ANALYSIS OF BROWNFIELDS CLEANUP ALTERNATIVES AND REMEDIAL ACTION PLAN

14 BRIDGE STREET
MONTVILLE, CONNECTICUT

HRP #MON3000.RA

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1.0 INTRODUCTION

In October 2011, HRP Associates, Inc. (HRP) was authorized by the Town of Montville to complete an Analysis of Brownfields Cleanup Alternatives (ABCA) and Remedial Action Plan (RAP) for 14 Bridge Street in Montville, Connecticut (hereafter referred to as the "Site"). HRP was designated the Remedial Oversight Consultant to supervise the implementation of soil remediation activities and prepare and maintain a complete record of remediation activities performed. A site location map is provided as Figure 1. This ABCA and RAP was prepared for submittal to the United States Environmental Protection Agency (EPA) pursuant to the EPA Revolving Loan Fund and has been prepared in conformance with the EPA guidance for cleanups with Federal grant funds (FY12 Guidelines for Brownfields Revolving Loan Fund (RLF) Grants, RFP No.: EPA-OSWER-OBLR-11-06).

The ABCA provides the following information to allow public comment on the environmental clean-up strategy selected for the site.

1. Summarize site background and the environmental conditions that warrant remediation
2. Identify the goals of the clean-up
3. Provide an analysis of clean-up alternatives on the basis of effectiveness, feasibility and cost
4. Describe the selected remedy and rationale

The RAP, also documented herein, outlines the proposed actions to be completed to address the polluted soil/fill at specific remedial areas on the Site that exhibit contaminant concentrations above the numerical criteria established by the applicable Connecticut Department of Energy and Environmental Protection (CT DEEP) Remediation Standard Regulations (RCSA §22a-133k-1 through 3 of the Regulations of Connecticut State Agencies, hereinafter referred to as the RSRs). The Site details provided in Sections 1.1, 1.2, 1.3, 2.1, and 2.2 and the proposed remediation are based upon the Phase I, II, and III environmental site assessments (ESAs) and Phase III Supplemental Site Investigation previously prepared by Paul Burgess, LLC. Implementation of this RAP will bring the Site soils into compliance with the applicable RSR criteria and render it suitable for commercial use.

Note that on July 1, 2011, the Connecticut Department of Environmental Protection (CT DEP) changed its name to CT DEEP. All references to the Department in this report, irrespective of date, utilize the current naming (CT DEEP).

1.1 Site Description and History

The Site building is currently listed at the address of 14 Bridge Street in Montville, Connecticut (Figure 1). The Tax Assessor's designation for the Site is Map 082, Lot 79 and the total parcel size is approximately 1.07 acres. The existing factory building on site was constructed in the late 1800s or early 1900s. Its original use was a warehouse for bedding products and then waste paper/finished paper products. In the late 1950s, the property was purchased by All Time Manufacturing. It was subsequently occupied by Finley Screw Machine Products, Jayfro Corp. (sporting goods manufacturing), Acme Wire Products, Displaymakers (exhibit manufacturers), and Impulse Design (exhibit manufacturers) since circa 1985.

The northern (front) and eastern sides of the building are paved (Figure 2). A railroad spur previously existed along the eastern side of the on-site building. To the rear of the building, the land is generally wooded. A dirt path extends south to an adjacent parcel. A small intermittent stream abuts the Site to the south and flows east to Oxoboxo Brook.

The mill building footprint is approximately 21,500 square feet in size and is divided into four sections (bays) with an additional single-story portion that historically served as the boiler room. The first three bays are three stories, including the basement level (at grade on the eastern side of the building). The fourth and rear section of the building is only two stories because of damage from a hurricane. The total building size is approximately 58,200 square feet. The building is wood-framed with masonry walls. The second and third levels have wood floors while the first floor (basement) has a concrete floor on grade. There are two loading docks attached to the building. The second floor of the building houses an active boiler room, supply rooms, a paint spray room, chemical storage room, and a bathroom. The third floor is used primarily for storage. An old spray paint room is located in the southwestern corner of the third floor. On-site operations performed by Impulse Design include woodcutting, gluing, laminating, and some painting. The former boiler room is located to the rear of the basement level. It is a separate attached one-story structure in very poor condition; the roof is deteriorated and it is open to the elements.

1.2 Surrounding Properties Use and History

The land use in the Site vicinity is mixed industrial, commercial, and residential (see Figures 1 and 2).

North: Residential property exists directly to the north of the Site across Bridge Street. Rand Whitney Container Board exists further to the north. Dunn's Tire Service is located to the northwest on Maple Avenue.

East: All Time Manufacturing (aluminum products manufacturer) abuts the Site to the east and also has a facility on Route 163 to the east across Oxoboxo Brook. Various commercial businesses are also located to the east of the Site, including Brandon's Towing, which was formerly Belanger's Gas Station. This business had a historical gasoline release that impacted groundwater in the site vicinity, including the subject Site, according to the CT DEEP (see Section 2.2, April 1995 CT DEEP letter). In addition, the Town owns a small building along Bridge Street east of the Site building. This building was used as a pump station (no longer in operation) for fire protection for the Site building and adjacent factory buildings.

West: A 15-foot Town-owned right-of-way abuts the Site to the west. Beyond the right-of-way are two residential dwellings. The property located along Bridge Street is privately owned and is listed as 30 Bridge Street. The property located behind 30 Bridge Street is owned by the Town of Montville and is listed as 22 Bridge Street.

South: The Montville Public Works garage, animal control complex, and recycling center are located to the south of the Site.

1.3 Site and Surrounding Resource Areas

As discussed above, the property is located in a mixed-use industrial, commercial, and residential area. Municipal water was connected to the Site on November 29, 2011. Sewer systems are not available to the Site and surrounding parcels. Groundwater beneath the Site and surrounding area is known to be utilized as a source of potable water.

A small intermittent stream abuts the Site to the south and flows approximately 200 feet east to Oxoboxo Brook. The CT DEEP designated the water quality of Oxoboxo Brook as class C/B, suitable for recreational use, fish and wildlife habitat, agricultural or industrial supply, and other legitimate uses, including navigation. The C/B classification indicates that the waters do not meet the water-quality criteria for one or more of the designated uses. The State's goal is Class B.

According to the map of Natural Diversity Data Base Areas, Montville, CT (CT DEEP, December 2010), no State and Federal Listed Species & Significant Naturally Communities (i.e., endangered or threatened species) are located within or in the immediate vicinity of the Site.

1.4 Proposed Site Use

Impulse Design will continue current operations at the Site, which include the construction of high-end trade show displays and booths. The proposed remedial alternatives presented herein (Section 3.0) have been selected to address previously identified soil contamination and bring the Site into compliance with the CT DEEP RSRs. The project is being financed by an EPA Revolving Loan Fund (RLF) grant administered through the Connecticut Department of Economic and Community Development (CT DECD). The proposed remediation will allow Impulse Design to expand their operations and workforce as well as rent some of the building space to a different tenant and grow business and employment opportunities within the Town of Montville.

1.5 Review of Connecticut Cleanup Standards

The analytical data obtained from the site investigations are compared to specific contaminant concentrations listed in the RSRs, dated January 30, 1996 and an addendum entitled "Approved Criteria for Additional Polluting Substances" dated April 30, 1999. The promulgated RSRs specify standards for the clean up of sites where hazardous wastes or other pollutants have been disposed or released to the environment. Contaminated soils and their remediation goals are evaluated by two methods:

1. <u>Direct Exposure Criteria (DEC)</u> - intended to protect human health from risks associated with direct exposure to pollutants in contaminated soils. Specific numeric exposure criteria for a broad range of pollutants in soil have been established by CT DEEP, based on exposure assumptions relative to incidental ingestion of pollutants in soils and dermal contact with soils. The DEC apply to soil to a depth of 15 feet.

   CT DEEP has established two sets of DEC using exposure assumptions appropriate for residential land use (R DEC) or for industrial and certain commercial land use (I/C DEC). In general, all sites are required to be remediated to the residential criteria. An industrial/commercial site may meet the industrial land-use criteria in lieu of meeting the residential standards if an Environmental Land Use Restriction (ELUR) that prohibits residential use is in effect with respect to such parcel.

2. Pollutant Mobility Criteria (PMC) - intended to protect groundwater quality from pollutants, which may migrate from unsaturated soils. The PMC that apply to remediation depend on the groundwater classification of the site. The purpose of these criteria is to prevent contamination to groundwater in GA classified areas and to prevent unacceptable further degradation to groundwater in GB classified areas. The PMC apply to all soil in the unsaturated zone, from the ground surface to the seasonal low water table in GA classified areas such as this Site.

Groundwater remediation goals are also outlined in the RSR document and are, in part, dependent upon water quality classifications and groundwater use in the area. The Site is located within a GA classification area, which is defined by CT DEEP as an area of existing private water supply wells or an area with the potential to provide water to public or private supply wells. The Department presumes that groundwater in such an area is suitable for drinking or other domestic uses without treatment. There are three (3) standards that typically apply to groundwater in a GA classification setting:

1. Groundwater Protection Criteria (GWPC) – intended to protect and preserve the existing use of groundwater in GA areas and maintain the groundwater as a natural resource.

2. Surface Water Protection Criteria (SWPC) – intended to protect the existing use of surface water bodies, wetland areas, and intermittent streams to which a groundwater plume discharges.

3. Volatilization Criteria (VC) – intended to protect the occupants of buildings from the migration of VOCs from a groundwater plume into the interior of a given structure.

2.0 ENVIRONMENTAL CONDITIONS AT THE SITE

2.1 Previous Environmental Investigations

Information from previous environmental site assessments and subsurface investigations conducted at 14 Bridge Street is included in the applicable sections of this document. The specific locations of site investigations are shown on Figure 2, Figure 3, and Figure 4. A summary of soil sample laboratory analytical results is presented in Table 1. Previous environmental reports are summarized as follows:

- A report entitled "Phase I & II/III Environmental Site Assessment, 14 Bridge Street, Montville, CT", dated February 2008, was issued by Paul Burgess, LLC to Impulse Design, LLC. The report identified the following recognized environmental concerns at the property:
  - Underground storage tank (UST)
  - Exterior fuel oil aboveground storage tanks (ASTs)
  - Former industrial operations inside the building (drum storage, industrial chemical processes, floor drains)
  - Loading docks
  - Septic system
  - Former pond located partially on the Site that was filled
  - Former railroad siding
  - Former dumpster location
  - Former air discharge locations associated with interior painting operations on western side of the building
  - Rubber hose from window in old boiler room

  The Phase II/III Site Investigation portion of the report documented the investigation of the recognized environmental concerns. Results of the soil and ground water sampling are detailed below. Sample locations are shown on Figure 3.

  - No field evidence of contamination associated with the UST was identified. There was no indication that the UST leaked. Polycyclic aromatic hydrocarbons (PAHs) were detected above the I/C DEC (sample GP-109), but was attributed to the presence of coal fragments noted in the soil samples. The coal is likely attributable to the former railroad siding on Site.
  - Extractable total petroleum hydrocarbons (ETPH) were detected in soil at several locations near and downgradient of the ASTs (SS-3, MW-3, GP-114), suggesting a tank leak and/or spill. ETPH was also detected in groundwater at monitoring well location MW-3 at a concentration above the GWPC. At most sample locations the soil contamination was at or near the water table. PCBs were also detected at shallow soil sample SS-2 at a concentration of 3 parts per million (ppm). It was inferred that the oils

released in the area may have contained PCBs, although other PCB testing in the area did not detect PCBs.

  - ETPH was detected in soil beneath the building floor (GP-101) within the former drum storage area at a concentration above the I/C DEC. Based on the chromatography provided by the laboratory, the detected ETPH may have been related to hydraulic oils. No ETPH was detected in soil samples collected adjacent to and downgradient of the former drum storage area below the loading dock. No VOCs were detected in the soil samples. No other indications of releases were detected inside the building, including at floor drains.
  - No soil contamination was detected above the numerical criteria established by the CT DEEP RSRs near the two loading docks. Low levels of PAHs were detected in soil (MW-2) and were likely associated with coal ash identified in several samples. A low concentration of PCBs (0.8 ppm) was detected in the soil boring advanced prior to the construction of monitoring well MW-2 (0 to 4 feet below grade).
  - No contamination was detected above the RSR numerical criteria in soil and groundwater samples collected near the septic system. Low levels of PAHs were detected in the soil boring advanced prior to the construction of monitoring well MW-1 (2 to 4 feet below grade).
  - Soil samples collected within the former pond area that was historically filled detected ETPH contamination (MW-3, GP-115, GP-116, GP-117). Given the close proximity to the ASTs, the contamination was attributed to the petroleum release from the ASTs.
  - Coal/ash fragments identified in Site soils are likely attributed to historical use of the former railroad siding.
  - No contaminants were identified above RSR numerical criteria in the soil sample (B-2) collected near the former dumpster location.
  - PAHs were detected at concentrations above the I/C DEC in a soil sample (SS-1) collected near the former air discharge vents. The contaminants are likely associated with former interior painting operations and/or a release of a petroleum-based product.
  - Soil samples were collected beneath a rubber hose observed exiting the boiler room. Arsenic was detected at a concentration above the I/C DEC and lead was detected at a concentration below the RSR numerical criteria. No ETPH or PAHs were detected.

- A report entitled "Supplemental Phase III Site Investigation and Remedial Action Plan, 14 Bridge Street, Montville, CT", dated January 2009, was issued by Paul Burgess, LLC to Impulse Design, LLC. The Supplemental Phase III Site Investigation was designed to further delineate previously identified contamination prior to site remediation. The following is a list of data quality objectives established for the Supplemental Phase III investigation:
  - Define the limits of soil contamination below the building floor for purposes of establishing an ELUR to render the soils inaccessible.

- Confirm that no releases of the UST occurred and define the extent of PAH contamination.
- Define the limit of soil contamination at the air discharge area.
- Define the extent of soil contamination at the boiler room discharge area.
- Define the extent of contamination at the fuel oil ASTs and former pond area.

