PLANS AND SPECIFICATIONS
(DRAFT)

Factory H

104 Butler & 77 Cooper Streets

MERIDEN, CONNECTICUT

Prepared for:

City of Meriden

Office of Economic Development

142 East Main Street

Meriden, Connecticut 06450-8022

Prepared by:

AECOM

500 Enterprise Drive
Rocky Hill, Connecticut 06067

April 2011

PEGGY

MEMORANDUM

CITY OF MERIDEN
DEPARTMENT OF PUBLIC WORKS

DPW

TO: Bob Bass, P.E.
Director of Public Works

FROM: Brian Ennis, P.E.
Associate City Engineer

SUBJECT: Interim Remedial Action Plan (Draft) Review
77 Cooper Street & 104 Butler Street

DATE: May 3, 2011

I reviewed the Draft plans submitted by AECOM for the soil remediation at the Factory H complex located at 104 Butler Street and 77 Cooper Street. The plans are very thorough, but there are two issues the consultant should address.

1. The entire site, with the exception of the northeast corner of 104 Butler Street, is located within the 100-year flood plain. The contractor should have a plan in place to remove and relocate the impacted soil stockpiles in the event that flooding is anticipated.

2. There is no mention in the reports about the depth to groundwater. Any groundwater encountered in the excavations will likely be contaminated and will need to treated on-site or collected and disposed of offsite. The contractor should have pumps and frac tanks available in the event that groundwater is encountered in any of the excavations.

Brian Ennis, PE
Associate City Engineer

BE/mb

cc: Flood Control Implementation Agency
Pierre L. Blanchet, P.E./L.S., Associate City Engineer
Paul A. Kopek, Assistant City Engineer
Project Files – 104 Butler Street; 77 Cooper Street
File

SOIL REMEDIATION
104 BUTLER AND 77 COOPER STREETS
TECHNICAL SPECIFICATIONS

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SECTION 01010

SUMMARY OF WORK

PART 1 - GENERAL

1.01 LOCATION OF WORK:

A. The work of this Contract is located in the City of Meriden, Connecticut, at Factory H on 104 Butler Street and 77 Cooper Street.

1.02 SCOPE OF WORK:

A. Furnish all labor, materials, equipment and incidentals necessary to perform the work as shown on the drawings and specified herein.

B. 104 Butler Street- The Work consists of the excavation and disposal of PAH, metals and TPH impacted soil from the designated area on-site, backfill of the excavated area utilizing on-site building materials and placement of geotextile fabric, installation of snow fence and silt fence in designated areas and restoration of the site upon completion of the work.

C. 77 Cooper Street - The Work consists of the excavation and disposal of PCB, PAH, metals and TPH impacted soil from the designated areas on-site, backfill of the excavated area utilizing two foot clean historic gravel layer and on-site building materials and placement of geotextile fabric, installation of snow fence and silt fence in designated areas and restoration of the site upon completion of the work.

1.03 WORK BY OTHERS:

A. The following work will be performed at the site by others concurrently with the Work of this Contract:
   1. Licensed Environmental Professional (LEP) services related to compliance of the site remediation activities with the CT Remediation Standard Regulations (RSRs).

1.04 PROJECT/SITE CONDITIONS

A. The site is property associated with the former location of the International Silver Company, Facotry H. The site was used for a variety of industrial and manufacturing purposes from the late 1800s until approximately 1974, at which time the property was vacated. Industrial processes historically conducted on the site included silverware and gun manufacturing. Processess included casting, forging, plating, machining, trimming, polishing, buffing, storage, and shipping. The property has remained vacant since 1974, and is currently abandoned. Factory H is known to have used alkali soaps, sulfuric acid, oils, nickel, silver, chromium, copper, zinc, acid and alkali solutions, and halogenated

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and non-halogenated solvents. Other constituents of concern (COCs) on the site include, but may not be limited to, asbestos, other metals (including lead), cyanide, PCBs, total petroleum hydrocarbons, and volatile and semi-volatile organic compounds. The limits and magnitude of the impacts has been investigated and documented in several reports as listed below.

AECOM USA Inc. (AECOM). Supplemental Investigation and Soil Re-Use Evaluation Report, Former Insilco Factory H, Meriden, Connecticut, August 2009

AECOM USA, Inc. (AECOM). Quality Assurance Project Plan Addendum for Soil Re-Use Evaluation, Insilco Factory H Site, Meriden, Connecticut, February 2009

Metcalf & Eddy, Inc. (M&E). Quality Assurance Project Plan Addendum for Supplemental Environmental Investigation, Insilco Factory H Site, Meriden, Connecticut, January 2009.

Metcalf & Eddy, Inc. (M&E). Phase II/III Environmental Site Assessment Report, Insilco Factory H Site, Cooper Street, Meriden, Connecticut, March 2007.

Metcalf & Eddy, Inc. (M&E). Phase I Environmental Site Assessment Report, Insilco Factory H Site, Cooper Street, Meriden, Connecticut, April 2006.

Advanced Environmental Interface (AEI). Removal Stabilization Activities Summary Report, Former International Silver Company/Insilco Factory H Site, Meriden, CT, February 2006.

United States Environmental Protection Agency (USEPA) (Prepared by Weston Solutions, Inc.). February 2004. Removal Program After Action Report for the Chrome Engineering Site.

GZA GeoEnvironmental, Inc., Supplemental Phase II, Environmental Site Evaluation, International Silver Company, Factory H Site, Meriden, Connecticut, June 2000.

Roy F. Weston, Inc., International Silver Company, Factory H, Brownfields Targeted Site Assessment Final Report, September 8, 1999.

Roy F. Weston, Inc., Removal Program Preliminary Assessment/Site Investigation Report, December 22, 1997.

ICF Kaiser Engineers, Inc., Underground Storage Tank Sampling Report, December 17, 1990.

Advanced Environmental Interface (AEI). Assessment of Site Environmental Conditions Report, January 24, 1990.

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HRP Associates, Inc., Site Assessment Report, June 21, 1988.

These reports are available at the office of the Engineer for review.

B. Subsurface Stratigraphy: Soil borings and soil sampling have been performed at the Site. The locations of these previous borings and samples are shown on the contract drawings. In general, the surficial soil to be handled throughout the Work Area consists of native and fill materials of varying composition:
   1. Surficial soils include brick at 104 Butler Street
   2. The top two feet of soil at 77 Cooper Street include clean gravel

C. Subsurface Hydrogeologic Conditions: Groundwater levels have been observed in the overburden at the site. Groundwater has been encountered during previous work at the site; elevations ranged from approximately 8-15 feet at 104 Butler Street and 5-9 feet at 77 Cooper Street.

D. Soil Characterization: Samples of the surficial and subsurface soil have been collected at the Site and have been analyzed at a laboratory for various parameters. The locations of these soil samples are shown on the contract drawings and the results of the analytical characterization are attached in Appendix A. Copies of the laboratory analytical reports are available from the Engineer.

1.05 PROJECT WORK PLAN

A. Prior to any work, the Contractor shall submit for review and approval a Project Work Plan. This Project Work Plan shall summarize the contractor's means and methods for carrying out the Work specified herein. The Project Work Plan shall include details of the proposed work activities including the project work zones and sequence of work activities.

END OF SECTION

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SECTION 01046

CONTROL OF WORK

PART 1 - GENERAL

1.01 WORKING HOURS:

A. Normal construction activity shall take place only between the hours of 7 a.m. to 6 p.m., excluding Saturdays, Sundays, and legal holidays. Work outside the above time periods will be permitted only with the written approval of the Owner.

B. All activities shall also be subject to any city ordinances regarding work activities and noise and any associated restrictions that these ordinances will place on the allowable work hours.

C. Night work may be established by the Contractor as regular procedure only with written permission of the Owner. Such permission, however, may be revoked at any time by the Owner if the Contractor fails to maintain adequate equipment and supervision for proper prosecution and control of work at night.

D. Emergency work may be done at any time without prior permission.

1.02 CONTRACTOR'S USE OF PREMISES:

A. The existing buildings are not available for the Contractor to use for the duration of the project. Only the dedicated work areas at "77 Cooper Street" and "104 Butler Street" within the project limit lines can be used and available for the Contractor as shown on the contract drawings.

B. Contractor shall assume full responsibility for the security of the Site throughout the duration of the project activities. These responsibilities shall include snow fencing, signs, and other measures as necessary to prevent unauthorized entry onto the site. The Contractor shall also be responsible for the security of all his and his subcontractors materials and equipment stored on the site.

C. Prior to the start of the project activities, the Contractor shall notify the local police of the project site and activities, and shall provide the police with an emergency contact person to be contacted in the event of an emergency at the site during non-working hours.

D. If directed by the Owner, Contractor shall move any stored items which interfere with operations of Owner.

E. Contractor shall obtain and pay for use of additional storage or work areas if needed to perform the Work.

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1.03 OCCUPYING PRIVATE LAND:

A. The Contractor shall not (except after written consent from the proper parties) enter or occupy with men, tools, materials, or equipment any land outside the actual property of the Owner. A copy of the written consent shall be provided to the Owner.

B. The Contractor shall obtain any city permits and/or approvals for Work within any city street or bridge right-of-ways.

1.05 OPEN EXCAVATIONS:

A. All open excavations shall be adequately safeguarded by providing temporary barricades, fencing, caution signs, lights, and other means to prevent accidents to persons and damage to property. The length or size of excavation will be controlled by the particular surrounding conditions, but shall always be confined to the limits prescribed by the Engineer. If the excavation becomes a hazard, or if it excessively restricts traffic at any point, the Engineer may require special construction procedures.

B. The Contractor shall take precautions to prevent injury to the public due to open trenches. All trenches, excavated material, equipment, or other obstacles which could be dangerous to the public shall be well lighted at night.

1.06 INTERFERENCE WITH AND PROTECTION OF STREETS:

A. The Contractor shall not close or obstruct any portion of a street, road, or private way without obtaining permits from the proper authorities. If any street, road or private way shall be rendered unsafe by the Contractor's operations, he shall make such repairs or provide such temporary ways or guards as shall be acceptable to the proper authorities.

B. Streets, roads, private ways, and walks not closed shall be maintained passable and safe by the Contractor, who shall assume and have full responsibility for the adequacy and safety of provisions made therefor.

C. The Contractor shall, at least 48 hours in advance, notify the Police and Fire Departments in writing, with a copy to the Engineer, if the obstruction and/or closure of a street or road is necessary or if traffic control will be required. He shall cooperate with the Police Department in the establishment of alternate routes and shall provide adequate detour signs, plainly marked and well lighted, in order to minimize confusion.

1.07 CARE AND PROTECTION OF PROPERTY:

A. The Contractor shall be responsible for the preservation of all public and private property, and shall use every precaution necessary to prevent damage thereto. If any direct or indirect damage is done to public or private property by or on account of any act,

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omission, neglect, or misconduct in the execution of the work on the part of the Contractor, such property shall be restored by the Contractor, at his expense, to a condition similar or equal to that existing before the damage was done, or he shall make good the damage in other manner acceptable to the Engineer.

1.08 PROTECTION AND RELOCATION OF EXISTING STRUCTURES AND UTILITIES:

A. The Contractor shall assume full responsibility for the protection of all buildings, structures, and utilities, public or private, including poles, signs, services to buildings, utilities in the street, gas pipes, water pipes, hydrants, sewers, drains, and electric and telephone cables, whether or not they are shown on the Drawings. The Contractor shall carefully support and protect all such structures and utilities from injury of any kind. Any damage resulting from the Contractor's operations shall be repaired by him at his expense.

B. Assistance will be given to the Contractor in determining the location of existing services. The Contractor, however, shall bear full responsibility for obtaining all locations of underground structures and utilities (including existing water services, drain lines, and sewers). Services to buildings shall be maintained, and all costs or charges resulting from damage thereto shall be paid by the Contractor.

C. Protection and temporary removal and replacement of existing utilities and structures as described in this Section shall be a part of the work under the Contract and all costs in connection therewith shall be included in the Total Price Bid in the Bid Form.

1.09 INSPECTION OF WORK AWAY FROM THE SITE:

A. Not Applicable.

1.10 COOPERATION WITHIN THIS CONTRACT:

A. All firms or persons authorized to perform any work under this Contract shall cooperate with General Contractor and his Subcontractors or trades, and shall assist in incorporating the work of other trades where necessary or required.

B. Cutting and patching, drilling and fitting shall be carried out where required by the trade or subcontractor having jurisdiction, unless otherwise indicated herein or directed by the Engineer.

1.11 CLEANUP AND DISPOSAL OF EXCESS MATERIAL:

A. During the course of the work, the Contractor shall keep the site of his operations in as clean and as neat a condition as is possible. He shall dispose of all residue resulting from the construction work and, at the conclusion of the work, he shall remove and haul away

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any surplus excavation, broken pavement, lumber, equipment, temporary structures, and any other refuse remaining from the construction operations, and shall leave the entire site of the work in a neat and orderly condition.

B. In order to prevent environmental pollution arising from the construction activities related to the performance of this Contract, the Contractor and his subcontractors shall comply with all applicable Federal, State, and local laws, and regulations concerning waste material disposal, as well as the specific requirements stated in this Section and elsewhere in the Specifications.

END OF SECTION

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SECTION 01110

ENVIRONMENTAL PROTECTION PROCEDURES

PART 1 - GENERAL

1.01 SCOPE OF WORK:

A. The work covered by this Section consists of furnishing all labor materials and equipment and performing all work required for the prevention of environmental pollution in conformance with applicable laws and regulations, during and as the result of construction operations under this Contract. For the purpose of this Specification, environmental pollution is defined as the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life; affect other species of importance to man; or degrade the utility of the environment for aesthetic and/or recreational purposes.

B. The control of environmental pollution requires consideration of air, water, and land, and involves management of noise and solid waste, as well as other pollutants.

C. Schedule and conduct all work in a manner that will minimize the erosion of soils and sediments in the area of the work. Provide erosion control measures such as diversion channels, turbidity curtains, sedimentation or filtration systems, berms, staked hay bales, seeding, mulching, or other special surface treatments as are required to prevent silting and muddying of streams, rivers, impoundments, lakes, etc. All erosion control measures shall be in place in an area prior to any construction activity in that area.

D. These Specifications are intended to ensure that construction is achieved with a minimum of disturbance to the existing ecological balance between a water resource and its surroundings. These are general guidelines. It is the Contractor's responsibility to determine the specific construction techniques to meet these guidelines.

E. Schedule and conduct all work in a manner that will minimize the level of noise escaping the site, especially at night and on weekends.

1.02 APPLICABLE REGULATIONS:

A. Comply with all applicable Federal, State, and local laws and regulations concerning environmental pollution control and abatement.

1.03 PERMITS:

A. The Contractor shall comply with all requirements and conditions of the regulatory permits and approvals issued for the project.

1.04 NOTIFICATIONS:

A. The Engineer will notify the Contractor in writing of any non-compliance with any environmentally objectionable acts and corrective action to be taken. State or local agencies responsible for verification of certain aspects of the environmental protection requirements shall notify the Contractor in writing, through the Engineer, of any non-compliance with State or local requirements. The Contractor shall, after receipt of such notice from the Engineer or from the regulatory agency through the Engineer, immediately take corrective action. Such notice, when delivered to the Contractor or his authorized representative at the site of the work, shall be deemed sufficient for the purpose. If the Contractor fails or refuses to comply promptly, the Owner may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to any such stop orders shall be made the subject of a claim for extension of time or for excess costs or damages by the Contractor unless it is later determined that the Contractor was in compliance.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 EROSION CONTROL:

A. Provide positive means of erosion control such as shallow ditches, haybales/siltfence around construction to carry off surface water and mitigate surface water from entering the excavation area. Erosion control measures such as siltation basins, hay check dams, mulching, jute netting, and other equivalent techniques shall be used as appropriate. Offsite surface water shall be diverted around the site to a downstream brook ahead of siltation barriers. Flow of surface water into excavated areas shall be prevented. All dewatering liquids shall be contained and disposed of at a permitted off-site disposal facility.

3.02 PROTECTION OF STREAMS WETLANDS, AND SURFACE WATER:

A. Care shall be taken to prevent or reduce to a minimum any damage to any stream, drainage ditch, storm drain or sewer from pollution by debris, sediment, or other material, or from the manipulation of equipment and/or materials in or near such streams. Water that has been used for washing or processing, or that contains oils or sediments that will reduce the quality of the water in the stream, shall not be discharged directly to any receiving streams or water bodies, it shall be contained and disposed of at a permitted off-site disposal facility.

B. All preventative measures shall be taken to avoid spillage of petroleum products and other pollutants. In the event of any spillage, prompt remedial action shall be taken.

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3.03 PROTECTION OF LAND RESOURCES:

A. Land resources within the project boundaries and outside the limits of permanent work shall be restored to a condition, after completion of construction, which will appear to be natural and not detract from the appearance of the project. Confine all construction activities to areas shown on the Drawings.

B. Outside of areas requiring earthwork for the prosecution of the Work, the Contractor shall not deface, injure, or destroy trees or shrubs, nor remove or cut them without prior approval. No ropes, cables, or guys shall be fastened to or attached to any existing nearby trees for anchorage unless specifically authorized. Where such special emergency use is permitted, first wrap the trunk with a sufficient thickness of burlap or rags over which softwood cleats shall be tied before any rope, cable, or wire is placed. The Contractor shall in any event be responsible for any damage resulting from such use.

C. Where trees may possibly be defaced, bruised, injured, or otherwise damaged by the Contractor's equipment, dumping or other operations, protect such trees by placing boards, planks, or poles around them. Monuments and markers shall be protected similarly before beginning operations near them.

D. Any trees or other landscape feature scarred or damaged by the Contractor's equipment or operations shall be restored as nearly as possible to its original condition. The Engineer will decide what method of restoration shall be used and whether damaged trees shall be treated and healed or removed and disposed of.

All scars made on trees by equipment, construction operations, or by the removal of limbs larger than 1-in. in diameter shall be coated as soon as possible with an approved tree wound dressing. All trimming or pruning shall be performed in an approved manner by experienced workmen with saws or pruning shears. Tree trimming with axes will not be permitted.

Climbing ropes shall be used where necessary for safety. Trees that are to remain, either within or outside established clearing limits, which are subsequently damaged by the Contractor and are beyond saving in the opinion of the Engineer shall be immediately removed and replaced.

E. The locations of the Contractor's storage, and other construction building, required temporarily in the performance of the work, shall be cleared portions of the job site or areas to be cleared as shown on the Drawings and shall require approval. The preservation of the landscape shall be an imperative consideration in the selection of all sites and in the construction of buildings.

F. Remove all signs of temporary construction facilities such as haul roads, work areas, stockpiles of excess of waste materials, or any other vestiges of construction as directed by the Engineer. It is anticipated that excavation, filling, and plowing of roadways will

be required to restore the area to near natural conditions, which will permit the growth of vegetation thereon. All disturbed areas shall be restored in accordance with the contract drawings and specifications.

G. All debris and excess material will be disposed of outside wetland or floodplain areas in an environmentally sound manner.

3.04 PROTECTION OF AIR QUALITY:

A. Burning. The use of burning at the project site for the disposal of refuse and debris will not be permitted.

B. Dust Control. The Contractor will be required to maintain all excavations, embankments, stockpiles, access roads, plant sites, waste areas, borrow areas, and all other work areas within or without the project boundaries free from dust which could cause the standards for air pollution to be exceeded, and which would cause a hazard or nuisance to others.

C. An approved method of stabilization consisting of sprinkling or other similar methods will be permitted to control dust.

D. Sprinkling, to be approved, must be repeated at such intervals as to keep all parts of the disturbed area at least damp at all times, and the Contractor must have sufficient competent equipment on the job to accomplish this if sprinkling is used. Dust control shall be performed as the work proceeds and whenever a dust nuisance or hazard occurs, as determined by the Engineer or Owner's Agent.

3.05 MAINTENANCE OF POLLUTION CONTROL FACILITIES DURING CONSTRUCTION:

A. Not Applicable.

3.06 NOISE CONTROL:

A. The Contractor shall make every effort to minimize noise caused by his operations. Equipment shall be equipped with silencers or mufflers designed to operate with the least possible noise in compliance with State and Federal (OSHA) regulations and local ordinances.

3.07 WASTE DISPOSAL:

A. The Contractor shall dispose of all project wastes in a safe and legal manner in accordance with applicable local, state, and federal rules, regulations, and requirements, and as specified in the contract documents, and as approved by the Engineer and Owner.

B. In addition to the disposal of impacted soil as specified herein, the Contractor shall provide for proper disposal of all other work-generated wastes that may be contaminated.

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These may include, but are not limited to, soil generated during snow and silt fencing installation, decontamination wastes, disposable personal protective equipment, and large cobbles, brick and paving fragments removed during the soil excavation.

C. The Contractor shall retain an environmental laboratory to assist the Contractor in dealing with all materials and wastes containing oil and/or hazardous materials encountered during construction.

1. The laboratory shall be certified by the State of Connecticut. The contractor shall submit the name, address, and qualifications of the laboratory to be used and a copy of the laboratory's state certification.

D. The Owner shall provide a Licensed Environmental Professional (LEP) for the project.

E. The Contractor shall submit in writing all off-site disposal facilities for Owner's approval prior to shipping any waste to the identified facilities.

F. The Contractor is responsible, subject to review by the Owner and/or Engineer, to completely characterize all project wastes in accordance with all applicable laws and regulations and disposal facility requirements.

G. The Contractor is responsible, subject to review by the Owner and/or Engineer, for the preparation and coordination of proper transportation/shipping papers for all wastes that leave the site. Contractor shall coordinate the preparation and utilization of the appropriate papers with the Owner (or their agent).

H. The Contractor shall load and transport waste to receiving facilities in accordance with USDOT, USEPA, OSHA, and CTDEP regulations.

I. The Contractor shall utilize hauler(s) that are licensed as necessary in all states affected by transport.

J. Wastes shall not be delivered to any facility other than that listed on the shipping papers.

K. The Contractor shall provide copies of all waste disposal documentation. The Contractor shall submit written documentation identifying the off-site disposal locations for all project wastes. This documentation shall include copies of all disposal tickets and receipts, treatment certificates, transportation bills of lading, material shipping records, manifests, and copies of all other documentation available from the transport and disposal activities.

3.08 SPILL RESPONSIBILITY:

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A. The Contractor is solely responsible for any and all spills or leaks during the performance of the work that occur as a result of, or are contributed to by the actions of its agents, employees, or subcontractors. The Contractor agrees to clean up such spills or leaks to the satisfaction of the Engineer and in a manner that complies with applicable federal, state and local laws and regulations. The spill clean up shall be at no cost to the Owner.

B. As required by federal law, the Contractor shall notify the National Response Center (1-800-424-8802) and all other appropriate organizations immediately if the transport vehicle is involved in an accident and a reportable quantity of hazardous material is released or suspected to have been released.

C. The Contractor shall report all such spills or leaks, regardless of their quantity, to the Engineer immediately upon discovery. A written follow-up report shall be submitted to the Engineer as soon as possible, but not later than 24 hours after the initial telephone report. The written report shall be in narrative form and at a minimum include the following:

1. Description of item spilled (including identity, quantity, manifest no., etc.)

2. Exact time and location of spill, including a description of the area involved.

3. Containment procedures initiated.

4. Description of cleanup procedures employed or to be employed, including disposal location of spill residue, and corrective measures to prevent recurrences.

D. As required by the federal and state laws and regulations, the Contractor shall notify the USEPA and/or the CTDEP of reportable releases within the applicable established regulatory time frames.

E. The Contractor shall fully comply with the USEPA and/or CTDEP with regard to all response actions.

END OF SECTION

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SECTION 01115

HEALTH AND SAFETY

PART 1 - GENERAL

1.01 SUMMARY:

A. The Contractor shall be responsible for preparing and implementing an effective Health and Safety Program, which complies with all OSHA and other applicable legal requirements. Due to the nature of this work and potential safety hazards associated with this type of operation, a thorough evaluation of the Site and implementation of safety procedures is necessary to reduce the potential for accidents and to minimize risks to the workers.

B. The Safety Program shall include a comprehensive Site-Specific Health and Safety Plan (HASP) prepared in accordance with 29 CFR 1910.120 or 29 CFR 1926.65. The HASP must be developed specifically for this Site. It must address the health and safety concerns and work to be performed under this contract. The Contractor shall utilize all available Site information and existing records and data pertaining to chemical and physical hazards to develop the HASP. All safety procedures, precautions, and personal protective equipment to be employed during on-site activities shall be specified in detail in the Contractor's HASP. No fieldwork shall begin until the Contractor's HASP has been prepared and implemented at the site.

C. The Contractor shall ensure that all project personnel, including subcontractors, suppliers and support personnel, follow all health and safety provisions.

D. If the Contractor determines that certain tasks can be performed without the application of 29 CFR 1926.65, then the Contractor shall indicate these tasks in his project work plan and state the reasons for the determination.

E. The HASP shall be prepared under the supervision of, and must be signed by, a Certified Industrial Hygienist (CIH) or Certified Safety Professional (CSP).

1.02 REFERENCES:

The publications listed below form a part of this Specification to the extent referenced. The publications are referred to in the text by basic designation only.

A. AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS (ACGIH):

1. ACGIH: Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices

B. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI):

1. ANSI Z358.1: Emergency Eyewash and Shower Equipment

C. CODE OF FEDERAL REGULATIONS:

1. 29 CFR 1904: Recording and Reporting Occupational Safety and Health Standards

2. 29 CFR 1910: Occupational Safety and Health Standards

3. 29 CFR 1926: Safety and Health Regulations for Construction

4. 29 CFR 1926.65: Hazardous Waste Operations and Emergency Response

5. 40 CFR 260-270: Environmental Protection Agency (USEPA) Hazardous Waste Requirements

6. 49 CFR 172: Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, and Training Requirements

1.03 REGULATIONS:

A. The work performed under this contract shall comply with all applicable federal, state, and local health and safety requirements. This includes but is not limited to Occupational Safety and Health Administration (OSHA) General Industry Standards, 29 CFR 1910; the Construction Industry Standards 29 CFR 1926, especially Section .65, "Hazardous Waste Site Operations and Emergency Response"; and the U.S. Environmental Protection Agency (USEPA) hazardous waste requirements 40 CFR 260-270.

B. Matters of interpretation of standards shall be submitted to the appropriate administrative agency for resolution before starting work.

C. Where the requirements of this Specification, applicable laws, criteria, ordinances, regulations, and referenced documents vary, the most stringent requirements shall be followed.

1.04 DEFINITIONS:

A. On-Site Personnel: The Engineer, designated representatives of USEPA and the State of Connecticut, designated representatives of the Owner, and Contractor's personnel such as employees, subcontractors and representatives.

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B. Contractor Personnel: Includes Contractor's employees and representatives, and subcontractor's employees and representatives.

C. Visitor: All others, except the on-site personnel.

D. Custodian: The Contractor's employee responsible for keeping all safety equipment and project facilities clean, properly equipped, and maintained.

E. Security Officer: The Contractor's employee responsible for maintaining the security of the Site.

F. Site: For the purpose of the HASP, the Site shall be the area within the project limits as shown on the drawings.

G. Monitoring: Indicates the use of direct or indirect reading field instrumentation to provide information regarding the levels of airborne contaminants, which could be released during Site activities. Monitoring shall be conducted by the Contractor to evaluate exposures to on-site personnel.

H. Physician: A licensed physician, provided by the Contractor, with experience in the practice of occupational medicine.

1.05 SUBMITTALS:

A. Prior to beginning any site work, the Contractor shall submit the Site Health and Safety Plan for verification of generation and completion.

B. Prior to beginning any work, the Contractor shall submit the names of all Contractor and subcontractor personnel to be working at the site. The Contractor shall submit documentation certifying that the listed personnel have received proper health and safety training and medical surveillance consistent with all regulatory requirements and provide the dates conducted or performed.

1.06 PRECONSTRUCTION SAFETY CONFERENCE:

A. Prior to the initiation of construction, the Contractor shall conduct a safety conference to discuss, but not limited to, training on hazard recognition, response to emergencies, explanation of Site activities, obtainment of safety supplies, identification of safety personnel, decontamination procedures, level of PPE required, air monitoring activities, and other topics relevant to the safety of the workers at the Site.

PART 2 - PRODUCTS (NOT USED)

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PART 3 - EXECUTION

3.01 HEALTH AND SAFETY PROGRAM:

A. OSHA standards 29 CFR 1926 section .65(b) and 1910 section 120 require employers to develop and implement a written Health and Safety Program for their employees involved in hazardous waste operations. This Specification section integrates the site-specific program requirements of the OSHA standards into one site-specific document, the Site Health and Safety Plan (HASP). The HASP shall interface with the employer's overall Health and Safety Program. Any portions of the overall Health and Safety Program that are referenced in the HASP shall be included as appendices to the HASP.

3.02 HEALTH AND SAFETY PLAN REQUIREMENTS:

A. General Requirements for Preparation and Implementation: The Contractor shall prepare a Site Health and Safety Plan (HASP) covering all on-site work to be performed by the Contractor and all subcontractors under this contract. The Contractor's Safety and Health Manager shall be responsible for the development, implementation and oversight of the HASP. The HASP shall establish, in detail, the protocols necessary for the recognition, evaluation, and control of all hazards associated with each task performed under this contract. The HASP shall address site-specific health and safety requirements and procedures based upon site-specific conditions. The level of detail provided in the HASP shall be tailored to all anticipated tasks, their related hazards and anticipated control measures.

1. The determination of the correctness of the HASP is solely the Contractor's responsibility.

B. Acceptance and Modifications: The HASP shall be submitted prior to conducting any fieldwork. Prior to submittal, the HASP shall be signed and dated by the Contractor's Safety and Health Manager and the Project Manager. The Contractor shall maintain a copy of the written HASP on-site. As work proceeds, the HASP shall be adapted to new situations and new conditions. Changes and modifications to the accepted HASP shall be made with the knowledge and concurrence of the Contractor's Safety and Health Manager. The Engineer shall be advised in advance of all changes in the HASP. All changes and modifications to the HASP shall be signed by the Safety and Health Manager. Should any unforeseen hazard become evident during the performance of the work, the Site Safety and Health Officer (SSHO) shall bring such hazard to the attention of the Contractor's Safety and Health Manager, and the Engineer, both verbally and in writing. The Contractor shall modify the HASP to address the unforeseen hazard. In the interim, the Contractor shall take necessary action to reestablish and maintain safe working conditions in order to safeguard on-site personnel, visitors, the public, and the environment. Any disregard for the provisions

of these Safety, Health and Emergency Response Specifications or the HASP will result in the stopping of work until the matter has been rectified.

C. Elements: All topics required by section .65(b)(4) of OSHA standard 29 CFR 1926; and those listed below shall be addressed in the HASP. Where the use of a specific topic is not applicable to the project, the HASP shall include a statement to justify its omission or reduced level of detail and establish that adequate consideration was given the topic.

- SITE DESCRIPTION AND CONTAMINATION CHARACTERIZATION
- HEALTH AND SAFETY HAZARD ANALYSIS
- STAFF ORGANIZATION, QUALIFICATIONS, AND RESPONSIBILITIES
- EMPLOYEE TRAINING ASSIGNMENTS
- PERSONAL PROTECTIVE EQUIPMENT
- MEDICAL SURVEILLANCE REQUIREMENTS
- EXPOSURE MONITORING/AIR SAMPLING PROGRAM
- HEAT/COLD STRESS MONITORING
- STANDARD OPERATING SAFETY PROCEDURES
- SITE CONTROL MEASURES
- DECONTAMINATION PROCEDURES
- EMERGENCY EQUIPMENT AND FIRST AID REQUIREMENTS
- EMERGENCY RESPONSE AND CONTINGENCY PROCEDURES
- LOGS, REPORTS, AND RECORDKEEPING
- SAFETY INSPECTIONS
- CONFINED SPACE ENTRY
- SPILL CONTAINMENT

3.03 SITE DESCRIPTION AND CONTAMINATION CHARACTERIZATION:

A. The Contractor shall provide a Site description and contaminant characterization in the HASP that meets the requirements of 29 CFR 1910.120.

3.04 HEALTH AND SAFETY HAZARD ANALYSES:

A. The plan shall address the health and safety hazards of each phase of Site operations. The Contractor shall review existing records and data to identify potential chemical and physical hazards associated with the Site and shall evaluate their impact on field operations. Sources, potential exposure pathways, and other factors as noted in 29 CFR 1926.65, paragraph (c)(7) employed to assess risk shall be described. Mixtures and dermal effects (absorption and irritation) shall be considered. The Contractor shall develop and justify action levels for implementation of engineering controls and personal protective equipment upgrades and downgrades for controlling worker exposure to the identified hazards. If there is no permissible exposure limit or published exposure level for an identified hazard, available information from other

published studies shall be used as guidance. Any modification of an established PEL must be fully documented.

3.05 STAFF ORGANIZATION, QUALIFICATIONS AND RESPONSIBILITIES:

A. The Contractor shall assign responsibilities for safety activities and procedures. An outline of the safety chain of command shall be provided in the HASP. Qualifications, including education, experience, certifications and training in safety and health for all personnel engaged in safety and health functions shall be documented in the HASP. At a minimum the following personnel will be identified in the HASP.

1. Safety and Health Manager: The Safety and Health Manager will implement and oversee the Health and Safety Program and develop, sign, and implement the HASP. Any changes to the established Health and Safety Program or HASP shall be at the direction and approval of the Safety and Health Manager. The Safety and Health Manager will not be required to be on-site during construction and related activities, but shall be readily available for consultation when required.

   The Safety and Health Manager shall be certified by the American Board of Industrial Hygiene (ABIH) and shall oversee all safety and health related aspects of this Contract. The minimum qualifications of the CIH are:

   a. A minimum of 5 years working experience in the chemical or hazardous waste industry.

   b. Demonstrable expertise in air monitoring techniques and in development of personal protective equipment programs for working in potentially toxic atmospheres.

   c. Working knowledge of applicable federal, state, and local occupational safety and health regulations.

   d. Formal education and training in occupational safety and health.

2. Safety and Health Officer: The Contractor shall utilize a trained, experienced Site Safety and Health Officer (SSHO), as described in subparagraph below, to assist and represent the Safety and Health Manager in the continued implementation and enforcement of the approved HASP. A SSHO shall be assigned to the Site during work activities on a full-time basis and shall be either a Contractor employee or a subcontractor who reports to the Contractor and the Safety and Health Manager in matters pertaining to Site safety and health. The SSHO shall have the on-site responsibility and authority to modify and/or halt work, or remove personnel from the Site if working conditions, which may affect on-site/off-site safety and health, change. The SSHO shall be the main

contact for any on-site emergency situation. Except in an emergency, the SSHO may modify the approved HASP only after consultation and concurrence of the Safety and Health Manager and notification to the Engineer.

The minimum qualifications of the SSHO are:

a. A minimum of 3 years working experience at hazardous waste Sites where EPA Level C and Level B personal protective equipment is required.

b. Specialized training in personal and respiratory protective equipment, program implementation, and in proper use of air monitoring instruments, air sampling methods, and interpretation of results.

c. Certified as having completed training in first aid and CPR by a recognized organization such as the American Red Cross.

d. Working knowledge of applicable federal, state, and local occupational safety and health regulations.

3. Project Manager: The Project Manager shall be competent, experienced and knowledgeable in the specific activities identified in this contract. The Contractor shall identify the Project Manager in the HASP including qualifications and experience. The Project Manager is responsible to assure that the work is done in a manner consistent with the Contractor's approved Site Health and Safety Program, Contractor Quality Control Plan and all state, federal and local laws and regulations. He will coordinate with the Safety and Health Manager and the Site Safety and Health Officer to assure that all activities are performed in a safe manner. The Project Manager shall be the primary Contractor contact for this contract.

3.06 EMPLOYEE TRAINING ASSIGNMENTS:

A. The Contractor shall develop a training program to inform employees, official visitors of the special hazards and procedures (including PPE, its use and inspection) to control hazards during field operations. This program shall be consistent with the requirements of 29 CFR 1926.65(e). Employees shall be trained in, but not limited to the following, emergency procedures, areas of restricted access, methods of decontamination, and general safety. All prime and subcontractor personnel shall complete this program prior to beginning on-site work. The Contractor shall maintain individual training records on all workers associated with the project and certify in writing that the workers are properly trained.

B. In addition, personnel shall be trained in the recognition of Site specific hazards prior to performance of work. A brief safety meeting shall be held prior to each work shift

to communicate routine and unique safety hazards associated with the work to be performed by that work shift.

3.07 PERSONAL PROTECTIVE EQUIPMENT:

A. The plan shall include the requirements and procedures for employee protection and shall include a detailed section on respiratory protection. The Contractor shall describe in detail and provide appropriate personal protective equipment (PPE) to insure workers are not exposed to levels greater than the action level for identified hazards for each operation stated for each work zone. The level of protection shall be specified in the SOP for each operation and shall be in compliance with all requirements of 29 CFR 1910. The Contractor shall provide and maintain all PPE.

B. The Safety and Health Manager shall identify the types of PPE to be worn by employees working at the Site.

C. The Contractor shall monitor noise levels and specify levels of hearing protection. At a minimum, hearing protection shall be available during all operations where there is the potential for sound levels to exceed 80 decibels on the "A" weighted scale.

D. All disposal transportation drivers shall remain in their vehicles at all times when inside project work zones.

E. All PPE waste generated during site work (i.e. tyvek suits, booties, gloves, etc.) is to be disposed of in accordance with all applicable local, state, and federal laws. Documentation of PPE disposal shall be provided to the Engineer.

3.08 MEDICAL SURVEILLANCE REQUIREMENTS:

A. All on-site Contractor personnel shall have medical examinations meeting the requirements of 29 CFR 1926.65 prior to commencement of work. The Safety and Health Manager, in conjunction with the Occupational Physician shall detail, the medical monitoring program that includes scheduling of examinations, certification of fitness, compliance with OSHA requirements, and information provided to the physician. The medical examination results shall be evaluated by a board-certified or board-eligible licensed physician practicing occupational medicine to determine if the individual is physically fit for the work to be performed and that no physical condition or disease would be aggravated by exposure to the identified hazards or wearing of PPE. The Contractor shall ensure that personnel working in the contaminated areas of the Site have been examined as prescribed in 29 CFR 1926.65 and determined medically fit to perform their duties.

B. The Contractor shall maintain individual medical surveillance records (certification of medical evaluation and clearance by the physician) for each employee to be at the Site and shall certify in writing that the employees receive proper medical surveillance.

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1. Frequency of Examinations: The Contractor shall ensure that employees have been provided with a medical examination within the last twelve months and receive exams annually thereafter; on termination of employment; reassignment if the employee develops signs or symptoms of illness relating to workplace exposure; if the physician determines that examinations need to be conducted more than once per year; and when an employee develops an OSHA recordable injury or illness in accordance with 29 CFR 1926.65 (f)(3) during the period of this contract. The Project Manager must be provided with a written statement signed by the physician prior to allowing the employee to return to the work Site after experiencing an OSHA recordable injury or illness, as defined in 29 CFR 1904.

3.09 EXPOSURE MONITORING/AIR SAMPLING PROGRAM:

A. The Contractor shall provide continuous air monitoring for the identified contaminants at the work Site for controlling worker exposure and migration of contaminants outside the exclusion zone during field operations. Direct reading instruments and integrated sampling techniques shall be used. Air monitoring results shall be used to implement engineering and work practice controls and to determine the appropriateness of PPE and need to upgrade or downgrade the established levels of protection based on established action levels. The HASP shall include air monitoring requirements consistent with 29 CFR 1926.65, paragraphs (b)(4)(ii)(E), (c)(6), and (h). The HASP shall identify specific air sampling equipment, locations, and frequencies.

B. Air and exposure monitoring requirements shall be specified in the Contractor's HASP. The Contractor's Safety and Health Manager shall specify exposure monitoring/air sampling requirements after a review of the contaminants of concern and planned Site activities.

C. At a minimum, exposure monitoring and air sampling during "Exclusion Zone" activities shall be performed and recorded every 15 minutes and whenever an action level is exceeded.

3.10 HEAT/COLD STRESS MONITORING:

A. The Contractor's Safety and Health Manager shall establish heat/cold stress monitoring program for on-Site activities. Details of the monitoring program, including work/rest schedules and physiological monitoring requirements, shall be described in the HASP. All personnel shall be trained to recognize the symptoms of heat and cold stress and related ailments. The Contractor shall designate, in writing, the SSHO and alternate persons to be responsible for the Heat/Cold stress monitoring program.

1. Cold Stress: To guard against cold injuries the Contractor shall provide appropriate clothing and warm shelter for rest periods. As a minimum,

monitoring of personnel for cold stress shall commence when the ambient temperature falls below 60°F. Procedures to monitor and avoid cold stress shall be followed in accordance with the current TLVs for Cold Stress as recommended by the ACGIH.

2. Heat Stress: Monitoring of personnel for heat stress shall commence when the ambient temperature is above 70°F. Procedures to monitor and avoid heat stress shall be followed in accordance with the current TLVs for heat stress as recommended by the ACGIH.

3.11 STANDARD OPERATING PROCEDURES (SOPs):

A. The Contractor shall outline SOPs for preventing accidents and protecting personnel from injury and occupational illness for all operations having a significant accident potential. Approved SOPs will be made available to the engineer and subcontractor personnel.

3.12 SITE CONTROL MEASURES:

A. The HASP shall include a Site map, work zone delineation (support, contamination reduction, and exclusion), on/off-site communications, Site access controls, and security (physical and procedural). No person shall be allowed entry into the exclusion zone or contamination reduction zone unless they meet the requirements set forth in the HASP and these Specifications.

1. Work Zones:

a. Three (3) unique work zones shall be identified in the HASP for each work area. These zones include "Exclusion Zone," "Contamination Reduction Zone" and the "Support Zone."

b. The "Exclusion Zone" is defined as the area where contamination is known to exist and where contact or exposure to this contamination may occur during work activities. At a minimum, all construction activities will occur within the "Exclusion Zone." The boundary of the "Exclusion Zone" shall be clearly marked by either fence or barrier tape, as appropriate.

c. The "Contamination Reduction Zone" is the area where personnel and equipment are decontaminated after leaving the "Exclusion Zone." It provides a buffer between contaminated areas and clean areas.

d. The "Support Zone" is the area where clean equipment is stored, personnel take rest breaks, and all other activities occur. The support zone is to be located where there is no potential for contact with contaminants.

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2. Communications: Written procedures for routine and emergency communications procedures shall be included in the Contractor's HASP. At a minimum, the following communications shall be available:

   a. Hard line or cellular telephone

   b. Two way portable radio

   c. Compressed air horn (emergency evacuation signal)

   d. Hand signals

   Visual and voice or radio communications must be maintained at all times while working onsite.

3. Signs: The Contractor shall post all OSHA required safety signs onsite. At a minimum, this will include:

   a. Visitor Signs: Signs shall be posted directing all visitors to the field office or security check-in point.

   b. No Smoking Signs: No smoking signs shall be posted in appropriate areas.

3.13 DECONTAMINATION PROCEDURES:

A. Decontamination facilities and procedures for personnel protective equipment, sampling equipment, and heavy equipment shall be discussed in detail in the HASP.

1. Personal Hygiene and Decontamination: The Contractor's HASP shall provide a written description of procedures to maintain personal hygiene and to provide decontamination for personnel and equipment. Personal hygiene and decontamination procedures shall be established by the Contractor's Safety and Health Manager.

2. Equipment Decontamination: All equipment which comes into direct contact with potentially contaminated soil, surface water or groundwater shall be properly decontaminated prior to leaving the contamination reduction zone.

   The Safety and Health Manager shall develop procedures for ensuring that the equipment decontamination procedures are effective.

3. Equipment Decontamination Tracking: All equipment used in the exclusion zone shall be decontaminated and verified as "clean" by the SSHO prior to it

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departing the Site. The sign in/sign out record should have a category to reflect that all equipment used in the exclusion zone has been properly decontaminated.

3.14 EMERGENCY EQUIPMENT AND FIRST AID REQUIREMENTS:

A. The Contractor shall provide appropriate emergency first aid kits and equipment suitable for treatment of exposure to identified hazards, including chemical agents. At least two persons with certified first aid/CPR training are to be on-site at all times during Site operations.

B. The Contractor shall provide at a minimum, the following, an approved emergency eye wash/shower unit in accordance with ANSI Z358.1, a first aid kit, and dry chemical fire extinguishers with a minimum rating of 2A.10 B: C in the Contamination Reduction Zone and in each active work area of the Exclusion Zone. One (1) "industrial" first aid kit appropriate for the number of employees on-site and stretcher shall be provided and maintained fully stocked at a designated location. First aid equipment locations shall be clearly marked, and provided with adequate water and other supplies necessary to cleanse and decontaminate burns, wounds, or lesions. Dry chemical fire extinguishers of the 2A-10 B: C type shall also be supplied to each flammable storage area on the Site. The Emergency Response Plans shall include equipment types, training frequency, and preventive maintenance procedures and shall be submitted as part of the HASP. The locations of equipment shall be identified in the Contractors HASP. At a minimum, this equipment shall include the following:

1. Eye wash/shower unit
2. First aid kits
3. Stretcher
4. Fire extinguishers (10 lb. 2A:10B:10C)
5. Air horns
6. Self contained breathing apparatus (SCBA)
7. Spill response kit
8. Site telephone

C. The Contractor shall also ensure that the SSHO and at least one other contractor employee has current certification training in first aid and cardiopulmonary resuscitation (CPR) from the American Red Cross or equipment.

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3.15 EMERGENCY RESPONSE AND CONTINGENCY PROCEDURES:

A. The Contractor shall establish procedures to take emergency action in the event of immediate hazards (i.e., a chemical agent leak or spill, fire, or personal injury). The Contractor's designated SSHO shall serve as the emergency coordinator. Personnel and facilities providing support in emergency procedures shall be identified. The emergency equipment to be present on-site and the Emergency Response Plan procedures, as required by 29 CFR 1926.65, paragraph (L) shall be specified in the Emergency Response Plan. The Emergency Response Plan shall be included as part of the HASP.

1. Pre-Emergency Planning: The Contractor shall identify emergency response resources for fire, spills, and injuries. Methods of communications with these resources shall be a component of the Emergency Response Contingency Plan. Communications systems, evacuation routes, locations of emergency equipment, and the emergency "chain of command" shall also be identified in advance. Prior to site operations and at daily Site briefings, all employees shall be informed of the Emergency Response Contingency Plan. The plan will be reviewed and revised if necessary, on a regular basis by the SSHO.

2. Personnel Roles and Authority: The Emergency Response Contingency Plan shall describe the emergency "chain of command" by personnel, their role, and their authority.

3. Emergency Recognition and Prevention: The Contractor shall ensure that their on-site employees are familiar with the appropriate techniques of hazard recognition from pre-assignment training and daily Site briefings. The SSHO is responsible for ensuring that prevention devices, equipment, and proper training are made available to personnel.

4. Evacuation Procedures: The Contractor shall prepare written evacuation procedures as part of the Emergency Response Contingency Plan. This shall include, but not be limited to, alarm procedures, evacuation routes, evacuation assembly areas, and "head count" procedures to ensure all have evacuated.

5. Emergency Contact/Notification System: The Contractor shall identify emergency response resources in the Emergency Response Contingency Plan. These resources shall include fire response, spill response, medical response, and security. It shall also include regulatory agencies and the National Response Center (NRC). This information shall be presented in tabular form by organization, contact, and telephone number. All identified emergency response resources shall be contacted in advance of Site operations and it shall be confirmed by the Contractor that these resources are prepared to provide emergency assistance.

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6. Emergency SOP: The Contractor shall prepare written emergency standard operating procedures (SOP) as part of the Emergency Response Contingency Plan. These procedures shall describe how personnel will respond to fires, injuries, spills, and leaks.

3.16 LOGS, REPORTS, AND RECORDKEEPING:

A. The Contractor shall maintain safety inspection logs and reports, accident/incident reports, medical certifications, training logs, monitoring results, etc. The Contractor shall maintain all exposure and medical monitoring records according to 29 CFR 1910 and 29 CFR 1926.

B. The Contractor shall immediately notify the Engineer of any accident/incident. Within two working days of any reportable accident the Contractor shall complete and submit to the Engineer an Accident Report.

3.17 SAFETY INSPECTIONS:

A. The Contractor shall devise a systematic method of conducting daily safety inspections to evaluate operating areas and personnel performance with the goal of eliminating hazards. Copies of all safety inspections shall be maintained on-site for inspection. These reports shall be made available to the Engineer. The Contractor's SSHO shall accompany any federal or state regulatory official performing onsite evaluations of Contractor operation.

3.18 CONFINED SPACE ENTRY:

A. No activities involving confined space entry are anticipated as part of this work.

3.19 SPILL CONTAINMENT:

A. A spill containment program in accordance with 29 CFR 1926.65(j) shall be incorporated as part of the HASP.

END OF SECTION

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SECTION 01150

MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.01 MEASUREMENT AND PAYMENT:

A. Each unit or lump sum price stated in the BID shall constitute full compensation as herein specified for each item of work completed in accordance with the drawings and specifications.

B. Item 1 is a lump sum price for mobilization of all necessary equipment, materials and supplies, clearing and grubbing, installation of all required site access and staging areas, demobilization and site clean-up for both parcels (104 Butler and 77 Cooper Street). The lump sum price for Item 1 shall account for all labor, equipment, materials, overhead, profit, other incidentals, and applicable taxes required for the Work, as currently defined in the plans and specifications. The lump sum price shall include all costs associated with the specified activities including, but not limited to: mobilization of all necessary equipment, materials and supplies, site preparation, clearing and grubbing, project meetings, temporary facilities, erosion and sedimentation control, health and safety requirements, equipment and personnel decontamination, installation and removal of temporary decontamination pad, site security, air monitoring, dust and airborne emissions control, installation of all required site access and staging areas, surveying, demobilization, and cleaning up.

