is expected to coordinate the sampling and load-out work with the OSC so as not to interfere with the Volunteer activities.

2. Schedule

It is anticipated that importation activities will require no more than 5 weeks, inclusive of sampling, hauling and stockpiling.

3. Sampling

a. Methodology

Soils proposed for importation will be properly characterized in the field and findings will be recorded in logbooks. Material selected for sampling will be obtained in a manner consistent with NYSDEC sample collection protocols. Decontaminated stainless steel trowels and dedicated gloves will be used at each sample location to place the material into laboratory-supplied glassware. Prior to and after the collection of each material sample, the sample collection instrument will be properly decontaminated to avoid cross-contamination between samples.

b. Analysis and Frequency

Samples will be analyzed for the full Target Compound List/Target Analyte List (TCL/TAL) plus top 10 TICs for VOCs and top 20 TICs for SVOCs:

- Target Compound List for Volatile Compounds (plus top 10 TICs)
- Target Compound List for Semivolatile Compounds (plus top 20 TICs)
- Target Compound List for Pesticides/Aroclors
- Target Analyte List for Metals and Cyanide

The following Sampling frequency will be adhered to:

- For the first 1,000 cubic yards(cy) imported:
  VOCs - 7 grab samples
  all other TCL/TAL - 7 composite samples

- For the next 4000 cy:
  VOCs - 1 grab per 1,000 cy of material
  all other TCL/TAL - 1 composite per 1,000 cy of material

Thereafter:

- VOCs - 1 grab per 5,000 cy of material
  all other TCL/TAL - 1 composite per 5,000 cy of material

All sample containers will be placed in a cooler and will be continuously maintained at cold temperatures prior to transport to a New York State Department of Health-certified laboratory for chemical analyses. Appropriate chain of custody procedures will be followed.

The clean-soil for use in back filling and/or creating the soil cover must meet the lower of the Soil Cleanup Objectives (SCOs) for Protection of Public Health, "Restricted Residential" Use, as specified in 6 NYCRR Part 375, Table 375-6.8(b) and the SCOs for the protection of groundwater, as specified in 6 NYCRR Part 375-6.7(d).

4. Air Monitoring

Ambient air monitoring will be performed at the Site by the OSC per the Community Air Monitoring Plan provided in Appendix D of the RDWP.

B. Transportation From Source to Site

The Contractor shall furnish and be responsible for all labor, equipment, supplies, and incidental costs required to transport clean fill from the load-out location to the Site and to acquire the necessary transportation permits and any other items and services required for transporting clean fill.

C. Hauling

1. The Contractor shall not import soil from any source/ facility other than the source approved by the OSC, the Volunteer, and the NYSDEC. All transporters must have a current license to haul the clean fill.

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.

4. The Contractor shall only use the transporter identified in his bid 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 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. The Contractor will further ensure that no truck (empty or loaded) attempts to cross the Hoffman Street Bridge. This bridge has a posted weight limit of 10 tons and no vehicle exceeding that weight is permitted to use the bridge.

6. The Contractor shall not combine materials from other projects with materials to be imported to the Site.

D. Stockpile Location

Unless otherwise directed, soils imported to the site will be stockpiled at a location to the northeast of the Southern Pressure Treatment plant Building (See Soil Importation Map, part of Attachment A of these Specifications).

E. Stockpile Maintenance

Secure stockpiled material with 6-mil PVC bottom and top cover in locations indicated by the Volunteer to ensure minimum disruption of Site activities. Active monitoring of the stockpiled soil to ensure proper coverage is the responsibility of the OSC. 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 significant storm event.

F. 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 OSC within four (4) business days following shipment. Any manifest discrepancies shall be reported immediately to the Volunteer and shall be resolved by the Contractor to the satisfaction of the Volunteer.

G. NYSDEC Communication

Communication with the NYSDEC will be maintained by the OSC and the Volunteer, and 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.

Property Location Map
Former A.C. Dutton Lumber Yard
1 Dutchess Avenue
Poughkeepsie, New York

N

ESI File: OP08022.50

March 2011

Attachment

N

clean fill
stock pile

Northern Pressure
Treatment Plant

Southern Pressure
Treatment Plant

DUTCHESS AVENUE

Hudson River

100 feet

Legend:

- property outline
- existing buildings
- former structures

Notes:

Map based on Fuss and O'Neill proposed "Remedial Action Map" (July 2006)

Soil Importation Map

Former A.C. Dutton Facility
1 Dutchess Avenue
Poughkeepsie, New York

ESI File: OP08022

March 2011 | Attachment

Ecosystems Strategies, Inc.

Truck Route Map Former A.C. Dutton Facility 1 Dutchess Avenue Poughkeepsie, New York	N	ESI File: OP08022.50 March 2011 Attachment

SPECIFICATIONS

FOR

INSTALLATION OF SOIL COVER

#5

May 2011

Site Identification:

Former A.C. Dutton Lumber Yard

1 Dutchess Avenue, City and Town of Poughkeepsie
Dutchess County, New York

ESI File: OP08022.50

NYSDEC Brownfields Program Site: C314081

Prepared By:

Ecosystems Strategies, Inc.
24 Davis Avenue, Poughkeepsie, NY 12603
phone 845.452.1658 | fax 845.485.7083 | ecosystemsstrategies.com

SECTION 1 - SUMMARY OF WORK

1.1 PROJECT SUMMARY

A. Purpose

Ecosystems Strategies, Inc. (ESI) has prepared these "Specifications for Installation of Soil Cover" as part of a Remedial Design Work Plan (RDWP) that includes detailed design specifications for all the proposed environmental response actions at the former A.C. Dutton Lumber Yard property located at 1 Dutchess Avenue, City and Town of Poughkeepsie, New York (Brownfields Site: C314081). All work at the Site is being performed in general conformance with regulations specified in 6 NYCRR Part 375 (Environmental Remediation Programs) and applicable New York Department of Environmental Conservation (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 Installation of Soil Cover" are hereafter referred to as the "Specifications". The contracting entity will be The O'Neill Group - Dutton, LLC, 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 former AC Dutton Lumber Yard located at 1 Dutchess Avenue, City and Town of Poughkeepsie, 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 areas of the Site which will be developed have not been determined as of the date of these specifications. No area of soil cover installation of cover has therefore been established. The location and dimensions of the soil cover will be determined in consultation with the NYSDEC and the Volunteer prior to installation.

D. Summary of Services

The Volunteer seeks a qualified Contractor to assist the Volunteer in performing all services necessary for the proper installation of a 2' soil cover across all unpaved portions of the Site. This work includes the following task:

- A cover of clean soil will be placed as a barrier layer at all areas of the Site not covered with asphalt, concrete, and/or buildings, i.e. grass covered and planting areas. A marker layer consisting of an easily identifiable, non-biodegradable layer such as high visible porous plastic mesh will first be placed on all areas which are targeted for the placement of the barrier layer. After the marker layer has been appropriately placed, a minimum of two feet of certified clean soil material will be placed on the Site in the designated areas (the importation of clean fill material to be used in constructing the soil cover is governed by separate specifications). Soil material will be placed and compacted in lifts not exceeding 12 inches compacted depth. All finished grades that receive cover soils will be properly stabilized to prevent erosion.

- Other tasks, including the importation of clean fill to the Site, are not considered part of this contract and are described in a separate specification documents appended to the RDWP.

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), prepared by Fuss and O'Neill, dated August 2007, and the Supplementary Investigation Report (SIR) prepared by ESI, dated September 2008. The remedial tasks described in these Specifications have been selected based on the Remedial Alternatives Analysis and Remedial Work Plan (RAA/RWP), prepared by ESI, dated September 2008. Environmental conditions and the conceptual remedy for the Site are also summarized in the January 2008 Brownfield Cleanup Program Decision Document prepared by the New York State Department of Environmental Conservation (NYSDEC).

1.2 KNOWN ENVIRONMENTAL CONDITIONS

Site conditions are detailed in the above-referenced RIR and SIR; however, the Contractor is hereby notified that conditions may have changed between the time of this investigatory work and the actual date of contract award. Furthermore, conditions unknown at the time of the August 2007 RIR and September 2008 SIR may be present which may materially affect this Contract.

The Site conditions are known to the NYSDEC and all services outlined in these Specifications will be implemented with the expressed intent of installing a 2' soil cover across all unpaved portions of the Site as required by the RAA/RWP. Communication with the NYSDEC will be the responsibility of the Volunteer and/or the OSC.

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

- The historic on-site pressure treatment of lumber using chromated copper arsenate (CCA) has contaminated on-site soils with arsenic and chromium. Other historic on-site industrial activities and fill of unknown origin, which comprises much of the Site, may be additional sources of documented metals contamination.

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 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 Contractor 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 has retained the 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

- Resource Conservation and Recovery Act 40 CFR Parts 260-265.
- 6NYCRR, Part 612-614.
- 6NYCRR, Part 360, et al.
  6NYCRR, Part 370, et al.

1.6 BIDDING CONSIDERATIONS

A. General

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

B. Return of Bid Documents

All bid documents must be returned to the Volunteer in a sealed manila envelope with the words:

> "*Bid for Contaminated Installation of Soil Cover*
> *At the former AC Dutton Lumber Yard, Town and City of Poughkeepsie, NY"*

clearly written on the outside. Unlabeled envelopes will be determined incomplete and will not be considered by the Volunteer.

C. Return Address

All bids must be submitted to the address shown in the Advertisement and Notice to Bidders.

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. The Contractor shall list the percentage of the overall project work performed by the prime Contractor forces.

C. The Contractor shall submit with this bid a copy of the Contractor's Site-specific Health and Safety Plan which conforms with 29 CFR 1910.120 and 29 CFR 1926. 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.

D. Submit a copy of the prime Contractor's standard qualifications form for this type of work.

E. All submitted bids will become the property of the Volunteer.

1.8 BID SCHEDULE

A. All bid documents must be received by the Volunteer in accordance with the schedule set forth in the Advertisement and Notice to Bidders. Bids received after that time or received in a manner determined by the Volunteer to be incomplete will be returned to the bidder unopened.

B. Bids will be opened by the Volunteer in a timely manner after the submittal deadline, and all bids will be read aloud and tabulated. The lowest cost bidder, as established by charges specified in the bid response forms, will be selected by the Volunteer.

C. The Volunteer retains the right to question any and all bidders.

D. Selection of the Contractor will be at the sole discretion of the Volunteer.

1.9 AWARD CRITERIA

The project will be awarded to the lowest cost-responsive, responsible bidder.

1.10 REJECTION OF BIDS

The Volunteer reserves the right to reject any or all bids for reasonable cause.

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 MEETINGS

A. <u>Coordination and Project Conditions</u>

1. The Contractor will coordinate scheduling, submittals, and work on the various portions and phases of the project 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 MANDATORY PRE-BID MEETING

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

1.14 PROJECT MEETINGS

The Contractor will attend a minimum of two meetings scheduled by the Volunteer to inform the Volunteer of the project's status. At a minimum, the initial pre-installation conference will be held at least two weeks prior to the initiation of services. The final mandatory meeting will be scheduled upon completion of all field work and to agree on a schedule for resolution of outstanding issues with the NYSDEC.

1.15 PROGRESS AND COMPLETION

A. Normal working hours and normal working days for the Contractor's Work on this Project shall be between the hours of 7:30 a.m. and 4:30 p.m. (or as determined appropriate by the City of Poughkeepsie), Monday through Friday, excluding holidays, except as otherwise specified.

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 WORK PHOTOGRAPHS

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

- initial conditions
- demarcation layer
- soil cover installation activities
- final Site conditions

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

1.17 ANTICIPATED PROJECT SCHEDULE

A. At the initial preconstruction conference, the Contractor will prepare a schedule identifying a timetable for performing all services detailed in the Specifications. This schedule will be submitted to the Volunteer in writing and once revised through mutual consent of the Volunteer and the Contractor will be relied upon to

assess Contractor responsiveness. Lack of completion of services in accordance with the approved schedule may be considered by the Volunteer as lack of responsiveness by the Contractor and, therefore, cause for possible dismissal.