The following is a list of analytical results for each area of Recognized Environmental Conditions (RECs) followed by proposed remedial actions as presented in the Remedial Action Plan (RAP) and attached Figure 5, Figure 6, Figure 7, and Table 2:

Former Industrial Operations Inside Building

Four additional soil borings and soil samples (GP-201 through GP-204) were collected and analyzed for ETPH in this REC to evaluate the extent of soil contamination. No additional soil contamination was detected.

The only contamination identified at this location was the detection of ETPH at GP-101 above the I/CDEC. This contamination can be managed by rendering the area inaccessible by establishing an ELUR preventing the demolition of this portion of the building. Alternatively, the concrete floor could be removed (approximately 10 by 10 feet) and the soil removed and properly disposed.

Underground Storage Tank

Three additional soil borings (GP-205 through GP-207) were advanced and two additional soil samples were collected for ETPH and PAH analysis. Low levels of ETPH, PAHs, and lead were detected in the additional soil samples well below RSR criteria. No physical evidence of a petroleum release (staining, odors) was noted in the field.

The UST and any residual contents should be removed and properly disposed. If impacted soil surrounding the UST is encountered, it should be removed at the time of the tank removal.

Exterior Aboveground Fuel Tanks

Six additional borings (GP-208 through GP-213) were advanced and seven soil samples collected for analysis to better define the extent of soil contamination. All samples were collected for ETPH analysis. Select samples were also analyzed for arsenic and lead or PCBs. Oily odors were noted at GP-208 and GP-209. Organic vapor readings were noted at GP-208, 209, and 211.

The three AST fuel oil tanks and any residual contents should be removed and properly disposed. The contaminated soil associated with releases from the ASTs and within the former pond area should be removed and disposed.

Former Air Discharge Locations (Western Side of Building)

PAHs and ETPH were detected at SS-1. Three surface-soil samples (SS-201 through SS-203) were collected and analyzed for ETPH and PAHs to further define the extent of soil contamination. PAHs were detected above the I/C DEC at two of three locations (SS-202 and SS-203).

The PAH- and ETPH-impacted soil should be removed and properly disposed.

Rubber Hose at Boiler Room

Arsenic was detected at SS-4 above the I/C DEC. Lead was also detected at concentrations suggesting a release, but the levels were below RSR numerical criteria. Three additional surface-soil samples (SS-204 through SS-206) were collected and analyzed for arsenic and lead. There were no further detections above RSR criteria.

The arsenic-contaminated soil should be removed and properly disposed.

Groundwater monitoring should be conducted following soil remediation efforts and continue until compliance with the RSRs is achieved (per RCSA §22a-133k-3(g)(3)(A)). Monitoring wells should be sampled and analyzed for Site contaminants of concern (COCs), which include Resource Conservation and Recovery Act (RCRA) metals (plus zinc), VOCs, and ETPH. PAHs are not included in the COC list for groundwater because all soil samples exhibited the inability to leach PAHs into groundwater (i.e., laboratory results for PAHs analysis by Synthetic Precipitation Leaching Procedure (SPLP) were non-detect).

Based on the results of previous investigations, a conceptual site model (CSM) was developed for the Site and is included in Table 2.

2.2 Site Environmental Regulatory History

The following is a summary of environmental regulatory file information for the Site:

- November 1967 and 1972: Finley Screw Machine received Pollution Abatement Orders from CT DEEP and were ordered to discharge all sanitary waste to the proposed Montville municipal system. Both orders are indicated as “revoked”.
- September 1972: Industrial processes associated with Connecticut Industrial Survey, Acme Wire Products (manufacturing of metal display racks) are listed as bending, forming, welding, blanking, cleaning (solvents), painting and baking. No industrial waste discharges were indicated. An updated 1973 form indicated that Filmax Textile was now located in the building.

- July 1988: A hazardous waste manifest form associated with Displaymakers identified– disposal of four 55-gallon drums (220 gallons) listed as waste flammable liquids.
- January 9, 1990: A CT DEEP Report of Complaint (Anonymous) stated that Displaymakers is stockpiling wastes in a room under the loading dock. There are approximately 20 5-gallon drums of spent waste, cleaning fluids, lacquers, and solvents; some drums have been stockpiled for as long as 8 to 10 years. There are currently two to three drums of waste in the work areas.
- January 12, 1990: A Hazardous Waste Inspection Report for Displaymakers listed site processes as silk screening and display fabrication. Screen and developer wash water was indicated as discharged to sink/septic system. Spray booth filters were indicated as disposed in dumpster. Various drums of chemical waste were noted, including the drums noted in the January complaint.
- April 1990: In a CT DEEP Memorandum Enforcement Action Summary was recommended for Displaymakers. The memorandum noted that the company was functioning as a large quantity generator of hazardous waste without the required hazardous waste notification and the company was improperly storing ignitables, waste paint/thinner, and other unknowns.
- July 1991: A CT DEEP Order was issued to Richard Stockton, which indicated that at least fourteen (14) 55-gallon drums containing waste chemicals have been on Site for 8 to 10 years. The Order required the removal and disposal of the hazardous waste and compliance with hazardous waste management regulations.
- November 1991: CT DEEP referred matters to the Connecticut Attorney General, indicating non-compliance with orders.
- April 1995: The United States Environmental Protection Agency (EPA) issued a report indicating that CT DEEP staff requested EPA assistance in drum removal at the Site. The on-site chemical containers were described as 25 55-gallon drums, 10 5-gallon pails, and 10 small containers. The chemical container information was described as sodium hydroxide, sodium sulfate, and hydroquinone. Analytical results of the waste identified toluene, xylenes, lead, and zinc. The drums were removed and disposed off site by an EPA contractor.
- April 1995: CT DEEP issued a letter to Impulse Design, which provided copies of water supply chemical analysis. This sampling was conducted due to the gasoline release at Belanger's service center site. Low levels of VOCs were detected at concentrations below drinking water standards.
- July 1995: A CT DEEP Memorandum to Close Administrative Orders (HM-682 & 721) documented the removal of 37 containers by EPA, including 21 55-gallon drums of hazardous waste. It was also noted that no additional hazardous waste was known to exist on Site. The memorandum recommended that orders pertaining to the Site be closed. This memorandum is filed on the Town Land records.

- January 1996: The EPA issued a letter to Allan Cohen of Impulse Design indicating that it had no plans to take steps to hold Allan Cohen or Impulse Design liable for past cleanup costs associated with the Displaymakers site.
- August 2006: CT DEEP issued a letter to Impulse Design, which provided copies of water supply chemical analysis. Low levels of VOCs were detected below drinking water standards.
- January 4, 2008: A fax from CT DEEP indicated that no manifest records were on file for Impulse Design (generator number CTP 000039846). Records for the July 1988 manifests for Displaymakers were on file.
- The Site is listed on the Comprehensive Environmental Response, Compensation, and Liability Information System No Further Remedial Action Planned (CERCLIS NFRAP) list under the name Displaymakers. CERCLIS sites designated NFRAP have been removed from CERCLIS. The NFRAP designation was assigned subsequent to the EPA Removal Action (drums). The Environmental Data Resources, Inc. (EDR) report indicated that 1) the removal took place in April 1995, 2) no viable potentially responsible parties were identified, and 3) the Site was "archived" in August 1996.

2.3 Potential Threats to the Public Health and the Environment

Various potential exposure pathways are evaluated to determine if any possible risk to public health or the environment exists from the on-site contamination. The evaluation is based on the location and depth of contaminants identified at the Site.

2.3.1 Soil Migration Pathway

Soils impacted with ETPH, PAHs, lead and arsenic were identified in shallow soils at several areas on Site including beneath the building and exterior areas. The ground surface at the Site is primarily covered with the Site building and bituminous pavement, and therefore, the underlying soils are generally inaccessible to direct contact. However, several areas along the western and southern sides of the building are not covered with bituminous pavement and present a direct exposure risk for Site occupants and visitors. The potential for exposure to Site soils through direct contact or ingestion exists within unpaved areas of the Site but is minimal because the areas lacking bituminous pavement are generally overgrown with vegetation and not frequented by people.

Proposed Site remediation activities, including Site excavation and re-grading as the proposed remedial alternative, could expose impacted soils creating the potential for direct contact exposure. Contaminated soils will require remediation and appropriate management to eliminate and/or minimize exposure through direct contact. Implementation of erosion and dust control measures will be required during the proposed Site remediation activities to prevent migration of contaminated soils from the Site.

2.3.2 Groundwater Migration Pathway

No contamination above laboratory minimum detection limits has been documented in groundwater beneath the Site. Groundwater depths ranged from approximately 1.75 to 2.85 feet below grade, with overburden groundwater flow beneath the Site interpreted to be to the southeast toward the Oxoboxo Brook. According to CT DEEP Aquifer Protection Area mapping, there are no aquifer protection areas in close proximity to the Site.

Based on the current conditions, the potential for contact with groundwater at the Site or surrounding area through direct contact or ingestion is probable. The site was connected to municipal water on November 29, 2011, but the current use of the on-site supply well is unknown. Potable water is obtained in the surrounding area via private supply wells. In addition, since groundwater is shallow at the Site, exposure to groundwater during remediation activities is expected (e.g. excavations extending below the water table). However, Site investigations completed to date by Paul Burgess, LLC did not identify contaminant impacts in the shallow groundwater. Despite the high likelihood of contact with groundwater at the Site, risk of exposure to contaminants in groundwater is low.

2.3.3 Surface Water Migration Pathway

The closest designated surface water body to the Site is Oxoboxo Brook located approximately 200 feet southeast of the Site. The surface water classification of Oxoboxo Brook is C/B. Based on the current conditions and proposed remedial actions (i.e., no proposed activities within Oxoboxo Brook or in close proximity), the potential for impact to the Oxoboxo Brook is minimal. However, contaminated soils will be exposed during proposed Site remediation activities, thus increasing the potential for impact to surface runoff. Therefore, erosion and sediment control measures will need to be implemented during the proposed remediation activities to prevent impact to Oxoboxo Brook from potential contaminated runoff from the Site.

2.3.4 Air Migration Pathway

Given the current restricting surfaces at the Site (building, pavement, and vegetation), potential for particulate migration of contaminated soils in the air is not likely. Dust control measures will be instituted during soil remediation to minimize the potential for off-site migration of contaminants via air transport. Since compounds exceeding regulatory standards (ETPH, PAHs, lead, and arsenic) have low volatility, vapor migration risk is unlikely.

3.0 REMEDIATION ALTERNATIVES ANALYSIS

3.1 Purpose of EPA Revolving Loan Fund

The Town of Montville has secured EPA Brownfields funding for eligible environmental cleanup activities at the Site through the RLF administered through the CT DECD. Below is a detailed discussion of potential remedial alternatives complete with an analysis of benefits and drawbacks (i.e., effectiveness, implementability, etc.), and relative costs associated with each option. The proposed Site remediation will allow the current building occupant, Impulse Design, to expand their operations and workforce as well as rent some of the building space to a separate tenant and grow business and employment opportunities within the Town of Montville.

3.2 Areas of Proposed Remediation

The following is a summary of soil contamination identified at the Site. Section 3.3 details remedial alternatives for addressing the identified soil contamination and achieving compliance with the RSRs.

3.2.1 Former Industrial Operations Inside Building

ETPH was detected at soil sample location GP-101 (Figure 3) beneath the building floor within the former drum storage area at a concentration above the I/CDEC.

3.2.2 Underground Storage Tank

PAHs were detected at soil sample location GP-109 (Figure 2) near the on-site UST at concentrations above the I/C DEC but were attributed to the presence of coal fragments noted in the soil sample. The coal is likely attributable to the former railroad siding on Site. In addition, low levels (below RSR criteria) of ETPH, PAHs, and/or lead were detected in soil samples collected near the UST (GP-109, GP-205, GP-206, GP-207). No physical evidence of a petroleum release (staining, odors) was noted in the field. In order to prevent any possible future release from the UST, it should be removed along with any residual contents and properly disposed/recycled. If impacted soil surrounding the UST is encountered during removal, it should be remediated at the time of the tank removal.

3.2.3 Exterior Aboveground Fuel Tanks and Former Pond Area

Numerous soil samples were collected to define the extent of soil contamination near the exterior ASTs and former pond area (Figure 4).

Concentrations of PAHs, ETPH, and arsenic above the I/C DEC and concentrations of ETPH and lead above the GA PMC were identified in several of the soil samples. In addition, oily odors were noted in soil collected from borings GP-208 and GP-209. Organic vapor readings were noted in soil recovered from borings GP-208, 209, and 211.

3.2.4 Former Air Discharge Locations (Western Side of Building)

PAHs were detected at concentrations above the I/C DEC in three soil samples (SS-2, SS-202, SS-203) and ETPH was detected at a concentration above the GA PMC in one soil sample (SS-1) collected beneath the former air discharge vents (Figure 2).

3.2.5 Rubber Hose at Boiler Room

Arsenic was detected in soil sample SS-4 collected beneath a rubber hose observed exiting the boiler room (Figure 4) at a concentration above the I/C DEC.

3.3 Remedial Alternatives Evaluation

Based on the results of previously conducted site investigations, several remedial alternatives are proposed below. A summary of the evaluation for each remedial alternative is also compared in Table 3.

3.3.1 No Action

The No-Action alternative is included as a baseline for comparison to the other proposed alternatives. The No-Action Alternative assumes that the property will continue to exist as is and none of the proposed actions listed in the other alternatives would be initiated. The No-Action Alternative would not provide for mitigation of the actual or potential risks posed by the site contamination at the property and would not be protective of human health and/or the environment.

Effectiveness: The effectiveness of the No-Action alternative in achieving project goals (i.e., compliance with RSRs) would be negligible. The continued presence of contaminants in soil, as would be the case under the no-action alternative, could pose a long-term health risk to the public and also to workers entering the buildings due to potential exposure risks associated with soil contact during site work or future Site improvements. Also, the presence of the contaminants in soil will make it difficult to obtain funding from lending institutions. The no-action alternative would be highly ineffectual in achieving the goals of reducing health risks and facilitating expansion of current Site operations and/or renting space to a separate tenant.

Implementation: Implementation of the No-Action alternative would be fairly straightforward. The Site would be left in its current state and previously identified contaminants in soil would still pose a hazard to those people working on site and/or entering the buildings.