C. Item 2 is a lump sum price for project health and safety measures and controls to be provided throughout the project as specified in the contract documents for both parcels (104 Butler and 77 Cooper Street). The lump sum price for Item 2 shall account for all labor, equipment, materials overhead, profit, other incidentals, and applicable taxes required for the Work, as currently defined in the plans and specifications. The lump sum price shall include all costs associated with the specified activities including, but not limited to: preparation of a site specific Health and Safety Plan (HASP), project safety personnel, exposure monitoring, site control measures, personal protective equipment (PPE), equipment and personnel decontamination, installation and removal of temporary decontamination pad, air monitoring, on-site emergency equipment, and dust and airborne emissions controls.

D. <u>104 Butler Street</u> - Item 3 is a unit price for excavation, on-site handling, loading, transport from the site and off-site disposal of contaminated soil containing PAHs, metals and TPH as specified in the contract documents. Item 3 includes all of the contaminated soil to be removed from the on-site remediation area shown on the contract drawing (estimated at approximately 975 tons). The unit price for Item 3 shall account for all labor, equipment, materials, overhead, profit, other incidentals and applicable taxes required for the Work, as currently defined in the drawings and specifications. The unit price shall include all costs associated with the specified remedial activities including, but not limited to: excavation, on-site handling and loading, transportation and off-site disposal of impacted soil, confirmation

sampling and laboratory analyses, equipment decontamination, load, transport, unload and place geotextile fabric and on-site building materials (i.e. brick and concrete) in excavated areas, and restoration of the excavation area. Payment for Item 3 shall be based on the actual number of tons of contaminated soil removed from the site and disposed of off-site. The quantity of excavated soil and incidental work related thereto to be paid for under Item 3 shall be measured by weight slips for the applicable loads of soil transported and disposed of.

E. 77 Cooper Street - Item 4 is a unit price for excavation, on-site handling, loading, transport from the site and off-site disposal of contaminated soil containing PCBs, PAHs, metals and TPH as specified in the contract documents. Item 4 includes all of the contaminated soil to be removed from the on-site remediation area shown on the contract drawing (estimated at approximately 840 tons). The unit price for Item 4 shall account for all labor, equipment, materials, overhead, profit, other incidentals and applicable taxes required for the Work, as currently defined in the drawings and specifications. The unit price shall include all costs associated with the specified remedial activities including, but not limited to: excavation, on-site handling and loading, transportation and off-site disposal of impacted soil, confirmation sampling and laboratory analyses, equipment decontamination, and placement of geotextile fabric, historic clean gravel two foot layer and on-site building materials (i.e. brick and concrete) in excavated areas, and restoration of the excavation area. The unit price shall also include placement of geotextile fabric and backfilling of an area (estimated at approximately 800 CY) within the former Building A with on-site building materials (i.e. brick and concrete), and restoration of the area. Payment for Item 4 shall be based on the actual number of tons of contaminated soil removed from the site and disposed of off-site. The quantity of excavated soil and incidental work related thereto to be paid for under Item 4 shall be measured by weight slips for the applicable loads of soil transported and disposed of.

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END OF SECTION

SECTION 01200

PROJECT MEETINGS

PART 1 - GENERAL

1.01 PRECONSTRUCTION CONFERENCE:

A. Prior to any work at the site, a pre-construction conference will be held between the Contractor, the Engineer, and the Owner to review the Contractor's proposed methods of complying with the requirements of the Contract Documents.

B. Contractor will be notified of the time, date and place where the preconstruction conference will be held.

1.02 PROGRESS MEETINGS:

A. In addition to other regular project meetings for other purposes (as indicated elsewhere in the Contract Documents), the Owner or Owner's Agent shall hold general progress meetings and shall issue meeting minutes once each week. Meeting dates shall be established by the Owner or Owner's Agent. Require every entity then involved in the planning, coordination or performance of work to be properly represented at each meeting. Include (when applicable) consultants, separate contractors (if any), principal subcontractors, suppliers/ manufacturers/fabricators, governing authorities, insurers, special supervisory personnel and others with an interest or expertise in the progress of the work. Review each entity's present and future needs including interface requirements, time, sequence, deliveries, access, site utilization, temporary facilities and services, hours of work, hazards and risks, housekeeping, submittals, change orders, schedule of values, submittal of monthly invoices for initial review prior to formal submittal, and documentation of information for payment requests. Discuss whether each element of current work is ahead of schedule. Determine how late work will be expedited, and secure commitments from the entities involved in doing so. Discuss whether schedule revisions are required to ensure that current work and subsequent work will be completed within the Contract Time. Review everything of significance that could affect the progress of the work.

END OF SECTION

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SECTION 01300

SUBMITTALS

PART 1 - GENERAL

1.01 DESCRIPTION:

A. This Section specifies the general methods and requirements of submissions applicable to the following work-related submittals.

1. Shop Drawings.

2. Product Data.

3. Samples.

4. Mock-Ups.

5. Construction or Submittal Schedules.

B. Detailed submittal requirements will be specified in the technical specifications section.

1.02 SHOP DRAWINGS, PRODUCT DATA, SAMPLES:

A. Shop Drawings:

1. Shop drawings, as specified in individual work Sections include, but are not necessarily limited to: scheduled information, coordination drawings, individual system or equipment inspection and test reports including performance curves and certifications as applicable to the work.

2. All shop and working drawings shall be prepared on standard size sheets, except those which are made by changing existing standard shop or working drawings.

3. All shop drawings shall be submitted using a standard transmittal form acceptable to the Owner's Agent.

4. All shop drawings submitted by subcontractors for approval shall be sent directly to the Contractor for checking. The Contractor shall be responsible for their submission at the proper time so as to prevent delays in delivery of materials.

5. The Contractor shall check all subcontractor's shop drawings regarding measurements, size of members, materials, and details to satisfy himself that they conform to the intent of the Drawings and Specifications. Shop drawings found to

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be inaccurate or otherwise in error shall be returned to the subcontractors for correction before submission thereof.

6. Submittals for equipment shall include a listing of all installations where identical or similar equipment has been installed and been in operation for a period of at least one year.

B. Product Data:

1. Product data as specified in individual Sections, include, but are not necessarily limited to, standard prepared data for manufactured products (sometimes referred to as catalog data), such as the manufacturer's product specification and printed installation instructions, availability of colors and patterns, manufacturer's printed statements of compliance including certificates of compliance and applicability, roughing-in diagrams and templates, catalog cuts, product photographs, standard wiring diagrams, printed performance curves and operational-range diagrams, production or quality control inspection and test reports and certifications and recommended spare-parts listing, and printed product warranties, as applicable to the Work.

C. Samples:

1. Samples specified in individual Sections, include, but are not necessarily limited to, physical examples of the work such as sections of manufactured or fabricated work, small cuts or containers of materials, complete units of repetitively-used products, color/texture/pattern swatches and range sets, specimens for coordination of visual effect, graphic symbols, and units of work to be used by the Owner or their agents for independent inspection and testing, as applicable to the Work.

1.03 CONTRACTOR'S RESPONSIBILITIES:

A. The Contractor shall review shop drawings, product data and samples, including those by subcontractors, prior to submission to determine and verify the following:

1. Field measurements

2. Field construction criteria

3. Catalog numbers and similar data

4. Conformance with the Specifications

B. Each shop drawing, sample, and product data submitted by the Contractor shall have affixed to it the following Certification Statement including the Contractor's Company

name and signed by the Contractor: "Certification Statement: by this submittal, I hereby represent that I have determined and verified all field measurements, field construction criteria, materials, dimensions, catalog numbers and similar data, and I have checked and coordinated each item with other applicable approved shop drawings and all Contract requirements." Shop drawings and product data sheets 11-in. X 17-in. and smaller shall be bound together in an orderly fashion and bear the above Certification Statement on the cover sheet. The cover sheet shall fully describe the packaged data and include a listing of all items within the package.

C. If a shop drawing shows any deviation from the requirements of the Contract Documents, the Contractor shall make specific mention of the deviations in the transmittal form and provide a description of the deviations in a letter attached to the submittal.

D. The review and approval of shop drawings, samples or product data by the Owner, the Owner's agent(s), and/or the Engineer shall not relieve the Contractor from his responsibility with regard to the fulfillment of the terms of the Contract. All risks of error and omission are assumed by the Contractor. The Owner, the Owner's Agent(s), and the Engineer will not have responsibility therefor.

E. No portion of the work requiring a shop drawing, sample, or product data shall be started nor shall any materials be fabricated or installed prior to the approval or qualified approval of such item. Fabrication performed, materials purchased or on-site construction accomplished which does not conform to approved shop drawings and data shall be at the Contractor's risk. The Owner will not be liable for any expense or delay due to corrections or remedies required to accomplish conformity.

F. Project work, materials, fabrication, and installation shall conform with approved shop drawings, applicable samples, and product data.

1. Manufacturer's printed installation instructions, as part of product data submitted will not be reviewed and are for informational purposes <u>only</u>.

1.04 SUBMISSION REQUIREMENTS:

A. Make submittals promptly in accordance with approved schedule, and in such sequence as to cause no delay in the Work or in the work of any other contractor. All submittals shall be made directly to the Owner's Agent.

B. All submittals shall be submitted sufficiently in advance of construction requirements to provide no less than ten calendar days for review from the time received at the office of the Owner's Agent's. For submittals of major equipment, that require more than ten days to review, due to its sheer complexity and amount of detail and also requiring review by more than one engineering discipline, a letter will be sent by the Owner's Agent or his/her designee to the Contractor informing him/her of the circumstances and the date it is expected the submittal will be returned to the Contractor.

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C. Number of submittals required:

1. Shop Drawings: Unless otherwise stated in the respective Specifications Sections, submit six (6) copies.

2. Product Data: Unless otherwise stated in the respective Specifications submit six (6) copies.

3. Samples: Submit the number stated in the respective Specification Sections.

D. Submittals shall contain:

1. The date of submission and the dates of any previous submissions.

2. The Project title and number.

3. Contractor identification.

4. The names of:

   a. Contractor

   b. Supplier

   c. Manufacturer

5. Identification of the product, with the specification section number, page and paragraph(s).

6. Field dimensions, clearly identified as such.

7. Relation to adjacent or critical features of the Work or materials.

8. Applicable standards, such as ASTM or Federal Specification numbers.

9. Identification of deviations from Contract Documents.

10. Identification of revisions on resubmittals.

E. Each submittal shall be accompanied by a transmittal form that specifies the shop drawings, product data and samples included in the submittal.

1.05 REVIEW OF SHOP DRAWINGS, PRODUCT DATA, WORKING DRAWINGS AND SAMPLES:

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A. The review of the Contractor's submittals by the Owner, Owner's Agent, and/or Engineer is for general conformance with the design concept and contract drawings. Markings or comments shall not be construed as relieving the Contractor from compliance with the contract plans and specifications or from departures therefrom. The Contractor remains responsible for details and accuracy, for coordinating the work with all other associated work and trades, for selecting fabrication processes, for techniques of assembly, and for performing work in a safe manner.

B. The review of shop drawings, data, and samples will be general. They shall not be construed:

1. as permitting any departure from the Contract requirements;

2. as relieving the Contractor of responsibility for any errors, including details, dimensions, and materials;

3. as approving departures from details furnished by the Engineer, except as otherwise provided herein.

C. If the shop drawings, data or samples as submitted describe variations and show a departure from the Contract requirements which the Owner's Agent finds to be in the interest of the Owner and to be so minor as not to involve a change in Contract Price or time for performance, the Owner's Agent may return the reviewed drawings without noting an exception.

D. Two (maximum) copies of shop drawings or product data will be returned to the Contractor via First Class United States Postal Service. Samples will not be returned.

E. Submittals will be returned to the Contractor under one of the action codes indicated and defined on the transmittal form furnished by the Owner's Agent.

F. Resubmittals will be handled in the same manner as first submittals. On resubmittals the Contractor shall direct specific attention, in writing, on the letter of transmittal and on resubmitted shop drawings by use of revision triangles or other similar methods, to revisions other than the corrections requested by the reviewer, on previous submissions. Any such revisions which are not clearly identified shall be made at the risk of the Contractor. The Contractor shall make corrections to any work done because of this type revision that is not in accordance to the Contract Documents as may be required by the Owner's Agent.

G. Partial submittals may not be reviewed. The Owner's Agent will be the only judge as to the completeness of a submittal. Submittals not complete will be returned to the Contractor, and will be considered "Rejected" until resubmitted. The Owner's Agent may at his option provide a list or mark the submittal directing the Contractor to the areas that are incomplete.

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H. If the Contractor considers any correction indicated on the shop drawings to constitute a change to the Contract Documents, the Contractor shall give written notice thereof to the Owner's Agent at least seven working days prior to release for manufacture.

I. When the shop drawings have been completed to the satisfaction of the Owner's Agent, the Contractor shall carry out the construction in accordance therewith and shall make no further changes therein except upon written instructions from the Owner's Agent.

1.06 DISTRIBUTION:

A. Distribute reproductions of approved shop drawings and copies of approved product data and samples, where required, to the job site file and elsewhere as directed by the Owner's Agent. Number of copies shall be as directed by the Owner's Agent but shall not exceed six (6).

1.07 GENERAL PROCEDURES FOR SUBMITTALS:

A. Coordination of Submittal Times: Prepare and transmit each submittal sufficiently in advance of performing the related work or other applicable activities, or within the time specified in the individual work sections, of the Specifications, so that the installation will not be delayed by processing times including disapproval resubmittal (if required), coordination with other submittals, inspection, testing (off-site and on-site), purchasing, fabrication, delivery and similar sequenced activities. No extension of time will be authorized because of the Contractor's failure to transmit submittals sufficiently in advance of the Work.

END OF SECTION

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SECTION 01310

CONSTRUCTION PROGRESS SCHEDULE

PART 1 - GENERAL

1.01 DESCRIPTION:

A. The Contractor shall prepare and submit a construction progress schedule for review and approval prior to beginning any work on-site.

1.02 FORM OF SCHEDULE:

A. Prepare schedule in form of a horizontal bar chart.

1. Provide separate horizontal bar for each activity or operation.

2. Horizontal Time Scale: Identify first work day of each week.

3. Scale and spacing to allow space for notations and future revisions.

B. Format of Listings: Chronological order of start of each item of work.

1.03 CONTENT OF SCHEDULE:

A. Construction Progress Schedule:

1. Show complete sequence of construction by activity.

2. Show dates for beginning and completion of each major element of construction.

3. Show projected percentage of completion for each item as of first day of each month.

1.04 SCHEDULE REVISIONS:

A. Contractor shall revise schedule at request of Owner or Owner's Agent.

B. Show changes occurring since previous submittal of schedule.

1. Major changes in scope.

2. Activities modified since previous submittal.

3. Revised projections of progress and completion.

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4. Other identifiable changes.

C. Provide a narrative report as needed to define:

1. Problem areas, anticipated delays, and impact on schedule.

2. Corrective action recommended and its effect.

END OF SECTION

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SECTION 01400

QUALITY ASSURANCE

PART 1 - GENERAL

1.01 DESCRIPTION:

A. This section covers Quality Assurance and Control requirements for this contract.

B. The Contractor is responsible for controlling the quality of work, including work of its subcontractors and suppliers and for assuring the quality specified in the Technical Specifications is achieved.

1.02 TESTING LABORATORY SERVICES:

A. All tests, which require the services of a laboratory to determine compliance with the Contract Documents, shall be performed by an independent commercial testing laboratory acceptable to the Engineer. The Contractor shall obtain the Engineer's acceptance of the testing laboratory before having services performed, and shall pay all costs for services. The laboratory shall be staffed with experienced technicians, properly equipped, and fully qualified to perform the tests in accordance with the specified standards. The laboratory shall be certified by the State of Connecticut. In addition, the laboratory shall hold all certifications required by selected disposal facility.

B. Quality Control Testing Services: Perform all quality control tests in the field or in the laboratory on backfill materials, during and after their incorporation in the Work. Field sampling and testing shall be performed in the general manner indicated in the specifications, with minimum interference with construction operations. The Engineer shall determine the exact time and location of field sampling and testing, and may require such additional sampling and testing as necessary to determine that materials and equipment conform with data previously furnished by Contractor and with the Contract Documents.

C. The Owner, Owner's Agent, and/or the Engineer reserves the right to collect split samples as a check on Contractor analysis.

D. Arrangements for delivery of samples and test specimens to the testing laboratory will be made by the Contractor. The laboratory tests shall be performed within a reasonable time consistent with the specified standards. Furnish a written report of each test to the Owner's Agent and Engineer.

E. Contractor shall furnish all sample materials and cooperate in the sampling and field testing activities, interrupting the Work when necessary. When sampling or testing activities are performed in the field, the Contractor shall furnish personnel and facilities

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to assist in the activities.

F. The Contractor shall not retain any testing laboratory against which the Owner or the Engineer have reasonable objection, and if at any time during the construction process the services become unacceptable to the Owner, or the Engineer, either the Owner or the Engineer may direct in writing that such services be terminated. The request must be supported with evidence of improper testing or unreasonable delay. If the Engineer determines that sufficient cause exists, the Contractor shall terminate the services and engage a different testing laboratory.

G. Transmittal of Test Reports: Written reports of testing and engineering data furnished by the Contractor for the review and approval of materials and equipment proposed to be used in the Work shall be submitted as specified for Shop Drawings.

H. The testing laboratory shall furnish four (4) copies of a written report of each test performed by laboratory personnel in the field or laboratory to the Contractor. Distribution shall be one (1) copy of each test report to the Engineer's Representative, one (1) copy to the Owner, one (1) copy to the Owner's Agent, and one (1) copy for the Contractor within three (3) days after each test is completed.

J. Analytical laboratory shall follow CTDEP Reasonable Confidence Protocol (RCP) analytical and reporting requirements for all analytical work. All analytical reports shall include the CTDEP Laboratory Certification Form completed in entirety as well as the following information.

1. Date of report
2. Chain of custody
3. Sample receipt checklist
4. State certificates
5. Case narrative
6. Sample results and surrogates (flagged as J, B, etc.)
7. Method blanks
8. Sample matrix spike/Matrix spike duplicate
9. Sample duplicate (if applicable)
10. Laboratory control sample

1.03 QUALITY ASSURANCE:

A. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to the Laws or Regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest version of such reference at the time of opening of bids, except as may be otherwise specifically stated in the Contract Documents.

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B. Copies of applicable referenced standards are not included in the Contract Documents. Where copies of standards are needed by the Contractor for superintendence and quality control of the work, the Contractor shall obtain a copy or copies directly from the publication source and maintain at the jobsite, available to the Contractor's personnel, subcontractors, Owner and Engineer.

C. Quality of Materials: Unless otherwise specified, all materials and equipment furnished for permanent installation in the Work shall conform to applicable standards and specifications and shall be new, unused, and free from defects and imperfections, when installed or otherwise incorporated in the Work. Material and equipment shall not be used by the Contractor for any purpose other than that intended or specified unless such use is authorized by the Owner or Engineer.

D. Where so specified, products or workmanship shall also conform to the additional performance requirements included within the Contract Documents to establish a higher or more stringent standard or quality than that required by the referenced standard.

1.04 MATERIALS AND EQUIPMENT:

A. The Contractor shall maintain control over procurement sources to ensure that materials and equipment conform to specified requirements in the Contract Documents.

B. The Contractor shall comply with manufacturer's printed instructions regarding all facets of materials and/or equipment movement, storage, installation, testing, startup, and operation. Should circumstances occur where the contract documents are more stringent than the manufacturer's printed instructions, the Contractor shall comply with the specifications. In cases where the manufacturer's printed instructions are more stringent than the contract documents, the Contractor shall advise the Owner's Agent of the disparity and conform to the manufacturer's printed instructions. In either case, the Contractor is to apply the more stringent specification or recommendation, unless approved otherwise by the Owner's Agent.

1.05 SHOP AND FIELD TESTING:

A. The Contractor is also responsible for providing the shop and field testing specified in the technical specification sections.

B. The Contractor and its Subcontractor shall perform inspections, tests, and other services as required by the Contract Documents.

C. Contractor shall provide twenty-one days notice to the Owner's Agent so that the Owner's Agent and/or the Engineer may witness Contractor and/or Subcontractors off-site and on-site tests. The witnessing of tests does not relieve the Contractor and/or Subcontractors of their obligation to comply with the requirements of the Contract Documents.

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PART 2 - PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.01 QUALITY CONTROL:

A. Quality control is the responsibility of the Contractor, and the Contractor shall maintain control over construction and installation processes to assure compliance with specified requirements.

B. Means and methods of construction and installation processes are the responsibility of the Contractor, and at no time is it the intent of the Owner, Owner's Agent, and/or the Engineer to supersede or void that responsibility.

END OF SECTION

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SECTION 01500

TEMPORARY FACILITIES

PART 1 - GENERAL

1.01 DESCRIPTION:

A. The Contractor shall provide all temporary facilities for the proper completion of the work, as required and as specified.

1.02 SANITARY REGULATIONS:

A. The Contractor shall provide adequate sanitary facilities for the use of those employed on the Work. Such facilities shall be made available when the first employees arrive on the site of the Work, shall be properly secluded from public observation, and shall be constructed and maintained during the progress of the Work in suitable numbers and at such points and in such manner as may be required.

B. The Contractor shall maintain the sanitary facilities in a satisfactory and sanitary condition at all times and shall enforce their use. He shall rigorously prohibit the committing of nuisances on the site of the Work, on the lands of the Owner, or on adjacent property.

1.03 WATER SUPPLY:

A. The Contractor shall make arrangements and pay for all water necessary for completion of construction operations under this contract.

1.04 TEMPORARY HEAT:

A. If temporary heat is required for the protection of the Work, the Contractor shall provide and install suitable heating apparatus, shall provide adequate and proper fuel, and shall maintain heat as required.

B. Temporary heating apparatus shall be installed and operated in such manner that finished work will not be damaged thereby. After the permanent heating system has been installed, tested, and made ready for operation, the Contractor may, at his own risk and expense, use it for providing heat for protection of the Work. He shall provide and pay for all fuel and care necessary, and, when the Work is ready for acceptance, he shall, at his own expense, put the system into first-class condition, even to the extent of replacing worn or damaged parts as directed.

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1.05 ELECTRICAL ENERGY:

A. The Contractor shall make all necessary applications and arrangements and pay all fees and charges for electrical energy for power and light necessary for the proper completion of the Work and during its entire progress. The Contractor shall provide and pay for all temporary wiring, switches, connections, and meters.

B. The Contractor shall provide sufficient electric lighting so that all work may be done in a workmanlike manner when there is not sufficient daylight.

1.06 PRECAUTIONS DURING ADVERSE WEATHER:

A. During adverse weather and against the possibility thereof, the Contractor shall take all necessary precautions so that the Work may be properly done and satisfactory in all respects. When required, protection shall be provided by use of tarpaulins, wood and building-paper shelters, or other suitable means.

B. During cold weather, materials shall be preheated, if required, and the materials and adjacent structure into which they are to be incorporated shall be made and kept sufficiently warm so that a proper bond will take place and a proper curing, aging, or drying will result. Protected spaces shall be artificially heated by suitable means, which will result in a moist or a dry atmosphere according to the particular requirements of the work being protected. Ingredients for concrete and mortar shall be sufficiently heated so that the mixture will be warm throughout when used.

1.07 CONTRACTOR'S FIELD OFFICE:

A. At his choice, the Contractor may maintain a temporary field office at the Work site for his own use during the period of construction. Readily accessible copies of all contract documents shall be kept on-site regardless of the presence of a field office. If an office is to be utilized, it shall be located where it will not interfere with the progress of the work.

B. After the date of completion of the Work, as determined by the Owner's Agent, the Contractor shall remove the office and all such temporary facilities from the site, and leave the premises in a condition acceptable to the Owner's Agent.

1.08 OFFICE FOR OWNER'S AGENT AND ENGINEER:

A. If the Contractor provides a field office for the Work, it shall be accessible for the use of the Owner and Engineer.

1.09 TEMPORARY FENCING:

A. Provide commercial grade temporary snow fence or install the permanent perimeter chain link fence prior to the remediation work to prevent trespass by workmen and suppliers onto private property and the public from the construction site.

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B. Coordinate location of temporary fencing with Owner and Engineer.

END OF SECTION

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SECTION 01568

EROSION CONTROL, SEDIMENTATION AND CONTAINMENT OF CONSTRUCTION MATERIALS

PART 1 – GENERAL

1.01 DESCRIPTION:

A. Provide all work and take all measures necessary to control soil erosion resulting from construction operations, prevent flow of sediment from construction site, and contain construction materials (including excavation and backfill) within protected working area as to prevent damage to any stream or wetlands.

1.02 REFERENCE:

A. "2002 Connecticut Guidelines for Soil Erosion and Sediment Control (DEP Bulletin 34)" published by the Connecticut Department of Environmental Protection, "Guide-lines for Erosion and Sediment Control, Planning and Implementation" and "Processes, Procedures and Methods to Control Pollution Resulting from all Construction Activity", published by the United States Environmental Protection Agency.

1.03 SUBMITTALS:

A. Two weeks prior to the start of the work, submit to Engineer, for review, a plan with detailed sketches showing the proposed methods to be used for controlling erosion during construction.

1.04 QUALITY ASSURANCE:

A. Use acceptable procedures, including use of water diversion structures, diversion ditches, settling basins, and sediment traps.

B. Operations restricted to areas of work indicated on drawings and area which must be entered for construction of temporary or permanent facilities.

C. If construction materials are washed away during construction, remove materials from fouled areas.

D. Stabilize diversion outlets by means acceptable to Engineer.

E. Engineer has authority to limit surface area of erodible earth material exposed by clearing and grubbing, excavation, borrow and fill operations and to direct immediate permanent or temporary pollution control measures to prevent contamination of any stream or wetlands, including construction of temporary berms, dikes, dams, sediment basins,

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sediment traps, slope drains, and use of temporary mulches, mats, or other control devices or methods as necessary to control erosion.

PART 2 – PRODUCTS

2.01 BALES:

A. Hay or straw or other suitable material acceptable to Engineer.

2.02 SILT FENCE:

A. Woven geotextile fabric as specified elsewhere in contract documents.

2.03 WOOD STAKES:

A. 2 in. by 2 in. by 3 ft.

PART 3 – EXECUTION

3.01 GENERAL:

A. Do not discharge chemicals, fuels, lubricants, bitumen, raw sewage and other harmful waste into or alongside any body of water or into natural or man-made channels.

3.02 INSTALLATION:

A. Install silt fence and/or baled hay or straw erosion checks in all locations as directed, surrounding base of all deposits of stored excavated material outside of disturbed area, and where directed by the Engineer.

B. Install checks immediately after site is cleared and before trench excavation. Locate checks, surrounding stored material, approximately 6 ft. from material.

C. Hold silt fence and/or hay bales in place with two 2 in. by 2 in. by 3 ft. stakes so that each bale is butted tightly against adjoining bale thereby precluding shortcircuiting of erosion check.

D. Construct earth berms or diversions to intercept and divert runoff water from critical areas.

E. Discharge silt-laden water from excavations onto filter fabric mat and/or baled hay or straw sediment traps to ensure that only sediment-free water is returned to watercourses.

F. Do not place excavated soil material adjacent to water-course in manner that will cause it to wash away by high water or runoff.

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G. Prevent damage to vegetation by excessive watering or silt accumulation in the discharge area.

H. Do not dump spoiled material into any streams, wetlands, surface waters, or unspecified locations.

I. Prevent indiscriminate, arbitrary, or capricious operation of equipment in streams, wetlands or surface waters.

J. Do not pump silt-laden water from trenches or excavations into surface waters, streams, wetlands, or natural or man-made channels leading thereto.

K. Prevent damage to vegetation adjacent to or outside of construction area limits.

L. Do not dispose of trees, brush, debris, paints, chemicals, asphalt products, concrete curing compounds, fuels, lubricants, insecticides, washwater from concrete trucks or hydroseeders, or any other pollutant in streams, wet-lands, surface waters, or natural or man-made channels leading thereto, or unspecified locations.

M. Do not alter flow line of any stream unless indicated or specified.

END OF SECTION

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SECTION 01710

CLEANING UP

PART 1 - GENERAL

1.01 DESCRIPTION:

A. During its progress, the work and the adjacent areas affected thereby shall be cleaned up and all rubbish, surplus materials, and unneeded construction equipment shall be removed and all damage repaired so that the public and property owners will be inconvenienced as little as possible.

B. Throughout the duration of the project, the Contractor shall keep Cherry Street, Butler Street, Cooper Street and other public areas affected by the project activities clean and free from dirt, dust, and debris. The Contractor shall use appropriate means (including use of a street sweeper) as necessary to maintain these areas in such a condition.

C. Where material or debris has washed or flowed into or been placed in existing watercourses, ditches, gutters, drains, pipes structures, work done under this contract, or elsewhere during the course of the Contractor's operations, such material or debris shall be entirely removed and satisfactorily disposed of during the progress of the work, and the ditches, channels, drains, pipes, structures, and work, etc., shall, upon completion of the work, be left in a clean and neat condition.

D. On or before the completion of the work, the Contractor shall, unless otherwise especially directed or permitted in writing, tear down and remove all temporary buildings and structures built by him; shall remove all temporary works, tools, and machinery or other construction equipment furnished by him; shall remove, acceptably disinfect, and cover all organic matter and material containing organic matter in, under, and around privies, houses, and other buildings used by him; shall remove all rubbish from any grounds which he has occupied; and shall leave the roads and all parts of the premises and adjacent property affected by his operations in a neat and satisfactory condition.

E. The Contractor shall thoroughly clean all materials and equipment installed by him and his subcontractors, and on completion of the work shall deliver it undamaged and in fresh and new-appearing condition.

F. The Contractor shall restore or replace, when and as directed, any public or private property damaged by his work, equipment, or employees, to a condition at least equal to that existing immediately prior to the beginning of operations. To this end, the Contractor shall do as required all necessary highway or driveway, walk, and landscaping work. Suitable materials, equipment, and methods shall be used for such restoration. The restoration of existing property or structures shall be done as promptly as practicable as work progresses and shall not be left until the end of the contract period.

END OF SECTION

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SECTION 02080

EXCAVATION AND LOADING OF IMPACTED SOIL

PART 1 – GENERAL

1.01 DESCRIPTION:

A. 77 Cooper Street: Areas of PCB contaminated soil to be excavated, direct loaded into lined roll-offs, and disposed of are shown on the contract drawings. These areas are subject to change based on field conditions, confirmation sampling results, and overall project funding limitations.

B. 104 Butler and 77 Cooper Streets: Other Areas of soil to be excavated, stockpiled, and disposed of are shown on the contract drawings. These areas are subject to change based upon field conditions, and overall project funding limitations.

C. Other project wastes shall be segregated from the contaminated soil, handled, loaded and disposed of as separate waste disposal streams, and shall not be commingled by the Contractor, unless previously approved by the Owner's LEP. Materials from distinct remediation areas shall be segregated and characterized prior to transporting from the site for disposal.

D. 77 Cooper Street: Coordinate confirmation sampling of excavation limits of PCB remediation areas and excavation of additional soil beyond limits shown with Owner's LEP. Contractor shall coordinate turnaround time on confirmation sampling analytical results in order to progress the Work.

E. 104 Butler and 77 Cooper Streets: Coordinate confirmation sampling of excavation limits of other areas with no excavation of additional soil beyond limits shown with Owner's LEP. Contractor shall coordinate turnaround time on confirmation sampling analytical results.

1.02 SUBMITTALS

A. Submit the Following in accordance with Section 01300:

1. Submit for review by the Engineer, a plan describing proposed sequence, methods, and equipment for staging and loading of contaminated and non-contaminated materials.

2. All backfill materials shall be approved by the Engineer prior to backfilling and filling.

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PART 2 – PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 EXCAVATION OF IMPACTED SOIL

A. The Contractor shall excavate the impacted soil in a systematic manner to allow for the Owner's LEP evaluation as described herein.

B. The Contractor shall excavate impacted soil to the limits shown on the contract drawings. Incidental soil excavated beyond the limits shown to achieve these horizontal limits for the full depth of the excavation shall be disposed of with the impacted soil from within the limits.

C. The Contractor shall excavate beyond the horizontal and vertical limits shown only where directed by the Engineer.

D. Excavation in Areas With Physical Obstructions:

1. The Contractor's excavation sequence in this area shall allow for the Owner's LEP visual inspection of the excavation limits from the surface to the excavation bottom and Owner's LEP collection of soil samples.

2. When the excavation has reached the horizontal and vertical limits identified in the contract documents for each remediation area and the Owner's LEP has visually inspected the excavation limits and collected soil samples, the Contractor may backfill this area of the excavation. No further excavation will occur beyond the indicated limits unless directed by the Owner's LEP.

3. The Contractor shall provide laboratory analysis of confirmation samples taken by the Owner, Owner's LEP, and/or Engineer. The laboratory analytical results for the confirmation samples shall be sent directly to the Owner's LEP for evaluation.

E. Excavation in Areas Without Physical Obstructions:

1. When the impacted soil excavation limits as shown on the contract drawings are reached, the Owner's LEP will visually evaluate the limits of the excavation.

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2. At the limits of excavation, the Owner's LEP will collect confirmation soil samples for laboratory analytical testing.

3. The Contractor shall provide laboratory analysis of confirmation samples.

4. Laboratory analytical results for confirmation samples shall be sent directly to the Owner's LEP for evaluation. The Contractor shall allow up to two (2) working days from the date of receipt of results for the Owner's LEP to evaluate the confirmation soil sample results for PCB remediation areas at 77 Cooper Street.

5. After evaluating the confirmation sample analytical results, the Owner's LEP shall direct the Contractor as to how to proceed with excavation/backfilling in this area.

6. If the results indicate that impacted soil remains, the Contractor shall continue excavating impacted soil in the area at the direction of the Owner's LEP.

7. If confirmation soil sample results indicate that impacted soil does not remain, the Contractor may backfill this area of the excavation, when directed by the Owner's LEP.

F. 77 Cooper Street: All confirmation samples taken in PCB remediation areas shall be analyzed for only PCBs by EPA Methods 8082/3540 (PCB Soxhlet Extraction).

G. 104 Butler & 77 Cooper Street: All other confirmation samples shall be analyzed for polycyclic aromatic hydrocarbons (PAHs) by USEPA Method 8270c, CT ETPH, and CT DEP RSR 15 metals. Synthetic precipitation leaching procedure (SPLP) analyses will also be conducted on certain samples based on the total mass analytical results.

G. The horizontal and vertical limits of excavation of impacted soil and the locations of all confirmation samples shall be located in the field by a land surveyor licensed in the State of Connecticut. This information shall be provided on the project as-built map and submitted to the Owner's LEP.

3.02 SEGREGATION OF SUSPECT MATERIAL:

A. If Contractor encounters suspect material, it shall be segregated from the impacted soil during excavation and stockpiled on-site as directed by the Owner's LEP. Handling and disposal of suspect material shall be paid for as extra work.

3.03 ELIMINATION OF FREE DRAINING LIQUIDS:

A. Dewatering of wet impacted soil shall be by gravity drainage. The resulting water will be collected, characterized and transported from the site for disposal.

B. Contractor shall conduct and coordinate all dewatering of wet excavated soils to prevent

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impacts to areas of the site which have undergone final remediation.

3.04 LOADING OF IMPACTED SOIL:

A. Stockpiling of impacted soil is required until waste characterization sampling is complete and the appropriate waste disposal facility is selected by the contractor.

B. PCB impacted soil will be direct loaded into line roll-off containers until waste characterization is completed and the appropriate waste disposal facility is selected by the contractor.

C. Contractor shall coordinate all loading activities and exercise care while loading impacted soil to minimize spillage.

3.05 DECONTAMINATION OF REMEDIATION EQUIPMENT:

A. All equipment (including heavy equipment such as excavator, backhoe, and bulldozer) shall be decontaminated prior to leaving the site in accordance with Section 02085.

END OF SECTION

DRAFT

SECTION 02081

TRANSPORTATION AND DISPOSAL OF IMPACTED SOIL

PART 1 - GENERAL

1.01 DESCRIPTION:

A. The work specified in this section shall involve the off-site transportation and disposal of impacted soil at an approved, off-site facility.

B. Disposal of all impacted soil shall be in compliance with all federal, state, and local requirements. The Contractor shall obtain all necessary permits, licenses and approvals for the off-site disposal of impacted soil.

1.02 REFERENCES:

A. Compliance with all applicable regulations, including but not limited to the following, is required. All work shall be conducted in compliance with applicable regulations and policies, as well as any changes or addenda to the same as set forth prior to the completion of the work. Nothing in this section will limit the Contractor's responsibility to adhere to these regulations and recognized standards and regulatory practices. The Owner, Owner's Agent, Owner's LEP, and/or the Engineer will not be responsible at any time for Contractor's violations of any applicable local, state, or federal regulations or endangerment of his employees or of his subcontractors.

B. Code of Federal Regulations (CFR)

1. Resources Conservation and Recovery Act (40 CFR 260 through 267)

2. Occupational Safety and Health Administration (OSHA), with special emphasis to 29 CFR 1926.65/1910.120 (Hazardous Waste Operations and Emergency Response)

3. U.S. Department of Transportation Regulations (49 CFR 171 through 179)

4. Toxic Substances Control Act (40 CFR 761)

C. State Regulations

1. Connecticut Remediation Standard Regulations

D. State Policies

1. Connecticut RCRA "Contained-In" Policy

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2. General Permit for Contaminated Soil Management

3. 2002 Connecticut Guidelines for Soil Erosion and Sediment Control

1.03 SUBMITTALS:

The following shall be submitted prior to the initiation of the Work.

A. Waste Hauler: The Contractor shall submit the name, location and qualifications of waste hauler(s) to be used for transportation of impacted soil.

B. Disposal Facility: Contractor shall submit the name and location of the off-site disposal facility to be used for disposal of impacted soil. No facility may be substituted for the one designated in the Contractor's submittals unless approved by the Engineer in writing.

C. The Contractor shall submit a letter from an authorized representative of the proposed treatment/disposal facility, with a statement of the facility's intent to accept from the Contractor the specified materials. This letter shall also include a copy of the facility acceptance criteria and a copy of the facility's operating permit.

D. The Contractor shall provide letters of commitment from the waste hauler(s) to haul shipments of impacted soil. The letters shall indicate agreement to handle and accept the specified material as described in this Contract.

E. The Contractor shall provide the proposed transport route for hauling impacted soil from the Site to the disposal facility, including all states which the material will pass through. The Contractor shall provide evidence of appropriate licenses/permits held by the waste hauler(s) to transport the material through each state.

F. The Contractor shall organize and maintain the material shipment and disposal records/manifests required by the State of Connecticut and the state where the treatment/disposal facility is located. These records shall become the property of the Owner and shall be turned over to the Owner at the completion of the Contract.

G. The Contractor shall submit copies of all transportation and disposal documentation, including bills of lading and/or manifests and weight tickets/receipts for disposal of excavated materials.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

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3.01 WASTE CHARACTERIZATION:

A. The Contractor shall use the services of the Contractor's retained environmental laboratory and Owner's LEP to assist the Contractor in dealing with characterization and transport of impacted soil to an off-site disposal facility.

B. The Contractor is responsible, subject to review by the Owner's LEP, to completely characterize all impacted soil for disposal in accordance with all applicable laws and regulations and disposal facility requirements.

D. The Contractor shall use existing and supplemental analytical data, provided by the Owner, to the maximum extent possible to characterize soil for disposal purposes. Available sample results and sample locations from previous site investigations and sampling events are provided in the contract documents Appendices. Laboratory analytical reports for these results are available from the Engineer.

E. If additional analytical data beyond that provided is necessary for waste disposal, the Contractor shall collect the additional samples and provide the additional data required. Sampling frequency and analytical parameters/methods for the waste characterization performed by the Contractor will be as required by the approved disposal facility.

F. The Contractor shall prepare necessary paperwork (waste profiles, manifests) to be used to transport the waste from the site to the disposal facility.

G. The Town of East Hampton will be the designated Generator of project wastes where a generator is required to be named.

3.02 TRANSPORTATION:

A. All transport containers/vehicles used to transport impacted soil shall have a metal dump body free from any holes and a sealable, watertight tailgate.

B. Impacted soil shall be covered and secured during transport to prevent shifting and to ensure that seepage of water into and release of soil, and/or dust out of the dump body is prevented.

C. Transport vehicles/containers, and loading and unloading procedures shall meet all appropriate state and federal DOT standards.

D. The Contractor shall transport impacted soil to an approved waste disposal/recycling facility, as arranged by the Contractor, in accordance with all local, state and federal regulations.

E. Impacted soil shall be kept several inches below the top of the truck container.

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F. The Contractor shall install and use a designated site entrance for transport vehicle traffic to minimize vehicle contact with impacted soil at (77 Cooper Street). The Contractor shall use the cul-de-sac at the end of Cherry Street for transport vehicle traffic to minimize vehicle contact with impacted soil at (104 Butler Street). Any material installed shall be removed and disposed of in the same manner as the impacted soil.

H. If impacted material is spilled on the exterior of the transport vehicles while loading, the material shall be brushed off, collected, and disposed of with other impacted soil before the vehicle leaves the Site.

I. The Contractor shall transport waste to receiving facilities in accordance with USDOT, USEPA, OSHA, and CTDEP regulations.

J. The Contractor shall utilize hauler(s) that are licensed as necessary in all states affected by transport.

3.03 SHIPPING PAPERS

A. The Contractor shall prepare all documentation required for transport and disposal of project wastes. Transport of the excavated impacted soil shall take place under a Bill of lading (BOL) and any additional shipping papers and/or waste manifests that may be required by the disposal facility or disposal state.

B. The Contractor shall obtain and prepare all shipping papers for review by the Owner's LEP.

C. The Contractor shall provide the Owner's LEP with a copy of the shipping papers and any supporting documents (i.e. laboratory data) at least 72 hours prior to planned removal of the soil from the Site.

D. The Owner's LEP shall review the BOL and/or manifest and supporting documentation prior to signature by the Owner.

E. The Contractor shall maintain a soil tracking system that shall be kept on site and available for inspection at any time. The tracking system shall document for each truck load: truck registration number and state of registration, driver name, description of load including source of material being disposed, BOL and/or manifest log sheet number, date of removal from site, date of arrival at facility, and date BOL log sheets and/or manifests returned with facility signature.

F. The Contractor shall verify that each truck load is accompanied by a complete BOL and original signed log sheet and/or manifest completed for the load it is carrying. Each BOL shall be accompanied by an attached list of all load identification numbers that are transported under said shipping papers.

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G. Each BOL shall note the truck registration number, state of registration, driver, and date of removal.

H. Upon final disposition of the waste, completed BOLs and waste manifests shall be retrieved and furnished to the Owner's LEP along with receipts or weight slips by the next working day. The Contractor is responsible for ensuring that facility copies are returned to the Owner's LEP.

I. Wastes shall not be delivered to any facility other than that listed on the shipping papers.

3.04 OFF-SITE DISPOSAL:

A. The Contractor shall identify the specific facility(ies) intended for use prior to any Work. Substitutions or additions shall not be permitted without prior written approval from the Owner or their agent.

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

D. The Owner or their agent reserves the right to contact and visit the disposal facilities and regulatory agencies to verify the agreement to accept the stated material and to verify any other information provided. This does not in any way relieve the Contractor of his responsibilities under this contract.

E. Contractor's Responsibility: In the event that the identified and approved facility ceases to accept the stated materials, or the facility does not provide sufficient disposal capacity, or the facility ceases operations, it shall be the Contractor's responsibility to arrange for an alternate approved and permitted disposal facility. The Contractor is responsible for making the necessary arrangements to utilize the facility, and the alternate facility must be approved in writing by the Owner or their agent in the same manner and with the same requirements as for the original facility.

3.05 RECORDKEEPING:

A. Records: The Contractor shall maintain a current record of all waste determinations, including results of analyses performed, sample locations, and the time of collection. Transportation, treatment, disposal methods and dates, the quantities of waste, the name and addresses of transporter(s) and the disposal facility shall also be recorded and available for the Owner or their agent(s)' inspection. The Contractor shall submit copies of all such documentation to the Owner at project completion.

B. Specific records to be kept and transferred to the Owner at project completion shall

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include the following, at a minimum:

1. Original copies of all shipping papers.

2. Original copies of all laboratory analytical reports performed for disposal.

4. One copy of all waste analyses or waste profile sheets.

5. Lone original copies of all certifications of final treatment/disposal signed by the responsible disposal facility official.

C. Documentation of Treatment or Disposal: The impacted soil must be taken to the approved disposal facility which has USEPA or appropriate state permits and identification numbers and complies with all of the provisions of the disposal regulations. Documentation of acceptance of soil and certification of treatment or disposal by the facility shall be furnished to the Owner not later than five (5) working days following the delivery of the waste to the facility.

END OF SECTION

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SECTION 02083

AIR MONITORING

PART 1 - GENERAL

1.01 SUMMARY:

A. The Contractor shall provide all labor, equipment and materials necessary for providing air monitoring as specified herein.

B. The Contractor shall conduct air monitoring to detect potential airborne contaminant emissions associated with site disturbance during remediation activities. The objective of air monitoring is to evaluate the effectiveness of dust controls, to minimize the release of dust and contaminants of concern (COCs) from the site, and to protect the health and safety of workers on-site as well as the general public off-site.

C. The Contractor shall conduct air monitoring in the work zone to assess for potential worker exposure and down-wind of the work zone to assess for potential emissions to off-site receptors. The Contractor's work zone air monitoring shall include personal and/or field instrument air monitoring.

D. Air monitoring shall be conducted for site COCs, including PAHs (benzo(a)pyrene) and TPH (104 Butler) and PCBs, PAHs (benzo(a)pyrene), metals and TPH (77 Cooper Street), as well as other compounds and/or emissions that the Contractor deems necessary.

E. Air monitoring data shall be evaluated with respect to NIOSH/OSHA standards for worker exposure, as well as other action levels the Contractor deems appropriate.

F. Both real-time continuous air monitoring using direct read instruments and collection of air samples for off-site laboratory analysis shall be conducted at locations and timeframes to be established for the specific site and activities.

G. Should air quality degrade as a result of remediation activities, modification of the project dust and volatile emission controls may be necessary.

1.02 REFERENCES:

A. U.S. EPA, *Air/Superfund National Technical Guidance Study Series: Volume IV - Procedures for Dispersion Modeling and Air Monitoring for Superfund Air Pathway Analysis, Interim Final*, EPA - 450/1-89-004.

B. U.S. EPA, *Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air*, EPA-600/4-84-041.

C. NIOSH, *NIOSH Manual of Analytical Methods (NMAM).*

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1.03 CONTAMINANTS OF CONCERN:

Soil contamination can become airborne at the site due to a variety of circumstances depending upon the activities conducted at the site, the properties of the contaminants, and the weather conditions. The Contractor shall review the available analytical data for the Site and shall identify the contaminants of concern with the potential for airborne suspension and dispersion from the site. Analytical data summary tables from previous site investigations are included in the contract documents appendices for reference.

1.04 SUBMITTALS:

A. The Contractor shall submit an Air Monitoring Plan as part of his Site Health & Safety Plan to the Engineer for review and approval prior to beginning any Work at the Site.

B. Background ambient air monitoring data shall be provided to the Engineer for review prior to the start of construction activities.

C. The Contractor shall generate, and indicate in his Air Monitoring Plan, action levels for contaminants of concern and any other airborne contaminants that may be present at the perimeter of the site. Each action level shall have a specific response action.

D. Ongoing remediation air monitoring data shall be provided to the Engineer at a minimum on a weekly basis.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 BACKGROUND AIR MONITORING:

A. The Contractor shall perform background air monitoring for contaminants of concern (COCs) and respirable particulates prior to any intrusive activities. This will document background levels of particulates and COCs on-site and in the area prior to remediation work.

B. Background air monitoring shall be conducted at the site for at least two days prior to any intrusive activities.

3.02 AMBIENT AIR MONITORING:

A. Ambient air monitoring shall be conducted within the site and at the site perimeter to evaluate potential exposure to airborne emissions of COCs and respirable particulates resulting from remediation activities.

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B. Ambient air monitoring shall include both real-time continuous air monitoring using direct read instruments and periodic collection of air samples for off-site laboratory analysis for site COCs and respirable particulates.

C. Contractor shall set up a mobile air monitoring station downwind of activities at the Site to assess for ambient air conditions beyond the work zone. The mobile station will be equipped with real-time dust monitoring equipment and a Photo Ionization Detector (PID).

D. Prior to contaminated soil excavation, the Contractor shall conduct ambient air monitoring daily during those site preparation activities with the potential for releasing contaminants.

E. During excavation and handling of contaminated soil, the Contractor shall conduct ambient air monitoring continuously.

F. After soil excavation and handling, dust monitoring will be performed at 15-minute intervals downwind of clean fill handling activities to ensure that the criteria for total particulates are not exceeded.

G. Response Actions:

In the event any of the action levels identified by the Contractor are exceeded during monitoring, the Contractor shall immediately implement the following actions/responses:

1. Implement actions/responses identified in the Contractor's Health & Safety Plan,

2. Cease activities and continue to monitor until levels subside,

3. If levels do not subside, contact Engineer.

3.03 PERSONAL AIR MONITORING

A. The Contractor shall conduct personal air monitoring during excavation of contaminated soil activities in order to determine the potential for worker exposure.

B. Personal air monitoring results shall be compared to NIOSH/OSHA criteria and the action limits set by the Contractor.

C. Contractor shall collect samples from the breathing zone of at least one of the workers in the excavation zone and one worker in the decontamination zone. The individuals selected will be scheduled to work for at least eight hours within the designated area. Individuals who would be expected to have the potential to receive maximum exposure will be selected for air monitoring.

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D. At a minimum, the Contractor shall collect and analyze samples for COCs and particulate matter for personal air monitoring.

E. The Contractor shall collect personal air samples from workers in both work zones daily at the beginning of intrusive activities. Provided that results for the selected parameters do not exceed the NIOSH/OSHA criteria and the action limits set by the Contractor, the frequency of sampling and analysis may be decreased for each work zone.

F. Throughout the remedial activities, if any of the criteria or actions limits are exceeded, then engineering controls must be implemented and additional personal air samples must be collected and analyzed to ensure the effectiveness of the control measures as indicated above.

G. Real-time air monitoring will be conducted within the exclusion zone and within the contamination reduction zone continuously. An air monitoring instrument that has a particulate detection limit at or below the total particulate action level will be used. Calibration and operating procedures indicated in the instrument manual will be followed.