B. It is anticipated that a schedule of services will be similar to the following:

Week 1:	Site Preparation and Clearing
Weeks 2-10:	Soil Cover Installation

1.18 QUALITY CONTROL

Quality Assurance - Control of Work

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

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

1.19 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.

1.20 CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

A. Temporary Sanitary Facilities

Temporary sanitary facilities will be the responsibility of the Contractor to provide and maintain. Costs associated with temporary sanitary facilities will not be borne by the Volunteer.

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 collect and remove waste materials, debris, and rubbish from Site weekly and dispose said materials off-site in accordance with all applicable Federal, State and local regulations.

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.

1.21 SITE-SPECIFIC CLOSE-OUT BILLING PROCEDURES

A. Close-out Procedures

1. The Contractor will submit written certification that Contract Documents have been reviewed, Work has been inspected, and Work is complete in

   accordance with Contract Documents and ready for the Volunteer's review.

   Note: Project Close-out will not occur until the Volunteer's Representative provides written notice to the NYSDEC certifying project completion.

2. The Contractor will provide submittals to the Volunteer that are required by governing or other authorities.

B. Final Cleaning

1. Final cleaning, prior to final project assessment, will be executed by the Contractor.

2. Prior to final inspection, the Contractor shall clean all construction debris.

3. The Site shall be cleaned, and construction materials, tools, equipment, sheds, barricades, tree protection, and other temporary construction shall be removed. Lawn areas shall be neat and free of debris of any kind.

4. Contractor's payment may be withheld if the Site is not cleaned up to Volunteer's satisfaction.

5. Requirements of this section shall be in addition to and not in limitation of any special cleaning requirements specified in other sections.

6. The Contractor shall be responsible for the removal and disposal from the Site of all trash and debris that resulted from the Contractor's work.

C. Project Record Documents

The Contractor will:

1. Maintain on the Site one set of the following documents on which to record actual revisions to the Work:

    a. Site-specific Health and Safety Plan
    b. Specifications and drawings
    c. Addenda
    d. Change Orders and other modifications to the Contract

2. Ensure entries are complete and accurate, enabling future reference by the Volunteer.

3. Store record documents separate from documents used for construction.

4. Record information concurrent with construction progress.

5. Submit documents to the Volunteer with claim for Final Application for Payment.

SECTION 2 - TECHNICAL SPECIFICATIONS

2.1 SITE PREPARATION SERVICES

A. Health and Safety Plan

The OSC will be responsible for maintaining, implementing, and enforcing a Health and Safety Plan ("HASP") provided in Appendix C of the RDWP (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 implementation.

B. Agency Notification

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

- Prior to the initiation of Site Work to identify the proposed location of the soil cover.
- Three working days prior to the initiation of installation activities.
- Prior to engaging in any substantive variations to the activities detailed in these Specifications.

2.2 COVER LAYER INSTALLATION

A. General

The cover of certified clean soil will be placed as a barrier layer at all areas that are not covered by the proposed on-site structures. The purpose of the cover will be to provide a barrier between the surface and low-level concentrations of

metals and/or petroleum contamination, which may remain on the Site following the excavation of grossly impacted materials.

A marker layer consisting of an easily identifiable, non-biodegradable layer such as high visible porous plastic mesh will first be placed on all areas that are targeted for the placement of the barrier layer. After the marker layer has been appropriately placed, a minimum of 24 inches of certified clean soil will be placed on the Site in the designated areas. Soil will be placed and compacted to 95% of maximum dry density in lifts not exceeding 12 inches compacted depth. For all covered areas having exposed soils, the top six inches of soil will contain sufficient organic matter to permit re-vegetation. This final layer may be replaced with topsoil in areas where final landscaping has been determined. All finished grades that receive topsoil shall be raked smooth, seeded and mulched, and water periodically as necessary to insure proper stabilization of soil areas.

The 24-inch soil barrier layer may also be substituted by any of the following:

- asphalt or concrete of sufficient thickness
- on-Site buildings

The specific thickness of each of these alternative materials will be dependent on ultimate Site development plans but will not be less than 6". The determination to utilize substitute materials will be made based on design considerations but will not be considered approved until written approval from the NYSDEC is received. A grading and cover plan illustrating the locations of structures, parking areas, landscaping and clean fill or equivalent substitute as well as the depth to contaminated soil will be provided to the NYSDEC after site development plans have been finalized. It will be the responsibility of the Volunteer to provide adequate justification for any and all proposed substitutes.

B. Schedule

It is anticipated that soil cover installation activities will require no more than one month.

C. 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.

Property Location Map
Former A.C. Dutton Lumber Yard
1 Dutchess Avenue
Poughkeepsie, New York

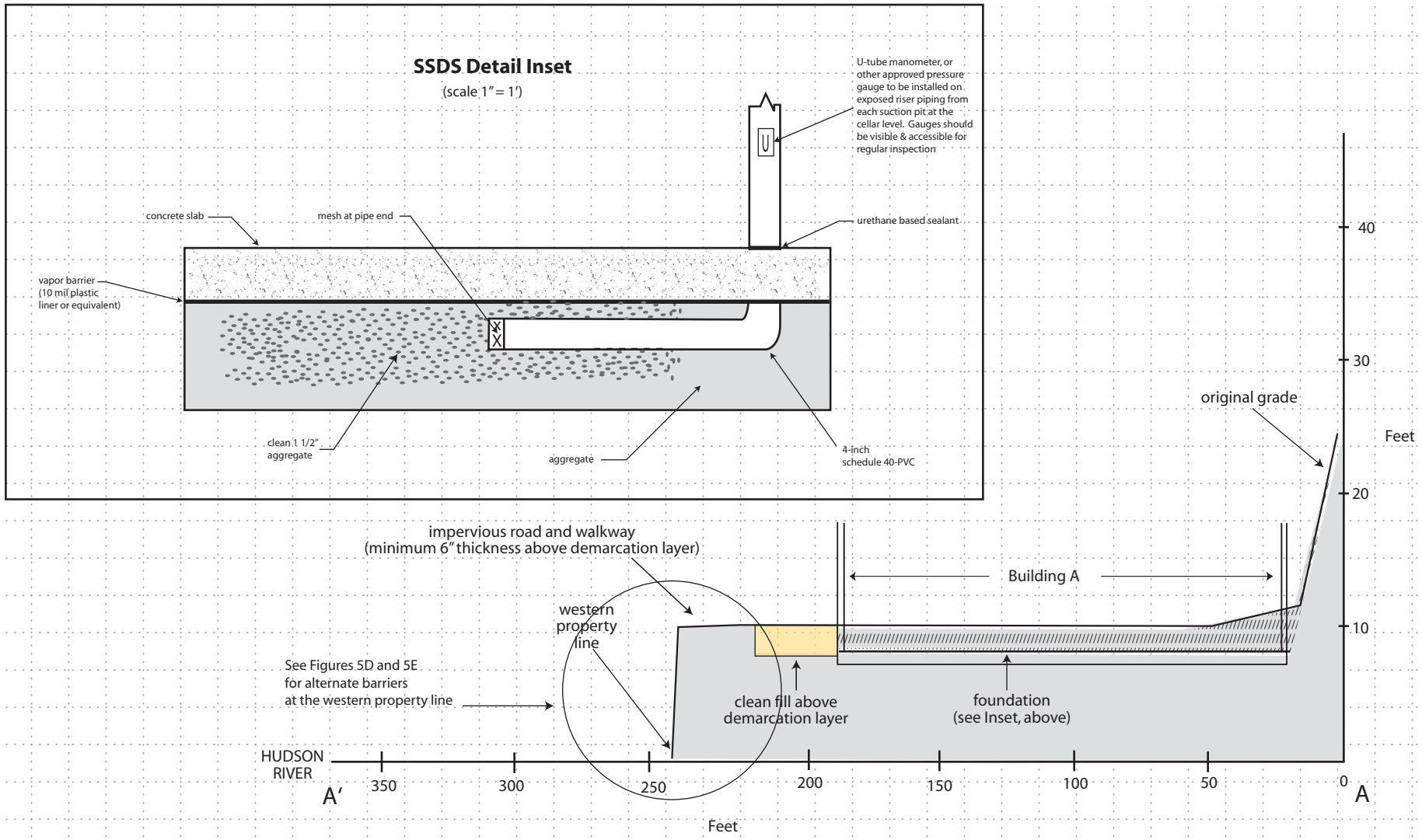
N

ESI File: OP08022.50

March 2011

Attachment

Ecosystems Strategies, Inc.



All feature locations are approximate. This map is intended as a schematic to be used in conjunction with the associated report, and it should not be relied upon as a survey for planning or other activities.

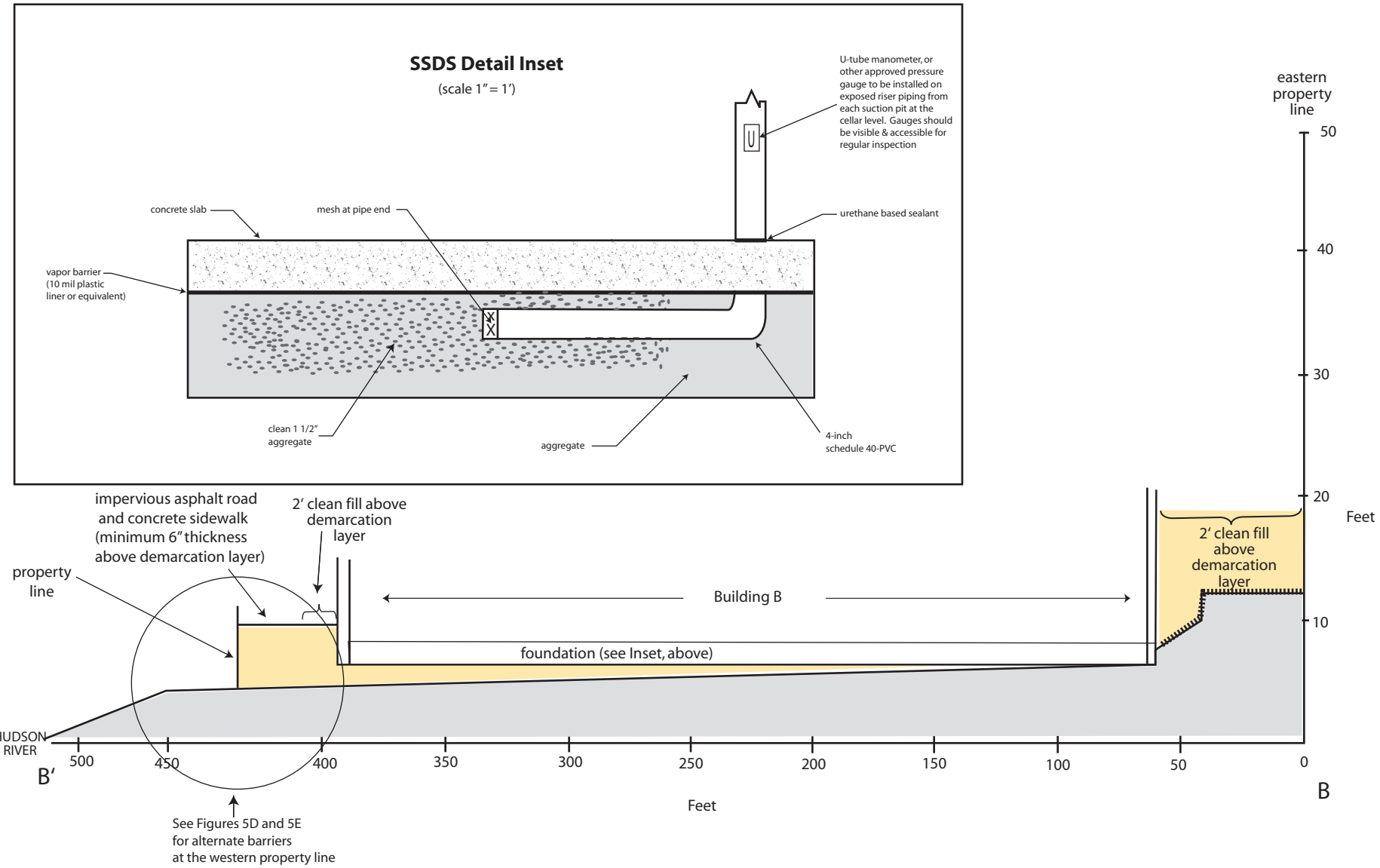
Figure 5A - Cross Section A

Former A.C. Dutton Facility
1 Dutchess Avenue
Poughkeepsie, New York

Legend:
- demarcation layer
- imported fill (clean)
- existing soils
- cut areas

ESI File: OP08022.50
March 2011
Scale as shown
Appendix B

Ecosystems Strategies, Inc.