Cost: Direct costs associated with the No-Action alternative would be negligible and the lowest of the proposed remedial alternatives presented herein. Indirect costs could include the inability to obtain funding from lending institutions and potential liabilities associated with the continued presence of Site contamination.

3.3.2 Soil Excavation and UST Removal

Soil excavation generally involves:

- removal and off-site disposal of impacted soil,
- collection of confirmatory sidewall and bottom samples for laboratory analysis to confirm complete removal of impacted soil, and
- placement and compaction of backfill material within the excavation area(s).

Effectiveness: Soils contaminated with ETPH, PAHs, lead, and arsenic exceeding RSR standards have been identified at depths within 6 feet of the ground surface at various locations on the Site. Implementation of shallow soil remedial excavation is a relatively simple and straightforward process. The benefit of soil excavation is that the impacted soils can be permanently removed from the Site within a relatively short timeframe. Complete removal is typically only limited by the presence of building structures and property boundaries. Another benefit of utilizing soil excavation as a remedial alternative is that the excavation equipment required for UST removal, which is also a proposed remedial activity, would already be on Site. Soil excavation does, however, require the use of large machinery and may temporarily disrupt ongoing business activities at the

Site. Off-site soil disposal will require a temporary increase in truck traffic on the local roads.

Implementation: Soil excavation and off-site disposal is a commonly used remedial method. The soils excavated from the Site should not pose a significant exposure risk to contractors or the general public if handled/managed appropriately during excavation and staging activities. Based on the identified contaminants, the soils could be properly disposed at a landfill for use as cover material or sent off for recycling as asphalt batch materials (contingent on petroleum content). The excavated UST would be cleaned and transported off-site for recycling.

In the event that complete removal of impacted soil is not feasible due to physical constraints (i.e., beneath a building, proximity to building footings, etc.), the CT DEEP RSRs allow exemptions from the DEC through the implementation of an ELUR. Therefore, use of an ELUR is a remedial option for the site based on the completeness of soil remediation via one of the proposed alternatives detailed herein. The CT DEEP RSRs allow for soils exceeding DEC to be left in-place (as inaccessible) if the soils are beneath a permanent building, beneath 4 feet of clean material, beneath 2 feet of clean material underlying a paved or concrete surface, or beneath a CT DEEP-approved Engineered Control. The RSRs allow for soils exceeding PMC (other than VOC contaminated soils) to be left in-place as environmentally isolated if the soils are beneath a permanent building. All of these scenarios require the implementation of an ELUR prepared in accordance with the requirements set forth in C.G.S. Section 22a-133q-1. A "do not disturb" ELUR provision combined with a non-residential use ELUR provision could be utilized and the ELUR would include all of the elements necessary to achieve CT RSR compliance. The ELUR is recorded on the property deed with the local municipality and documents the environmental conditions and site restrictions. Implementation of these remedial controls is less costly and has lower energy consumption than other remedial options.

Cost: Relative to each of the remedial alternatives presented herein, costs associated with soil excavation and off-site disposal are low to moderate. Exact costs will be dependent on the selection of a remedial excavation contractor and soil disposal costs.

Due to the reasons presented above (i.e., commonly used and highly effective, relatively quick to implement, permanent removal and off-site disposal of contaminated soil, provisions for implementing an ELUR, low to moderate cost) excavation and off-site disposal of contaminated soil is proposed as the remedial option for the Site.

3.3.3 In-situ Soil Treatment and UST Removal

In-situ treatment generally involves the application of a remedial agent into the subsurface environment that will physically/chemically break down the contaminants or will stimulate microorganisms to biologically deplete the compounds. The treatment converts contaminants into harmless by-products. The on-site UST would be excavated and transported off site for proper recycling.

Effectiveness: The primary advantages of in-situ treatment are that it is less invasive and disruptive than soil excavation and it can be utilized to remediate deeper soils. In-situ treatment is most effective in saturated soil where groundwater can be used as a means to distribute the remedial agent. The primary disadvantages of in-situ treatment are that it can be difficult to achieve uniform application of the treatment agent to subsurface materials, especially above the water table and in tightly packed soil and/or fine-grained soil, and it is typically less effective for heavily contaminated materials.

Implementation: Introduction of a remedial agent into the subsurface requires permit approval by the CT DEEP and can be facilitated primarily by injection, introduction into an open excavation, or mixed into soil without soil excavation. The process typically requires initial soil and groundwater chemistry analysis so that the appropriate remedial agent can be selected. In addition, soil confirmatory sampling and post-remediation groundwater monitoring is required. The excavated UST would be cleaned and transported off-site for recycling.

Cost: Relative to each of the remedial alternatives presented herein, costs associated with in-situ soil treatment are moderate to high. Exact costs will be dependent on the selection of a remedial agent to be introduced into the subsurface soil, the soil type and how easy/difficult it will be to achieve uniform application of the remedial agent, and selection of a remedial contractor.

Given the limited extent of contamination at the Site located above the water table, the COCs, the difficulties associated with achieving uniform distribution of the remedial agent, and the relatively higher costs associated with this alternative, in-situ treatment of soil contamination is not proposed as a viable remedial option.

3.3.4 Ex-situ Soil Treatment and UST Removal

Ex-situ treatment generally involves the application of a remedial agent into excavated soils to remediate contamination. Following treatment, soils can be reused on site or shipped off site for disposal. The on-site UST would be excavated and transported off site for proper recycling.

Effectiveness: The primary advantage of ex-situ treatment is that it can provide a uniform application of the treatment agent to soils. Also, soils can be converted to geotechnically suitable materials for on-site reuse. This method can also be cost effective in treating soils with EPA hazardous waste levels of contaminants prior to off-site disposal. Similar to the soil excavation remedial alternative, effectiveness of ex-situ soil treatment is limited by the presence of building structures and property boundaries.

Implementation: Ex-situ treatment of soil is often used to treat soil that would normally be considered hazardous waste due to the elevated concentrations of contaminants in the soil. Ex-situ treatment would be used to reduce the concentrations and significantly reduce the off-site disposal costs. The process typically requires extensive initial soil and groundwater chemistry analysis so that the appropriate remedial agent can be selected. Post-remediation soil and groundwater monitoring is required. In addition, the excavation and ex-situ treatment of soil typically involves large equipment that requires a lot of space and can be disruptive to on-going business activities. The excavated UST would be cleaned and transported off-site for recycling.

Cost: Relative to each of the remedial alternatives presented herein, costs associated with ex-situ soil treatment are high. Exact costs will be dependent on the selection of a remedial agent to be introduced into the soil and a remedial contractor.

Given the contaminant concentrations detected in soil at the Site are presumed to be non-hazardous regulated waste, ex-situ treatment of soil contamination has minimal benefit at this Site, has the highest associated cost of the remedial options presented herein, and is therefore not a recommended remedial option.

3.4 Selection and Implementation of Remedial Alternatives

Based on evaluation of remedial alternatives, soil excavation, tank removal, and off-site disposal/recycling is the recommended for the Site. Also, based on the accessibility of soils and results of confirmatory soil samples, completion of soil remediation by implementation of an ELUR is recommended, if necessary. The ELUR would stipulate that impacted soils are present at the Site and cannot be disturbed without prior approval from CT DEEP. Confirmatory/closure soil sampling will be conducted as part of soil remediation activities. At the completion of Site soil remediation, a Remedial Action Report (RAR) will be issued for the project that documents the remedial activities, confirmatory sampling results, soil disposal, and ELUR location. Additional details regarding the proposed remedial actions are presented as part of the RAP in Section 4.0.

In accordance with Section 22a-133k-3(g)(3)(A), post-remediation groundwater monitoring will be conducted to evaluate the remedial activities. Post-remediation groundwater monitoring will be reported in the final verification document, which will be prepared in accordance with CT DEEP's August 1, 2008 *Verification Report Guidance Document* and on a form prescribed by the Commissioner Pursuant to Public Acts 07-81 and 07-233.

3.5 Evaluation of Conformity with Green Remediation Policy

The "Clean and Green Policy for Contaminated Sites" (February 18, 2010) was developed by EPA New England (Region 1) to promote strategies and practices that reduce the environmental footprint during cleanup and restoration activities. These goals generally include the following:

- minimize total energy use and maximize use of renewable energy
- minimize air emissions and greenhouse gas generation
- minimize water use and impacts to water resources
- reduce, reuse, and recycle materials and wastes
- support the environmentally-sustainable reuse of remediated land

The proposed implementation of remedial controls to reduce the quantity of soils requiring excavation and off-site disposal will reduce energy consumption and air emissions. An ELUR will be implemented to minimize off-site disposal, thus reducing carbon emissions from vehicle transport, decreasing the amount of waste being placed in landfills, and reducing air pollutant emissions from waste incineration. Soils that require off-site disposal will be either recycled for use in asphalt or reused at a landfill facility as daily cover material, as is possible. The selected remedial approach generally meets the EPA green remediation goals, to the extent practical and appropriate for this project.

3.6 Estimated Remediation Costs

In a proposal from Cisco LLC of New Haven, CT to Al Cohen with Impulse Design, dated January 17, 2009, remediation costs were estimated based on the investigations completed to date for the Site and a preliminary RAP prepared by Paul Burgess, LLC.

The total estimated remediation cost was $138,900 which included removal/disposal of the UST and ASTs, disposal of residual material within tanks, excavation/disposal of contaminated soil, removal/replacement of the concrete floor within the building following underlying soil excavation/disposal, placement of backfill, and Site restoration. It is anticipated that the proposed site remediation activities as described in Section 4.0 can be completed without exceeding the estimated cost received from Cisco LLC.

4.0 REMEDIAL ACTION PLAN

The proposed soil remediation activities include focused excavation and removal of contaminated soils with identified contaminant concentrations exceeding the applicable GA PMC and I/C DEC. It is anticipated that an ELUR will ultimately be recorded for the Site to address DEC contaminated soils, as necessary, and specifically beneath the Site structure (see Section 3.2.4). It is HRP's understanding that the Town of Montville has taken ownership of the Site through foreclosure proceedings and will conduct voluntary remediation of the Site under direct supervision by CT DEEP in accordance with RCSA Section 22a-133x. Prior to remediation, public notice in accordance with RCSA Section 22a-133x(g) will be provided at the discretion of the Town and its stakeholders. Also, it is HRP's understanding that a Class-A2 property boundary survey will be completed for the Site buy the current property owner prior to initiation of remediation activities.

The lateral and vertical extents of the proposed remedial areas containing polluted soil/fill are illustrated on Figures 5, 6, and 7. The proposed remedial excavations will extend to varying depths based upon the maximum documented depth of contamination. Modifications to the initial remedial excavation limits may be made based on field conditions observed during excavation activities. Field screening will also be performed to determine appropriate excavation limits and confirmatory soil sampling locations.

Contaminated soils generated from the remedial excavations will be excavated and temporarily stockpiled on the Site pending off-site disposal at an approved facility at the Town's discretion. Stockpiled soils will be placed on and beneath polyethylene sheeting at the time of excavation until being shipped off-site for appropriate recycling/disposal. Proper erosion and sediment control measures will be implemented. Representative waste characterization samples will be collected from the stockpile to satisfy the requirement of the disposal facility/facilities. Upon approval, the contaminated soils generated during site remediation will be shipped off-site to the selected facility/facilities for recycling/disposal.

Once the initial remedial soil excavation has been completed, confirmatory soil samples from the sidewalls and bottom of the resultant excavation will be collected. Sample locations will be staked and measured relative to two or more control points. The confirmatory sidewall samples will be collected at a frequency of no less than one every 25 linear feet of excavation sidewall and a minimum of one sample per sidewall, regardless of length. The bottom samples will be collected at a frequency of no less than one every 20 by 20 foot area (i.e., at least one sample for every 400 square feet). All confirmatory soil sample locations will be targeted at worst-case conditions based on field screening and inspection of the excavation.

The confirmatory soil samples will be analyzed at a Connecticut-certified, independent laboratory following the Connecticut Reasonable Confidence Protocols (RCPs). All confirmatory samples will be submitted to the laboratory under strict chain-of-custody for analysis of one or more of the following parameters (exact parameters dependent upon specific COCs and previously detected compounds associated with each release area:

- Lead and Arsenic (Total [mass] and SPLP analysis as appropriate)
- ETPH (Total [mass] and SPLP analysis as appropriate)
- PAHs (Total [mass] and SPLP as appropriate)

The analytical results will be reviewed upon receipt to determine if soils exceeding the applicable standards remain within the initial remedial excavation. Additional excavation will be performed wherever soil contamination exceeds the I/C DEC and/or GA PMC in the confirmatory soil sampling results (with the exception of remedial excavation areas that extend to the property line). Additional confirmatory soil samples will be collected wherever sequential soil excavations are performed to remove soils exceeding the remediation criteria. Soil excavation and confirmatory soil sampling will continue as an iterative process until all confirmatory soil samples meet the applicable I/C DEC and/or GA PMC. The limits of the excavation and location of confirmatory soil samples will be recorded and mapped in the field to known/fixed points such as existing building corners and property lines. Once successful remediation of the polluted soil/fill is confirmed to meet the I/C DEC and/or GA PMC numeric criteria, the excavation will be backfilled with clean fill to meet pre-existing grade.

Following active remediation at the Site and approval of the RAR by the Department, an ELUR will be recorded for the Site if necessary to achieve compliance with the RSRs. As previously discussed (Section 3.2.4), a “do not disturb” ELUR provision combined with a non-residential use ELUR provision could be implemented.

5.0 DOCUMENTATION AND REPORTING

HRP, as the Remedial Oversight Consultant, will supervise the implementation of soil remediation activities and will prepare and maintain a complete record of remediation activities performed. HRP will be responsible for ensuring that the project is completed in accordance with the specifications of this RAP, the Health and Safety Plan (to be provided as a separate document), the quality assurance project plan (QAPP, detailed below), and generally accepted industry/engineering standards.

5.1 Quality Assurance Project Plan (QAPP)

A site-specific QAPP will be developed prior to implementation of site remedial activities, as necessary. The QAPP will conform to the standards and procedures detailed in HRP's corporate QAPP, which was approved by the U.S. Environmental Protection Agency (EPA) in June 2009. All fieldwork activities, sampling protocols, laboratory analysis, and associated quality assurance/quality control (QA/QC) measures to be followed during the project will be outlined in the QAPP.

