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**SRSNE Site Group**

# Remedial Action Work Plan for Pre-ISTR Preparation

Solvents Recovery Service of New England, Inc.
(SRSNE) Superfund Site
Southington, Connecticut

April 2010

ARCADIS

**DRAFT**

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Solvents Recovery Service of New England, Inc. (SRSNE) Superfund Site
Southington, Connecticut

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# 1. Introduction

## 1.1 Purpose and Scope

This document has been prepared on behalf of the SRSNE Site Group, an unincorporated association of the Settling Defendants to a Consent Decree (CD) and Statement of Work (SOW) for the Remedial Design/Remedial Action (RD/RA) at the Solvents Recovery Service of New England, Inc. (SRSNE) Superfund Site in Southington, Connecticut (Site). The CD was lodged on October 30, 2008 with the United States District Court for the District of Connecticut in connection with Civil Actions No. 3:08cv1509 (SRU) and No. 3:08cv1504 (WWE). The CD was entered by the Court on March 26, 2009.

A Remedial Design Work Plan (RDWP) was prepared on behalf of the SRSNE Site Group and submitted to the United States Environmental Protection Agency (USEPA) for review on April 20, 2009. One component of the RDWP (Attachment M) was the *Pre-ISTR Preparation Plan* (PIPP), which provided concept-level design for certain activities to be conducted to prepare the site for implementation of the In-Situ Thermal Remediation (ISTR) component of the remedial approach. USEPA approval of the PIPP was received on August 11, 2009.

This Remedial Action Work Plan (RAWP) is being submitted to the USEPA for review and approval in accordance with Section V.E.1.d of the SOW. Consistent with the requirements established in Section VI.A of the SOW, this RAWP summarizes the scope of work associated with pre-ISTR preparation activities, and describes the various activities necessary to implement that scope of work. As further discussed below, this includes utility installations, contracting approach and construction schedule, a perimeter air monitoring plan, a stormwater pollution prevention plan, and the approach for compliance with substantive permit requirements. This RAWP is being submitted concurrent with a detailed Pre-ISTR Design Report that presents the basis of design, design calculations, design drawings, and technical specifications associated with the pre-ISTR design.

## 1.2 Project Background

The SRSNE Site is composed of approximately 14 acres of land encompassing four properties along Lazy Lane in Southington, Hartford County, Connecticut, approximately 15 miles southwest of the City of

Hartford (Figure 1). One of the major components of the selected remedial action that was outlined in the Superfund Record of Decision (ROD) issued in September 2005, calls for the in-situ thermal treatment of subsurface source material (non-aqueous phase liquid [NAPL]) in the overburden aquifer that is primarily located in the SRSNE property's former Operations Area (this information is also described in detail in prior report submittals, including the *Remedial Investigation Report* [Blasland, Bouck & Lee, Inc. (BBL) 1998] and the *Feasibility Study Report* [BBL and USEPA 2005]). The limits of the Overburden NAPL Area originally delineated in the ROD and shown in the RDWP were subsequently revised as a result of additional delineation activities that were conducted in 2009. The revised limits of the Overburden NAPL Area (approved by USEPA on December 16, 2009) and proposed ISTR treatment surface cover limits are shown on the attached Existing Site Plan (Figure 2).

This RAWP provides the supporting information for implementation of the PIPP construction, which includes relocation of existing culverts, grading of the ISTR area for equipment access, relocation of the AT&T fiber optic line, installation of new utility services required for thermal treatment process equipment, and any required modifications to the existing Hydraulic Containment and Treatment System (HCTS) to accommodate ISTR. Completion of each of these activities is necessary prior to implementing ISTR. ISTR of the Overburden NAPL Area will be performed in a subsequent ISTR design phase that will be covered under a separate RAWP.

In addition, the selected remedial action from the ROD calls for capping of the soils located in the former Operations Area and along the railroad right-of-way with a Resource Conservation and Recovery Act (RCRA) Subtitle C cap. Soil sampling activities have been conducted along the railroad right-of-way to characterize the soils so that appropriate health and safety and grading design considerations are incorporated into the PIPP as well as to support future delineation of the required extent of the cap. For Pre-ISTR Preparation, impacted soils will be excavated along the railroad right-of-way, consolidated in the ISTR treatment area and used for ISTR area grading and fill material. The design and installation of the RCRA cap will be performed in a future phase and will also be covered under a separate RAWP. To the extent possible, the pre-ISTR activities have been designed in a manner to facilitate the future cap design and installation.

### 1.3 Roles and Responsibilities

This RAWP represents a collaborative effort among several firms on behalf of the SRSNE Site Group. Specific roles and responsibilities are described below:

- *de maximis, inc.* (de maximis) – Supervising Contractor; responsibilities include supervising and directing the implementation of the RD/RA work activities; coordinating with AT&T to coordinate and implement the relocation approach for the fiber optic line. de maximis also serves as the Independent Quality Assurance Team (IQAT).

- ARCADIS – Remedial Design Contractor; responsibilities include developing the remedial design and implementing the RAWP.

- Weston Solutions – responsibilities include RD/RA support for design of modifications for and continued operation of the HCTS.

Additional information regarding roles and responsibilities is presented in the Site Management Plan (SMP) (Attachment A to the Remedial Design Project Operations Plan [RD POP]).

### 1.4 Work Plan Organization

The remainder of this document is organized into six sections that detail the existing site conditions and pre-ISTR design elements. The sections are identified and briefly described as follows:

- **Section 2 – Description of Construction Activities:** summarizes the key PIPP-related construction activities and anticipated construction sequence.

- **Section 3 – Construction Implementation Schedule:** presents the construction schedule for PIPP, milestone dates, duration of activities, and relationship to other remedial components.

- **Section 4 – Perimeter Air Monitoring Plan:** describes the perimeter air monitoring to be performed in support of the PIPP activities.

- **Section 5 – Stormwater Pollution Prevention Plan (SWPPP):** provides information and details for erosion and sediment control practices to be implemented during construction.

- **Section 6 – Compliance with Substantive Permit Requirements Applicable to Pre-ISTR Construction Activities:** describes the requirements of federal, state and local permits that are applicable for PIPP construction activities and describes the means by which the design achieves substantive compliance with the permit requirements.

- **Section 7 – References:** lists documents cited herein.

Various figures and appendices are also provided and referenced as appropriate. In addition, reference is made to the separately bound and concurrently submitted *Pre-ISTR Design Report*, including the Design Drawings and Technical Specifications provided with that document.

## 2. Description of Construction Activities

Prior to initiation of ISTR, the Site must be prepared to provide a fully accessible work area for installation and operation of the thermal wellfield and equipment. Modifications are also needed to provide site security, provide necessary utility connections, reroute existing utilities around the treatment zone, and modify the HCTS to accommodate site changes associated with the ISTR implementation. The general sequence of work activities is described below, followed by additional details regarding key construction activities.

### 2.1 General Construction Sequence

The general sequence associated with the implementation of pre-ISTR site preparation activities is anticipated to occur as follows:

1. Mobilization of equipment, materials, and labor.

    - Establish construction support facilities (as needed), and identify utilities and other critical features to be protected.
    - Delineate work areas and clearing limits.
    - Place erosion and sedimentation controls around work areas.
    - Perform a pre-construction site assessment to ensure that all appropriate erosion and sediment controls are in place and properly installed.

2. Site clearing.

    - Remove and dispose of vegetation and debris as required for access to work areas and implementation of site work.
    - Demolish above-grade portions of former building foundations within the former Operations Area.

3. Relocation of existing fencing and installation of new fencing as needed to encompass the work areas and minimize the potential for inadvertent or unknowing access to the Site. The modified perimeter fence alignment is shown on the Design Drawings.

4. Construction of a gravel-surface parking area and construction entrance along the existing access from Lazy Lane.

5. Implementation of utility- and recovery-well-related modifications to the existing HCTS components.

6. Utility installation and relocation.

    - Install the relocated fiber optic line around the work area (in coordination with AT&T).

    - Construct a utility corridor as shown on the Design Drawings to provide for sewer, water, gas, and phone service for the ISTR project.

7. Excavation and consolidation of on-site soils.

    - Remove existing soil piles for consolidation as grading/fill materials and construct perimeter access roads in and around the thermal treatment area.

    - Excavate the existing culvert, consolidate excavated materials within the thermal treatment area, and construct a new culvert and associated drainage appurtenances, including a discharge headwall and rip-rap lined discharge point.

    - Excavate target soils along the railroad right-of-way for consolidation as grading/fill material within the thermal treatment area.

    - Backfill the excavated portion of the railroad right-of-way with clean fill from an off-site source, including placement of a gravel surface that will eventually serve as a subbase course for the rails-to-trails corridor to be constructed in this area.

8. ISTR area grading.

    - Grade and compact fill materials to achieve target subgrade as specified on the design drawings, followed by placement of temporary erosion control measures.

- Import clean and select fill from off-site source(s) as needed to construct perimeter access roads, ISTR staging areas, target ISTR subgrade, and specified drainage features.

9. Restoration and stabilization.

    - Restore surface vegetation in ancillary affected areas, including soils piles excavated for use as fill materials (on an ongoing basis once impacts in a given area are stopped or complete).

10. Demobilization.

    - Remove all construction support facilities.

    - Clean/restore, at a minimum to the pre-construction condition, any areas/features that were disturbed as a result of the Pre-ISTR construction activities.

Note that certain of the general activities listed above will be performed concurrently or in an overlapping manner. The actual sequence of work will be developed by the selected contractor and the requirements of the various utility providers involved with the installation. Additional details regarding key project components are further described in the following subsections.

## 2.2 Site Access and Clearing

During this initial phase of the project, access to the Site will be from the private driveway to the former Operations Area and the driveway to the Non-Time-Critical Removal Action (NTCRA) Treatment facility located off of Lazy Lane. It is anticipated that the equipment and materials mobilized to the Site during this phase will be staged in an open area south of the existing treatment facility and within the existing asphalt surface within the former Operations Area. Prior to the start of clearing activities, the sediment and erosion controls will be established around the perimeter of the work area. The existing perimeter chain link fencing will be removed and reset, or new fence and gates provided as needed, to provide adequate access to the work areas by project work crews while also providing site security. Clearing and grubbing will be performed with the following disposal procedures designated for the resulting waste materials:

1. Soils will be handled as excavated material, consolidated in the Operations Area and used as fill. Existing topsoil will not be stripped from the Site. Large stones encountered during the clearing activities will be separated from the soils and staged in a location to be designated for potential future use as fill where suitable.

2. Concrete will be broken up into pieces less than 6 inches, consolidated in the Operations Area and used as fill.

3. Existing railroad ties within the portion of the former railroad right-of-way in which pre-ISTR activities will be performed will be removed and disposed of at an approved off-site location.

4. Trees and brush cleared from above ground surface will be stockpiled in a designated on-site location for processing. When their removal is required to facilitate excavation or grading, stumps will be shredded to the extent possible and consolidated in specific areas based on their source location as follows:

    - Stumps removed from impacted soil areas (e.g., the former operations area or the portion of the railroad right-of-way to be excavated to four feet) will be placed within or beneath the ISTR area access road fill slopes where there is greater than 5 feet of fill.

    - Stumps removed from unimpacted soil areas (e.g., on-site fill piles, utility trenches beyond target remedial areas, access/ staging areas, etc.) may be placed in a suitable location to be designated within the former SRSNE parcel south of the target treatment area; such location will be identified in the field based on the extent of work, planned utility relocation, and soil characterization data available at the time. Such materials will not be stockpiled in wetlands or watercourses, or in a manner that would impact subsequent phases of construction or access to existing Site wells.

The portions of the concrete foundations that extend above the existing grade in the ISTR area will be broken up into pieces less than 6 inches and used as fill. The remaining portions of the foundation will remain in place and be broken up into pieces of 12 inches or less.

## 2.3 HCTS Modifications

Existing monitoring wells and recovery wells that are a part of the NTCRA groundwater extraction system and located within or in close proximity to the ISTR treatment area will be abandoned prior to commencing PIPP-related site preparation activities. Well abandonment and new well installation is being addressed as part of a separate site-wide well network modification plan (the *Monitoring Well Network Evaluation and Groundwater Monitoring Plan* - Attachment N to the RDWP). That plan was developed, in part, to address the well modifications necessary for ISTR implementation.

Abandonment of the recovery wells will also require removal of existing recovery well equipment, including the recovery well vault, pump, motor, submersible cables, level controls, well control panels and ancillary items. In addition, the NTCRA 1 extraction system conveyance piping and the subsurface electrical system will require relocation to an area either further away from the ISTR treatment area, or away from other ISTR utilities that will ensure continued operations during and following the ISTR. Existing monitoring wells that are to remain in place will be protected by the Contractor during implementation of PIPP construction.

## 2.4 Utility Installation and Relocation

The thermal treatment process will require the installation of new utilities to the process equipment area and ISTR treatment area. These utilities include electric, gas, water, sanitary sewer, and telecommunications services. To the extent possible, all new utility services will be installed within a dedicated utility corridor that runs along the existing site access driveway, west of the existing treatment system building, and deliver utilities to a connection point adjacent to the ISTR equipment staging area. The corridor location is shown on Figure 3 and on the Design Drawings included with the *Pre-ISTR Design Report*. In addition, an active telecommunication line (AT&T fiber optic telephone line) and an abandoned copper line exist within portions of the railroad right-of-way and pass through the area subject to thermal treatment. The fiber optic line will be relocated to the west side of the treatment area as shown on Design Drawings C-1 and C-2. The copper line will be abandoned in place.

Additional information regarding the specific utility installation and modifications is provided in the separately bound *Pre-ISTR Design Report*.

## 2.5 Culvert Relocation

Existing 24-inch and 30-inch diameter reinforced concrete pipe culverts that drain from the west side of the railroad right-of-way to Quinnipiac River will be removed because their orientation passes through the planned overburden ISTR zone and because the current reinforced concrete pipe is susceptible to groundwater infiltration. The culverts will be replaced with 340 linear feet (LF) of 30-inch diameter fusion welded high-density polyethylene (HDPE) PE 3408 pipe that will be placed partly along a new alignment to the north of the present culvert locations. Precast concrete manholes with watertight pipe connectors will be installed at the lateral connection and changes in pipe alignment. The culvert will have a concrete endwall and rip rap dissipater basin placed at the outlet. The existing 6-inch HDPE effluent discharge pipe from the NTCRA treatment facility will also be realigned to outlet at the endwall alongside the 30-inch culvert.