All feature locations are approximate. This map is intended as a schematic to be used in conjunction with the associated report, and it should not be relied upon as a survey for planning or other activities.

Figure 5B - Cross Section B

Former A.C. Dutton Facility
1 Dutchess Avenue
Poughkeepsie, New York

Legend:

- imported fill
- existing soils
- demarcation layer

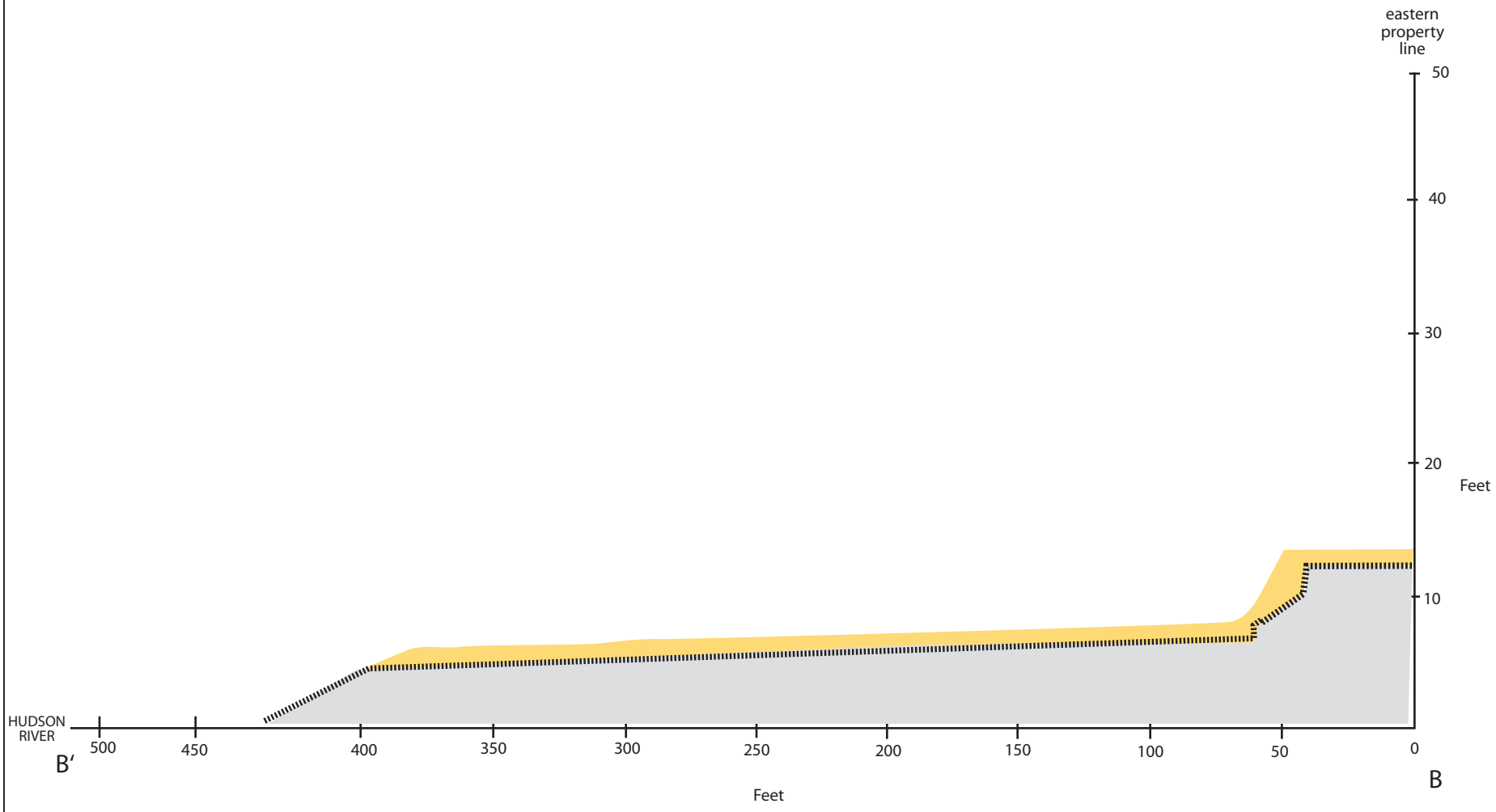
ESI File: OP08022.50

March 2011

Scale as shown

Appendix B

Ecosystems Strategies, Inc.



All feature locations are approximate. This map is intended as a schematic to be used in conjunction with the associated report, and it should not be relied upon as a survey for planning or other activities.

Figure 5B - Cross Section B-1

Former A.C. Dutton Facility
1 Dutchess Avenue
Poughkeepsie, New York

Legend:

- imported fill
- existing soils
- demarcation layer

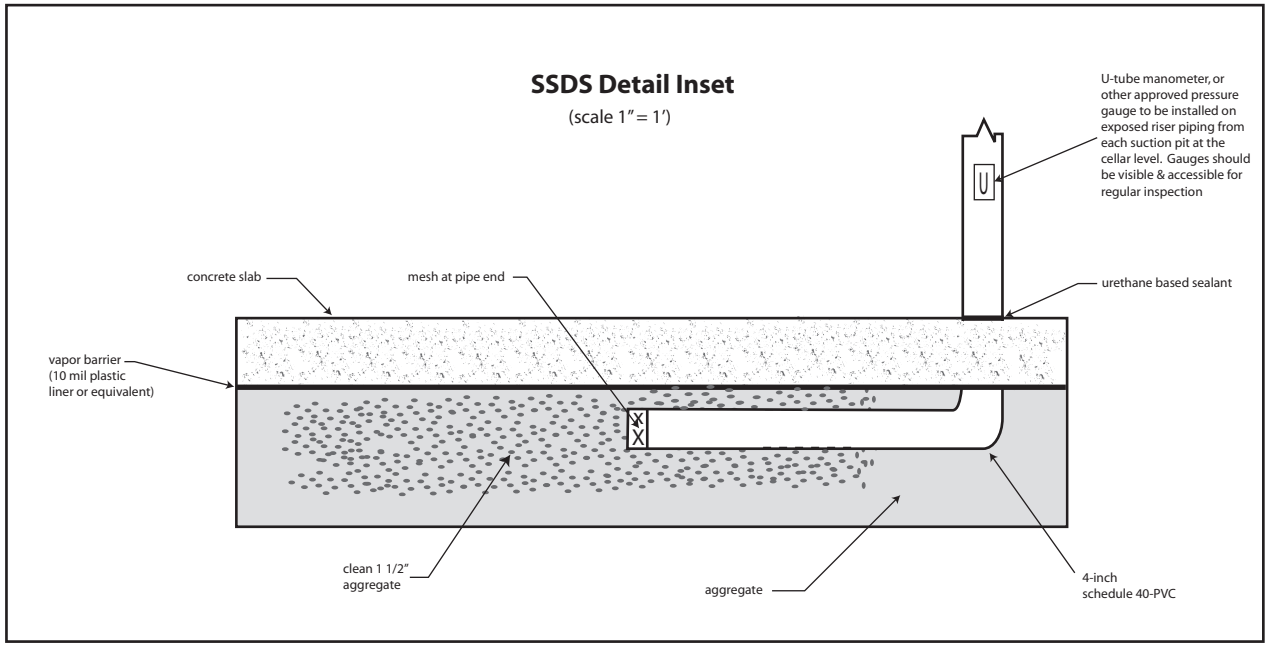
ESI File: OP08022.50

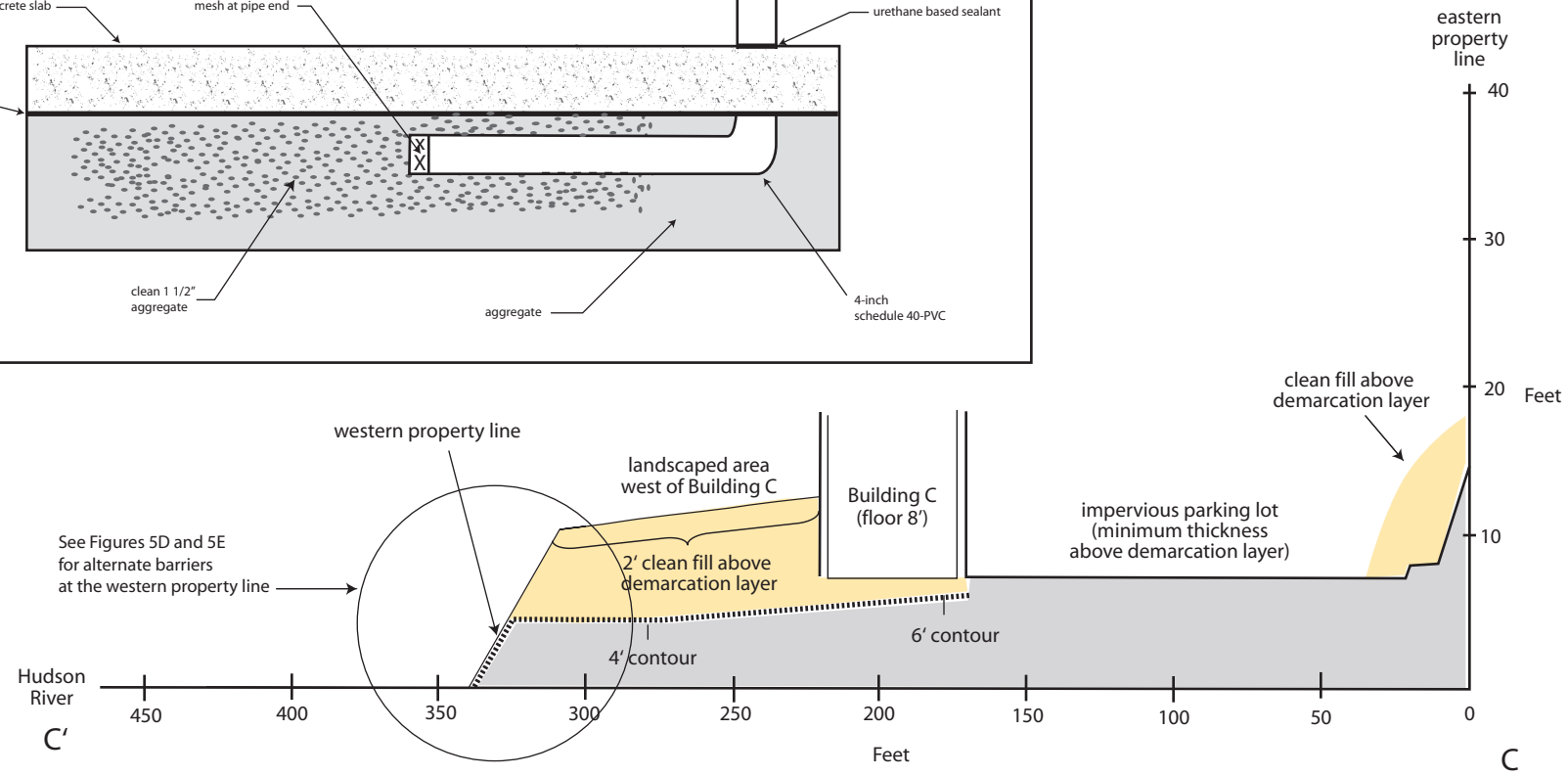
March 2011

Scale as shown

Appendix B

Ecosystems Strategies, Inc.





