11 Candlewood Hill Road
Haddam, Connecticut

DRAFT Remedial Action Plan

Prepared For:

Town of Haddam, Connecticut

April 2021

Cover Letter

Section 1 Introduction

Section 2 Site Background

2.1 Site Description 2-1
2.2 Site Operations and History 2-1
2.3 Regulatory Criteria 2-4
2.3.1 Soil Remediation Criteria 2-4
2.3.2 Groundwater Remediation Criteria 2-5
2.4 Site Geology & Hydrogeology 2-7
2.5 Previous Investigations 2-8
2.6 Conceptual Site Model & Areas of Concern 2-34
2.6.1 Description of Site, Environments, and RECs 2-35
2.6.2 Nature and Extent of Contamination 2-35
2.6.3 Potential Release Mechanisms 2-35
2.6.4 Migration Pathways 2-35

Section 3 Remedial Objectives

3.1 Objective 3-1
3.2 Proposed Redevelopment Plan and Remediation Areas 3-1

Section 4 Remedial Strategies

4.1 Evaluation & Selection 4-1

Section 5 Remedial Action Implementation

5.1 Notifications 5-1
5.2 Health & Safety Plan 5-1
5.3 Utility Clearance & Ground Penetrating Radar Survey 5-1
5.4 Contractor Work Plan 5-1
5.5 Hazardous Building Material Abatement 5-2
5.6 Site Controls 5-2
5.7 Soil Excavation, Handling/Staging, & Disposal 5-3
5.9 Site Restoration 5-4
5.10 Equipment Decontamination 5-5
5.11 ELUR & Engineered Controls 5-5
5.12 Remedial Documentation 5-5

Section 6 Proposed Groundwater Monitoring Plan

6.1 Restoration of the Monitoring Well Network 6-1
6.2 Baseline & Performance Groundwater Monitoring 6-2
6.3 Compliance Groundwater Monitoring 6-2

6.4 General Groundwater Sampling Plan 6-3

Section 7 Schedule

Appendices

Appendix A Figures

Figure 1 – Site Location Map
Figure 2 – Soil Boring / Monitoring Well Locations & AOCs
Figure 3 – Soil Analytical Results
Figure 4 – Groundwater Analytical Results & Groundwater Flow Direction
Figure 5 – Soil Remediation Areas

Appendix B Tables

Table 1 – Soil Analytical Summary
Table 2 – Groundwater Analytical Summary
Table 3 – Opinion of Probable Remedial Cost

Appendix C Town of Haddam Reuse Concept

Section 1
Introduction

Tighe & Bond, Inc. (Tighe & Bond) was retained by the Town of Haddam (Town) to prepare this Remedial Action Plan (RAP) to describe remediation requirements and methods for impacted Areas of Concern (AOCs) identified at a parcel of land addressed 11 Candlewood Hill Road in Haddam, Connecticut (the site). The site location is shown on Figure 1 (Appendix A).

Preparation of this RAP was requested by the Town to support the potential purchase and reuse of the site.

This work was conducted utilizing State-owned Brownfield funding provided to the Town by the Connecticut Department of Economic and Community Development (DECD).

The site was used as a Connecticut Department of Transportation (DOT) repair, maintenance, and storage facility from 1942 to 2014. Numerous environmental investigations have been conducted for the site from 1983 to the present including a recent Phase I ESA Update and Phase III Environmental Site Assessment (ESA) completed by Tighe & Bond. The Phase III ESA identified 21 AOCs at the site associated with historical land use and filling activities conducted by DOT which include disposal areas, underground storage tanks (USTs), fuel dispensers, hydraulic lifts, floor drains, septic system, salt storage, etc.

Results of the investigations indicated that petroleum products and other materials have been used and stored at the site that have resulted in releases to the environment. Soil and groundwater data for the site have been compared to numeric criteria provided in the Connecticut Department of Energy and Environmental Protection (CTDEEP) Remediation Standard Regulations (RSRs). Constituents identified in soil and groundwater have been detected at concentrations exceeding the CTDEEP RSRs at the site; therefore, remedial actions are warranted. This RAP has been prepared to describe and present remedial actions that can satisfy the requirements of the CTDEEP RSRs.