The existing reinforced concrete culverts that are to be removed will be broken up into pieces smaller than 6 inches and used as general fill for grading that is necessary in the proposed thermal treatment area (Section 2.7). Excavations for pipe removal that are outside the proposed 30-inch HDPE pipe installation will be completely backfilled with imported (approved) select fill material as specified in the Design Drawings and Technical Specifications.

## 2.6 Railroad Right-of -Way Excavation and Grading

In order to remove impacted or potentially impacted soils, and to allow for continued drainage of surface water through this area, the railroad right-of-way, between Lazy Lane and the north side of the proposed ISTR treatment area will be excavated to a depth of 4 feet below the existing ground surface and backfilled with imported general fill from an approved source. The excavated material from the railroad right-of-way will be transported to the ISTR treatment area for consolidation and use as general fill and grading material.

The excavation of the top 4 feet of soil from the targeted portion of the railroad right-of-way (see Design Drawings C-4 and C-5) was based on results of the pre-design sampling activities described in the *Pre-Design Investigation Report* and included with the *Pre-ISTR Design Report*. The rationale for this approach is further described in Section 5.2 of the *Pre-ISTR Design Report*.

It is anticipated that the excavation of the targeted portion of the railroad right-of-way will eliminate the future need for extending the RCRA C cap for the entirety of the right-of-way area north of the former Operations Area. Part 2, Section L.2.c of the ROD indicates that the cap will cover the existing asphalt cover in the Operations Area and along the railroad right-of-way. It further references Figure 8 of the ROD, which depicts an anticipated cap extent that includes the entirety of the railroad right-of-way north of the Operations Area. However, Part 2, Section L.2.c of the ROD also indicates that USEPA "maintains the flexibility to modify the capping component of the remedy" and that the "modifications may include reducing the size of the cap, and/or excavating isolated 'hot spots' of contaminated soil in lieu of capping assuming these response actions can be conducted in a protective, ARARs compliant, effective, and cost-effective manner." For reasons discussed in Section 5.2 the *Pre-ISTR Design Report*, this proposed consolidation approach results in a more implementable and ARAR-compliant approach that is consistent with this ROD provision. It also reduces the amount of imported fill required to achieve the design subgrade, avoids the need for off-site disposal of soils, and reduces the extent of the future RCRA C cap (including long-term maintenance thereof). Nonetheless, at the USEPA's discretion, this change may require a minor amendment to the ROD.

Following excavation and backfill, the railroad right-of-way will be graded to conform to the horizontal alignment, vertical grades and cross section for the future rails-to-trails corridor that is planned between Lazy Lane and Curtiss Street. The surface of this section will be temporarily paved with 9 inches of gravel to provide stabilization until the entire length of this rails-to-trails corridor is completed and paved with asphalt concrete pavement.

## 2.7 ISTR Area Grading

The earthwork activities for Pre-ISTR Preparation mainly focus on attaining the grades necessary to provide access for and operation of drilling equipment, installation of the thermal wells, positive drainage, and roads for maintenance during thermal treatment operation. Earthwork for all site work including grading, trenching and backfill for proposed utilities and drainage, removal of existing on-site fill piles and the excavation and backfill of the railroad right-of way will be handled in the following manner:

1. Impacted soil materials (e.g., the former operations area or the portion of the railroad right-of-way to be excavated to four feet) - will remain in or be transported to the proposed ISTR treatment area to be used as general

fill and grading material. The material will be used for fill or grading material within the limits of the thermal treatment area and will not be relocated outside of this area.

2. Non-impacted soil materials (e.g., utility and drainage trenches beyond target remedial areas) - surplus material from non-impacted sources may be used as fill or grading material inside or outside of the proposed ISTR treatment area.

3. Perimeter drainage and utility trenches shall be completely backfilled with clean approved select fill material to subgrade.

4. The portion of the railroad right-of-way that is excavated to four feet below the existing ground surface shall be completely backfilled to the proposed subgrade with clean approved general fill material.

Grading activities will be performed in a manner such that all soil and concrete foundation materials presently located within the thermal treatment area limits will not be relocated outside the treatment area (e.g., inside edge of the perimeter access road). After clearing, drainage and utility installation is complete, it is anticipated that the perimeter access roads (and associated outer drainage channels) that loop the site will be constructed to divert drainage run-on from off-site and provide complete access to the site. The interior grading inside the maintenance roadways would then be performed including the 4 foot wide drainage channel, terraced areas, and access ramps. These features are shown on the Design Drawings.

Erosion and sediment control measures shall be employed during construction of the newly graded surfaces in accordance with the Section 5 of this RAWP, Stormwater Pollution Prevention Plan, the details in the Pre-ISTR design, and the Connecticut Guidelines for Sediment and Erosion Control.

### 2.8 Imported Fill Materials

Any offsite materials proposed for use as general fill, select fill, or topsoil must be from an approved source. Samples of proposed sources of granular fill (i.e., soil, but not stone) will be provided by the selected contractor and subject to analytical testing for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), pesticides/herbicides, and inorganics; results will be compared to the Soil Cleanup Levels for the

Site. Sources exhibiting concentrations above Site Cleanup Levels will not be approved for use.

### 2.9 Site Stabilization and Restoration

As grading is completed, the finished surfaces will be stabilized or restored with the following surface treatments:

1. Vegetated surface with permanent erosion control mat – for slopes and soil surfaces that will be permanently restored or that will be exposed for the duration of thermal treatment. Six inches of topsoil will be placed, a permanent erosion control mat installed, and the surfaces seeded.

2. Vegetated surface with temporary erosion control mat – for slopes and soil surfaces that will be temporarily exposed and will receive a concrete or alternate surface cover as part of the initial ISTR construction. These surfaces will receive a temporary erosion control mat and be seeded to provide for soil stabilization until the ISTR-related surface cover is placed.

3. Gravel surface cover – for areas subject to traffic loading from drilling equipment, construction/maintenance vehicles, or personal vehicles. These surfaces will receive a minimum of six inches of an aggregate type base course with a woven geotextile fabric for separation and stability.

4. Asphalt pavement – low spots in the existing asphalt pavement of the former Operations Area that are exposed under the prepared subgrade condition will shimmed with a minimum of 2” of Type A Select Fill where necessary to provide a surface that will not be subject to ponding.

## 3. Construction Implementation and Schedule

This section discusses schedule-related requirements, including the RA-related activities and schedule specified by the SOW as well as the anticipated schedule for construction of the pre-ISTR preparation activities. It also discusses two additional items that are related to the schedule: property access approvals and contractor procurement.

### 3.1 Schedule

Remedial action components are specified in Section VI of the SOW. This RAWP addresses the requirements of SOW Section VI.A. Section VI.A also calls for a revised Remedial Action Project Operations Plan (RA POP) if needed. However, there are no activities associated with the PIPP-related construction activities that require addenda to or modification of the POP submitted in conjunction with the Remedial Design activities. Note, however, that the schedule-related information presented herein supersedes the schedule of PIPP-related activities provided in the RD POP.

The following table identifies the various RA-related work activities specified in SOW Section VI that are anticipated to be performed in conjunction with PIPP-related activities. It also identifies the SOW-specified timeframe/schedule for each item.

| Milestone/SOW Reference | Description | Timeframe/Target Date of Implementation |
|---|---|---|
| RA Implementation Schedule; VI.B | The implementation schedule will identify all major milestones for completion of each major component of the RA, including the commencement and completion of construction of each component of the remedy, and for demonstrating compliance with the approved construction plan. | Within 30 days after receipt of USEPA approval or modifications of the Final RAWP. |
| Pre-Construction Conference; VI.C | Participants will include all parties involved in the RA, including but not limited to the Settling Defendants and their representatives, USEPA and CTDEP. | Within 30 days after receipt of USEPA approval or modifications of the Final RAWP. |

| Milestone/SOW Reference | Description | Timeframe/Target Date of Implementation |
|---|---|---|
| Pre-Construction Public Meeting; VI.D | Invitees will include local law enforcement and emergency personnel, as well as local residents. This meeting may be combined with the Pre-Construction Conference. | Within 45 days after receipt of USEPA approval or modifications of the Final RAWP. |
| Initiation of Construction; VI.E | Commence mobilization to execute RAWP. | Within 60 days after receipt of USEPA approval or modifications of the Final RAWP. |
| Meetings During Construction; VI.F | Discuss progress of construction activities. Modification to the RAWP may be proposed during meetings and/or conference calls. | Weekly during construction. |
| Final Construction Inspection; VI.G | Participants will include all parties involved in the RA, including but not limited to the Settling Defendants and their representatives, USEPA and CTDEP. | Within 60 days after completion of construction; contingent upon construction completion date. |
| Construction Completion Report; VI.H | Summarize construction activities. | Within 30 days after the Final Construction Inspection; contingent upon construction completion date. |

The SRSNE Site Group is targeting PIPP-related construction activities for the 2010 construction season. This schedule is subject to USEPA approval of the RAWP and associated design documentation. It's also subject to obtaining requisite property access approvals, as further discussed below.

Construction of the Pre-ISTR site work is anticipated to take approximately 120 days to complete. Assuming USEPA approval on June 1, 2010, work is expected to begin at the Site no earlier than August 1, 2010 based on the SOW-specified schedule indicated above. This would result in a completion date in early December 2010. The Site would then be maintained in the prepared condition until the next phase of the work (ISTR implementation),

which is anticipated to commence in spring 2011 pending submittal and USEPA approval of the ISTR design component.

### 3.2 Property Access Approval Status

Implementation of the PIPP activities will require access to multiple property parcels. Those properties, and the current status of property access, are summarized as follows:

- **SRSNE Operations Area and Cianci Property** – The SRSNE Site Group currently controls these properties and there are no access-related issues.

- **Former Railroad Right-of-Way** – This property is currently owned by the CTDEP. Access for the purpose of construction the remedy and for subsequent maintenance of the post-construction conditions has been formally discussed with the CTDEP, which indicated no adverse concerns or objections. A written access agreement is currently being developed.

- **Yorski Property** – The Yorski property is located west of the former SRSNE Operations Area. Based on the delineated extent of NAPL in the overburden soils – which defines the limits of soil subject to ISTR – access to a portion of the Yorski-owned parcel will be required. While the delineated extent of NAPL did not extend appreciably onto the Yorski parcel, a buffer around the target treatment area is needed in order to install the thermal well field and provide perimeter access roads, drainage features, and room for the fiber optic line relocation. An agreement for purchase of or access to a limited portion of the Yorski parcel (approximately 0.5 acres) is currently being negotiated with the property owner. The basis of design and the Design Drawings presume access to this parcel for the purpose of construction as designed.

- **Maiellaro Property** – The Maiellaro property is located north of the former Operations Area and west of the road that accesses the Operations Area from Lazy Lane. Based on the extent of work activities shown on the Design Drawings (Attachment C to the PIPP Design Report), pre-ISTR-related construction is not anticipated to extend onto this parcel. However, the planned fiber optic relocation route – and AT&T's requirement for a 20-foot-wide easement along the relocated route – may require that a portion of this property be designated as a permanent easement. In the longer term, it is also possible that the RCRA C cap termination may extend several feet beyond the pre-ISTR work limits such that work on the

Maiellaro property may be needed. Accordingly, the SRSNE Site Group will contact the property owner to discuss potential future access requirements for this property.

### 3.3 Contractor Procurement Approach

The scope of work for the Pre- ISTR Preparation activities is presented in this RAWP and the associated *Pre-ISTR Design Report*. To meet the Pre-ISTR Preparation implementation target dates, competitive bids for performing the work based on these documents will be solicited concurrent with USEPA review of these documents. The final contract will be developed and executed in time for the selected Contractor to support the development of a revised project schedule and other required pre-construction activities indicated in SOW Section VI and summarized above. As indicated in the general schedule in Section 3.1 above, construction will be initiated within 60 days after receipt of USEPA approval of the RAWP.

Because the NTCRA 1 extraction system and HCTS are currently in operation, Weston (current HCTS operator), will self-perform the HCTS modifications. This contracting approach assures that the HCTS modifications are coordinated with active system operations and will be implemented in a manner that will minimize HCTS downtime and meet compliance standards to the maximum practical extent. The HCTS improvements will be performed concurrently with the other Pre-ISTR activities.

## 4. Perimeter Air Monitoring Plan

Separate from any personal or health and safety-related monitoring that may be performed in the work area in accordance with the Site Health and Safety Plan (HASP; Attachment D to the RD POP), real-time VOC and particulate air monitoring will also be performed at representative perimeter locations. The purpose of this monitoring is to assess the potential for dust or VOC concentrations to exceed action levels protective of surrounding populations, and to trigger control measures if action levels are exceeded. The basis for the scope of action levels and potential mitigation measures associated with this environmental monitoring plan are further discussed below.

### 4.1 Potential Air Emissions Related to Remedial Activities

Intrusive construction activities to be performed at the Site as part of the PIPP activities have the potential to generate localized impacts to air quality. These actions include, but may not be limited to, the following:

- Grading of ISTR area (including handling of existing soil, handling/breaking foundations and slabs, and handling borrow material).
- Construction of access roads and water diversion features (including grading/handling of existing soil and handling of borrow material).
- Relocation of utilities and culvert (including excavation/grading of existing soil and handling of borrow material).
- Other ancillary intrusive activities.

The types of air quality impacts potentially associated with these activities include release of VOCs or dust associated with grading or excavating impacted soils, as well as the potential for generation of dust associated with placement and grading of fill materials. With the grading approach and soil management procedures that have been established in the former Operations Area (see Section 2.7) it is expected that the potential for generation of VOCs and impacted dust will be minimal. The grades in the former Operations Area have been established to significantly reduce the amount of excavation required and will keep much of the existing asphalt paved surfaces intact.

### 4.2 Monitoring Station Location Selection and Deployment

Organic vapor and airborne particulate monitoring station locations will be determined daily based on meteorological data and the nature of the anticipated remediation activities. An upwind location for both organic vapors and airborne particulate monitoring will be selected at the start of each workday. The upwind location will be one that is unaffected by construction activities and monitored to assess background levels relative to the work area. Two downwind (based on predominant wind direction) locations for both organic vapor and airborne particulate monitoring will also be selected. Downwind locations will be established at perimeter locations downwind of the work area(s) to assess potential work-related air quality impacts. Based on the predominant wind direction (i.e., from the northwest), monitoring is expected to be performed at the approximate locations shown on Figure 2. It should be noted that these locations are several hundred feet from the nearest fixed location of an off-site receptor, and thus serve as highly conservative monitoring locations relative to potential nearby receptors.