3.04 SAMPLING PROCEDURES:

A. Low volume air sampler shall be required for the collection of air samples to be submitted for laboratory analysis. The number and type of samplers shall be coordinated with the analytical laboratory.

B. All sampling equipment will be calibrated and maintained in accordance with manufacture's recommendations. Pumps will be calibrated on a daily basis both before and after the work day.

3.05 LABORATORY ANALYSIS:

A. Laboratory analytical methods shall be based on NIOSH/OSHA methods. Some of the methods may be modified to achieve the required detection limits. These methods may be modified depending on the selected laboratory's standard methods. In no instance will the method be modified in such a way that the required detection limits are compromised.

B. The detection limit is the lowest concentration of analyte that can be accurately detected by the method indicated.

C. The analytical laboratory shall follow the CTDEP Reasonable Confidence Protocol (RCP) analytical and reporting requirements for all analytical work. All analytical reports shall include the CTDEP Laboratory Certification Form completed in entirety as well as all other required information.

C. Completeness is a measure of the amount of valid data collected as compared to the

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amount intended to be collected. Circumstances such as the loss or breakage of samples, or poor laboratory QC may result in the data being unusable for the intended purpose. Completeness is calculated by dividing the amount of usable data collected by the amount of data that was intended to be collected. If completeness objectives are not being met, additional samples will be collected to increase the amount of usable data.

3.06 QUALITY ASSURANCE/QUALITY CONTROL:

The laboratories will be required to perform all of the internal quality control procedures that are specified in the methods. These include but are not limited to:

A. Blanks - The laboratory will analyze method blanks prepared and analyzed with each set of samples. These are a check of the accuracy of the system and indicate if there are positive biases.

B. Calibrations Checks - These are standards generally from a different source then the calibration standards that are analyzed along with the samples to determine if the system is functioning accurately.

C. Matrix Spike - A matrix spike is an actual sample that is spiked with a known amount of one or more target compounds. The matrix spike recovery is calculated from the analysis data.

D. Field QA/QC sample will be collected to ensure that the procedures used in the field to collect the samples do not result in sample bias or poor reproducibility. The field QA/QC samples will include:

1. Field Blanks - These are samples that accompany the filters and adsorbent cartridges from the laboratory into the field, are handled like samples, and are than sent back to the laboratory for analysis. These provide a measure of the bias due to both field and laboratory handling procedures. One field blank will be collected for approximately every 10 samples analyzed.

2. Field Duplicates - These samples are collected at the same time with the sample intakes placed at the same location using identical sampling apparatuses. Separate sampling pumps and apparatus will be required for field duplicate collection. Field duplicates provide an indication of the overall precision of the method. One field duplicate will be collected and analyzed for approximately every 10 samples analyzed.

END OF SECTION

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SECTION 02084

CONTROL OF AIRBORNE EMISSIONS

PART 1 - GENERAL

1.01 SUMMARY:

A. The Contractor shall conduct operations and maintain the project site in a manner that minimizes the creation and dispersion of dust, odor, vapors, and all other airborne emissions. Measures to control dust, odors, vapors, and other airborne emissions shall be used as necessary during the entire project. The purpose of these measures is to minimize the potential exposure of project and non-project personnel to airborne contaminants emanating from project activities.

PART 2 – PRODUCTS:

2.01 ENGINEERING CONTROL:

A. All materials to be used for odor control and/or airborne emission control which may come in contact with impacted soil to be disposed of shall be acceptable to the soil disposal facility. Furthermore, all such materials shall not render material unacceptable to disposal facilities, or cause interference with laboratory analytical methods. All materials to be used shall be approved by the Owner or their agent. All materials shall be applied by the Contractor in accordance with manufacturer's recommendations.

B. The Contractor may use the following materials to control odor and/or vapors at the project site.

1. Foam Concentrate: The Contractor may use foam concentrate that is designed for and is capable of suppressing odor and/or vapor emissions at the project site. The Contractor shall submit product information for review and approval.

2. Foam Stabilizer: The Contractor may use foam stabilizer that is designed to extend the duration of effectiveness of the foam concentrate in areas where prolonged emission suppression is required. The Contractor shall submit product information for review and approval.

3. Counteracting Chemicals: The Contractor may add chemical additives to neutralize, absorb, or counteract odors and/or vapor emissions.

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PART 3 - EXECUTION

3.01 DUST CONTROL:

A. The Contractor shall apply water or other approved materials to the site when dust control is necessary, according to action levels specified in the site Health and Safety Plan and/or Air Monitoring Plan. These materials shall be applied without interfering with excavation equipment or site operations and without creating nuisance conditions such as ponding or runoff.

3.02 ODOR/VAPOR EMISSION CONTROL:

A. If odor and/or vapor emissions exceed an action level established in the site Health and Safety Plan and/or Air Monitoring Plan, the Contractor shall modify/discontinue his work activities and/or apply an engineering control as necessary to reduce the emissions to acceptable levels.

B. Temporary foam shall be capable of suppressing emissions for a period up to 24 hours. If the action level is exceeded and an open excavation exists at the completion of the workday, permanent foam capable of suppressing vapors for a period in excess of 24 hours shall be applied to the excavation. Foam application shall be made to source areas as often as necessary to maintain airborne concentrations below the established action level.

END OF SECTION

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SECTION 02085

EQUIPMENT DECONTAMINATION

PART 1 - GENERAL

1.01 DESCRIPTION:

A. Furnish labor, materials, tools and equipment for decontamination of all equipment and supplies used for remediation. Decontamination shall be performed to prevent contamination of clean areas, cross contamination between contaminated areas, or incidental transport of contaminated materials off site.

1.02 SUBMITTALS:

A. The Contractor shall certify in writing that all equipment provided to the Site is free of contamination and that all equipment removed from the Site has been properly decontaminated as necessary and is free of contamination.

PART 2 - PRODUCTS

2.01 EQUIPMENT:

A. Decontamination Equipment:

1. Portable steam cleaning equipment.
2. Pressure washer.
3. Scrub brushes.

PART 3 - EXECUTION

3.01 EQUIPMENT DECONTAMINATION PROCEDURES:

A. All equipment shall be provided to the work site free of contamination.

B. The Contractor shall decontaminate all equipment that comes in contact with impacted soil or suspect material, either directly or indirectly, (i.e., excavation, sampling and testing equipment). Equipment decontamination shall be provided after completion of work at one location and prior to beginning work at another location, if so directed by the Owner or his agent(s).

C. Decontamination in PCB remediation areas shall be performed in accordance with TSCA 40 CFR 761.79.

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D. Heavy equipment, such as vehicles and large power tools, shall have dirt and grit physically removed. The equipment shall then be steam cleaned or washed under high pressure water spray, scrubbed with a water/mild soap solution (if required by the Owner or his agents), rinsed with steam or high pressure tap water, and air dried.

E. Light equipment such as hand tools shall have dirt and grit physically removed. The equipment shall then be scrubbed with a water/mild soap solution, rinsed with tap water, and air-dried.

F. Sampling equipment shall have dirt and grit physically removed. The equipment shall then be scrubbed with a water/mild soap solution, rinsed with tap water, rinsed with deionized water, rinsed with methanol, and air-dried.

G. All equipment decontamination shall be performed at a designated temporary decontamination area at the site. All decontamination wastes shall be collected and properly disposed of at an approved off-site disposal facility.

H. Following completion of the work, the temporary equipment decontamination area shall be removed and properly disposed of.

3.02 HEALTH AND SAFETY PROCEDURES:

A. Throughout all decontamination activities, the Contractor shall follow all applicable health and safety requirements.

END OF SECTION

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SECTION 02100

SITE PREPARATION

PART 1 - GENERAL

1.01 DESCRIPTION:

A. Provide labor, material, tools and equipment to prepare site as indicated and specified.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 EXISTING TREES AND VEGETATION:

A. Avoid cutting or injuring trees and vegetation outside project limit line and outside areas to be cleared as indicated, without Engineer's permission.

B. Accept responsibility for damages outside these lines.

3.02 EXISTING STRUCTURES AND PROPERTY:

A. Do not remove existing signs, posts, catchbasin frames and grates within construction path unless directed otherwise.

3.03 CLEARING:

A. Cut or remove trees, brush, and other vegetable matter such as snags, bark and refuse, from areas to be cleared. Limits of clearing are specified in the Contract Drawings.

B. Cut trees, stumps, and stubs to be cleared, except where clearing done by machinery, as close to ground surface as practicable, but no more than 6 in. above ground surface for small trees and 12 in. for larger trees.

3.04 GRUBBING, STRIPPING, DISPOSAL:

A. Remove stumps and roots larger than 3 in. in diameter to a depth of 12 in., and roots larger than 1/2 in. in diameter to a depth of 6 in. Measure depths to cut from existing ground surface or proposed finished grade, whichever is lower.

B. Remove soil from stumps and roots. Collect soil removed from stumps and roots and manage with other contaminated soil from the site. Do not take soil from site.

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C. Dispose of vegetative material and trees from clearing and grubbing off site at a facility permitted to accept such waste. In doing so, observe all applicable laws, ordinances, rules and regulations.

END OF SECTION

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SECTION 02210

EARTH EXCAVATION, BACKFILL, FILL AND GRADING

PART 1 - GENERAL

1.01 DESCRIPTION:

A. Perform earth excavation, backfill, fill and grading as indicated or specified.

B. Provide equipment for backfilling excavations with historic clean two foot gravel layer (where present) and on-site building materials as indicated and specified.

C. Grade surfaces to meet proposed finished grades.

D. Remove boulders within the excavation limits.

1.02 REFERENCES:

A. American Society for Testing and Materials (ASTM) Publications:

1. D421: Practice for Dry Preparation of Soil Samples for Particle Size Analysis and Determination of Soil Constants.

2. D422: Test Method for Particle-Size Analysis of Soils.

3. D1140: Test Method for Amount of Material in Soils Finer than the No. 200 (75 Fm) Sieve.

4. D1556: Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method.

5. D1557: Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lb/ft^3 (600 kN-m/m^3)).

6. D2167: Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method.

7. D2922: Test Method for Density of Soil and Soil-Aggregate in Place by Nuclear Methods. (Shallow Depth).

8. D3017: Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth).

9. D4318: Test Method for Liquid Limit, Plastic Limit and Plasticity Index of Soils.

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10. D4718: Practice for Correction of Unit Weight and Water Content for Soils Containing Oversized Particles.

11. D4944: Test Method for Field Determination of Water (Moisture) Content of Soil by the Calcium Carbide Pressure Tester Method.

12. D4959: Test Method for Field Determination of Water (Moisture) Content of Soil by Direct Heating Method.

13. D5080: Test Method for Rapid Determination of Percent Compaction.

B. Occupational Safety and Health Administration (OSHA) Standards and Regulations contained in Title 29: Subpart P - Excavations, Trenching and Shoring.

1.03 DEFINITIONS:

A. Percentage of compaction is defined as the ratio of the field dry density, as determined by ASTM D1556 to the maximum dry density determined by ASTM D1557 Procedure C, multiplied by 100.

B. Proof Roll: Compaction with a minimum of 4 passes of a vibratory steel drum or rubber tire roller. Vibratory plate compactors shall be used in small areas where vibratory steel drum or rubber tire roller cannot be used.

C. Acceptable Material: Material which does not contain organic silt or organic clay, peat, vegetation, wood or roots, stones or rock fragments over 6-inch [15 cm] in diameter, porous biodegradable matter, loose or soft fill, excavated pavement, construction debris, or refuse. Stones or rock fragments shall not exceed 40 percent by weight of the backfill material.

D. Unacceptable Materials: Materials does not comply with the requirements for the acceptable material or which cannot be compacted to the specified or indicated density.

1.04 SUBMITTALS:

A. Submit the following in accordance with Section 01300 - Submittals::

1. Qualifications of the Contractor's Independent Testing Laboratory as specified in Paragraph 1.06 I, four (4) weeks prior to the execution of any earth excavation, backfilling, filling, or compaction process.

B. All backfill materials shall be submitted to the Engineer for approval prior to backfilling and filling.

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1. Submittal shall include laboratory testing results of gradation and moisture-density relationship, as well as specific location of the source and the date when the sample was taken.

C. Submit written confirmation of fill lift thickness, in-place soil moisture content, and percentage of compaction.

1.05 QUALITY ASSURANCE AND CONTROL:

A. Excavations shall be performed in the dry, and kept free from water, snow and ice during construction. Bedding and backfill material shall not be placed in water. Water shall not be allowed to rise up on or flow over the bedding and backfill material.

B. The Contractor shall be solely responsible for making all excavations in a safe manner. All excavation, trenching, and related sheeting, bracing, etc. shall comply with the requirements of OSHA excavation safety standards (29 CFR Part 1926 Subpart P) and State requirements. Where conflict between OSHA and State regulations exists, the more stringent requirements shall apply.

C. Do not excavate, construct embankments, or fill until all the required submittals have been reviewed by the Engineer.

D. Formulate excavation, backfilling, and filling schedule and procedures to eliminate possibility of undermining or disturbing foundations of partially and completed structures, pipelines and embankments or existing structures and pipelines.

E. Employ an independent testing laboratory to perform particle size and gradation analyses in accordance with ASTM D422, and to determine compactibility in accordance with ASTM D1557 for all the proposed backfill and fill materials, and monitoring field compaction operations. The Contractor's independent testing laboratory shall have the following qualifications:

1. Be accredited by the American Associates of State Highway and Transportation Officials (AASHTO) Accreditation Program.

2. Have three (3) years experience in sampling, testing and analysis of soil and aggregates, and monitoring field compaction operations.

3. Able to provide three (3) references from previous work.

F. Field Testing and Inspections:

1. By Contractor's independent testing laboratory. Acceptable to the Owner or his agent, at Contractor's expense as specified in Paragraph 1.05 I.

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2. Location of tests mutually acceptable to testing laboratory and the Engineer or as directed by the Engineer.

3. In the event compacted material does not meet specified in-place density, recompact material and retest this area until specified results are obtained at no additional to the Owner.

4. Contractor's testing laboratory to perform inspection at least once daily to confirm lift thickness and compaction effort for entire fill area.

G. Methods of Field Testing:

1. In-Place Density: ASTM D1556, ASTM D2167, or ASTM D2922.

2. In-Place Moisture Content: ASTM D3017, ASTM D4944, or ASTM D4959.

H. Material Testing Frequency: The following testing frequencies are minimum required for all structural and non-structural fill, grading and embankment.

1. Field In-Place Density and Moisture Content - Screened gravel and crushed stone shall be compacted as specified and indicated. For other backfill and fill materials, minimum test frequency shall be as follows, and no less than one test per:

a. Open excavations every 3,500 square feet per lift

2. Moisture Density - One per source, except for screened gravel and crushed stone. Repeat the moisture density test for every 5,000 cubic yard of material use, and whenever visual inspection indicates a change in material gradation as determined by the Engineer.

3. Gradation Analysis - A minimum of one per source and for each moisture density test and whenever visual inspection indicates a change in material gradation.

I. Construction Tolerances:

1. Construct finished surfaces to plus or minus 3 inches [7.5 cm] of the elevations indicated.

2. Grade cut and fill areas to plus or minus 3 inches [7.5 cm] of the grades indicated.

3. Complete embankment edges to plus or minus 6 inches [15 cm] of the slope lines indicated.

4. Provide the Engineer with adequate survey information to verify compliance with above tolerances.

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J. Cut pavement with a saw or pneumatic tools to prevent damage to remaining pavement without extra compensation. Where pavement is removed in large pieces, segregate pieces for separate handling and disposal.

K. Pipes, drains, and other utilities may exist in certain locations not indicated on drawings. No attempt has been made to show all services. Completeness or accuracy of information given is not guaranteed.

L. Dig test pits considered as incidental to the normal excavation as indicated and specified in this Section, at no additional compensation. When the Engineer orders test pits beyond limits of excavation, payment for such test pits shall be paid as extra work on a time and materials basis.

M. Carefully support and protect from damage, existing pipes, poles, wires, fences, curbings, property line markers, and other structures, which the Engineer determines must be preserved in place without being temporarily or permanently relocated. Should such items be damaged, restore without compensation therefore, to at least as good condition as that in which they were found immediately before the work was begun.

N. Whenever certain existing structures, as described below, are encountered, and the Engineer so directs, change the location, remove and later restore, or replace such structures, or assist the Owner in doing so. Such work to be paid for under applicable items of work, otherwise as Extra Work.

O. In removing existing pipes or other structures, include for payment only those new materials which are necessary to replace those unavoidably damaged as determined by the Engineer.

P. The preceding two paragraphs apply to pipes, wires, and other structures which meet the following: (a) are not indicated on the drawings or otherwise provided for, (b) encroach upon or are encountered near and substantially parallel to the edge of the excavation, and (c) in the opinion of the Engineer, will impede progress to such an extent that satisfactory construction cannot proceed until they have been changed in location, removed (to be later restored), or replaced.

Q. Restore existing property or structures as promptly as practicable.

R. If material unacceptable for foundation (in the opinion of the Engineer) is found at or below the grade to which excavation would normally be carried in accordance with the drawings and/or specifications, remove such material to the required width and depth as directed by the Engineer and replace it with screened gravel, select borrow, or concrete.

S. Do not remove excavation materials from the site of the work or dispose of except as directed or permitted by the Engineer.

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T. Haul away and dispose of surplus excavated materials at locations directed by the Engineer at no additional cost to the Owner.

U. During progress of work, conduct earth moving operations and maintain work site so as to minimize the creation and dispersion of dust. Furnish and spread calcium chloride if the Engineer decides that it is necessary for more effective dust control.

V. Provide suitable and safe bridges and other crossings where required for accommodation of travel, and to provide access to private property during construction, and remove said structures thereafter.

PART 2 - PRODUCTS

2.01 GENERAL:

A. Use only acceptable materials from excavations or borrows.

B. Provide screened gravel and bank-run gravel where indicated.

C. Provide erosion/sedimentation control devices as indicated, including geotextile fabric in accordance with Section 02273.

2.02 EQUIPMENT:

A. The compaction equipment shall be selected by the Contractor, and shall be capable of consistently achieving the specified compaction requirements. The selected compaction equipment shall meet the following minimum requirements:

1. Manually operated vibratory plate compactors weighing no less than 200 pounds [90 kg] with vibration frequency no less than 1600 cycles per minute.

2. Vibratory steel drum or rubber tire roller weighing at least 12,000 pounds [5450 kg].

PART 3 - EXECUTION

3.01 SITE MAINTENANCE:

A. Roadway and Site Leveling: Grade temporary roadway and site as to maintain them in a level un-rutted condition and to eliminate puddles of surface and subsurface water.

3.02 EXCAVATION:

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A. Execution of any earth excavation shall not commence until the related excavation support systems, and backfill and fill materials submittals are reviewed by the Engineer and all Engineer's comments satisfactorily addressed.

B. Carry out program of excavation and excavation support systems to eliminate possibility of undermining or disturbing foundations of existing structures or of work previously completed under this contract.

C. Excavate to lines and grades indicated in an orderly and continuous program.

D. Establish limits of excavation to allow adequate working space for installing forms and for safety of personnel.

E. Excavate to elevations indicated, or deeper, as directed by the Engineer, to remove unacceptable bottom material.

F. Exercise care to preserve material below and beyond the lines of excavations.

G. Place excavated material at the approved stockpile locations and in no case closer than 3 feet [90 cm] from edge of excavations to prevent cave-ins of bank slides.

H. Regard small, less than one cubic yard, boulders, rock fragments, and concrete encountered during excavation as a normal part of in-place soils and not included for payment as rock.

3.03 SEPARATION OF EXCAVATED MATERIALS FOR REUSE:

A. Remove only contaminated soil beneath historic two foot clean gravel layer.

B. Carefully remove acceptable material (i.e. historic two foot clean gravel layer) from excavated areas and store separately for further use as backfill material as directed by Engineer.

3.04 EXCAVATION NEAR EXISTING STRUCTURES:

A. Discontinue digging by machinery when excavation approaches pipes, conduits, or other underground structures. Continue excavation by use of hand tools. Include such manual excavation in work to be done when incidental to normal excavation and under items involving normal excavation.

B. Excavate test pits when determination of exact location of pipe or other underground structure is necessary for doing work properly.

3.05 CARE AND RESTORATION OF PROPERTY:

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A. Enclose uncut tree trunks adjacent to work in wooden boxes of such height as may be necessary for protection from injury from piled material, equipment, operations, or otherwise due to work. Operate excavating machinery and cranes of suitable type with care to prevent injury to trees not to be cut and particularly to overhanging branches and limbs.

B. Cut all branches, limbs, and roots smoothly and neatly without splitting or crushing. Neatly trim, cut the injured portions and cover with an application of grafting wax or tree healing paint as directed.

C. Protect cultivated hedges, shrubs, and plants which might be injured by the Contractor's operations by suitable means or dig up and temporarily replant and maintain. After construction operations have been substantially completed, replant in original positions and care for until growth is reestablished. If cultivated hedges, shrubs, and plants are injured to such a degree as to effect their growth or diminish in their beauty or usefulness, replace by items of equal kind and quality existing at the start of the work.

D. Do not use or operate tractors, bulldozers, or other power-operated equipment on paved surfaces when their treads or wheels of which are so shaped as to cut or otherwise damage such surfaces.

E. Restore surfaces damaged by the Contractor's operations to a condition at least equal to that in which they were found immediately before work commenced. Use suitable materials and methods for such restoration.

3.06 BACKFILLING - GENERAL:

A. Do not place frozen materials in backfill or place backfill upon frozen material. Remove previously frozen material or treat before new backfill is placed.

B. Do not place, spread, roll or compact fill material during unfavorable weather conditions. If interrupted by heavy rain or other unfavorable conditions, do not resume until ascertaining that the moisture content and density of the previously placed soil are as specified.

C. Do not use puddling, ponding or flooding as a means of compaction.

3.07 MATERIAL PLACEMENT AND COMPACTION REQUIREMENTS:

A. Historic Two Foot Clean Gravel Layer for use as non-structural fill:

1. Dump and spread in layers not to exceed 8-in. [20 cm] uncompacted thickness.

2. Compact using excavator or bulldozer by walking in the material. Provide additional compaction where directed by the Engineer.

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B. On-site building materials (i.e. crushed brick and concrete) and backfill materials for use as non-structural fill:

1. Dump and spread in layers not to exceed 8-in. [20 cm] uncompacted thickness.

2. Compact using excavator or bulldozer by walking in the material. Provide additional compaction where directed by the Engineer.

C. Backfilling and filling operation shall be suspended in areas where tests are being made until tests are completed and the testing laboratory has advised the Engineer that adequate densities are obtained.

3.08 COMPACTION CONTROL OF BACKFILL, FILL, AND EMBANKMENT:

A. Compact to density specified and indicated for various types of material. Control moisture content of material being placed as specified or if not specified, at a level slightly lower than optimum.

B. The soil testing laboratory shall provide inspection during filling or backfilling operations to ensure compaction of screened gravel or crushed stone and record compaction equipment in use.

C. Moisture control may be required either at the stockpile area, pits, or on embankment or backfill. Increase moisture content when material is too dry by sprinkling or other means of wetting uniformly. Reduce moisture content when material is too wet by using ditches, pumps, drainage wells, or other devices and by exposing the greatest possible area to sun and air in conjunction with harrowing, plowing, spreading of material or any other effective methods.

3.09 ALLOWANCE FOR SHRINKAGE:

A. Build embankments or backfill to a height above finished grade which will, in the opinion of the Engineer, allow for the shrinkage or consolidation of material. Initially, provide at all points, an excess of at least one percent of total height of backfill measured from stripped surface to top of finished surface.

B. Supply specified materials and build up low places as directed, without additional cost if embankment or backfilling settles so as to be below the indicated level for proposed finished surface at any time before final acceptance of the work.

END OF SECTION

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SECTION 02273

GEOTEXTILE FABRIC

PART 1 - GENERAL

1.01 DESCRIPTION:

A. Provide geotextile fabric for separation of existing soil from backfill and/or fill material, as indicated or specified.

B. Provide non-woven geotextile fabric for temporary road reinforcement, as indicated or specified.

C. Provide geotextile fabric for silt fence as indicated or specified.

1.02 REFERENCES:

A. American Society for Testing and Materials (ASTM) Publications:

1. D4355: Test Method for Deterioration of Geotextiles from Exposure to Ultraviolet Light and Water (Xenon-ARC Type Apparatus).

2. D4491: Test Methods for Water Permeability of Geotextile by Permittivity.

3. D4533: Test Method for Trapezoid Tearing Strength of Geotextiles.

4. D4632: Test Method for Grab Breaking Load and Elongation of Geotextiles.

5. D4751: Test Method for Determining Apparent Opening Size of a Geotextile.

6. D4833: Test Method for Index Puncture Resistance of Geotextiles, Geomembranes and Related Products.

1.03 SUBMITTALS:

A. Submit the following in accordance with Section 01300 - SUBMITTALS.

1. At least two (2) weeks prior to shipment, submit manufacturer's certificate of compliance and physical property data sheet indicating that requirements for materials and manufacture are in conformance as specified.

2. For informational purposes only, submit manufacturer's printed installation instructions.

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1.04 QUALITY ASSURANCE:

A. Provide in accordance with Section 01400 and as specified.

B. General:

1. Producer of geotextile fabric to maintain competent laboratory at point of manufacture to insure quality control in accordance with ASTM testing procedures. Laboratory to maintain records of quality control results.

2. Do not expose geotextile fabric, except the geotextile fabric for silt fence, to ultraviolet radiation (sunlight) for more than 14 days total in period of time following manufacture until geotextile fabric is installed and covered with fill or backfill material.

3. Take all precautions to protect geotextile fabric from damage resulting from any cause. Either repair or replace geotextile fabric to Owner or his agent's satisfaction at no additional cost to the Owner.

1.05 DELIVERY, STORAGE AND HANDLING:

A. Provide as specified.

B. Provide geotextile fabric in rolls wrapped with protective covering to protect geotextile fabric from mud, dirt, dust, and debris. Label each roll of geotextile fabric with number or symbol to identify production run.

C. Protect geotextile fabric from sunlight during transportation and storage. Do not leave geotextile fabric exposed to sunlight for more than two (2) weeks during installation operations.

PART 2 - PRODUCTS

2.01 MANUFACTURERS:

A. Provide the following nonwoven geotextile fabric:

1. Trevira 011/200 as manufactured by Hoechst Celanese Corp., Spartanburg, South Carolina.

2. Mirafi 160N as manufactured by Mirafi, Pendergrass, GA.

3. Amoco 4551 as manufactured by Amoco Fabrics and Fibers Co., Atlanta, GA.

4. Or acceptable equivalent product.

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B. Provide the following woven geotextile fabric except for silt fence:

1. Amoco 2002 as manufactured by Amoco Fabrics and Fibers Co., Atlanta, GA.

2. Mirafi 500X as manufactured by Mirafi, Pendergrass, GA.

3. Linq GTF 200 as manufactured by Linq Industrial Fabrics, Summerville, SC.

4. Or acceptable equivalent product.

C. Provide the following woven geotextile fabric for silt fence:

1. Amoco 2122 as manufactured by Amoco Fabrics and Fibers Co., Atlanta, GA.

2. Mirafi 100X as manufactured by Mirafi, Pendergrass, GA.

3. Geotex 910SC as manufactured by Synthetic Industry, Chattanooga, TN.

4. Or acceptable equivalent product.

2.02 MATERIAL:

A. Geotextile fabric shall conforms to test requirements for minimum average roll value (weakest principle direction) for strength properties of any individual roll tested from manufacturing lot or lots of particular shipment in excess of minimum average roll value (weakest principle direction) as specified hereafter.

B. Physical Properties of Minimum Average Roll of the nonwoven geotextile fabric shall be:

Property	ASTM Test Method	Units	Value
1. Grab Strength	D4632	lbs [N]	150 [670](min.)
2. Grab Elongation	D4632	%	50 (min.)
3. Trapezoidal Tear Strength	D4533	lbs [N]	60 [270](min.)
4. Puncture Strength	D4833	lbs [N]	75 [330](min.)
5. Permittivity	D4491	sec -1	1.3 (min.)
6. Apparent Opening Size	D4751	Sieve Number	70-100

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7. Ultraviolet Stability	D4355	Percent	70 (min.)

C. Woven geotextile fabric, except for silt fence, shall be:

Property	ASTM Test Method	Units	Value
1. Grab Strength	D4632	lbs [N]	200 [900](min.)
2. Grab Elongation	D4632	%	15 (min.)
3. Trapezoidal Tear Strength	D4533	lbs [N]	75 [300](min.)
4. Puncture Strength	D4833	lbs [N]	80 [350](min.)
5. Permittivity	D4491	sec -1	0.02 (min.)
6. Apparent Opening Size	D4751	Sieve Number	30-70
7. Ultraviolet Stability	D4355	Percent	70 (min.)

D. Physical Properties of Minimum Average Roll of the woven geotextile fabric for silt fence shall be:

Property	ASTM Test Method	Units	Value
1. Grab Strength	D4632	lbs [N]	100[450](min.)
2. Permittivity	D4491	sec -1	0.10 (min.)
3. Apparent Opening Size	D4751	Sieve Number	20-30
4. Ultraviolet Stability	D4355	Percent	70 (min.)

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PART 3 - EXECUTION:

3.01 INSTALLATION:

A. Install geotextile fabric in accordance with manufacturer's printed instructions.

B. Overlap geotextile fabric 18 inches [45 cm] minimum for unsewn lap joint. Overlap fabric six (6) inches [15 cm] at seam for sewn joint.

C. Do not permit traffic or construction equipment to travel directly on geotextile fabric.

D. Place geotextile fabric in relatively smooth condition to prevent tearing or puncturing. Lay geotextile fabric loosely but without wrinkles or creases so that placement of the backfill materials will not stretch or tear geotextile fabric. Leave sufficient slack in geotextile fabric around irregularities to allow for readjustments.

E. Patch all tears in geotextile fabric by placing additional section of geotextile fabric over tear with a minimum of three (3) feet [90 cm] overlay.

F. Extend the geotextile fabric and wrap around the screened gravel or crushed stone along the perimeter of the foundation.

G. Install silt fence in accordance with the manufacturer's printed instructions and as indicated.

END OF SECTION

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APPENDIX A
HISTORICAL LABORATORY ANALYTICAL RESULTS FOR SOIL

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AECOM, Supplemental Investigation and Soil Re-Use Evaluation

August 2009

TABLE 3A
Summary of Soil Sample Analytical Data

Supplemental Investigation and Soil Re-Use Evaluation
INSILCO, Factory H
Meriden, Connecticut
AECOM Environment
August 2009

Parameter	CT RSR Criteria			SAMPLE LOCATION								
				AOC 15 A/B (DEBRIS PILES), SA-B (CONTAMINATED SOIL PILES), SA-C (ASPHALT PILES), and SA-F (IMPACTED SOIL PILE, STAGING AREA #1)								
	I/C DEC	RES DEC	GB PMC	ME-SS-01 0-1 FT	ME-SS-02 0-1 FT	ME-SS-03 0-1 FT	ME-SS-04 0-1 FT	ME-SS-05 0-1 FT	ME-SS-06 0-1 FT	ME-SS-07 0-1 FT	ME-SS-08 0-1 FT	ME-SS-DUP
Sampling Date				2/17/09	2/17/09	2/17/09	2/17/09	2/17/09	2/17/09	2/17/09	2/17/09	2/17/09
Laboratory Report Number				LIMT-23332	LIMT-23332/23698/23748	LIMT-23332	LIMT-23332	LIMT-23332/23748	LIMT-23332/23695/23748	LIMT-23332/23748	LIMT-23332	LIMT-23332
CTDEP ETPH (mg/kg)												
ETPH	2,500	500	2,500	NT	NT	NT	NT	NT	NT	NT	NT	NT
PCBs 8082 (mg/kg)				NT	NT	NT	NT	NT	NT	NT	NT	NT
VOCs 8260 (mg/kg)												
Naphthalene	2,500	1,000	56	NT	NT	NT	NT	NT	NT	NT	NT	NT
Tetrachloroethylene	110	12	~	NT	NT	NT	NT	NT	NT	NT	NT	NT
Trichloroethylene	520	56	~	NT	NT	NT	NT	NT	NT	NT	NT	NT
VOCs 8260 - solid (mg/kg)				NT	NT	NT	NT	NT	NT	NT	NT	NT
CTDEP 15 RSR Metals (mg/kg)												
Arsenic†	10	10	NDC	NT	NT	NT	NT	NT	NT	NT	NT	NT
Barium†	140,000	4,700	NDC	NT	NT	NT	NT	NT	NT	NT	NT	NT
Beryllium	2	2	NDC	NT	NT	NT	NT	NT	NT	NT	NT	NT
Cadmium†	1,000	34	NDC	NT	NT	NT	NT	NT	NT	NT	NT	NT
Chromium†	~	~	NDC	NT	NT	NT	NT	NT	NT	NT	NT	NT
Copper	76,000	2,500	NDC	144	1,950	66.2	406	108	742	1,060	336	305
Lead†	1,000	400	NDC	57.8	435	159	245	39.2	252	744	565	492
Mercury†	610	20	NDC	NT	NT	NT	NT	NT	NT	NT	NT	NT
Nickel	7,500	1,400	NDC	NT	NT	NT	NT	NT	NT	NT	NT	NT
Silver†	10,000	340	NDC	NT	NT	NT	NT	NT	NT	NT	NT	NT
Vanadium	14,000	470	NDC	NT	NT	NT	NT	NT	NT	NT	NT	NT
Zinc	610,000	20,000	NDC	NT	NT	NT	NT	NT	NT	NT	NT	NT
Cyanide 9014 (mg/kg)												
Cyanide	41,000	1,400	NDC	NT	NT	NT	NT	NT	NT	NT	NT	NT
SPLP Metals (ug/L)												
Silver	NDC	NDC	360	NT	NT	NT	NT	NT	NT	NT	NT	NT
Copper	NDC	NDC	13,000	NT	6,760 J	NT	NT	<25.0 UJ	NT	NT	NT	NT
Cyanide	NDC	NDC	2000000	NT	NT	NT	NT	NT	NT	NT	NT	NT
Lead	NDC	NDC	150	NT	NT	NT	NT	NT	37.5	101	NT	NT
Mercury	NDC	NDC	20000	NT	NT	NT	NT	NT	NT	NT	NT	NT
PAHs 8270C (mg/kG)												
Acenaphthene	2,500	1,000	84	<0.201	2.40	<0.221	<0.195	<0.182	<0.720	0.652	<0.369	<0.380
Anthracene	2,500	1,000	400	<0.201	8.44	<0.221	<0.195	<0.182	1.34	2.03	0.938	1.21
Benzo(a)anthracene	7.8	1	1	0.285	24.1	0.449	0.609	<0.182	3.34***	4.12**	3.23**	3.87**
Benzo(a)pyrene	1	1	1	0.229	21.1***	0.449	0.586	<0.182	3.27***	2.97**	3.06**	3.56**
Benzo(b)fluoranthene	7.8	1	1	0.273	27.4***	0.674	0.704	0.277	4.29**	3.98**	4.33**	4.08**
Benzo(g,h,i)perylene	2,500	1,000	42	<0.201	5.71	<0.221	0.259	<0.182	1.37	1.12	1.34	1.62
Benzo(k)fluoranthene	78	8.4	1	<0.201	7.39***	0.288	0.301	<0.182	1.52***	1.56**	1.8**	1.85**
Chrysene	780	84	1	0.314	25.4***	0.553	0.659	0.198	3.55***	3.92**	3.41**	3.96**
Dibenz(a,h)anthracene	1	1	1	<0.201	1.8***	<0.221	<0.195	<0.182	<0.720	0.360	0.402	0.492
Fluoranthene	2,500	1,000	56	0.334	49.4	0.654	0.786	0.226	6.24	6.34	6.45	6.66
Fluorene	2,500	1,000	56	<0.201	4.38	<0.221	<0.195	<0.182	<0.720	0.655	0.515	0.622
Indeno(1,2,3-cd)pyrene	7.8	1	1	<0.201	7.08***	0.234	0.329	<0.182	1.7***	1.4**	1.82**	1.9**
2-Methylnaphthalene	2,500	474	9.8	<0.201	1.96	<0.221	<0.195	<0.182	<0.720	0.239	<0.369	<0.380
Naphthalene	2,500	1,000	56	<0.201	2.28	<0.221	<0.195	<0.182	<0.720	0.281	<0.369	<0.380
Phenanthrene	2,500	1,000	40	<0.201	53.4***	0.350	0.647	<0.182	6.09	7.53	3.94	4.98
Pyrene	2,500	1,000	40	0.386	46.2***	0.603	0.849	<0.182	5.09	5.52	5.53	5.33
SPLP PAHs 8270C (ug/l)			(GA GWPC x 10)									
Acenaphthene	NDC	NDC	4,200	NT	<0.30	NT	NT	NT	<0.30	NT	NT	NT
Acenaphthylene	NDC	NDC	4,200	NT	0.3 J	NT	NT	NT	<0.30 UJ	NT	NT	NT
Anthracene	NDC	NDC	20,000	NT	0.21 J	NT	NT	NT	<0.20 UJ	NT	NT	NT
Benzo(a)anthracene	NDC	NDC	0.6	NT	0.61 J	NT	NT	NT	<0.050 UJ	NT	NT	NT
Benzo(a)pyrene	NDC	NDC	2	NT	0.39 J	NT	NT	NT	<0.100 UJ	NT	NT	NT
Benzo(b)fluoranthene	NDC	NDC	0.8	NT	0.65 J	NT	NT	NT	<0.050 UJ	NT	NT	NT
Benzo(g,h,i)perylene	NDC	NDC	42	NT	<0.500 UJ	NT	NT	NT	<0.500 UJ	NT	NT	NT
Chrysene	NDC	NDC	48	NT	0.49 J	NT	NT	NT	<0.20 UJ	NT	NT	NT
Fluoranthene	NDC	NDC	2,800	NT	1.18 J	NT	NT	NT	<0.50 UJ	NT	NT	NT
Fluorene	NDC	NDC	2,800	NT	<1.00	NT	NT	NT	<1.00	NT	NT	NT
2-Methylnaphthalene	NDC	NDC	490	NT	<1.00	NT	NT	NT	<1.00	NT	NT	NT
Naphthalene	NDC	NDC	2,800	NT	<1.00	NT	NT	NT	<1.00	NT	NT	NT
Phenanthrene	NDC	NDC	4,200	NT	1.66 J	NT	NT	NT	<0.05 UJ	NT	NT	NT
Pyrene	NDC	NDC	2,000	NT	1.14 J	NT	NT	NT	<1.00 UJ	NT	NT	NT
% Solids				83.0	85.6	75.5	85.7	91.6	92.7	84.2	90.5	87.8

Notes:
1. An asterisk (*) following a detection limit indicates that the minumum laboratory reporting limit exceeds one or more of the regulatory criteria.
2. NT = Not tested.
3. ~ = No Standard available
4. Detected compounds only are shown on this table (with the exception of SPLP metals, all are shown). For a complete analyte list, see laboratory analytical reports.
5. Bolded values indicate the compound was reported at the concentration indicated.
6. Soil samples with shaded values exceed the RSR Direct Exposure Criteria (DEC) for the parameter.
7. Soil samples with bolded outline exceed the RSR PMC for the parameter.
8. RSR criteria are in same units as analyte.
9. † = RCRA 8 Metal. Samples were analyzed either for select metals, RCRA 8 or CTDEP 15 Metals.
10. SPLP analyses not shown may have been performed at certain locations. Only detected SPLP results are shown.
11. If detected, SPLP PAH results are compared to the GWPCx10.

** Based on comparison of mass analyses results to SPLP results from other samples, mass analytical results may not exceed the GB PMC if the sample was reanalyzed for SPLP.
*** Based on SPLP results from this sample, mass analyses results do not exceed the GB PMC.

RSRs = Remediation Standard Regulations
Res DEC = Residential Direct Exposure Criteria
I/C DEC = Industrial/Commercial Direct Exposure Criteria
PMC = Pollutant Mobility Criteria

VOCs = Volatile Organic Compounds
PAHs = Poly-cyclic Aromatic Hydrocarbons
ETPH = Extractable Petroleum Hydrocarbons
PCBs = Poly Chlorinated Biphenyls
ND = Not Detected above laboratory detection limit (shown in parenthesis)
NT = Not Tested
NDC = Not Directly Comparable based on the analytical method

EB= analyte was detected in the associated equipment blank and there is an indeterminate amount of error in the result presented
J = concentration is an estimate
UJ =reporting limit is an estimate

TABLE 3A
l Sample Analytical Data

tion and Soil Re-Use Evaluation
CO, Factory H
n, Connecticut
M Environment
ugust 2009

SAMPLING LOCATION							
AOCs 24 (FORMER UST) and 17 (FORMER BUILDING D)							
FT	ME-SB-07 0-1 FT	ME-SB-07 2-4 FT	ME-SB-DUP	ME-SS-09 1-1.5 FT	ME-SS-10 0-1 FT	ME-SS-11 1-1.5 FT	ME-SS-12 0-1 FT
	2/17/09	2/17/09	2/17/09	2/17/09	2/17/09	2/17/09	2/17/09
	LIMT-23332	LIMT-23332/23748	LIMT-23332	LIMT-2333223748	LIMT-23332	LIMT-23332	LIMT-23332/23748
	NT	NT	NT	13	110	<12	72
	NT	NT	NT	NT	NT	NT	NT
	<0.010	<0.009	<0.009	NT	NT	NT	NT
	0.008	0.042 J	0.021 J	NT	NT	NT	NT
	0.12	0.320 J	0.180 J	NT	NT	NT	NT
	NT	NT	NT	NT	NT	NT	NT
	NT	NT	NT	2.71	2.89	<2.80	9.21
	NT	NT	NT	57.5	19.3	32.3	109
	NT	NT	NT	<0.27	<0.27	<0.28	<0.31
	NT	NT	NT	<0.27	0.42	<0.28	0.75
	NT	NT	NT	15.1	3.36	3.77	18.1
	NT	NT	NT	19.6	87.1	20.8	1,050
	518	472 J	244 J	6.05	11.1	7.91	194
	NT	NT	NT	0.017	0.018	<0.012	0.220
	NT	NT	NT	11.3	11.5	3.64	218
	NT	NT	NT	<0.54	<0.53	<0.56	11.5
	NT	NT	NT	33.0	86.4	11.3	57.9
	NT	NT	NT	33.6 J	53.2 J	15.5 J	426 J
	NT	NT	NT	NT	NT	NT	NT
	NT	NT	NT	NT	NT	NT	NT
	NT	NT	NT	NT	NT	NT	120 J
	NT	NT	NT	NT	NT	NT	NT
	NT	28.9	NT	<5.00	NT	NT	NT
	NT	NT	NT	NT	NT	NT	NT
	<0.977	<0.197	<0.208	<0.179	<0.353	<0.187	<1.02
	<0.977	<0.197	<0.208	<0.179	<0.353	<0.187	<1.02
	1.04**	<0.197	0.269	<0.179	<0.353	<0.187	2.6**
	<0.977	<0.197	<0.208	<0.179	<0.353	<0.187	2.25**
	1.59**	<0.197	0.264	<0.179	<0.353	<0.187	2.99**
	<0.977	<0.197	<0.208	<0.179	<0.353	<0.187	1.06
	<0.977	<0.197	<0.208	<0.179	<0.353	<0.187	1.21**
	1.28**	<0.197	0.288	<0.179	<0.353	<0.187	2.84**
	<0.977	<0.197	<0.208	<0.179	<0.353	<0.187	<1.02*
	2.37	<0.197 UJ	0.394 J	<0.179	<0.353	<0.187	4.39
	<0.977	<0.197	<0.208	<0.179	<0.353	<0.187	<1.02
	<0.977	<0.197	<0.208	<0.179	<0.353	<0.187	1.35**
	<0.977	<0.197	<0.208	<0.179	<0.353	<0.187	<1.02*
	<0.977	<0.197	<0.208	<0.179	<0.353	1.18	<1.02
	<0.977	<0.197	0.267	<0.179	<0.353	<0.187	2.64
	1.84	<0.197 UJ	0.403 J	<0.179	<0.353	<0.187	3.66
	NT	NT	NT	NT	NT	NT	NT
	NT	NT	NT	NT	NT	NT	NT
	NT	NT	NT	NT	NT	NT	NT
	NT	NT	NT	NT	NT	NT	NT
	NT	NT	NT	NT	NT	NT	NT
	NT	NT	NT	NT	NT	NT	NT
	NT	NT	NT	NT	NT	NT	NT
	NT	NT	NT	NT	NT	NT	NT
	NT	NT	NT	NT	NT	NT	NT
	NT	NT	NT	NT	NT	NT	NT
	NT	NT	NT	NT	NT	NT	NT
	NT	NT	NT	NT	NT	NT	NT
	NT	NT	NT	NT	NT	NT	NT
	85.3	84.8	80.3	93.4	94.6	89.5	82.1

TABLE 3A
Summary of Soil Sample Analytical Data

Supplemental Investigation and Soil Re-Use Evaluation
INSILCO, Factory H
Meriden, Connecticut
AECOM Environment
August 2009

Parameter	CT RSR Criteria			SAMPLE LOCATION AOC 33 (BUILDING A)											
	I/C DEC	RES DEC	GB PMC	ME-MW-02 4.5-5FT	ME-MW-02 13-14FT	ME-SB-01 0.5-1.5FT	ME-SB-01 8-9FT	ME-SB-02 1-2FT	ME-SB-02 8-9FT	ME-SB-03 1-2FT	ME-SB-03 7.5-8.5FT	ME-SB-04 0-1FT	ME-SB-04 8-9FT	ME-SB-05 0.5-1.5FT
Sampling Date				2/19/09	2/19/09	2/19/09	2/19/09	2/19/09	2/19/09	2/19/09	2/19/09	2/19/09	2/19/09	2/19/09
Laboratory Report Number				LIMT-23411/23748	LIMT-23411	LIMT-23411/23695/23748	LIMT-23411/23748	LIMT-23411	LIMT-23411	LIMT-23411	LIMT-23411	LIMT-23411	LIMT-23411	LIMT-23411
CTDEP ETPH (mg/kg)														
ETPH	2,500	500	2,500	**170**	<12	**620**	**13**	<11	<11	**31**	<12	<11	<12	**55**
PCBs 8082 (mg/kg)				NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
VOCs 8260 (mg/kg)														
Naphthalene	2,500	1,000	56	<0.006	<0.005	<0.004	<0.005	<0.004	<0.004	<0.004	<0.005	<0.004	<0.004	<0.004
Tetrachloroethylene	110	12	~	<0.003	<0.003	<0.002	<0.003	<0.002	<0.002	<0.002	<0.003	<0.002	<0.002	<0.002
Trichloroethylene	520	56	~	<0.003	<0.003	<0.002	<0.003	<0.002	<0.002	**0.002**	<0.003	<0.002	<0.002	<0.002
VOCs 8260 - solid (mg/kg)				NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
CTDEP 15 RSR Metals (mg/kg)														
Arsenic†	10	10	NDC	**14.4**	<2.86	**3.16**	**4.70**	**3.75**	<2.63	**6.71**	<2.89	**5.36**	**3.08**	**4.80**
Barium†	140,000	4,700	NDC	**68.4**	**28.7**	**80.5**	**282**	**96.3**	**90.7**	**224**	**173**	**249**	**105**	**178**
Beryllium	2	2	NDC	**0.41**	NT	NT	**0.90**	NT	NT	NT	NT	NT	NT	**0.53**
Cadmium†	1,000	34	NDC	<0.26	<0.29	**0.31**	**0.37**	**0.28**	<0.27	<0.28	<0.29	**0.35**	<0.28	**0.26**
Chromium†	~	~	NDC	**6.11**	**6.17**	**11.5**	**32.8**	**14.8**	**9.85**	**25.9**	**16.9**	**19.8**	**16.4**	**19.7**
Copper	76,000	2,500	NDC	**202**	NT	NT	**31.7**	NT	NT	NT	NT	NT	NT	**350**
Lead†	1,000	400	NDC	**90.9**	**4.18**	**58.5**	**31.6**	**8.21**	**9.76**	**33.5**	**7.96**	**12.7**	**6.28**	**129**
Mercury†	610	20	NDC	**0.099**	<0.014	**0.089**	**0.105**	<0.010	<0.014	**0.053**	**0.022**	**0.010**	<0.012	**0.307**
Nickel	7,500	1,400	NDC	**40.0**	NT	NT	**13.2**	NT	NT	NT	NT	NT	NT	**72.7**
Silver†	10,000	340	NDC	**82.2**	<0.58	**1.83**	<0.66	<0.52	<0.53	**2.20**	<0.58	<0.52	<0.56	**4.47**
Vanadium	14,000	470	NDC	**12.1**	NT	NT	**59.8**	NT	NT	NT	NT	NT	NT	**39.1**
Zinc	610,000	20,000	NDC	**85.3 J**	NT	NT	**77.4 J**	NT	NT	NT	NT	NT	NT	**144 J**
Cyanide 9014 (mg/kg)														
Cyanide	41,000	1,400	NDC	<0.81	<1.1	**1.7**	**2.7**	<0.67	<0.89	<0.81	<0.64	<0.90	<0.94	<0.82
SPLP Metals (ug/L)														
Silver	NDC	NDC	360	**21.0**	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Copper	NDC	NDC	13,000	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Cyanide	NDC	NDC	2000000	NT	NT	**12**	<10	NT	NT	NT	NT	NT	NT	NT
Lead	NDC	NDC	150	**19.2**	NT	<5.00	NT	NT	NT	NT	NT	NT	NT	NT
Mercury	NDC	NDC	20000	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
PAHs 8270C (mg/kG)														
Acenaphthene	2,500	1,000	84	**0.200**	<0.191	**0.515**	<0.218	<0.171	<0.176	<0.184	<0.193	<0.173	<0.186	<0.170
Anthracene	2,500	1,000	400	<0.170	<0.191	**1.95**	<0.218	<0.171	<0.176	<0.184	<0.193	<0.173	<0.186	<0.170
Benzo(a)anthracene	7.8	1	1	**0.778**	<0.191	**6.8*** **	<0.218	<0.171	<0.176	**0.243**	<0.193	<0.173	<0.186	<0.170
Benzo(a)pyrene	1	1	1	**0.407**	<0.191	**6.85*** **	<0.218	<0.171	<0.176	**0.197**	<0.193	<0.173	<0.186	<0.170
Benzo(b)fluoranthene	7.8	1	1	**0.478**	<0.191	**6.15*** **	<0.218	<0.171	<0.176	**0.230**	<0.193	<0.173	<0.186	<0.170
Benzo(g,h,i)perylene	2,500	1,000	42	**0.218**	<0.191	**2.01**	<0.218	<0.171	<0.176	<0.184	<0.193	<0.173	<0.186	<0.170
Benzo(k)fluoranthene	78	8.4	1	<0.170	<0.191	**2.14*** **	<0.218	<0.171	<0.176	<0.184	<0.193	<0.173	<0.186	<0.170
Chrysene	780	84	1	**1.08**	<0.191	**6.24*** **	<0.218	<0.171	<0.176	**0.264**	<0.193	<0.173	<0.186	**0.179**
Dibenz(a,h)anthracene	1	1	1	<0.170	<0.191	**0.850**	<0.218	<0.171	<0.176	<0.184	<0.193	<0.173	<0.186	<0.170
Fluoranthene	2,500	1,000	56	**0.978**	<0.191	**7.91**	<0.218	<0.171	<0.176	**0.441**	<0.193	<0.173	<0.186	**0.177**
Fluorene	2,500	1,000	56	**0.203**	<0.191	**0.753**	<0.218	<0.171	<0.176	<0.184	<0.193	<0.173	<0.186	<0.170
Indeno(1,2,3-cd)pyrene	7.8	1	1	**0.227**	<0.191	**2.78*** **	<0.218	<0.171	<0.176	<0.184	<0.193	<0.173	<0.186	<0.170
2-Methylnaphthalene	2,500	474	9.8	**0.257**	<0.191	**1.05**	<0.218	<0.171	<0.176	<0.184	<0.193	<0.173	<0.186	<0.170
Naphthalene	2,500	1,000	56	**0.867**	<0.191	**5.46**	**1.70**	<0.171	0.780	**3.93**	**9.95**	<0.173	**1.23**	**1.28**
Phenanthrene	2,500	1,000	40	**2.91**	<0.191	**6.96**	<0.218	<0.171	<0.176	**0.356**	<0.193	<0.173	<0.186	<0.170
Pyrene	2,500	1,000	40	**2.74**	<0.191	**8.58**	**0.281**	<0.171	<0.176	**0.568**	<0.193	<0.173	<0.186	**0.302**
SPLP PAHs 8270C (ug/l)			**(GA GWPC x 10)**											
Acenaphthene	NDC	NDC	4,200	NT	NT	<0.30	NT	NT	NT	NT	NT	NT	NT	NT
Acenaphthylene	NDC	NDC	4,200	NT	NT	<0.30	NT	NT	NT	NT	NT	NT	NT	NT
Anthracene	NDC	NDC	20,000	NT	NT	**0.20**	NT	NT	NT	NT	NT	NT	NT	NT
Benzo(a)anthracene	NDC	NDC	0.6	NT	NT	**0.210**	NT	NT	NT	NT	NT	NT	NT	NT
Benzo(a)pyrene	NDC	NDC	2	NT	NT	**0.200**	NT	NT	NT	NT	NT	NT	NT	NT
Benzo(b)fluoranthene	NDC	NDC	0.8	NT	NT	**0.200**	NT	NT	NT	NT	NT	NT	NT	NT
Benzo(g,h,i)perylene	NDC	NDC	42	NT	NT	<0.500 UJ	NT	NT	NT	NT	NT	NT	NT	NT
Chrysene	NDC	NDC	48	NT	NT	<0.20	NT	NT	NT	NT	NT	NT	NT	NT
Fluoranthene	NDC	NDC	2,800	NT	NT	<0.50	NT	NT	NT	NT	NT	NT	NT	NT
Fluorene	NDC	NDC	2,800	NT	NT	<1.00	NT	NT	NT	NT	NT	NT	NT	NT
2-Methylnaphthalene	NDC	NDC	490	NT	NT	<1.00	NT	NT	NT	NT	NT	NT	NT	NT
Naphthalene	NDC	NDC	2,800	NT	NT	<1.00	NT	NT	NT	NT	NT	NT	NT	NT
Phenanthrene	NDC	NDC	4,200	NT	NT	**0.56**	NT	NT	NT	NT	NT	NT	NT	NT
Pyrene	NDC	NDC	2,000	NT	NT	<1.00	NT	NT	NT	NT	NT	NT	NT	NT
% Solids				98.6	87.7	94.5	76.5	98.0	95.2	90.7	86.6	96.8	89.7	98.2

Notes:
1. An asterisk (*) following a detection limit indicates that the minumum laboratory reporting limit exceeds
2. NT = Not tested.
3. ~ = No Standard available
4. Detected compounds only are shown on this table (with the exception of SPLP metals, all are shown). see laboratory analytical reports.
5. Bolded values indicate the compound was reported at the concentration indicated.
6. Soil samples with shaded values exceed the RSR Direct Exposure Criteria (DEC) for the parameter.
7. Soil samples with bolded outline exceed the RSR PMC for the parameter.
8. RSR criteria are in same units as analyte.
9. † = RCRA 8 Metal. Samples were analyzed either for select metals, RCRA 8 or CTDEP 15 Metals.
10. SPLP analyses not shown may have been performed at certain locations. Only detected SPLP result
11. If detected, SPLP PAH results are compared to the GWPCx10.