5.2 Field Documentation

The following specific documentation and reporting requirements will be performed in the field during remediation activities:

- Photographic documentation of completed excavations and other pertinent observations
- Completion of a daily field report/notes summarizing the progress, events, contractor activities, and other pertinent details
- Mapping and sketching of the limits of the remedial excavations and confirmatory soil sample locations

5.3 Post-Remediation Reporting

The RAR will be prepared for the remediation of polluted soil on Site and will be submitted to the Town, EPA, CT DEEP, and CT DECD for review and approval. The report will describe the completed work at the Site and will contain, but will not be limited to, the following specific items:

- Description of all remediation activities, including field notes and photographs
- Site plan showing Site features, sample locations, and the vertical and horizontal limits of excavation
- Summary tables containing results of confirmatory sampling
- Figures showing the location and depth of all confirmatory samples
- Complete certified laboratory reports
- Discussion of validity of data and QA/QC information
- Documentation of waste disposal, including manifests, bills-of-lading, and certificates of relocation.

6.0 POST-REMEDIATION GROUNDWATER MONITORING

A post-remediation groundwater monitoring plan will be developed In accordance with Section 22a-133k-3(g)(3)(A). The monitoring plan will be presented as a separate document and will outline an approach for evaluating the effectiveness of remedial activities. The monitoring plan will be provided to the Town, EPA, CT DEEP, and CT DECD for review and approval prior to submittal to the Department and subsequent implementation. Results of post-remediation groundwater monitoring will be reported in the final verification document, which will be prepared in accordance with CT DEEP's August 1, 2008 *Verification Report Guidance Document* and on a form prescribed by the Commissioner Pursuant to Public Acts 07-81 and 07-233.

7.0 LIMITATIONS ON WORK PRODUCT

All work product and reports provided by HRP in connection with the performance of any phase of Environmental Site Assessments, and any services related to remedial and post-remedial action, including all work performed under HRP's Terms & Conditions and any follow-up work is subject to the following limitations.

A. The observations described in the Project Report(s) are made under the stated conditions. The conclusions presented in the Report(s) are based solely upon the indicated services, and not on scientific tasks or procedures beyond the scope of described services or the time and budgetary constraints imposed by the Client.

B. In preparing Project Reports, HRP relies on certain representations made and information provided by federal, state and local officials, the Client and other parties referenced in the Project Reports, and on information contained in the files of federal, state and/or local agencies made available to HRP, at the time of the Project. To the extent that such information and files are missing, incomplete or not provided to HRP, HRP is not responsible. Although there may be some degree of overlap in the information provided by these various sources, HRP does not attempt to independently verify the accuracy or completeness of all information reviewed or received during the course of the Project. If the Client determines that information provided or made available to HRP from any source is incorrect or inaccurate, the Client should promptly notify HRP, whereupon HRP will issue a corrected Project Report.

C. Observations are made of the Site and of structures on the Site as indicated within the Project Report(s). Where access to portions of the Site or to structures on the Site is unavailable or limited, HRP renders no opinion as to the presence of potential contamination by hazardous substances, wastes or petroleum and chemical products and wastes. In addition, HRP renders no opinion as to the presence of indirect evidence relating to potential contamination by hazardous substances, wastes or petroleum and chemical products or wastes where direct observation of the interior walls, floors, or ceilings of a structure on a site is obstructed by objects or coverings on or over these surfaces.

D. Unless otherwise specified in the Project Report(s), HRP does not perform testing or analyses to determine the presence or concentration of asbestos or poly-chlorinated biphenyls (PCBs), lead paint, urea formaldehyde foam insulation (UFFI), wetlands, regulatory compliance, cultural and historical risks, industrial hygiene, health & safety, ecological resources, endangered species, indoor air quality, high voltage power lines, or radon at the Site or in the environment of the Site. When HRP is contracted to perform asbestos or lead paint testing, planning or related services, HRP assumes no responsibility for the implementation or enforcement of the procedures, work practices, or other control methods recommended, required, or mentioned in the Project Report(s), unless HRP has been specifically contracted to implement or supervise such actions, in which case the associated contractual documents will define our scope and responsibilities.

E. The purpose of the Project Report(s) is to assess the physical characteristics of the Site with respect to the potential presence in the Site soil, groundwater or surface water environment of contamination by hazardous substances, hazardous waste or petroleum and chemical products and wastes. HRP has not confirmed the compliance of present or past owners or operators of the Site with federal, state, or local laws and regulations, environmental or otherwise.

F. If sampling is included in the scope of the Project, the conclusions and recommendations contained in the Project Report(s) are based in part upon the data obtained from a limited number of soil, groundwater, or surface water samples obtained from widely spaced surface or subsurface explorations. The nature and extent of variations between these locations may not become evident until further exploration. If variations or other latent conditions then appear evident, it will be necessary to re-evaluate the conclusions and recommendations of the Project Report(s).

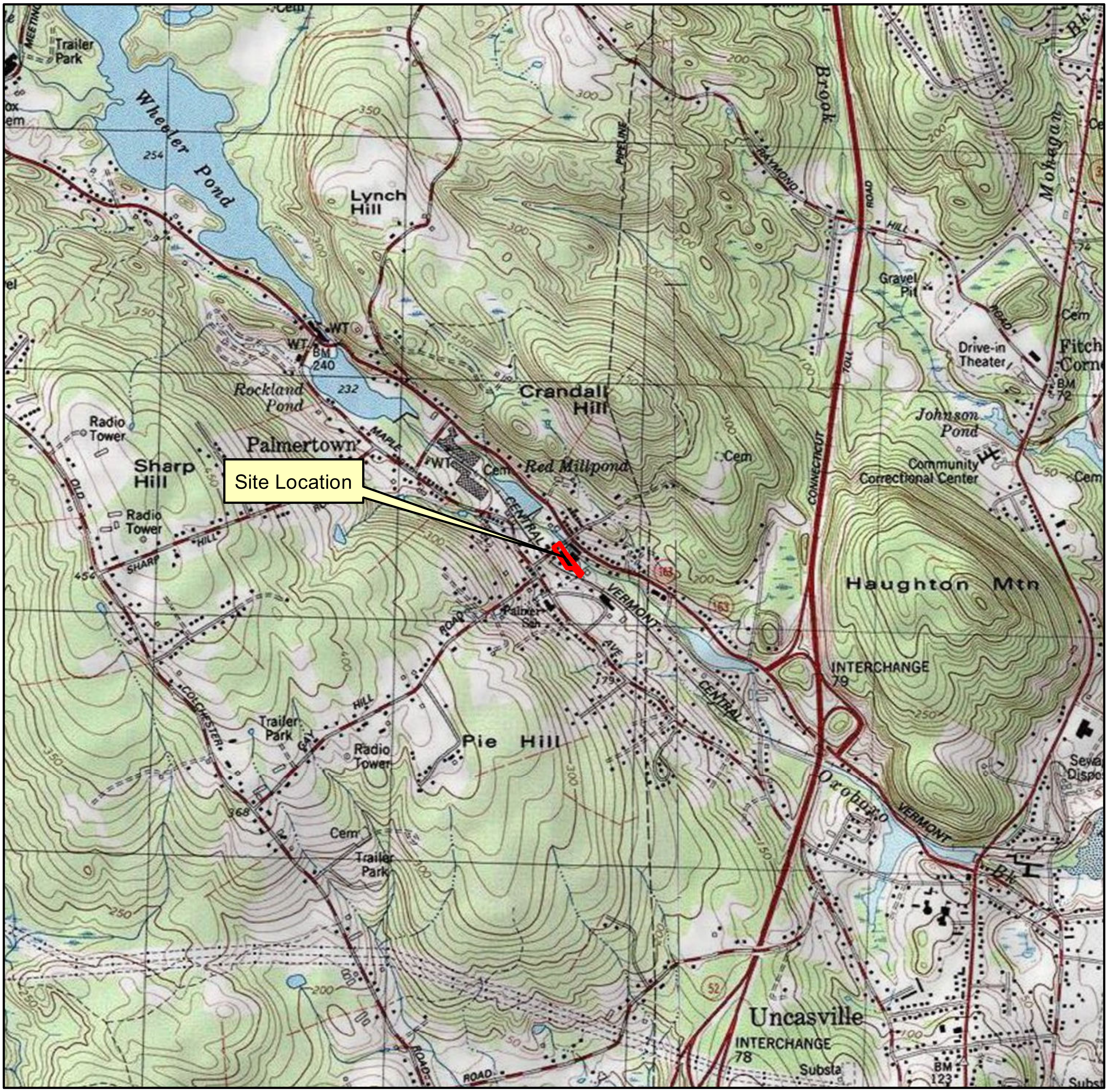
G. If water level readings are made in test pits, borings, and/or observation wells; these observations are made at the times and under the conditions stated on the test pit or boring logs or in the Project Report(s). However, it must be noted that fluctuations in the level of groundwater may occur due to variations in rainfall, passage of time and other factors. Should additional data become available in the future, these data may alter the basis of conclusions and recommendations presented in the Project Report(s).

H. If the conclusions and recommendations contained in the Project Report(s) are based, in part, upon various types of chemical analyses, then the conclusions and recommendations are contingent upon the validity of such data. The analyses are performed for specific parameters and additional chemical constituents not searched for during the current study may be present in soil, groundwater, or surface water at the Site. Where such analyses have been conducted by an out-side laboratory, HRP has relied upon the data provided, and has not conducted an independent evaluation of the reliability of these tests. The data (if obtained) are reviewed and interpretations made in the Project Report(s). If indicated within the Project Report(s), some of these data may be preliminary "screening" level data and should be confirmed with quantitative analyses if more specific in-formation is necessary. Moreover, it should be noted that variations in the types and concentrations of contaminants and variations in their flow paths may occur due to seasonal water table fluctuations, past disposal practices, the passage of time, and other factors. Should additional chemical data become available in the future, these data may alter the basis of the conclusions and recommendations presented in the Project Report(s).

I. It is recommended that HRP be retained to provide further hydrogeologic and engineering services during the conduct of further exploration or the construction and/or implementation of any remedial measures recommended in HRP's Project Report(s). This is to allow HRP and the Client to observe consistency with the concepts and recommendations contained therein, and to allow the development of changes to the remedial program in the event that subsurface conditions or other conditions differ from those anticipated.

J. The services provided by HRP do not include legal advice. Legal counsel should be consulted regarding interpretation of relevant federal, state and local laws.