If wind direction shifts radically during the workday and for an extended period of time, such that the upwind location and downwind locations no longer fall within acceptable guidelines (+/- 60° compass change from the original wind direction), the monitoring stations will be relocated so that the upwind and downwind locations are maintained. Air monitoring location changes will be documented in the field logbook.

The frequency of perimeter air monitoring will depend on the status of the work activities, type of monitoring and nature of the measured concentrations at the downwind and fixed monitoring locations, as further discussed in Section 4.9.

### 4.3 Organic Vapor Monitoring

A photoionization detector equipped with an 11.7 eV lamp and calibrated to 100 parts per million (ppm) isobutylene (e.g., Photovac 2020PRO or equivalent) will be used for perimeter monitoring of total VOC levels. The Photovac 2020PRO is a rechargeable battery-operated PID that allows for both logging and non-logging operation, and will provide instantaneous readings. When used with the 11.7 eV lamp, the Photovac 2020 measures volatile concentrations, including those associated with ionizing chlorinated compounds. Detectable compounds are as follows: benzene, toluene, naphthalene, acetylene, ethylene, 1,3-butadiene, vinyl chloride, chloroform, trichloroethylene, methylene chloride, acetone, methyl ethyl ketone, methyl

isobutyl ketone, methanol, ethanol, isopropanol, n-butanol and organic fuels. The Photovac 2020PRO can also measure benzene separately. The detection range of the Photovac 2020PRO is 0.1 to 10,000 parts per million.

All scheduled readings, and any additional readings taken to facilitate activity decisions, will be recorded in the field logbook. In the event of readings above any action level, the possible sources of the exceedance, including Site-related sources and other sources, will be assessed. In the event that non-Site sources (e.g., high humidity affecting the instrument) are determined to be a source of elevated readings, and other concurrent Site-related sources can be ruled out, the source of the elevated readings will be noted in monitoring records.

### 4.4 Airborne Particulate Monitoring

Fugitive dust migration will be visually assessed during work activities, and reasonable dust suppression techniques will be used during site activities that may generate fugitive dust (Section 4.1). Additionally, real-time airborne particulate monitoring will be conducted during intrusive and/or potential dust-generating activities.

A real-time particulate monitor (e.g., DUSTTRAK II or equivalent) will be used for airborne particulate monitoring. The DUSTTRAK II is a rechargeable battery-operated particulate monitor that measures aerosol concentrations corresponding to $PM_1$, $PM_{2.5}$, $PM_{10}$ or respirable size fractions. The DUSTTRAK II allows for logging operation, and will provide instantaneous readings. The detection range of the DUSTTRAK II is 0.001 to 150 $mg/m^3$.

All scheduled readings, and any additional readings taken to facilitate activity decisions, will be recorded in the field logbook. In the event of readings above any action level, the possible sources of the exceedance, including Site-related sources and other sources, will be assessed. In the event that non-site sources (e.g., exhaust from site equipment) are determined to be a source of elevated readings, and other concurrent Site-related sources can be ruled out, the source of the elevated readings will be noted in monitoring records.

### 4.5 Action Levels

The action levels provided below are to be used to initiate corrective actions, based on interval monitoring described in Section 4.9.

### 4.5.1 Action Levels for Volatile Organic Compounds

VOC monitoring will be performed using a photoionization detector (PID) equipped with an 11.7 eV lamp. An appropriate perimeter action level was developed considering the maximum concentrations in soil that may be disturbed during PIPP-related construction activities (i.e., soil associated with samples SS-C1 through SS-C10 in the former Operations Area[1]). The associated data (provided in Appendix A) were used to calculate a perimeter action level using the State of Connecticut Hazard Limiting Values (HLVs) located in Section 22a-174-29 "Hazardous Air Pollutants" regulation. The action levels were calculated using a spreadsheet provided by the PID manufacturer and are further described in Appendix A.

If the sustained[2] ambient VOC concentration at all of the downwind perimeter monitoring locations is below the VOC action level of 0.4 parts per million (ppm) above the average background (upwind location) concentration, site work (as defined in Section 4.1) may continue and perimeter monitoring will continue on an hourly basis.

If the sustained ambient air VOC concentration at any one (or more) of the downwind perimeter locations exceeds the action level of 0.4 ppm, but is less than 2 ppm above the average background (upwind location) concentration, work activities may continue for up 30 minutes while continuous real-time VOC monitoring is conducted downwind and the potential source(s) of the elevated VOC concentration is identified and corrective actions to reduce or abate the emissions are undertaken to reduce perimeter VOC levels below 0.4 ppm above background level. If any 1 (or more) of the downwind perimeter locations exceeds 0.4 ppm above the background (upwind location) concentration *for more than 30 minutes*, soil disturbance activities will be stopped until corrective actions to reduce or abate the emissions are undertaken to reduce downwind perimeter VOC levels below the Action Level of 0.4 ppm above background level.

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[1] These samples are representative of the area and depth range of soil likely to be disturbed during PIPP activities.

[2] For purposes of this Air Monitoring Plan, sustained readings are defined as the average airborne concentration maintained for a period of 1 minute.

If the sustained ambient air VOC concentration at one (or more) of the downwind perimeter locations is 2 ppm above the average background concentration, soil disturbance activities must immediately cease and corrective actions must be implemented to control VOC emissions (refer to Section 4.6 for details).

| Parameter | Downwind Concentration | Action |
|---|---|---|
| Total Organic Vapors (TOV) | 0 ppm to < 0.4 ppm above background | Normal Operations; continue hourly perimeter readings |
| | 0.4 to < 2 ppm above background for less than 30 minutes | Continue working with continuous monitoring |
| | 0.4 to < 2 ppm above background for 30 minutes or more | Stop work; implement corrective measures |
| | > 2 ppm above background | Immediately stop work; implement corrective measures |

### 4.5.2 Action Levels for Real-Time Airborne Particulate Monitoring

Perimeter ambient air monitoring will be conducted using a real-time aerosol DataRAM (DUSTTRAK II or similar). For activities involving native (impacted) soil, an appropriate perimeter Action Level was developed considering the maximum soil concentration data for existing metals (which are the constituents most likely associated with respirable dust) in soil that may be disturbed during PIPP-related construction activities (i.e., soil associated with samples SS-C1 through SS-C10 near the former process area) to calculate a perimeter action level using the HLVs located in Section 22a-174-29 "Hazardous Air Pollutants" regulation. For activities involving only imported ("clean") fill, the perimeter action level was developed considering the primary ambient air quality standard for particulates located in Section 22a-174-24 Connecticut primary and secondary standards regulation. The perimeter action levels for each of these conditions are further discussed below.

***Activities Involving Imported Fill Only***

For activities that do not involve Site soils (i.e., activities that involve only imported "clean" fill), the action level is equal to three times the 24-hour respirable dust standard (0.15 milligrams per cubic meter [$mg/m^3$]).[3] The resulting action level is equal to 0.45 $mg/m^3$. Calculation of the action level is further discussed in Appendix A.

If the sustained ambient airborne particulate concentration at all of the downwind perimeter monitoring locations is below the airborne particulate action level of 0.45 $mg/m^3$ (450 micrograms per cubic meter [$ug/m^3$]) above the average background (upwind location) concentration, site work (as defined in Section 4.1) may continue and perimeter monitoring will continue on an hourly basis.

If the sustained ambient airborne particulate concentration at one (or more) of the downwind perimeter locations is 0.45 $mg/m^3$ above the average background concentration, soil disturbance activities must immediately cease and dust suppression must be implemented to control airborne particulate emissions (refer to Section 4.6 for details).

***Activities Involving Site Soil***

Based upon a review of the soil analytical data and the respective HLV, arsenic concentrations in soil drive the dust-based perimeter action level. In overview, the arsenic concentration in the samples noted above was used to calculate airborne dust concentrations that correlate to ambient arsenic in air levels below the arsenic HLVs. The calculation of particulate action levels is further described in Appendix A.

If the sustained ambient airborne particulate concentration at all of the downwind perimeter monitoring locations is below the airborne particulate action level of 0.12 $mg/m^3$ (120 $ug/m^3$) above the average background (upwind location) concentration, site work (as defined in Section 4.1) may continue and perimeter monitoring will continue on an hourly basis.

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[3] The 24-hour limit was multiplied by 3 because the 8-hour work day constitutes 1/3 of the 24-hour period to which the action level applies, and no dust is generated during off-hours, which accounts for 2/3 of the 24-hour period.

If the sustained ambient airborne particulate concentration at any one (or more) of the downwind perimeter locations exceeds the action level of 0.12 mg/m$^3$ above the average background (upwind location) level, but is less than 0.45 mg/m$^3$ (450 ug/m$^3$) above the average background (upwind location) concentration, work activities may continue for up to 30 minutes while continuous real-time airborne particulate monitoring is conducted downwind and the potential source(s) of the elevated airborne particulate concentration is identified and corrective actions to reduce or abate the emissions are undertaken to reduce perimeter airborne particulate levels below 0.12 mg/m$^3$ above background level. If any one (or more) of the downwind perimeter locations exceeds 0.45 mg/m$^3$ above the background (upwind location) concentration *for more than 30 minutes*, soil disturbance activities will be stopped until dust suppression corrective actions reduce downwind perimeter airborne particulate levels below the Action Level of 0.12 mg/m$^3$ above background (upwind location) level.

If the sustained ambient airborne particulate concentration at one (or more) of the downwind perimeter locations is 0.45 mg/m$^3$ above the average background concentration, soil disturbance activities must immediately cease and dust suppression must be implemented to control airborne particulate emissions (refer to Section 4.6 for details).

| Parameter | Downwind Concentration | Action |
|---|---|---|
| Total Particulates (activities involving only imported soil) | 0 ppm to < 0.45 ppm above background | Normal operations; continue hourly perimeter readings |
| | > 0.45 ppm above background | Stop work; implement corrective measures |
| Arsenic (activities involving native soil) | 0 ppm to < 0.12 ppm above background | Normal operations; continue hourly perimeter readings |
| | 0.12 ppm to < 0.45 ppm above background for **less than 30 minutes** | Continue working with continuous monitoring |
| | 0.12 ppm to < 0.45 ppm above background for **30 minutes or more** | Stop work; implement corrective measures |
| | > 0.45 ppm above background | Stop work; implement corrective measures |

### 4.6 Air/Dust Emissions and Control Measures

Air emissions control and fugitive dust suppression measures will be implemented concurrently with the activities identified above (as needed) to limit the potential for organic vapor and dust emissions from the Site. Air emissions associated with grading/ backfilling, material handling and other intrusive activities (described in Section 4.1), will be controlled as further described below. The following vapor and dust control measures may be used during these activities, depending upon specific circumstances, visual observations and air monitoring results:

- Water/BioSolve® spray
- Polyethylene sheeting (e.g., for covering excavation faces, material stockpiles)
- Minimizing surface area of soil exposed at any given time through proper sequencing of the work
- Vapor suppression foam
- Reducing vehicle speeds to minimize dust generation

The Contractor will mobilize BioSolve® (or approved equivalent) and vapor-suppressant foam (including application equipment) to the Site prior to initiating intrusive activities and will maintain an adequate supply of such materials for the duration of intrusive activities in the event they are needed over the course of the work.

### 4.7 Meteorological Monitoring

Meteorological monitoring of wind speed, wind direction, relative humidity, and ambient temperature will be conducted by logging onto the National Weather Service website (www.weather.gov) and recording the online data for a nearby location (e.g., Meriden Markham Municipal Airport) in the field log book once in the morning and once in the afternoon. This will be used as a basis for selection of downwind monitoring locations. Significant deviations in observed wind direction at the Site relative to this reference location will be recorded with the air monitoring log.

### 4.8 Instrument Calibration

Calibration of the air monitoring instrumentation will be conducted at the beginning and end of each day of use (at a minimum) in accordance with each of the equipment manufacturer's calibration and quality assurance requirements. Calibrations will be recorded in the field logbook.

Records for calibrated equipment must include the following minimum information:

- Type and identification number of equipment
- Calibration frequency and acceptance tolerances
- Calibration dates
- The individual and organization performing the calibration
- Reference equipment and/or standards used for calibration; standards for calibration will be consistent with those recommended by the manufacturer (e.g., 100 ppm isobutylene standard for a PID)
- Calibration data
- Certificates or statements of calibration provided by manufacturers and external organizations
- Documentation of calibration acceptance or failure and of repair of failed equipment

Additional information related to instrument calibration is provided in the RD POP – Attachment B (Field Sampling Plan [FSP]) and Attachment C (Quality Assurance Project Plan [QAPP]).

### 4.9 Monitoring Schedule

Air monitoring will be conducted prior to initiating intrusive activities to establish adequate baseline data and continue until such time that significant material handling activities are complete. Real-time airborne particulate monitoring will be performed during all intrusive and/or potential dust-generating activities (as described in Section 4.1) and VOC monitoring will be conducted during

grading/handling of native soil/materials. PID monitoring will not be performed during times when only "clean" off-site material is being handled. The frequency of air monitoring will be relative to the level of site work activities being conducted and may be adjusted as the work proceeds and in consideration of the monitoring results.

VOC monitoring will be conducted at one-hour intervals (minimum) during active work periods. The instrument will be monitored for one minute (i.e., to provide a "sustained reading" as discussed in Section 4.5) and the highest level for that minute will be recorded in the logs. Should readings at the downwind monitor(s) rise above the readings at the upwind (background) monitor (but remain below the action levels described in Section 4.5.1), the monitoring frequency will increase to half-hourly for the remainder of the work day, or until background readings are again observed.

Real-time airborne particulate monitoring will be conducted at one-hour intervals (minimum) during active work periods. Again, the instrument will be monitored for one minute and the highest level will be recorded in the logs. Should readings at the downwind monitor(s) rise above the readings at the upwind (background) monitor (but remain below action levels described in Section 4.5.2), the monitoring frequency will increase to half-hourly for the remainder of the work day, or until background readings are again observed.

Procedures for monitoring following exceedance of an action level are described in Section 4.5.

### 4.10 Data Collection and Reporting

Air monitoring data will be collected from PID and $PM_{10}$ monitors at the frequencies indicated in Section 4.9 during all intrusive and/or potential dust-generating activities.