** Based on comparison of mass analyses results to SPLP results from other samples, mass analytical re sample was reanalyzed for SPLP.

*** Based on SPLP results from this sample, mass analyses results do not exceed the GB PMC.

TABLE 3A
Summary of Soil Sample Analytical Data

Supplemental Investigation and Soil Re-Use Evaluation
INSILCO, Factory H
Meriden, Connecticut
AECOM Environment
August 2009

Parameter	CT RSR Criteria			
	I/C DEC	RES DEC	GB PMC	ME-SB-05 5.5-6FT
Sampling Date				2/19/09
Laboratory Report Number				LIMT-23411/23748
CTDEP ETPH (mg/kg)				
ETPH	2,500	500	2,500	73
PCBs 8082 (mg/kg)				NT
VOCs 8260 (mg/kg)				
Naphthalene	2,500	1,000	56	<0.005
Tetrachloroethylene	110	12	~	<0.003
Trichloroethylene	520	56	~	<0.003
VOCs 8260 - solid (mg/kg)				NT
CTDEP 15 RSR Metals (mg/kg)				
Arsenic†	10	10	NDC	7.10
Barium†	140,000	4,700	NDC	256
Beryllium	2	2	NDC	NT
Cadmium†	1,000	34	NDC	0.55
Chromium†	~	~	NDC	26.3
Copper	76,000	2,500	NDC	NT
Lead†	1,000	400	NDC	454
Mercury†	610	20	NDC	2.07
Nickel	7,500	1,400	NDC	NT
Silver†	10,000	340	NDC	9.77
Vanadium	14,000	470	NDC	NT
Zinc	610,000	20,000	NDC	NT
Cyanide 9014 (mg/kg)				
Cyanide	41,000	1,400	NDC	<0.98
SPLP Metals (ug/L)				
Silver	NDC	NDC	360	<2.50
Copper	NDC	NDC	13,000	NT
Cyanide	NDC	NDC	2000000	NT
Lead	NDC	NDC	150	21.6
Mercury	NDC	NDC	20000	<0.10
PAHs 8270C (mg/kG)				
Acenaphthene	2,500	1,000	84	<0.236
Anthracene	2,500	1,000	400	<0.236
Benzo(a)anthracene	7.8	1	1	<0.236
Benzo(a)pyrene	1	1	1	<0.236
Benzo(b)fluoranthene	7.8	1	1	<0.236
Benzo(g,h,i)perylene	2,500	1,000	42	<0.236
Benzo(k)fluoranthene	78	8.4	1	<0.236
Chrysene	780	84	1	<0.236
Dibenz(a,h)anthracene	1	1	1	<0.236
Fluoranthene	2,500	1,000	56	<0.236
Fluorene	2,500	1,000	56	<0.236
Indeno(1,2,3-cd)pyrene	7.8	1	1	<0.236
2-Methylnaphthalene	2,500	474	9.8	<0.236
Naphthalene	2,500	1,000	56	<0.236
Phenanthrene	2,500	1,000	40	<0.236
Pyrene	2,500	1,000	40	0.322
SPLP PAHs 8270C (ug/l)			(GA GWPC x 10)	
Acenaphthene	NDC	NDC	4,200	NT
Acenaphthylene	NDC	NDC	4,200	NT
Anthracene	NDC	NDC	20,000	NT
Benzo(a)anthracene	NDC	NDC	0.6	NT
Benzo(a)pyrene	NDC	NDC	2	NT
Benzo(b)fluoranthene	NDC	NDC	0.8	NT
Benzo(g,h,i)perylene	NDC	NDC	42	NT
Chrysene	NDC	NDC	48	NT
Fluoranthene	NDC	NDC	2,800	NT
Fluorene	NDC	NDC	2,800	NT
2-Methylnaphthalene	NDC	NDC	490	NT
Naphthalene	NDC	NDC	2,800	NT
Phenanthrene	NDC	NDC	4,200	NT
Pyrene	NDC	NDC	2,000	NT
% Solids				70.7

Notes:

1. An asterisk (*) following a detection limit indicates that the minumum laboratory reporting limit exceeds
2. NT = Not tested.
3. ~ = No Standard available
4. Detected compounds only are shown on this table (with the exception of SPLP metals, all are shown). see laboratory analytical reports.
5. Bolded values indicate the compound was reported at the concentration indicated.
6. Soil samples with shaded values exceed the RSR Direct Exposure Criteria (DEC) for the parameter.
7. Soil samples with bolded outline exceed the RSR PMC for the parameter.
8. RSR criteria are in same units as analyte.
9. † = RCRA 8 Metal. Samples were analyzed either for select metals, RCRA 8 or CTDEP 15 Metals.
10. SPLP analyses not shown may have been performed at certain locations. Only detected SPLP result
11. If detected, SPLP PAH results are compared to the GWPCx10.

** Based on comparison of mass analyses results to SPLP results from other samples, mass analytical re sample was reanalyzed for SPLP.

*** Based on SPLP results from this sample, mass analyses results do not exceed the GB PMC.

LE 3B
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08 2-3FT	ME-SB-08 5-6FT	ME-SB-09 3-4FT	ME-SB-09 3-4FT DUP	ME-SB-09 8-9FT	ME-SB-10 1-2FT
/09	3/31/09	3/31/09	3/31/09	3/31/09	3/31/09
88/24711	LIMT-24388/24711	LIMT-24388	LIMT-24388	LIMT-24388	LIMT-24388
50	270	<12	<12	<13	2,600
114	NT	<0.120	<0.120	NT	<0.115
008	<0.009	<0.008	<0.008	<0.008	<0.009
06	<2.80	3.57	4.39	3.58	5.12
01	198	127	139	61.9	76.9
.29	<0.28	<0.30	<0.30	<0.32	<0.29
34	<0.28	<0.30	<0.30	<0.32	0.39
.1	11.4	11.8	13.2	10.5	15.2
18	44.1	14.9	20.2	17.5	455
07	26.0	42.8	42.2	4.26	161
96	0.391	0.048	0.041	<0.015	0.210
.6	10.0	8.69	9.89	9.39	71.5
.9	1.10	<0.60	0.60	<0.63	8.96
.2	14.2	22.1	33.6	21.7	28.9
73	102	45.1	55.1	29.1	146
50	<2.50	NT	NT	NT	NT
.0	<25.0	NT	NT	NT	NT
T	NT	NT	NT	NT	NT
.9	7.19	NT	NT	NT	NT
37	<0.10	NT	NT	NT	NT
189	<0.187	<0.200	<0.199	<0.207	<0.952
189	<0.187	<0.200	<0.199	<0.207	<0.952
70	0.602	<0.200	<0.199	<0.207	<0.952
1***	1.84***	<0.200	<0.199	<0.207	1.09**
3***	1.31***	<0.200	<0.199	<0.207	1.11**
5***	1.47***	<0.200	<0.199	<0.207	1.48**
02	0.494	<0.200 UJ	<0.199 UJ	<0.207 UJ	<0.952
70	0.601	<0.200	<0.199	<0.207	<0.952
.19	<0.19	<0.20	<0.20	<0.21	<0.96
3***	1.63***	<0.200	<0.199	<0.207	1.37**
38	<0.38	<0.40	<0.40	<0.42	<1.91*
75	0.208	<0.200 UJ	<0.199 UJ	<0.207 UJ	<0.952
08	2.30	<0.200	<0.199	<0.207	1.56
189	0.207	<0.200	<0.199	<0.207	<0.952
9***	0.629	<0.200 UJ	<0.199 UJ	<0.207 UJ	<0.952
189	<0.187	<0.200	<0.199	<0.207	<0.952
189	<0.187	<0.200	<0.199	<0.207	<0.952
33	1.68	<0.200	<0.199	<0.207	1.61
53	2.56	<0.200 UJ	<0.199 UJ	<0.207 UJ	1.98
30	<0.30	NT	NT	NT	NT
30	<0.30	NT	NT	NT	NT
20	<0.20	NT	NT	NT	NT
050	<0.050	NT	NT	NT	NT
100	<0.100	NT	NT	NT	NT
050	<0.050	NT	NT	NT	NT
500	<0.500	NT	NT	NT	NT
01	2.75	NT	NT	NT	NT
00	<5.00	NT	NT	NT	NT
20	<0.20	NT	NT	NT	NT
.0	<10.0	NT	NT	NT	NT
50	<0.50	NT	NT	NT	NT
00	<1.00	NT	NT	NT	NT
00	<1.00	NT	NT	NT	NT
00	<1.00	NT	NT	NT	NT
08	0.56	NT	NT	NT	NT
00	<1.00	NT	NT	NT	NT
.4	89.6	83.6	84.0	80.6	87.6

the regulatory criteria.

e analyte list,

xceed the GB PMC if the

RSRs = Remediation Standard Regulations
Res DEC = Residential Direct Exposure Criteria
I/C DEC = Industrial/Commercial Direct Exposure Criteria
PMC = Pollutant Mobility Criteria

VOCs = Volatile Organic Compounds
SVOCs = Semi-Volatile Organic Compounds
ETPH = Extractable Petroleum Hydrocarbons
PCBs = Poly Chlorinated Biphenyls
ND = Not Detected above laboratory detection limit (shown in parenthesis)
NT = Not Tested
NDC = Not Directly Comparable based on the analytical method

EB= analyte was detected in the associated equipment blank and there is an indeterminate amount
J = concentration is an estimate
UJ =reporting limit is an estimate

BLE 3B
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n and Soil Re-Use Evaluation
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ust 2009

N ON 11 12-13FT	ME-SB-11 3-4FT	ME-SB-11 3-4FT DUP	ME-SB-12 3-4FT	ME-SB-12 6.5-7.5FT	ME-SB-13 3-4FT	ME-SB-13 8-9FT
31/09	3/31/09	3/31/09	3/31/09	3/31/09	3/31/09	3/31/09
-24388	LIMT-24388	LIMT-24388	LIMT-24388	LIMT-24388	LIMT-24388/24711	LIMT-24388
<12	<13	<13	150	<14	1,800	<12
NT	<0.126	<0.129	<0.122	NT	<0.121	NT
0.007	<0.009	<0.010	<0.009	<0.011	0.045	<0.007
5.52	4.13	4.10	6.85	5.49	5.86	9.28
53.3	241	228	124	132	91.7	152
0.30	<0.32	<0.33	<0.31	<0.34	<0.31	<0.29
0.30	<0.32	<0.33	0.51	<0.34	0.40	<0.29
10.1	21.0	19.9	21.9	15.2	13.6	17.9
12.6	11.4	14.2	251	11.3	269	10.2
1.78	42.0	58.8	108	39.2	80.9	3.12
0.014	0.072	0.052	0.390	0.025	0.135	<0.025
12.2	9.87	10.3	42.4	8.58	65.5	11.5
0.60	<0.63	0.65	8.61	<0.67	6.19	0.71
19.9	40.8	39.3	31.1	34.7	19.9	49.1
26.8	53.6	59.7	175	35.4	132	40.8
NT	NT	NT	NT	NT	<2.50	NT
NT	NT	NT	NT	NT	33.6	NT
NT	NT	NT	NT	NT	NT	NT
NT	NT	NT	NT	NT	13.4	NT
NT	NT	NT	NT	NT	<0.10	NT
0.199	<0.209	<0.215	<0.202	<0.224	1.27	<0.193
0.199	<0.209	<0.215	<0.202	<0.224	2.51	<0.193
0.199	<0.209	<0.215	<0.202	<0.224	8.70	<0.193
0.199	<0.209	<0.215	1.11**	<0.224	9.85***	<0.193
0.199	<0.209	<0.215	0.903	<0.224	7.51***	<0.193
0.199	<0.209	<0.215	1.1**	<0.224	8.6***	<0.193
0.199	<0.209 UJ	<0.215 UJ	0.557	<0.224	3.50	<0.193
0.199	<0.209	<0.215	0.420	<0.224	4.48***	<0.193
0.20	<0.21	<0.22	<0.21	<0.23	2.34	<0.20
0.199	<0.209	<0.215	1.15**	<0.224	9.84***	<0.193
0.40	<0.42	<0.43	<0.41	<0.45	5.25***	<0.39
0.199	<0.209 UJ	<0.215 UJ	0.208	<0.224	1.38***	<0.193
0.199	<0.209	<0.215	1.22	<0.224	20.1	<0.193
0.199	<0.209	<0.215	<0.202	<0.224	9.36	<0.193
0.199	<0.209 UJ	<0.215 UJ	0.725	<0.224	4.83***	<0.193
0.199	<0.209	<0.215	<0.202	<0.224	1.84	<0.193
0.199	<0.209	<0.215	<0.202	<0.224	2.40	<0.193
0.199	<0.209	<0.215	0.616	<0.244	28.5	<0.193
0.199	<0.209 UJ	<0.215 UJ	1.67	<0.224	20.5	<0.193
NT	NT	NT	NT	NT	3.51	NT
NT	NT	NT	NT	NT	6.61	NT
NT	NT	NT	NT	NT	4.91	NT
NT	NT	NT	NT	NT	0.440	NT
NT	NT	NT	NT	NT	0.180	NT
NT	NT	NT	NT	NT	0.190	NT
NT	NT	NT	NT	NT	3.50	NT
NT	NT	NT	NT	NT	5.26	NT
NT	NT	NT	NT	NT	24.30	NT
NT	NT	NT	NT	NT	0.36	NT
NT	NT	NT	NT	NT	10.6	NT
NT	NT	NT	NT	NT	5.19	NT
NT	NT	NT	NT	NT	23.5	NT
NT	NT	NT	NT	NT	3.12	NT
NT	NT	NT	NT	NT	2.44	NT
NT	NT	NT	NT	NT	31.8	NT
NT	NT	NT	NT	NT	3.49	NT
83.8	79.9	77.7	82.6	74.7	83.3	86.6

Metcalf & Eddy, Phase II / Phase III Environmental Site Assessment

March 2007

Table 4
mmary - Soil Samples
er Company, Factory H
n, Connecticut
alf Eddy, Inc.
arch 2007

AOC-1								AOC-2					
AOC-1-SB2 8-10		AOC-1-SB2 10-12		AOC-1-SB3 0-2		AOC-1-SB3 10-12		AOC-2-SS1		AOC-2-SB1 5.5-6		AOC-2-SB1 6-8	
3/31/06		3/31/06		3/29/06		3/29/06		3/29/06		3/29/06		3/31/06	
8-10		10-12		0-2		10-12		0-0.5		5.5-6		6-8	
LIMS-96388		LIMS-96388		LIMS-96358, LIMS-96679, LIMS-		LIMS-96359		LIMS-96358, LIMS-96679, LIMS-		LIMS-96358		LIMS-96388, LIMS-96698	
<4.7*		<0.019*		<0.017*		<0.018*		<0.012*		<0.021*		<3.7*	
<0.24		<0.001		<0.001		<0.001		<0.001		<0.002		<0.19	
<0.47*		<0.002		0.008		<0.002		<0.001		<0.003		<0.37*	
<0.47*		<0.002		<0.002		<0.002		<0.001		<0.003		<0.37*	
<2.4*		<0.010		<0.009		<0.009		<0.006		<0.011		<1.9	
<0.47		<0.002		<0.002		<0.002		<0.001		0.049		17	J
<0.47		0.003		<0.002		<0.002		<0.001		0.022		9.1	J
<0.47		<0.002		<0.002		<0.002		<0.001		0.006		0.83	
<0.47		<0.002		<0.002		<0.002		<0.001		<0.003		<0.37*	
<0.24*		<0.001		<0.001		<0.001		<0.001		<0.002		<0.19*	
<0.94		<0.004		<0.004		<0.004		<0.002		<0.005		<0.73	
<2.4		<0.010		<0.009		<0.009		<0.006		<0.011		<1.9	UJ
<0.47*		<0.002		<0.002		<0.002		<0.001		<0.003		<0.37	
<0.24*		<0.001		<0.001		<0.001		<0.001		<0.002		<0.19*	
0.80		0.031		<0.002		<0.002		<0.001		<0.003		0.71	
<0.47		<0.002		<0.002		<0.002		<0.001		<0.003		<0.37	
<0.24		<0.001		<0.001		<0.001		<0.001		<0.002		<0.19	
<0.47		<0.002		<0.002		<0.002		<0.001		0.002		2.4	J
<0.47		<0.002		<0.002		<0.002		<0.001		0.007		3.5	J
<0.47		<0.002		<0.002		<0.002		<0.001		0.013		15	
<4.7*		<0.019		0.029		<0.018		<0.012		<0.021		<3.7*	
<2.4		<0.010		0.023		<0.009		<0.006		<0.011		21	J
<0.47		<0.002		<0.002		<0.002		<0.001		0.008		5.6	J
<0.47*		<0.002		<0.002		<0.002		<0.001		<0.003		<0.37*	
<0.24*		<0.001		<0.001		<0.001		<0.001		<0.002		<0.19*	
0.83		<0.002		0.002	J	<0.002		<0.001		<0.003		<0.37	
<0.47		<0.002		0.002		<0.002		<0.001		<0.003		0.65	
<0.47		0.005		<0.002		<0.002		<0.001		0.035		<0.37	
<0.47		<0.002		0.003		<0.002		<0.001		0.086		37	J
<0.47		<0.002		<0.002		<0.002		<0.001		0.093		17	
<2.4*		<0.010		<0.009		<0.009		<0.006		<0.011		<1.9*	J
<0.94		<0.004		<0.004		<0.004		<0.002		0.007		5.0	J
<0.47		<0.002		<0.002		<0.002		<0.001		0.005		3.1	
NT		NT		NT		NT		NT		NT		15.6	
NT		NT		NT		NT		NT		NT		12.7	
NT		NT		NT		NT		NT		NT		1.8	
NT		NT		NT		NT		NT		NT		0.9	
NT		NT		NT		NT		NT		NT		<0.5	
NT		NT		NT		NT		NT		NT		7.7	
NT		NT		NT		NT		NT		NT		9.7	
NT		NT		NT		NT		NT		NT		4.1	
NT		NT		NT		NT		NT		NT		<0.5	
NT		NT		NT		NT		NT		NT		<0.5	
NT		NT		NT		NT		NT		NT		1.2	
NT		NT		NT		NT		NT		NT		59.4	
NT		NT		NT		NT		NT		NT		0.8	
NT		NT		NT		NT		NT		NT		8.6	
NT		NT		NT		NT		NT		NT		NT	
NT		NT		NT		NT		NT		NT		NT	
NT		NT		NT		NT		NT		NT		NT	
NT		NT		NT		NT		NT		NT		NT	
NT		NT		NT		NT		NT		NT		NT	
NT		NT		NT		NT		NT		NT		NT	
NT		NT		NT		NT		NT		NT		NT	
NT		NT		NT		NT		NT		NT		NT	
NT		NT		131		NT		17.9		NT		NT	
NT		NT		NT		NT		NT		NT		NT	
NT		NT		NT		NT		NT		NT		NT	
NT		NT		NT		NT		NT		NT		NT	

Table 4
Analytical Summary - Soil Samples
International Silver Company, Factory H
Meriden, Connecticut
Metcalf Eddy, Inc.
March 2007

Parameter	RSR DEC			AOC-1							AOC-2		
	I/C DEC	R DEC	GB PMC	AOC-1 SB1 4-6	AOC-1-SB1 6-6	AOC-1-SB2 2-4	AOC-1-SB2 8-10	AOC-1-SB2 10-12	AOC-1-SB3 0-2	AOC-1-SB3 10-12	AOC-2-SS1	AOC-2-SB1 6.5-6	AOC-2-SB1 6-8
Sampling Date				3/29/06	3/29/06	3/31/06	3/31/06	3/31/06	3/29/06	3/29/06	3/29/06	3/29/06	3/31/06
Sample Depth (feet)				4-6	6	2-4	8-10	10-12	0-2	10-12	0-0.5	6.5-6	6-8
Laboratory Report Number				LIMS-96358, LIMS-96662	LIMS-96358, LIMS-96662	LIMS-96388, LIMS-96696	LIMS-96388	LIMS-96388	LIMS-96358, LIMS-96679, LIMS-	LIMS-96359	LIMS-96358, LIMS-96679, LIMS-	LIMS-96358	LIMS-96388, LIMS-96698
METALS - (SPLP)													
splp - beryllium (mg/l)													
Beryllium	~	~	0.04	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
splp - cd low (mg/l leachate)													
Cadmium	~	~	0.05	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
splp - chromium (mg/l leachate)													
Chromium	~	~	0.50	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
splp - copper (mg/l leachate)													
Copper	~	~	13.00	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
splp - lead icp (mg/l leachate)													
Lead	~	~	0.15	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
splp - nickel (mg/l leachate)													
Nickel	~	~	1.00	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
splp - sb furn (mg/l)													
Antimony	~	~	0.06	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
splp - silver (mg/l leachate)													
Silver	~	~	0.36	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
splp - tl furn (mg/l)													
Thallium	~	~	0.05	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
splp - vanadium (mg/l leachate)													
Vanadium	~	~	0.50	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
splp barium icp (mg/l leachate)													
Barium	~	~	10.00	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
splp mercury (mg/l leachate)													
Mercury	~	~	0.02	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
PAHs - MASS													
pah - sludge (mg/kg dry wt)													
Acenaphthene	2,500	1,000	84	<3.63	<0.26	<0.20	<8.11	<0.40	22.9	<0.20	<1.81	<0.21	<1.07
Acenaphthylene	2,500	1,000	84	3.96	<0.26	1.11	<8.11	<0.40	6.28	<0.20	3.59	<0.21	<1.07
Anthracene	2,500	1,000	400	10.7	<0.26	1.42	<8.11	<0.40	67.4	<0.20	6.24	0.24	<1.07
Benzo(a)anthracene	7,80	1,00	1	36.0	<0.26	7.14	<8.11*	<0.40	66.9	<0.20	51.8	1.94	<1.07*
Benzo(a)pyrene	1,00	1,00	1	21.3	<0.26	7.48	<8.11*	<0.40	43.3	<0.20	11.5	1.53	<1.07*
Benzo(b)fluoranthene	7,80	1,00	1	29.7	0.28	2.49	<8.11*	<0.40	98.2	<0.20	23.7	1.11	<1.07*
Benzo(g,h,i)perylene	2,500	1,000	42	10.8	<0.26	2.27	<8.11	<0.40	20.5	<0.20	8.49	0.76	<1.07
Benzo(k)fluoranthene	78,0	8,00	1	8.36	<0.26	2.19	<8.11*	<0.40	17.3	<0.20	7.28	0.63	<1.07*
Chrysene	780	84,0	1	33.0	<0.26	8.21	<8.11*	<0.40	62.8	<0.20	23.1	1.32	<1.07*
Dibenz(a,h)anthracene	1,00	1,00	1	<3.63*	<0.26	0.85	<8.11*	<0.40	7.32	<0.20	3.53	0.28	<1.07*
Fluoranthene	2,500	1,000	56	30.6	0.54	16.7	<8.11	0.46	226	<0.20	55.5	1.82	<1.07
Fluorene	2,500	1,000	56	<3.63	<0.26	0.46	<8.11	<0.40	37.3	<0.20	1.85	<0.21	<1.07
Indeno(1,2,3-cd)pyrene	7,80	1,00	1	13.4	<0.26	2.16	<8.11*	<0.40	24.3	<0.20	10.1	0.86	<1.07*
2-Methylnaphthalene	2,500	474	0.8	<3.63	<0.26	0.21	<8.11	<0.40	23.7	<0.20	<1.81	1.12	3.36
Naphthalene	2,500	1,000	56	3.75	<0.26	0.58	<8.11	<0.40	36.7	<0.20	<1.81	0.56	2.03
Phenanthrene	2,500	1,000	40	24.8	<0.26	8.91	<8.11	<0.40	286	<0.20	25.0	0.71	<1.07
Pyrene	2,500	1,000	40	69.2	0.46	15.7	<8.11	0.58	197	<0.20	41.3	1.86	<1.07
PAHs - (self-implementing)													
splp - pah (ug/l)			GWPC X 10										
Acenaphthene	~	~	4200	<0.30	NT	<0.30	NT	NT	50.2	NT	1.00	NT	NT
Acenaphthylene	~	~	4200	<0.30	NT	<0.30	NT	NT	1.82	NT	0.51	NT	NT
Anthracene	~	~	20000	<0.20	NT	<0.20	NT	NT	13.8	NT	10.8	NT	NT
Benzo(a)anthracene	~	~	0.6	<0.050	NT	0.260	NT	NT	<0.050	NT	0.460	NT	NT
Benzo(a)pyrene	~	~	2.0	<0.100	NT	0.270	NT	NT	<0.100	NT	<0.100	NT	NT
Benzo(b)fluoranthene	~	~	0.6	<0.050	NT	0.260	NT	NT	<0.050	NT	<0.050	NT	NT
Benzo(g,h,i)perylene	~	~	2100	<0.500	NT	<0.500	NT	NT	<0.500	NT	<0.500	NT	NT
Benzo(k)fluoranthene	~	~	5.0	<0.200	NT	0.320	NT	NT	<0.200	NT	<0.200	NT	NT
Chrysene	~	~	48	<0.20	NT	0.32	NT	NT	<0.20	NT	0.53	NT	NT
Dibenz(a,h)anthracene	~	~	5.0	<0.500	NT	<0.500	NT	NT	<0.500	NT	<0.500	NT	NT
Fluoranthene	~	~	2800	<0.50	NT	<0.50	NT	NT	13.2	NT	6.24	NT	NT
Fluorene	~	~	2800	<1.00	NT	<1.00	NT	NT	53.9	NT	1.18	NT	NT
Indeno(1,2,3-cd)pyrene	~	~	5.0	<0.500	NT	<0.500	NT	NT	<0.500	NT	<0.500	NT	NT
2-Methylnaphthalene	~	~	48	<1.00	NT	<1.00	NT	NT	8.44	NT	<1.00	NT	NT
Naphthalene	~	~	2800	<1.00	NT	<1.00	NT	NT	<1.00	NT	<1.00	NT	NT
Phenanthrene	~	~	2000	<0.10	NT	<0.10	NT	NT	72.7	NT	10.5	NT	NT
Pyrene	~	~	2000	<1.00	NT	<1.00	NT	NT	7.36	NT	3.45	NT	NT
Method 600/R-93/116													
Asbestos	~	~	~	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
cyanide-tot s/d/g (mg/kg dry wt)													
Cyanide - None detected	41000	1400	~	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
etph dry weight (mg/kg dry weight)													
Extractable TPH (ETPH)	2,500	500	2500	440	18 J	180	4,000	330	1,900	<12	930	290	5,300
solids (percent) (%)													
Solids, total	~	~	~	91.9	84.9	84.4	68.3	83.6	87.8	83.5	92.5	80.0	78.0

Notes:
1. An asterisk (*) following a detection limit indicates that the minumum laboratory reporting limit exceeds one or more of the regulatory criteria.
2. NT = Not tested.
3. ND = Not detected above the laboratory reporting limit
4. ~ = No Standard available
5. RSR criteria are in same units as analyte.
6. ** indicates a concentrations which would be considered hazardous based on toxicity
7. Bold cell boarders indicate a GB PMC and/or GB PMC X 20 exceedance
8. Shaded cells indicate a R DEC and/or I/C DEC exceedance
9. J = the associated value is an estimated quantity. The reported result is qualitatively accurate but
10. UJ = the compound was analyzed for, but was not detected, and the associated value is an estimated value due to the variance from

ble 4
nary - Soil Samples
Company, Factory H
Connecticut
Eddy, Inc.
h 2007

AOC-6				AOC-RB1		AOC-RB2		AOC-10	
AOC-6-SB1 10-12	AOC-6-SB2 2-4		AOC-06-SB2 9-11	AOC-RB1 2-4		AOC-RB2 2-4		AOC10-SS-1	AOC10-SS-2MS/MSD
3/31/06	3/29/06		3/31/06	3/31/06		3/31/06		3/31/06	3/31/06
10-12	2-4		9-11	2-4		2-4		0-0.5	0-0.5
LIMS-96388	LIMS-96358, LIMS-96679, LIMS-		LIMS-96392	LIMS-96388		LIMS-96388		LIMS-96392	LIMS-96392, LIMS-96737
<0.016*	<0.011*		<3.2*	<0.024*		<0.013*		NT	NT
<0.001	<0.001		<0.16	<0.002		<0.001		NT	NT
0.002	<0.002		<0.32*	<0.003		<0.001		NT	NT
<0.002	<0.002		<0.32*	<0.003		<0.001		NT	NT
<0.008	<0.006		<1.6	<0.012		<0.006		NT	NT
<0.002	<0.002		1.2	<0.003		<0.001		NT	NT
<0.002	<0.002		1.3	<0.003		<0.001		NT	NT
<0.002	<0.002		<0.32	<0.003		<0.001		NT	NT
<0.002	<0.002		<0.32	<0.003		<0.001		NT	NT
<0.001	<0.001		<0.16*	<0.002		<0.001		NT	NT
<0.004	<0.003		<0.64	<0.005		<0.003		NT	NT
<0.008	<0.006		<1.6*	<0.012		<0.006		NT	NT
<0.002	<0.002		<0.32	<0.003		<0.001		NT	NT
<0.001	<0.001		<0.16*	<0.002		<0.001		NT	NT
<0.002	<0.002		<0.32	<0.003		<0.001		NT	NT
<0.002	<0.002		<0.32	<0.003		<0.001		NT	NT
<0.001	<0.001		<0.16	<0.002		<0.001		NT	NT
<0.002	<0.002		<0.32	<0.003		<0.001		NT	NT
<0.002	<0.002		<0.32	<0.003		<0.001		NT	NT
<0.002	<0.002		<0.32	<0.003		<0.001		NT	NT
<0.016	<0.011		<3.2*	<0.024		<0.013		NT	NT
<0.008	<0.006		<1.6	<0.012		<0.006		NT	NT
<0.002	<0.002		0.37	<0.003		<0.001		NT	NT
<0.002	<0.002		<0.32*	<0.003		<0.001		NT	NT
<0.001	<0.001		<0.16*	<0.002		<0.001		NT	NT
<0.002	<0.002		<0.32	<0.003		<0.001		NT	NT
<0.002	<0.002		<0.32	<0.003		<0.001		NT	NT
0.003	0.002		<0.32	<0.003		0.003		NT	NT
<0.002	<0.002		<0.32	<0.003		<0.001		NT	NT
<0.002	<0.002		<0.32	<0.003		<0.001		NT	NT
<0.008	<0.006		<1.6*	<0.012		<0.006		NT	NT
<0.004	<0.003		<0.64	<0.005		<0.003		NT	NT
<0.002	<0.002		<0.32	<0.003		<0.001		NT	NT
NT	NT		NT	NT		NT		NT	NT
NT	NT		NT	NT		NT		NT	NT
NT	NT		NT	NT		NT		NT	NT
NT	NT		NT	NT		NT		NT	NT
NT	NT		NT	NT		NT		NT	NT
NT	NT		NT	NT		NT		NT	NT
NT	NT		NT	NT		NT		NT	NT
NT	NT		NT	NT		NT		NT	NT
NT	NT		NT	NT		NT		NT	NT
NT	NT		NT	NT		NT		NT	NT
NT	NT		NT	NT		NT		NT	NT
NT	NT		NT	NT		NT		NT	NT
NT	NT		NT	NT		NT		NT	NT
NT	12.7	J	2.11	NT		NT		NT	19.8
NT	<5.52		<6.31	NT		NT		NT	<6.31
NT	65.0		110	NT		NT		NT	120
NT	0.37		0.41	NT		NT		NT	0.49
NT	<0.56		<0.64	NT		NT		NT	0.92
NT	7.80		16.4	NT		NT		NT	98.1
NT	1,190	J	68.5	NT		NT		NT	481
NT	0.188		0.111	NT		NT		NT	0.209
NT	348		18.0	NT		NT		NT	61.3
NT	107		17.0	NT		NT		6.75	208
NT	<4.41*	UJ	<5.05*	NT		NT		NT	<5.05*
NT	28.7		30.6	NT		NT		NT	37.4
NT	435		58.4	NT		NT		NT	222

Table 4
Analytical Summary - Soil Samples
International Silver Company, Factory H
Meriden, Connecticut
Metcalf Eddy, Inc.
March 2007

Parameter	RSR DEC I/C DEC	RSR DEC R DEC	GB PMC	AOC-3 AOC-3-SB/MW01 2-4	AOC-3 AOC-3-SB/MW01 6-8	AOC-8 AOC-5-SS1	AOC-8 AOC-5-SB1 2-4	AOC-8 AOC-5-SB1 10-12	AOC-8 AOC-5-SB2 2-4	AOC-8 AOC-05-SB2 9-11	AOC-RB1 AOC-RB1 2-4	AOC-RB2 AOC-RB2 2-4	AOC-10 AOC10-SS-1	AOC-10 AOC10-SS-2MS/MSD
Sampling Date				3/30/06	3/30/06	3/29/06	3/29/06	3/31/06	3/29/06	3/31/06	3/31/06	3/31/06	3/31/06	3/31/06
Sample Depth (feet)				2-4	6-8	0-0.5	2-4	10-12	2-4	9-11	2-4	2-4	0-0.5	0-0.5
Laboratory Report Number				LIMS-96397, LIMS-96698	LIMS-96357	LIMS-96358	LIMS-96358	LIMS-96388	LIMS-96358, LIMS-96679, LIMS-	LIMS-96392	LIMS-96388	LIMS-96388	LIMS-96392	LIMS-96392, LIMS-96737
METALS - (SPLP)														
splp - beryllium (mg/l) Beryllium	~	~	0.04	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
splp - cd low (mg/l leachate) Cadmium	~	~	0.05	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
splp - chromium (mg/l leachate) Chromium	~	~	0.50	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	<0.03
splp - copper (mg/l leachate) Copper	~	~	13.00	NT	NT	NT	NT	NT	2.91	NT	NT	NT	NT	0.09
splp - lead icp (mg/l leachate) Lead	~	~	0.15	0.01	NT	NT	NT	NT	0.08	NT	NT	NT	NT	0.02
splp - nickel (mg/l leachate) Nickel	~	~	1.00	NT	NT	NT	NT	NT	0.36	NT	NT	NT	NT	<0.03
splp - sb furn (mg/l) Antimony	~	~	0.06	NT	NT	NT	NT	NT	0.0114	NT	NT	NT	NT	NT
splp - silver (mg/l leachate) Silver	~	~	0.36	NT	NT	NT	NT	NT	<0.05*	NT	NT	NT	NT	<0.03
splp - tl furn (mg/l) Thallium	~	~	0.05	NT	NT	NT	NT	NT	<0.0005	NT	NT	NT	NT	NT
splp - vanadium (mg/l leachate) Vanadium	~	~	0.50	NT	NT	NT	NT	NT	<0.05	NT	NT	NT	NT	NT
splp barium icp (mg/l leachate) Barium	~	~	10.00	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
splp mercury (mg/l leachate) Mercury	~	~	0.02	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
PAHs - MASS														
pah - sludge (mg/kg dry wt) Acenaphthene	2,500	1,000	84	<0.18	<0.20	<3.77	<0.38	<0.19	<0.37	<0.22	<0.26 UJ	<0.21	NT	<0.22
Acenaphthylene	2,500	1,000	84	<0.18	<0.20	<3.77	0.80	<0.19	4.93	<0.22	<0.26 UJ	<0.21	NT	0.22
Anthracene	2,500	1,000	400	<0.18	<0.20	5.96	1.72	<0.19	3.30	<0.22	<0.26 UJ	0.33	NT	<0.22
Benzo(a)anthracene	7.80	1.00	1	<0.18	<0.20	19.1	2.90	<0.19	0.28	0.28	<0.26 UJ	0.31	NT	0.67
Benzo(a)pyrene	1.00	1.00	1	<0.18	<0.20	13.8	3.15	<0.19	19.4	<0.22	<0.26 UJ	0.32	NT	0.78
Benzo(b)fluoranthene	7.80	1.00	1	<0.18	<0.30	13.1	4.16	<0.19	16.8	0.28	<0.26 UJ	0.49	NT	1.08
Benzo(g,h,i)perylene	2,500	1,000	42	<0.18	<0.20	6.03	2.11	<0.19	27.1	<0.22	<0.26 UJ	0.24	NT	0.52
Benzo(k)fluoranthene	78.0	8.40	1	<0.18	<0.20	8.12	2.2	<0.19	5.48	<0.22	<0.26 UJ	<0.21	NT	0.46
Chrysene	780	84.0	1	<0.18	<0.20	21.3	4.12	<0.19	7.48	<0.22	<0.26 UJ	0.36	NT	0.90
Dibenz(a,h)anthracene	78.00	8.40	1	<0.18	<0.20	<3.77	0.76	<0.19	21.9	0.28	<0.26 UJ	<0.21	NT	<0.22
Fluoranthene	2,500	1,000	56	<0.18	<0.20	32.1	8.75	<0.19	3.31	<0.22	<0.26 J	0.67	NT	1.36
Fluorene	2,500	1,000	56	<0.18	<0.20	<3.77	1.00	<0.19	33.1	0.37	<0.26 UJ	<0.21	NT	<0.22
Indeno(1,2,3-cd)pyrene	7.80	1.00	1	<0.18	<0.20	6.42	2.82	<0.19	2.03	<0.22	<0.26 UJ	0.23	NT	0.54
2-Methylnaphthalene	2,500	474	9.8	<0.18	<0.20	<3.77	<0.38	<0.19	1.41	<0.22	<0.26 UJ	<0.21	NT	<0.22
Naphthalene	2,500	1,000	56	<0.18	<0.20	<3.77	<0.38	<0.19	0.83	0.54	<0.26 UJ	<0.21	NT	<0.22
Phenanthrene	2,500	1,000	40	<0.18	<0.20	28.0	7.81	<0.19	16.0	<0.22	<0.26 UJ	0.33	NT	0.75
Pyrene	2,500	1,000	40	<0.18	<0.20	37.7	8.74	<0.19	38.7	0.40	0.30 J	0.85	NT	1.41
PAHs - (self-implementing)			GWPC X.10											
spip - pah (ug/l)	~	~	4200	NT	NT	NT	NT	NT	1.36	NT	NT	NT	NT	NT
Acenaphthene	~	~	4200	NT	NT	NT	NT	NT	8.07	NT	NT	NT	NT	NT
Acenaphthylene	~	~	20000	NT	NT	NT	NT	NT	1.01	NT	NT	NT	NT	NT
Anthracene	~	~	0.6	NT	NT	NT	NT	NT	<0.050	NT	NT	NT	NT	NT
Benzo(a)anthracene	~	~	2.0	NT	NT	NT	NT	NT	<0.100	NT	NT	NT	NT	NT
Benzo(a)pyrene	~	~	0.8	NT	NT	NT	NT	NT	<0.050	NT	NT	NT	NT	NT
Benzo(b)fluoranthene	~	~	2100	NT	NT	NT	NT	NT	<0.500	NT	NT	NT	NT	NT
Benzo(g,h,i)perylene	~	~	5.0	NT	NT	NT	NT	NT	<0.200	NT	NT	NT	NT	NT
Benzo(k)fluoranthene	~	~	48	NT	NT	NT	NT	NT	<0.20	NT	NT	NT	NT	NT
Chrysene	~	~	5.0	NT	NT	NT	NT	NT	<0.500	NT	NT	NT	NT	NT
Dibenz(a,h)anthracene	~	~	2800	NT	NT	NT	NT	NT	2.17	NT	NT	NT	NT	NT
Fluoranthene	~	~	2800	NT	NT	NT	NT	NT	11.0	NT	NT	NT	NT	NT
Fluorene	~	~	5.0	NT	NT	NT	NT	NT	<0.500	NT	NT	NT	NT	NT
Indeno(1,2,3-cd)pyrene	~	~	48	NT	NT	NT	NT	NT	1.59	NT	NT	NT	NT	NT
2-Methylnaphthalene	~	~	2800	NT	NT	NT	NT	NT	<1.00	NT	NT	NT	NT	NT
Naphthalene	~	~	2000	NT	NT	NT	NT	NT	3.47	NT	NT	NT	NT	NT
Phenanthrene	~	~	2000	NT	NT	NT	NT	NT	1.30	NT	NT	NT	NT	NT
Pyrene	~	~	~	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND	Anosite - trace
Method 600/R-93/116 Asbestos														
cyanide-tot sldg (mg/kg dry wt) Cyanide - None detected	41000	1400	~	<0.63	<0.67	NT	NT	NT	NT	NT	NT	NT	NT	NT
etph dry weight (mg/kg dry weight) Extractable TPH (ETPH)	2,500	500	2500	43	44	1,600	190	36	990	2,300	170	140	NT	270
solids (percent) (%) Solids, total	~	~	~	90.8	83.1	88.5	89.4	89.0	90.7	79.3	84.9	79.5	88.9	79.3

Table 4
Analytical Summary - Soil Samples
International Silver Company, Factory H
Meriden, Connecticut
Metcalf Eddy, Inc.
March 2007