Section 2
Site Background

2.1 Site Description

The site is located at 11 Candlewood Hill Road in The Higganum Village section of Haddam, Connecticut. The site is identified on Map 15 as Lot 90 by the Haddam Tax Assessor and includes land totaling approximately 4.00 acres. The site is developed with two 2-story long rectangular brick structures, an asphalt paved driveway, and associated parking areas. The site is owned by DOT. The site location is shown on Figure 1, and the current configuration of the site is shown on Figure 2.

From approximately 1844 to 1941 the site was occupied by the former D&H Scovil Hoe Company Mill No.4 which manufactured farming equipment such as planters, hoes, and milled feldspar. DOT purchased the Site in 1941 and utilized it as a repair and maintenance facility and for storage from approximately 1942 to 2014. The use of the site prior to 1844 is unknown.

The general area surrounding the Site is rural and consists of a mix of open space, residential, and commercial uses. There is no municipal sewer or potable water services in the area of the Site. Historic groundwater contamination has been documented in the Higganum Village.

The site is bounded to the north by Candlewood Hill Road, Higganum Village Green, and the former Haddam Elementary School (now vacant), to the south by Candlewood Hill Brook, residential properties, and Higganum Cemetery, to the east by the Haddam Veterans Museum and Community Center (former Firehouse) and commercial proeprties within the Higganum Village Center, and to the west by woodlands and residential properties.

2.2 Site Operations and History

The site was first developed sometime prior to 1844. Earliest records show that a former mill structure existed at the site in 1838 that was used for milling fledspar. This mill building was reportedly expanded in 1866 and in 1887 the existing South Mill building was constructed adjoining the existing mill building. In 1905 the existing North Mill building was constructed and both mills were reportedly utilized by Scovil Hoe as foundries and metal working until circa 1941. DOT purchase the site in 1941, reportedly demolished the older mill structure in 1941 and converted the existing mill buildings into garage bays/repair & maintenance facility.

The Site has had extensive assessment from the mid-1980s to the present and appears to be enrolled in the CTDEEP Voluntary Remediation Program 22a-133x. Based on available reports, the earlier assessments were related to groundwater contamination identified in the Higganum Village and suspicion of dumping/drum burial by DOT in the former Spar Mill Pond on the west side of the Site. In general, it appears that CTDEEP required all industrial property owners within the Higganum Village to have assessments completed on their properties to determine if the potential source of trichloroethylene (TCE) contamination impacting potable drinking water wells in the Village (mid 1980s to 1990s). Although the Site was found to have several AOCs/RECs and release areas, it was determined that the Site was not the source of the trichloroethylene (TCE) contamination impacting the potable wells in the Village. However, the Site was found to be the source

of the sodium and chloride contamination in area groundwater. Furthermore, investigations did not identify the reported pesticide/herbicide drum disposal area on the Site but did identify a layer of tar-like substance (i.e. joint sealer) along with some drums of joint sealer on the southwestern portion of the Site that was reportedly removed.

The following description of the site and operations conducted at the site by DOT was provided in a 2001 Phase I ESA prepared by Marin Environmental:

The South Mill building was identified as containing an engine room, boiler room, machine room, wood working room and grinding room with a forge shop. This building was also reported to have had an earthen floor. The North Mill building was also identified as a forge shop with an engine room and boiler room. A lumber shed, coal bin, and flume adjacent to Candlewood Hill Brook, a pond identified as Spar Mill Pond and associated wetlands were located on the western section of the site. A dam and spill way were identified at the eastern end of Spar Mill Pond. Marin stated that the site may have been altered in 1942 as a result of conversion of a mill to a vehicle repair garage.