In the event of an exceedance of an action level (for either airborne particulate or VOCs), the field personnel will notify the Project Manager (or designee) at the time the exceedance is observed (i.e., real time). The field personnel will follow up with the Project Manager (or designee) within 24 hours of the observed exceedance summarizing the data, the cause of the exceedance, and any corrective measures implemented as a result of the exceedance.

Sometimes, an exceedance is caused by non-site-related sources, such as high humidity affecting the instruments, exhaust emissions from operating equipment, or other factors unrelated to the site media. If such a source is suspected to be the cause of the exceedance, and other potential sources are adequately investigated and ruled out, this will be recorded in the field log book.

Documentation of perimeter monitoring will be maintained as part of the field log books in accordance with the requirements of the RD POP (Section 3.4 of the FSP]). Monitoring will be documented on the Air Monitoring Log provided in Appendix B.

## 5. Stormwater Pollution Prevention Plan

This section provides an SWPPP that addresses stormwater management and pollution prevention measures to be implemented during Pre-ISTR construction activities. The final development plan for this Site will include a vegetated RCRA Subtitle C cap over the former Operations Area and a Rails-to-Trails segment between Curtiss Street and Lazy Lane. Due to the phased nature of the remediation activities, interim surface conditions will exist throughout the work area. The actions presented herein are applicable to the pre-ISTR site preparation activities. However, because site grading and drainage patterns will remain for the subsequent ISTR implementation phase, the stormwater management procedures will also be applicable to the ISTR implementation phase. A SWPPP that addresses stormwater pollution prevention for the construction of the cap and trail will be developed as part of the associated RAWP for that phase of work.

### 5.1 Project Description

The Site is located in an area of flat to rolling terrain with slope gradients averaging from approximately 1 to 8 percent. The immediate Site area and the adjacent upland areas generally slope to the east towards the Quinnipiac River. The typical land uses present in the watersheds that drain to the Site consist mainly of a mix of agricultural and residential development. From the current Natural Resources Conservation Service soil survey, soils in the area are predominantly Cheshire fine sandy loams and Ludlow silty loam with hydrologic soil group ratings of B and C, respectively. Surface runoff from a number of sources including a 36-acre watershed area west of the Site, a ditch along the railroad on the north side of Lazy Lane, the adjacent property on the west side of the Site, and the former Operations Area, is collected in a drainage channel located on the west side of the existing railroad right-of-way east of the former Operations Area (Figure 2). The channel drains south to an existing 24-inch steel culvert beneath the railroad to a ditch on the east side of the former railroad area. The ditch then drains to an existing 30-inch concrete culvert that runs below grade eastward to an outlet located approximately 150 feet from the Quinnipiac River.

The main focus of the Pre-ISTR construction is the grading activities in the former Operations Area that presently consists of a total of 2.9 acres with 1.4 acres of asphalt pavement and the remains of several concrete building foundations. The remaining 1.5 acres is mainly composed of woods, brush and vegetated areas that are generally located on the slopes around the perimeter

of the Site. Additional construction will occur on the former railroad right-of-way and Cianci property to relocate existing drainage, remove impacted soils and provide the utility services for ISTR. The total area of disturbance for the pre-ISTR construction activities is estimated to be approximately 4.7 acres.

### 5.2 Construction Sequence

For the Pre-ISTR site preparation activities, it is anticipated that work would be performed in the sequence described in Section 2.1 above. Additionally, the selected contractor will be required to perform a pre-construction site assessment to ensure that all appropriate erosion and sediment controls are in place and properly installed prior to the start of earthwork activities.

Following completion of construction and during demobilization, the contractor will remove all construction support facilities and clean/restore, at a minimum to the pre-construction condition, any areas/features that were disturbed as a result of the Pre-ISTR construction activities including those not otherwise scheduled for restoration.

### 5.3 Erosion and Sediment Control Plan

The contractor will be responsible for installing and maintaining all temporary erosion and sediment control measures that may be required during construction associated with Pre-ISTR preparation activities. All erosion and sediment controls will be installed and maintained in accordance with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control (CTDEP Bulletin 34) unless otherwise noted herein. Temporary erosion and sediment control measures will be installed prior to any significant soil disturbance and/or clearing activities at the Site. The contractor will also be responsible for providing additional erosion and sediment control measures, as needed, to achieve the stormwater management objectives of this SWPPP.

General descriptions of erosion and sediment control measures that are anticipated to be utilized during Pre-ISTR construction activities are presented below. Refer to the Design Drawings for approximate locations and details for construction of proposed erosion and sediment controls.

Temporary Seeding – will be established to reduce the potential for erosion and sediment transport from disturbed or bare soil areas. Seeding will be performed in areas that have achieved final grade or are not scheduled for further construction activities within 14 calendar days. Temporary or long-term

erosion control mats will be placed on slopes or other areas during time periods when site conditions are not conducive to rapid germination and grass growth. Temporary seeding will be performed in accordance with the Design Drawings. Temporary and permanent seeding should occur within 24 hours of initial disturbance/achievement of final grade to reduce the need for scarification of the seedbed prior to seeding.

Mulching – provides immediate erosion control during the establishment of vegetation, moderation of seedbed conditions (e.g., temperature and moisture), and serves as a dust control measure. Mulching will be performed immediately following seeding (in areas not receiving erosion control mat) and conducted in accordance with the materials and methods indicated in Section 5-4-5 of the Connecticut Guidelines for Soil Erosion and Sediment Control, titled, “Non-Living Soil Protection – Mulch for Seed”.

Equipment Lay-Down/Material Staging Areas – are anticipated to be established in two primary areas for use during the PIPP and ISTR phases of the work: one within the asphalt-covered surface within the former Operations Area and another within a grass-covered area south of the groundwater treatment building. Of these, staging is primarily expected to occur in the former Operations Area, and any use of the area south of the treatment building is expected to be minimal and of short duration. Silt fencing will be installed along the downgradient perimeter of all laydown/material staging areas. Any impact to the existing ground surface south of the treatment building that results from temporary equipment staging will be repaired and the area will be reseeded as soon as practical following the completion of staging.

Silt Fence – will be used to reduce the potential for migration of suspended sediments from construction areas to off-site locations. Silt fencing will be installed on the perimeter of disturbed areas as shown on the Design Drawings.

Level Spreader – will be constructed to reduce the depth and velocity of concentrated runoff and release it uniformly as sheet flow onto a stable area. A level spreader will be constructed at the outlet of the 2-foot-wide perimeter drainage channel at the southeastern corner of the ISTR area. The level spreader will be constructed as shown on the Design Drawings and in accordance with the materials and methods indicated in Section 5 of the Connecticut Guidelines for Soil Erosion and Sediment Control, titled, “Energy Dissipaters – Level Spreader”.

Stone Check Dam – will be constructed to reduce the velocity of concentrated stormwater flows within the drainage channels and therefore reducing erosion of the channels. Stone check dams also temporarily pond stormwater runoff and allow sediments to settle out. Stone check dams will be constructed in the steeper portions of the perimeter ISTR area ditches and in accordance with the materials and methods indicated on the drawings and in Section 5 of the Connecticut Guidelines for Soil Erosion and Sediment Control, titled, “Energy Dissipaters – Stone Check Dam”.

Temporary Diversions – will be installed as necessary to reduce the potential for migration of sediment-laden water off-site by conveying construction-related stormwater to on-site management areas.

Polyethylene Tarps – will be used to cover stockpile areas where the site constraints make the use of alternative erosion controls (e.g., silt fence) impractical. Tarps will completely cover the pile, extend out from the base, and be secured in-place with sand bags (or similar means). Tarps will also be placed over the granular fill stockpile(s) (e.g., clean backfill pending final placement) at the end of each day’s work effort, and during significant rainfall events (i.e., capable of producing visible run-off from stockpile areas).

Dust Control – will be the responsibility of the contractor and will be performed in accordance with the HASP and the measures described in Section 4 of this RAWP. Water that is applied to exposed soils and access roads during construction shall be done without causing soil erosion.

Good housekeeping practices – will be implemented at the Site to minimize the potential for construction materials entering stormwater discharges from the Site. During construction, the contractor will be responsible for maintaining the Site in a neat and orderly condition. This will include, but may not be necessarily limited to: routine waste management activities, including the collection and disposal of trash, rubbish, construction waste and sanitary wastes; prompt cleanup of spills of liquid or dry materials (if any); and prompt cleanup of any sediments tracked by construction vehicles and/or transported by wind or stormwater from active work areas to other areas of the Site or nearby off-site areas.

## 5.4 Inspection and Maintenance of Erosion and Sediment Controls

Inspections of erosion and sediment controls will be performed as a quality control procedure to confirm that the erosion and sediment control plan is being implemented properly and remains functional relative to site conditions. Prior to initiation of significant construction activities, the contractor will have a qualified inspector (as defined in the CTDEP General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities) perform a pre-construction site assessment to verify that erosion and sediment controls are properly installed. During construction, the contractor will also be responsible for inspecting and maintaining erosion and sediment controls associated with construction activities. At a minimum, the erosion and sediment control measures will be inspected for deficiencies by a qualified inspector once every seven calendar days and within 24 hours of the end of a storm producing 0.1 inches or greater rainfall. In addition, repair of damage to sediment control features will be initiated within one day of identification of any deficiencies and will be completed prior to the next scheduled inspection. The erosion and sediment control measures will be maintained for the duration of the project until such time that all permanent stabilization measures have been fully established.

Related to the pre-ISTR activities, the selected contractor will be responsible for inspecting and maintaining erosion and sediment controls from the time of installation until April 1, 2011. After that time, the responsibility may be extended or assigned to others based on the status and schedule of the ISTR design and implementation activities. It is anticipated that the erosion and sediment control activities installed during pre-ISTR activities will be maintained for continued use throughout the ISTR implementation component of the project.

## 5.5 Additional Pollution Control Measures

In addition to the good housekeeping practices indicated in Section 5.3, the contractor will implement additional pollution prevention measures as indicated in the following sections.

### 5.5.1 Spill Prevention

Prior to mobilization, each piece of equipment to be brought on site will be visually inspected by the contractor for potential sources of spills of hydraulic fluid, engine oil, transmission fluid, fuel, grease, etc. (by inspecting the

condition of hydraulic cylinders, hoses, gaskets, fuel tanks, etc.). If a potential spill source is identified, the contractor will conduct the necessary repairs or replace the piece of equipment prior to entering the Site. At a minimum, the construction site will be equipped with a spill kit consisting of sorbents, absorbent booms, and fire extinguishers. All spills will be contained and cleaned up immediately.

#### 5.5.2 Construction Waste

Rubbish and debris will be disposed of in a covered dumpster located in a support/staging area in the general work area. The dumpster will be emptied at least once a week.

#### 5.5.3 Soil Stockpiling

Any soils that are either excavated or brought on site to be used as backfill will be stored in an area that is not within a concentrated runoff pathway unless such pathway is scheduled for fill in accordance with the grading plan and new/alternate drainage features are established. The stockpiles will be surrounded by silt fencing and covered with plastic or seeded to prevent erosion in the event they are to be left idle for more than 10 calendar days.

### 5.6 Dewatering Wastewater

On-site sources of construction wastewater generated from water table depression, dewatering of excavations, decontamination of equipment or other means will be collected, containerized and transported to the on-site treatment facility for treatment.

### 5.7 Recordkeeping

The following reporting and recordkeeping requirements will be followed for the duration of the project:

- **SWPPP (and related documents)** – A copy of the SWPPP, Design Drawings, Design Report, any inspection reports, and any other relevant documents will be retained at the construction site from the date of initiation of construction activities to the date of final site stabilization. These documents will be retained on site in a secured location readily available to individuals performing compliance inspections.

- **Contractor Compliance Certification** – All contractors and subcontractors are required to certify compliance with the SWPPP. All such certifications will be retained on site along with the SWPPP.

- **Weekly Inspections Reports** – In accordance with Section 5.4, above, erosion and sediment controls will be inspected, at a minimum, once every 7 calendar days. The inspections will be performed and documented by the entity responsible for installation and maintenance of the erosion and sediment control devices. Inspection reports will be prepared to document the results of the inspections. At a minimum, inspection reports shall include the following:

    - Date and time of inspection.

    - Name and title of person(s) performing inspection.

    - A description of the weather and soil conditions (e.g., dry, wet, saturated) at the time of the inspection.

    - A description of the condition of the runoff at all points of discharge from the construction site. This will include identification of any discharges of sediment from the construction site, as well as discharges from conveyance systems (i.e., pipes, culverts, ditches, etc.) and overland flow.

    - Identification of all erosion and sediment control practices that need repair or maintenance, or that were not installed properly or are not functioning as designed and need to be reinstalled or replaced.

    - Description and sketch of areas that are disturbed at the time of the inspection and areas that have been stabilized (temporary and/or final) since the last inspection.

    - Current phase of construction of all post-construction stormwater management practices and identification of all construction that is not in conformance with the SWPPP and technical standards.

    - Corrective action(s) that must be taken to install, repair, replace or maintain erosion and sediment control practices, and to correct deficiencies identified with the construction of the post-construction stormwater management practice(s).

- Signature of the qualified inspector performing the inspection.

- **Records Retention** – Copies of the SWPPP and related documents, including any reports submitted or prepared in conjunction with the SWPPP to meet the requirements of the CTDEP's General Permit will be retained for a period of at least three years (or a longer period of time if required by the SMP) from the date that the Site is finally stabilized.

### 5.8 Site Restoration

At the completion of construction, all disturbed areas will be restored based on the habitat they currently support and the future use of the restored area; restoration details are shown on the Design Drawings. Drainage ditches will be seeded with the drainage channel seed mix while other vegetated areas will be seeded with the upland seed mix as specified in Specification Section MP-02921 of the Specifications, titled "Seeding". Topsoil will be placed in the locations shown on the Design Drawings and placed in accordance with Specification Section MP 02911- Topsoil and the Design Drawings.

Rip rap outlet protection will be constructed to protect the soil surface from the erosive forces of concentrated runoff and drainage channel flow velocities. Rip rap outlet protection will be constructed at the end of the proposed 30-inch culvert as shown on the Design Drawings and in accordance with Specification Section MP 02370 – Rip Rap.