Parameter	RSR DEC			AOC-3		AOC-5					AOC-RB1	AOC-RB2	AOC-10	
	I/C DEC	R DEC	GB PMC	AOC-3-SB/MW01 2-4	AOC-3-SB/MW01 6-8	AOC-5-SS1	AOC-5-SB1 2-4	AOC-5-SB1 10-12	AOC-5-SB2 2-4	AOC-06-SB2 9-11	AOC-RB1 2-4	AOC-RB2 2-4	AOC10-SS-1	AOC10-SS-2MS/MSD
Sampling Date				3/30/06	3/30/06	3/29/06	3/29/06	3/31/06	3/29/06	3/31/06	3/31/06	3/31/06	3/31/06	3/31/06
Sample Depth (feet)				2-4	6-8	0-0.5	2-4	10-12	2-4	9-11	2-4	2-4	0-0.5	0-0.5
Laboratory Report Number				LIMS-96357, LIMS-96668	LIMS-96357	LIMS-96358	LIMS-96358	LIMS-96358	LIMS-96358, LIMS-96679, LIMS-	LIMS-96392	LIMS-96358	LIMS-96358	LIMS-96392	LIMS-96392, LIMS-96737
VOCs - MASS														
8260 dry weight (mg/kg dry wt)														
Acrylonitrile	11	1.1	0.10	<0.015*	<0.019*	<0.020*	<0.015*	<0.016*	<0.011*	<3.2*	<0.024*	<0.013*	NT	NT
tert-Amylmethyl Ether	~	~	~	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.16	<0.002	<0.001	NT	NT
Benzene	200	21	0.20	<0.002	<0.002	<0.002	<0.002	0.002	<0.002	<0.32*	<0.003	<0.001	NT	NT
Bromodichloromethane	92	9.9	0.11	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.32*	<0.003	<0.001	NT	NT
Bromomethane	1,000	95	2.0	<0.008	<0.010	<0.010	<0.008	<0.008	<0.006	<1.6	<0.012	<0.006	NT	NT
n-Butylbenzene	1,000	500	14	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	1.2	<0.003	<0.001	NT	NT
sec-Butylbenzene	1,000	500	14	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	1.3	<0.003	<0.001	NT	NT
tert-Butylbenzene	1,000	500	14	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.32	<0.003	<0.001	NT	NT
Carbon Tetrachloride	44	4.7	1.0	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.32	<0.003	<0.001	NT	NT
Chlorodibromomethane	68	7.3	0.10	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.16*	<0.002	<0.001	NT	NT
Chloroform	940	100	1.2	<0.003	<0.004	<0.004	<0.003	<0.004	<0.003	<0.64	<0.005	<0.003	NT	NT
Chloromethane	440	47	0.54	<0.008	<0.010	<0.010	<0.008	<0.008	<0.006	<1.6*	<0.012	<0.006	NT	NT
1,2-Dibromo-3-Chloropropane	4.1	0.44	~	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.32	<0.003	<0.001	NT	NT
1,2-Dibromoethane	0.067	0.007	~	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.16*	<0.002	<0.001	NT	NT
cis-1,2-Dichloroethylene	1,000	500	14	<0.002	0.002	<0.002	<0.002	<0.002	<0.002	<0.32	<0.003	<0.001	NT	NT
1,2-Dichloropropane	84	9.0	1.0	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.32	<0.003	<0.001	NT	NT
1,3-Dichloropropane	~	~	0.1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.16	<0.002	<0.001	NT	NT
Ethyl Benzene	1,000	500	10	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.32	<0.003	<0.001	NT	NT
Isopropylbenzene	1,000	500	130	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.32	<0.003	<0.001	NT	NT
p-Isopropyltoluene	1,000	500	14	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.32	<0.003	<0.001	NT	NT
Methylene Chloride	760	82	1.0	<0.015	<0.019	<0.020	<0.015	<0.016	<0.011	<3.2*	<0.024	<0.013	NT	NT
Naphthalene	2,500	1,000	56	<0.008	<0.010	<0.010	<0.008	<0.008	<0.006	<1.6	<0.012	<0.006	NT	NT
n-Propylbenzene	1,000	500	14	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.37	<0.003	<0.001	NT	NT
1,1,1,2-Tetrachloroethane	220	24	0.20	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.32*	<0.003	<0.001	NT	NT
1,1,2,2-Tetrachloroethane	29	3.1	0.10	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.16*	<0.002	<0.001	NT	NT
Tetrachloroethylene	110	12	1.0	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.32	<0.003	<0.001	NT	NT
Toluene	1,000	500	67	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.32	<0.003	<0.001	NT	NT
Trichloroethylene	520	56	1.0	<0.002	<0.002	<0.002	<0.002	0.003	0.002	<0.32	<0.003	0.003	NT	NT
1,2,4-Trimethylbenzene	1,000	500	70	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.32	<0.003	<0.001	NT	NT
1,3,5-Trimethylbenzene	1,000	500	70	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.32	<0.003	<0.001	NT	NT
Vinyl Chloride	3.0	0.32	0.40	<0.008	<0.010	<0.010	<0.008	<0.008	<0.006	<1.6*	<0.012	<0.006	NT	NT
m + p Xylene	1,000	500	20	<0.003	<0.004	<0.004	<0.003	<0.004	<0.003	<0.64	<0.005	<0.003	NT	NT
o-Xylene	1,000	500	20	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.32*	<0.003	<0.001	NT	NT
VOCs - (self-implementing)														
spip 8260 (ug/l)			GWPC X 10											
Acetone	~	~	7000	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
n-Butylbenzene	~	~	610	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
tert-Butylbenzene	~	~	610	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Carbon Disulfide	~	~	7000	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
cis-1,2-Dichloroethylene	~	~	700	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
p-Isopropyltoluene	~	~	700	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Methylene Chloride	~	~	50	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Naphthalene	~	~	2800	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Tetrachloroethylene	~	~	50	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Trichloroethylene	~	~	50	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1,2,4-Trimethylbenzene	~	~	3500	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1,3,5-Trimethylbenzene	~	~	3500	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Vinyl Chloride	~	~	20	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
o-Xylene	~	~	5300	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
METALS - TOTAL (mg/kg)			**PMC X 20 (screening)**											
ag (mg/kg)dw icp (mg/kg dry wt) Silver	10,000	340	7.20	1.89	0.73	NT	NT	NT	12.7 J	2.11	NT	NT	NT	19.8
as (mg/kg)dw icp (mg/kg dry wt) Arsenic	10.0	10.0	10.00	<5.51	<6.02	NT	NT	NT	<5.52	<6.31	NT	NT	NT	<6.31
ba (mg/kg)dw icp (mg/kg dry wt) Barium	140,000	4,700	200.00	47.1	84.7	NT	NT	NT	65.0	110	NT	NT	NT	120
be (mg/kg)dw icp (mg/kg dry wt) Beryllium	2.00	2.00	0.80	0.29	0.32	NT	NT	NT	0.37	0.41	NT	NT	NT	0.49
cd (mg/kg)dw icp (mg/kg dry wt) Cadmium	1,000	34.0	1.00	<0.56	<0.61	NT	NT	NT	<0.56	<0.64	NT	NT	NT	0.92
cr (mg/kg)dw icp (mg/kg dry wt) Chromium	~	~	10.00	12.8	14.1	NT	NT	NT	7.80	16.4	NT	NT	NT	96.1
cu (mg/kg)dw icp (mg/kg dry wt) Copper	76,000	2,900	280.00	34.3	18.0	NT	NT	NT	1,190 J	68.5	NT	NT	NT	481
hg (mg/kg) dw (mg/kg dry wt) Mercury	610	20.0	0.40	0.023	0.029	NT	NT	NT	0.188	0.111	NT	NT	NT	0.209
ni (mg/kg)dw icp (mg/kg dry wt) Nickel	7,500	1,400	20.00	12.0	12.7	NT	NT	NT	348	18.0	NT	NT	NT	61.3
pb (mg/kg)dw icp (mg/kg dry wt) Lead	1,000	400	3.00	13.5	8.70	NT	NT	NT	107	17.0	NT	NT	6.75	208
sb (mg/kg)dw icp (mg/kg dry wt) Antimony	8,200	27.0	1.20	<4.41*	<4.82*	NT	NT	NT	<4.41* UJ	<5.05*	NT	NT	NT	<5.05*
v (mg/kg)dw icp (mg/kg dry wt) Vanadium	14,000	470	10.00	26.6	27.8	NT	NT	NT	28.7	30.6	NT	NT	NT	37.4
zn (mg/kg)dw icp (mg/kg dry wt) Zinc	610,000	20,000	1000.00	32.3	34.8	NT	NT	NT	435	58.4	NT	NT	NT	222

Table 4
Analytical Summary - Soil Samples
International Silver Company, Factory H
Meriden, Connecticut
Metcalf Eddy, Inc.
March 2007

Parameter	RSR DEC I/C DEC	RSR DEC R DEC	GB PMC	AOC 11 AOC-11SS -1DUP	AOC-11SS1 MS/MSD	AOC-11SS2	AOC-11SB2 2-4	AOC-11SB2 8-10	AOC-11-MW1 4-6	AOC-11-MW1 8-10	AOC-13 AOC-13 SS1	AOC-13 SB1 2-4	AOC-13-SB1 4-6
Sampling Date				3/30/06	3/30/06	3/30/06	3/30/06	3/30/06	3/30/06	3/30/06	3/29/06	3/29/06	3/29/06
Sample Depth (feet)				0-0.5	0-0.5	0-0.5	2-4	8-10	4-6	8-10	0-0.5	2-4	4-6
Laboratory Report Number				LIMS-96357, LIMS-96668	LIMS-96357	LIMS-96357, LIMS-96668	LIMS-96357, LIMS-96668	LIMS-96357, LIMS-96668	LIMS-96356, LIMS-96679	LIMS-96356	LIMS-96358	LIMS-96358	LIMS-96359, LIMS-96668
VOCs - MASS													
8260 dry weight (mg/kg dry wt)													
Acrylonitrile	11	1.1	0.10	<0.018*	<0.020*	<0.020*	<0.018*	<0.023*	<0.022*	<0.024*	<0.018*	<0.025*	<0.019*
tert-Amylmethyl Ether	~	~	~	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.001
Benzene	200	21	0.20	<0.002	<0.002	<0.002	<0.002	<0.003	<0.002	<0.003	<0.002	<0.003	<0.002
Bromodichloromethane	92	9.9	0.11	<0.002	<0.002	<0.002	<0.002	<0.003	<0.002	<0.003	<0.002	<0.003	<0.002
Bromomethane	1,000	95	2.0	<0.009	<0.010	<0.010	<0.009	<0.012	<0.011	<0.012	<0.009	<0.013	<0.010
n-Butylbenzene	1,000	500	14	<0.002	<0.002 UJ	<0.002	<0.002	<0.003	<0.002	<0.003	<0.002	<0.003	<0.002
sec-Butylbenzene	1,000	500	14	<0.002	<0.002	<0.002	<0.002	<0.003	<0.002	<0.003	<0.002	<0.003	<0.002
tert-Butylbenzene	1,000	500	14	<0.002	<0.002	<0.002	<0.002	<0.003	<0.002	<0.003	<0.002	<0.003	<0.002
Carbon Tetrachloride	44	4.7	1.0	<0.002	<0.002	<0.002	<0.002	<0.003	<0.002	<0.003	<0.002	<0.003	<0.002
Chlorodibromomethane	68	7.3	0.10	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.001
Chloroform	940	100	1.2	<0.004	<0.004	<0.004	<0.004	<0.005	<0.004	<0.005	<0.004	<0.005	<0.004
Chloromethane	440	47	0.54	<0.009	<0.010 UJ	<0.010	<0.009	<0.012	<0.011	<0.012	<0.009	<0.013	<0.010
1,2-Dibromo-3-Chloropropane	4.1	0.44	~	<0.002	<0.002	<0.002	<0.002	<0.003	<0.002	<0.003	<0.002	<0.003	<0.002
1,2-Dibromoethane	0.067	0.007	~	<0.001	<0.001 UJ	<0.001	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.001
cis-1,2-Dichloroethylene	1,000	500	14	<0.002	<0.002	<0.002	<0.002	<0.003	<0.002	<0.003	<0.002	<0.003	<0.002
1,2-Dichloropropane	84	9.0	1.0	<0.002	<0.002	<0.002	<0.002	<0.003	<0.002	<0.003	<0.002	<0.003	<0.002
1,3-Dichloropropane	~	~	0.1	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.001
Ethyl Benzene	1,000	500	10	<0.002	<0.002	<0.002	<0.002	<0.003	<0.002	<0.003	<0.002	<0.003	<0.002
Isopropylbenzene	1,000	500	130	<0.002	<0.002	<0.002	<0.002	<0.003	<0.002	<0.003	<0.002	<0.003	<0.002
p-Isopropyltoluene	1,000	500	14	<0.002	<0.002	<0.002	<0.002	<0.003	<0.002	<0.003	<0.002	<0.003	<0.002
Methylene Chloride	760	82	1.0	<0.018	<0.020 UJ	<0.020	<0.018	<0.023	<0.022 UJ	<0.024 UJ	<0.018	0.077	<0.019
Naphthalene	2,500	1,000	56	<0.009	<0.010 UJ	<0.010	<0.009	<0.012	<0.011	<0.012	<0.009	<0.013	<0.010
n-Propylbenzene	1,000	500	14	<0.002	<0.002 UJ	<0.002	<0.002	<0.003	<0.002	<0.003	<0.002	<0.003	<0.002
1,1,1,2-Tetrachloroethane	220	24	0.20	<0.002	<0.002	<0.002	<0.002	<0.003	<0.002	<0.003	<0.002	<0.003	<0.002
1,1,2,2-Tetrachloroethane	29	3.1	0.10	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.001
Tetrachloroethylene	110	12	1.0	<0.002	<0.002	<0.002	<0.002	<0.003	<0.002	<0.003	<0.002	<0.003	<0.002
Toluene	1,000	500	67	<0.002	<0.002	<0.002	<0.002	<0.003	<0.002	<0.003	<0.002	<0.003	<0.002
Trichloroethylene	520	56	1.0	<0.002	<0.002	<0.002	<0.002	<0.003	<0.002	<0.003	<0.002	<0.003	<0.002
1,2,4-Trimethylbenzene	1,000	500	70	<0.002	<0.002	<0.002	<0.002	<0.003	<0.002	<0.003	<0.002	<0.003	<0.002
1,3,5-Trimethylbenzene	1,000	500	70	<0.002	<0.002	<0.002	<0.002	<0.003	<0.002	<0.003	<0.002	<0.003	<0.002
Vinyl Chloride	3.0	0.32	0.40	<0.009	<0.010 UJ	<0.010	<0.009	<0.012	<0.011	<0.012	<0.009	<0.013	<0.010
m + p Xylene	1,000	500	20	<0.004	<0.004	<0.004	<0.004	<0.005	<0.004	<0.005	<0.004	<0.005	<0.004
o-Xylene	1,000	500	20	<0.002	<0.002	<0.002	<0.002	<0.003	<0.002	<0.003	<0.002	<0.003	<0.002
VOCs - (self-implementing)													
splp 8260 (ug/l)			GWPC X 10										
Acetone	~	~	7000	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
n-Butylbenzene	~	~	610	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
tert-Butylbenzene	~	~	610	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Carbon Disulfide	~	~	7000	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
cis-1,2-Dichloroethylene	~	~	700	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
p-Isopropyltoluene	~	~	700	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Methylene Chloride	~	~	50	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Naphthalene	~	~	2800	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Tetrachloroethylene	~	~	50	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Trichloroethylene	~	~	50	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1,2,4-Trimethylbenzene	~	~	3500	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1,3,5-Trimethylbenzene	~	~	3500	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Vinyl Chloride	~	~	20	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
o-Xylene	~	~	5300	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
METALS - TOTAL (mg/kg)			PMC X 20 (screening)										
ag (mg/kg)dw icp (mg/kg dry wt) Silver	10,000	340	7.20	6.03 J	16.4 J	0.84	2.00	<0.65	<0.66	<0.65	<0.56	<0.67	<0.56
as (mg/kg)dw icp (mg/kg dry wt) Arsenic	10.0	10.0	10.00	<5.70	<5.81	<5.38	<5.83	<6.41	<6.59	<6.45	<5.58	<6.63	<5.56
ba (mg/kg)dw icp (mg/kg dry wt) Barium	140,000	4,700	200.00	83.8	91.2	109	361	133	318	116	132	268	102
be (mg/kg)dw icp (mg/kg dry wt) Beryllium	2.00	2.00	0.80	0.59	0.55	1.26	0.57	0.44	0.92	0.40	0.56	0.84	0.29
cd (mg/kg)dw icp (mg/kg dry wt) Cadmium	1,000	34.0	1.00	<0.57	<0.59	<0.54	<0.59	<0.65	<0.66	<0.65	<0.56	<0.67	<0.56
cr (mg/kg)dw icp (mg/kg dry wt) Chromium	~	~	10.00	12.2	16.6	13.0	11.4	21.8	33.8	16.6	22.8	27.4	13.1
cu (mg/kg)dw icp (mg/kg dry wt) Copper	76,000	2,500	260.00	146	194	42.0	27.1	11.7	90.5	18.2	90.5	29.2	9.03
hg (mg/kg) dw (mg/kg dry wt) Mercury	610	20.0	0.40	0.073	0.100	0.147	0.167	0.089	0.089	0.006	0.384	0.050	0.011
ni (mg/kg)dw icp (mg/kg dry wt) Nickel	7,500	1,400	20.00	34.3	40.1	16.1	9.61	10.1	72.7	74.6	12.9	15.6	8.00
pb (mg/kg)dw icp (mg/kg dry wt) Lead	1,000	400	3.00	62.0 J	105 J	35.9	481	11.9	36.5	5.36	75.6	138	5.64
sb (mg/kg)dw icp (mg/kg dry wt) Antimony	8,200	27.0	1.20	<4.56*	<4.65*		5.30	<5.13*	<5.27*	<5.16*	<4.47*	<5.30*	<4.45*
v (mg/kg)dw icp (mg/kg dry wt) Vanadium	14,000	470	10.00	39.7	34.3	31.9	23.7	36.6	81.7	43.6	60.1	67.2	23.7
zn (mg/kg)dw icp (mg/kg dry wt) Zinc	610,000	20,000	1000.00	95.6	121	76.0	80.8	38.4	141	130	95.4	109	24.6

Table 4
ummary - Soil Samples
ilver Company, Factory H
len, Connecticut
calf Eddy, Inc.
March 2007

										AOC-13			
AOC-11SB2 2-4		AOC-11SB2 8-10		AOC-11-MW1 4-6		AOC-11-MW1 8-10		AOC-13 SS1		AOC-13 SB1 2-4		AOC-13-SB1 4-6	
3/30/06		3/30/06		3/30/06		3/30/06		3/29/06		3/29/06		3/29/06	
2-4		8-10		4-6		8-10		0-0.5		2-4		4-6	
/S-96357, LIMS-96668		LIMS-96357, LIMS-96668		LIMS-96356, LIMS-96679		LIMS-96356		LIMS-96358		LIMS-96358		LIMS-96359, LIMS-96668	
NT		NT		<0.0010		NT		NT		0.0021		NT	
NT		NT		<0.03		NT		NT		<0.03		NT	
<0.02		<0.03		NT		NT		NT		NT		<0.03	
NT		NT		NT		NT		NT		NT		NT	
0.03		0.06		<0.01		NT		NT		<0.01		<0.01	
NT		NT		0.09		NT		NT		NT		NT	
0.0145		0.0117		0.0204		NT		NT		NT		0.0128	
NT		NT		NT		NT		NT		NT		NT	
<0.0010		<0.0005		<0.0005		NT		NT		NT		<0.0005	
<0.02		0.04		<0.03		NT		NT		NT		<0.03	
0.63		NT		1.24		NT		NT		1.28		NT	
NT		NT		NT		NT		NT		NT		NT	
NT		NT		NT		NT		NT		NT		NT	
NT		NT		NT		NT		NT		NT		NT	
NT		NT		NT		NT		NT		NT		NT	
NT		NT		NT		NT		NT		NT		NT	
NT		NT		NT		NT		NT		NT		NT	
NT		NT		NT		NT		NT		NT		NT	
NT		NT		NT		NT		NT		NT		NT	
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NT		NT		NT		NT		NT		NT		NT	
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NT		NT		NT		NT		NT		NT		NT	
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NT		NT		NT		NT		NT		NT		NT	
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NT		NT		NT		NT		NT		NT		NT	
NT		NT		NT		NT		NT		NT		NT	
100		<13		29		<13		130		16	J	<12	
85.9		78.0		75.9		77.6		89.7		75.5		90.0	

Table 4
mmary - Soil Samples
ver Company, Factory H
en, Connecticut
alf Eddy, Inc.
larch 2007

AOC-15															
AOC-15(B)-SS4		AOC-15(B)-SS-5		AOC-15(A)-SB1 2-4		AOC15(B)-SB2- 2-4		AOC-15(B)-MW3 4-6		AOC-15(B)-MW3 2-4		AOC-15(B)-SB4 2-4		AOC-15(B)-SB5 2-4	
3/30/06		3/30/06		3/29/06		3/31/06		3/30/06		3/30/06		3/30/06		3/30/06	
0-0.5		0-0.5		2-4		2-4		4-6		2-4		2-4		2-4	
S-96356, LIMS-96679		LIMS-96356, LIMS-96679		LIMS-96359, LIMS-96668		LIMS-96388		LIMS-96356, LIMS-96679		LIMS-96356, LIMS-96679		LIMS-96356		LIMS-96356	
<0.022*		<0.019*		<0.018*		<0.019*		<0.020*		<0.018*		<0.020*		<0.018*	
<0.002		<0.001		<0.001		<0.001		<0.001		<0.001		<0.001		<0.001	
<0.003		<0.002		<0.002		<0.002		<0.002		<0.002		<0.002		<0.002	
<0.003		<0.002		<0.002		<0.002		<0.002		<0.002		<0.002		<0.002	
<0.011		<0.010		<0.009		<0.010		<0.010		<0.009		<0.010		<0.009	
<0.003		<0.002		<0.002		<0.002		<0.002		<0.002		<0.002		<0.002	
<0.003		<0.002		<0.002		<0.002		<0.002		<0.002		<0.002		<0.002	
<0.003		<0.002		<0.002		<0.002		<0.002		<0.002		<0.002		<0.002	
<0.003		<0.002		<0.002		<0.002		<0.002		<0.002		<0.002		<0.002	
<0.002		<0.001		<0.001		<0.001		<0.001		<0.001		<0.001		<0.001	
<0.005		<0.004		<0.004		<0.004		<0.004		<0.004		<0.004		<0.004	
<0.011		<0.010		<0.009		<0.010		<0.010		<0.009		<0.010		<0.009	
<0.003		<0.002		<0.002		<0.002		<0.002		<0.002		<0.002		<0.002	
<0.002		<0.001		<0.001		<0.001		<0.001		<0.001		<0.001		<0.001	
<0.003		<0.002		<0.002		<0.002		<0.002		<0.002		<0.002		<0.002	
<0.003		<0.002		<0.002		<0.002		<0.002		<0.002		<0.002		<0.002	
<0.002		<0.001		<0.001		<0.001		<0.001		<0.001		<0.001		<0.001	
<0.003		<0.002		<0.002		<0.002		<0.002		<0.002		<0.002		<0.002	
<0.003		<0.002		<0.002		<0.002		<0.002		<0.002		<0.002		<0.002	
<0.003		<0.002		<0.002		<0.002		<0.002		<0.002		<0.002		<0.002	
0.049	J	0.026	J	<0.018		<0.019		<0.020	UJ	<0.018	UJ	0.047	J	<0.018	
<0.011		<0.010		<0.009		<0.010		<0.010		<0.009		<0.010		<0.009	
<0.003		<0.002		<0.002		<0.002		<0.002		<0.002		<0.002		<0.002	
<0.003		<0.002		<0.002		<0.002		<0.002		<0.002		<0.002		<0.002	
<0.002		<0.001		<0.001		<0.001		<0.001		<0.001		<0.001		<0.001	
<0.003		<0.002		<0.002		<0.002		<0.002		<0.002		<0.002		<0.002	
<0.003		<0.002		<0.002		<0.002		<0.002		<0.002		<0.002		<0.002	
<0.003		<0.002		<0.002		<0.002		<0.002		<0.002		<0.002		<0.002	
<0.003		<0.002		<0.002		<0.002		<0.002		<0.002		<0.002		<0.002	
<0.003		<0.002		<0.002		<0.002		<0.002		<0.002		<0.002		<0.002	
<0.011		<0.010		<0.009		<0.010		<0.010		<0.009		<0.010		<0.009	
<0.005		<0.004		<0.004		<0.004		<0.004		<0.004		<0.004		<0.004	
<0.003		<0.002		<0.002		<0.002		<0.002		<0.002		<0.002		<0.002	
NT		NT		NT		NT		NT		NT		NT		NT	
NT		NT		NT		NT		NT		NT		NT		NT	
NT		NT		NT		NT		NT		NT		NT		NT	
NT		NT		NT		NT		NT		NT		NT		NT	
NT		NT		NT		NT		NT		NT		NT		NT	
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NT		NT		NT		NT		NT		NT		NT		NT	
NT		NT		NT		NT		NT		NT		NT		NT	
NT		NT		NT		NT		NT		NT		NT		NT	
NT		NT		NT		NT		NT		NT		NT		NT	
NT		NT		NT		NT		NT		NT		NT		NT	
NT		NT		NT		NT		NT		NT		NT		NT	
3.57		2.43		<0.60		0.63		3.14		6.97		<0.61		<0.63	
<6.36		<5.84		<5.97		<5.67		<5.86		<5.41		<6.06		<6.26	
81.3		96.7		73.3		59.8		**216**		103		83.4		142	
0.71		0.76		0.72		0.58		0.66		0.49		0.63		0.71	
<0.64		<0.59		<0.60		<0.57		<0.59		<0.55		<0.61		<0.63	
16.9		**20.1**		**14.2**		7.61		**44.2**		**61.7**		**17.0**		**19.9**	
161		122		30.7		57.5		173		233		44.4		57.6	J
0.070		0.212		0.038		0.031		0.162		0.141		0.040		0.257	
64.4		**42.9**		14.7		12.1		**22.6**		**24.7**		15.1		16.8	
48.1		**69.4**		**14.4**		**29.1**		**64.7**		**134**		**28.3**		**74.2**	
<5.09*		<4.67*		<4.78*		<4.54*		<4.69*		<4.33*		<4.85*		<5.01*	UJ
33.4		**38.1**		**44.0**		**17.4**		**64.9**		**36.1**		**43.3**		**39.4**	
106		134		82.6		67.7		114		142		82.5		126	

3/7/2011

Table 4
Analytical Summary - Soil Samples
International Silver Company, Factory H
Meriden, Connecticut
Metcalf Eddy, Inc.
March 2007

Parameter	RSR DEC I/C DEC	RSR DEC R DEC	GB PMC	AOC-15 AOC-15(A)-SS1	AOC-15(B)-SS2 DUP	AOC-15(B)-SS2 MS/MSD	AOC-15(B)-SS-3	AOC-15(B)-SS4	AOC-15(B)-SS-5	AOC-15(A)-SB1 2-4	AOC15(B)-SB2- 2-4	AOC-15(B)-MW3 4-6	AOC-15(B)-MW3 2-4	AOC-15(B)-SB4 2-4	AOC-15(B)-SB5 2-4
Sampling Date				3/29/06	3/31/06	3/31/06	3/30/06	3/30/06	3/30/06	3/29/06	3/31/06	3/30/06	3/30/06	3/30/06	3/30/06
Sample Depth (feet)				0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	2-4	2-4	4-6	2-4	2-4	2-4
Laboratory Report Number				LIMS-96359, LIMS-96668	LIMS-96358	LIMS-96358	LIMS-96356, LIMS-96679, LIMS-	LIMS-96356, LIMS-96679	LIMS-96356, LIMS-96679	LIMS-96359, LIMS-96668	LIMS-96358	LIMS-96356, LIMS-96679	LIMS-96356, LIMS-96679	LIMS-96356	LIMS-96356
METALS - (SPLP)															
splp - beryllium (mg/l) Beryllium	~	~	0.04	<0.0010	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
splp - cd low (mg/l leachate) Cadmium	~	~	0.05	NT	NT	NT	<0.03	<0.02	<0.03	NT	NT	<0.03	<0.03	NT	NT
splp - chromium (mg/l leachate) Chromium	~	~	0.50	NT	NT	NT	NT	NT	NT	<0.03	NT	NT	NT	NT	NT
splp - copper (mg/l leachate) Copper	~	~	13.00	0.03	NT	NT	1.95	NT	NT	NT	NT	NT	NT	NT	NT
splp - lead icp (mg/l leachate) Lead	~	~	0.15	0.03	NT	NT	0.15	0.02	0.01	<0.01	NT	0.02	0.03	NT	NT
splp - nickel (mg/l leachate) Nickel	~	~	1.00	<0.03	NT	NT	0.15	0.04	<0.03	NT	NT	<0.03	<0.03	NT	NT
splp - sb furn (mg/l) Antimony	~	~	0.06	0.0418	NT	NT	0.0109	0.0089	0.0079	0.0064	NT	0.0070	0.0091	NT	NT
splp - silver (mg/l leachate) Silver	~	~	0.36	NT	NT	NT	<0.03	NT	NT	NT	NT	NT	NT	NT	NT
splp - tl furn (mg/l) Thallium	~	~	0.05	NT	NT	NT	<0.0005	<0.0005	<0.0005	<0.0005	NT	<0.0005	<0.0005	NT	NT
splp - vanadium (mg/l leachate) Vanadium	~	~	0.50	NT	NT	NT	<0.03	<0.02	<0.03	<0.03	NT	<0.03	<0.03	NT	NT
splp barium icp (mg/l leachate) Barium	~	~	10.00	NT	NT	NT	1.37	NT	NT	NT	NT	1.17	NT	NT	NT
splp mercury (mg/l leachate) Mercury	~	~	0.02	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
PAHs - MASS															
pah - sludge (mg/kg dry wt) Acenaphthene	2,500	1,000	84	<0.19	<0.19	<0.91	1.80	<0.22	<0.20	<0.20	<0.19	<0.20	<0.19	<0.21 UJ	<0.21 UJ
Acenaphthylene	2,500	1,000	84	<0.19	<0.19	<0.91	<0.97	<0.22	<0.20	<0.20	<0.19	<0.20	0.38	<0.21 UJ	<0.21 UJ
Anthracene	2,500	1,000	400	<0.19	<0.19	<0.91	3.83	<0.22	0.27	<0.20	<0.19	<0.20	3.73	<0.21 UJ	0.73 J
Benzo(a)anthracene	7,80	1,00	1	<0.19	0.71	0.92 J	14.1	<0.22	0.78	<0.20	<0.19	<0.20	4.16	<0.21 UJ	1.07 J
Benzo(a)pyrene	1,00	1,00	1	<0.19	0.76	<0.91	12.0	<0.22	0.59	<0.20	<0.19	<0.20	3.71	<0.21 UJ	0.78 J
Benzo(b)fluoranthene	7,80	1,00	1	<0.19	1.06	1.3 J	9.88	<0.22	0.71	<0.20	<0.19	<0.20	4.18	<0.21 UJ	0.93 J
Benzo(g,h,i)perylene	2,500	1,000	42	<0.19	0.44	<0.91	4.48	<0.22	0.27	<0.20	<0.19	<0.20	1.71	<0.21 UJ	0.30 J
Benzo(k)fluoranthene	78,0	8,00	1	<0.19	0.38	<0.91	3.46	<0.22	0.32	<0.20	<0.19	<0.20	1.59	<0.21 UJ	0.37 J
Chrysene	780	84,0	1	<0.19	0.78	0.98	8.23	<0.22	0.71	<0.20	<0.19	<0.20	3.76	<0.21 UJ	0.93 J
Dibenz(a,h)anthracene	1,00	1,00	1	<0.19	<0.19	<0.91	1.18	<0.22	0.20	<0.20	<0.19	<0.20	0.58	<0.21 UJ	<0.21 UJ
Fluoranthene	2,500	1,000	56	0.21	1.21	1.65 J	21.9	<0.22	1.44	<0.20	<0.19	<0.20	7.92	<0.21 UJ	2.09 J
Fluorene	2,500	1,000	56	<0.19	<0.19	<0.91	1.22	<0.22	0.31	<0.20	<0.19	<0.20	0.86	<0.21 UJ	0.27 J
Indeno(1,2,3-cd)pyrene	7,80	1,00	1	<0.19	0.49	<0.91	4.99	<0.22	<0.20	<0.20	<0.19	<0.20	2.04	<0.21 UJ	0.36 J
2-Methylnaphthalene	2,500	474	9.8	<0.19	<0.19	<0.91	<0.97	<0.22	<0.20	<0.20	<0.19	<0.20	<0.19	<0.21 UJ	<0.21 UJ
Naphthalene	2,500	1,000	56	<0.19	<0.19	<0.91	19.7	<0.22	0.87	<0.20	<0.19	<0.20	6.45	<0.21 UJ	<0.21 UJ
Phenanthrene	2,500	1,000	40	<0.19	0.70	1.15	16.4	<0.22	1.19	<0.20	<0.19	<0.20	6.88	<0.21 UJ	2.04 J
Pyrene	2,500	1,000	40	<0.19	1.19	1.69 J									1.82 J
PAHs - (self-Implementing)			GW/PC X 10												
splp - pah (ug/l) Acenaphthene	~	~	4200	NT	NT	NT	0.32	NT	NT	NT	NT	NT	NT	NT	NT
Acenaphthylene	~	~	4200	NT	NT	NT	<0.30	NT	NT	NT	NT	NT	NT	NT	NT
Anthracene	~	~	20000	NT	NT	NT	0.20	NT	NT	NT	NT	NT	NT	NT	NT
Benzo(a)anthracene	~	~	0.6	NT	NT	NT	<0.050	NT	NT	NT	NT	NT	NT	NT	NT
Benzo(a)pyrene	~	~	2.0	NT	NT	NT	<0.100	NT	NT	NT	NT	NT	NT	NT	NT
Benzo(b)fluoranthene	~	~	0.8	NT	NT	NT	<0.050	NT	NT	NT	NT	NT	NT	NT	NT
Benzo(g,h,i)perylene	~	~	2100	NT	NT	NT	<0.500	NT	NT	NT	NT	NT	NT	NT	NT
Benzo(k)fluoranthene	~	~	5.0	NT	NT	NT	<0.200	NT	NT	NT	NT	NT	NT	NT	NT
Chrysene	~	~	48	NT	NT	NT	0.23	NT	NT	NT	NT	NT	NT	NT	NT
Dibenz(a,h)anthracene	~	~	5.0	NT	NT	NT	<0.500	NT	NT	NT	NT	NT	NT	NT	NT
Fluoranthene	~	~	2800	NT	NT	NT	<0.50	NT	NT	NT	NT	NT	NT	NT	NT
Fluorene	~	~	2800	NT	NT	NT	<1.00	NT	NT	NT	NT	NT	NT	NT	NT
Indeno(1,2,3-cd)pyrene	~	~	5.0	NT	NT	NT	<0.500	NT	NT	NT	NT	NT	NT	NT	NT
2-Methylnaphthalene	~	~	49	NT	NT	NT	<1.00	NT	NT	NT	NT	NT	NT	NT	NT
Naphthalene	~	~	2800	NT	NT	NT	<1.00	NT	NT	NT	NT	NT	NT	NT	NT
Phenanthrene	~	~	2000	NT	NT	NT	0.16	NT	NT	NT	NT	NT	NT	NT	NT
Pyrene	~	~	2000	NT	NT	NT	<1.00	NT	NT	NT	NT	NT	NT	NT	NT
Method 600/R-93/116 Asbestos	~	~	~	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
cyanide-tot sfdg (mg/kg dry wt) Cyanide - None detected	41000	1400	~	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
e(ph dry weight (mg/kg dry weight) Extractable TPH (ETPH)	2,500	500	2500	360	110	140	160	20	43	<12	41	22	890	33	<13
solids (percent) (%) Solids, total	~	~	~	90.4	91.3	91.8	88.7	78.7	85.7	83.8	88.2	85.4	92.5	82.8	80.0

Table 4
l Summary - Soil Samples
l Silver Company, Factory H
eriden, Connecticut
Metcalf Eddy, Inc.
March 2007

		AOC-19					
AOC-17-SB2 14-16	AOC-17-SB2 18-20	AOC-19-SB02 2-4	AOC-19-SB2 7-9	AOC-19-SB3 2-4	AOC-19-SB3-8-10	AOC-19-MW1 2-4	AOC19-MW-1 5-7
3/29/06	3/29/06	3/30/06	3/31/06	3/29/06	3/31/06	3/29/06	3/30/06
14-16	18-20	2-4	7-9	2-4	8-10	2-4	5-7
LIMS-96360	LIMS-96360	LIMS-96357, LIMS-96668	LIMS-96388, LIMS-96737	LIMS-96358, LIMS-96679, LIMS-	LIMS-96388	LIMS-96358	LIMS-96392, LIMS-96737
<3.1*	<3.0*	<0.017*	<0.015*	<0.021*	<0.019*	NT	<0.020*
<0.16	<0.15	<0.001	<0.001	<0.002	<0.001	NT	<0.001
<0.31*	<0.30*	<0.002	<0.002	0.004	<0.002	NT	<0.002
<0.31*	<0.30*	<0.002	<0.002	<0.003	<0.002	NT	<0.002
<1.6	<1.5	<0.009	<0.008	<0.011	<0.010	NT	<0.010
0.95	0.57	<0.002	<0.002	<0.003	<0.002	NT	<0.002
0.76	0.48	<0.002	0.002	<0.003	<0.002	NT	<0.002
<0.31	<0.30	<0.002	<0.002	<0.003	<0.002	NT	<0.002
<0.31	<0.30	<0.002	<0.002	<0.003	<0.002	NT	<0.002
<0.16*	<0.15*	<0.001	<0.001	<0.002	<0.001	NT	<0.001
<0.61	<0.59	<0.003	<0.003	<0.005	<0.004	NT	<0.004
<1.6*	<1.5*	<0.009	<0.008	<0.011	<0.010	NT	<0.010
<0.31	<0.30	<0.002	<0.002	<0.003	<0.002	NT	<0.002
<0.16*	<0.15*	<0.001	<0.001	<0.002	<0.001	NT	<0.001
2.5	6.1	<0.002	<0.002	<0.003	<0.002	NT	<0.002
<0.31*	<0.30*	<0.002	<0.002	<0.003	<0.002	NT	<0.002
<0.16	<0.15	<0.001	<0.001	<0.002	<0.001	NT	<0.001
<0.31	<0.30	<0.002	<0.002	<0.003	<0.002	NT	<0.002
0.63	0.52	<0.002	0.002	<0.003	<0.002	NT	<0.002
0.59	0.31	<0.002	<0.002	<0.003	<0.002	NT	<0.002
<3.1*	<3.0*	<0.017	<0.015	<0.021	<0.019	NT	0.040
<1.6	<1.5	<0.009	<0.008	<0.011	<0.010	NT	<0.010 UJ
0.92	0.79	<0.002	<0.002	<0.003	<0.002	NT	<0.002
<0.31*	<0.30*	<0.002	<0.002	<0.003	<0.002	NT	<0.002
<0.16*	<0.15*	<0.001	<0.001	<0.002	<0.001	NT	<0.001
60	54	<0.002	<0.002	<0.003	<0.002	NT	<0.002
<0.31	<0.30	<0.002	<0.002	<0.003	<0.002	NT	<0.002
6.8	12	<0.002	<0.002	0.008	<0.002	NT	0.005
1.1	<0.30	<0.002	<0.002	<0.003	<0.002	NT	<0.002
<0.31	<0.30	<0.002	<0.002	<0.003	<0.002	NT	<0.002
<1.6*	<1.5*	<0.009	<0.008	<0.011	<0.010	NT	<0.010
<0.61	<0.59	<0.003	<0.003	<0.005	<0.004	NT	<0.004
<0.31	<0.30	<0.002	<0.002	<0.003	<0.002	NT	<0.002
NT	NT	NT	NT	NT	NT	NT	NT
NT	NT	NT	NT	NT	NT	NT	NT
NT	NT	NT	NT	NT	NT	NT	NT
NT	NT	NT	NT	NT	NT	NT	NT
NT	NT	NT	NT	NT	NT	NT	NT
NT	NT	NT	NT	NT	NT	NT	NT
NT	NT	NT	NT	NT	NT	NT	NT
NT	NT	NT	NT	NT	NT	NT	NT
NT	NT	NT	NT	NT	NT	NT	NT
NT	NT	NT	NT	NT	NT	NT	NT
NT	NT	NT	NT	NT	NT	NT	NT
NT	NT	NT	NT	NT	NT	NT	NT
NT	NT	NT	NT	NT	NT	NT	NT
NT	NT	NT	NT	NT	NT	NT	NT
NT	NT	46.1	1.38	19.7	<0.57	109	5.20
NT	NT	<5.95	<5.66	7.10	<5.68	6.04	<5.82
NT	NT	168	64.7	148	97.1	196	98.9
NT	NT	0.68	0.52	0.52	0.53	0.45	0.51
NT	NT	<0.60	<0.57	<0.61	<0.57	<0.60	0.60
NT	NT	20.3	10.4	17.9	13.6	33.3	14.8
NT	NT	614	91.0	3,710	110	2,680	187
NT	NT	0.557	0.031	0.092	0.011	0.244	0.239
NT	NT	110	197	762	67.4	501	126
NT	NT	797	15.3	209	3.77	234	51.8
NT	NT	8.31	<4.53*	<4.83*	<4.55*	<4.73*	<4.66*
NT	NT	40.2	36.0	33.6	40.7	29.5	39.1
NT	NT	279	247	800	103	778	231

Table 4
ummary - Soil Samples
ver Company, Factory H
en, Connecticut
alf Eddy, Inc.
larch 2007

			AOC-19					
2-4	AOC-17-SB2 14-16	AOC-17-SB2 18-20	AOC-19-SB02 2-4	AOC-19-SB2 7-9	AOC-19-SB3 2-4	AOC-19-SB3-8-10	AOC-19-MW1 2-4	AOC19-MW-1 5-7
	3/29/06	3/29/06	3/30/06	3/31/06	3/29/06	3/31/06	3/29/06	3/30/06
	14-16	18-20	2-4	7-9	2-4	8-10	2-4	5-7
-96668	LIMS-96360	LIMS-96360	LIMS-96357, LIMS-96668	LIMS-96368, LIMS-96737	LIMS-96358, LIMS-96679, LIMS-	LIMS-96368	LIMS-96358	LIMS-96392, LIMS-96737
	NT	NT	NT	NT	NT	NT	NT	NT
	NT	NT	NT	NT	<0.03	NT	NT	NT
	NT	NT	<0.03	<0.03	NT	NT	NT	<0.03
	NT	NT	1.01	NT	4.31	NT	NT	NT
	NT	NT	3.06	<0.01	0.07	NT	NT	0.02
	NT	NT	0.05	0.11	0.31	NT	NT	<0.03
	NT	NT	0.0520	0.0060	0.0098	NT	NT	NT
	NT	NT	<0.03	NT	<0.03	NT	NT	NT
	NT	NT	<0.0005	<0.0005	<0.0005	NT	NT	NT
	NT	NT	<0.03	<0.03	<0.03	NT	NT	NT
	NT	NT	NT	NT	NT	NT	NT	NT
	NT	NT	0.00004	NT	NT	NT	NT	NT
	NT	NT	<0.20	<0.95	0.22	<0.19	<0.20	<0.19
	NT	NT	<0.20	<0.95	<0.21	<0.19	<0.20	<0.19
	NT	NT	0.31	<0.95	0.45	<0.19	0.27	<0.19
	NT	NT	0.87	<0.95	1.24	<0.19	0.97	<0.19
	NT	NT	0.70	<0.95	1.00	<0.19	0.92	<0.19
	NT	NT	0.93	<0.95	1.22	<0.19	1.34	<0.19
	NT	NT	0.31	<0.95	0.82	<0.19	0.56	<0.19
	NT	NT	0.33	<0.95	0.46	<0.19	0.43	<0.19
	NT	NT	0.88	<0.95	1.06	<0.19	0.99	<0.19
	NT	NT	<0.20	<0.95	<0.21	<0.19	<0.20	<0.19
	NT	NT	1.43	<0.95	2.38	<0.19	1.73	<0.19
	NT	NT	<0.20	<0.95	<0.21	<0.19	<0.20	<0.19
	NT	NT	0.36	<0.95	0.82	<0.19	0.63	<0.19
	NT	NT	<0.20	<0.95	<0.21	<0.19	<0.20	<0.19
	NT	NT	<0.20	<0.95	<0.21	<0.19	<0.20	<0.19
	NT	NT	1.19	<0.95	2.33	<0.19	1.21	<0.19
	NT	NT	1.54	<0.95	2.44	<0.19	1.73	<0.19
	NT	NT	NT	NT	<0.30	NT	NT	NT
	NT	NT	NT	NT	<0.30	NT	NT	NT
	NT	NT	NT	NT	<0.20	NT	NT	NT
	NT	NT	NT	NT	<0.050	NT	NT	NT
	NT	NT	NT	NT	<0.100	NT	NT	NT
	NT	NT	NT	NT	<0.050	NT	NT	NT
	NT	NT	NT	NT	<0.500	NT	NT	NT
	NT	NT	NT	NT	<0.200	NT	NT	NT
	NT	NT	NT	NT	<0.20	NT	NT	NT
	NT	NT	NT	NT	<0.500	NT	NT	NT
	NT	NT	NT	NT	<0.50	NT	NT	NT
	NT	NT	NT	NT	<1.00	NT	NT	NT
	NT	NT	NT	NT	<0.500	NT	NT	NT
	NT	NT	NT	NT	<1.00	NT	NT	NT
	NT	NT	NT	NT	<1.00	NT	NT	NT
	NT	NT	NT	NT	<0.10	NT	NT	NT
	NT	NT	NT	NT	<1.00	NT	NT	NT
	NT	NT	NT	NT	NT	NT	NT	NT
	NT	NT	NT	NT	NT	NT	NT	NT
	NT	NT	190	4,900	160	17	200	<12
	NT	NT	84.2	88.4	82.9	88.1	84.7	85.9

Table 4
Analytical Summary - Soil Samples
International Silver Company, Factory H
Meriden, Connecticut
Metcalf Eddy, Inc.
March 2007

Parameter	RSR DEC		GB PMC	AOC-24			AOC-30				AOC-SAC		AOC-SAE		AOC-SAH	
	I/C DEC	R DEC		AOC-24-SS1	AOC-24-MW1 2-4	AOC-24-MW1 4-6	AOC-30-SS1 MS/MSD	AOC-30-SS1DUP	AOC-30-MW1 2-4	AOC-30-MW1 5-7	AOC-SAC-SS1	AOC-SAC-SB1 2-4	AOC-SAE-SB1 0-2	AOC-SAE-SB1 2-4	SAH-SB1 0-2	AOC-SA-H-SB01 2-4
Sampling Date				3/29/06	3/29/06	3/29/06	3/30/06	3/30/06	3/30/06	3/30/06	3/29/06	3/29/06	3/29/06	3/29/06	3/31/06	3/30/06
Sample Depth (feet)				0-0.5	2-4	4-6	0-0.5	0-0.5	2-4	5-7	0-0.5	2-4	0-2	2-4	0-2	2-4
Laboratory Report Number				LIMS-96359, LIMS-96661	LIMS-96359, LIMS-96661	LIMS-96356	LIMS-96356	LIMS-96356	LIMS-96356	LIMS-96356	LIMS-96359, LIMS-96668	LIMS-96359	LIMS-96359, LIMS-96668	LIMS-96359	LIMS-96388	LIMS-96357, LIMS-96668
VOCs - MASS																
8260 dry weight (mg/kg dry wt)																
Acrylonitrile	11	1.1	0.10	<0.021*	<0.022*	NT	<0.017*	<0.025*	<0.023*	<0.020*	NT	NT	NT	NT	<0.020*	<0.013*
tert-Amylmethyl Ether	~	~	~	<0.002	<0.002	NT	<0.001	<0.002	<0.002	<0.001	NT	NT	NT	NT	<0.001	<0.001
Benzene	200	21	0.20	<0.003	<0.003	NT	<0.002	<0.003	<0.003	<0.002	NT	NT	NT	NT	<0.002	<0.002
Bromodichloromethane	92	9.9	0.11	<0.003	<0.003	NT	<0.002	<0.003	<0.003	<0.002	NT	NT	NT	NT	<0.002	<0.002
Bromomethane	1,000	95	2.0	<0.011	<0.011	NT	<0.009	<0.013	<0.012	<0.010	NT	NT	NT	NT	<0.010	<0.007
n-Butylbenzene	1,000	500	14	<0.003	<0.003	NT	<0.002	UJ <0.003	<0.003	<0.002	NT	NT	NT	NT	<0.002	<0.002
sec-Butylbenzene	1,000	500	14	<0.003	<0.003	NT	<0.002	UJ <0.003	<0.003	<0.002	NT	NT	NT	NT	<0.002	<0.002
tert-Butylbenzene	1,000	500	14	<0.003	<0.003	NT	<0.002	UJ <0.003	<0.003	<0.002	NT	NT	NT	NT	<0.002	<0.002
Carbon Tetrachloride	44	4.7	1.0	<0.003	0.003	NT	<0.002	<0.003	<0.003	<0.002	NT	NT	NT	NT	<0.002	<0.002
Chlorodibromomethane	68	7.3	0.10	<0.002	<0.002	NT	<0.001	<0.002	<0.002	<0.001	NT	NT	NT	NT	<0.001	<0.001
Chloroform	940	100	1.2	<0.005	0.007	NT	<0.004	<0.005	<0.005	<0.004	NT	NT	NT	NT	<0.004	<0.003
Chloromethane	440	47	0.54	<0.011	<0.011	NT	<0.009	<0.013	<0.012	<0.010	NT	NT	NT	NT	<0.010	<0.007
1,2-Dibromo-3-Chloropropane	4.1	0.44	~	<0.003	<0.003	NT	<0.002	UJ <0.003	<0.003	<0.002	NT	NT	NT	NT	<0.002	<0.002
1,2-Dibromoethane	0.067	0.007	~	<0.002	<0.002	NT	<0.001	<0.002	<0.002	<0.001	NT	NT	NT	NT	<0.001	<0.001
cis-1,2-Dichloroethylene	1,000	500	14	<0.003	<0.003	NT	<0.002	<0.003	<0.003	<0.002	NT	NT	NT	NT	<0.002	<0.002
1,2-Dichloropropane	84	9.0	1.0	<0.003	0.003	NT	<0.002	<0.003	<0.003	<0.002	NT	NT	NT	NT	<0.002	<0.002
1,3-Dichloropropane	~	~	0.1	<0.002	<0.002	NT	<0.001	<0.002	<0.002	<0.001	NT	NT	NT	NT	<0.001	<0.001
Ethyl Benzene	1,000	500	10	<0.003	<0.003	NT	<0.002	UJ <0.003	<0.003	<0.002	NT	NT	NT	NT	<0.002	<0.002
Isopropylbenzene	1,000	500	130	<0.003	<0.003	NT	<0.002	UJ <0.003	<0.003	<0.002	NT	NT	NT	NT	<0.002	<0.002
p-Isopropyltoluene	1,000	500	14	<0.003	<0.003	NT	<0.002	UJ <0.003	<0.003	<0.002	NT	NT	NT	NT	<0.002	<0.002
Methylene Chloride	760	82	1.0	<0.021	<0.022	NT	<0.017	UJ <0.025	<0.023	<0.020 UJ	NT	NT	NT	NT	<0.020	<0.013
Naphthalene	2,500	1,000	56	<0.011	<0.011	NT	<0.009	UJ <0.013	<0.012	<0.010	NT	NT	NT	NT	<0.010	<0.007
n-Propylbenzene	1,000	500	14	<0.003	<0.003	NT	<0.002	<0.003	<0.003	<0.002	NT	NT	NT	NT	<0.002	<0.002
1,1,1,2-Tetrachloroethane	220	24	0.20	<0.003	<0.003	NT	<0.002	<0.003	<0.003	<0.002	NT	NT	NT	NT	<0.002	<0.002
1,1,2,2-Tetrachloroethane	29	3.1	0.10	<0.002	<0.002	NT	<0.001	<0.002	<0.002	<0.001	NT	NT	NT	NT	<0.001	<0.001
Tetrachloroethylene	110	12	1.0	0.007	0.021	NT	<0.002	UJ <0.003	<0.003	<0.002	NT	NT	NT	NT	<0.002	<0.002
Toluene	1,000	500	67	<0.003	<0.003	NT	<0.002	<0.003	<0.003	<0.002	NT	NT	NT	NT	<0.002	<0.002
Trichloroethylene	530	56	1.0	0.063	27	NT	<0.002	<0.003	<0.003	<0.002	NT	NT	NT	NT	<0.002	<0.002
1,2,4-Trimethylbenzene	1,000	500	70	<0.003	<0.003	NT	<0.002	UJ <0.003	<0.003	<0.002	NT	NT	NT	NT	<0.002	<0.002
1,3,5-Trimethylbenzene	1,000	500	70	<0.003	<0.003	NT	<0.002	UJ <0.003	<0.003	<0.002	NT	NT	NT	NT	<0.002	<0.002
Vinyl Chloride	3.0	0.32	0.40	<0.011	<0.011	NT	<0.009	<0.013	<0.012	<0.010	NT	NT	NT	NT	<0.010	<0.007
m + p Xylene	1,000	500	20	<0.005	<0.005	NT	<0.004	UJ <0.005	<0.005	<0.004	NT	NT	NT	NT	<0.004	<0.003
o-Xylene	1,000	500	20	<0.003	<0.003	NT	<0.002	UJ <0.003	<0.003	<0.002	NT	NT	NT	NT	<0.002	<0.002
VOCs - (self-implementing)																
sp/p 8260 (ug/l)			GWPC X 10													
Acetone	~	~	7000	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
n-Butylbenzene	~	~	610	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
tert-Butylbenzene	~	~	610	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Carbon Disulfide	~	~	7000	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
cis-1,2-Dichloroethylene	~	~	700	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
p-Isopropyltoluene	~	~	700	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Methylene Chloride	~	~	50	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Naphthalene	~	~	2800	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Tetrachloroethylene	~	~	50	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Trichloroethylene	~	~	50	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1,2,4-Trimethylbenzene	~	~	3500	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1,3,5-Trimethylbenzene	~	~	3500	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Vinyl Chloride	~	~	20	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
o-Xylene	~	~	5300	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
METALS - TOTAL (mg/kg)			PMC X 20 (screening)													
ag (mg/kg)dw icp (mg/kg dry wt) Silver	10,000	340	7.20	NT	NT	NT	NT	NT	NT	NT	22.9	3.41	20.3	5.18	<0.54	<0.55
as (mg/kg)dw icp (mg/kg dry wt) Arsenic	10.0	10.0	10.00	NT	NT	NT	NT	NT	NT	NT	8.39	6.93	<5.96	<6.47	<5.36	<5.41
ba (mg/kg)dw icp (mg/kg dry wt) Barium	140,000	4,700	200.00	NT	NT	NT	NT	NT	NT	NT	114	138	70.1	183	33.0	37.1
be (mg/kg)dw icp (mg/kg dry wt) Beryllium	2.00	2.00	0.80	NT	NT	NT	NT	NT	NT	NT	0.68	0.72	0.46	0.83	0.29	<0.28
cd (mg/kg)dw icp (mg/kg dry wt) Cadmium	1,000	34.0	1.00	NT	NT	NT	NT	NT	NT	NT	<0.60	<0.60	1.44	<0.65	<0.54	<0.55
cr (mg/kg)dw icp (mg/kg dry wt) Chromium	~	~	10.00	NT	NT	NT	NT	NT	NT	NT	23.2	68.1	91.8	31.1	7.80	7.64
cu (mg/kg)dw icp (mg/kg dry wt) Copper	78,000	2,800	280.00	NT	NT	NT	NT	NT	NT	NT	600	205	762	236	9.35	11.0
hg (mg/kg) dw (mg/kg dry wt) Mercury	610	20.0	0.40	NT	NT	NT	NT	NT	NT	NT	0.156	0.303	0.797	0.223	0.008	<0.008
ni (mg/kg)dw icp (mg/kg dry wt) Nickel	7,500	1,400	20.00	NT	NT	NT	NT	NT	NT	NT	383	36.8	29.2	21.1	7.43	8.00
pb (mg/kg)dw icp (mg/kg dry wt) Lead	1,000	400	3.00	NT	NT	NT	NT	NT	NT	NT	336	144	382	63.0	3.67	6.04
sb (mg/kg)dw icp (mg/kg dry wt) Antimony	8,200	27.0	1.20	NT	NT	NT	NT	NT	NT	NT	41.8	6.18	7.38	<5.17*	<4.29*	<4.33*
v (mg/kg)dw icp (mg/kg dry wt) Vanadium	14,000	470	10.00	NT	NT	NT	NT	NT	NT	NT	62.1	63.1	68.9	59.7	18.0	18.4
zn (mg/kg)dw icp (mg/kg dry wt) Zinc	610,000	20,000	1000.00	NT	NT	NT	NT	NT	NT	NT	573	102	338	143	18.6	20.5