All feature locations are approximate. This map is intended as a schematic to be used in conjunction with the associated report, and it should not be relied upon as a survey for planning or other activities.

Figure 5C - Cross Section C

Former A.C. Dutton Facility
1 Dutchess Avenue
Poughkeepsie, New York

Legend:

- imported fill
- existing soils
- demarcation layer

ESI File: OP08022.50

March 2011

Scale as shown

Appendix B

Ecosystems Strategies, Inc.

Figure 5D - Cross Section of Cover at Western Property Boundary

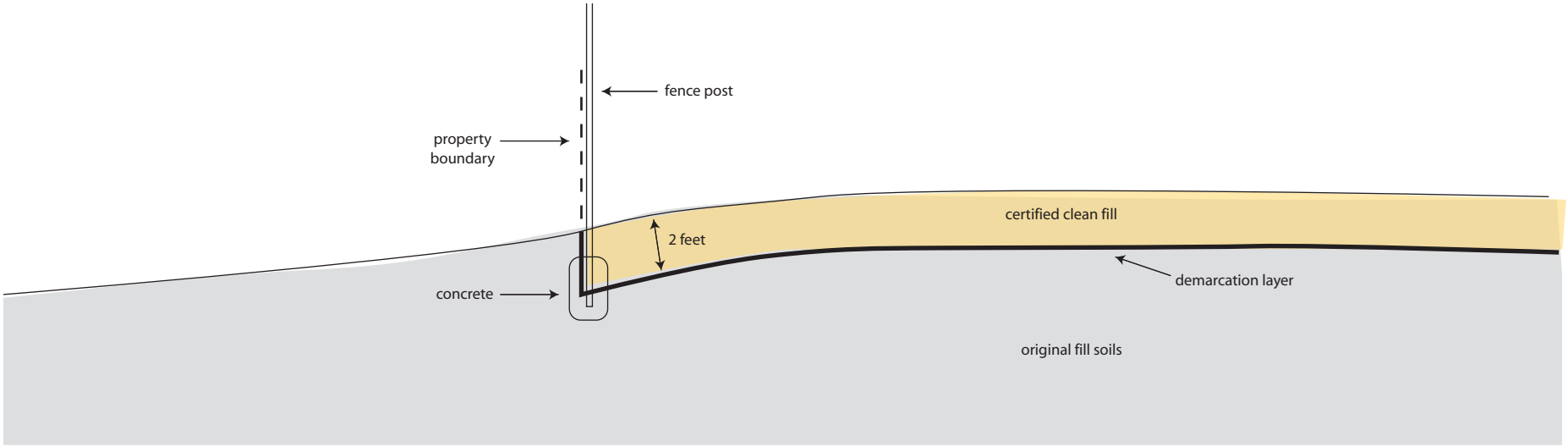


Figure 5E - Alternate Cross Section at Western Property Boundary

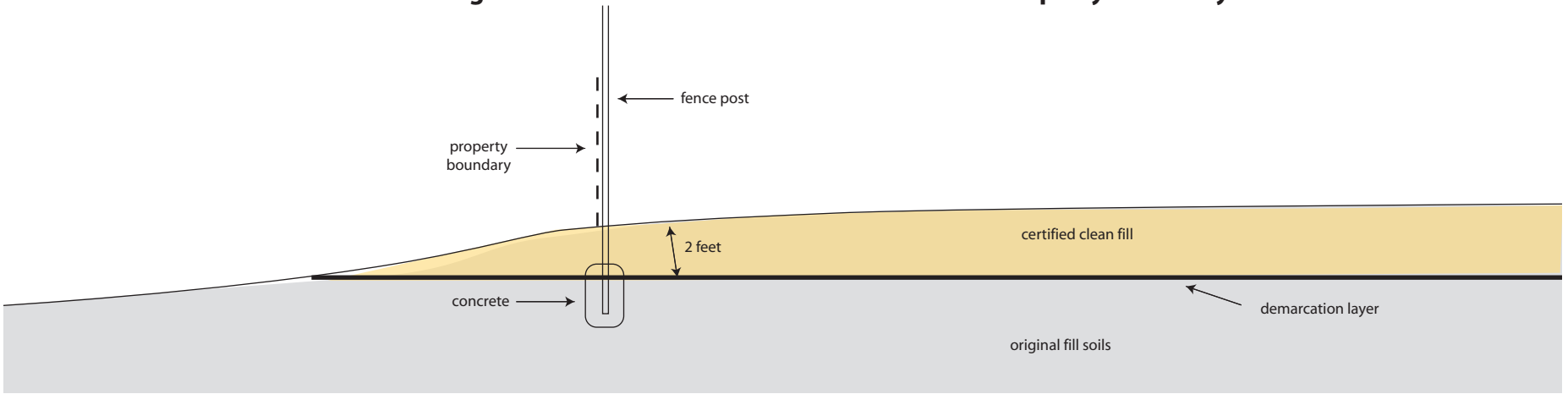
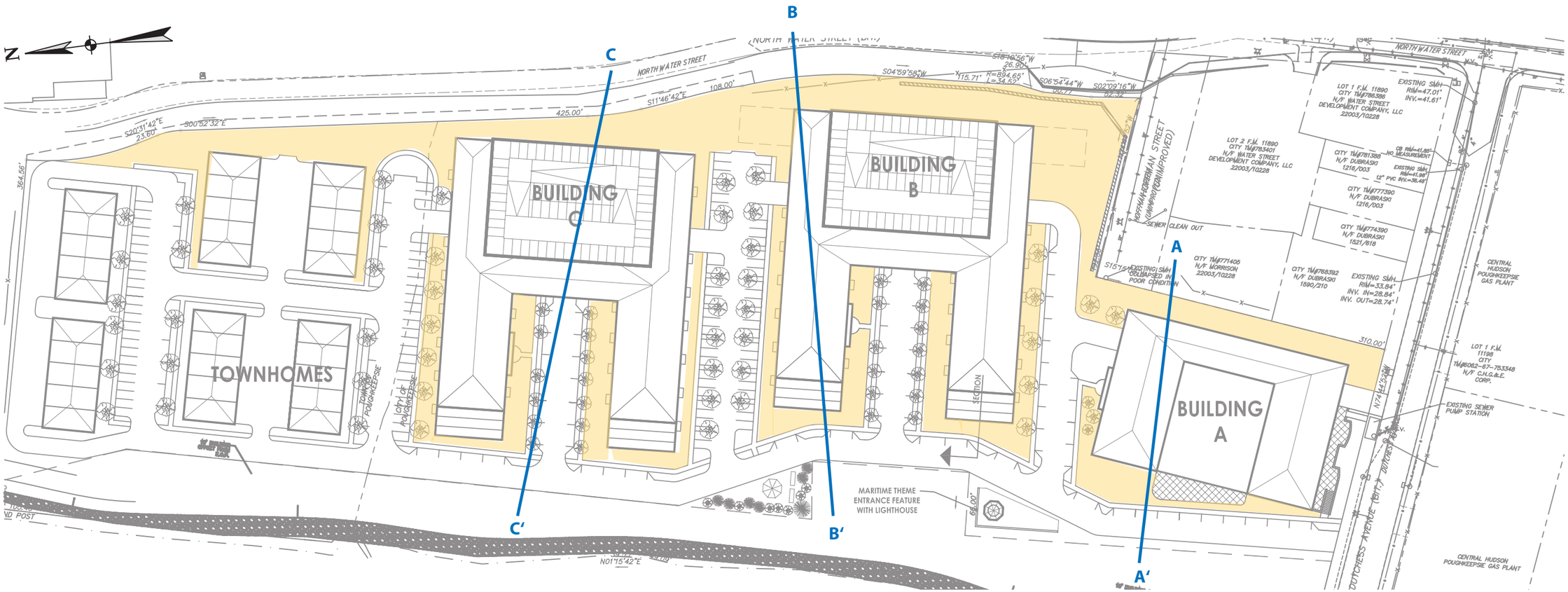


Figure 5D & 5E Cross Section at Western Property Boundary

Former A.C. Dutton Facility
1 Dutchess Avenue
Poughkeepsie, New York

ESI File: OP08022.50
March 2011
Not to scale
Appendix B

Ecosystems Strategies, Inc.



area of soil cover

section lines

Proposed Site Plans as shown in this and other drawings within this document are schematic; changes may be made based on reviews by local agencies.

Base map by Minno & Wasko Architects and Planners dated 1/20/2011

Figure 5 - Soil Cover Map

Former A.C. Dutton Facility 1 Dutchess Avenue Poughkeepsie, New York	ESI File: OP08022.50
	Scale as shown
	March 2011 | Appendix B

APPENDIX I

Resumes of Key Personnel

Ecosystems Strategies, Inc.

Paul H. Ciminello, CEM, CAQS

PRESIDENT

EDUCATION

Master of Environmental Management, 1986
School of the Environment, Duke University, Durham, North Carolina

Master of Arts in Public Policy Sciences, 1986
Institute of Policy Sciences and Public Affairs, Duke University, Durham, North Carolina

Bachelor of Arts, 1980
Tufts University, Medford, Massachusetts

CERTIFICATIONS AND TRAINING

Certified Environmental Manager, Environmental Assessment Association, 2006
Certified Air Quality Specialist, Environmental Assessment Association, 2007
NJ Dept. of Environmental Protection Licensed Subsurface Evaluator (License Number: 0014686)
NYS Dept. of Labor Certified Asbestos Building Inspector (Cert. Number: AH92-14884)
Connecticut Department of Environmental Protection Interim Environmental Professional
NYS Department of State, Division of Licensing Services, Real Estate Instructor
In compliance with OSHA Hazardous Materials Safety (29 CFR 1910) requirements

PROFESSIONAL EXPERIENCE

President, Ecosystems Strategies, Inc., Poughkeepsie, New York *1992 to present*

Coordinates corporate strategic planning, financial management and marketing activities. Oversees corporate work on state and federal superfund sites and manages education/training services. Responsible for technical services in areas of pollution prevention, contaminant delineation and site remediation. Twenty years experience in the investigation and remediation of petroleum contamination at commercial and residential properties. Major recent projects of relevance include:

- Irvington Waterfront Park (Irvington, NY): Project Manager for site investigation and remedial design of abandoned industrial riverfront properties. Documented soil and groundwater contamination and designed remediation including soil removal and site capping. Project completed in 2000; project awarded the 2000 Gold Medal Award by Consulting Engineers Council of New York State, Inc.

- Greyston Bakery Site (Yonkers, NY): Project Manager for site investigation and remedial design of former manufactured gas plant site for future use as a bakery. Documented soil, groundwater and soil gas contamination. Remedial systems included installations of a DNAPL collection system, a barrier layer, a subslab depressurization system under the building, and groundwater monitoring. Project completed in 2004.

- 400 Block Redevelopment (Poughkeepsie, NY): Project Manager for site investigation and remedial design of multi-use industrial development property (boiler repair, clothing manufacturer, auto repair) for future retail/residential use. Documented soil (petroleum, PCBs, metals) and groundwater (petroleum) contamination. Remedial systems include: soil (and tank) removal, installation of a barrier, and groundwater monitoring. Project completed in 2006.

- Parkview Commons Site (Bronx, NY): Project Manager for site investigation and remedial design of former gas station/auto repair facility for future use as a residential/commercial building. Remedial investigation and design is currently on-going. Project completed in 2006.

Senior Hazardous Waste Specialist, U.S. Hydrogeologic, Inc., Poughkeepsie, New York 1986 to 1992

Supervisor for corporate hazardous and solid waste investigatory and remedial services. Major projects included:

- Coordination of subsurface investigations at a New York State Superfund site (former industrial facility); project manager in charge of site reclassification (delisted as of January, 1991).
- Coordination of petroleum storage tank management plan for Dutchess County (NY) Department of Public Works, including an assessment of regulatory compliance, product utilization and physical conditions of more than 100 tanks at over 20 facilities.
- Environmental compliance Audit of 42,000-square foot printing facility with specific remediations for solvent handling/disposal, inks storage and metal recovery processes.