A final site inspection will be performed (and documented) to verify that all disturbed areas are stabilized with at least 80% perennial vegetative cover, permanent landscape mulches, or impervious cover (e.g., asphalt, concrete). If this is not the case, measures will be implemented to correct inadequate areas and another final site inspection will be performed. Following completion of the final site stabilization, the contractor will remove any temporary erosion and sediment control features that are no longer needed (e.g., silt fencing), as appropriate.

## 6. Compliance with Substantive Permit Requirements Applicable to Pre-ISTR Construction Activities

The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) exempts the need to obtain permits or implement administrative requirements under federal law (e.g., dredge and fill permits), state law (e.g., water discharge permits), and local law (e.g., building construction permits relative to fire prevention, electrical, and other code requirements). Notwithstanding the permit exemption, remedial action under CERCLA must comply with the substantive requirements of federal, state and local laws and regulations if they are identified as applicable or relevant and appropriate requirements (ARARs). Compliance with the substantive requirements of federal, state and local laws is also referred to as "permit equivalency." The requirements and manner of compliance for the applicable or relevant rules and regulations for the Pre-ISTR construction are summarized in the following table:

| Regulatory Agency | Permit | Description | Manner of Compliance |
|---|---|---|---|
| Town of Southington | Conservation Commission Wetlands and Watercourses Permit | This permit regulates any operation within or use of a wetland or watercourse involving removal or deposition of material, or any obstruction, construction, alteration or pollution of such wetlands or watercourses, as well as land within 100 feet of the edge of the defined channel of the Quinnipiac River. | Minimize disturbance to existing wetlands from grading activities.<br>Establish 30-inch culvert outlet upgradient of wetland areas and Quinnipiac River channel.<br>Apply wetland credit where culvert relocation results in loss of wetland.<br>Develop Site-specific SWPPP and employ erosion and sediment controls during construction. |

| Regulatory Agency | Permit | Description | Manner of Compliance |
|---|---|---|---|
| State of Connecticut | Contaminated Soil and/or Sediment Management (Staging and Transfer) | This general permit authorizes the staging, transfer, and temporary storage of contaminated soil and/or sediment and is intended to address the management of these materials when they are generated during projects that are less than 2 years in duration and involve the excavation of earthen material. | Soil management procedures established for handling of excavated soils.<br>Excavated soil will be used for on-site fill and consolidated in the treatment area. Such soils will be temporarily covered during ISTR implementation and then permanently capped in a future phase. |
| | Surface Water and Wetlands, Inland Wetlands and Watercourses Act | This rule regulates any activities within or affecting inland wetlands involving removal or deposition of material or any obstruction, construction, alteration or pollution of such wetlands. | Minimize disturbance to existing wetlands from grading activities.<br>Establish 30-inch culvert outlet upgradient of wetland areas and Quinnipiac River channel.<br>Apply wetland credit where culvert relocation results in loss of wetland.<br>Employ erosion and sediment controls during construction. |
| | Discharge of Stormwater and Dewatering Wastewaters from Construction Activities | This regulation applies to all discharges of stormwater and dewatering wastewater from construction activities which result in the disturbance of *one or more* total acres of land area on a site regardless of project phasing. | Develop a Site-specific SWPPP and employ erosion and sediment controls during construction.<br>Dewatering wastewater from on-site excavation will be treated at the on-site treatment facility. |
| | Placement of Utilities and Drainage within Inland Wetlands and Stream Encroachment Lines | This rule regulates activities involving the placement, repair or replacement of utilities or drainage subject to certain conditions, if they are within inland wetlands and stream channel encroachment lines. | Minimize disturbance to existing wetlands from placement of utilities and drainage.<br>Establish 30-inch culvert outlet upgradient of wetland areas and Quinnipiac River channel.<br>Employ erosion and sediment controls during construction |

| Regulatory Agency | Permit | Description | Manner of Compliance |
|---|---|---|---|
| Federal | Clean Water Act (CWA) - Discharge to Waters of the United States, Section 404 | These rules regulate the discharge of dredge and fill materials in wetlands and navigable waters. Such discharges are not allowed if practicable alternatives are available. | Minimize disturbance to existing wetlands from grading activities.<br>Establish 30-inch culvert outlet upgradient of wetland areas and Quinnipiac River channel.<br>Apply wetland credit where culvert relocation results in loss of wetland.<br>Employ erosion and sediment controls during construction. |
| | Toxic Substances Control Act | Soil containing PCBs > 50 ppm is regulated under this Act. | Soil management procedures established for handling of excavated soils.<br>Excavated soil will be used for on-site fill and will be stored and consolidated in the treatment area that will be capped in a future phase. |

## 7. References

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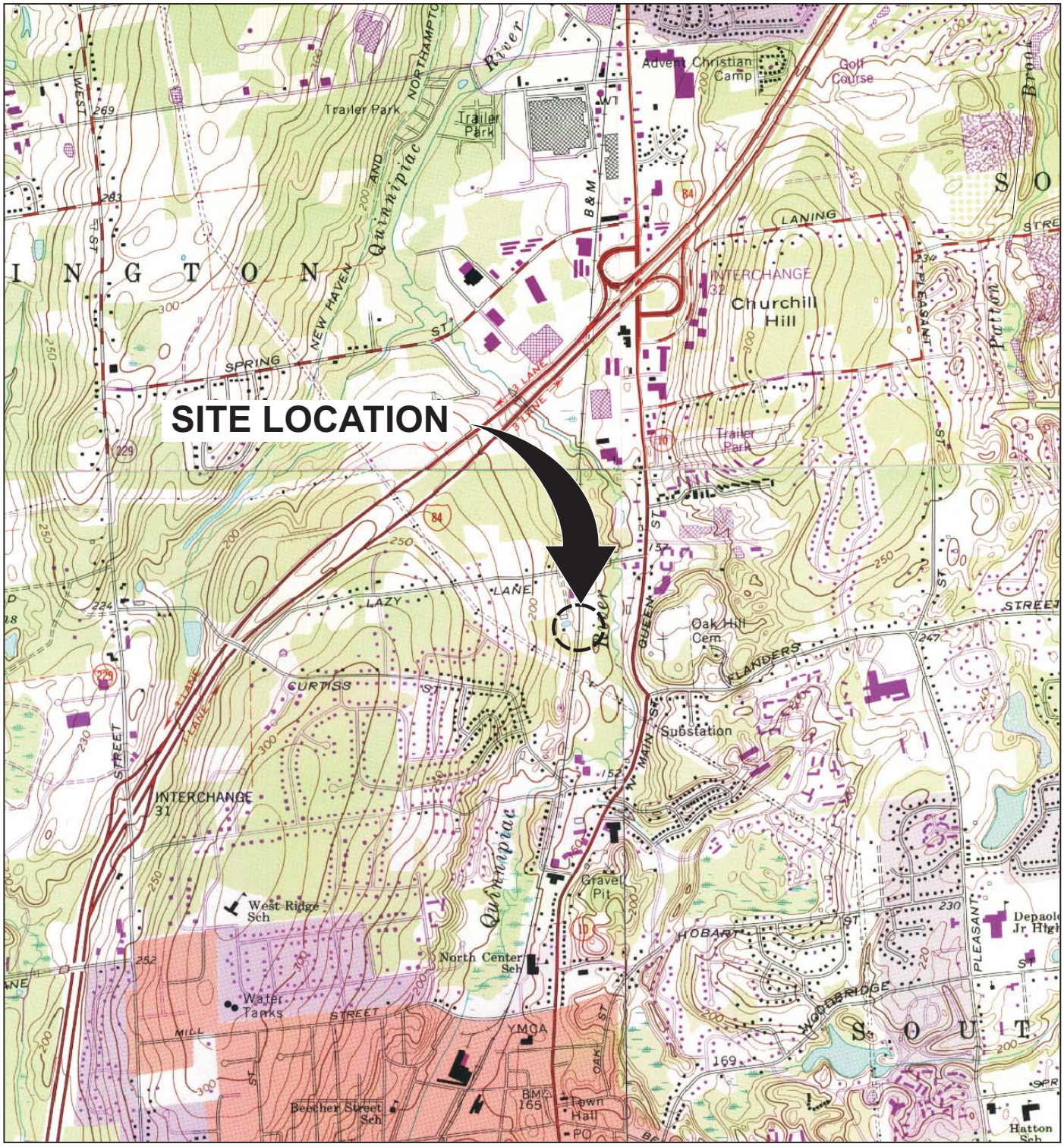
USEPA. 2005. Record of Decision Summary, Solvents Recovery Service of New England, Inc. (SRSNE) Superfund Site, Southington, Connecticut, USEPA New England, September 2005.

ARCADIS

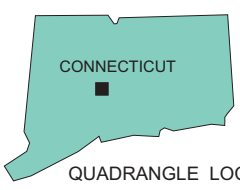
**Figures**




**REFERENCE:** SOUTHINGTON, CONN. USGS QUAD. 1968 PR 1992, MERIDEN, CONN. USGS QUAD. 1966 PR 1984, NEW BRITAIN, CONN. USGS QUAD. 1966 PR 1984, & BRISTOL, CONN. USGS QUAD 1967 PR 1984

2000' 0 2000'

APPROX. SCALE: 1" = 2000'




QUADRANGLE LOCATION

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SRSNE SUPERFUND SITE
SOUTHINGTON, CONNECTICUT
**REMEDIAL ACTION WORK PLAN**

## SITE LOCATION MAP

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FIGURE
**1**

03/04/2010 SYRACUSE, NY-ENV/CAD DJH, LJP K.SARTORI
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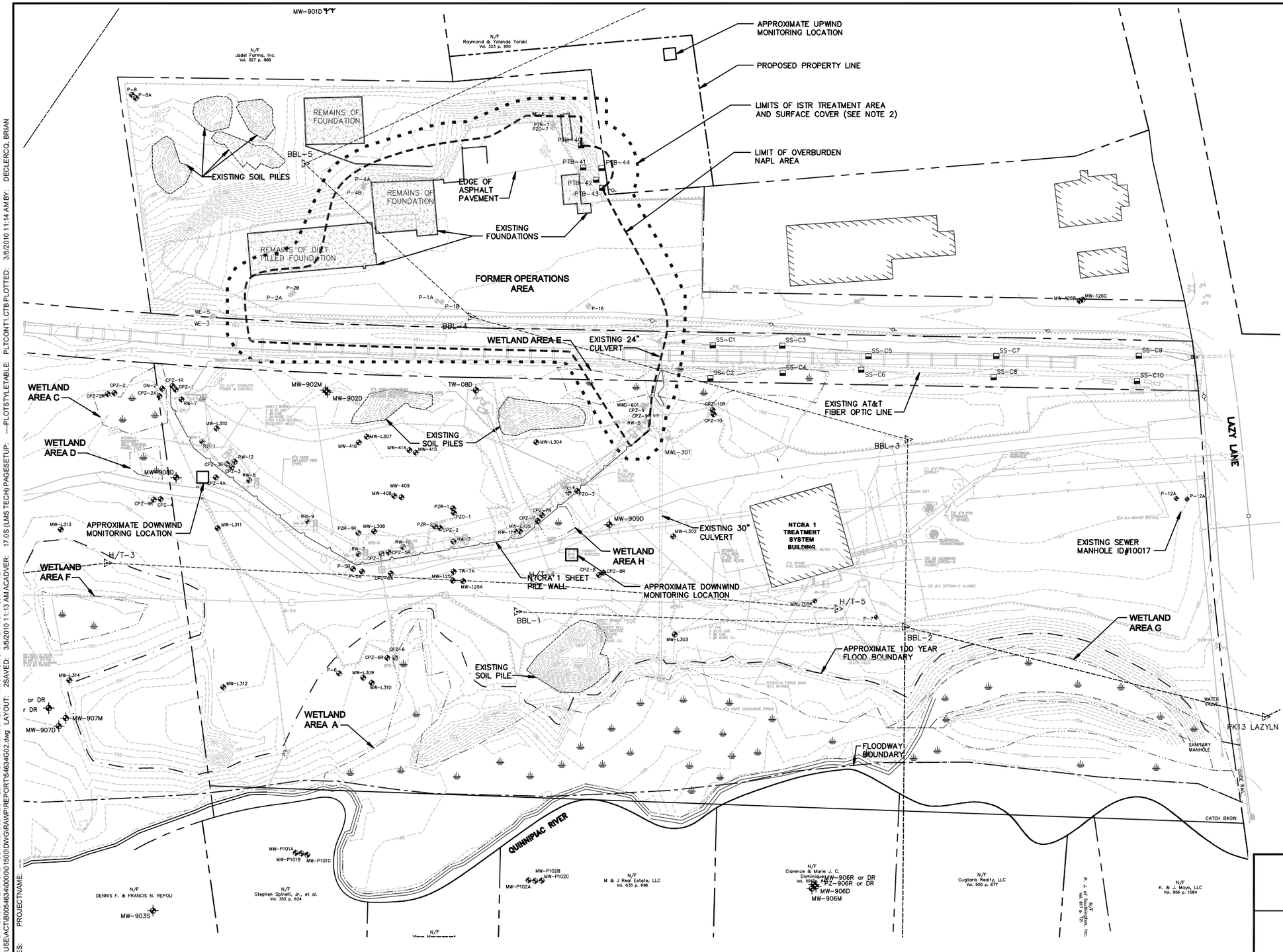


BENCHMARK:
P. K. NAIL IN CL&P
#9094
ELEV.=164.03

NOTES:

1. SEE DRAWING NUMBER G-1 FOR BASEMAP INFORMATION
2. LIMITS OF THERMAL REMEDIATION AREA SHOWN HEREON REFLECT THE LIMITS OF THE PROPOSED THERMAL WELLFIELD AND ASSOCIATED SURFACE COVER TO BE INSTALLED IN A FUTURE PHASE. THE LIMITS ARE BASED ON THE TREATMENT LIMITS PRESENTED IN THE USEPA RECORD OF DECISION (ROD) DATED SEPTEMBER 2005 AND ADDITIONAL DELINEATION ACTIVITIES.
3. LOCATION OF EXISTING SITE FEATURES AND PROPERTY BOUNDARIES ARE APPROXIMATE. ADDITIONAL SITE FEATURES (NOT SHOWN) MAY EXIST. THE LOCATIONS OF WHICH ARE NOT KNOWN AT THIS TIME. ALL RELEVANT SITE FEATURES/CONDITIONS SHALL BE FIELD VERIFIED/IDENTIFIED/LOCATED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.