Table 4
Analytical Summary - Soil Samples
International Silver Company, Factory H
Meriden, Connecticut
Metcalf Eddy, Inc.
March 2007

Parameter	RSR DEC I/C DEC	RSR DEC R DEC	GB PMC	AOC-24 AOC-24-SS1	AOC-24 AOC-24-MW1 2-4	AOC-24 AOC-24-MW1 4-6	AOC-30 AOC-30-SS1 MS/MSD	AOC-30 AOC-30-SS1DUP	AOC-30 AOC-30-MW1 2-4	AOC-30 AOC-30-MW1 5-7	AOC-SAC AOC-SAC-SS1	AOC-SAC AOC-SAC-SB1 2-4	AOC-SAE AOC-SAE-SB1 0-2	AOC-SAE AOC-SAE-SB1 2-4	AOC-SAH SAH-SB1 0-2	AOC-SAH AOC-SA-H-SB01 2-4
Sampling Date				3/29/06	3/29/06	3/29/06	3/30/06	3/30/06	3/30/06	3/30/06	3/29/06	3/29/06	3/29/06	3/29/06	3/31/06	3/30/06
Sample Depth (feet)				0-0.5	2-4	4-6	0-0.5	0-0.5	2-4	5-7	0-0.5	2-4	0-2	2-4	0-2	2-4
Laboratory Report Number				LIMS-96359, LIMS-96661	LIMS-96359, LIMS-96661	LIMS-96358	LIMS-96356	LIMS-96356	LIMS-96356	LIMS-96356	LIMS-96359, LIMS-96668	LIMS-96359	LIMS-96359, LIMS-96668	LIMS-96359	LIMS-96388	LIMS-96357, LIMS-96668
METALS - (SPLP)																
splp - beryllium (mg/l) Beryllium	~	~	0.04	NT	NT	NT	NT	NT	NT	NT	NT	NT	<0.0010	NT	NT	NT
splp - cd low (mg/l leachate) Cadmium	~	~	0.05	NT	NT	NT	NT	NT	NT	NT	NT	NT	<0.003	NT	NT	NT
splp - chromium (mg/l leachate) Chromium	~	~	0.50	NT	NT	NT	NT	NT	NT	NT	<0.03	NT	<0.03	NT	NT	NT
splp - copper (mg/l leachate) Copper	~	~	13.00	NT	NT	NT	NT	NT	NT	NT	2.37	NT	0.60	NT	NT	NT
splp - lead icp (mg/l leachate) Lead	~	~	0.15	NT	NT	NT	NT	NT	NT	NT	5.63**	NT	0.10	NT	NT	<0.01
splp - nickel (mg/l leachate) Nickel	~	~	1.00	NT	NT	NT	NT	NT	NT	NT	0.14	NT	<0.03	NT	NT	NT
splp - sb furn (mg/l) Antimony	~	~	0.06	NT	NT	NT	NT	NT	NT	NT	0.0097	NT	0.0098	NT	NT	0.0089
splp - silver (mg/l leachate) Silver	~	~	0.36	NT	NT	NT	NT	NT	NT	NT	<0.03	NT	<0.03	NT	NT	NT
splp - tl furn (mg/l) Thallium	~	~	0.05	NT	NT	NT	NT	NT	NT	NT	<0.0005	NT	<0.0005	NT	NT	<0.0005
splp - vanadium (mg/l leachate) Vanadium	~	~	0.50	NT	NT	NT	NT	NT	NT	NT	<0.03	NT	<0.03	NT	NT	<0.03
splp barium icp (mg/l leachate) Barium	~	~	10.00	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
splp mercury (mg/l leachate) Mercury	~	~	0.02	NT	NT	NT	NT	NT	NT	NT	NT	NT	0.00012	NT	NT	NT
PAHs - MASS																
pah - sludge (mg/kg dry wt) Acenaphthene	2,500	1,000	84	<1.82	<0.94	<0.30	NT	NT	NT	NT	<0.20	<0.20	NT	NT	NT	NT
Acenaphthylene	2,500	1,000	84	<1.82	<0.94	<0.30	NT	NT	NT	NT	<0.20	<0.20	NT	NT	NT	NT
Anthracene	2,500	1,000	400	<1.82	1.28	<0.30	NT	NT	NT	NT	<0.20	0.28	NT	NT	NT	NT
Benzo(a)anthracene	7.80	1.00	1	2.27	2.19	<0.30	NT	NT	NT	NT	<0.20	0.22	NT	NT	NT	NT
Benzo(a)pyrene	1.00	1.00	1	1.99	1.88	<0.30	NT	NT	NT	NT	<0.20	0.32	NT	NT	NT	NT
Benzo(b)fluoranthene	7.80	1.00	1	2.43	2.7	<0.30	NT	NT	NT	NT	<0.20	<0.20	NT	NT	NT	NT
Benzo(g,h,i)perylene	2,500	1,000	42	<1.82	<0.94	<0.30	NT	NT	NT	NT	<0.20	<0.20	NT	NT	NT	NT
Benzo(k)fluoranthene	78.0	8.00	1	<1.82*	1.08	<0.30	NT	NT	NT	NT	<0.20	0.26	NT	NT	NT	NT
Chrysene	780	84.0	1	2.44	2.23	<0.30	NT	NT	NT	NT	<0.20	<0.20	NT	NT	NT	NT
Dibenz(a,h)anthracene	1.00	1.00	1	<1.82*	<0.94	<0.30	NT	NT	NT	NT	<0.20	0.37	NT	NT	NT	NT
Fluoranthene	2,500	1,000	56	4.93	5.02	<0.30	NT	NT	NT	NT	<0.20	<0.20	NT	NT	NT	NT
Fluorene	2,500	1,000	56	<1.82	<0.94	<0.30	NT	NT	NT	NT	<0.20	<0.20	NT	NT	NT	NT
Indeno(1,2,3-cd)pyrene	7.80	1.00		<1.82*	<0.94	<0.30	NT	NT	NT	NT	<0.20	<0.20	NT	NT	NT	NT
2-Methylnaphthalene	2,500	474	9.8	<1.82	<0.94	<0.30	NT	NT	NT	NT	<0.20	<0.20	NT	NT	NT	NT
Naphthalene	2,500	1,000	56	<1.82	<0.94	<0.30	NT	NT	NT	NT	<0.20	<0.20	NT	NT	NT	NT
Phenanthrene	2,500	1,000	40	5.29	5.28	<0.30	NT	NT	NT	NT	<0.20	0.38	NT	NT	NT	NT
Pyrene	2,500	1,000	40	4.99	4.89	<0.30										
PAHs - (self-implementing)																
splp - pah (ug/l)			GWPC X 10													
Acenaphthene	~	~	4200	<0.30	<0.30	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Acenaphthylene	~	~	4200	<0.30	<0.30	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Anthracene	~	~	20000	<0.20	<0.20	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Benzo(a)anthracene	~	~	0.6	<0.050	<0.050	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Benzo(a)pyrene	~	~	2.0	<0.100	<0.100	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Benzo(b)fluoranthene	~	~	0.6	<0.050	<0.050	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Benzo(g,h,i)perylene	~	~	2100	<0.500	<0.500	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Benzo(k)fluoranthene	~	~	5.0	<0.200	<0.200	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Chrysene	~	~	48	<0.20	<0.20	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Dibenz(a,h)anthracene	~	~	5.0	<0.500	<0.500	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Fluoranthene	~	~	2800	<0.50	<0.50	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Fluorene	~	~	2800	<1.00	<1.00	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Indeno(1,2,3-cd)pyrene	~	~	5.0	<0.500	<0.500	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
2-Methylnaphthalene	~	~	48	<1.00	<1.00	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Naphthalene	~	~	2800	<1.00	<1.00	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Phenanthrene	~	~	2000	<0.10	<0.10	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Pyrene	~	~	2000	<1.00	<1.00	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Method 600/R-93/116 Asbestos	~	~	~	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
cyanide-tot sldg (mg/kg dry wt) Cyanide - None detected	41000	1400	~	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
etph dry weight (mg/kg dry weight) Extractable TPH (ETPH)	2,500	500	2500	400	180	91 J	120	210	100	<13	91	110	NT	NT	21	<11
solids (percent) (%) Solids, total	~	~	~	92.0	88.7	56.0	91.0	90.4	77.7	82.0 J	83.6	83.6	90.0	77.4	93.5	92.9

Table 4
Analytical Summary - Soil Samples
International Silver Company, Factory H
Meriden, Connecticut
Metcalf Eddy, Inc.
March 2007

Parameter	RSR DEC			AOC-SAM			AOC-SAN		AOC-SAO		AOC-SAP		AOC-SAT			AOC-26	
	I/C DEC	R DEC	GB PMC	AOC-SA-M-SB1 0-2	AOC-SA-M SB1 2-4	AOC-SA-M-SB-02	AOC-SAN-SS1	AOCSAN-SS-2	AOC-SAO-SB1 0-2	AOC-SAO-SB1-2-4	AOC-SAP-SS1	AOC-SAP-SS2	AOC-SAT-SS1	AOC-SA-T-03	AOC-SA-T-04	MW-100 11.5 -13.5	MW-107 6-8
Sampling Date				3/29/06	3/29/06	5/10/06	3/31/06	3/31/06	3/30/06	3/30/06	3/29/06	3/29/06	3/31/06	3/30/06	3/30/06	11/23/06	11/23/06
Sample Depth (feet)				0-2	2-4	0-1	0-0.5	0-0.5	0-2	2-4	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	11.5 -13.5	6-8
Laboratory Report Number				LIMS-96358, LIMS-96679, LIMS-	LIMS-96358	LIMS-97315	LIMS-96368, LIMS-96737	LIMS-96392	LIMS-96356, LIMS-96679	LIMS-96356, LIMS-96679	LIMS-96360	LIMS-96360	LIMS-96368	LIMS-96357, LIMS-96668	LIMS-96357	LIMT- 01995	LIMT- 01995
VOCs - MASS																	
8260 dry weight (mg/kg dry wt)																	
Acrylonitrile	11	1.1	0.10	<0.019*	NT	<0.022*	NT	NT	<0.013*	<0.026*	NT	NT	NT	NT	NT	<0.021	<0.025
tert-Amylmethyl Ether	~	~	~	<0.001	NT	<0.002	NT	NT	<0.001	<0.002	NT	NT	NT	NT	NT	<0.001	<0.002
Benzene	200	21	0.20	<0.002	NT	<0.003	NT	NT	<0.001	<0.003	NT	NT	NT	NT	NT	<0.002	<0.003
Bromodichloromethane	92	9.9	0.11	<0.002	NT	<0.003	NT	NT	<0.001	<0.003	NT	NT	NT	NT	NT	<0.002	<0.003
Bromomethane	1,000	95	2.0	<0.010	NT	<0.011	NT	NT	<0.008	<0.013	NT	NT	NT	NT	NT	<0.011	<0.013
n-Butylbenzene	1,000	500	14	<0.002	NT	<0.003	NT	NT	<0.001	<0.003	NT	NT	NT	NT	NT	<0.002	<0.003
sec-Butylbenzene	1,000	500	14	<0.002	NT	<0.003	NT	NT	<0.001	<0.003	NT	NT	NT	NT	NT	<0.002	<0.003
tert-Butylbenzene	1,000	500	14	<0.002	NT	<0.003	NT	NT	<0.001	<0.003	NT	NT	NT	NT	NT	<0.002	<0.003
Carbon Tetrachloride	44	4.7	1.0	<0.002	NT	<0.003	NT	NT	<0.001	<0.003	NT	NT	NT	NT	NT	<0.002	<0.003
Chlorodibromomethane	68	7.3	0.10	<0.001	NT	<0.002	NT	NT	<0.001	<0.002	NT	NT	NT	NT	NT	<0.001	<0.002
Chloroform	940	100	1.2	<0.004	NT	<0.005	NT	NT	<0.003	<0.006	NT	NT	NT	NT	NT	<0.004	<0.005
Chloromethane	440	47	0.54	<0.010	NT	<0.011	NT	NT	<0.008	<0.013	NT	NT	NT	NT	NT	<0.011	<0.013
1,2-Dibromo-3-Chloropropane	4.1	0.44	~	<0.002	NT	<0.003	NT	NT	<0.001	<0.003	NT	NT	NT	NT	NT	<0.002	<0.003
1,2-Dibromoethane	0.067	0.007	~	<0.001	NT	<0.002	NT	NT	<0.001	<0.002	NT	NT	NT	NT	NT	<0.001	<0.002
cis-1,2-Dichloroethylene	1,000	500	14	0.008	NT	<0.003	NT	NT	<0.001	<0.003	NT	NT	NT	NT	NT	<0.002	<0.003
1,2-Dichloropropane	84	9.0	1.0	<0.002	NT	<0.003	NT	NT	<0.001	<0.003	NT	NT	NT	NT	NT	<0.002	<0.003
1,3-Dichloropropane	~	~	0.1	<0.001	NT	<0.002	NT	NT	<0.001	<0.002	NT	NT	NT	NT	NT	<0.001	<0.002
Ethyl Benzene	1,000	500	10	<0.002	NT	<0.003	NT	NT	<0.001	<0.003	NT	NT	NT	NT	NT	<0.002	<0.003
Isopropylbenzene	1,000	500	130	<0.002	NT	<0.003	NT	NT	<0.001	<0.003	NT	NT	NT	NT	NT	<0.002	<0.003
p-Isopropyltoluene	1,000	500	14	<0.002	NT	<0.003	NT	NT	<0.001	<0.003	NT	NT	NT	NT	NT	<0.002	<0.003
Methylene Chloride	760	82	1.0	<0.019	NT	<0.022	NT	NT	<0.013 UJ	<0.026 UJ	NT	NT	NT	NT	NT	<0.021	<0.025
Naphthalene	2,500	1,000	56	<0.010	NT	<0.011	NT	NT	0.062	<0.013	NT	NT	NT	NT	NT	<0.004	<0.005
n-Propylbenzene	1,000	500	14	<0.002	NT	<0.003	NT	NT	<0.001	<0.003	NT	NT	NT	NT	NT	<0.002	<0.003
1,1,1,2-Tetrachloroethane	220	24	0.20	<0.002	NT	<0.003	NT	NT	<0.001	<0.003	NT	NT	NT	NT	NT	<0.002	<0.003
1,1,2,2-Tetrachloroethane	29	3.1	0.10	<0.001	NT	<0.002	NT	NT	<0.001	<0.002	NT	NT	NT	NT	NT	<0.001	<0.002
Tetrachloroethylene	110	12	1.0	0.021	NT	<0.003	NT	NT	<0.001	<0.003	NT	NT	NT	NT	NT	0.008	<0.003
Toluene	1,000	500	67	<0.002	NT	<0.003	NT	NT	<0.001	<0.003	NT	NT	NT	NT	NT	<0.002	<0.003
Trichloroethylene	520	56	1.0	0.034	NT	<0.003	NT	NT	<0.001	<0.003	NT	NT	NT	NT	NT	0.007	<0.003
1,2,4-Trimethylbenzene	1,000	500	70	<0.002	NT	<0.003	NT	NT	<0.001	<0.003	NT	NT	NT	NT	NT	<0.002	<0.003
1,3,5-Trimethylbenzene	1,000	500	70	<0.002	NT	<0.003	NT	NT	<0.001	<0.003	NT	NT	NT	NT	NT	<0.002	<0.003
Vinyl Chloride	3.0	0.32	0.40	<0.010	NT	<0.011	NT	NT	<0.008	<0.013	NT	NT	NT	NT	NT	<0.011	<0.013
m + p Xylene	1,000	500	20	<0.004	NT	<0.005	NT	NT	<0.003	<0.006	NT	NT	NT	NT	NT	<0.004	<0.005
o-Xylene	1,000	500	20	<0.002	NT	<0.003	NT	NT	<0.001	<0.003	NT	NT	NT	NT	NT	<0.002	<0.003
VOCs - (self-implementing)																	
splp 8260 (ug/l)			GWPC X 10														
Acetone	~	~	7000	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
n-Butylbenzene	~	~	610	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
tert-Butylbenzene	~	~	610	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Carbon Disulfide	~	~	7000	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
cis-1,2-Dichloroethylene	~	~	700	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
p-Isopropyltoluene	~	~	700	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Methylene Chloride	~	~	50	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Naphthalene	~	~	2800	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Tetrachloroethylene	~	~	50	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Trichloroethylene	~	~	50	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1,2,4-Trimethylbenzene	~	~	3500	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1,3,5-Trimethylbenzene	~	~	3500	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Vinyl Chloride	~	~	20	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
o-Xylene	~	~	5300	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
METALS - TOTAL (mg/kg)			PMC X 20 (screening)														
ag (mg/kg)dw icp (mg/kg dry wt) Silver	10,000	340	7.20	4.94	<0.59	2.75	NT	NT	17.8	<0.68	NT	NT	NT	NT	NT	NT	NT
as (mg/kg)dw icp (mg/kg dry wt) Arsenic	10.0	10.0	10.00	<5.67	<5.85	7.76	NT	NT	<5.66	<8.72	NT	NT	NT	NT	NT	NT	NT
ba (mg/kg)dw icp (mg/kg dry wt) Barium	140,000	4,700	200.00	145	116	304	NT	NT	106	283	NT	NT	NT	NT	NT	NT	NT
be (mg/kg)dw icp (mg/kg dry wt) Beryllium	2.00	2.00	0.80	0.50	0.96	0.46	NT	NT	0.69	0.76	NT	NT	NT	NT	NT	NT	NT
cd (mg/kg)dw icp (mg/kg dry wt) Cadmium	1,000	34.0	1.00	<0.57	<0.59	0.78	NT	NT	0.66	<0.68	NT	NT	NT	NT	NT	NT	NT
cr (mg/kg)dw icp (mg/kg dry wt) Chromium	~	~	10.00	19.7	14.2	14.7	NT	NT	66.6	31.1	NT	NT	NT	NT	NT	NT	NT
cu (mg/kg)dw icp (mg/kg dry wt) Copper	76,000	2,800	260.00	410	37.9	194	NT	NT	1,200	33.1	NT	NT	NT	NT	NT	NT	NT
hg (mg/kg) dw (mg/kg dry wt) Mercury	610	20.0	0.40	0.236	0.061	0.393	NT	NT	0.406	0.059	NT	NT	NT	NT	NT	NT	NT
ni (mg/kg)dw icp (mg/kg dry wt) Nickel	7,500	1,400	20.00	98.6	16.1	32.6	NT	NT	117	27.3	NT	NT	NT	NT	NT	NT	NT
pb (mg/kg)dw icp (mg/kg dry wt) Lead	1,000	400	3.00	182	20.1	333	362 J	3.09	241	38.1	NT	NT	344	406	131	NT	NT
sb (mg/kg)dw icp (mg/kg dry wt) Antimony	8,200	27.0	1.20	<4.54*	<4.68*	<3.13* UJ	NT	NT	4.77	<5.38*	NT	NT	NT	NT	NT	NT	NT
v (mg/kg)dw icp (mg/kg dry wt) Vanadium	14,000	470	10.00	41.4	38.0	38.2	NT	NT	83.4	62.6	NT	NT	NT	NT	NT	NT	NT
zn (mg/kg)dw icp (mg/kg dry wt) Zinc	610,000	20,000	1000.00	283	179	290	NT	NT	407	64.9	NT	NT	NT	NT	NT	NT	NT

Table 4
Analytical Summary - Soil Samples
International Silver Company, Factory H
Meriden, Connecticut
Metcalf Eddy, Inc.
March 2007

Parameter	RSR DEC			AOC-SAM			AOC-SAN		AOC-SAO		AOC-SAP		AOC-SAT			AOC-25	
	I/C DEC	R DEC	GB PMC	AOC-SA-M-SB1 0-2	AOC-SA-M SB1 2-4	AOC-SA-M-SB-02	AOC-SAN-SS1	AOCSAN-SS-2	AOC-SAO-SB1 0-2	AOC-SAO-SB1-2-4	AOC-SAP-SS1	AOC-SAP-SS2	AOC-SAT-SS1	AOC-SA-T-03	AOC-SA-T-04	MW-100 11.5 -13.5	MW-107 6-8
Sampling Date				3/29/06	3/29/06	5/10/06	3/31/06	3/31/06	3/30/06	3/30/06	3/29/06	3/29/06	3/31/06	3/30/06	3/30/06	11/23/06	11/23/06
Sample Depth (feet)				0-2	2-4	0-1	0-0.5	0-0.5	0-2	2-4	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	11.5 -13.5	6-8
Laboratory Report Number				LIMS-96358, LIMS-96679, LIMS-	LIMS-96358	LIMS-97315	LIMS-96368, LIMS-96737	LIMS-96392	LIMS-96356, LIMS-96679	LIMS-96356, LIMS-96679	LIMS-96360	LIMS-96360	LIMS-96368	LIMS-96357, LIMS-96668	LIMS-96357	LIMT- 01995	LIMT- 01995
METALS - (SPLP)																	
splp - beryllium (mg/l) Beryllium	~	~	0.04	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
splp - cd low (mg/l leachate) Cadmium	~	~	0.05	<0.03	NT	NT	NT	NT	<0.02	<0.02	NT	NT	NT	NT	NT	NT	NT
splp - chromium (mg/l leachate) Chromium	~	~	0.50	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
splp - copper (mg/l leachate) Copper	~	~	13.00	0.49	NT	NT	NT	NT	0.40	NT	NT	NT	NT	NT	NT	NT	NT
splp - lead icp (mg/l leachate) Lead	~	~	0.15	0.05	NT	NT	0.02	NT	0.05	<0.01	NT	NT	NT	0.03	NT	NT	NT
splp - nickel (mg/l leachate) Nickel	~	~	1.00	0.03	NT	NT	NT	NT	0.04	0.05	NT	NT	NT	NT	NT	NT	NT
splp - sb furn (mg/l) Antimony	~	~	0.06	0.0071	NT	NT	NT	NT	0.0115	0.0057	NT	NT	NT	NT	NT	NT	NT
splp - silver (mg/l leachate) Silver	~	~	0.36	NT	NT	NT	NT	NT	<0.02	NT	NT	NT	NT	NT	NT	NT	NT
splp - tl furn (mg/l) Thallium	~	~	0.05	<0.0005	NT	NT	NT	NT	<0.0005	<0.0005	NT	NT	NT	NT	NT	NT	NT
splp - vanadium (mg/l leachate) Vanadium	~	~	0.50	<0.03	NT	NT	NT	NT	<0.02	<0.02	NT	NT	NT	NT	NT	NT	NT
splp barium icp (mg/l leachate) Barium	~	~	10.00	NT	NT	NT	NT	NT	NT	0.63	NT	NT	NT	NT	NT	NT	NT
splp mercury (mg/l leachate) Mercury	~	~	0.02	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
PAHs - MASS																	
pah - sludge (mg/kg dry wt)																	
Acenaphthene	2,500	1,000	84	<0.38	<0.20	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Acenaphthylene	2,500	1,000	84	<0.38	<0.20	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Anthracene	2,500	1,000	400	<0.38	<0.20	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Benzo(a)anthracene	7.80	1.00	1	1.08	<0.20	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Benzo(a)pyrene	1.00	1.00	1	1.12	<0.20	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Benzo(b)fluoranthene	7.80	1.00	1	1.43	<0.20	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Benzo(g,h,i)perylene	2,500	1,000	42	0.62	<0.20	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Benzo(k)fluoranthene	78.00	8.40	1	0.54	<0.20	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Chrysene	780	84.0	1	1.16	<0.20	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Dibenz(a,h)anthracene	1.00	1.00	1	<0.38	<0.20	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Fluoranthene	2,500	1,000	56	1.86	<0.20	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Fluorene	2,500	1,000	56	<0.38	<0.20	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Indeno(1,2,3-cd)pyrene	7.80	1.00	1	0.72	<0.20	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
2-Methylnaphthalene	2,500	474	9.8	<0.38	<0.20	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Naphthalene	2,500	1,000	56	<0.38	<0.20	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Phenanthrene	2,500	1,000	40	1.02	<0.20	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Pyrene	2,500	1,000	40	1.90	<0.20	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
PAHs - (self-implementing)																	
splp - pah (ug/l)			GWPC X 10														
Acenaphthene	~	~	4200	<0.50	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Acenaphthylene	~	~	4200	<0.30	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Anthracene	~	~	20000	<0.20	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Benzo(a)anthracene	~	~	0.6	<0.050	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Benzo(a)pyrene	~	~	2.0	<0.100	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Benzo(b)fluoranthene	~	~	0.8	<0.050	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Benzo(g,h,i)perylene	~	~	2100	<0.500	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Benzo(k)fluoranthene	~	~	5.0	<0.200	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Chrysene	~	~	48	<0.20	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Dibenz(a,h)anthracene	~	~	5.0	<0.500	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Fluoranthene	~	~	2800	<0.50	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Fluorene	~	~	2800	<1.00	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Indeno(1,2,3-cd)pyrene	~	~	5.0	<0.500	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
2-Methylnaphthalene	~	~	48	<1.00	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Naphthalene	~	~	2800	<1.00	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Phenanthrene	~	~	2000	<0.10	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Pyrene	~	~	2000	<1.00	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Method 600/R-93/116 Asbestos	~	~	~	NT	NT	NT	ND	Chrysotile - trace Anosite - trace	NT	NT	ND	ND	ND	Chrysotile - trace	ND	NT	NT
cyanide-tot sldg (mg/kg dry wt) Cyanide - None detected	41000	1400	~	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
eph dry weight (mg/kg dry weight) Extractable TPH (ETPH)	2,500	500	2500	210	<12	NT	NT	NT	1,700	41	NT	NT	NT	NT	NT	NT	NT
solids (percent) (%) Solids, total	~	~	~	88.3	85.6	NT	95.1	86.3	88.4	74.4	NT	NT	89.5	74.8	64.5	79.6	79.7

Advanced Environmental Interface, Inc., Removal Stabilization Activities
Summary Report February 2006

AEI-2006

AFT

Table 1
Comparison of Soil Sample Analyte Concentrations to DEP Remediation Standard Regulations Numerical Criteria
Former Insilco Factory H Site
77 Cooper Street, Meriden, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)			
	Residential	Industrial/ Commercial	GB	S-1 (W)	S-2 (W)	SW-3 (W)	SW-4 (W)
Depth Below Grade				(1')	(1')	(3.5')	(2')
Sampling Date				28-Jul-05	28-Jul-05	28-Jul-05	1-Aug-05
USEPA Method 8270C Polynuclear Aromatic Hydrocarbons (PAHs)							
Acenaphthene	1,000	2,500	84	ND	ND	ND	ND
Acenaphthylene	1,000	2,500	84	ND	ND	ND	ND
Anthracene	1,000	2,500	400	ND	ND	ND	ND
Benzo[a]anthracene	1	7.8	1	ND	ND	ND	ND
Benzo[a]pyrene	1	1	1	ND	ND	ND	ND
Benzo[b]fluoranthene	1	7.8	1	ND	ND	ND	ND
Benzo[g,h,i]perylene	1,000	2,500	42	ND	ND	ND	ND
Benzo[k]fluoranthene	8.4	78	1	ND	ND	ND	ND
Chrysene	84	780	1	ND	ND	ND	ND
Dibenz[a,h]anthracene	1	1	1	ND	ND	ND	ND
7H-Dibenzo(c,g)carbozole	NC	NC	NC	NT	NT	NT	NT
Indeno[1,2,3-cd]pyrene	1	7.8	1	ND	ND	ND	ND
Fluoranthene	1,000	2,500	56	ND	ND	ND	ND
Fluorene	1,000	2,500	56	ND	ND	ND	ND
Naphthalene	1,000	2,500	56	ND	ND	ND	ND
Phenanthrene	1,000	2,500	40	ND	ND	ND	ND
Pyrene	1,000	2,500	40	ND	ND	ND	ND
USEPA Method 8260B GC/MS	NA	NA	NA	ND	ND	ND	ND
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)	1	10	0.005	ND	ND	ND	ND

NOTE: Soils at Sample Locations S-1 and S-2 were removed; Depths at locations PX-GP and HS begin at 2' below grade (i.e., at bottom of excavation now backfilled)

8:57 AM

D FT

Table 1

Comparison of Soil Sample Analyte Concentrations to DEP Remediation Standard Regulations Numerical Criteria

Former Insilco Factory H Site

77 Cooper Street, Meriden, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)			
	Residential	Industrial/ Commercial	GB	S-1 (W)	S-2 (W)	SW-3 (W)	SW-4 (W)
Depth Below Grade				(1')	(1')	(3.5')	(2')
Sampling Date				28-Jul-05	28-Jul-05	28-Jul-05	1-Aug-05
Mass/Total Metals							
Antimony	**27**	8,200	**0.06**	ND	ND	**40**	ND
Arsenic	**10**	**10**	NA	ND	ND	**40.4**	4.6
Barium	4,700	140,000	**10.0**	**15**	**17**	14	**58**
Cadmium	34	1,000	**0.1**	ND	**1.8**	**1.4**	**0.5**
Chromium (total)	NC	NC	**0.5**	**16.7**	**184**	**3.9**	**10.5**
Copper	**2,500**	**76,000**	NA	**61,700**	**78,700**	974	**23,600**
Lead	**500**	1,000	NA	50.8	102	**936**	303
Mercury	**20**	610	**0.02**	**0.05**	**0.25**	0.04	**0.18**
Nickel	**1,400**	**7,500**	NA	**15,600**	**1,540**	516	**6,410**
Silver	**340**	10,000	NA	33.6	187	57.1	286
Vanadium	470	14,000	**0.5**	**8.2**	7.2	**1.8**	**5.7**
Zinc	**20,000**	610,000	NA	11,700	**27,000**	1,100	5,070
SPLP Metals							
Lead	NA	NA	NA	NT	NT	NT	NT
USEPA Method 335.2 Total Cyanide	1,400	41,000	NA	ND	ND	ND	ND
Connecticut Extractable Total Petroleum Hydrocarbons (ETPH)	**500**	**2,500**	**2,500**	**14,420**	**3,649**	ND	**12,629**

Notes:

mg/kg = milligrams per kilogram.
ppm = Parts per million (comparable to mg/kg).
NA = Not applicable.
NC = No criteria established.
ND = Not detected above the laboratory minimum detection limit.
NT = Not tested.
☐ = Concentration exceeds associated criterion.

NOTE: Soils at Sample Locations S-1 and S-2 were removed; Depths at locations PX-GP and HS begin at 2' below grade (i.e., at bottom of excavation now backfilled)

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Table 1

Comparison of Soil Sample Analyte Concentrations to DEP Remediation Standard Regulations Numerical Criteria

Former Insilco Factory H Site

77 Cooper Street, Meriden, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial	GB	HS-A	HS-B	HS-C	HS-D	HS-E	HS-F
Depth Below Grade				(0-0.5')	(0-0.5')	(0-0.5')	(0-0.5')	(0-0.5')	(0-0.5')
Sampling Date				9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05
USEPA Method 8270C Polynuclear Aromatic Hydrocarbons (PAHs)									
Acenaphthene	1,000	2,500	84	ND	ND	0.031	ND	ND	ND
Acenaphthylene	1,000	2,500	84	ND	ND	0.032	0.017	0.027	0.046
Anthracene	1,000	2,500	400	ND	0.280	0.174	0.036	0.064	0.048
Benzo[a]anthracene	**1**	7.8	**1**	ND	**1.560**	0.531	0.079	0.162	0.174
Benzo[a]pyrene	1	1	1	ND	0.540	0.248	0.016	0.081	0.064
Benzo[b]fluoranthene	**1**	7.8	**1**	ND	0.910	0.344	0.069	0.111	0.118
Benzo[g,h,i]perylene	1,000	2,500	42	ND	ND	0.227	ND	ND	0.096
Benzo[k]fluoranthene	8.4	78	**1**	ND	0.740	0.242	0.043	0.075	0.104
Chrysene	84	780	**1**	ND	**1.780**	0.645	0.074	0.168	0.191
Dibenz[a,h]anthracene	1	1	1	ND	ND	0.104	ND	ND	ND
7H-Dibenzo(c,g)carbozole	NC	NC	NC	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	**1**	7.8	**1**	ND	ND	0.215	ND	ND	0.091
Fluoranthene	1,000	2,500	56	0.360	2.18	0.871	0.130	0.306	0.281
Fluorene	1,000	2,500	56	ND	ND	0.035	ND	ND	ND
Naphthalene	1,000	2,500	56	ND	ND	0.104	0.162	0.048	0.028
Phenanthrene	1,000	2,500	40	ND	0.920	0.635	0.174	0.129	0.166
Pyrene	1,000	2,500	40	0.380	2.210	0.947	0.125	0.306	0.284
USEPA Method 8260B GC/MS	NA	NA	NA	NT	NT	NT	NT	NT	NT
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)	1	10	**0.005**	ND	ND	ND	ND	ND	**1.0**

NOTE: Soils at Sample Locations S-1 and S-2 were removed; Depths at locations PX-GP and HS begin at 2' below grade (i.e., at bottom of excavation now backfilled)

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Table 1

Comparison of Soil Sample Analyte Concentrations to DEP Remediation Standard Regulations Numerical Criteria

Former Insilco Factory H Site

77 Cooper Street, Meriden, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial	GB	HS-A	HS-B	HS-C	HS-D	HS-E	HS-F
Depth Below Grade				(0-0.5')	(0-0.5')	(0-0.5')	(0-0.5')	(0-0.5')	(0-0.5')
Sampling Date				9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05
Mass/Total Metals									
Antimony	**27**	8,200	**0.06**	NT	NT	NT	NT	NT	NT
Arsenic	**10**	**10**	NA	ND	1.7	6.5	3.1	ND	ND
Barium	4,700	140,000	**10.0**	NT	NT	NT	NT	NT	NT
Cadmium	34	1,000	**0.1**	NT	NT	NT	NT	NT	NT
Chromium (total)	NC	NC	**0.5**	NT	NT	NT	NT	NT	NT
Copper	**2,500**	**76,000**	NA	**40,000**	**137,000**	866	493	**32,200**	**45,500**
Lead	**500**	1,000	NA	195	36.5	142	120	386	89.4
Mercury	**20**	610	**0.02**	NT	NT	NT	NT	NT	NT
Nickel	**1,400**	**7,500**	NA	**2,430**	**28,300**	200	86.6	803	**6,940**
Silver	**340**	10,000	NA	79.9	57.9	328	79.2	**472**	182
Vanadium	470	14,000	**0.5**	NT	NT	NT	NT	NT	NT
Zinc	**20,000**	610,000	NA	2,250	**27,600**	357	113	756	9,980
SPLP Metals									
Lead	NA	NA	NA	NT	NT	NT	NT	NT	NT
USEPA Method 335.2 Total Cyanide	1,400	41,000	NA	ND	1.8	ND	ND	2.3	2.3
Connecticut Extractable Total Petroleum Hydrocarbons (ETPH)	**500**	**2,500**	**2,500**	**21,676**	**5,589**	300	264	**913**	**4,939**

Notes:

mg/kg = milligrams per kilogram.
ppm = Parts per million (comparable to mg/kg).
NA = Not applicable.
NC = No criteria established.
ND = Not detected above the laboratory minimum detection limit.
NT = Not tested.
☐ = Concentration exceeds associated criterion.

NOTE: Soils at Sample Locations S-1 and S-2 were removed; Depths at locations PX-GP and HS begin at 2' below grade (i.e., at bottom of excavation now backfilled)

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Table 1

Comparison of Soil Sample Analyte Concentrations to DEP Remediation Standard Regulations Numerical Criteria

Former Insilco Factory H Site

77 Cooper Street, Meriden, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial	GB	HS-G	PX-GP-1	PX-GP-1	PX-GP-1	PX-GP-2	PX-GP-2
Depth Below Grade				(0-0.5')	(0-0.5')	(0.5-2')	(2-3.5')	(0-0.5')	(0.5-2')
Sampling Date				9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05
USEPA Method 8270C Polynuclear Aromatic Hydrocarbons (PAHs)									
Acenaphthene	1,000	2,500	84	0.210	NT	0.042	NT	NT	NT
Acenaphthylene	1,000	2,500	84	ND	NT	0.014	NT	NT	NT
Anthracene	1,000	2,500	400	0.920	NT	0.158	NT	NT	NT
Benzo[a]anthracene	1	7.8	1	**2.490**	NT	0.176	NT	NT	NT
Benzo[a]pyrene	1	1	1	0.820	NT	0.089	NT	NT	NT
Benzo[b]fluoranthene	1	7.8	1	**1.020**	NT	0.124	NT	NT	NT
Benzo[g,h,i]perylene	1,000	2,500	42	1.190	NT	0.101	NT	NT	NT
Benzo[k]fluoranthene	8.4	78	1	**1.030**	NT	0.083	NT	NT	NT
Chrysene	84	780	1	**2.440**	NT	0.297	NT	NT	NT
Dibenz[a,h]anthracene	1	1	1	ND	NT	ND	NT	NT	NT
7H-Dibenzo(c,g)carbozole	NC	NC	NC	ND	NT	0.059	NT	NT	NT
Indeno[1,2,3-cd]pyrene	1	7.8	1	0.900	NT	0.089	NT	NT	NT
Fluoranthene	1,000	2,500	56	3.800	NT	0.476	NT	NT	NT
Fluorene	1,000	2,500	56	ND	NT	0.047	NT	NT	NT
Naphthalene	1,000	2,500	56	0.240	NT	0.119	NT	NT	NT
Phenanthrene	1,000	2,500	40	2.980	NT	0.593	NT	NT	NT
Pyrene	1,000	2,500	40	3.850	NT	0.439	NT	NT	NT
USEPA Method 8260B GC/MS	NA	NA	NA	NT	NT	NT	NT	NT	NT
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)	1	10	0.005	ND	NT	ND	NT	NT	NT

NOTE: Soils at Sample Locations S-1 and S-2 were removed; Depths at locations PX-GP and HS begin at 2' below grade (i.e., at bottom of excavation now backfilled)

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Table 1

Comparison of Soil Sample Analyte Concentrations to DEP Remediation Standard Regulations Numerical Criteria

Former Insilco Factory H Site

77 Cooper Street, Meriden, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial	GB	HS-G	PX-GP-1	PX-GP-1	PX-GP-1	PX-GP-2	PX-GP-2
Depth Below Grade				(0-0.5')	(0-0.5')	(0.5-2')	(2-3.5')	(0-0.5')	(0.5-2')
Sampling Date				9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05
Mass/Total Metals									
Antimony	**27**	8,200	**0.06**	NT	NT	NT	NT	NT	NT
Arsenic	**10**	**10**	NA	ND	7.0	5.5	ND	2.9	5.8
Barium	4,700	140,000	**10.0**	NT	NT	NT	NT	NT	NT
Cadmium	34	1,000	**0.1**	NT	NT	NT	NT	NT	NT
Chromium (total)	NC	NC	**0.5**	NT	NT	NT	NT	NT	NT
Copper	**2,500**	**76,000**	NA	**38,900**	389	576	391	471	2,340
Lead	**500**	1,000	NA	138	327	317	**924**	117	229
Mercury	**20**	610	**0.02**	NT	NT	NT	NT	NT	NT
Nickel	**1,400**	**7,500**	NA	**4,810**	79.5	83.2	52.6	97.9	479
Silver	**340**	10,000	NA	128	15.5	11.7	4.0	15.6	77.2
Vanadium	470	14,000	**0.5**	NT	NT	NT	NT	NT	NT
Zinc	**20,000**	610,000	NA	5,720	189	147	783	102	437
SPLP Metals									
Lead	NA	NA	NA	NT	NT	NT	NT	NT	NT
USEPA Method 335.2 Total Cyanide	1,400	41,000	NA	ND	NT	ND	NT	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (ETPH)	**500**	**2,500**	**2,500**	**34,539**	NT	347	NT	NT	NT

Notes:

mg/kg = milligrams per kilogram.
ppm = Parts per million (comparable to mg/kg).
NA = Not applicable.
NC = No criteria established.
ND = Not detected above the laboratory minimum detection limit.
NT = Not tested.
☐ = Concentration exceeds associated criterion.

NOTE: Soils at Sample Locations S-1 and S-2 were removed; Depths at locations PX-GP and HS begin at 2' below grade (i.e., at bottom of excavation now backfilled)

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Table 1
Comparison of Soil Sample Analyte Concentrations to DEP Remediation Standard Regulations Numerical Criteria
Former Insilco Factory H Site
77 Cooper Street, Meriden, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial	GB	PX-GP-2	PX-GP-3	PX-GP-3	PX-GP-3	PX-GP-4	PX-GP-4
Depth Below Grade				(2.3-5')	(0-0.5')	(0.5-2')	(2-3.5')	(0-0.5')	(0.5-2')
Sampling Date				9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05
USEPA Method 8270C Polynuclear Aromatic Hydrocarbons (PAHs)									
Acenaphthene	1,000	2,500	84	NT	NT	0.019	NT	NT	NT
Acenaphthylene	1,000	2,500	84	NT	NT	0.101	NT	NT	NT
Anthracene	1,000	2,500	400	NT	NT	0.225	NT	NT	NT
Benzo[a]anthracene	1	7.8	1	NT	NT	0.789	NT	NT	NT
Benzo[a]pyrene	1	1	1	NT	NT	0.250	NT	NT	NT
Benzo[b]fluoranthene	1	7.8	1	NT	NT	0.275	NT	NT	NT
Benzo[g,h,i]perylene	1,000	2,500	42	NT	NT	0.272	NT	NT	NT
Benzo[k]fluoranthene	8.4	78	1	NT	NT	0.277	NT	NT	NT
Chrysene	84	780	1	NT	NT	0.682	NT	NT	NT
Dibenz[a,h]anthracene	1	1	1	NT	NT	0.083	NT	NT	NT
7H-Dibenzo(c,g)carbozole	NC	NC	NC	NT	NT	0.055	NT	NT	NT
Indeno[1,2,3-cd]pyrene	1	7.8	1	NT	NT	0.312	NT	NT	NT
Fluoranthene	1,000	2,500	56	NT	NT	0.976	NT	NT	NT
Fluorene	1,000	2,500	56	NT	NT	0.069	NT	NT	NT
Naphthalene	1,000	2,500	56	NT	NT	0.021	NT	NT	NT
Phenanthrene	1,000	2,500	40	NT	NT	0.647	NT	NT	NT
Pyrene	1,000	2,500	40	NT	NT	0.898	NT	NT	NT
USEPA Method 8260B GC/MS	NA	NA	NA	NT	NT	NT	NT	NT	NT
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)	1	10	0.005	NT	NT	ND	NT	NT	NT

NOTE: Soils at Sample Locations S-1 and S-2 were removed; Depths at locations PX-GP and HS begin at 2' below grade (i.e., at bottom of excavation now backfilled)

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Table 1

Comparison of Soil Sample Analyte Concentrations to DEP Remediation Standard Regulations Numerical Criteria

Former Insilco Factory H Site

77 Cooper Street, Meriden, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial	GB	PX-GP-2	PX-GP-3	PX-GP-3	PX-GP-3	PX-GP-4	PX-GP-4
Depth Below Grade				(2.3-5')	(0-0.5')	(0.5-2')	(2-3.5')	(0-0.5')	(0.5-2')
Sampling Date				9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05
Mass/Total Metals									
Antimony	**27**	8,200	**0.06**	NT	NT	NT	NT	NT	NT
Arsenic	**10**	**10**	NA	6.7	**19.8**	**10.1**	1.8	9.4	8.5
Barium	4,700	140,000	**10.0**	NT	NT	NT	NT	NT	NT
Cadmium	34	1,000	**0.1**	NT	NT	NT	NT	NT	NT
Chromium (total)	NC	NC	**0.5**	NT	NT	NT	NT	NT	NT
Copper	**2,500**	**76,000**	NA	**3,670**	117	151	70	**2,950**	2,220
Lead	**500**	1,000	NA	150	103	150	40.3	194	176
Mercury	**20**	610	**0.02**	NT	NT	NT	NT	NT	NT
Nickel	**1,400**	**7,500**	NA	829	27	20.2	12.9	529	394
Silver	**340**	10,000	NA	31.5	5.0	4.4	ND	21.2	11
Vanadium	470	14,000	**0.5**	NT	NT	NT	NT	NT	NT
Zinc	**20,000**	610,000	NA	621	44.9	56.4	41.1	435	344
SPLP Metals									
Lead	NA	NA	NA	NT	NT	NT	NT	NT	NT
USEPA Method 335.2 Total Cyanide	1,400	41,000	NA	NT	NT	ND	NT	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (ETPH)	500	2,500	2,500	NT	NT	233	NT	NT	NT

Notes:

mg/kg = milligrams per kilogram.
ppm = Parts per million (comparable to mg/kg).
NA = Not applicable.
NC = No criteria established.
ND = Not detected above the laboratory minimum detection limit.
NT = Not tested.
☐ = Concentration exceeds associated criterion.