Adjunct Professor, (various institutions) *1991 to Present*

Dutchess Community College, Poughkeepsie, New York
Marist College, Poughkeepsie, New York
Vassar College, Poughkeepsie, New York

Courses: Macroeconomics, Environmental Economics (DCC)
Introduction to Environmental Issues (Marist)
Environmental Geology (Vassar)

Policy Intern, Southern Growth Policies Board, North Carolina *1985*

Prepared several in-depth and short analyses of environmental and economic issues, with specific concern for their impact on Southern state policies. Analyses included: hazardous waste facility setting policies and environmental impacts of "high tech" industries on host communities.

Research Assistant, University of Oregon, Eugene, Oregon *1983*

Analyzed (with Dr. John Baldwin, Chairman of the Department of Planning, Public Policy and Management, U. of Oregon) the "Oregon Riparian Tax Incentive Program". Designed survey, conducted interviews and analyzed data. Summary paper with programmatic recommendations, was presented at the Annual Conference of the National Association of Environmental Educators.

RELATED EXPERIENCE

Research Assistant, School of the Environment, Duke University, North Carolina *1986*

Assisted in the design and evaluation of risk assessment models to estimate the impact of landfill leachate on human health. Monte Carlo simulation and pollutant transport models used in the analyses.

Research Assistant, USDA Forest Service, Duke University, North Carolina *1985*

Collected economic data and assisted in statistical analyses for a study isolating research as a variable in timber production functions.

Research Assistant, School of the Environment, Duke University, North Carolina *1984*

Preliminary research on the use of mathematical models by water resource administrators.

Teacher, Eugene, Oregon *1980-1983*

PRESENTATIONS

- "Environmental Risks in Lending" Training Session for Pawling Savings Bank employees, December 18 and 19, 1989; and July 1, 1993.
- "Identifying Environmental Concerns in Appraisals", Workshops for Lakewood Appraisal Corporation, October, and November, 1989 and April, 1990.
- "State and Local Groundwater Protection Strategies", Annual meeting of the New York State Association of Towns, February, 1990.
- "Environmental Audits on Orchards and Agricultural Properties", Resource Education Institute, Inc., Real Estate Site Assessment and Environmental Audits Conference, December 4, 1990.
- "Environmental Audits on Orchards and Agricultural Properties", National Water Well Association Annual Conference, July 29-31, 1991.
- "Principles of Environmental Economics for Ground Water Professionals", National Groundwater Association Outdoor Action Conference, May 27, 1993.
- "Impact of Environmental Liabilities on Real Estate Transactions", a NYS Department of Education approved course for licensed real estate professionals, March 1995; April 1995; May 1995; October 1995.
- "Brownfields Redevelopment in New York: A Discussion of Two Case Studies", New England Environmental Conference 1996, March, 1996.
- "Quantifying Environmental Liabilities", a NYS Department of Education approved course for licensed real estate professionals, March 1997.
- "Environmental Assessments in Urban Settings", Vassar College, Fall 1999 and Fall 2000.
- "Navigating Property Contaminant Problems", Land Trust Alliance Rally 2001, Oct 2001

ARTICLES

Ciminello, P. 1993. A Primer on Petroleum Bulk Storage Tanks and Petroleum Contamination of Property, ASHI Technical Journal, Volume 3, No. 1

Ciminello, P. 1991. Environmental Audits on Orchard and Other Agricultural Properties, Proceedings of the National Water Well Association Annual Conference

Ciminello, P. 1991. Property Managers Should Carefully Examine Current Fuel Storage Practices, NYS Real Estate Journal, Vol. 3, No. 9

Ciminello, P. 1991. New DEC Regulations Affect Development of Agricultural Lands, NYS Real Estate Journal, Vol. 3, No. 6

Ciminello, P., Hodges-Copple, J. 1986. Managing Toxic Risks From High Tech Manufacturing, Growth and Environmental Management Series (Southern Growth Policies Board)

Ciminello, P. 1986. State Assistance in Financing Water Treatment Facilities, Growth and Environmental Management Series (Southern Growth Policies Board)

Ciminello, P. 1985. Plants Amid Plantings: The Future Role of Environmental Factors in Business Climate, Ratings, Southern Growth ALERT (Southern Growth Policies Board)

Ciminello, P., J. Baldwin, N. Duhnkrack,1984, An Incentive Approach to Riparian Lands Conservation, Monographs in Environmental Education and Environmental Studies (North American Association of Environmental Educators)

PROFESSIONAL AFFILIATIONS

American Water Resources Association
National Groundwater Association
Hazardous Materials Control Research Institute
Environmental Assessment Association

ADDITIONAL INFORMATION

Member, Dutchess County (NY) Youth Board (1987-1992); Chairman, 1992
Member, City of Poughkeepsie (NY) School District Ad Hoc Committee on Teen Parents and Pregnancy Prevention (1991)
Member, City of Poughkeepsie School District Budget Advisory Committee (1994 to 2000)
Member, City of Poughkeepsie PTA and Middle School Building Level Team

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Fax: (845) 565-4142

Philip A. Bell, P.E.

QUALIFICATIONS

Over Eighteen (18) years experience in the field of Civil Engineering, Surveying and Geographical Information Systems. Project Manager responsible for the design and construction of Civil Engineering projects ranging from Municipal Infrastructure Improvements, Infrastructure Management, Site design & Planning, Drainage Analysis, Culvert Design to Site Remediation Activities.

EXPERIENCE

Experienced in many facets of municipal infrastructure management and design projects including extensive water system design and analysis, sanitary sewer systems, pump stations, storm sewer systems, roadway and streetscape design, park design, urban brownsfields programs, site planning and design for sites ranging from one to twelve acres. Has prepared Periodic Review Reports for site remediation projects. Responsible for a wide variety of utility improvement construction projects including water, sewer and storm drainage systems. The work on these projects has included involvement from the analysis stages through to the final design and managing construction.

CURRENT 2008 PROJECTS

Delaval Waterfront Development Project, status: active – Lead site engineer for 12 acre commercial development project. Also acting as liaison between developer and current site remediation project with NYSDEC and the City of Poughkeepsie. Project represents the second largest cleanup in State history with costs of more than 10 million dollars.

Shadows on the Hudson, status: complete – Prepared periodic review report for submittal to NYSDEC for 2 million dollar remediation project.

Vassar Temple, status: active – Site plans for drainage improvements.

Bronx River Haulage, status: active – Site Engineer for transfer station expansion. Handling environmental permitting with the NYSDEC.

EDUCATION

University of Colorado, Denver – School of Engineering, Denver, Colorado
Bachelor of Science, Civil Engineering
S.U.N.Y. Buffalo, NY – School of Architecture and Environmental Design
Bachelor of Arts, Environmental Design and Urban Planning

REGISTRATION

Professional Engineer; New York - No. 081943

CERTIFICATIONS

OSHA Hazardous Waste Operations, Cert. No. 08041111350
NYSDOL Asbestos Designer, Cert. No. 08-111265

Ecosystems Strategies, Inc.

Richard Hooker
Project Manager

PROFESSIONAL EXPERIENCE

Project Manager, Ecosystems Strategies, Inc., Poughkeepsie, NY *2001 - present*

- Conducts Environmental Site Investigations and prepares final site assessment reports. Over 300 Investigations and Final Reports completed to date.
- Investigates site histories.
- Conducts facility inspections.
- Reviews regulatory agency records.
- Documents facility compliance with relevant State and Federal regulations.
- Conducts Phase II Technical Environmental Investigations and prepares technical reports.
- Researches field and regulatory information.
- Manages tank removals.
- Coordinates subcontractors.
- Oversees fieldwork and handles collection of material, soil and water samples.

EDUCATION

Ph.D. from the University of St. Andrews, St. Andrews, Scotland *1997*
BA from Staffordshire University, Stoke-on-Trent, England *1989*

SELECT PROJECTS

Former Fur Processing Facility, Bronx, NY

Documented the presence of chlorinated hydrocarbon, petroleum, and metals contamination beneath and/or near a former industrial structure. Coordinated the sampling and removal of multiple drums of hazardous and non-hazardous material from the structure and secured NYCDEP approval. Developed a Workplan for site remediation and directed environmental restoration activities, including: excavation and removal of both aboveground and underground storage tanks, removal of contaminated soils, installation of a barrier layer soil cap, and pre-demolition removal of asbestos materials.

Jamaica Hospital Medical Center, Queens, NY

Coordinated and supervised the removal of two, large underground storage tanks and documented site conditions through soil and groundwater sampling. Secured NYSDEC approval of PBS tank closure and registration requirements.

The Point CDC, Bronx, NY

ESI assisted with the open space for community access to the waterfront in revitalization of a former fur processing plant. Activities included subsurface investigation, hazardous waste characterization/disposal program. Worked with architects, engineers, and demolition contractors to demolish existing structure and assisted with site redesign as a multi-purpose community access point to the Bronx River.

PROFESSIONAL CERTIFICATIONS

- OSHA Hazardous Waste Site Operations
- OSHA Emergency Response Training
- 29 CRF 1910.120 (e) – 40 Hour Hazwoper

Ecosystems Strategies, Inc.

Kimberly Punchar
Senior Project Manager and Senior Quality Control Manager
Kimberly@ecosystemsstrategies.com

EDUCATION

Marist College, Poughkeepsie, New York
Bachelor of Science in Environmental Science

CERTIFICATIONS AND TRAINING

- Permit Required Confined Space Training Competencies; Attendant, Entrant, Entry Supervisor [Title 29 CFR Part 1910.146(g)(1)
- Completed EA Engineering, Science and Technology Project Managers Training
- Excellent interpersonal, customer, research & analysis and decision-making skills
- Completed Hydric Soils and Methodology for Delineating Wetlands continuing education courses and received Rutger's University Wetland Delineator Program Certification.
- Licensed New York State Wildlife Rehabilitator

PROFESSIONAL EXPERIENCE

Senior Project Manager and Senior Quality Control Manager,
Ecosystems Strategies, Inc., (ESI) Poughkeepsie, New York *Present*

Management and quality review of environmental site assessments and Phase II technical environmental investigations, and remedial projects including Brownfield sites. Conducts research to obtain field and regulatory information about the environmental status of a designated area. Reviews all documents prepared by ESI to ensure consistency and technical accuracy. Responsibilities associated with the preparation of site assessments include: investigating site histories, conducting facility inspections, reviewing regulatory agency records, documenting facility compliance with relevant State and Federal regulations, and preparing reports. Management of complex technical environmental investigations (including sites currently on the NYSDEC Registry of Inactive Hazardous Waste Sites), involved with: coordinating subcontractors; overseeing fieldwork; designing and implementing material, soil, and water sampling plans, preparing technical reports, and interfacing with regulatory agency personnel.

Director of Office & Environmental Services, Associate Environmental Scientist/Project Manager,
Spectra Environmental Group, Inc., Spectra Engineering, Architecture & Surveying, PC.
Poughkeepsie, New York *2003 – 2011*

- **Management** - Supervised a team of up to 15 Environmental, Engineering and Surveying professionals who managed projects with values that exceeded $1,000,000 or more (e.g. large subdivisions, industrial engineering – asphalt plant relocation design).
- **Petroleum/Chemical** - Extensive experience with Petroleum Bulk Storage Regulations (PBS – Title 6 NYCRR Parts 612-614), Spill Prevention Control and Countermeasure plan development (SPCC – Title 40 CFR Part 112), Chemical Bulk Storage Regulations (CBS – Title 6 NYCRR Parts 595-599), Spill Prevention Report (SPR) development and Emergency Response Plan development. Completed PBS and CBS storage tank inspections and conducted secondary containment (soil) permeability testing at an MOSF facility.