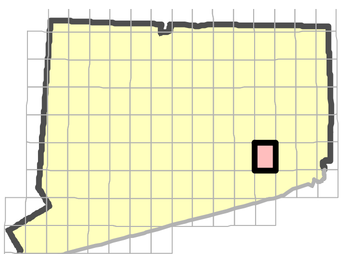
FIGURES



0 1,000 2,000 4,000 6,000 8,000 Feet

1 inch = 2,000 feet

N

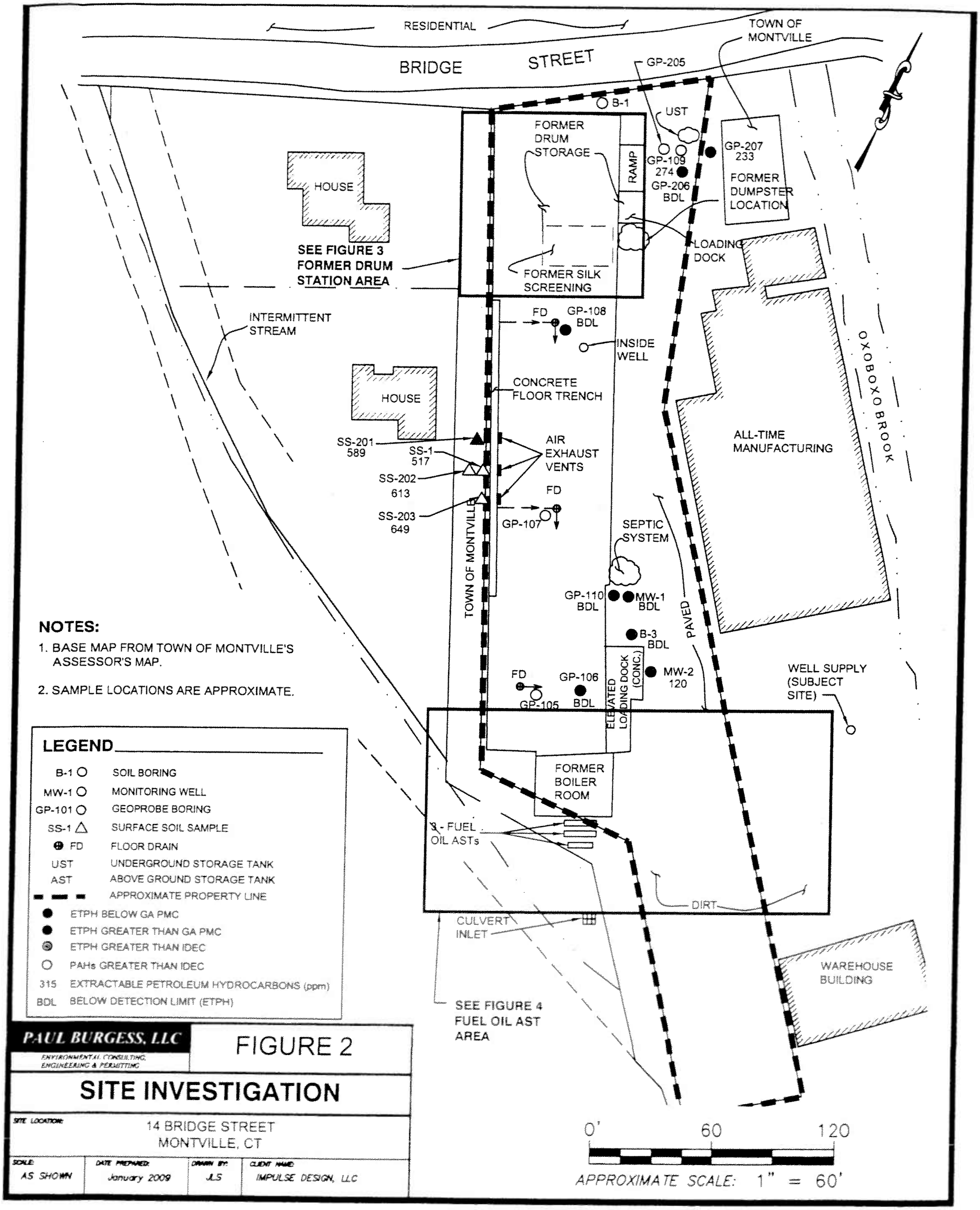


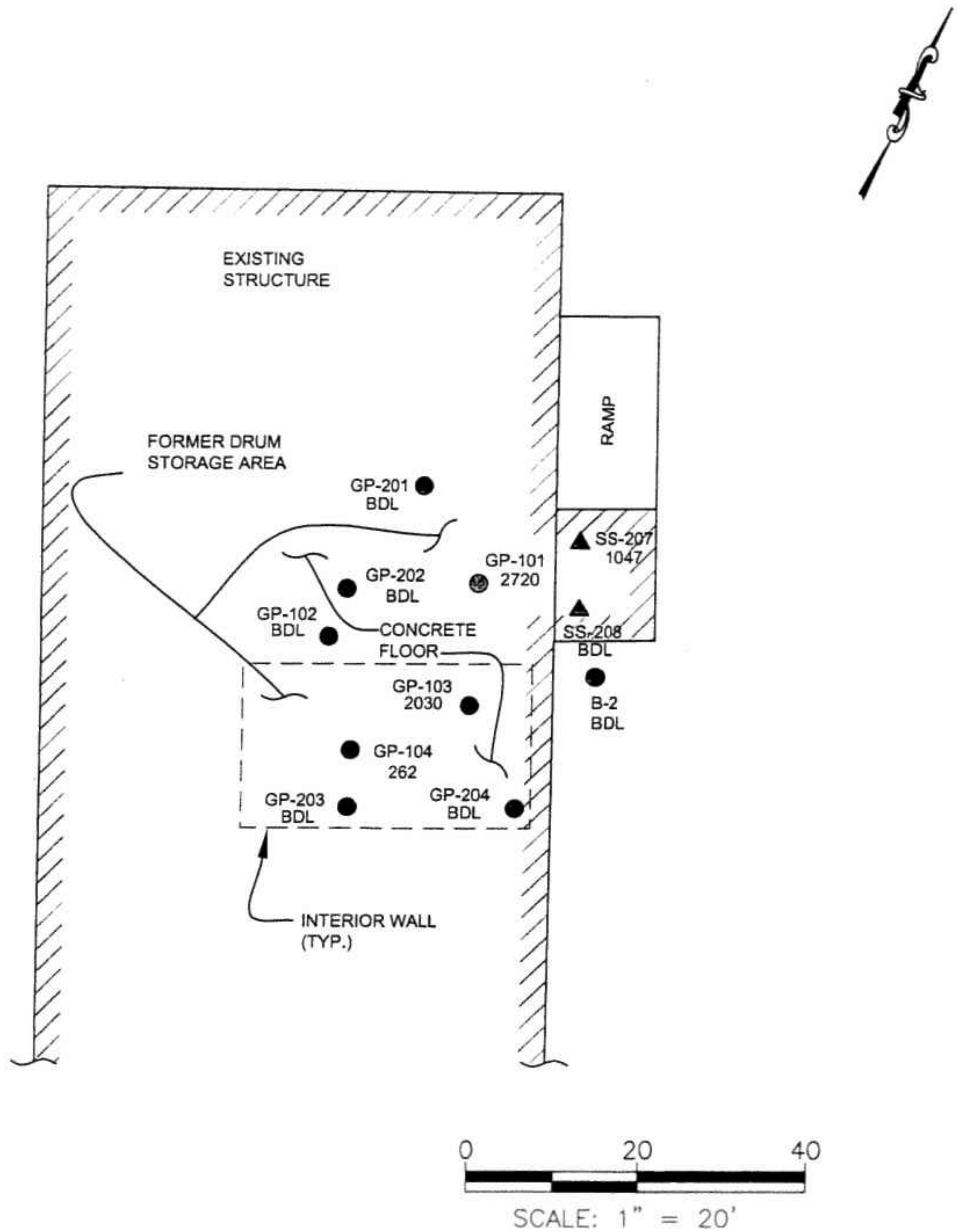
USGS Quadrangle Information
Quad ID: 41072-D2
Name: Montville, Connecticut
Date Pub: 1984

Figure 1
Site Location
14 Bridge Street
Montville, Connecticut
HRP # MON3000.RA
Scale 1" = 2,000'

HRP Associates, Inc.
Environmental/Civil Engineering & Hydrogeology
Creating the Right Solutions Together
Offices in CT, SC, NY, FL, MA, and TX
197 Scott Swamp Road
Farmington, Connecticut 06032
Ph:(860)674-9570 Fax:(860)674-9624
www.hrpassociates.com

Path: J:\M\MONTO - TOWN OF MONTVILLE\14 BRIDGE STREET MONTVILLE, CT\MON3000RA\GIS\Site Location.mxd


RESIDENTIAL
BRIDGE STREET
TOWN OF MONTVILLE
GP-205
B-1
UST
FORMER DRUM STORAGE
RAMP
GP-109 274
GP-206 BDL
GP-207 233
FORMER DUMPSTER LOCATION
LOADING DOCK
HOUSE
SEE FIGURE 3 FORMER DRUM STATION AREA
FORMER SILK SCREENING
INTERMITTENT STREAM
FD
GP-108 BDL
INSIDE WELL
HOUSE
CONCRETE FLOOR TRENCH
OXOBOXO BROOK
ALL-TIME MANUFACTURING
SS-201 589
SS-1 517
SS-202 613
SS-203 649
AIR EXHAUST VENTS
FD
GP-107
TOWN OF MONTVILLE
SEPTIC SYSTEM
GP-110 BDL
MW-1 BDL
PAVED
B-3 BDL
MW-2 120
ELEVATED LOADING DOCK (CONC.)
FD
GP-106 BDL
GP-105
WELL SUPPLY (SUBJECT SITE)
FORMER BOILER ROOM
3 - FUEL OIL ASTs
DIRT
CULVERT INLET
WAREHOUSE BUILDING
SEE FIGURE 4 FUEL OIL AST AREA
NOTES:
1. BASE MAP FROM TOWN OF MONTVILLE'S ASSESSOR'S MAP.
2. SAMPLE LOCATIONS ARE APPROXIMATE.
LEGEND
B-1 SOIL BORING
MW-1 MONITORING WELL
GP-101 GEOPROBE BORING
SS-1 SURFACE SOIL SAMPLE
FD FLOOR DRAIN
UST UNDERGROUND STORAGE TANK
AST ABOVE GROUND STORAGE TANK
APPROXIMATE PROPERTY LINE
ETPH BELOW GA PMC
ETPH GREATER THAN GA PMC
ETPH GREATER THAN IDEC
PAHs GREATER THAN IDEC
315 EXTRACTABLE PETROLEUM HYDROCARBONS (ppm)
BDL BELOW DETECTION LIMIT (ETPH)
PAUL BURGESS, LLC
ENVIRONMENTAL CONSULTING, ENGINEERING & PERMITTING
FIGURE 2
SITE INVESTIGATION
SITE LOCATION: 14 BRIDGE STREET MONTVILLE, CT
SCALE: AS SHOWN
DATE PREPARED: January 2009
DRAWN BY: JLS
CLIENT NAME: IMPULSE DESIGN, LLC
0' 60 120
APPROXIMATE SCALE: 1" = 60'



NOTES:

1. BASE MAP FROM TOWN OF MONTVILLE'S ASSESSOR'S MAP.
2. SAMPLE LOCATIONS ARE APPROXIMATE.

LEGEND

B-1 ○	SOIL BORING
GP-101 ○	GEOPROBE BORING
SS-1 △	SURFACE SOIL SAMPLE
▬ ▬ ▬	APPROXIMATE PROPERTY LINE
●	ETPH BELOW RDEC GA PMC
●	ETPH GREATER THAN GA PMC
◉	ETPH GREATER THAN IDEC
315	EXTRACTABLE PETROLEUM HYDROCARBONS (ppm)
BDL	BELOW DETECTION LIMIT (ETPH)

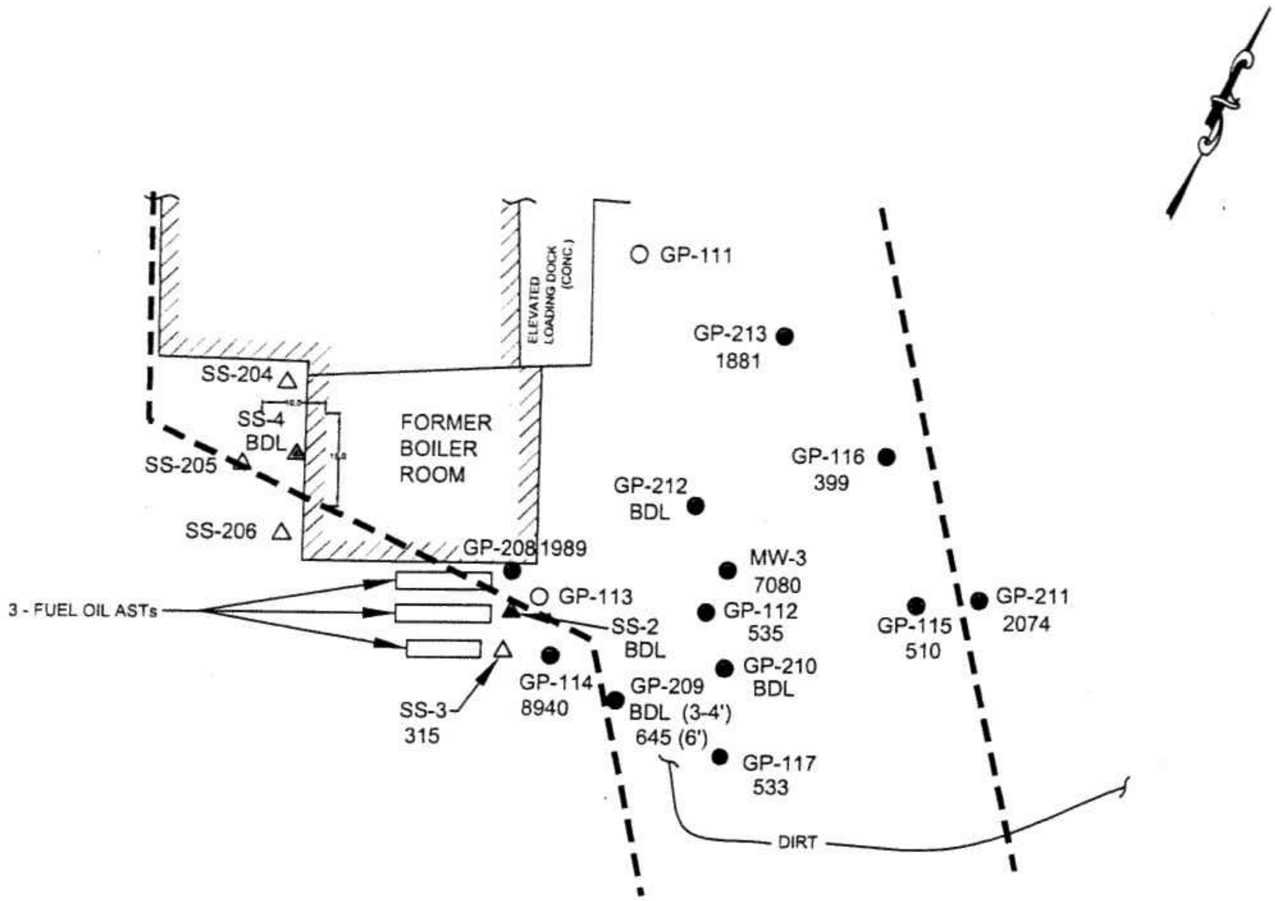
PAUL BURGESS, LLC
ENVIRONMENTAL CONSULTING, ENGINEERING & PERMITTING

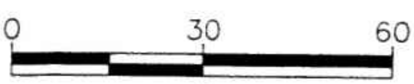
FIGURE 3

FORMER DRUM STORAGE AREA

SITE LOCATION: 14 BRIDGE STREET, MONTVILLE, CT

SCALE:	DATE PREPARED:	DRAWN BY:	CLIENT NAME:
AS SHOWN	JANUARY 2009	JLS	IMPULSE DESIGN, LLC





SCALE: 1" = 30'