NOTE: Soils at Sample Locations S-1 and S-2 were removed; Depths at locations PX-GP and HS begin at 2' below grade (i.e., at bottom of excavation now backfilled)

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Table 1

Comparison of Soil Sample Analyte Concentrations to DEP Remediation Standard Regulations Numerical Criteria

Former Insilco Factory H Site

77 Cooper Street, Meriden, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial	GB	PX-GP-4	PX-GP-5	PX-GP-5	PX-GP-5	PX-GP-6	PX-GP-6
Depth Below Grade				(2-3.5')	(0-0.5')	(0.5-2')	(2-3.5')	(0-0.5')	(0.5-2')
Sampling Date				9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05
USEPA Method 8270C Polynuclear Aromatic Hydrocarbons (PAHs)									
Acenaphthene	1,000	2,500	84	ND	NT	0.158	ND	NT	NT
Acenaphthylene	1,000	2,500	84	0.610	NT	0.108	0.049	NT	NT
Anthracene	1,000	2,500	400	0.530	NT	0.415	0.091	NT	NT
Benzo[a]anthracene	**1**	7.8	**1**	**1.960**	NT	0.948	0.450	NT	NT
Benzo[a]pyrene	1	1	1	0.850	NT	0.361	0.157	NT	NT
Benzo[b]fluoranthene	1	7.8	**1**	**1.380**	NT	0.499	0.241	NT	NT
Benzo[g,h,i]perylene	1,000	2,500	42	1.120	NT	0.493	0.183	NT	NT
Benzo[k]fluoranthene	8.4	78	**1**	**1.260**	NT	0.402	0.201	NT	NT
Chrysene	84	780	**1**	**2.430**	NT	**1.046**	0.604	NT	NT
Dibenz[a,h]anthracene	1	1	1	ND	NT	0.057	ND	NT	NT
7H-Dibenzo(c,g)carbozole	NC	NC	NC	ND	NT	0.198	ND	NT	NT
Indeno[1,2,3-cd]pyrene	**1**	7.8	**1**	**1.230**	NT	0.445	0.208	NT	NT
Fluoranthene	1,000	2,500	56	3.770	NT	0.938	0.604	NT	NT
Fluorene	1,000	2,500	56	ND	NT	0.189	0.015	NT	NT
Naphthalene	1,000	2,500	56	0.340	NT	0.251	0.075	NT	NT
Phenanthrene	1,000	2,500	40	2.040	NT	1.157	0.158	NT	NT
Pyrene	1,000	2,500	40	3.600	NT	0.821	0.598	NT	NT
USEPA Method 8260B GC/MS	NA	NA	NA	NT	NT	NT	NT	NT	NT
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)	1	10	0.005	ND	NT	ND	ND	NT	NT

NOTE: Soils at Sample Locations S-1 and S-2 were removed; Depths at locations PX-GP and HS begin at 2' below grade (i.e., at bottom of excavation now backfilled)

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Table 1

Comparison of Soil Sample Analyte Concentrations to DEP Remediation Standard Regulations Numerical Criteria

Former Insilco Factory H Site

77 Cooper Street, Meriden, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial	GB	PX-GP-4	PX-GP-5	PX-GP-5	PX-GP-5	PX-GP-6	PX-GP-6
Depth Below Grade				(2-3.5')	(0-0.5')	(0.5-2')	(2-3.5')	(0-0.5')	(0.5-2')
Sampling Date				9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05
Mass/Total Metals									
Antimony	**27**	8,200	**0.06**	NT	NT	NT	NT	NT	NT
Arsenic	**10**	**10**	NA	**14.6**	**14.2**	**45.4**	1.8	8.5	2.8
Barium	4,700	140,000	**10.0**	NT	NT	NT	NT	NT	NT
Cadmium	34	1,000	**0.1**	NT	NT	NT	NT	,NT	NT
Chromium (total)	NC	NC	**0.5**	NT	NT	NT	NT	NT	NT
Copper	**2,500**	**76,000**	NA	1,760	2,200	1,130	93.5	533	197
Lead	**500**	1,000	NA	109	190	146	**104**	53.3	88.2
Mercury	**20**	610	**0.02**	NT	NT	NT	NT	NT	NT
Nickel	**1,400**	**7,500**	NA	412	862	438	38.3	91.1	101
Silver	**340**	10,000	NA	22	25.8	26.8	0.70	2.4	3.9
Vanadium	470	14,000	**0.5**	NT	NT	NT	NT	NT	NT
Zinc	**20,000**	610,000	NA	318	742	673	42.2	112	144
SPLP Metals									
Lead	NA	NA	NA	NT	NT	NT	NT	NT	NT
USEPA Method 335.2 Total Cyanide	1,400	41,000	NA	ND	NT	ND	ND	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (ETPH)	**500**	2,500	**2,500**	893	NT	**539**	**1,718**	NT	NT

Notes:

mg/kg = milligrams per kilogram.
ppm = Parts per million (comparable to mg/kg).
NA = Not applicable.
NC = No criteria established.
ND = Not detected above the laboratory minimum detection limit.
NT = Not tested.
☐ = Concentration exceeds associated criterion.

NOTE: Soils at Sample Locations S-1 and S-2 were removed; Depths at locations PX-GP and HS begin at 2' below grade (i.e., at bottom of excavation now backfilled)

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Table 1
Comparison of Soil Sample Analyte Concentrations to DEP Remediation Standard Regulations Numerical Criteria
Former Insilco Factory H Site
77 Cooper Street, Meriden, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial	GB	PX-GP-6	PX-GP-7	PX-GP-7	PX-GP-7	PX-GP-8	PX-GP-8
Depth Below Grade				(2-3.5')	(0-0.5')	(0.5-2')	(2-3.5')	(0-0.5')	(0.5-2')
Sampling Date				9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05
USEPA Method 8270C Polynuclear Aromatic Hydrocarbons (PAHs)									
Acenaphthene	1,000	2,500	84	NT	NT	0.042	ND	NT	NT
Acenaphthylene	1,000	2,500	84	NT	NT	0.087	0.290	NT	NT
Anthracene	1,000	2,500	400	NT	NT	0.188	0.430	NT	NT
Benzo[a]anthracene	1	7.8	1	NT	NT	0.611	**2.020**	NT	NT
Benzo[a]pyrene	1	1	1	NT	NT	0.277	0.610	NT	NT
Benzo[b]fluoranthene	1	7.8	1	NT	NT	0.434	0.550	NT	NT
Benzo[g,h,i]perylene	1,000	2,500	42	NT	NT	0.415	1.060	NT	NT
Benzo[k]fluoranthene	8.4	78	1	NT	NT	0.307	0.590	NT	NT
Chrysene	84	780	1	NT	NT	0.803	**3.230**	NT	NT
Dibenz[a,h]anthracene	1	1	1	NT	NT	0.064	ND	NT	NT
7H-Dibenzo(c,g)carbozole	NC	NC	NC	NT	NT	0.053	ND	NT	NT
Indeno[1,2,3-cd]pyrene	1	7.8	1	NT	NT	0.431	**1.130**	NT	NT
Fluoranthene	1,000	2,500	56	NT	NT	0.967	2.790	NT	NT
Fluorene	1,000	2,500	56	NT	NT	0.046	ND	NT	NT
Naphthalene	1,000	2,500	56	NT	NT	0.154	0.490	NT	NT
Phenanthrene	1,000	2,500	40	NT	NT	0.571	0.840	NT	NT
Pyrene	1,000	2,500	40	NT	NT	1.051	3.080	NT	NT
USEPA Method 8260B GC/MS	NA	NA	NA	NT	NT	NT	NT	NT	NT
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)	1	10	0.005	NT	NT	ND	ND	NT	NT

NOTE: Soils at Sample Locations S-1 and S-2 were removed: Depths at locations PX-GP and HS begin at 2' below grade (i.e., at bottom of excavation now backfilled)

D FT

Table 1
Comparison of Soil Sample Analyte Concentrations to DEP Remediation Standard Regulations Numerical Criteria
Former Insilco Factory H Site
77 Cooper Street, Meriden, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial	GB	PX-GP-6	PX-GP-7	PX-GP-7	PX-GP-7	PX-GP-8	PX-GP-8
Depth Below Grade				(2-3.5')	(0-0.5')	(0.5-2')	(2-3.5')	(0-0.5')	(0.5-2')
Sampling Date				9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05
Mass/Total Metals									
Antimony	**27**	8,200	**0.06**	NT	NT	NT	NT	NT	NT
Arsenic	**10**	**10**	NA	2.8	1.3	2.5	2.8	1.4	6.1
Barium	4,700	140,000	**10.0**	NT	NT	NT	NT	NT	NT
Cadmium	34	1,000	**0.1**	NT	NT	NT	NT	NT	NT
Chromium (total)	NC	NC	**0.5**	NT	NT	NT	NT	NT	NT
Copper	**2,500**	**76,000**	NA	1,060	417	759	238	149	799
Lead	**500**	1,000	NA	175	18.7	48	36.3	8.9	**541**
Mercury	**20**	610	**0.02**	NT	NT	NT	NT	NT	NT
Nickel	**1,400**	**7,500**	NA	312	98	230	79.1	40.6	194
Silver	**340**	10,000	NA	17.4	3.8	1.9	ND	ND	23.5
Vanadium	470	14,000	**0.5**	NT	NT	NT	NT	NT	NT
Zinc	**20,000**	610,000	NA	288	104	202	116	58.7	237
SPLP Metals									
Lead	NA	NA	NA	NT	NT	NT	NT	NT	NT
USEPA Method 335.2 Total Cyanide	1,400	41,000	NA	NT	NT	ND	ND	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (ETPH)	500	2,500	2,500	NT	NT	230	**532**	NT	NT

Notes:

mg/kg = milligrams per kilogram.
ppm = Parts per million (comparable to mg/kg).
NA = Not applicable.
NC = No criteria established.
ND = Not detected above the laboratory minimum detection limit.
NT = Not tested.
☐ = Concentration exceeds associated criterion.

NOTE: Soils at Sample Locations S-1 and S-2 were removed; Depths at locations PX-GP and HS begin at 2' below grade (i.e., at bottom of excavation now backfilled)

D' ET

Table 1
Comparison of Soil Sample Analyte Concentrations to DEP Remediation Standard Regulations Numerical Criteria
Former Insilco Factory H Site
77 Cooper Street, Meriden, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial	GB	PX-GP-8	PX-GP-9	PX-GP-9	PX-GP-9	PX-GP-10	PX-GP-10
Depth Below Grade				(2-3.5')	(0-0.5')	(0.5-2')	(2-3.5')	(0-0.5')	(0.5-2')
Sampling Date				9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05
USEPA Method 8270C Polynuclear Aromatic Hydrocarbons (PAHs)									
Acenaphthene	1,000	2,500	84	NT	NT	0.037	NT	NT	NT
Acenaphthylene	1,000	2,500	84	NT	NT	0.047	NT	NT	NT
Anthracene	1,000	2,500	400	NT	NT	0.179	NT	NT	NT
Benzo[a]anthracene	1	7.8	1	NT	NT	0.238	NT	NT	NT
Benzo[a]pyrene	1	1	1	NT	NT	0.092	NT	NT	NT
Benzo[b]fluoranthene	1	7.8	1	NT	NT	0.155	NT	NT	NT
Benzo[g,h,i]perylene	1,000	2,500	42	NT	NT	0.181	NT	NT	NT
Benzo[k]fluoranthene	8.4	78	1	NT	NT	0.162	NT	NT	NT
Chrysene	84	780	1	NT	NT	0.392	NT	NT	NT
Dibenz[a,h]anthracene	1	1	1	NT	NT	ND	NT	NT	NT
7H-Dibenzo(c,g)carbozole	NC	NC	NC	NT	NT	0.057	NT	NT	NT
Indeno[1,2,3-cd]pyrene	1	7.8	1	NT	NT	0.195	NT	NT	NT
Fluoranthene	1,000	2,500	56	NT	NT	0.570	NT	NT	NT
Fluorene	1,000	2,500	56	NT	NT	0.037	NT	NT	NT
Naphthalene	1,000	2,500	56	NT	NT	0.055	NT	NT	NT
Phenanthrene	1,000	2,500	40	NT	NT	0.489	NT	NT	NT
Pyrene	1,000	2,500	40	NT	NT	0.552	NT	NT	NT
USEPA Method 8260B GC/MS	NA	NA	NA	NT	NT	NT	NT	NT	NT
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)	1	10	0.005	NT	NT	ND	NT	NT	NT

NOTE: Soils at Sample Locations S-1 and S-2 were removed; Depths at locations PX-GP and HS begin at 2' below grade (i.e., at bottom of excavation now backfilled)

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Table 1
Comparison of Soil Sample Analyte Concentrations to DEP Remediation Standard Regulations Numerical Criteria
Former Insilco Factory H Site
77 Cooper Street, Meriden, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial	GB	PX-GP-8	PX-GP-9	PX-GP-9	PX-GP-9	PX-GP-10	PX-GP-10
Depth Below Grade				(2-3.5')	(0-0.5')	(0.5-2')	(2-3.5')	(0-0.5')	(0.5-2')
Sampling Date				9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05
Mass/Total Metals									
Antimony	**27**	8,200	**0.06**	NT	NT	NT	NT	NT	NT
Arsenic	**10**	**10**	NA	2.9	1.5	**37.1**	**42.5**	1.0	4.7
Barium	4,700	140,000	**10.0**	NT	NT	NT	NT	NT	NT
Cadmium	34	1,000	**0.1**	NT	NT	NT	NT	NT	NT
Chromium (total)	NC	NC	**0.5**	NT	NT	NT	NT	NT	NT
Copper	**2,500**	**76,000**	NA	84.9	**3,000**	**5,170**	**15,100**	516	**8,600**
Lead	**500**	1,000	NA	71.6	26.6	223	211	31.8	**559**
Mercury	**20**	610	**0.02**	NT	NT	NT	NT	NT	NT
Nickel	**1,400**	**7,500**	NA	45.6	651	705	1,250	124	935
Silver	**340**	10,000	NA	1.7	10.7	26.4	34.7	4.0	112
Vanadium	470	14,000	**0.5**	NT	NT	NT	NT	NT	NT
Zinc	**20,000**	610,000	NA	81.7	492	581	1,660	145	643
SPLP Metals									
Lead	NA	NA	NA	NT	NT	NT	NT	NT	NT
USEPA Method 335.2 Total Cyanide	1,400	41,000	NA	NT	NT	ND	NT	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (ETPH)	**500**	**2,500**	**2,500**	NT	NT	**1,635**	NT	NT	NT

Notes:

mg/kg = milligrams per kilogram.
ppm = Parts per million (comparable to mg/kg).
NA = Not applicable.
NC = No criteria established.
ND = Not detected above the laboratory minimum detection limit.
NT = Not tested.
☐ = Concentration exceeds associated criterion.

NOTE: Soils at Sample Locations S-1 and S-2 were removed; Depths at locations PX-GP and HS begin at 2' below grade (i.e., at bottom of excavation now backfilled)

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Table 1

Comparison of Soil Sample Analyte Concentrations to DEP Remediation Standard Regulations Numerical Criteria

Former Insilco Factory H Site

77 Cooper Street, Meriden, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial	GB	PX-GP-10	PX-GP-11	PX-GP-11	PX-GP-11	PX-GP-12	PX-GP-12
Depth Below Grade				(2-3.5')	(0-0.5')	(0.5-2')	(2-3.5')	(0-0.5')	(0.5-2')
Sampling Date				9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05
USEPA Method 8270C Polynuclear Aromatic Hydrocarbons (PAHs)									
Acenaphthene	1,000	2,500	84	NT	NT	0.042	ND	NT	NT
Acenaphthylene	1,000	2,500	84	NT	NT	0.030	ND	NT	NT
Anthracene	1,000	2,500	400	NT	NT	0.189	ND	NT	NT
Benzo[a]anthracene	1	7.8	1	NT	NT	0.217	ND	NT	NT
Benzo[a]pyrene	1	1	1	NT	NT	0.060	ND	NT	NT
Benzo[b]fluoranthene	1	7.8	1	NT	NT	0.100	ND	NT	NT
Benzo[g,h,i]perylene	1,000	2,500	42	NT	NT	0.079	ND	NT	NT
Benzo[k]fluoranthene	8.4	78	1	NT	NT	0.082	ND	NT	NT
Chrysene	84	780	1	NT	NT	0.301	ND	NT	NT
Dibenz[a,h]anthracene	1	1	1	NT	NT	ND	ND	NT	NT
7H-Dibenzo(c,g)carbozole	NC	NC	NC	NT	NT	ND	ND	NT	NT
Indeno[1,2,3-cd]pyrene	1	7.8	1	NT	NT	0.073	ND	NT	NT
Fluoranthene	1,000	2,500	56	NT	NT	0.585	ND	NT	NT
Fluorene	1,000	2,500	56	NT	NT	0.089	ND	NT	NT
Naphthalene	1,000	2,500	56	NT	NT	0.080	0.024	NT	NT
Phenanthrene	1,000	2,500	40	NT	NT	0.611	ND	NT	NT
Pyrene	1,000	2,500	40	NT	NT	0.624	ND	NT	NT
USEPA Method 8260B GC/MS	NA	NA	NA	NT	NT	NT	NT	NT	NT
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)	1	10	0.005	NT	NT	ND	ND	NT	NT

NOTE: Soils at Sample Locations S-1 and S-2 were removed; Depths at locations PX-GP and HS begin at 2' below grade (i.e., at bottom of excavation now backfilled)

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Table 1
Comparison of Soil Sample Analyte Concentrations to DEP Remediation Standard Regulations Numerical Criteria
Former Insilco Factory H Site
77 Cooper Street, Meriden, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial	GB	PX-GP-10	PX-GP-11	PX-GP-11	PX-GP-11	PX-GP-12	PX-GP-12
Depth Below Grade				(2-3.5')	(0-0.5')	(0.5-2')	(2-3.5')	(0-0.5')	(0.5-2')
Sampling Date				9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05
Mass/Total Metals									
Antimony	**27**	8,200	**0.06**	NT	NT	NT	NT	NT	NT
Arsenic	**10**	**10**	NA	**11.1**	6.5	4.1	4.7	6.1	2.3
Barium	4,700	140,000	**10.0**	NT	NT	NT	NT	NT	NT
Cadmium	34	1,000	**0.1**	NT	NT	NT	NT	NT	NT
Chromium (total)	NC	NC	**0.5**	NT	NT	NT	NT	NT	NT
Copper	**2,500**	**76,000**	NA	**7,200**	1,970	1,950	**8,830**	**2,790**	**5,450**
Lead	**500**	1,000	NA	470	42.6	35.7	39.7	497	46.7
Mercury	**20**	610	**0.02**	NT	NT	NT	NT	NT	NT
Nickel	**1,400**	**7,500**	NA	1,150	355	422	**2,900**	389	**1,520**
Silver	**340**	10,000	NA	74.3	12.3	1.2	10.8	66.8	4.0
Vanadium	470	14,000	**0.5**	NT	NT	NT	NT	NT	NT
Zinc	**20,000**	610,000	NA	862	344	326	2,810	536	825
SPLP Metals									
Lead	NA	NA	NA	NT	NT	NT	NT	NT	NT
USEPA Method 335.2 Total Cyanide	1,400	41,000	NA	NT	NT	ND	ND	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (ETPH)	500	**2,500**	**2,500**	NT	NT	**1,099**	**3,990**	NT	NT

Notes:

mg/kg = milligrams per kilogram.
ppm = Parts per million (comparable to mg/kg).
NA = Not applicable.
NC = No criteria established.
ND = Not detected above the laboratory minimum detection limit.
NT = Not tested.
☐ = Concentration exceeds associated criterion.

NOTE: Soils at Sample Locations S-1 and S-2 were removed: Depths at locations PX-GP and HS begin at 2' below grade (i.e., at bottom of excavation now backfilled)

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Table 1

Comparison of Soil Sample Analyte Concentrations to DEP Remediation Standard Regulations Numerical Criteria

Former Insilco Factory H Site

77 Cooper Street, Meriden, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial	GB	PX-GP-12	PX-GP-13	PX-GP-13	PX-GP-13	PX-GP-14	PX-GP-14
Depth Below Grade				(2-3.5')	(0-0.5')	(0.5-2')	(2-3.5')	(0-0.5')	(0.5-2')
Sampling Date				9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05
USEPA Method 8270C Polynuclear Aromatic Hydrocarbons (PAHs)									
Acenaphthene	1,000	2,500	84	NT	NT	ND	NT	NT	NT
Acenaphthylene	1,000	2,500	84	NT	NT	ND	NT	NT	NT
Anthracene	1,000	2,500	400	NT	NT	0.260	NT	NT	NT
Benzo[a]anthracene	1	7.8	1	NT	NT	0.290	NT	NT	NT
Benzo[a]pyrene	1	1	1	NT	NT	ND	NT	NT	NT
Benzo[b]fluoranthene	1	7.8	1	NT	NT	ND	NT	NT	NT
Benzo[g,h,i]perylene	1,000	2,500	42	NT	NT	ND	NT	NT	NT
Benzo[k]fluoranthene	8.4	78	1	NT	NT	ND	NT	NT	NT
Chrysene	84	780	1	NT	NT	0.390	NT	NT	NT
Dibenz[a,h]anthracene	1	1	1	NT	NT	ND	NT	NT	NT
7H-Dibenzo(c,g)carbozole	NC	NC	NC	NT	NT	ND	NT	NT	NT
Indeno[1,2,3-cd]pyrene	1	7.8	1	NT	NT	ND	NT	NT	NT
Fluoranthene	1,000	2,500	56	NT	NT	0.780	NT	NT	NT
Fluorene	1,000	2,500	56	NT	NT	ND	NT	NT	NT
Naphthalene	1,000	2,500	56	NT	NT	0.300	NT	NT	NT
Phenanthrene	1,000	2,500	40	NT	NT	0.400	NT	NT	NT
Pyrene	1,000	2,500	40	NT	NT	0.630	NT	NT	NT
USEPA Method 8260B GC/MS	NA	NA	NA	NT	NT	NT	NT	NT	NT
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)	1	10	0.005	NT	NT	ND	NT	NT	NT

NOTE: Soils at Sample Locations S-1 and S-2 were removed; Depths at locations PX-GP and HS begin at 2' below grade (i.e., at bottom of excavation now backfilled)

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Table 1

Comparison of Soil Sample Analyte Concentrations to DEP Remediation Standard Regulations Numerical Criteria

Former Insilco Factory H Site

77 Cooper Street, Meriden, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial	GB	PX-GP-12	PX-GP-13	PX-GP-13	PX-GP-13	PX-GP-14	PX-GP-14
Depth Below Grade				(2-3.5')	(0-0.5')	(0.5-2')	(2-3.5')	(0-0.5')	(0.5-2')
Sampling Date				9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05
Mass/Total Metals									
Antimony	**27**	8,200	**0.06**	NT	NT	NT	NT	NT	NT
Arsenic	**10**	**10**	NA	ND	ND	ND	ND	ND	ND
Barium	4,700	140,000	**10.0**	NT	NT	NT	NT	NT	NT
Cadmium	34	1,000	**0.1**	NT	NT	NT	NT	NT	NT
Chromium (total)	NC	NC	**0.5**	NT	NT	NT	NT	NT	NT
Copper	**2,500**	**76,000**	NA	**42,300**	**2,900**	**2,520**	**2,850**	**2,670**	**4,250**
Lead	**500**	1,000	NA	64.1	186	194	295	433	180
Mercury	**20**	610	**0.02**	NT	NT	NT	NT	NT	NT
Nickel	**1,400**	**7,500**	NA	**10,400**	620	608	732	510	950
Silver	**340**	10,000	NA	14.9	41.5	48.9	40.3	288	75
Vanadium	470	14,000	**0.5**	NT	NT	NT	NT	NT	NT
Zinc	**20,000**	610,000	NA	9,620	491	466	625	575	693
SPLP Metals									
Lead	NA	NA	NA	NT	NT	NT	NT	NT	NT
USEPA Method 335.2 Total Cyanide	1,400	41,000	NA	NT	NT	ND	NT	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (ETPH)	**500**	**2,500**	**2,500**	NT	NT	**1,362**	NT	NT	NT

Notes:

mg/kg = milligrams per kilogram.
ppm = Parts per million (comparable to mg/kg).
NA = Not applicable.
NC = No criteria established.
ND = Not detected above the laboratory minimum detection limit.
NT = Not tested.
☐ = Concentration exceeds associated criterion.

NOTE: Soils at Sample Locations S-1 and S-2 were removed; Depths at locations PX-GP and HS begin at 2' below grade (i.e., at bottom of excavation now backfilled)

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Table 1

Comparison of Soil Sample Analyte Concentrations to DEP Remediation Standard Regulations Numerical Criteria

Former Insilco Factory H Site

77 Cooper Street, Meriden, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial	GB	PX-GP-14	PX-GP-15	PX-GP-15	PX-GP-15	PX-GP-16	PX-GP-16
Depth Below Grade				(2-3.5')	(0-0.5')	(0.5-2')	(2-3.5')	(0-0.5')	(0.5-2')
Sampling Date				9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05
USEPA Method 8270C Polynuclear Aromatic Hydrocarbons (PAHs)									
Acenaphthene	1,000	2,500	84	NT	NT	0.013	ND	NT	NT
Acenaphthylene	1,000	2,500	84	NT	NT	0.071	0.047	NT	NT
Anthracene	1,000	2,500	400	NT	NT	0.250	0.149	NT	NT
Benzo[a]anthracene	1	7.8	1	NT	NT	0.389	0.306	NT	NT
Benzo[a]pyrene	1	1	1	NT	NT	0.108	0.090	NT	NT
Benzo[b]fluoranthene	1	7.8	1	NT	NT	0.137	0.151	NT	NT
Benzo[g,h,i]perylene	1,000	2,500	42	NT	NT	0.151	0.101	NT	NT
Benzo[k]fluoranthene	8.4	78	1	NT	NT	0.101	0.121	NT	NT
Chrysene	84	780	1	NT	NT	0.659	0.451	NT	NT
Dibenz[a,h]anthracene	1	1	1	NT	NT	0.059	ND	NT	NT
7H-Dibenzo(c,g)carbozole	NC	NC	NC	NT	NT	ND	ND	NT	NT
Indeno[1,2,3-cd]pyrene	1	7.8	1	NT	NT	0.109	0.132	NT	NT
Fluoranthene	1,000	2,500	56	NT	NT	0.791	0.585	NT	NT
Fluorene	1,000	2,500	56	NT	NT	0.043	0.020	NT	NT
Naphthalene	1,000	2,500	56	NT	NT	0.132	0.115	NT	NT
Phenanthrene	1,000	2,500	40	NT	NT	0.543	0.281	NT	NT
Pyrene	1,000	2,500	40	NT	NT	0.743	0.511	NT	NT
USEPA Method 8260B GC/MS	NA	NA	NA	NT	NT	NT	NT	NT	NT
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)	1	10	0.005	NT	NT	ND	ND	NT	NT

NOTE: Soils at Sample Locations S-1 and S-2 were removed; Depths at locations PX-GP and HS begin at 2' below grade (i.e., at bottom of excavation now backfilled)

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Table 1
Comparison of Soil Sample Analyte Concentrations to DEP Remediation Standard Regulations Numerical Criteria
Former Insilco Factory H Site
77 Cooper Street, Meriden, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial	GB	PX-GP-14	PX-GP-15	PX-GP-15	PX-GP-15	PX-GP-16	PX-GP-16
Depth Below Grade				(2-3.5')	(0-0.5')	(0.5-2')	(2-3.5')	(0-0.5')	(0.5-2')
Sampling Date				9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05	9-Sep-05
Mass/Total Metals									
Antimony	**27**	8,200	**0.06**	NT	NT	NT	NT	NT	NT
Arsenic	**10**	**10**	NA	ND	ND	5.7	ND	ND	1.0
Barium	4,700	140,000	**10.0**	NT	NT	NT	NT	NT	NT
Cadmium	34	1,000	**0.1**	NT	NT	NT	NT	NT	NT
Chromium (total)	NC	NC	**0.5**	NT	NT	NT	NT	NT	NT
Copper	**2,500**	**76,000**	NA	2,230	**2,780**	1,760	**2,560**	622	1,040
Lead	**500**	1,000	NA	200	383	323	124	20.2	72
Mercury	**20**	610	**0.02**	NT	NT	NT	NT	NT	NT
Nickel	**1,400**	**7,500**	NA	438	764	379	761	124	308
Silver	**340**	10,000	NA	20.7	273	22.6	27.9	85.3	133
Vanadium	470	14,000	**0.5**	NT	NT	NT	NT	NT	NT
Zinc	**20,000**	610,000	NA	520	777	381	582	201	317
SPLP Metals									
Lead	NA	NA	NA	NT	NT	NT	NT	NT	NT
USEPA Method 335.2 Total Cyanide	1,400	41,000	NA	NT	NT	ND	ND	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (ETPH)	**500**	**2,500**	**2,500**	NT	NT	411	458	NT	NT

Notes:

mg/kg = milligrams per kilogram.
ppm = Parts per million (comparable to mg/kg).
NA = Not applicable.
NC = No criteria established.
ND = Not detected above the laboratory minimum detection limit.
NT = Not tested.
☐ = Concentration exceeds associated criterion.

NOTE: Soils at Sample Locations S-1 and S-2 were removed; Depths at locations PX-GP and HS begin at 2' below grade (i.e., at bottom of excavation now backfilled)

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Table 1

Comparison of Soil Sample Analyte Concentrations to DEP Remediation Standard Regulations Numerical Criteria

Former Insilco Factory H Site

77 Cooper Street, Meriden, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)				
	Residential	Industrial/ Commercial	GB	WW-N-Wall	WW-S-Wall	UST-Bottom	UST-N-Wall	UST-S-Wall
Depth Below Grade				(11')	(11')	(4.5')	(4.5')	(4.5')
Sampling Date				14-Sep-05	14-Sep-05	21-Sep-05	21-Sep-05	21-Sep-05
USEPA Method 8270C Polynuclear Aromatic Hydrocarbons (PAHs)								
Acenaphthene	1,000	2,500	84	ND	ND	NT	NT	NT
Acenaphthylene	1,000	2,500	84	ND	ND	NT	NT	NT
Anthracene	1,000	2,500	400	ND	ND	NT	NT	NT
Benzo[a]anthracene	1	7.8	1	0.537	0.156	NT	NT	NT
Benzo[a]pyrene	1	1	1	0.432	0.141	NT	NT	NT
Benzo[b]fluoranthene	1	7.8	1	0.176	ND	NT	NT	NT
Benzo[g,h,i]perylene	1,000	2,500	42	ND	ND	NT	NT	NT
Benzo[k]fluoranthene	8.4	78	1	0.171	ND	NT	NT	NT
Chrysene	84	780	1	0.446	0.149	NT	NT	NT
Dibenz[a,h]anthracene	1	1	1	ND	ND	NT	NT	NT
7H-Dibenzo(c,g)carbozole	NC	NC	NC	ND	ND	NT	NT	NT
Indeno[1,2,3-cd]pyrene	1	7.8	1	ND	ND	NT	NT	NT
Fluoranthene	1,000	2,500	56	0.734	0.233	NT	NT	NT
Fluorene	1,000	2,500	56	ND	ND	NT	NT	NT
Naphthalene	1,000	2,500	56	ND	ND	NT	NT	NT
Phenanthrene	1,000	2,500	40	0.177	ND	NT	NT	NT
Pyrene	1,000	2,500	40	0.779	0.258	NT	NT	NT
USEPA Method 8260B GC/MS	NA	NA	NA	ND	ND	ND	ND	ND
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)	1	10	0.005	NT	NT	NT	NT	NT

NOTE: Soils at Sample Locations S-1 and S-2 were removed; Depths at locations PX-GP and HS begin at 2' below grade (i.e., at bottom of excavation now backfilled)

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Table 1
Comparison of Soil Sample Analyte Concentrations to DEP Remediation Standard Regulations Numerical Criteria
Former Insilco Factory H Site
77 Cooper Street, Meriden, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)				
	Residential	Industrial/ Commercial	GB	WW-N-Wall	WW-S-Wall	UST-Bottom	UST-N-Wall	UST-S-Wall
Depth Below Grade				(11')	(11')	(4.5')	(4.5')	(4.5')
Sampling Date				14-Sep-05	14-Sep-05	21-Sep-05	21-Sep-05	21-Sep-05
Mass/Total Metals								
Antimony	**27**	8,200	**0.06**	NT	NT	NT	NT	NT
Arsenic	**10**	**10**	NA	ND	1.8	NT	NT	NT
Barium	4,700	140,000	**10.0**	63	165	NT	NT	NT
Cadmium	34	1,000	**0.1**	ND	ND	NT	NT	NT
Chromium (total)	NC	NC	**0.5**	15.3	17	NT	NT	NT
Copper	**2,500**	**76,000**	NA	101	117	NT	NT	NT
Lead	**500**	1,000	NA	48.5	22	NT	NT	NT
Mercury	**20**	610	**0.02**	0.49	0.05	NT	NT	NT
Nickel	**1,400**	**7,500**	NA	23.1	32	NT	NT	NT
Silver	**340**	10,000	NA	3.5	4.5	NT	NT	NT
Vanadium	470	14,000	**0.5**	NT	NT	NT	NT	NT
Zinc	**20,000**	610,000	NA	58.8	58.7	NT	NT	NT
SPLP Metals								
Lead	NA	NA	NA	0.011	0.007	NT	NT	NT
USEPA Method 335.2 Total Cyanide	1,400	41,000	NA	NT	NT	NT	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (ETPH)	**500**	**2,500**	**2,500**	ND	ND	159	ND	ND

Notes:

mg/kg = milligrams per kilogram.
ppm = Parts per million (comparable to mg/kg).
NA = Not applicable.
NC = No criteria established.
ND = Not detected above the laboratory minimum detection limit.
NT = Not tested.
☐ = Concentration exceeds associated criterion.

NOTE: Soils at Sample Locations S-1 and S-2 were removed; Depths at locations PX-GP and HS begin at 2' below grade (i.e., at bottom of excavation now backfilled)

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Table 1

Comparison of Soil Sample Analyte Concentrations to DEP Remediation Standard Regulations Numerical Criteria

Former Insilco Factory H Site

77 Cooper Street, Meriden, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)		
	Residential	Industrial/ Commercial	GB	UST-E-Wall	UST-W-Wall	TP-S-1
Depth Below Grade				(4.5')	(4.5')	(2')
Sampling Date				21-Sep-05	21-Sep-05	30-Sep-05
USEPA Method 8270C Polynuclear Aromatic Hydrocarbons (PAHs)						
Acenaphthene	1,000	2,500	84	NT	NT	NT
Acenaphthylene	1,000	2,500	84	NT	NT	NT
Anthracene	1,000	2,500	400	NT	NT	NT
Benzo[a]anthracene	1	7.8	1	NT	NT	NT
Benzo[a]pyrene	1	1	1	NT	NT	NT
Benzo[b]fluoranthene	1	7.8	1	NT	NT	NT
Benzo[g,h,i]perylene	1,000	2,500	42	NT	NT	NT
Benzo[k]fluoranthene	8.4	78	1	NT	NT	NT
Chrysene	84	780	1	NT	NT	NT
Dibenz[a,h]anthracene	1	1	1	NT	NT	NT
7H-Dibenzo(c,g)carbozole	NC	NC	NC	NT	NT	NT
Indeno[1,2,3-cd]pyrene	1	7.8	1	NT	NT	NT
Fluoranthene	1,000	2,500	56	NT	NT	NT
Fluorene	1,000	2,500	56	NT	NT	NT
Naphthalene	1,000	2,500	56	NT	NT	NT
Phenanthrene	1,000	2,500	40	NT	NT	NT
Pyrene	1,000	2,500	40	NT	NT	NT
USEPA Method 8260B GC/MS	NA	NA	NA	ND	ND	NT
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)	1	10	0.005	NT	NT	ND

NOTE: Soils at Sample Locations S-1 and S-2 were removed; Depths at locations PX-GP and HS begin at 2' below grade (i.e., at bottom of excavation now backfilled)

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Table 1

Comparison of Soil Sample Analyte Concentrations to DEP Remediation Standard Regulations Numerical Criteria

Former Insilco Factory H Site

77 Cooper Street, Meriden, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)		
	Residential	Industrial/ Commercial	GB	UST-E-Wall	UST-W-Wall	TP-S-1
Depth Below Grade				(4.5')	(4.5')	(2')
Sampling Date				21-Sep-05	21-Sep-05	30-Sep-05
Mass/Total Metals						
Antimony	**27**	8,200	**0.06**	NT	NT	NT
Arsenic	**10**	**10**	NA	NT	NT	NT
Barium	4,700	140,000	**10.0**	NT	NT	NT
Cadmium	34	1,000	**0.1**	NT	NT	NT
Chromium (total)	NC	NC	**0.5**	NT	NT	NT
Copper	**2,500**	**76,000**	NA	NT	NT	NT
Lead	**500**	1,000	NA	NT	NT	75.2
Mercury	**20**	610	**0.02**	NT	NT	NT
Nickel	**1,400**	**7,500**	NA	NT	NT	NT
Silver	**340**	10,000	NA	NT	NT	NT
Vanadium	470	14,000	**0.5**	NT	NT	NT
Zinc	**20,000**	610,000	NA	NT	NT	NT
SPLP Metals						
Lead	NA	NA	NA	NT	NT	NT
USEPA Method 335.2 Total Cyanide	1,400	41,000	NA	NT	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (ETPH)	**500**	**2,500**	**2,500**	67	ND	39,900

Notes:

mg/kg = milligrams per kilogram.
ppm = Parts per million (comparable to mg/kg).
NA = Not applicable.
NC = No criteria established.
ND = Not detected above the laboratory minimum detection limit.
NT = Not tested.
☐ = Concentration exceeds associated criterion.

NOTE: Soils at Sample Locations S-1 and S-2 were removed; Depths at locations PX-GP and HS begin at 2' below grade (i.e., at bottom of excavation now backfilled)

8:57 AM

Roy F. Weston, Inc., Brownfields Target Site Assessment

September 1999

Table 6

International Silver Co., Factory H
START Soil Sample Results
Samples Collected 24 August to 1 September 1998

Sample ID	Contaminant and Concentration (ppm)	Total*	SPLP*	R-DEC (ppm)	I/C-DEC (ppm)	PMC-GB (ppm)
MW-8-2	Antimony	ND	0.015	27	8,200	0.06
	Arsenic	3.5	ND	10	10	0.5
	Beryllium	0.43	ND	2	2	0.04
	Cadmium	0.42	ND	34	1,000	0.05
	Chromium	12.8	ND	NE	NE	0.5
	Copper	172.0	0.027	2,500	76,000	13
	Lead	106.0	0.012	500	1,000	0.15
	Mercury	0.24	ND	20	610	0.02
	Nickel	32.0	ND	1,400	7,500	1
	Silver	2.8	ND	340	10,000	0.5
	Thallium	3.2	ND	5.4	160	0.05
	Zinc	150.0	ND	20,000	610,000	50
	TPH	73.8		500	2,500	2,500
MW-8-7	Arsenic	2.0	ND	10	10	0.5
	Chromium	13.9	ND	NE	NE	0.5
	Copper	15.2	ND	2,500	76,000	13
	Lead	49.9	ND	500	1,000	0.15
	Nickel	9.0	ND	1,400	7,500	1
	Thallium	1.3	ND	5.4	160	0.05
	Zinc	38.1	ND	20,000	610,000	50
MW-9-2	Antimony	2.9	ND	27	8,200	0.06
	Arsenic	4.0	ND	10	10	0.5
	Chromium	11.3	ND	NE	NE	0.5
	Copper	233.0	0.099	2,500	76,000	13
	Lead	121.0	ND	500	1,000	0.15
	Mercury	0.51	ND	20	610	0.02
	Nickel	44.2	ND	1,400	7,500	1
	Silver	14.7	ND	340	10,000	0.5
	Thallium	3.0	ND	5.4	160	0.05
	Zinc	140.0	ND	20,000	610,000	50
	Methylene chloride	0.0336		82	760	1
	TPH	***2,340***		500	2,500	2,500
MW-9-7	Beryllium	0.48	ND	2	2	0.04
	Chromium	19.8	ND	NE	NE	0.5
	Copper	12.6	ND	2,500	76,000	13
	Lead	8.9	ND	500	1,000	0.15
	Nickel	9.7	ND	1,400	7,500	1
	Thallium	1.4	ND	5.4	160	0.05
	Zinc	44.1	ND	20,000	610,000	50

Table 6

International Silver Co., Factory H
START Soil Sample Results
Samples Collected 24 August to 1 September 1998 (continued)

Sample ID	Contaminant and Concentration (ppm)	Total*	SPLP*	R-DEC (ppm)	I/C-DEC (ppm)	PMC-GB (ppm)
MW-10-2.5	Arsenic	4.2	ND	10	10	0.5
	Beryllium	0.52	ND	2	2	0.04
	Chromium	26.9	ND	NE	NE	0.5
	Copper	108.0	0.034	2,500	76,000	13
	Lead	32.2	0.011	500	1,000	0.15
	Nickel	18.2	ND	1,400	7,500	1
	Silver	2.3	ND	340	10,000	0.36
	Thallium	4.1	ND	5.4	160	0.05
	Zinc	75.2	ND	20,000	610,000	50
	TPH	159		500	2,500	2,500
MW-10-12	Chromium	7.2	ND	NE	NE	0.5
	Copper	12.2	ND	2,500	76,000	13
	Lead	5.3	ND	500	1,000	0.15
	Nickel	6.0	ND	1,400	7,500	1
	Thallium	1.1	ND	5.4	160	0.05
	Zinc	20.3	ND	20,000	610,000	50
	TPH	442		500	2,500	2,500
MW-11-2	Arsenic	3.3	ND	10	10	0.5
	Chromium	8.9	ND	NE	NE	0.5
	Copper	266.0	ND	2,500	76,000	13
	Lead	50.8	ND	500	1,000	0.15
	Mercury	0.18	ND	20	610	0.02
	Nickel	26.1	ND	1,400	7,500	1
	Selenium	2.0	ND	340	10,000	0.5
	Silver	1.1	ND	340	10,000	0.36
	Thallium	*13.8*	ND	5.4	160	0.05
	Zinc	254.0	ND	20,000	610,000	50
	Tetrachloroethylene	0.0376		12	110	1
	Trichloroethylene	0.0045		56	520	1
	TPH	78.7		500	2,500	2,500
MW-11-7	Arsenic	1.6	ND	10	10	0.5
	Beryllium	0.74	ND	2	2	0.04
	Chromium	40.9	ND	NE	NE	0.5
	Copper	18.7	ND	2,500	76,000	13
	Lead	12.8	ND	500	1,000	0.15
	Nickel	41.0	ND	1,400	7,500	1
	Thallium	1.7	ND	5.4	160	0.05
	Zinc	81.4	ND	20,000	610,000	50
	cis-1,2-Dichloroethylene	0.0064		500	1,000	14

Table 6

International Silver Co., Factory H
START Soil Sample Results
Samples Collected 24 August to 1 September 1998 (continued)

Sample ID	Contaminant and Concentration (ppm)	Total*	SPLP*	R-DEC (ppm)	I/C-DEC (ppm)	PMC-GB (ppm)
MW-12-2	Arsenic	2.3	ND	10	10	0.5
	Chromium	6.2	ND	NE	NE	0.5
	Copper	133	ND	2,500	76,000	13
	Lead	150	ND	500	1,000	0.15
	Nickel	24.9	ND	1,400	7,500	1
	Silver	4.2	ND	340	10,000	0.36
	Thallium	*6.5*	ND	5.4	160	0.05
	Zinc	110	ND	20,000	610,000	50
	Methylene chloride	0.0074		82	760	1
	Tetrachloroethylene	0.0471		12	110	1
	Trichloroethylene	0.0064		56	120	1
	Aroclor 1254 (PCB)	0.0575		1	10	0.005
	TPH	*4,210*		500	2,500	2,500
MW-12-11	Arsenic	4.1	ND	10	10	0.5
	Beryllium	0.49	ND	2	2	0.04
	Chromium	15.9	ND	NE	NE	0.5
	Copper	22.0	ND	2,500	76,000	13
	Lead	9.1	ND	500	1,000	0.15
	Nickel	16.0	ND	1,400	7,500	1
	Thallium	4.4	ND	5.4	160	0.05
	Zinc	39.8	0.040	20,000	610,000	50
	cis-1,2-Dichloroethylene	0.0744		500	1,000	14
	Tetrachloroethylene	0.0045		12	110	1
	Trichloroethylene	0.0044		56	520	1
MW-13-2	Antimony	1.9	ND	27	8,200	0.06
	Arsenic	5.1	ND	10	10	0.5
	Chromium	114	ND	NE	NE	0.5
	Copper	522	0.058	2,500	76,000	13
	Lead	211	0.020	500	1,000	0.15
	Mercury	0.89	ND	20	610	0.02
	Nickel	38.5	ND	1,400	7,500	1
	Silver	16.8	ND	340	10,000	0.36
	Thallium	4.1	ND	5.4	160	0.05
	Zinc	272	0.067	20,000	610,000	50
	TPH	*531*		500	2,500	2,500

Table 6

International Silver Co., Factory H
START Soil Sample Results
Samples Collected 24 August to 1 September 1998 (continued)

Sample ID	Contaminant and Concentration (ppm)	Total*	SPLP*	R-DEC (ppm)	I/C-DEC (ppm)	PMC-GB (ppm)
MW-31-2 (Dup. of MW-13-2)	Antimony	1.4	ND	27	8,200	0.06
	Arsenic	4.2	ND	10	10	0.5
	Chromium	73.6	ND	NE	NE	0.5
	Copper	522	0.11	2,500	76,000	13
	Lead	367	0.024	500	1,000	0.15
	Mercury	0.56	ND	20	610	0.02
	Nickel	33.7	ND	1,400	7,500	1
	Silver	17.4	ND	340	10,000	0.36
	Thallium	2.8	ND	5.4	160	0.05
	Zinc	295	0.065	20,000	610,000	50
	Methylene chloride	0.0159		82	760	1
	TPH	854		500	2,500	2,500
MW-13-7	Arsenic	2.4	ND	10	10	0.5
	Beryllium	0.90	ND	2	2	0.04
	Chromium	36.7	ND	NE	NE	0.5
	Copper	58.0	ND	2,500	76,000	13
	Lead	22.8	ND	500	1,000	0.15
	Nickel	28.1	ND	1,400	7,500	1
	Thallium	2.4	ND	5.4	160	0.05
	Zinc	129	0.057	20,000	610,000	50
	Acetone	0.0592		500	1,000	140
	TPH	63.5		500	2,500	2,500
MW-14-2	Antimony	ND	0.012	27	8,200	0.06
	Arsenic	3.6	0.012	10	10	0.5
	Chromium	20.6	ND	NE	NE	0.5
	Copper	140	0.079	2,500	76,000	13
	Lead	73.1	0.041	500	1,000	0.15
	Mercury	0.27	ND	20	610	0.02
	Nickel	24.1	ND	1,400	7,500	1.0
	Silver	3.6	ND	340	10,000	0.36
	Thallium	3.0	ND	5.4	160	0.05
	Zinc	91.4	0.088	20,000	610,000	50
	Acetone	0.043		500	1,000	140
	Trichloroethylene	0.0025		56	520	1
	TPH	279		500	2,500	2,500

Table 6

International Silver Co., Factory H
START Soil Sample Results
Samples Collected 24 August to 1 September 1998 (concluded)

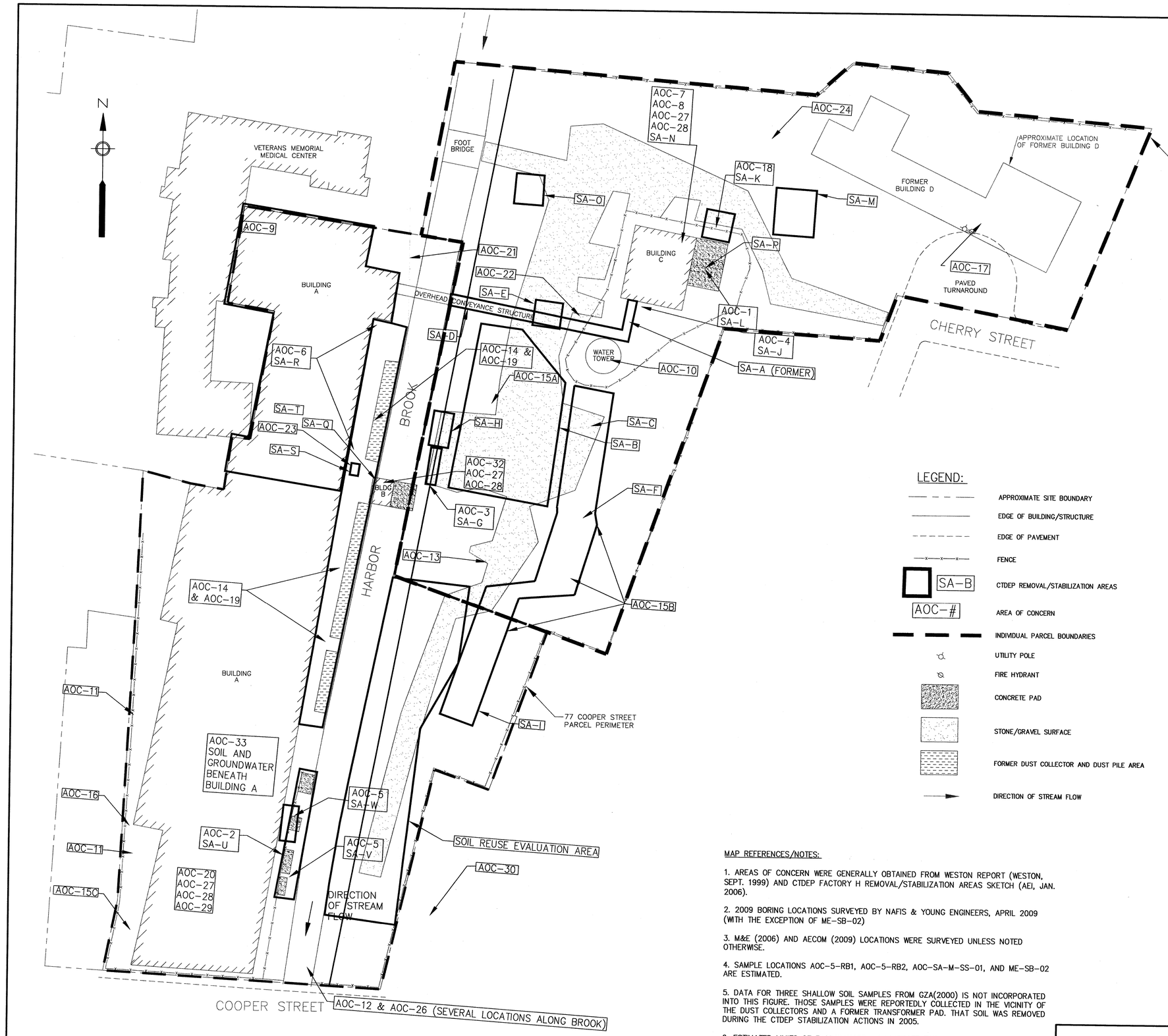
Sample ID	Contaminant and Concentration (ppm)	Total*	SPLP*	R-DEC (ppm)	I/C-DEC (ppm)	PMC-GB (ppm)
MW-14-7	Antimony	1.9	ND	27	8,200	0.06
	Arsenic	4.8	ND	10	10	0.5
	Beryllium	0.47	ND	2	2	0.04
	Chromium	22.8	ND	NE	NE	0.5
	Copper	91.3	0.033	2,500	76,000	13
	Lead	88.9	0.033	500	1,000	0.15
	Mercury	0.29	ND	20	610	0.02
	Nickel	12.8	ND	1,400	7,500	1
	Selenium	1.1	ND	340	10,000	0.5
	Silver	1.6	ND	340	10,000	0.36
	Thallium	2.7	ND	5.4	160	0.05
	Zinc	88.5	0.064	20,000	610,000	50
	Acetone	0.246		500	1,000	140

SPLP = Synthetic precipitation leaching procedure.
PCBs = Polychlorinated biphenyls.
TPH = Total petroleum hydrocarbons.
NE = Not Established.
ppm = Parts per million.
R-DEC = CT DEP Residential Direct Exposure Criteria.
I/C-DEC = CT DEP Industrial/Commercial Direct Exposure Criteria.
PMC-GB = CT DEP Pollutant Mobility Criteria for GB classified areas.
ND = Not detected.
* = Total metals and cyanide analysis are used for comparison with CT DEP DEC standards. SPLP metals and cyanide analyses are used for comparison with CT DEP PMC standards. Other parameters (i.e., total VOCs, PCBs, and TPH) can be used for comparison with both CT DEP DEC and CT DEP PMC standards.