50' 0 50' 100'
1"=50'

SRSNE SUPERFUND SITE
SOUTHINGTON, CONNECTICUT
**REMEDIAL ACTION WORK PLAN**

# EXISTING SITE PLAN

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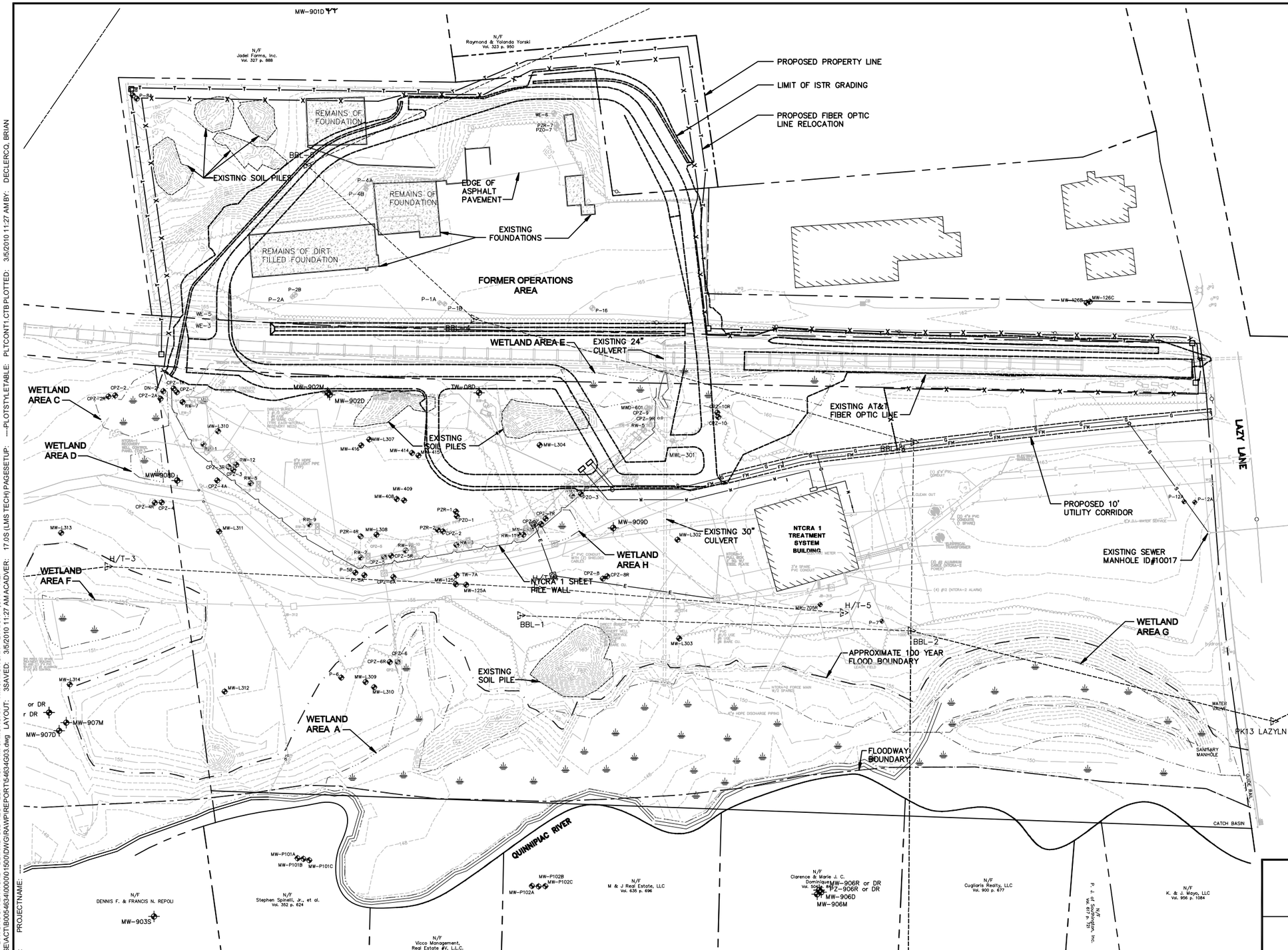
FIGURE
**2**




BENCHMARK:
P. K. NAIL IN CL&P
#9094
ELEV.=164.03

NOTES:

1. SEE DRAWING NUMBER G-1 FOR BASEMAP INFORMATION
2. LIMITS OF THERMAL REMEDIATION AREA SHOWN HEREON REFLECT THE LIMITS OF THE PROPOSED THERMAL WELLFIELD AND ASSOCIATED SURFACE COVER TO BE INSTALLED IN A FUTURE PHASE. THE LIMITS ARE BASED ON THE TREATMENT LIMITS PRESENTED IN THE USEPA RECORD OF DECISION (ROD) DATED SEPTEMBER 2005 AND ADDITIONAL DELINEATION ACTIVITIES.
3. LOCATION OF EXISTING SITE FEATURES AND PROPERTY BOUNDARIES ARE APPROXIMATE. ADDITIONAL SITE FEATURES (NOT SHOWN) MAY EXIST. THE LOCATIONS OF WHICH ARE NOT KNOWN AT THIS TIME. ALL RELEVANT SITE FEATURES/CONDITIONS SHALL BE FIELD VERIFIED/IDENTIFIED/LOCATED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.

50' 0 50' 100'
1"=50'

SRSNE SUPERFUND SITE
SOUTHINGTON, CONNECTICUT
**REMEDIAL ACTION WORK PLAN**

# SITE UTILITY PLAN

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FIGURE
3

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# Appendices

ARCADIS

# Appendix A

Calculations of Air Monitoring Action Levels

## Appendix A. Calculation of Air Monitoring Action Levels

Remedial Action Work Plan for Pre-ISTR Preparation
Solvents Recovery Service of New England, Inc. (SRSNE) Superfund Site
Southington, Connecticut

### VOC ACTION LEVEL CALCULATIONS

Using a spreadsheet provided by the PID manufacturer, an ambient air action level was calculated by using a chemical specific correction factor for the maximum reported VOCs (acetone, methylene chloride and toluene) and maximum soil concentrations those SVOCs (naphthalene and phenol) that respond to the PID.[1] The action level for the anticipated airborne mixture was calculated from the sum of the mole fractions of each component divided by their respective correction factors. The correction factor for the mixture was used to set the ambient air alarm limit for the mixture.

The State of Connecticut Hazard Limiting Values (HLVs) located in Section 22a-174-29 "Hazardous Air Pollutants" regulation for each of these VOCs/SVOCs were used to calculate the perimeter PID ambient air action level using a PID equipped with an 11.7 eV lamp calibrated to isobutylene.

### PARTICULATE ACTION LEVEL CALCULATIONS

#### Construction Activities Involving Only Imported Fill

For activities that do not involve site soils (i.e., activities that involve only imported "clean" fill), the action level is based on the 24-hour respirable dust standard (0.15 $mg/m^3$). The action level for dust generated from imported fill was calculated by multiplying the 24-hour standard by 3 (because no dust is generated during off-hours, which accounts for 2/3 of the 24-hour period to which the action level applies). The resulting action level is equal to **0.45 $mg/m^3$**. Safety factors are not needed for these imported fill action levels because the action levels are already conservative due to the fact that the 24-hour standard from which they is derived is for respirable dust, which is a fraction of total $PM_{10}$.

#### Construction Activities Involving Native Soil

For activities involving native (impacted) soil, arsenic was used to calculate particulate action levels.

---

[1] Soil data associated with samples SS-C1 to SS-C10 were used to select the maximum soil concentrations used in the spreadsheet (i.e., data for native soils that will be disturbed during PIPP-related construction activities). See Table A1 for a summary of these data and RAWP Figure 2 for sample locations.

**Appendix A. Calculation of Air Monitoring Action Levels**

Remedial Action Work Plan for Pre-ISTR Preparation
Solvents Recovery Service of New England, Inc. (SRSNE) Superfund Site
Southington, Connecticut

*8-Hour HLV Calculation:* Using the arsenic 8-hour HLV (0.05 ug/$m^3$) for the perimeter (fence-line) action level and assuming conservatively that the source material of the airborne particulate has the highest reported arsenic concentration (137 mg/kg) in soil that will be disturbed during construction activities (i.e., soil associated with samples SS-C1 to SS-C10)[1], the following formula was used to calculate an airborne dust (AD) concentration to maintain ambient arsenic in air levels below the arsenic 8-Hour HLV:

AD in mg/$m^3$ = 0.00005 mg/$m^3$ / (137/1,000,000)

AD = 0.36 mg/$m^3$ (dividing this result by safety factor of 3 = 0.12 mg/$m^3$)

Therefore, by applying a safety factor of 3 to compensate for the fact that real-time monitoring devices focus on total respirable dust, the perimeter fence-line action level for real-time monitoring using a DUSTTRAK II or similar shall be **0.12 mg/$m^3$** above upwind background levels in order to maintain ambient arsenic in air levels below the arsenic 8-hour HLV level of 0.05 ug/$m^3$.

*30-Minute HLV Calculation*: Using the arsenic 30-minute HLV (0.25 ug/$m^3$) for the perimeter (fence-line) action level and assuming conservatively that the source material of the airborne particulate has the highest reported arsenic concentration in soil (137 mg/kg), the following formula was used to calculate an airborne dust (AD) concentration to maintain ambient arsenic in air levels below the arsenic 30-minute HLV:

AD in mg/$m^3$ = 0.00025 mg/$m^3$ / (137/1,000,000)

AD = 1.82 mg/$m^3$ (dividing this result by safety factor of 3 = 0.61 mg/$m^3$)

Therefore, by applying a safety factor of 3 to compensate for the fact that real-time monitoring devices focus on respirable dust, the perimeter fence-line action level for real-time monitoring using a DUSTTRAK II or similar shall be 0.61 mg/$m^3$ above upwind background levels in order to maintain ambient arsenic in air levels below the Arsenic 30-minute HLV level of 0.25 ug/$m^3$. However, because the particulate action level for "clean" soil (discussed above) is lower, at **0.45 mg/$m^3$**, this action level will be used.

**DRAFT**

Solvents Recovery Service of New England, Inc. (SRSNE) Superfund Site
Southington, Connecticut

| | | | Sample Location | SS-C1 | SS-C1 | SS-C2 | SS-C2 | SS-C3 |
|---|---|---|---|---|---|---|---|---|
| | | | Sample Date | 7/8/2009 | 7/8/2009 | 7/7/2009 | 7/7/2009 | 7/8/2009 |
| | | | Field Sample ID | R-SS-C1-SS-01(0-2') | R-SS-C1-SB-02(2-4') | R-SS-C2-SS-01 (0-2') | R-SS-C2-SB-02 (2-4') | R-SS-C3-SS-01(0-2') |
| | | | Sample Depth Range | (0 - 2') | (2 - 4') | (0 - 2') | (2 - 4') | (0 - 2') |
| **Analyte** | **CAS No.** | **Unit** | | | | | | |
| **VOCs (8260B)** | | | | | | | | |
| Acetone | 67-64-1 | ug/Kg | | ND | ND | **6.4J TB** | **16J TB** | ND [ND] |
| Methylene Chloride | 75-09-2 | ug/Kg | | ND | ND | ND | ND | ND [ND] |
| Toluene | 108-88-3 | ug/Kg | | **0.39J** | ND | **0.83J** | **0.77J** | ND [ND] |
| **SVOCs (8270C)** | | | | | | | | |
| 1,1'-Biphenyl | 92-52-4 | ug/Kg | | **30J** | ND | **66J** | **43J** | ND [ND] |
| 2,4-Dimethylphenol | 105-67-9 | ug/Kg | | ND | ND | ND | ND | ND [ND] |
| 2-Methylnaphthalene | 91-57-6 | ug/Kg | | **140J** | **46J** | **170J** | **100J** | **26J [24J]** |
| 2-Methylphenol | 95-48-7 | ug/Kg | | ND | ND | ND | ND | ND [ND] |
| 3,3'-Dichlorobenzidine | 91-94-1 | ug/Kg | | **R** | **R** | ND | ND | **R [R]** |
| 4-Methylphenol | 106-44-5 | ug/Kg | | ND | ND | ND | ND | ND [ND] |
| Acenaphthene | 83-32-9 | ug/Kg | | ND | ND | **78J** | **63J** | ND [ND] |
| Acenaphthylene | 208-96-8 | ug/Kg | | **74J** | **21J** | **1900** | **1500** | **100J [130J]** |
| Anthracene | 120-12-7 | ug/Kg | | **68J** | **17J** | **2200** | **2700** | **77J [100J]** |
| Benzaldehyde | 100-52-7 | ug/Kg | | **190JFB** | **120JFB** | **130J** | **88J** | **110JFB [97JFB]** |
| Benzo[a]anthracene | 56-55-3 | ug/Kg | | **180J** | **56J** | **3200** | **2700** | **180J [210J]** |
| Benzo[a]pyrene | 50-32-8 | ug/Kg | | **180J** | **52J** | **2800** | **2300** | **210J [260J]** |
| Benzo[b]fluoranthene | 205-99-2 | ug/Kg | | **240J** | **82J** | **5100** | **4500** | **240J [300J]** |
| Benzo[g,h,i]perylene | 191-24-2 | ug/Kg | | **430** | **320J** | **2800** | **2000** | **410J [420]** |
| Benzo[k]fluoranthene | 207-08-9 | ug/Kg | | **78J** | ND | **2100** | **1700** | **83J [95J]** |
| Benzoic acid | 65-85-0 | ug/Kg | | **760J** | **800J** | **670J** | **560J** | **620J [610J]** |
| Bis(2-ethylhexyl) phthalate | 117-81-7 | ug/Kg | | **270J** | **61J** | **120J** | **86J** | **160J [130J]** |
| Butyl benzyl phthalate | 85-68-7 | ug/Kg | | **130J** | **33J** | **41J** | **27J** | **93J [84J]** |
| Carbazole | 86-74-8 | ug/Kg | | **26J** | ND | **530** | **460** | ND [28J] |
| Chrysene | 218-01-9 | ug/Kg | | **330J** | **130J** | **3800** | **3300** | **260J [290J]** |
| Dibenz(a,h)anthracene | 53-70-3 | ug/Kg | | **320J** | **280J** | **1200** | **870** | **310J [320J]** |
| Dibenzofuran | 132-64-9 | ug/Kg | | **38J** | ND | **150J** | **100J** | ND [ND] |
| Fluoranthene | 206-44-0 | ug/Kg | | **270J** | **66J** | **4600** | **3500** | **290J [330J]** |
| Fluorene | 86-73-7 | ug/Kg | | ND | ND | **170J** | **150J** | ND [ND] |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | ug/Kg | | **410JFB** | **300JFB** | **3500** | **2600** | **410JFB [420FB]** |
| Naphthalene | 91-20-3 | ug/Kg | | **94J** | **31J** | **190J** | **120J** | ND [ND] |
| Phenanthrene | 85-01-8 | ug/Kg | | **260J** | **120J** | **980** | **690** | **160J [160J]** |
| Phenol | 108-95-2 | ug/Kg | | ND | **52J** | ND | ND | ND [ND] |
| Pyrene | 129-00-0 | ug/Kg | | **300J** | **82J** | **4600** | **3400** | **340J [360J]** |
| **Metals (6010B & 7471A)** | | | | | | | | |
| Aluminum | 7429-90-5 | mg/Kg | | **5760** | **10400** | **8830** | **4850** | **9310 [8300]** |
| Antimony | 7440-36-0 | mg/Kg | | **3.8J** | ND | ND | ND | ND [ND] |
| Arsenic | 7440-38-2 | mg/Kg | | **25.5** | **7.8** | **15.9J** | **11.2J** | ND [ND] |
| Barium | 7440-39-3 | mg/Kg | | **876** | **699** | **202FB** | **141FB** | **712 [643]** |
| Beryllium | 7440-41-7 | mg/Kg | | **0.46J** | **0.66J** | **0.51J** | **0.37J** | **0.40J [0.34J]** |
| Cadmium | 7440-43-9 | mg/Kg | | **1.1J** | ND | ND | ND | **1.1J [0.83J]** |
| Calcium | 7440-70-2 | mg/Kg | | **3420** | **2470** | **1450FB** | **682FB** | **2180 [2090]** |
| Chromium | 7440-47-3 | mg/Kg | | **10.3J** | **12.8J** | **13J** | **9.5J** | **11.2J [9.7J]** |
| Cobalt | 7440-48-4 | mg/Kg | | **3.8J** | **5.3J** | **3.5J** | **2.6J** | **3.8J [3.2J]** |
| Copper | 7440-50-8 | mg/Kg | | **43.4** | **40.9** | **14.7FB** | **7.7FB** | **23.6 [22.4]** |
| Iron | 7439-89-6 | mg/Kg | | **11300J** | **12600J** | **11600J** | **9350J** | **11500J [9990J]** |
| Lead | 7439-92-1 | mg/Kg | | **109FB** | **63.4FB** | **39** | **19.9** | **61.5FB [52.7FB]** |
| Magnesium | 7439-95-4 | mg/Kg | | **1570J** | **2660J** | **1620J** | **983J** | **1960J [1660J]** |
| Manganese | 7439-96-5 | mg/Kg | | **341** | **332** | **192FB** | **291FB** | **247 [241]** |
| Mercury | 7439-97-6 | mg/Kg | | 0.11 | 0.21 | 0.15 | 0.079 | **0.11 [0.11]** |
| Nickel | 7440-02-0 | mg/Kg | | **9.2J** | **11.4J** | **7.8J** | **5.4J** | **8.7J [6.7J]** |
| Potassium | 9/7/7440 | mg/Kg | | **542J** | **810J** | **430J** | **327J** | **553J [484J]** |
| Sodium | 7440-23-5 | mg/Kg | | **109JFB** | **85.1J** | **36.7J** | **17.2J** | **72.3JFB [60.9JFB]** |
| Thallium | 7440-28-0 | mg/Kg | | ND | ND | ND | ND | ND [ND] |
| Vanadium | 7440-62-2 | mg/Kg | | **16.5J** | **22.3** | **19.5J** | **18.6J** | **20.7J [18.6J]** |
| Zinc | 7440-66-6 | mg/Kg | | **56.3JFB** | **61.6JFB** | **38.3J** | **22.5J** | **45JFB [38.7JFB]** |
| **PCBs (8082)** | | | | | | | | |
| PCBs, Total | | ug/Kg | | **42J** | **1710** | **990** | **1500** | **93J [71J]** |