- **Stormwater/SPDES** - Developed and managed the preparation of Stormwater Pollution Prevention Plans (SWPPP) in accordance with Section 402 of the Clean Water Act for stormwater discharges from numerous industrial facilities. Prepared Annual Certification Reports and Discharge Monitoring Reports.
- **Phase I** - Prepared and managed numerous Phase I Environmental Site Assessments (ESAs) for various residential, commercial and industrial sites to assess the presence or absence of recognizable environmental conditions. Prepared reports that summarized the findings and which provided recommendations with related cost estimates for additional sampling/investigative work, as appropriate.
- **Phase II** - Managed numerous Phase II Environmental Site Investigations as a result of Phase I ESA findings, petroleum and chemical spills and leaking underground storage tanks. Performed soil and ground-water monitoring and landfill investigation oversight. Prepared reports based on field monitoring/sampling data; which provided recommendations for cleanup/remediation with related cost estimates, as appropriate.
- **Phase III** - Managed numerous Phase III Remediation projects involving the cleanup of petroleum contaminated soil and groundwater, including the cleanup of a mercury spill. Prepared reports that summarized cleanup/remedial activities and which provided recommendations for spill closure or additional long-term monitoring (with related cost estimates, as appropriate).
- **LTM/Spill Closure** - Developed Long-Term Monitoring Plans and Spill Closure Reports that describe a site's history, outline regulatory requirements, and define the monitoring/reporting program and/or spill cleanup activities completed for various commercial/industrial facilities**.**
- **Solid Waste** - Developed solid waste management facility operation and maintenance manuals which include a general operating plan, a staffing plan, a personnel training plan, a waste control plan, a contingency plan and a closure plan in accordance with Title 6 NYCRR Part 360.
- **Training/Presentations** - Developed training programs for SPCC/ SWPPP and conducted annual training classes for various industrial facilities.
- **SEQRA** - Prepared Environmental Assessment Forms (EAFs), developed Scoping Documents and Environmental Impact Statements (EIS) in accordance with the State Environmental Quality Review Act (SEQR).
- **Health & Safety** - Prepared work plans; sampling plans; quality assurance project plans; and safety and health, and emergency response plans for working at hazardous sites.
- **Mentoring** - Mentored junior staff with regard to conducting Phase I ESAs, Phase II investigation work, Phase III remediation/cleanup and environmental compliance auditing for PBS, CBS and Stormwater Pollution Prevention.

Environmental Scientist/Project Manager
Ea Engineering, Science And Technology, *1999 – 2003*
Newburgh, New York

- **Management** - Independently managed projects, provided support to secure multiple long-term contracts, and developed significant company proposals under an existing term contract. Developed Project Number Request Budgets, reviewed project pre-bill charges and prepared invoice spreadsheets for multiple projects awarded under a long-term environmental service term contract with a New York State Agency. Successfully managed company resources with respect to staff allocation, maximizing equipment usage recovery, demonstrating cost savings/innovations, meeting project milestones with respect to scheduling field events, personnel and deliverables, and performing subcontractor procurement.
- **Mentoring** - Served as a supervisor for multiple people and mentored junior staff.
- **Petroleum/Chemical** - Extensive experience with PBS (Title 6 NYCRR Parts 612-614) and Chemical Bulk Storage (CBS – Title 6 NYCRR Part 595-599) management, SPR development (Title 6 NYCRR Part 598), and SPCC (Title 40 CFR Part 112) plan development and training.

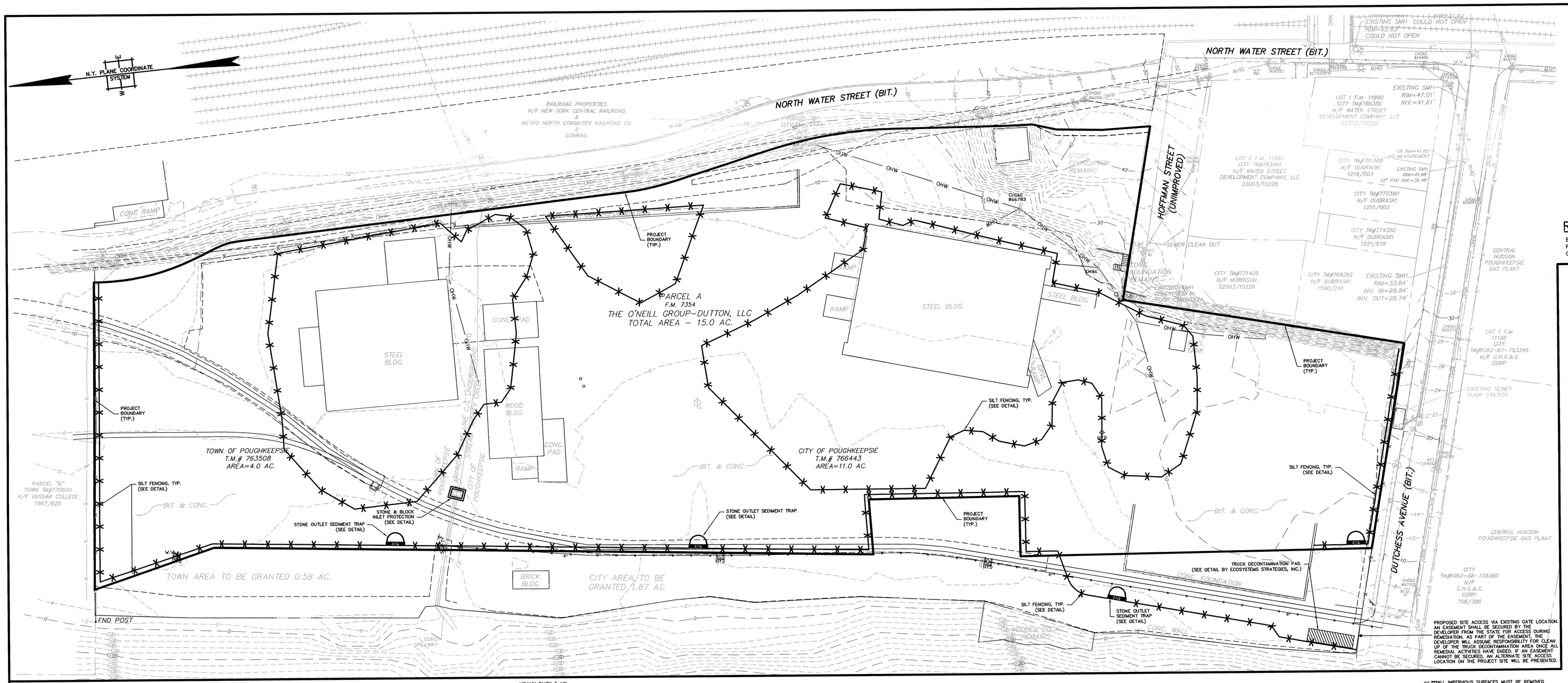
- **Solid Waste** - Performed oversight for various landfill investigations and ground-water contamination investigations in accordance with 6 NYCRR Part 360.
- **Health & Safety** - Developed work plans and safety and health plans for various environmental investigations as required.
- **Phase I & II** - Conducted a Phase I ESA and a Phase II Environmental Site Investigation for a 62+ acre parcel in order to identify areas of environmental concern and to determine if further removal or cleanup actions were necessary. Developed and implemented a long-term monitoring / spill closure plan for a local state facility. Provided oversight for the operation and maintenance of a soil vapor extraction system.
- **Pollution Prevention** - Updated a Pollution Prevention Plan for a Naval Base.
- **Stormwater** - Developed SWPP plans in accordance with Section 402 of the Clean Water Act for stormwater discharges from construction activities that disturb one or more acres of land (Phase II).
- **ISO** - Assisted with Environmental Management System, ISO 14001, 9001/2, and OHSAS 18001 research for a renowned pharmaceutical company.

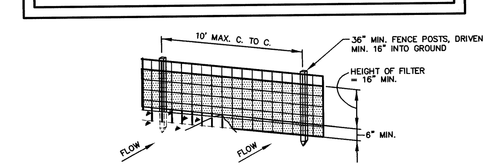
Environmental Scientist
Lawler, Matusky And Skelly Engineers,
Wappingers Falls, New York *1994 – 1999*

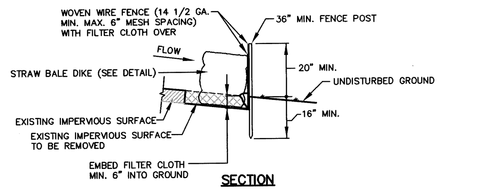
- **Engineering Support** - Provided engineering support to comply with State, Federal, and Corporate regulations/requirements for industrial facilities.
- **Petroleum/Chemical** - Experienced with New York State PBS regulations Title 6 NYCRR Part 612 – 614. Experienced with New York State CBS regulations Title 6 NYCRR Part 595 – 599 and in the development of SPRs. Experienced in the interpretation and development of Federal SPCC Plans and Facility Response Plans (FRPs) in accordance with Title 40 CFR Part 112.
- **RCRA** - Assisted with Resource Conservation Recovery Act (RCRA) third party auditing.
- **SPDES** - Experienced with State Pollutant Discharge Elimination System (SPDES) sampling, preparation of discharge monitoring reports and flow meter calibration verification.