Note: All substances detected are listed in the above table. Soil samples were analyzed for total and SPLP PP13 metals, total and SPLP cyanide, PCBs, VOCs, and TPH.

Underlined, italicized, and bolded concentrations indicate an exceedance of CT DEP RSR standards.

Exceedances of CT DEP RSR standards were noted in samples MW-9-2, MW-11-2, MW-12-2, and MW-13-2, which were all collected from an interval of 0 to 2 feet bgs. No exceedances were noted in subsurface samples collected from greater than 2 feet bgs. If future redevelopment plans do not call for a residential use, then the CT DEP RES-DEC standards would not apply, and only samples MW-12-2 and MW-13-2 would exhibit exceedances of CT DEP RSR standards.



LEGEND:

- APPROXIMATE SITE BOUNDARY
- EDGE OF BUILDING/STRUCTURE
- EDGE OF PAVEMENT
- FENCE
- SA-B — CTDEP REMOVAL/STABILIZATION AREAS
- AOC-# — AREA OF CONCERN
- INDIVIDUAL PARCEL BOUNDARIES
- UTILITY POLE
- FIRE HYDRANT
- CONCRETE PAD
- STONE/GRAVEL SURFACE
- FORMER DUST COLLECTOR AND DUST PILE AREA
- DIRECTION OF STREAM FLOW

MAP REFERENCES/NOTES:

1. AREAS OF CONCERN WERE GENERALLY OBTAINED FROM WESTON REPORT (WESTON, SEPT. 1999) AND CTDEP FACTORY H REMOVAL/STABILIZATION AREAS SKETCH (AEI, JAN. 2006).

2. 2009 BORING LOCATIONS SURVEYED BY NAFIS & YOUNG ENGINEERS, APRIL 2009 (WITH THE EXCEPTION OF ME-SB-02)

3. M&E (2006) AND AECOM (2009) LOCATIONS WERE SURVEYED UNLESS NOTED OTHERWISE.

4. SAMPLE LOCATIONS AOC-5-RB1, AOC-5-RB2, AOC-SA-M-SS-01, AND ME-SB-02 ARE ESTIMATED.

5. DATA FOR THREE SHALLOW SOIL SAMPLES FROM GZA(2000) IS NOT INCORPORATED INTO THIS FIGURE. THOSE SAMPLES WERE REPORTEDLY COLLECTED IN THE VICINITY OF THE DUST COLLECTORS AND A FORMER TRANSFORMER PAD. THAT SOIL WAS REMOVED DURING THE CTDEP STABILIZATION ACTIONS IN 2005.

6. ESTIMATED LIMITS OF EXCEEDANCES INCORPORATE FINDINGS FROM M&E PHASE II/III ENVIRONMENTAL SITE ASSESSMENT (2007).

1" = 40' 0 40 80 120 SCALE FEET

Summary of Areas of Concern

No.	Area of Concern	Location	Description
1	2 - 20,000-gallon USTs	East side of Building C	Reported to be steel construction and have contained diesel fuel. Unknown installation date.
2	1 - 1,000-gallon UST	Southeast side of Building A	Reported to be steel construction and have contained kerosene. Unknown installation date.
3	1 - 10,000-gallon UST	Along Harbor Brook north of Building B	Reported to be steel construction and have contained metal finishing rinse and wastewater. Installed in 1970.
4	1 - UST of unknown size	South side of Building C	Contained gasoline; unknown construction and installation date.
5	2 - USTs of unknown size	Curbed areas along southeast side of Building A	Unknown construction, use, and installation date.
6	5 - USTs of unknown size	Fill pipes along northeast side of Building A	Unknown construction, use, and installation date.
7	2 - 200-gallon ASTs	Ground floor of Building C	Reported to be steel construction. Unknown use and installation date.
8	1 - 1,500-gallon AST	Ground floor of Building C	Reported to be concrete construction. Unknown use and installation date.
9	2 - 300-gallon ASTs	North and west side of ground floor of Building A	Reported to be concrete construction. Unknown use and installation date.
10	1 - 150,000-gallon AST (Water tower)	South of Building C	Reported to be steel construction. Unknown installation date.
11	11 - 55-gallon drums	Throughout southwestern portion of property	HRP observed four empty drums, and seven partially-filled drums containing unidentified wastes.
12	Discharge pipes (to Harbor Brook)	East of Building A along Harbor Brook	Pipes formerly discharged wastewater from Building A to Harbor Brook.
13	Dry well	Southeast of Building B	Unknown materials may have been disposed of via the dry well.
14	Dust piles	East of Building A under dust collectors	Piles of dust generated from facility's former silver polishing dust collection system.
15A/B	Debris piles	East of Harbor Brook; southern central portion of property	Several piles of earthen material, scrap, and debris.
15C	Debris piles	Southwestern corner of property, southwest of Building A	Pile of earthen material, scrap, and debris.
16	Debris pile- glass slides	Southwest side of Building A	Pile of medical glass slides near the building dock of Building A.
17	Contaminated soil	Northeast corner of property in vicinity of former Building D	Approximately 5,600 ft^2 of chlorinated solvent contaminated soil (to a depth of at least 15 ft below ground surface).
18	Contaminated soil	Area adjacent to Building C	15 ft^2 of fuel oil stained soil.
19	Contaminated soil	Under dust piles east of Building A.	1,600 ft^2 of green stained soils contaminated with metals from overlying dust piles.
20	Contaminated wood floor	South end of Building A	30 ft^2 of oil stained wooden floor.
21	Stained concrete	North end of Building A	40 ft^2 of stained concrete floor.
22	Asbestos debris pile	Adjacent to smoke stack south of Building C	10 ft^2 of deteriorated insulation material, possibly asbestos-containing material.
23	Stained soil	East of Building A	10 ft^2 of paint stains.
24	Possible UST	West side of former Building D	Possible UST identified by ICF Kaiser Engineers
25	Contaminated groundwater (various areas)	Various portions of property	Groundwater contaminated with chlorinated solvents have been documented in various portions of site.
26	Contaminated surface water and sediments	Harbor Brook	Process wastewater is known to have been discharged to Harbor Brook
27	Asbestos containing materials	Throughout building interiors	Asbestos-containing pipe insulation, floor tiles and roof shingles have been identified in on-site buildings
28	Lead paint	Throughout building interiors	Peeling paint noted in on-site buildings.
29	Fluorescent light ballasts	Throughout building interiors	Fluorescent light ballasts may contain hazardous metals and PCBs.
30	Louie's Auto shop (55 Cooper St.)	Down-gradient of Louie's Auto	Louie's Auto shop may be an upgradient source of groundwater contamination.
31	Site-wide surficial soils	Throughout site	Site-wide soil may need to be managed as part of site redevelopment activities.
32	Building B-transformer/electrical house	In building interior	Electrical transformers located in building may contain PCBs.
33	Subsurface Soils and Groundwater Beneath Building A	Building A	Releases may have occurred resulting in impacts to soil and groundwater located beneath Building A.

NOTE THAT MANY OF THESE AOCs HAVE BEEN PARTIALLY TO COMPLETELY ADDRESSED BY PREVIOUS REMOVAL, RESPONSE, OR STABILIZATION ACTIONS.

AECOM

CITY OF MERIDEN, CONNECTICUT
INTERNATIONAL SILVER COMPANY, FACTORY H
INTERIM SOIL REMEDIAL ACTIONS

AREAS OF CONCERN

SCALE: AS NOTED | DATE: APRIL 2011 | SHEET: C-1

PATH/FILENAME: P:\60148468-MER\C\PLANS\CZMER002.DWG

PLOT DATE: Tuesday, April 19, 2011 2:05:24 PM LAST UPDATE: Tuesday, April 19, 2011 1:26:58 PM

LEGEND:

- APPROXIMATE SITE BOUNDARY
- INDIVIDUAL PARCEL BOUNDARIES
- EDGE OF BUILDING/STRUCTURE
- EDGE OF PAVEMENT
- FENCE
- UTILITY POLE
- FIRE HYDRANT
- CONCRETE PAD
- STONE/GRAVEL SURFACE
- FORMER DUST COLLECTOR AND DUST PILE AREA
- DIRECTION OF STREAM FLOW
- MW-# — DESTROYED/NOT FOUND OVERBURDEN MONITORING WELL (PRE 2006)
- MW-# — SHALLOW OVERBURDEN MONITORING WELL (PRE 2006)
- MW-# — DEEP OVERBURDEN MONITORING WELL (PRE 2006)
- TB-# — SOIL BORING LOCATION (HRP, 1988)
- WIPE-# — RETAINING WALL WIPE SAMPLE LOCATION (WESTON, 1999)
- SD-# — SEDIMENT AND SURFACE WATER SAMPLING LOCATION (WESTON, 1999)
- SW-# — SEDIMENT SAMPLE LOCATION (HRP, 1988)
- PX-GP-12 — SOIL SAMPLING LOCATION (AEI, 2006)
- AOC-#-SS-# / AOC-#-SB-# — SOIL BORING AND/OR SOIL BORING AND SURFICIAL SOIL SAMPLE (M&E, 2006)
- AOC-#-SB/MW# — SOIL BORING/MONITORING WELL (M&E, 2006)
- AOC-SA-?-SS-# — SURFICIAL SOIL SAMPLE (M&E, 2006)
- ME-SB-07 — SOIL BORING (AECOM, 2009)
- ME-MW-02 — SOIL BORING/MONITORING WELL (AECOM, 2009)
- ME-MW-01 — MONITORING WELL (AECOM, 2009)
- ME-SS-12 — SURFICIAL SOIL SAMPLE (AECOM, 2009)

MAP REFERENCES/NOTES:

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1" = 40' SCALE — 0 40 80 120 FEET

AECOM

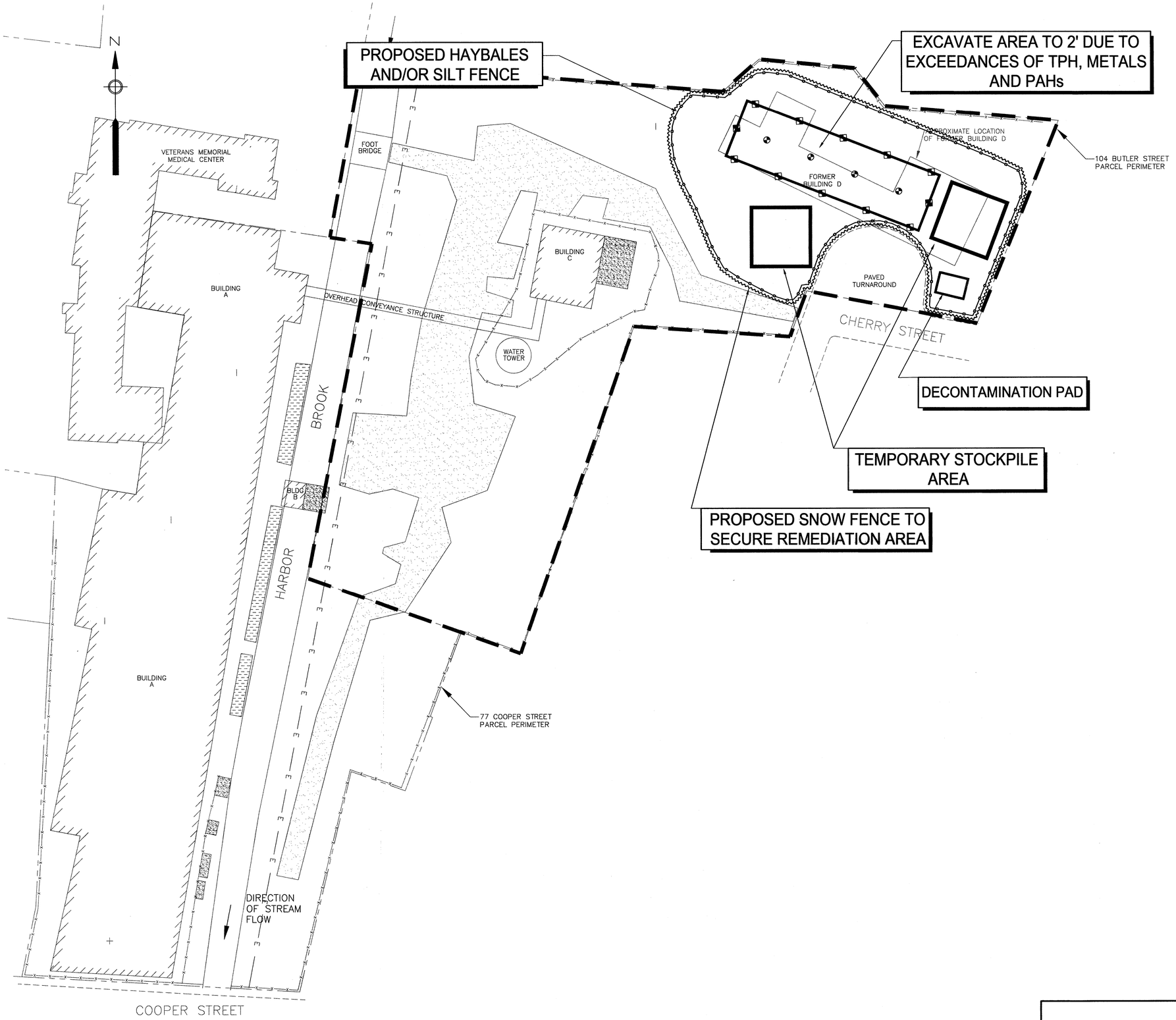
CITY OF MERIDEN, CONNECTICUT
INTERNATIONAL SILVER COMPANY, FACTORY H
INTERIM SOIL REMEDIAL ACTIONS

SAMPLE LOCATIONS

SCALE: AS NOTED	DATE: APRIL 2011	SHEET: C-2

PATH/FILENAME: P:\60148468-MER\C\PLANS\CZMER003.DWG

PLOT DATE: Tuesday, April 19, 2011 2:05:34 PM LAST UPDATE: Tuesday, April 19, 2011 1:37:13 PM



LEGEND:

- APPROXIMATE SITE BOUNDARY
- 104 BUTLER STREET PARCEL
- EDGE OF BUILDING/STRUCTURE
- EDGE OF PAVEMENT
- FENCE
- UTILITY POLE
- FIRE HYDRANT
- CONCRETE PAD
- STONE/GRAVEL SURFACE
- FORMER DUST COLLECTOR AND DUST PILE AREA
- DIRECTION OF STREAM FLOW
- PROPOSED SILT FENCE
- PROPOSED GRAB SAMPLE LOCATIONS (SIDEWALL SAMPLE 0–3")
- PROPOSED GRAB SAMPLE LOCATIONS (BOTTOM SAMPLE ONLY)
- PROPOSED EXCAVATION LIMITS (APPROXIMATELY 8,750 SF)
- PROPOSED SNOW FENCE

1" = 40' SCALE — 0 40 80 120 FEET

AECOM

CITY OF MERIDEN, CONNECTICUT
INTERNATIONAL SILVER COMPANY, FACTORY H
INTERIM SOIL REMEDIAL ACTIONS

PROPOSED SOIL REMEDIATION - 104 BUTLER STREET

SCALE: AS NOTED	DATE: APRIL 2011	SHEET: C-3

PATH/FILENAME: P:\60148468-MER\C\PLANS\CZMER005.DWG

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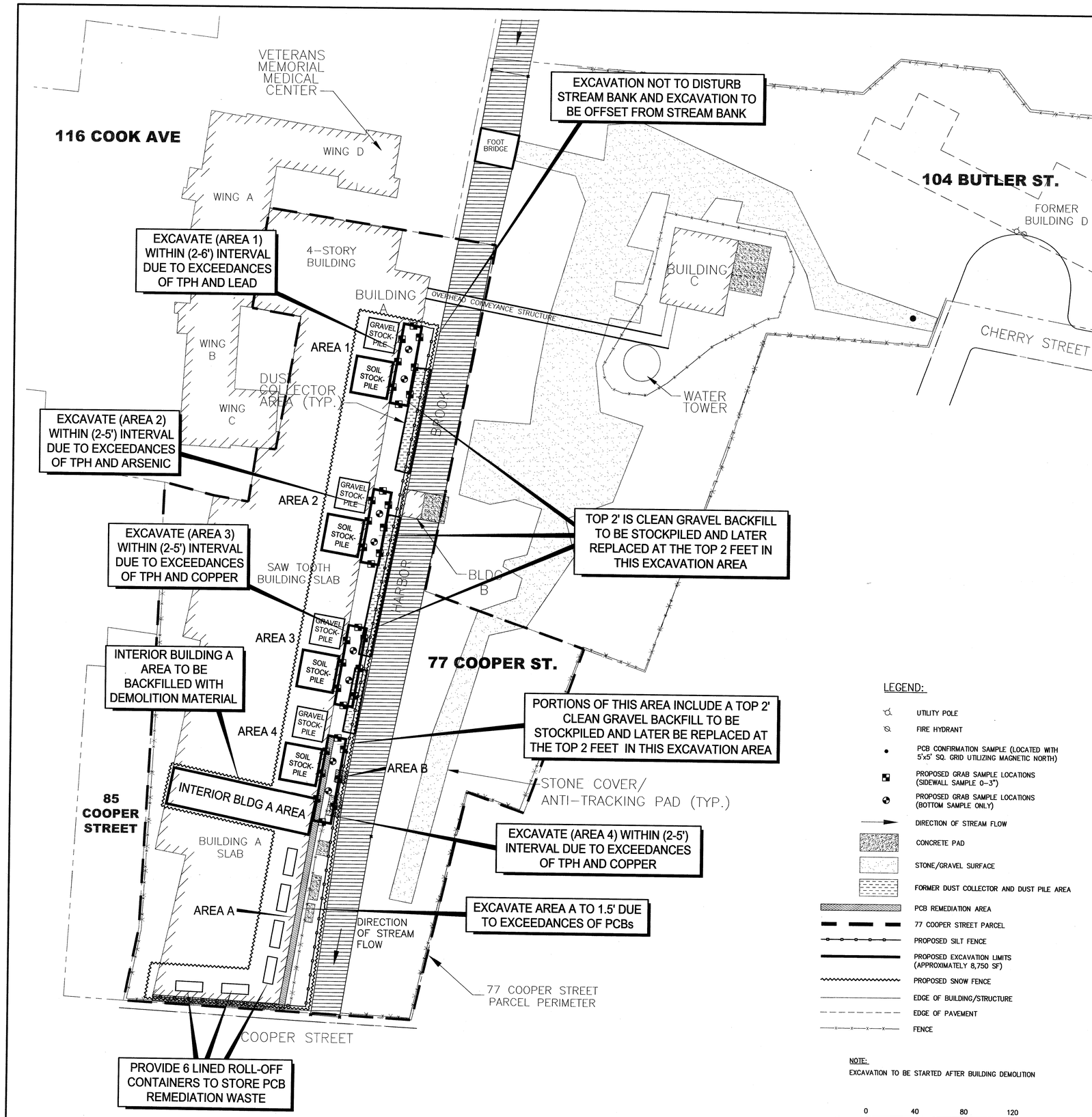


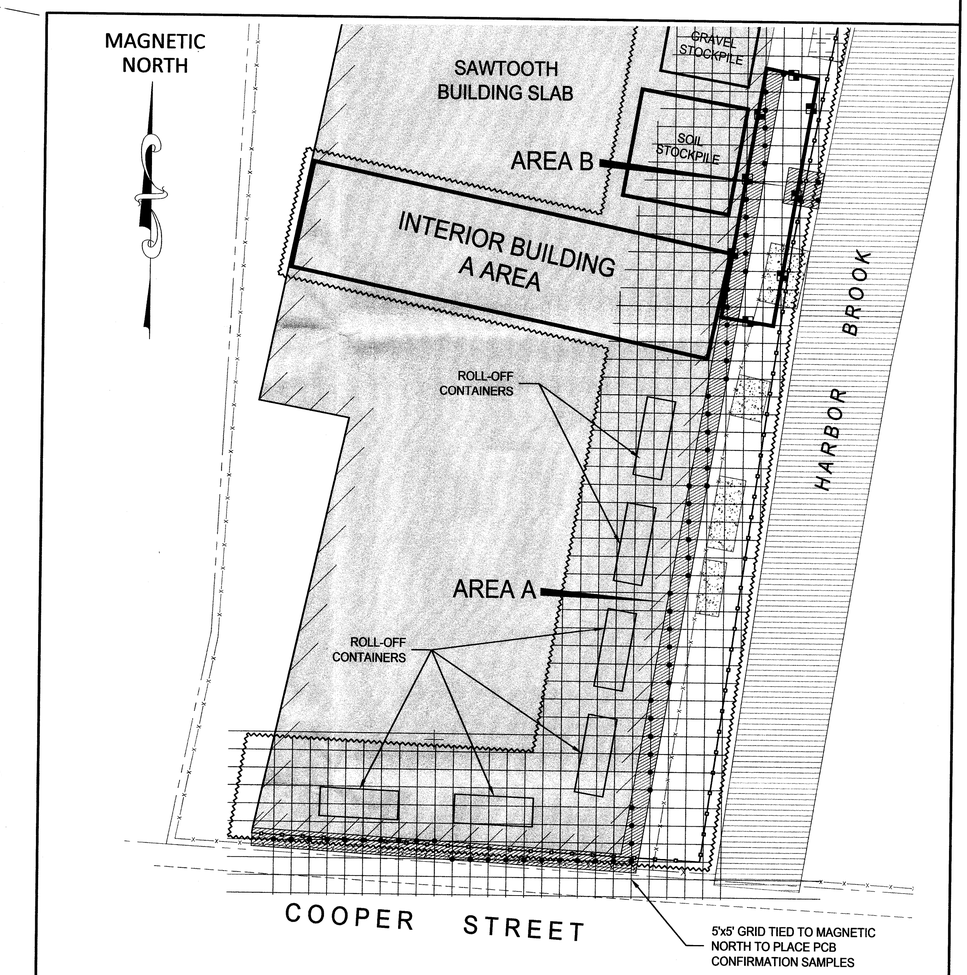
N

LEGEND:

- UTILITY POLE
- FIRE HYDRANT
- PCB CONFIRMATION SAMPLE (LOCATED WITH 5'x5' SQ. GRID UTILIZING MAGNETIC NORTH)
- PROPOSED GRAB SAMPLE LOCATIONS (SIDEWALL SAMPLE 0-3")
- PROPOSED GRAB SAMPLE LOCATIONS (BOTTOM SAMPLE ONLY)
- DIRECTION OF STREAM FLOW
- CONCRETE PAD
- STONE/GRAVEL SURFACE
- FORMER DUST COLLECTOR AND DUST PILE AREA
- PCB REMEDIATION AREA
- 77 COOPER STREET PARCEL
- PROPOSED SILT FENCE
- PROPOSED EXCAVATION LIMITS (APPROXIMATELY 8,750 SF)
- PROPOSED SNOW FENCE
- EDGE OF BUILDING/STRUCTURE
- EDGE OF PAVEMENT
- FENCE

NOTE:
EXCAVATION TO BE STARTED AFTER BUILDING DEMOLITION

1" = 40' SCALE — 0, 40, 80, 120 FEET



AREA A & B DETAIL AREA
SCALE: 1"=20'

AECOM

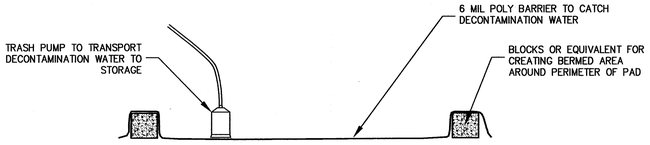
CITY OF MERIDEN, CONNECTICUT
INTERNATIONAL SILVER COMPANY, FACTORY H
INTERIM SOIL REMEDIAL ACTIONS

PROPOSED SOIL REMEDIATION - 77 COOPER STREET

SCALE: AS NOTED	DATE: APRIL 2011	SHEET: C-4

PATH/FILENAME: P:\60148468-MER\C\PLANS\CZMER007.DWG

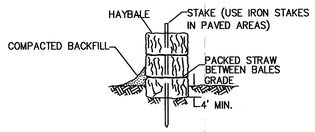
PLOT DATE: Tuesday, April 19, 2011 2:05:16 PM LAST UPDATE: Tuesday, April 19, 2011 1:42:51 PM



FOLLOWING COMPLETION OF REMEDIATION ACTIVITIES, REMOVE ACCUMULATED WASTES AND DECONTAMINATION AREA COMPONENTS ENTIRELY AND DISPOSE OFF SITE.

HEAVY EQUIPMENT TEMPORARY DECONTAMINATION AREA

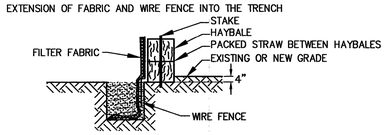
NTS



SECTION VIEW
N.T.S.

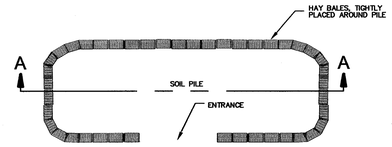
HAY BALE BARRIER

N.T.S.

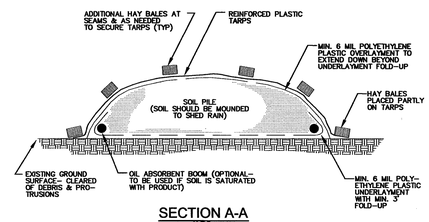


SILT FENCE - DETAIL

NTS



PLAN
N.T.S.



SECTION A-A
N.T.S.

STAGED SOIL/SOIL STOCKPILE DETAIL

STORMWATER NOTES:

1. AVOID LOW-LYING AREAS FOR STAGING.
2. TARPS MAY BE RE-USED BY CONTRACTOR ON OTHER SITES IF USED OVER POLY.
3. SAND BAGS, OR EQUAL, MAY BE USED IN PLACE OF HAY BALES ON TOP OF PILE.
4. IF EXISTING GROUND SURFACE IS VERY ROUGH OR UNEVEN, A 4"-6" LAYER OF CLEAN SAND MAY BE PLACED TO PROTECT UNDERLAYMENT.
5. PERIMETER HAY BALES SERVE BOTH TO SECURE TARP AND TO PREVENT SEDIMENT RUNOFF IN THE EVENT OF A BREACH OF THE PLASTIC.
6. FOLD EXCESS TARP MATERIAL UNDER TARP AND EXCESS PLASTIC SHEETING MATERIAL UNDER PLASTIC SHEETING TO AVOID COLLECTING RAINWATER IN FOLDS.

EROSION AND SEDIMENTATION CONTROL NOTES

1. SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHOWN ON THE DRAWINGS SHALL BE IMPLEMENTED AND MAINTAINED UNTIL DISTURBED SURFACES HAVE BEEN STABILIZED. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL CONFORM TO AND BE MAINTAINED IN ACCORDANCE WITH THE "2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL".
2. ALL DISTURBED AREAS THAT WILL BE EXPOSED FOR A PERIOD GREATER THAN ONE MONTH SHALL HAVE TEMPORARY VEGETATION ESTABLISHED.
3. THE CONTRACTOR SHALL CONSTRUCT AND MAINTAIN STABILIZED CONSTRUCTION ENTRANCE PAD(S) AND TEMPORARY ACCESS ROAD(S) NEEDED TO COMPLETE THE WORK. EACH DAY, CONTRACTOR SHALL SWEEP/CLEAN-UP ANY OFF-SITE TRACKING OF MATERIAL THAT OCCURS.
4. THE CONTRACTOR SHALL MONITOR FOR, AND CONTROL EMISSIONS OF AIRBORNE CONTAMINANTS AND DUST DURING EARTHWORK.
5. SILT FENCE AND HAY BALES WILL BE INSTALLED PRIOR TO THE START OF CONSTRUCTION AS SHOWN. SILT FENCE WILL BE MAINTAINED UNTIL DISTURBED AREAS HAVE BEEN STABILIZED.
6. ALL MATERIAL STOCKPILE AREAS WILL BE PROTECTED WITH SILT FENCE AND/OR HAYBALES.
7. SOIL EROSION AND SEDIMENTATION CONTROL MEASURES WILL BE INSPECTED AT LEAST ONCE PER WEEK AND WITHIN 24 HOURS OF THE END OF A STORM WITH A RAINFALL OF 0.5 INCH OR GREATER, TO DETERMINE MAINTENANCE NEEDS.
8. CONTRACTOR SHALL PROVIDE INTERIM EROSION AND SEDIMENTATION CONTROLS WITHIN WORK ZONES. INTERIM MEASURES TO BE DETAILED IN PROJECT WORK PLAN.

GENERAL NOTES

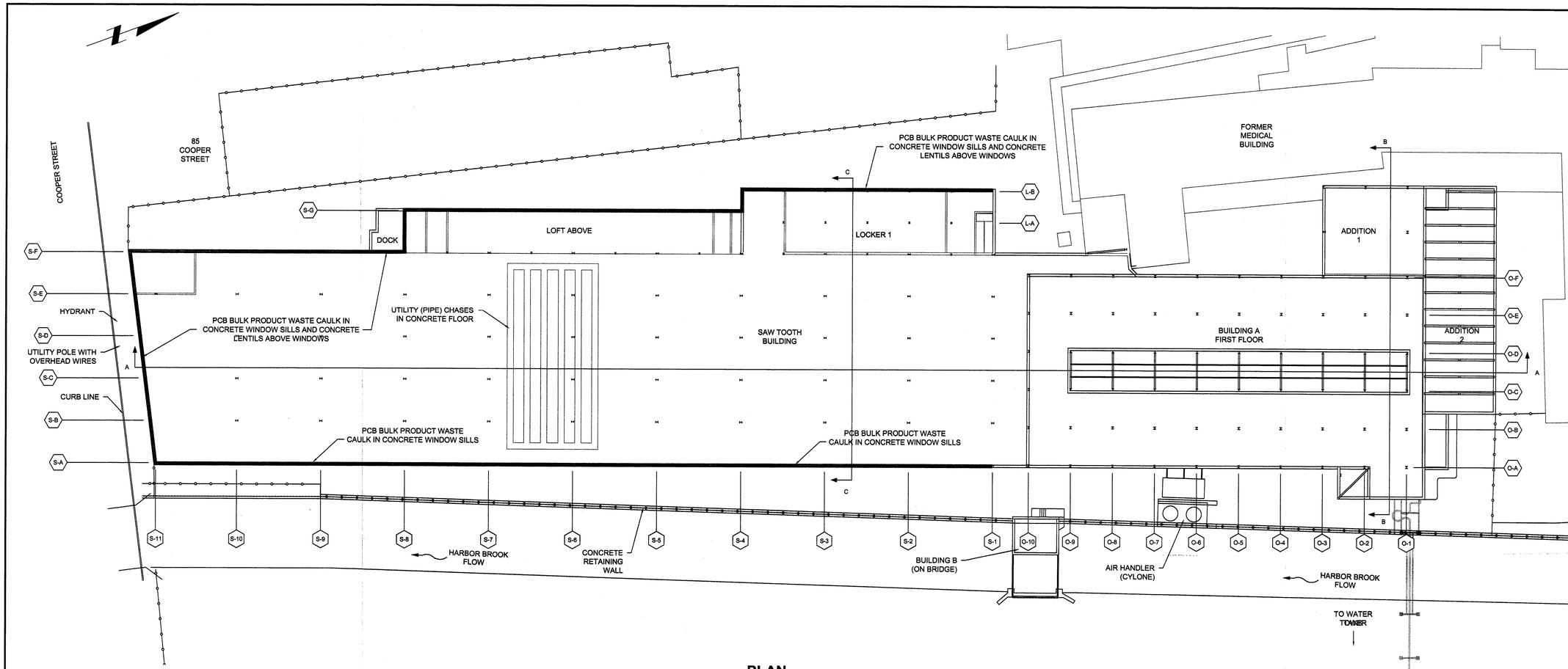
1. EXISTING CONDITIONS, AS PRESENTED, REPRESENT THOSE CURRENT AS OF THE DATE OF THE FIELD SURVEY. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF SITE CONDITIONS PRIOR TO START OF WORK.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING "CALL-BEFORE-YOU-DIG" AT 1-800-922-4455 TO ARRANGE FOR MARKING OUT THE LOCATION OF EXISTING UNDERGROUND UTILITIES AT LEAST 72 HOURS IN ADVANCE OF EXCAVATION.
3. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR START ANY KIND OF EXCAVATION WORK PRIOR TO OBTAINING ALL THE NECESSARY INFORMATION REGARDING THE LOCATION OF UNDERGROUND UTILITIES AT THE SITE.
4. ALL EXCAVATION SHALL BE ACCOMPLISHED IN SUCH A MANNER THAT UNDERGROUND OR OVERHEAD UTILITIES OR STRUCTURES ARE NOT DAMAGED. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY FOR ANY DAMAGE INCURRED DURING EXCAVATION OPERATIONS. THE CONTRACTOR SHALL IMMEDIATELY REPAIR ANY EXISTING PIPE OR UTILITY DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.
5. ALL STREET CURBS, PAVEMENTS, SIDEWALKS AND GRASSED AREAS ADJACENT TO THE PROJECT LIMITS DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED TO THE SATISFACTION OF THE OWNER AT THE CONTRACTOR'S EXPENSE.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY LOCAL, STATE AND FEDERAL PERMITS REQUIRED THAT ARE NOT PREVIOUSLY OBTAINED AND MADE PART OF THE CONTRACT DOCUMENTS.
7. COMPLIANCE WITH ALL PROJECT PERMIT CONDITIONS IS THE RESPONSIBILITY OF THE CONTRACTOR.
8. ALL FUEL, OIL, PAINT OR OTHER HAZARDOUS MATERIALS SHALL BE STORED IN A SECONDARY CONTAINMENT AREA AND SECURED IN A LOCKED AREA WITH AN IMPERVIOUS FLOOR DURING NON-WORK HOURS.
9. ALL EXCAVATED MATERIALS WITH THE EXCEPTION OF PCB REMEDIATION SOIL AND THE CLEAN TWO FOOT GRAVEL LAYER ON 77 COOPER STREET SHALL BE STOCKPILED, CHARACTERIZED AND TRANSPORTED OFF SITE IN ACCORDANCE WITH ALL STATE AND FEDERAL REGULATIONS. PCB REMEDIATION SOIL SHALL BE DIRECT LOADED INTO LINED ROLL-OFFS, CHARACTERIZED AND TRANSPORTED AND DISPOSED OF OFF SITE IN ACCORDANCE WITH ALL STATE AND FEDERAL REGULATIONS. THE TWO FOOT CLEAN GRAVEL LAYER AT 77 COOPER STREET SHALL BE TEMPORARILY STOCKPILED AND USED AS BACKFILL.
10. A SUPPLY OF ABSORBENT SPILL RESPONSE MATERIAL SUCH AS BOOMS OR BLANKETS SHALL BE AVAILABLE AT THE CONSTRUCTION SITE AT ALL TIMES TO CLEAN UP POTENTIAL SPILLS OF HAZARDOUS MATERIALS SUCH AS GASOLINE AND OIL.
11. SPILLS OF HAZARDOUS MATERIALS SHALL BE REPORTED IMMEDIATELY TO THE FOLLOWING: CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION, OIL AND CHEMICAL SPILLS UNIT AT 860-566-3338.
12. ALL ON-SITE CONSTRUCTION ACTIVITIES SHALL BE IN ACCORDANCE WITH THE CONTRACT DRAWINGS AND TECHNICAL SPECIFICATIONS.
13. A WATER SUPPLY IS NOT AVAILABLE AT THE SITE.
14. CONTRACTOR TO SUBMIT PROJECT WORK PLAN WITH SEQUENCE AND DETAILS OF PROPOSED WORK ACTIVITIES INCLUDING PROJECT WORK ZONES.
15. CONTRACTOR TO SECURE AND MAINTAIN OPEN REMEDIAL EXCAVATIONS PRIOR TO BACKFILLING EXCAVATION.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE TRANSPORT AND DISPOSAL OF ALL WASTES GENERATED DURING THE PROJECT.
17. CONTRACTOR TO PROVIDE DUST CONTROL AS NECESSARY DURING HANDLING OF CONTAMINATED MATERIALS AND CONSTRUCTION WATER THROUGHOUT DURATION OF PROJECT ACTIVITIES.
18. CONTRACTOR SHALL COORDINATE ANY REQUIRED UTILITY WORK WITH THE RESPECTIVE UTILITY. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION AND COSTS ASSOCIATED WITH CUSTOMER OWNED SERVICES AND FOR ALL UTILITY WORK MADE FOR THE CONTRACTOR'S CONVENIENCE, INCLUDING TEMPORARY UTILITY RELOCATION(S) AND RECONNECTION(S).
19. CONTRACTOR TO PERFORM CLEARING AND GRUBBING AS NECESSARY WITHIN PROJECT LIMITS. LIMITS OF CLEARING AND GRUBBING SHALL NOT EXTEND BEYOND THE LIMITS SHOWN ON THIS SHEET. PHASE ALL CLEARING TO MINIMIZE CLEARED AREAS REQUIRED TO COMPLETE SPECIFIED WORK. REMOVE DIRT FROM STUMPS AND COMBINE WITH CONTAMINATED SOIL TO BE DISPOSED OF. STUMPS FREE OF DIRT TO BE DISPOSED OF AS BULKY WASTE AT PERMITTED OFF SITE FACILITY.
20. PRIOR TO CONSTRUCTION ACTIVITIES, CONTRACTOR TO SUBMIT STORM WATER CONTROL PLAN AND INSTALL AND MAINTAIN EROSION CONTROLS THROUGHOUT ENTIRE PROJECT WORK ZONES.
21. CONTRACTOR TO MAINTAIN THROUGH TRAFFIC ON CITY STREETS AT ALL TIMES. CONTRACTOR TO SUBMIT TRAFFIC CONTROL PLAN FOR PROPOSED WORK PRIOR TO CONSTRUCTION ACTIVITIES AND PROVIDE TRAFFIC CONTROL (INCLUDING POLICE WHEN NECESSARY) DURING ACTIVITIES AFFECTING LOCAL ROADS.
22. THE CONTRACT LIMIT LINE IS THE PROJECT LIMITS AS SHOWN.
23. CONTRACTOR TO RESTRICT HIS CONSTRUCTION ACTIVITIES ON-SITE TO WITHIN CONTRACT LIMITS.
24. CONTRACTOR TO RESTORE DISTURBED AREAS IN ACCORDANCE WITH CONTRACT DRAWINGS. SPECIFICATIONS, AND PERMIT REQUIREMENTS. GRADES AFTER RESTORATION SHALL BE THE SAME AS EXISTING UNLESS OTHERWISE NOTED.
25. EXISTING FENCING, SIGNS, GUIDE RAILS, CURBING AND ANY OTHER OBJECTS DAMAGED OR TEMPORARILY REMOVED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION (UNLESS OTHERWISE SPECIFIED).
26. CONTRACTOR TO RETAIN SERVICES OF LAND SURVEYOR LICENSED IN STATE OF CT FOR ALL SURVEYING WORK ON THE PROJECT, AND SHALL SUBMIT SURVEYOR'S NAME, COMPANY NAME AND ADDRESS, AND LICENSE NUMBER TO ENGINEER PRIOR TO WORK AT THE SITE.
27. LICENSED SURVEYOR TO LOCATE AND IDENTIFY IN THE FIELD ALL SITE PROPERTY LINES IN THE VICINITY OF PROJECT ACTIVITIES.
28. LICENSED SURVEYOR TO STAKE THE LIMITS OF THE REMEDIAL EXCAVATION AREA IN THE FIELD PRIOR TO ANY EXCAVATION.
29. FOLLOWING THE COMPLETION OF CONTAMINATED SOIL EXCAVATION (AND PRIOR TO BACKFILLING), LICENSED SURVEYOR TO LOCATE THE HORIZONTAL AND VERTICAL LIMITS OF THE REMEDIAL EXCAVATION.
30. RECORD DRAWINGS OF THE HORIZONTAL AND VERTICAL LIMITS OF SOIL REMOVAL, CONFIRMATION SAMPLE LOCATIONS, AND FINAL SITE GRADES SHALL BE SUBMITTED TO THE ENGINEER UPON COMPLETION OF THE WORK. DRAWINGS SHALL BE PREPARED AND STAMPED BY A LAND SURVEYOR LICENSED IN STATE OF CT.
31. AVAILABLE FUNDING FOR PROJECT IS LIMITED AND CANNOT BE INCREASED. CONTRACTOR TO COORDINATE CLOSELY WITH OWNER AND ENGINEER THROUGHOUT PROJECT TO ENSURE THAT THE COST OF WORK DOES NOT EXCEED AVAILABLE FUNDING.

AECOM

CITY OF MERIDEN, CONNECTICUT
INTERNATIONAL SILVER COMPANY, FACTORY H
INTERIM SOIL REMEDIAL ACTIONS

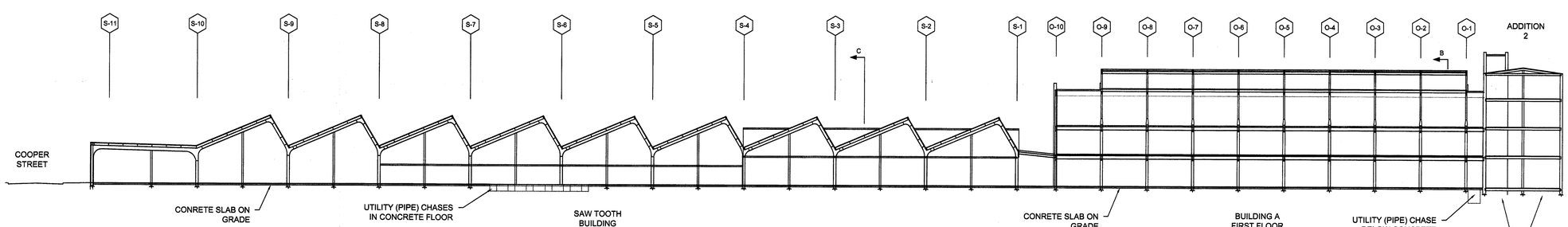
NOTES AND DETAILS

SCALE: AS NOTED	DATE: APRIL 2011	SHEET: C-5



PLAN
FIRST FLOOR

0' 12.5' 25' 50'



SECTION A - A

0' 12.5' 25' 50'

NOTES:
1) LOCATION, SPACING AND SIZES OF STRUCTURAL MEMBERS SHOWN ARE FOR DEMOLITION AND SALVAGE PURPOSES ONLY. AECOM CLAIMS NO RESPONSIBILITY TO THE STRUCTURAL INTEGRITY OF ANY STRUCTURAL ELEMENTS SHOWN OR NOT SHOWN.

2) DIMENSIONS SHOWN FOR STRUCTURAL MEMBERS ARE APPROXIMATE BASED ON RANDOM FIELD MEASUREMENTS.

Plotted By: serraj
Plot File Date Created: Apr/19/2011 4:10 PM
Layout-Sheet Name: 1-FIRST FLOOR (PCB ABATEMENT 1)
Filename: P:\60148468-MER\C\FROM ALBANY\MERIDEN_DEMO.DWG

1-INCH VERIFY SCALE IF PLAN SHEET IS REDUCED

REV	DESCRIPTION	DRN	CHK	DATE (M/D/Y)

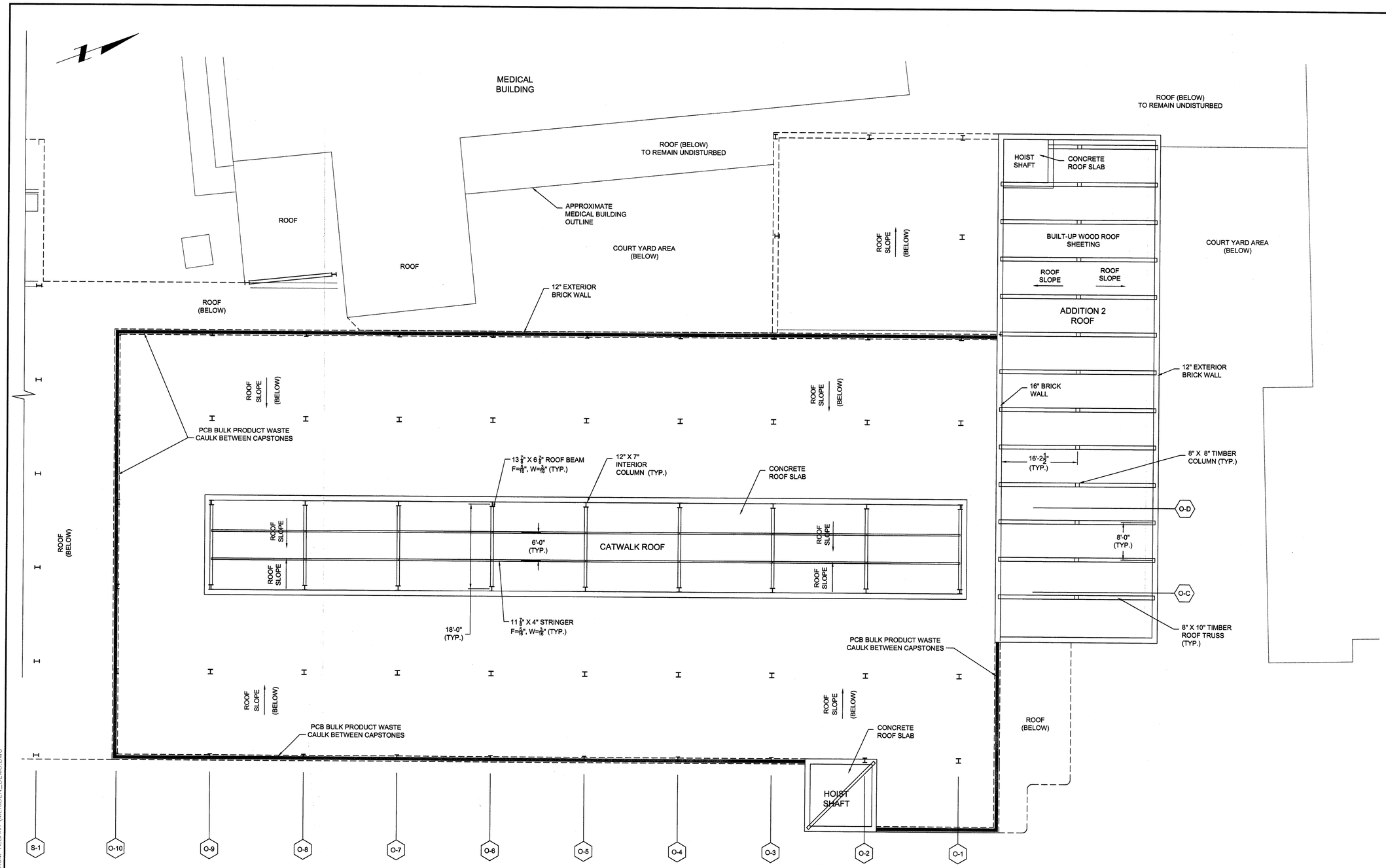
DRN BY: — DES BY: — CHK BY: — APP BY: —

AECOM
50 Enterprise Drive, Suite 1A
Rocky Hill, CT 06067-5729
T 860.263.5800 F 860.263.5777
WWW.AECOM.COM

CITY OF MERIDEN
INTERNATIONAL SILVER COMPANY
BUILDING DEMOLITION

BUILDING A AND SAW TOOTH BUILDING
EXISTING FIRST FLOOR - PLAN AND SECTION
PCB ABATEMENT DRAWING NO. 1

PROJECT START DATE (M/Y)	MAY 2010
PROJECT NO.	60148468
FILENAME	Meriden_Demo.dwg
SHEET NO.	03
DRAWING NO.	17



NOTES:
1) LOCATION, SPACING AND SIZES OF STRUCTURAL MEMBERS SHOWN ARE FOR DEMOLITION AND SALVAGE PURPOSES ONLY. AECOM CLAIMS NO RESPONSIBILITY TO THE STRUCTURAL INTEGRITY OF ANY STRUCTURAL ELEMENTS SHOWN OR NOT SHOWN.

2) DIMENSIONS SHOWN FOR STRUCTURAL MEMBERS ARE APPROXIMATE BASED ON RANDOM FIELD MEASUREMENTS.

PLAN
BUILDING A
CATWALK

0' 5' 10' 20'

REV	DESCRIPTION	DRN	CHK	DATE (MO/Y)

1" — 1-INCH — VERIFY SCALE IF PLAN SHEET IS REDUCED

DRN BY: —
DES BY: —
CHK BY: —
APP BY: —

AECOM
50 Enterprise Drive, Suite 1A
Rocky Hill, CT 06067-5729
T 860.263.5800 F 860.263.5777
WWW.AECOM.COM

CITY OF MERIDEN
INTERNATIONAL SILVER COMPANY BUILDING DEMOLITION

BUILDING A
CATWALK AND ROOF PLAN - ROOF FRAMING PLAN
PCB ABATEMENT DRAWING NO. 2

PROJECT START DATE (M/Y): MAY 2010
PROJECT NO.: 60148468
FILENAME: Meriden_Demo.dwg
SHEET NO.: 10
DRAWING NO.: 18

Plotted By: serraj
Plot File Date Created: Apr/19/2011 5:11 PM
Layout-Sheet Name: 5-CATWALK-BUILDING-A (PCB ABATE 2)
Filename: P:\60148468-MER\C\FROM ALBANY\MERIDEN_DEMO.DWG