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Solvents Recovery Service of New England, Inc. (SRSNE) Superfund Site
Southington, Connecticut

| | Sample Location | | SS-C3 | SS-C4 | SS-C4 | SS-C5 | SS-C5 |
|---|---|---|---|---|---|---|---|
| | Sample Date | | 7/8/2009 | 7/7/2009 | 7/7/2009 | 7/8/2009 | 7/8/2009 |
| | Field Sample ID | | R-SS-C3-SB-02(2-4') | R-SS-C4-SS-01 (0-2') | R-SS-C4-SB-02 (2-4') | R-SS-C5-SS-01(0-2') | R-SS-C5-SB-02(2-4') |
| | Sample Depth Range | | (2 - 4') | (0 - 2') | (2 - 4') | (0 - 2') | (2 - 4') |
| **Analyte** | **CAS No.** | **Unit** | | | | | |
| **VOCs (8260B)** | | | | | | | |
| Acetone | 67-64-1 | ug/Kg | ND | ND | **5.4J TB** | ND | ND |
| Methylene Chloride | 75-09-2 | ug/Kg | **7.4J** | ND | ND | ND | ND |
| Toluene | 108-88-3 | ug/Kg | ND | ND | **0.54J** | ND | ND |
| **SVOCs (8270C)** | | | | | | | |
| 1,1'-Biphenyl | 92-52-4 | ug/Kg | ND | ND | ND | **230J** | ND |
| 2,4-Dimethylphenol | 105-67-9 | ug/Kg | ND | ND | ND | **120J** | ND |
| 2-Methylnaphthalene | 91-57-6 | ug/Kg | **16J** | **64J** | **15J** | **650** | **50J** |
| 2-Methylphenol | 95-48-7 | ug/Kg | ND | ND | ND | **59J** | ND |
| 3,3'-Dichlorobenzidine | 91-94-1 | ug/Kg | **R** | ND | ND | **R** | **R** |
| 4-Methylphenol | 106-44-5 | ug/Kg | ND | ND | ND | **300J** | ND |
| Acenaphthene | 83-32-9 | ug/Kg | ND | ND | ND | **990** | **63J** |
| Acenaphthylene | 208-96-8 | ug/Kg | **45J** | **70J** | **24J** | **22000** | **1100** |
| Anthracene | 120-12-7 | ug/Kg | **30J** | **49J** | **18J** | **21000** | **1100** |
| Benzaldehyde | 100-52-7 | ug/Kg | ND | ND | ND | **140JFB** | ND |
| Benzo[a]anthracene | 56-55-3 | ug/Kg | **69J** | **130J** | **53J** | **41000** | **2700** |
| Benzo[a]pyrene | 50-32-8 | ug/Kg | **80J** | **130J** | **58J** | **34000** | **2300** |
| Benzo[b]fluoranthene | 205-99-2 | ug/Kg | **97J** | **210J** | **87J** | **46000** | **3000** |
| Benzo[g,h,i]perylene | 191-24-2 | ug/Kg | **320J** | **320J** | **270J** | **15000** | **1200** |
| Benzo[k]fluoranthene | 207-08-9 | ug/Kg | ND | **64J** | **35J** | **16000** | **1100** |
| Benzoic acid | 65-85-0 | ug/Kg | **710J** | **490J** | **R** | **1200J** | **480J** |
| Bis(2-ethylhexyl) phthalate | 117-81-7 | ug/Kg | **59J** | ND | ND | ND | ND |
| Butyl benzyl phthalate | 85-68-7 | ug/Kg | **59J** | ND | ND | **74J** | ND |
| Carbazole | 86-74-8 | ug/Kg | ND | **21J** | ND | **3700** | **190J** |
| Chrysene | 218-01-9 | ug/Kg | **120J** | **200J** | **79J** | **40000** | **2700** |
| Dibenz(a,h)anthracene | 53-70-3 | ug/Kg | **270J** | **250J** | **240J** | **8600** | **550** |
| Dibenzofuran | 132-64-9 | ug/Kg | ND | ND | ND | **1100** | **63J** |
| Fluoranthene | 206-44-0 | ug/Kg | **100J** | **250J** | **110J** | **91000** | **4800** |
| Fluorene | 86-73-7 | ug/Kg | ND | ND | ND | **1800** | **83J** |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | ug/Kg | **310JFB** | **320J** | **270J** | **20000** | **1500FB** |
| Naphthalene | 91-20-3 | ug/Kg | ND | **50J** | ND | **1100** | **94J** |
| Phenanthrene | 85-01-8 | ug/Kg | **74J** | **150J** | **62J** | **18000** | **950** |
| Phenol | 108-95-2 | ug/Kg | ND | ND | ND | ND | ND |
| Pyrene | 129-00-0 | ug/Kg | **120J** | **270J** | **110J** | **59000** | **4200** |
| **Metals (6010B & 7471A)** | | | | | | | |
| Aluminum | 7429-90-5 | mg/Kg | **8590** | **7400** | **6790** | **5040** | **7760** |
| Antimony | 7440-36-0 | mg/Kg | ND | ND | ND | **1.6J** | ND |
| Arsenic | 7440-38-2 | mg/Kg | ND | **7.8J** | **7.7J** | **137** | **4.2J** |
| Barium | 7440-39-3 | mg/Kg | **906** | **159FB** | **140FB** | **126** | **36.7** |
| Beryllium | 7440-41-7 | mg/Kg | **0.33J** | **0.34J** | **0.34J** | **0.29J** | **0.33J** |
| Cadmium | 7440-43-9 | mg/Kg | **0.47J** | ND | ND | **0.63J** | **0.86J** |
| Calcium | 7440-70-2 | mg/Kg | **1370** | **875FB** | **949FB** | **1610** | **499** |
| Chromium | 7440-47-3 | mg/Kg | **7.5J** | **8.7J** | **7.6J** | **8.6J** | **7.4J** |
| Cobalt | 7440-48-4 | mg/Kg | **2.4** | **2.6J** | **2.6J** | **3.5J** | **2.2J** |
| Copper | 7440-50-8 | mg/Kg | **19** | **10.7FB** | **12.6FB** | **53.4** | **4.7** |
| Iron | 7439-89-6 | mg/Kg | **8710J** | **7470J** | **7610J** | **14800J** | **8630J** |
| Lead | 7439-92-1 | mg/Kg | **28.1FB** | **23.3** | **15** | **112FB** | **8.8FB** |
| Magnesium | 7439-95-4 | mg/Kg | **1220J** | **1250J** | **1110J** | **934J** | **1000J** |
| Manganese | 7439-96-5 | mg/Kg | **275** | **86.3FB** | **102FB** | **171** | **78.6** |
| Mercury | 7439-97-6 | mg/Kg | 0.084 | **0.042J** | **0.014J** | 0.12 | **0.0091J** |
| Nickel | 7440-02-0 | mg/Kg | **6.2J** | **5.7J** | **5.8J** | **5.8J** | **4.7J** |
| Potassium | 9/7/7440 | mg/Kg | **366J** | **271J** | **310J** | **280J** | **267J** |
| Sodium | 7440-23-5 | mg/Kg | **55.7J** | **23.4J** | **28J** | **53.9JFB** | **79.3JFB** |
| Thallium | 7440-28-0 | mg/Kg | ND | ND | ND | ND | **1.1J** |
| Vanadium | 7440-62-2 | mg/Kg | **14.3J** | **11.7J** | **11.3J** | **16.6J** | **12.9J** |
| Zinc | 7440-66-6 | mg/Kg | **30.1JFB** | **24.3J** | **23.5J** | **24.1JFB** | **19.4JFB** |
| **PCBs (8082)** | | | | | | | |
| PCBs, Total | | ug/Kg | **18.4J** | **69J** | **29.4J** | **58J** | ND |

**DRAFT**

Solvents Recovery Service of New England, Inc. (SRSNE) Superfund Site
Southington, Connecticut