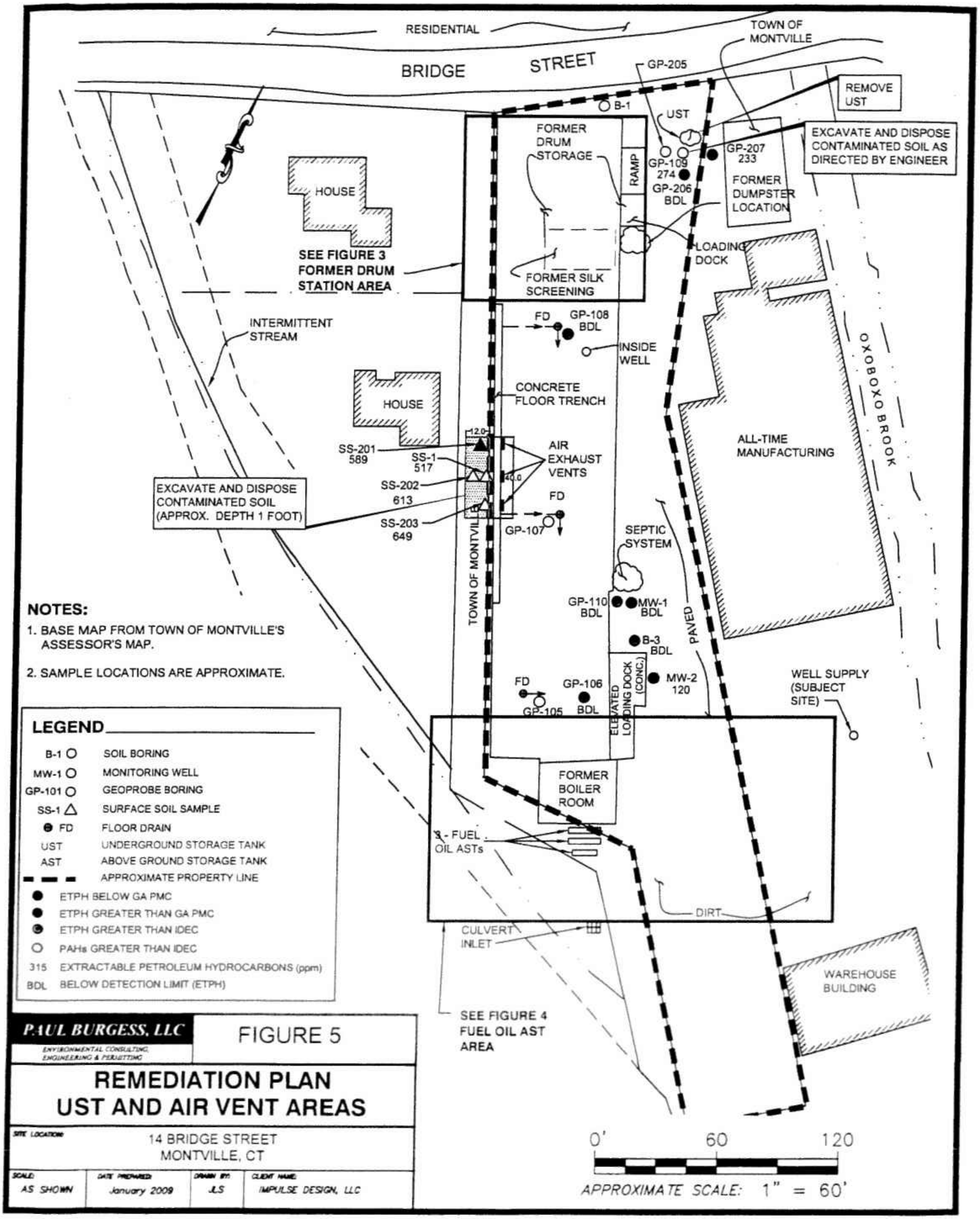
NOTES:

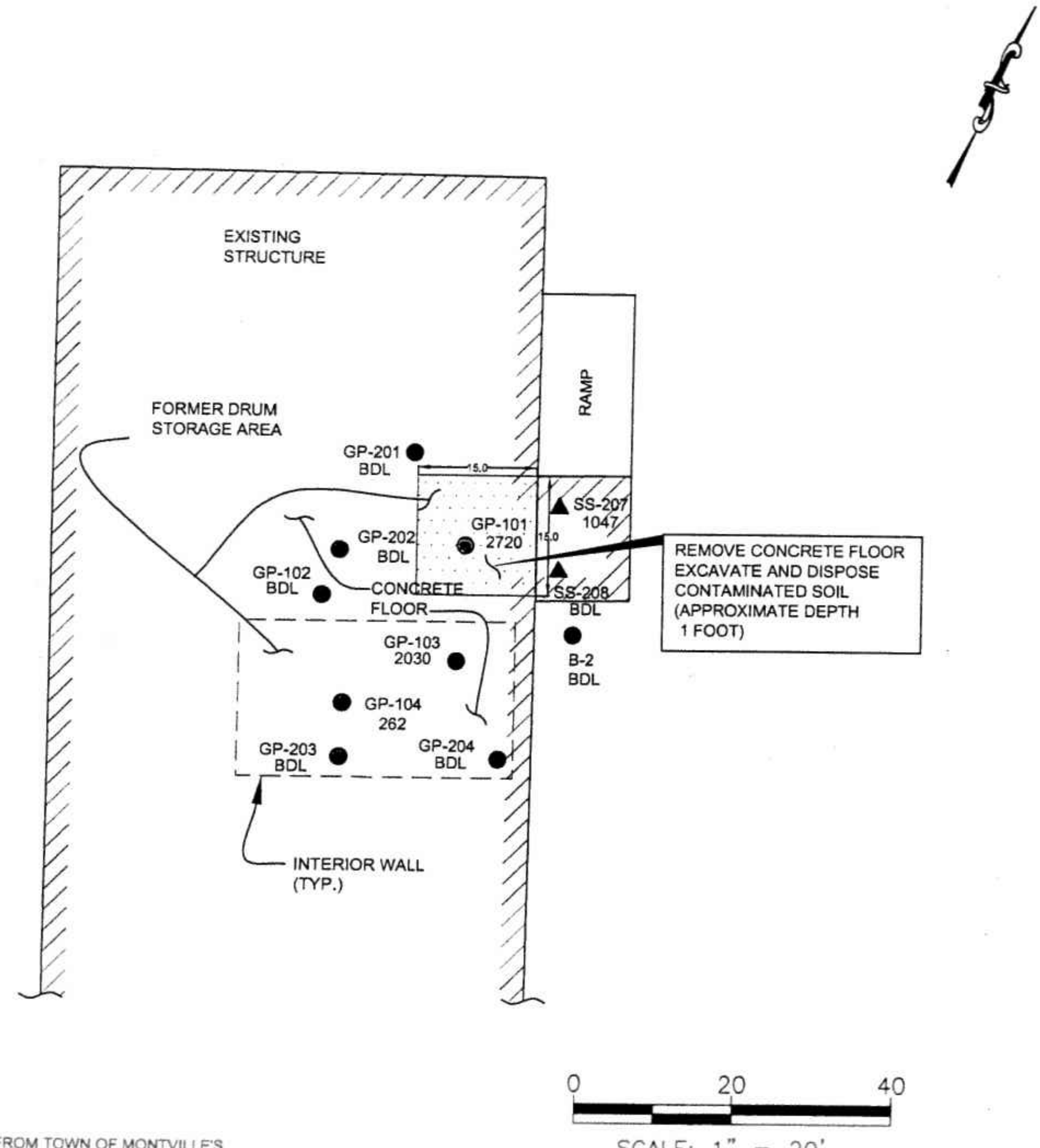
1. BASE MAP FROM TOWN OF MONTVILLE'S ASSESSOR'S MAP.
2. SAMPLE LOCATIONS ARE APPROXIMATE.

LEGEND

B-1 ○	SOIL BORING
MW-1 ○	MONITORING WELL
GP-101 ○	GEOPROBE BORING
SS-1 △	SURFACE SOIL SAMPLE
● FD	FLOOR DRAIN
UST	UNDERGROUND STORAGE TANK
AST	ABOVE GROUND STORAGE TANK
▬ ▬ ▬	APPROXIMATE PROPERTY LINE
●	ETPH BELOW GA PMC
●	ETPH GREATER THAN GA PMC
◉	ETPH GREATER THAN IDEC
○	PAHs GREATER THAN IDEC
▲	ARSENIC GREATER THAN IDEC
315	EXTRACTABLE PETROLEUM HYDROCARBONS (ppm)
BDL	BELOW DETECTION LIMIT (ETPH)

PAUL BURGESS, LLC ENVIRONMENTAL CONSULTING ENGINEERING & PERMITTING	FIGURE 4		
FUEL OIL AST AREA			
SITE LOCATION: 14 BRIDGE STREET MONTVILLE, CT			
SCALE: AS SHOWN	DATE PREPARED: JANUARY 2009	DRAWN BY: JLS	CLIENT NAME: IMPULSE DESIGN, LLC


RESIDENTIAL
TOWN OF MONTVILLE
BRIDGE STREET
GP-205
REMOVE UST
B-1
UST
EXCAVATE AND DISPOSE CONTAMINATED SOIL AS DIRECTED BY ENGINEER
FORMER DRUM STORAGE
RAMP
GP-109 274
GP-206 BDL
GP-207 233
FORMER DUMPSTER LOCATION
HOUSE
SEE FIGURE 3 FORMER DRUM STATION AREA
LOADING DOCK
FORMER SILK SCREENING
FD
GP-108 BDL
INSIDE WELL
INTERMITTENT STREAM
OXOBOXO BROOK
CONCRETE FLOOR TRENCH
HOUSE
ALL-TIME MANUFACTURING
12.0
SS-201 589
SS-1 517
AIR EXHAUST VENTS
40.0
SS-202 613
EXCAVATE AND DISPOSE CONTAMINATED SOIL (APPROX. DEPTH 1 FOOT)
FD
SS-203 649
GP-107
TOWN OF MONTVILLE
SEPTIC SYSTEM
PAVED
GP-110 BDL
MW-1 BDL
B-3 BDL
ELEVATED LOADING DOCK (CONC.)
MW-2 120
FD
GP-106 BDL
GP-105
WELL SUPPLY (SUBJECT SITE)
FORMER BOILER ROOM
3 - FUEL OIL ASTs
DIRT
CULVERT INLET
WAREHOUSE BUILDING
SEE FIGURE 4 FUEL OIL AST AREA
NOTES:
1. BASE MAP FROM TOWN OF MONTVILLE'S ASSESSOR'S MAP.
2. SAMPLE LOCATIONS ARE APPROXIMATE.
LEGEND
B-1 SOIL BORING
MW-1 MONITORING WELL
GP-101 GEOPROBE BORING
SS-1 SURFACE SOIL SAMPLE
FD FLOOR DRAIN
UST UNDERGROUND STORAGE TANK
AST ABOVE GROUND STORAGE TANK
APPROXIMATE PROPERTY LINE
ETPH BELOW GA PMC
ETPH GREATER THAN GA PMC
ETPH GREATER THAN IDEC
PAHs GREATER THAN IDEC
315 EXTRACTABLE PETROLEUM HYDROCARBONS (ppm)
BDL BELOW DETECTION LIMIT (ETPH)
PAUL BURGESS, LLC
ENVIRONMENTAL CONSULTING, ENGINEERING & PERMITTING
FIGURE 5
REMEDIATION PLAN
UST AND AIR VENT AREAS
SITE LOCATION
14 BRIDGE STREET
MONTVILLE, CT
SCALE AS SHOWN
DATE PREPARED January 2009
DRAWN BY JLS
CLIENT NAME IMPULSE DESIGN, LLC
0' 60 120
APPROXIMATE SCALE: 1" = 60'



NOTES:

1. BASE MAP FROM TOWN OF MONTVILLE'S ASSESSOR'S MAP.
2. SAMPLE LOCATIONS ARE APPROXIMATE.

PAUL BURGESS, LLC
ENVIRONMENTAL CONSULTING ENGINEERING & PERMITTING

FIGURE 6

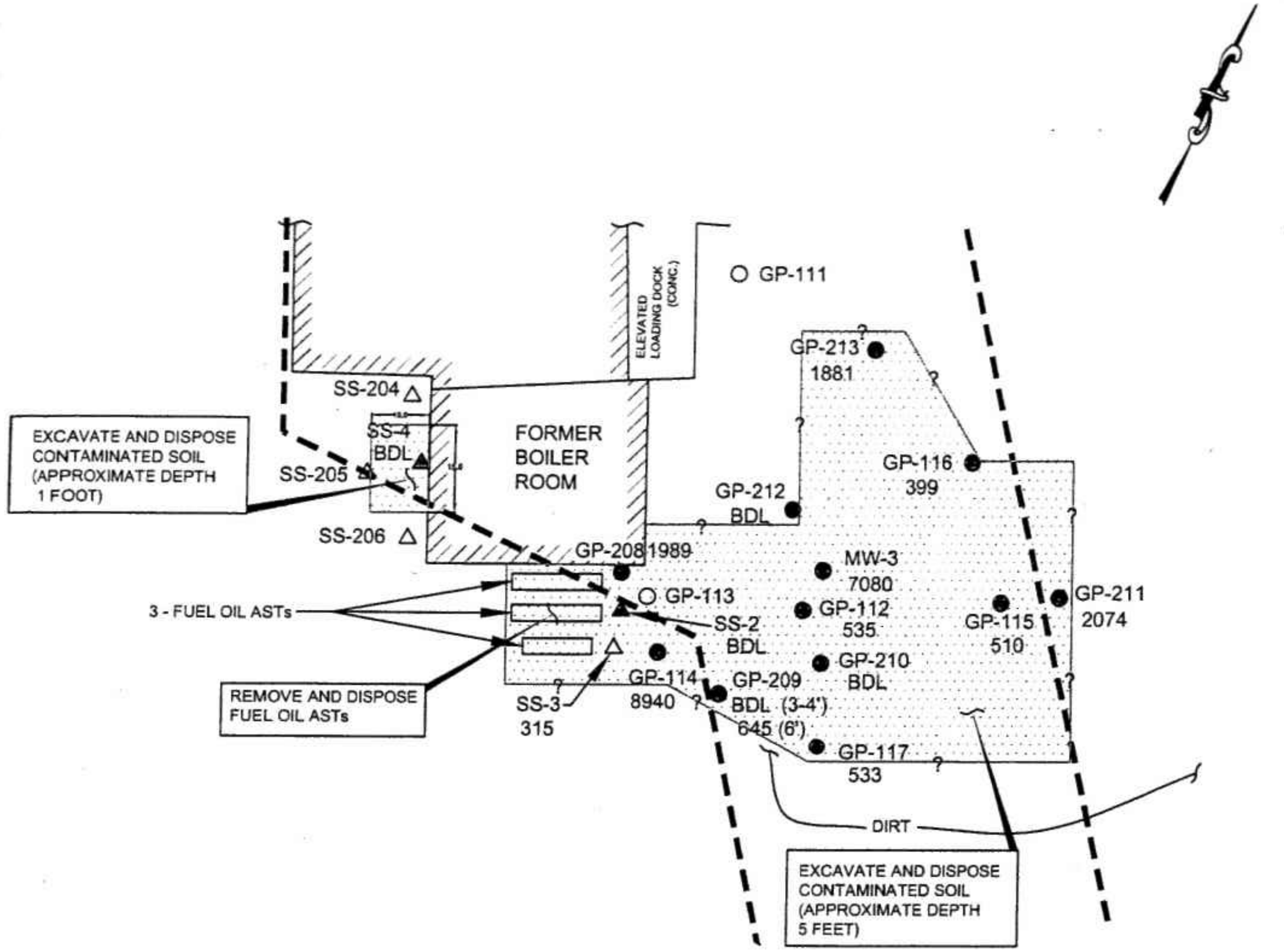
REMEDIATION PLAN
FORMER DRUM STORAGE AREA