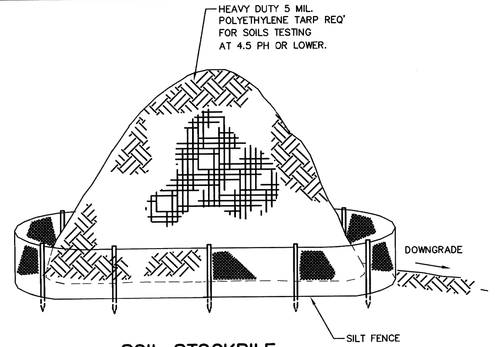
APPENDIX J

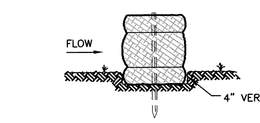
Erosion and Sedimentation Control Plan

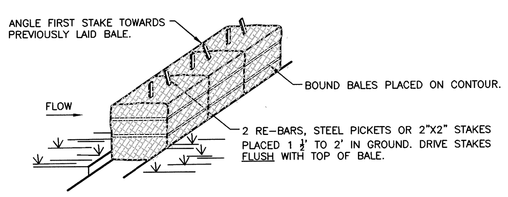


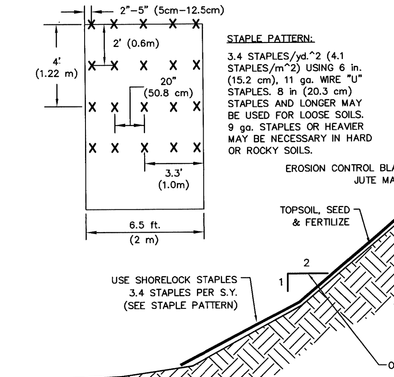


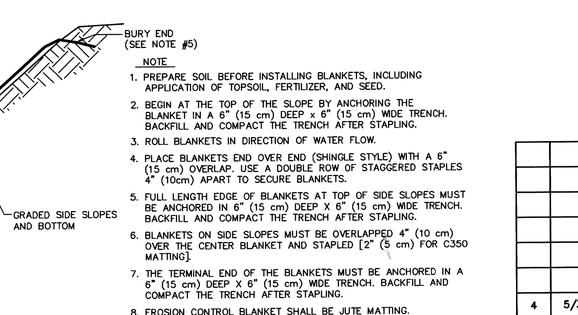


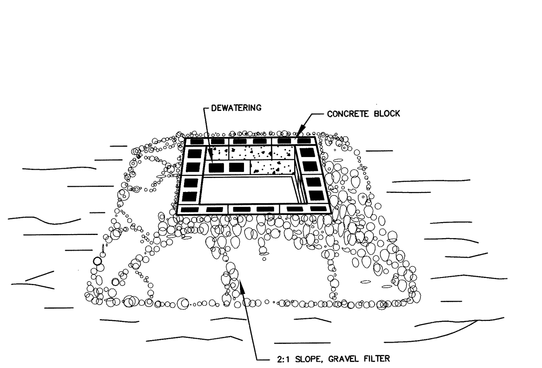


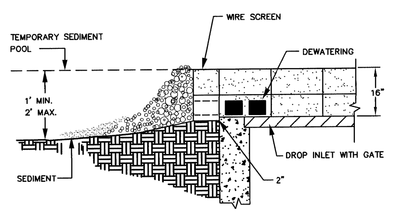


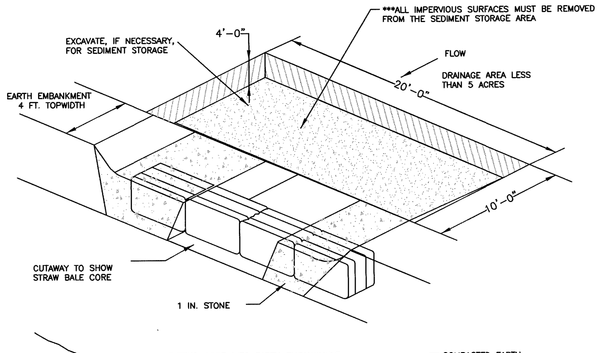


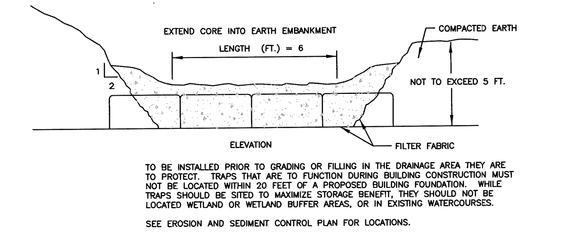


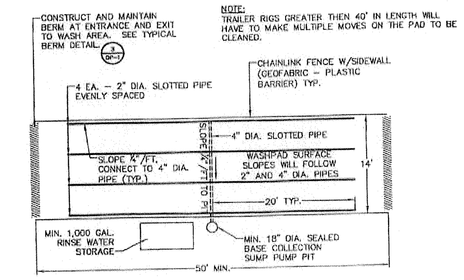


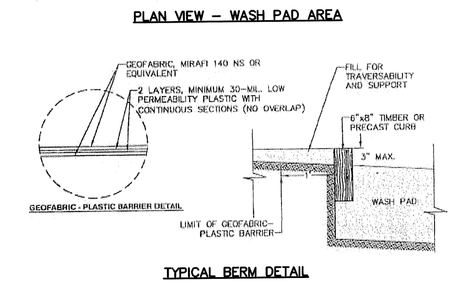


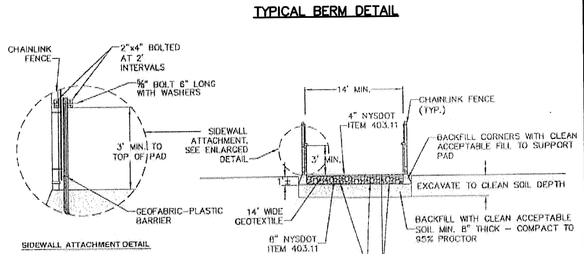












SITE EROSION & SEDIMENT CONTROL PLAN

50 0 50 100
SCALE IN FEET
(1"=50')

LEGEND FOR EROSION CONTROL MEASURES DURING REMEDIATION

—✕—✕— HAY BALE/SILT FENCE

▣ STONE & BLOCK INLET PROTECTION

◓ STONE OUTLET SEDIMENT TRAP

REFERENCE:

BOUNDARY, TOPOGRAPHIC, AND HIGH/LOW WATER INFORMATION SHOWN HEREON IS TAKEN FROM A PLAN PREPARED BY LARRY L. LYNN, L.S. ENTITLED "PLOT PLAN FOR/TO THE O'NEILL GROUP-DUTTON, LLC" DATED JULY 11, 2008.

PROPOSED SITE ACCESS VIA EXISTING GATE LOCATION. AN EASEMENT SHALL BE SECURED BY THE DEVELOPER FROM THE STATE FOR ACCESS DURING REMEDIATION. AS PART OF THE EASEMENT, THE DEVELOPER WILL ASSUME RESPONSIBILITY FOR CLEAN UP OF THE TRUCK DECONTAMINATION AREA ONCE ALL REMEDIAL ACTIVITIES HAVE ENDED. IF AN EASEMENT CANNOT BE SECURED, AN ALTERNATE SITE ACCESS LOCATION ON THE PROJECT SITE WILL BE PRESENTED.

THIS PLAN IS FOR EROSION CONTROL PURPOSES ONLY.

CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

POSTS: STEEL EITHER "T" OR "U" TYPE OR 2" HARDWOOD.
FENCE: WOVEN WIRE 14 1/2 GA. 6" MAX. MESH OPENING.
FILTER CLOTH: FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUAL.
PREFABRICATED UNIT: GEOFAB, ENVIROFENCE, OR APPROVED EQUAL.

WIRE REINFORCED SILT FENCE

N.T.S.

GENERAL SEQUENCING NOTES

1. THE SEQUENCE (PHASING) AND SCHEDULING OF THE WORK BEING UNDERTAKEN SHALL BE PER THE REMEDIAL DESIGN WORK PLAN BY ECOSYSTEMS STRATEGIES, INC. AREAS OF EXPOSED SOILS SHALL BE MINIMIZED DURING THE COURSE OF REMEDIATION. IN NO INSTANCE SHALL THE TOTAL AREA OF EXPOSED, EXISTING, CONTAMINATED SOILS EXCEED 2.0 ACRES.

2. INSTALL ALL EROSION CONTROL DEVICES AS SHOWN ON THIS PLAN. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL CONFORM TO THE LATEST VERSION OF THE NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL:

- CONSTRUCT AND MAINTAIN THE ENTRANCE AND DECONTAMINATION PAD AS PER THE REMEDIAL DESIGN WORK PLAN BY ECOSYSTEMS STRATEGIES, INC.
- CONTRACTOR SHALL INSTALL SILT FENCE AND STRAW BALE DIKE AS SHOWN ON THIS PLAN.
- CONTRACTOR SHALL INSTALL STONE OUTLET SEDIMENT TRAP AS SHOWN ON THIS PLAN.
- PROVIDE STONE & BLOCK INLET PROTECTION AT DRAINAGE STRUCTURE.
- ADDITIONAL EROSION CONTROL MEASURES SHALL BE INSTALLED, AS MAY BE REQUIRED AND REQUESTED BY AUTHORITIES, TO PREVENT THE INCIDENTAL DISCHARGE OF SILT LADEN RUNOFF FROM ENTERING THE HUDSON RIVER OR EXISTING DRAINAGE SYSTEM.

3. STABILIZATION* – TEMPORARY CESSATION OF CONSTRUCTION ACTIVITIES IN A GIVEN AREA IS DEFINED AS 14 DAYS WITHOUT ACTIVITY. THE OPERATOR SHALL INITIATE STABILIZATION MEASURES AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 7 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED.

* STABILIZATION MEANS COVERING OR MAINTAINING AN EXISTING COVER OVER SOIL. COVER CAN BE VEGETATIVE (E.G. GRASS, TREES, SEED AND MULCH, SHRUBS, OR TURF) OR NON-VEGETATIVE (E.G. GEOTEXTILES, RIP-RAP, OR GABIONS).

SOIL STOCKPILE

N.T.S.

GENERAL SOIL EROSION AND SEDIMENT CONTROL NOTES

1. ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES ARE TO BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCE, OR IN THEIR PROPER SEQUENCE, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.

2. ANY DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN SEVEN (7) DAYS FOR DISTURBANCES LESS THAN FIVE (5) ACRES AND NOT SUBJECT TO CONSTRUCTION TRAFFIC, WILL IMMEDIATELY RECEIVE A TEMPORARY SEEDING. IF THE SEASON PREVENTS THE ESTABLISHMENT OF TEMPORARY COVER, THE DISTURBED AREAS WILL BE MULCHED WITH STRAW, OR EQUIVALENT MATERIAL, AT A RATE OF TWO (2) TONS PER ACRE, ACCORDING TO STATE STANDARDS.

3. PERMANENT VEGETATION TO BE SEEDED ON ALL EXPOSED AREAS WITHIN FIVE (5) DAYS AFTER FINAL GRADING. MULCHING IS REQUIRED ON ALL SEEDING. WHEN HYDROSEEDING, MIXTURE OF THE COMPONENTS SHALL NOT BE COMBINED IN THE TANK UNTIL CONTRACTOR IS ON SITE.

4. ALL WORK TO BE DONE IN ACCORDANCE WITH THE NEW YORK STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL.

5. IMMEDIATELY FOLLOWING INITIAL DISTURBANCE OR ROUGH GRADING, ALL CRITICAL AREAS SUBJECT TO EROSION (I.E. STEEP SLOPES AND EMBANKMENTS) WILL RECEIVE A TEMPORARY SEEDING IN COMBINATION WITH STRAW MULCH OR A SUITABLE EQUIVALENT, AT A RATE OF TWO (2) TONS PER ACRE, ACCORDING TO STATE STANDARDS.

6. A STABILIZED CONSTRUCTION ACCESS AND TRUCK DECONTAMINATION PAD SHALL BE INSTALLED AT ALL CONSTRUCTION DRIVEWAYS, IMMEDIATELY AFTER INITIAL SITE DISTURBANCE. LOCATION PER REMEDIAL DESIGN WORK PLAN BY ECOSYSTEMS STRATEGIES, INC.

7. AT THE TIME THE SITE PREPARATION FOR PERMANENT VEGETATIVE STABILIZATION IS GOING TO BE ACCOMPLISHED, ANY SOIL THAT WILL NOT PROVIDE A SUITABLE ENVIRONMENT TO SUPPORT ADEQUATE VEGETATIVE GROUND COVER, SHALL BE REMOVED OR TREATED IN SUCH A WAY THAT IT WILL PERMANENTLY ADJUST THE SOIL CONDITIONS AND RENDER IT SUITABLE FOR VEGETATIVE GROUND COVER. IF THE REMOVAL OR TREATMENT OF THE SOIL WILL NOT PROVIDE SUITABLE CONDITIONS, NON-VEGETATIVE MEANS OF PERMANENT GROUND STABILIZATION WILL HAVE TO BE EMPLOYED.

8. DEWATERING LOCATIONS AND DETAILS PER REMEDIAL DESIGN WORK PLAN BY ECOSYSTEMS STRATEGIES, INC. UNFILTERED DEWATERING IS NOT PERMITTED. TAKE ALL NECESSARY PRECAUTIONS DURING ALL DEWATERING OPERATIONS TO MINIMIZE SEDIMENT TRANSFER. ANY DEWATERING METHODS USED MUST BE IN ACCORDANCE WITH STATE STANDARDS.

9. SHOULD THE CONTROL OF DUST AT THE SITE BE NECESSARY, THE SITE WILL BE SPRINKLED UNTIL THE SURFACE IS WET, TEMPORARY VEGETATIVE COVER SHALL BE ESTABLISHED OR MULCH SHALL BE APPLIED IN ACCORDANCE WITH STATE STANDARDS FOR EROSION CONTROL.

10. ALL SOIL WASHED, DROPPED, SPILLED, OR TRACKED OUTSIDE THE LIMIT OF DISTURBANCE OR ONTO PUBLIC RIGHT-OF-WAY WILL BE REMOVED IMMEDIATELY.

11. THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR ANY EROSION AND SEDIMENTATION THAT MAY OCCUR BELOW STORMWATER OUTFALLS OR OFFSITE AS A RESULT OF CONSTRUCTION OF THE PROJECT.

12. STOCKPILE AND STAGING LOCATIONS DETERMINED IN THE FIELD AND SHALL BE PLACED WITHIN THE LIMITS OF DISTURBANCE ACCORDING TO THE REMEDIAL DESIGN WORK PLAN BY ECOSYSTEMS STRATEGIES, INC.

13. ALL SOIL STOCKPILES TO BE LOCATED OUTSIDE OF THE ONE-HUNDRED YEAR FLOODPLAIN WHERE FEASIBLE. ALL SOIL STOCKPILES ARE TO BE TEMPORARILY STABILIZED IN ACCORDANCE WITH STATE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL.

14. ALL PERMANENT SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED BY THE PROPERTY OWNER, AND SHALL BECOME THEIR RESPONSIBILITY.