| | | | Sample Location | SS-C6 | SS-C6 | SS-C7 | SS-C7 | SS-C8 |
|---|---|---|---|---|---|---|---|---|
| | | | Sample Date | 7/7/2009 | 7/7/2009 | 7/8/2009 | 7/8/2009 | 7/8/2009 |
| | | | Field Sample ID | R-SS-C6-SS-01 (0-2') | R-SS-C6-SB-02 (2-4') | R-SS-C7-SS-01(0-2') | R-SS-C7-SB-02(2-4') | R-SS-C8-SS-01(0-2') |
| | | | Sample Depth Range | (0 - 2') | (2 - 4') | (0 - 2') | (2 - 4') | (0 - 2') |
| **Analyte** | **CAS No.** | **Unit** | | | | | | |
| **VOCs (8260B)** | | | | | | | | |
| Acetone | 67-64-1 | ug/Kg | | ND | ND | ND | ND | ND |
| Methylene Chloride | 75-09-2 | ug/Kg | | ND | ND | ND | ND | ND |
| Toluene | 108-88-3 | ug/Kg | | ND | **0.88J** | ND | **0.12J** | ND |
| **SVOCs (8270C)** | | | | | | | | |
| 1,1'-Biphenyl | 92-52-4 | ug/Kg | | ND | ND | ND | ND | ND |
| 2,4-Dimethylphenol | 105-67-9 | ug/Kg | | ND | ND | ND | ND | ND |
| 2-Methylnaphthalene | 91-57-6 | ug/Kg | | **14J** | ND | ND | ND | **20J** |
| 2-Methylphenol | 95-48-7 | ug/Kg | | ND | ND | ND | ND | ND |
| 3,3'-Dichlorobenzidine | 91-94-1 | ug/Kg | | ND | ND | **R** | **R** | ND |
| 4-Methylphenol | 106-44-5 | ug/Kg | | ND | ND | ND | ND | ND |
| Acenaphthene | 83-32-9 | ug/Kg | | ND | ND | ND | **63J** | ND |
| Acenaphthylene | 208-96-8 | ug/Kg | | **47J** | ND | **220J** | **320J** | **74J** |
| Anthracene | 120-12-7 | ug/Kg | | **36J** | ND | **250J** | **420** | **50J** |
| Benzaldehyde | 100-52-7 | ug/Kg | | ND | ND | ND | ND | **2000JFB** |
| Benzo[a]anthracene | 56-55-3 | ug/Kg | | **89J** | **24J** | **320** | **560** | **110J** |
| Benzo[a]pyrene | 50-32-8 | ug/Kg | | **96J** | **24J** | **360** | **650** | **130J** |
| Benzo[b]fluoranthene | 205-99-2 | ug/Kg | | **160J** | **41J** | **480** | **890** | **200J** |
| Benzo[g,h,i]perylene | 191-24-2 | ug/Kg | | **300J** | **250J** | **390** | **530** | **250J** |
| Benzo[k]fluoranthene | 207-08-9 | ug/Kg | | **53J** | ND | **180J** | **330** | **70J** |
| Benzoic acid | 65-85-0 | ug/Kg | | **470J** | **R** | **430J** | ND | **10000** |
| Bis(2-ethylhexyl) phthalate | 117-81-7 | ug/Kg | | **38J** | ND | **31J** | ND | **43J** |
| Butyl benzyl phthalate | 85-68-7 | ug/Kg | | ND | ND | ND | ND | **44J** |
| Carbazole | 86-74-8 | ug/Kg | | ND | ND | **62J** | **90J** | ND |
| Chrysene | 218-01-9 | ug/Kg | | **120J** | **37J** | **360** | **630** | **170J** |
| Dibenz(a,h)anthracene | 53-70-3 | ug/Kg | | **240J** | ND | **240J** | **320J** | **170J** |
| Dibenzofuran | 132-64-9 | ug/Kg | | ND | ND | ND | ND | ND |
| Fluoranthene | 206-44-0 | ug/Kg | | **160J** | **36J** | **460** | **360** | **R** |
| Fluorene | 86-73-7 | ug/Kg | | ND | ND | **26J** | **21J** | ND |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | ug/Kg | | **300J** | **240J** | **440FB** | **630FB** | **250JFB** |
| Naphthalene | 91-20-3 | ug/Kg | | ND | ND | ND | ND | ND |
| Phenanthrene | 85-01-8 | ug/Kg | | **50J** | **20J** | **190J** | **62J** | **91J** |
| Phenol | 108-95-2 | ug/Kg | | ND | ND | ND | ND | **140J** |
| Pyrene | 129-00-0 | ug/Kg | | **160J** | **39J** | **440** | **390** | **190J** |
| **Metals (6010B & 7471A)** | | | | | | | | |
| Aluminum | 7429-90-5 | mg/Kg | | **7890** | **6910** | **8210** | **5130** | **7900** |
| Antimony | 7440-36-0 | mg/Kg | | ND | ND | ND | ND | ND |
| Arsenic | 7440-38-2 | mg/Kg | | **5.8J** | **4J** | **7.6** | **14.8** | **8.5** |
| Barium | 7440-39-3 | mg/Kg | | **39.6FB** | **37.4FB** | **44.2** | **31.2** | **87.3** |
| Beryllium | 7440-41-7 | mg/Kg | | **0.35J** | **0.31J** | **0.36J** | **0.29J** | **0.36J** |
| Cadmium | 7440-43-9 | mg/Kg | | ND | ND | **0.54J** | **0.64J** | ND |
| Calcium | 7440-70-2 | mg/Kg | | **296FB** | **233FB** | **498** | **465** | **399** |
| Chromium | 7440-47-3 | mg/Kg | | **7.2J** | **6.5J** | **7.6J** | **6.5J** | **7.5J** |
| Cobalt | 7440-48-4 | mg/Kg | | **2.5J** | **2.3J** | **2.9J** | **2.8J** | **2.5J** |
| Copper | 7440-50-8 | mg/Kg | | **8.3FB** | **7.7FB** | **5.9** | **6.8** | **12.7** |
| Iron | 7439-89-6 | mg/Kg | | **8460J** | **7820J** | **9260J** | **8030J** | **9070J** |
| Lead | 7439-92-1 | mg/Kg | | **12.3** | **16.1** | **9FB** | **10.4FB** | **25.5FB** |
| Magnesium | 7439-95-4 | mg/Kg | | **1100J** | **1040J** | **1300J** | **1070J** | **1090J** |
| Manganese | 7439-96-5 | mg/Kg | | **66FB** | **65.4FB** | **125** | **141** | **131** |
| Mercury | 7439-97-6 | mg/Kg | | **0.025J** | **0.029J** | **0.017J** | **0.0092J** | **0.029J** |
| Nickel | 7440-02-0 | mg/Kg | | **5.1J** | **4.9J** | **5.7J** | **5J** | **5.4J** |
| Potassium | 9/7/7440 | mg/Kg | | **287J** | **299J** | **325J** | **344J** | **425J** |
| Sodium | 7440-23-5 | mg/Kg | | **32.5J** | ND | **70.7JFB** | **72.5JFB** | ND |
| Thallium | 7440-28-0 | mg/Kg | | ND | ND | ND | **1.7J** | ND |
| Vanadium | 7440-62-2 | mg/Kg | | **13.3J** | **12.5J** | **13.7J** | **11.5J** | **14.2J** |
| Zinc | 7440-66-6 | mg/Kg | | **21.7J** | **20.2J** | **21.5JFB** | **17.5JFB** | **26.7JFB** |
| **PCBs (8082)** | | | | | | | | |
| PCBs, Total | | ug/Kg | | **22.6J** | **8.1J** | ND | ND | ND |

**DRAFT**

Solvents Recovery Service of New England, Inc. (SRSNE) Superfund Site
Southington, Connecticut

| Analyte | CAS No. | Unit | Sample Location / Sample Date / Field Sample ID / Sample Depth Range: SS-C8 7/8/2009 R-SS-C8-SB-02(2-4') (2 - 4') | SS-C9 7/8/2009 R-SS-C9-SS-01-(0-2') (0 - 2') | SS-C9 7/8/2009 R-SS-C9-SB-02(2-4') (2 - 4') | SS-C10 7/8/2009 R-SS-C10-SS-01(0-2') (0 - 2') | SS-C10 7/8/2009 R-SS-C10-SB-02(2-4') (2 - 4') | Maximum Detected Result |
|---|---|---|---|---|---|---|---|---|
| **VOCs (8260B)** | | | | | | | | |
| Acetone | 67-64-1 | ug/Kg | **12J TB** | ND | ND | ND | ND | 16 |
| Methylene Chloride | 75-09-2 | ug/Kg | ND | ND | ND | ND | ND | 7.4 |
| Toluene | 108-88-3 | ug/Kg | **0.35J** | ND | ND | **0.2J** | **0.49J** | 0.88 |
| **SVOCs (8270C)** | | | | | | | | |
| 1,1'-Biphenyl | 92-52-4 | ug/Kg | ND | ND | **24J** | ND | ND | 230 |
| 2,4-Dimethylphenol | 105-67-9 | ug/Kg | ND | ND | ND | ND | ND | 120 |
| 2-Methylnaphthalene | 91-57-6 | ug/Kg | **14J** | **35J** | **87J** | **25J** | **9.3J** | 650 |
| 2-Methylphenol | 95-48-7 | ug/Kg | ND | ND | ND | ND | ND | 59 |
| 3,3'-Dichlorobenzidine | 91-94-1 | ug/Kg | **R** | **R** | **R** | **R** | **R** | ND |
| 4-Methylphenol | 106-44-5 | ug/Kg | ND | ND | ND | ND | ND | 300 |
| Acenaphthene | 83-32-9 | ug/Kg | ND | **47J** | **90J** | ND | ND | 990 |
| Acenaphthylene | 208-96-8 | ug/Kg | ND | **420** | **700** | **190J** | ND | 22000 |
| Anthracene | 120-12-7 | ug/Kg | ND | **350J** | **600** | **180J** | ND | 21000 |
| Benzaldehyde | 100-52-7 | ug/Kg | ND | ND | ND | ND | ND | 2000 |
| Benzo[a]anthracene | 56-55-3 | ug/Kg | **22J** | **800** | **1400** | **530** | **28J** | 41000 |
| Benzo[a]pyrene | 50-32-8 | ug/Kg | **18J** | **940** | **1500** | **540** | **29J** | 34000 |
| Benzo[b]fluoranthene | 205-99-2 | ug/Kg | ND | **1100** | **1500** | **580** | **38J** | 46000 |
| Benzo[g,h,i]perylene | 191-24-2 | ug/Kg | **250J** | **610** | **900** | **540** | **240J** | 15000 |
| Benzo[k]fluoranthene | 207-08-9 | ug/Kg | ND | **380** | **530** | **220J** | ND | 16000 |
| Benzoic acid | 65-85-0 | ug/Kg | **560J** | **580J** | **500J** | **480J** | **450J** | 10000 |
| Bis(2-ethylhexyl) phthalate | 117-81-7 | ug/Kg | ND | **67J** | **86J** | **57J** | ND | 270 |
| Butyl benzyl phthalate | 85-68-7 | ug/Kg | ND | ND | **25J** | **26J** | ND | 130 |
| Carbazole | 86-74-8 | ug/Kg | ND | **90J** | **150J** | **30J** | ND | 3700 |
| Chrysene | 218-01-9 | ug/Kg | **34J** | **990** | **1600** | **620** | **44J** | 40000 |
| Dibenz(a,h)anthracene | 53-70-3 | ug/Kg | ND | **340J** | **410** | **300J** | ND | 8600 |
| Dibenzofuran | 132-64-9 | ug/Kg | ND | **32J** | **62J** | ND | ND | 1100 |
| Fluoranthene | 206-44-0 | ug/Kg | **28J** | **1400** | **2500** | **830** | **43J** | 91000 |
| Fluorene | 86-73-7 | ug/Kg | ND | **86J** | **190J** | **31J** | ND | 1800 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | ug/Kg | **240JFB** | **660FB** | **960FB** | **560FB** | **230JFB** | 20000 |
| Naphthalene | 91-20-3 | ug/Kg | ND | **58J** | **170J** | **26J** | ND | 1100 |
| Phenanthrene | 85-01-8 | ug/Kg | **28J** | **560** | **1400** | **550** | **33J** | 18000 |
| Phenol | 108-95-2 | ug/Kg | ND | ND | ND | ND | ND | 140 |
| Pyrene | 129-00-0 | ug/Kg | **28J** | **1200** | **2400** | **1100** | **50J** | 59000 |
| **Metals (6010B & 7471A)** | | | | | | | | |
| Aluminum | 7429-90-5 | mg/Kg | **7610** | **5470** | **4930** | **7570** | **8150** | 10400 |
| Antimony | 7440-36-0 | mg/Kg | ND | ND | ND | ND | ND | 3.8 |
| Arsenic | 7440-38-2 | mg/Kg | ND | ND | **2.8J** | ND | ND | 137 |
| Barium | 7440-39-3 | mg/Kg | **40.7** | **60.7** | **58.6** | **76.8** | **56.4** | 906 |
| Beryllium | 7440-41-7 | mg/Kg | **0.32J** | **0.35J** | **0.29J** | **0.35J** | **0.36J** | 0.66 |
| Cadmium | 7440-43-9 | mg/Kg | ND | **0.62J** | **0.39J** | ND | ND | 1.1 |
| Calcium | 7440-70-2 | mg/Kg | **368** | **1680** | **1080** | **437** | **259** | 3420 |
| Chromium | 7440-47-3 | mg/Kg | **6.5J** | **9.4J** | **10.4J** | **8J** | **8.2J** | 13 |
| Cobalt | 7440-48-4 | mg/Kg | **2.3J** | **3J** | **2.7J** | **2.8J** | **2.5J** | 5.3 |
| Copper | 7440-50-8 | mg/Kg | **6.2** | **13.4** | **11.1** | **10.5** | **6.7** | 53.4 |
| Iron | 7439-89-6 | mg/Kg | **8730J** | **7930J** | **7580J** | **8070J** | **8740J** | 14800 |
| Lead | 7439-92-1 | mg/Kg | **9.4FB** | **26.3FB** | **25.3FB** | **17.9FB** | **9.1FB** | 112 |
| Magnesium | 7439-95-4 | mg/Kg | **1080J** | **2000J** | **1650J** | **1190J** | **1040J** | 2660 |
| Manganese | 7439-96-5 | mg/Kg | **84.2** | **113** | **104** | **114** | **97.1** | 341 |
| Mercury | 7439-97-6 | mg/Kg | **0.011J** | **0.014J** | **0.010J** | **0.034J** | **0.023J** | 0.21 |
| Nickel | 7440-02-0 | mg/Kg | **4.5J** | **6.2J** | **6.1J** | **5.5J** | **5.3J** | 11.4 |
| Potassium | 9/7/7440 | mg/Kg | **341J** | **553J** | **509J** | **332J** | **304J** | 810 |
| Sodium | 7440-23-5 | mg/Kg | ND | **206JFB** | **153FB** | **37.6JFB** | **16.5JFB** | 206 |
| Thallium | 7440-28-0 | mg/Kg | ND | ND | **1.3J** | ND | ND | 1.7 |
| Vanadium | 7440-62-2 | mg/Kg | **12.5J** | **20.1J** | **14.6J** | **13.2J** | **12.4J** | 22.3 |
| Zinc | 7440-66-6 | mg/Kg | **18.3JFB** | **33.9JFB** | **22.5JFB** | **26.4JFB** | **20.7JFB** | 61.6 |
| **PCBs (8082)** | | | | | | | | |
| PCBs, Total | | ug/Kg | **7.4J** | **64J** | **59J** | **112** | **13J** | 1710 |

Notes:

**Bold** = detected result
**VOCs** = volatile organic compounds
**SVOCs** = semi-volatile organic compounds
**PCBs** = polychlorinated biphenyls
**CTDEP** = Connecticut Department of Environmental Protection
**ND** = Analyte was not detected above laboratory reporting limit
**J** = Analyte result is estimated
**R** = The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.
**FB** = Analyte detected in the Field Blank
**TB** = Analyte detected in the Trip Blank

ARCADIS

**Appendix B**

Air Monitoring Log

ARCADIS
Infrastructure, environment, buildings



DRAFT

# AIR MONITORING LOG

**Project** _____ **Site Location** _____

**Project Number** _____ **Weather Conditions** _____

**Prepared by** _____ **Date** _____

| TIME | Wind Direction | Background PID (ppm) | Background PDR (ug/m3) | Work Zone PID (ppm) | Downwind Perimeter PID #1 (ppm) | Downwind Perimeter PID #2 (ppm) | Downwind Perimeter PDR #1 (ug/m3) | Downwind Perimeter PDR #2 (ug/m3) | Notes |
|---|---|---|---|---|---|---|---|---|---|
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| **COMMENTS** | | | | | | | | | |
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