SITE LOCATION: 14 BRIDGE STREET MONTVILLE, CT

SCALE	DATE PREPARED	DRAWN BY	CLIENT NAME
AS SHOWN	JANUARY 2009	JLS	IMPULSE DESIGN, LLC

LEGEND

- B-1 ○ SOIL BORING
- GP-101 ○ GEOPROBE BORING
- SS-1 △ SURFACE SOIL SAMPLE
- ▬ ▬ ▬ APPROXIMATE PROPERTY LINE
- ● ETPH BELOW RDEC GA PMC
- ● ETPH GREATER THAN GA PMC
- ◉ ETPH GREATER THAN IDEC
- 315 EXTRACTABLE PETROLEUM HYDROCARBONS (ppm)
- BDL BELOW DETECTION LIMIT (ETPH)



0 30 60

SCALE: 1" = 30'

NOTES:

1. BASE MAP FROM TOWN OF MONTVILLE'S ASSESSOR'S MAP.
2. SAMPLE LOCATIONS ARE APPROXIMATE.

LEGEND

B-1 ○	SOIL BORING
MW-1 ○	MONITORING WELL
GP-101 ○	GEOPROBE BORING
SS-1 △	SURFACE SOIL SAMPLE
● FD	FLOOR DRAIN
UST	UNDERGROUND STORAGE TANK
AST	ABOVE GROUND STORAGE TANK
▬ ▬ ▬	APPROXIMATE PROPERTY LINE
●	ETPH BELOW GA PMC
●	ETPH GREATER THAN GA PMC
◕	ETPH GREATER THAN IDEC
○	PAHs GREATER THAN IDEC
▲	ARSENIC GREATER THAN IDEC
315	EXTRACTABLE PETROLEUM HYDROCARBONS (ppm)
BDL	BELOW DETECTION LIMIT (ETPH)

PAUL BURGESS, LLC
ENVIRONMENTAL CONSULTING ENGINEERING & PERMITTING

FIGURE 7

REMEDIATION PLAN FUEL OIL AST AREA

SITE LOCATION: 14 BRIDGE STREET MONTVILLE, CT

SCALE	DATE PREPARED	DRAWN BY	CLIENT NAME
AS SHOWN	JANUARY 2009	JLS	IMPULSE DESIGN, LLC

TABLES

TABLE 1

Soil Analytical Data
14 Bridge Street
Montville, Connecticut

PAHS by EPA Method 8270C (ug/kg)

Sample Name/Depth Parameter	I/C DEC	Soil PMC GA	B-2 (2-3')	B-3 (2-4')	GP-101 (0-0.5')	GP-102 (0.5-2.0')	GP-103 (0.5-3')	GP-104 (0.5-3')	GP-106 (4-5')	GP-108 (0-1')	GP-109 (0-3.5')	GP-110 (0-3.5')	MW-1 (2-4')
Acenaphthene	2,500,000	8,400	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Acenaphthylene	2,500,000	8,400	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Anthracene	2,500,000	40,000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Benzo(a)anthracene	7,800	1,000	BDL	BDL	123.0	BDL	BDL	74.0	BDL	BDL	**1,220.0**	55.0	78.0
Benzo(a)pyrene	1,000	1,000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	**1,660.0**	BDL	BDL
Benzo(b)fluoranthene	7,800	1,000	BDL	BDL	BDL	BDL	BDL	70.0	BDL	BDL	**1,350.0**	69.0	76.0
Benzo(g,h,i)perylene	2,500,000	4,200	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	1,500.0	BDL	BDL
Benzo(k)fluoranthene	78,000	1,000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	950.0	BDL	BDL
Carbazole	290,000	1,000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
2-Chloronaphthalene	2,500,000	11,000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Chrysene	780,000	1,000	BDL	BDL	120.0	BDL	61.0	101.0	BDL	BDL	**1,750.0**	92.0	90.0
Dibenzo(a,h)anthracene	1,000	1,000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Fluoranthene	2,500,000	5,600	BDL	74.0	113	BDL	53.0	173.0	55.0	BDL	2,910.0	141.0	184.0
Fluorene	2,500,000	5,600	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Indeno(1,2,3-cd)pyrene	7,800	1,000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	**2,040.0**	50.0	BDL
2-Methylnaphthalene	2,500,000	980	BDL	BDL	BDL	BDL	57	BDL	BDL	BDL	BDL	BDL	BDL
Naphthalene	2,500,000	5,600	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Phenanthrene	2,500,000	4,000	BDL	74.0	123	BDL	68.0	153.0	BDL	BDL	1,770.0	117.0	167.0
Pyrene	2,500,000	4,000	BDL	64.0	130	BDL	56.0	156.0	BDL	BDL	2,540.0	131.0	147.0
Sample Comment											Complies with PMC based on SPLP		

*Notes follow last page of Table 1

TABLE 1

Soil Analytical Data
14 Bridge Street
Montville, Connecticut

PAHS by EPA Method 8270C (ug/kg)

Sample Name/Depth Parameter	I/C DEC	Soil PMC GA	MW-2 (0-4')	MW-3 (0-2')	SS-1	SS-3	SS-4	SS-201 12/08	SS-202 12/08	SS-203 12/08	GP-206 (0-4') 12/08	GP-207 (0-2') 12/08
Acenaphthene	2,500,000	8,400	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Acenaphthylene	2,500,000	8,400	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Anthracene	2,500,000	40,000	BDL	115.0	561.0	BDL	BDL	BDL	BDL	BDL	52.0	117.0
Benzo(a)anthracene	7,800	1,000	109.0	485.0	**1,450.0**	**1,480.0**	BDL	536.0	**1,030.0**	817.0	104.0	383.0
Benzo(a)pyrene	1,000	1,000	85.0	294.0	**1,850.0**	**1,030.0**	BDL	773.0	**1,770.0**	**1,340.0**	177.0	446.0
Benzo(b)fluoranthene	7,800	1,000	127.0	532.0	**1,450.0**	**1,820.0**	BDL	896.0	**2,050.0**	**1,610.0**	152.0	393.0
Benzo(g,h,i)perylene	2,500,000	4,200	BDL	216.0	1,510.0	1,120.0	BDL	BDL	1,980.0	1,520.0	166.0	404.0
Benzo(k)fluoranthene	78,000	1,000	BDL	184.0	1,060.0	621.0	BDL	510.0	**1,460.0**	**1,090.0**	93.0	258.0
Carbazole	290,000	1,000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
2-Chloronaphthalene	2,500,000	11,000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Chrysene	780,000	1,000	164.0	600.0	**2,130.0**	**2,080.0**	BDL	717.0	**1,820.0**	**1,360.0**	223.0	529.0
Dibenzo(a,h)anthracene	1,000	1,000	BDL	200.0	BDL	BDL	BDL	BDL	BDL	BDL	BDL	131
Fluoranthene	2,500,000	5,600	254.0	1,000.0	4,450.0	2,920.0	BDL	1,330.0	3,850.0	2,600.0	298.0	876.0
Fluorene	2,500,000	5,600	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Indeno(1,2,3-cd)pyrene	7,800	1,000	92.0	304.0	**2,130.0**	**1,640.0**	BDL	607.0	**1,420.0**	**1,160.0**	137.0	333.0
2-Methylnaphthalene	2,500,000	980	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Naphthalene	2,500,000	5,600	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Phenanthrene	2,500,000	4,000	178.0	615.0	2,610.0	1,910.0	BDL	659.0	2,630.0	1,370.0	260.0	688.0
Pyrene	2,500,000	4,000	246.0	926.0	3,810.0	2,570.0	BDL	1,210.0	3,180.0	2,190.0	284.0	846.0
Sample Comment					Complies with PMC based on SPLP	Complies with PMC based on SPLP						

*Notes follow last page of Table 1

TABLE 1

Soil Analytical Data
14 Bridge Street
Montville, Connecticut

SPLP PAHS by EPA Method 8270C (ug/L)

Sample Name/Depth Parameter	GWPC	GP-109 (0-3.5')	SS-1	SS-3
Acenaphthene	420	BDL	BDL	BDL
Acenaphthylene	420	BDL	BDL	BDL
Anthracene	2,000	BDL	BDL	BDL
Benzo(a)anthracene	0.06	BDL	BDL	BDL
Benzo(a)pyrene	0.2	BDL	BDL	BDL
Benzo(b)fluoranthene	0.08	BDL	BDL	BDL
Benzo(g,h,i)perylene	210	BDL	BDL	BDL
Benzo(k)fluoranthene	0.5	BDL	BDL	BDL
Carbazole	10	BDL	BDL	BDL
2-Chloronaphthalene	560	BDL	BDL	BDL
Chrysene	4.8	BDL	BDL	BDL
Dibenzo(a,h)anthracene	0.2	BDL	BDL	BDL
Fluoranthene	280	BDL	BDL	BDL
Fluorene	280	BDL	BDL	BDL
Indeno(1,2,3-cd)pyrene	0.2	BDL	BDL	BDL
2-Methylnaphthalene	49	BDL	BDL	BDL
Naphthalene	280	BDL	BDL	BDL
Phenanthrene	200	BDL	BDL	BDL
Pyrene	200	BDL	BDL	BDL

*Notes follow last page of Table 1

Table 1

Soil Analytical Data
14 Bridge Street
Montville, Connecticut

VOCs (ug/kg)

Sample Name/Depth Parameter	I/C DEC	GA PMC	B-2 (2-3')	B-3 (2-4')	GP-103 (0.5-3')	GP-109 (0-3.5')
Acetone	1,000,000	14,000	BDL	BDL	BDL	NA
Acrylonitrile	NE	NE	BDL	BDL	BDL	NA
Benzene	200,000	20	BDL	BDL	BDL	BDL
Bromobenzene	NE	NE	BDL	BDL	BDL	BDL
Bromochloromethane	NE	NE	BDL	BDL	BDL	NA
Bromodichloromethane	92,000	11	BDL	BDL	BDL	NA
Bromoform	720,000	80	BDL	BDL	BDL	NA
Bromomethane	1,000,000	200	BDL	BDL	BDL	NA
Butylbenzene n-	1,000,000	1,400	BDL	BDL	BDL	BDL
Butylbenzene sec-	1,000,000	1,400	BDL	BDL	BDL	BDL
Butylbenzene tert-	1,000,000	1,400	BDL	BDL	BDL	BDL
Carbon disulfide	1,000,000	14,000	BDL	BDL	BDL	NA
Carbon tetrachloride	44,000	100	BDL	BDL	BDL	NA
Chlorobenzene	1,000,000	2,000	BDL	BDL	BDL	BDL
Chloroethane	NE	NE	BDL	BDL	BDL	NA
Chloroform	940,000	120	BDL	BDL	BDL	NA
Chloromethane	440,000	54	BDL	BDL	BDL	NA
Chlorotoluene 2-	1,000,000	NE	BDL	BDL	BDL	BDL
Chlorotoluene 4-	1,000,000	NE	BDL	BDL	BDL	BDL
Dibromochloromethane	68,000	10	BDL	BDL	BDL	NA
Dibromo-3-chloropropane 1,2-	NE	NE	BDL	BDL	BDL	NA
Dibromoethane 1,2- (EDB)	67	10	BDL	BDL	BDL	NA
Dibromomethane	NE	NE	BDL	BDL	BDL	NA
Dichlorobenzene 1,2-	1,000,000	3,100	BDL	BDL	BDL	BDL
Dichlorobenzene 1,3-	1,000,000	12,000	BDL	BDL	BDL	BDL
Dichlorobenzene 1,4-	240,000	1,500	BDL	BDL	BDL	BDL
Dichloro-2-butene t-1,4-	NE	NE	BDL	BDL	BDL	NA
Dichlorodifluoromethane	NE	NE	BDL	BDL	BDL	NA
Dichloroethane 1,1-	1,000,000	1,400	BDL	BDL	BDL	NA
Dichloroethane 1,2-	63,000	20	BDL	BDL	BDL	NA
Dichloroethylene 1,1-	9,500	140	BDL	BDL	BDL	NA
Dichloroethylene cis-1,2-	1,000,000	1,400	BDL	BDL	BDL	NA
Dichloroethylene trans-1,2-	1,000,000	2,000	BDL	BDL	BDL	NA
Dichloropropane 1,2-	84,000	100	BDL	BDL	BDL	NA
Dichloropropane 1,3-	32,000	10	BDL	BDL	BDL	NA
Dichloropropane 2,2-	NE	NE	BDL	BDL	BDL	NA
Dichloropropylene 1,1-	NE	NE	BDL	BDL	BDL	NA
Dichloropropylene cis-1,3-	NE	NE	BDL	BDL	BDL	NA
Dichloropropylene trans-1,3-	NE	NE	BDL	BDL	BDL	NA
Ethyl Benzene	1,000,000	10,100	BDL	BDL	BDL	BDL
Hexachlorobutadiene	73,000	1,000	BDL	BDL	BDL	NA
Isopropylbenzene	1,000,000	600	BDL	BDL	BDL	BDL
Isopropyltoluene p-	1,000,000	600	BDL	BDL	BDL	BDL
Methylene chloride	760,000	100	BDL	BDL	BDL	NA
MIBK	1,000,000	7,000	BDL	BDL	BDL	NA
Methyl tert-butyl ether (MTBE)	1,000,000	2,000	BDL	BDL	BDL	BDL
Methyl ethyl ketone	1,000,000	8,000	BDL	BDL	BDL	NA
Methyl butyl ketone	NE	NE	BDL	BDL	BDL	NA
Naphthalene	2,500,000	5,600	BDL	BDL	BDL	BDL
Propylbenzene n-	1,000,000	1,400	BDL	BDL	BDL	BDL
Styrene	1,000,000	2,000	BDL	BDL	BDL	BDL
Tetrachloroethane 1,1,1,2-	220,000	20	BDL	BDL	BDL	NA
Tetrachloroethane 1,1,2,2-	29,000	10	BDL	BDL	BDL	NA
Tetrachloroethylene	110,000	100	BDL	BDL	BDL	NA
Tetrahydrofuran	NE	NE	BDL	BDL	BDL	NA
Toluene	1,000,000	20,000	BDL	BDL	BDL	BDL
Trichloroethane 1,1,1-	1,000,000	4,000	BDL	BDL	BDL	NA
Trichloroethane 1,1,2-	100,000	100	BDL	BDL	BDL	NA
Trichlorobenzene 1,2,4-	2,500,000	1,400	BDL	BDL	BDL	BDL
Trichlorobenzene 1,2,3-	NE	NE	BDL	BDL	BDL	BDL
Trichloroethylene	520,000	100	BDL	BDL	BDL	NA
Trichlorofluoromethane	1,000,000	26,000	BDL	BDL	BDL	NA
Trichloropropane 1,2,3-	NE	NE	BDL	BDL	BDL	NA
Trichlorotrifluoroethane	NE	NE	BDL	BDL	BDL	NA
Trimethylbenzene 1,2,4-	1,000,000	7,000	BDL	BDL	BDL	BDL
Trimethylbenzene 1,3,5-	1,000,000	7,000	BDL	BDL	BDL	BDL
Vinyl chloride	3,000	40	BDL	BDL	BDL	NA
Xylene Total	1,000,000	19,500	BDL	BDL	BDL	BDL