15. PAVEMENT AREAS ARE TO BE KEPT CLEAN AT ALL TIMES.

16. DURING CONSTRUCTION, ANY ADDITIONAL CONTROL MEASURES AS DEEMED NECESSARY TO PREVENT EROSION OR CONTROL SEDIMENT BEYOND THOSE MEASURES SHOWN ON THE APPROVED PLAN SHALL BE INSTALLED OR EMPLOYED AT THE DIRECTION OF THE MUNICIPAL ENGINEER.

17. ALL TEMPORARY, STRUCTURAL EROSION AND SEDIMENT CONTROL MEASURES CAN BE REMOVED, WHEN ALL CONSTRUCTION ACTIVITY IDENTIFIED IN THE REMEDIAL DESIGN WORK PLAN BY ECOSYSTEMS STRATEGIES, INC. HAS BEEN COMPLETED, ALL AREAS OF DISTURBANCE HAVE ACHIEVED FINAL STABILIZATION.**

**FINAL STABILIZATION – MEANS THAT ALL SOIL DISTURBANCE ACTIVITIES HAVE CEASED AND A UNIFORM, PERENNIAL VEGETATIVE COVER WITH A DENSITY OF EIGHTY (80) PERCENT OVER THE ENTIRE PERVIOUS SURFACE HAS BEEN ESTABLISHED; OR OTHER EQUIVALENT STABILIZATION MEASURES THAT COMPLY WITH THE REQUIREMENTS OF THE DECISION DOCUMENT HAVE BEEN APPLIED ON ALL DISTURBED AREAS THAT ARE NOT COVERED BY PERMANENT STRUCTURES, CONCRETE OR PAVEMENT.

MAINTENANCE PLAN DURING CONSTRUCTION:

INSPECTION AND MAINTENANCE SHALL BE PERFORMED IN CONFORMANCE WITH GP-0-10-001. ALL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL BUT IN NO CASE LESS THAN ONCE EVERY WEEK. ANY NEEDED REPAIRS WILL BE MADE IMMEDIATELY TO MAINTAIN ALL PRACTICES AS DESIGNED AND INSTALLED FOR THE PROJECT. THE SEDIMENT TRAPS WILL BE CLEANED OUT WHEN THE LEVEL OF SEDIMENT REACHES 25% OF ITS' CAPACITY. SEDIMENT WILL BE REMOVED FROM BEHIND THE SILT FENCE WHEN IT BECOMES ABOUT 0.5 FT DEEP AT THE FENCE. THE SEDIMENT FENCE WILL BE REPAIRED AS NECESSARY TO MAINTAIN A BARRIER. ALL SEEDED AREAS WILL BE FERTILIZED, RESEEDED AS NECESSARY, AND MULCHED ACCORDING TO SPECIFICATIONS IN THE SEEDING NOTES TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE COVER.

GENERAL SEEDING NOTES

1. TEMPORARY SEEDING SHALL CONSIST OF PERENNIAL RYEGRASS APPLIED AT A RATE OF 1.0 LBS. PER 1000 SF OR SPRING OATS APPLIED AT A RATE OF 2.0 LBS. PER 1000 SF. TEMPORARY SEEDING SHALL BE MULCHED AND MAINTAINED UNTIL DISTURBED AREAS ARE PERMANENTLY STABILIZED WITH PERMANENT SEEDING.

2. PERMANENT SEEDING SHALL CONSIST OF THE FOLLOWING MIXTURE OR APPROVED EQUAL – OPTIMUM SEEDING DATES ARE BETWEEN APRIL 1 AND MAY 31: AND AUGUST 16 AND OCTOBER 15.

MIXTURE –	HARD FESCUE	120 LBS/ACRE
	PERENNIAL RYE GRASS	30 LBS/ACRE
	KENTUCKY BLUE GRASS (BLEND)	40 LBS/ACRE
MIXTURE –	TALL FESCUE	160 LBS/ACRE
	PERENNIAL RYE GRASS (BLEND)	20 LBS/ACRE
	KENTUCKY BLUE GRASS (BLEND)	20 LBS/ACRE

3. PERMANENT SEEDING TO BE APPLIED BY RAKING OR DRILLING INTO THE SOILS AT A RATE OF 150# PER ACRE, SLOPED AREA TO BE COVERED WITH MULCH AS INDICATED IN NOTE 5.

4. FERTILIZER FOR THE ESTABLISHMENT OF TEMPORARY AND PERMANENT VEGETATIVE COVER SHALL BE 10-20-20 APPLIED AT A RATE OF 14# PER 1000 SF OR AS DETERMINED BY SOIL TESTS. LIMESTONE FOR TEMPORARY SEEDING SHALL BE APPLIED AT A RATE OF 90# PER 1000 SF. LIMESTONE FOR PERMANENT SEEDING SHALL BE APPLIED AT RATE OF 135# PER 1000 SF.

5. IF SEASON PREVENTS THE ESTABLISHMENT OF TEMPORARY OR PERMANENT SEEDING, EXPOSED AREA TO BE STABILIZED WITH MULCH AS INDICATED IN NOTE 6.

6. MULCH TO CONSIST OF SMALL GRAIN STRAW OR SALT HAY ANCHORED WITH A WOOD AND FIBER MULCH BINDER OR AN APPROVED EQUAL. MULCH WILL BE SPREAD AT RATES OF 90 TO 115 LBS. PER 1000 SF AND ANCHORED WITH A MULCH ANCHORING TOOL OR LIQUID MULCH BINDER, AND SHALL BE PROVIDED ON ALL SEEDINGS. HYDROMULCH SHALL ONLY BE USED DURING OPTIMUM GROWING SEASONS.

7. WORK LIME AND FERTILIZER INTO SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRINGTOOTH HARROW, OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISCING OPERATION SHOULD BE ON ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTILL A REASONABLY UNIFORM, FINE SEEDBED IS PREPARED. ALL BUT CLAY OR SILTY SOILS AND COARSE SANDS SHOULD BE ROLLED TO FIRM THE SEEDBED WHEREVER FEASIBLE.

8. REMOVE FROM THE SURFACE ALL STONES TWO INCHES OR LARGER IN ANY DIMENSION. REMOVE ALL OTHER DEBRIS, SUCH AS WIRE, CABLE, TREE ROOTS, PIECES OF CONCRETE, CLODS, LUMPS, OR OTHER UNSUITABLE MATERIAL.

9. INSPECT SEEDBED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED, THE AREA MUST BE RETILLED AND FIRMED AS ABOVE.

CONSTRUCTION SPECIFICATIONS

1. BALES SHALL BE PLACED AT THE TOE OF A SLOPE OR ON THE CONTOUR AND IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
2. EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF (4) INCHES, AND PLACED SO THE BINDINGS ARE HORIZONTAL.
3. BALES SHALL BE SECURELY ANCHORED IN PLACE BY EITHER TWO (2) STAKES OR RE-BARS DRIVEN THROUGH THE BALE. THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE AT AN ANGLE TO FORCE THE BALES TOGETHER. STAKES SHALL BE DRIVEN FLUSH WITH THE BALE.
4. INSPECTION SHALL BE FREQUENT AND REPAIR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
5. BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

STRAW BALE DIKE

N.T.S.

STAPLE PATTERN:

3.4 STAPLES/yd.^2 (4.1 STAPLES/m^2) USING 6 in. (15.2 cm), 11 ga. WIRE "U" STAPLES. 8 in (20.3 cm) STAPLES AND LONGER MAY BE USED FOR LOOSE SOILS. 9 ga. STAPLES OR HEAVIER MAY BE NECESSARY IN HARD OR ROCKY SOILS.

NOTE

1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING APPLICATION OF TOPSOIL, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" (15 cm) DEEP x 6" (15 cm) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
3. ROLL BLANKETS IN DIRECTION OF WATER FLOW.
4. PLACE BLANKETS END OVER END (SHINGLE STYLE) WITH A 6" (15 cm) OVERLAP. USE A DOUBLE ROW OF STAGGERED STAPLES 4" (10cm) APART TO SECURE BLANKETS.
5. FULL LENGTH EDGE OF BLANKETS AT TOP OF SIDE SLOPES MUST BE ANCHORED IN 6" (15 cm) DEEP X 6" (15 cm) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
6. BLANKETS ON SIDE SLOPES MUST BE OVERLAPPED 4" (10 cm) OVER THE CENTER BLANKET AND STAPLED [2" (5 cm) FOR C350 MATTING].
7. THE TERMINAL END OF THE BLANKETS MUST BE ANCHORED IN A 6" (15 cm) DEEP X 6" (15 cm) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
8. EROSION CONTROL BLANKET SHALL BE JUTE MATTING.

SLOPE STABILIZATION DETAIL

N.T.S

CONSTRUCTION SPECIFICATIONS

1. LAY ONE BLOCK ON EACH SIDE OF THE STRUCTURE ON ITS SIDE FOR DEWATERING. FOUNDATION SHALL BE 2 INCHES MINIMUM BELOW REST OF INLET AND BLOCKS SHALL BE PLACED AGAINST INLET FOR SUPPORT.
2. HARDWARE CLOTH OR ½" WIRE MESH SHALL BE PLACED OVER BLOCK OPENINGS TO SUPPORT STONE.
3. USE CLEAN STONE OR GRAVEL ½" – ¾" IN DIAMETER PLACED 2 INCHES BELOW TOP OF THE BLOCK ON A 2:1 SLOPE OR FLATTER.

STONE & BLOCK INLET PROTECTION

N.T.S.

TO BE INSTALLED PRIOR TO GRADING OR FILLING IN THE DRAINAGE AREA THEY ARE TO PROTECT. TRAPS THAT ARE TO FUNCTION DURING BUILDING CONSTRUCTION MUST NOT BE LOCATED WITHIN 20 FEET OF A PROPOSED BUILDING FOUNDATION. WHILE TRAPS SHOULD BE SITED TO MAXIMIZE STORAGE BENEFIT, THEY SHOULD NOT BE LOCATED WETLAND OR WETLAND BUFFER AREAS, OR IN EXISTING WATERCOURSES.

SEE EROSION AND SEDIMENT CONTROL PLAN FOR LOCATIONS.

INSTALLATION NOTES

1. AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED, AND STRIPPED OF ANY VEGETATION AND ROOT MAT. THE POOL AREA SHALL BE CLEARED AS WELL.
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 AND OTHER QUESTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED.
3. 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.
4. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED.
5. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION IS MINIMIZED.
6. THE STRUCTURE SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.
7. ALL CUT AND FILL SLOPES SHALL BE 1 : 2 OR FLATTER.
8. THE STONE USED IN THE OUTLET SHALL BE SMALL RIPRAP 4"-8" ALONG WITH A 1' THICKNESS OF 2" AGGREGATE PLACED ON THE UP GRADE SIDE ON THE SMALL RIPRAP OR EMBEDDED FILTER CLOTH IN THE RIPRAP.

STONE OUTLET SEDIMENT TRAP

N.T.S.

NOTE: DECONTAMINATION PAD DETAIL TAKEN FROM REMEDIAL DESIGN WORK PLAN BY ECOSYSTEMS STRATEGIES, INC.

TRUCK DECONTAMINATION PAD

N.T.S.

REV.	DATE	DRAWN BY	DESCRIPTION
4	5/31/11	JBC	ADDITIONAL REVISIONS
3	5/26/11	JBC	REVISIONS PER NYSDEC COMMENTS
2	5/5/11	JBC	REVISIONS PER NYSDEC COMMENTS
1	4/20/11	JBC	ADDITION OF TRUCK WASH DETAIL

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ONE DUTCHESS AVENUE
SITE REMEDIATION
SOIL EROSION & SEDIMENT CONTROL PLAN
FOR
THE O'NEILL GROUP – DUTTON LLC
TAX LOT 14-6062-02-763508-00 &
TAX LOT 31-6062-59-766443-00
CITY/TOWN OF POUGHKEEPSIE DUTCHESS COUNTY NEW YORK

JOB NUMBER: 07001417A
DATE: 04/11/11
SCALE: AS SHOWN
LATEST REVISION: 5/31/11
INDEX NUMBER: NB001166
DESIGN BY: JBC
SHEET NUMBER: 1 of 1