*Notes follow last page of Table 1

Table 1

Soil Analytical Data
14 Bridge Street
Montville, Connecticut

Metals (mg/kg)

Sample Name/Depth Parameter	I/C DEC (mg/kg)	B-2 (2-3')	B-3 (2-4')	MW-1 (2-4')	MW-2 (0-4')	MW-3 (0-2')	SS-1	SS-4	GP-101 (0-0.5')	GP-102 (0.5-2.0')	GP-103 (0.5-3')	GP-104 (0.5-3')	GP-106 (4-5')	GP-108 (0-1')	GP-109 (0-3.5')	GP-110 (0-3.5')	SS-204 12/08	SS-205 12/08	SS-206 12/08	GP-209 (3-4') 12/08	GP-213 (3-4') 12/08
Arsenic	10	5.0	4.4	4.4	4.1	**10.8**	3.2	**13.9**	1.2	3.7	4.3	5.0	2.4	BDL	NA	3.9	5.3	8.7	6.1	3.1	13.2
Barium	140,000	43	51	74	38	94	88	106	23	39	43	52	34	12	NA	62	NA	NA	NA	NA	NA
Cadmium	1,000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	BDL	NA	NA	NA	NA	NA
Chromium, Total	100	16.7	12.4	14.9	15.3	10.8	29.7	52.4	6.5	14.3	10.3	9.9	8.0	2.4	NA	11.4	NA	NA	NA	NA	NA
Cyanide	41,000	BDL	BDL	NA	BDL	NA	NA	BDL	BDL	BDL	BDL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	1,000	29.0	81.1	56.2	56.5	261	202	218	7.4	10.1	89.4	87.6	26.9	5.3	23.4	32.0	193	151	235	92.1	195
Mercury	610	0.04	0.25	0.37	0.07	0.18	0.06	0.27	BDL	0.02	0.27	0.17	0.07	BDL	NA	0.12	NA	NA	NA	NA	NA
Selenium	10,000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	BDL	NA	NA	NA	NA	NA
Silver	10,000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	BDL	NA	NA	NA	NA	NA
Copper	76,000	12.6	19.6	25.4	60.8	49.5	26.9	1030	4.4	15.6	46.6	53.5	17.0	4.2	NA	15.3	NA	NA	NA	NA	NA
Nickel	7,500	11.5	12.4	11.9	12.3	21.8	12.1	60.8	4.8	13.5	11.6	13.2	9.4	4.1	NA	11.5	NA	NA	NA	NA	NA
Zinc	610,000	44.1	49.2	55.9	78.4	289	84.0	787	13.1	27.7	152	86.8	21.4	11.2	NA	42.1	NA	NA	NA	NA	NA

*Notes follow last page of Table 1

Table 1

Soil Analytical Data
14 Bridge Street
Montville, Connecticut

SPLP Metals (mg/L)

Sample Name/Depth Parameter	Soil PMC GA	B-2 (2-3')	B-3 (2-4')	MW-1 (2-4')	MW-2 (0-4')	MW-3 (0-2')	SS-1	SS-4	GP-101 (0-0.5')	GP-102 (0.5-2.0')	GP-103 (0.5-3')	GP-104 (0.5-3')	GP-106 (4-5')	GP-108 (0-1')	GP-109 (0-3.5')	GP-110 (0-3.5')	GP-209 (3-4') 12/08	GP-213 (3-4') 12/08
Arsenic	0.01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	BDL	BDL	BDL
Barium	1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	BDL	NA	NA
Cadmium	0.005	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	BDL	NA	NA
Chromium, Total	0.05	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	BDL	NA	NA
Lead	0.015	BDL	BDL	0.007	0.010	**0.045**	BDL	0.013	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.015	0.008
Mercury	0.002	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	BDL	NA	NA
Selenium	0.05	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	BDL	NA	NA
Silver	0.036	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	BDL	NA	NA
Copper	1.3	BDL	BDL	0.01	0.01	BDL	BDL	0.06	BDL	BDL	0.02	BDL	BDL	BDL	NA	BDL	NA	NA
Nickel	0.1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	BDL	NA	NA
Zinc	5	BDL	BDL	BDL	BDL	0.05	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	BDL	NA	NA

*Notes follow last page of Table 1

Table 1

Soil Analytical Data
14 Bridge Street
Montville, Connecticut

ETPH

Sample Name (Depth)	I/C DEC	GA PMC	GA PMC SPLP	ETPH (mg/kg)	ETPH SPLP (mg/l)	Sample Comment
B-2 (2-3')	2,500	500		BDL		
B-3 (2-4')	2,500	500		BDL		
GP-101 (0-0.5')	2,500	500	0.1	2720	BDL	Complies with GA PMC
GP-102 (0.5-2.0')	2,500	500		BDL		
GP-103 (0.5-3')	2,500	500	0.1	2030	BDL	Complies with GA PMC
GP-104 (0.5-3')	2,500	500		262		
GP-106 (4-5')	2,500	500		BDL		
GP-108 (0-1')	2,500	500		BDL		
GP-109 (0-3.5')	2,500	500		274		
GP-110 (0-3.5')	2,500	500		BDL		
GP-112 (4-6')	2,500	500		535		
GP-114 (4')	2,500	500	0.1	8940	0.4	
GP-115 (4-6')	2,500	500		510		
GP-116 (3-4')	2,500	500		399		
GP-117 (4')	2,500	500		533		
MW-1 (2-4')	2,500	500		BDL		
MW-2 (0-4')	2,500	500		120		
MW-3 (3')	2,500	500	0.1	7080	0.2	
SS-1	2,500	500		517		
SS-2	2,500	500		BDL		
SS-3	2,500	500		315		
SS-4	2,500	500		BDL		
SS-201	2,500	500		589		
SS-202	2,500	500		613		
SS-203	2,500	500		649		
SS-207	2,500	500		1044	BDL	Complies with GA PMC
SS-208	2,500	500		BDL		
GP-201 (3")	2,500	500		BDL		
GP-202 (0-0.5)	2,500	500		BDL		
GP-203 (3-4')	2,500	500		BDL		
GP-204 (3-4')	2,500	500		BDL		
GP-206 (0-4')	2,500	500		BDL		
GP-207 (0-2')	2,500	500		233	BDL	
GP-208 (3-4')	2,500	500		1989		
GP-209 (3-4')	2,500	500		BDL		
GP-209 (6')	2,500	500	0.1	645	0.3	
GP-210 (3-4')	2,500	500		BDL		
GP-211 (3-4')	2,500	500		**2074**		
GP-212 (3-4')	2,500	500		BDL		
GP-213 (3-4')	2,500	500	0.1	**1881**	**0.7**	

Table 1

Soil Analytical Data
14 Bridge Street
Norwich, Connecticut

PCBs

Sample Name/Depth Parameter	I/C DEC	GA PMC	B-3 (2-4')	GP-110 (0-3.5')	GP-112 (4-6')	GP-114 (4')	GP-117 (4')	MW-1 (2-4')	MW-2 (0-4')	SS-2	SS-3	GP-208 (3-4') 12/08	GP-209 (6') 12/08
PCBs, Total (mg/kg)	10		BDL	BDL	BDL	BDL	BDL	BDL	0.8	3.0	BDL	BDL	BDL
PCBs, SPLP(mg/l)		0.0005								BDL		BDL	BDL
												BDL	BDL
Aroclor 1016			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Aroclor 1221			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Aroclor 1232			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Aroclor 1242			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Aroclor 1248			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Aroclor 1254			BDL	BDL	BDL	BDL	BDL	BDL	0.8	3	BDL	BDL	BDL
Aroclor 1260			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

*Notes follow last page of Table 1

TABLE 1

Soil Analytical Data
14 Bridge Street
Montville, Connecticut

Notes:

CT RSRs - Connecticut Remediation Standard Regulations
PMC GA - Pollutant Mobility Criteria for 'GA' area
RES DEC - Residential Direct Exposure Criteria
I/C DEC - Industrial/Commercial Direct Exposure Criteria
BDL - Below Detectable Limit
ETPH- Extractable Total Petroleum Hydrocarbons
SPLP - Synthetic Precipitate Leaching Procedure
VOCs - Volatile Organic Compounds
PAHs - Polycyclic Aromatic Hydrocarbons
Shade indicates detected result exceeds the applicable CTDEP Standard
NE - indicates CTDEP standard not established
NA - Not Analyzed
mg/kg = milligrams per kilogram or ppm
µg/kg = micrograms per kilogram or ppb
µg/L = micrograms per liter or ppb
mg/L = milligrams per liter or ppm
ppb = parts per billion
ppm = parts per million

Table 2
Conceptual Site Model
14 Bridge Street
Montville, Connecticut

Recognized Environmental Condition / Release Mechanism	Release	Recommendations	Chemical of Concern	Potential Impacted Media
UST	None identified with UST	Remove UST, Remediate PAHs above I/C DEC		Subsurface soil, Groundwater
Fuel Oil ASTs	Release detected	Remove impacted soil	ETPH, PCBs, lead, arsenic	Surface soil, Subsurface soil, Groundwater
Former industrial operations inside buildings-first floor (e.g., drum storage, industrial chemical processes, floor drains)	Limited release detected	Remove impacted soil and establish an ELUR	ETPH, PCBs, Lead, Arsenic	Subsurface Soil
Loading Docks	No release detected	No further action		
Septic System	No release detected	No further action		
Former Pond	Release detected-comingled with AST fuel tanks release	Remove impacted soil		Subsurface soil, Groundwater
Former Railroad Siding	Coal ash intermingled with other RECs	Investigated with other RECs		Surface soil, Subsurface soil
Former Dumpster Location	No release detected	No further action		
Discharge Vents	Release detected	Remove impacted soil	ETPH, PAHs	Surface Soil
Boiler Room Discharge	Release detected	Remove impacted soil	Lead, Arsenic	Surface Soil

AST - Aboveground Storage Tank
ELUR - Environmental Land Use Restriction
ETHP - Extractable Total Petroleum Hydrocarbons
I/C DEC - Industrial/Commercial Direct Exposure Criteria
PAHs - Polunuclear Aromatic Hydrocarbons
PCBs - Polychlorinated Biphenyls
REC - Reconized Environmental Condition

Table 3
Remedial Alternative Summary
14 Bridge Street
Montville, Connecticut

Alternative	Advantages	Disadvantages	Relative Cost to Implement
No Remedial Action Includes: • No remediation activities • Continued Site operations	• Minimizes remedial costs • Minimizes disruption to business	• Site contamination left unaddressed and not in compliance with regulations • No reduction in potential risks for Site occupants • Lack of remediation may make property less attractive to receive loans from lending institutions	• Direct costs are negligible • Indirect costs could include 1) the inability to obtain funding from a lending institution and 2) potential liability risks, due to the presence of contaminated soil on site
Soil Excavation & Off-Site Disposal Includes: • Excavation, transportation, and off-site disposal of impacted soil • Collection of confirmatory soil samples from sidewalls and bottom of the excavation • Post-remediation groundwater monitoring & well installation.	• Removes contaminated soil in shortest timeframe possible • Excavation is the only method for UST removal	• Disruptive to ongoing business • Temporary increase in truck traffic during off-site transportation of impacted soil • Complete removal of impacted soil may be compromised due to on site buildings/footings • Requires proper handling and management of soil during excavation to reduce exposure risks	• Low to moderate
In-situ Soil Treatment Includes: • Application of a remedial agent into the subsurface environment that will physically/chemically break down contaminants or will stimulated microorganisms to biologically deplete the compounds • Post-remediation groundwater monitoring and reporting • Post-remediation soil sampling and reporting	• Less invasive and disruptive than soil excavation • Can be used to remediate deeper soil • No off-site transportation/disposal of soil	• Difficult to achieve uniform application of the treatment agent to subsurface materials • Less effective in highly contaminated soil • Poor distribution of treatment agent in unsaturated soil • Longer duration of remedial activities compared to soil excavation and off-site disposal • Requires permit approval by CT DEEP • Requires extensive initial soil and groundwater chemistry analysis so the appropriate remedial agent can be selected	• Moderate to high
Ex-situ Soil Treatment Includes: • Application of a remedial agent into excavated soils to remediate contamination • Soil can be reused on site or shipped off site for disposal • Post-remediation groundwater monitoring and reporting • Post-remediation soil sampling and reporting	• Can provide a uniform application of the treatment agent to soil • Soil can be converted into geotechnically suitable materials for on-site reuse • Effective method of treating hazardous waste levels down to non-hazardous concentrations	• Requires large equipment and can be disruptive to ongoing business • Complete removal of impacted soil may be compromised due to on site buildings/footings • Requires proper handling and management of soil during excavation and mixing to reduce exposure risks • Longer duration of remedial activities compared to soil excavation and off-site disposal • Requires permit approval by CT DEEP • Requires extensive initial soil and groundwater chemistry analysis so the appropriate remedial agent can be selected	• High