CTDOT reportedly occupied the site beginning in 1942 and utilized the Site as a repair facility with the existing buildings containing several garage bays, tool and hardware storage areas, supply storage areas, material storage, welding areas, two boiler rooms and office space. At the time of Marin's Phase I ESA the Site was owned by CTDOT and was actively utilized as a repair and maintenance facility. Two, two story brick buildings (North Mill building and South Mill building), two wooden sheds, an emergency generator shed, a vehicle and equipment compound area, asphalt paved parking areas, and gravel and grass covered areas were observed. Five USTs were in use at the site including 2 heating oil USTs, a gasoline and a diesel fuel oil UST with dispensing pumps used for fueling vehicles, and a waste oil UST. All of these tanks were reportedly installed in March 1989 to replace older USTs. It was reported that the waste oil UST was emptied approximately twice a year by United Oil Recovery of Meriden, CT. Marin indicated that all of the USTs had some form of monitoring system (i.e. monitoring wells) associated with their operation.

The North Mill building first floor was comprised of office space, a boiler room, tool/hardware storage areas, a restroom, three vehicle repair bays, and a welding area. One of the offices was reportedly used by Test Boring, Inc. a drilling company which reportedly used other areas of the Site for storage. The second floor consisted of a field storage area and hallway/crawl space. This area was reportedly not observed due to excessive rodent (mice and bat) infestation. A boiler room was located on the eastern section of the building. This area also contained an enclosed shower stall and two restrooms. A floor drain located in the boiler room was reported to discharge to the on-site septic system located to the east of this building. The vehicle repair areas were reported to be well organized and in good order. Three steel 55-gallon drums containing hydraulic oil and motor oil were observed in the central repair bay area. These were reportedly located within a secondary containment structure. A "citrus-based" parts cleaning station was observed in the central bay. A 100-gallon diesel AST was located in this area and was used to fuel the emergency generator. A utility pit was reportedly located in the central bay area of the North Mill building which reportedly contained various air hoses, wires, and pipes associated with on-site hydraulic and electrical systems which travel between the two existing mill buildings. The electrical panel located on the eastern wall of the central bay of the North Mill building reportedly services both mill buildings. One capped floor drain was located in this central bay.

The South Mill building first floor was comprised of a boiler room, storage areas, two vehicle repair bays, and a break area. The boiler room was located at the eastern end of the building and contained a capped floor drain. A supply area in the eastern section of the building contained various non-hazardous industrial and household cleaning materials

and supplies which appeared to be in good order on shelving. A materials storage area at this end of the building contained items including hoses, tires, steel, various vehicle and equipment parts, along with five steel 55-gallon drums containing motor oil and hydraulic oil. Approximately twelve 5-gallon buckets containing motor oil and antifreeze, and vehicle batteries were stored on wooden pallets within a secondary containment in this storage area.

Two vehicle repair bays were located in the central section of the South Mill building. Approximately eight steel 55-gallon drums containing motor oil and hydraulic oil, two 25-gallon drums containing motor oil, and five plastic 5-gllon buckets containing motor oil and hydraulic oil were observed in this area within a secondary containment. An air compressor and used filter bin were also observed in this area along with a fill pipe to the 550-gallon waste oil UST. Heavy staining of the concrete was noted around the fill pipe. An above ground vehicle lift was reported in the central bay. This lift reportedly replaced a former in-ground lift in the same area. A release of 70 gallons of hydraulic oil reportedly occurred from this lift in 1998 with approximately 7.5 gallons reaching the subsurface soils. Contaminated soil was reportedly removed from this area during removal of the inground lift. A parts cleaning station was observed within the central repair bay that was reported to be serviced by Advanced Liquid Recycling, Inc of Meriden every couple of months. Two capped floor drains were observed within this bay. An employee break/lunchroom area was located near the central bay.

The western repair bay of the South Mill building included a general storage area used by Test Borings, Inc., that consisted of drilling equipment (i.e. augers) and associated tools. Two capped floor drains were observed in this area. The second floor of the South Mill building consisted of two storage areas including one on the east side of the building that contained empty wooden shelves and one on the west side of the building containing various signs and field supplies used by Test Borings, Inc. A manhole observed along the northern exterior wall central to the South Mill building reportedly contains an inactive potable well that according to the report may have been abandoned.

Pipe insulation that was labeled "asbestos" was observed throughout the buildings. Minimal to moderate staining of the concrete floor was reported in the vehicle repair areas. It was noted that there was no unusual cracking of the concrete floor in these areas.

Two wooden storage sheds were located just to the west of the South Mill building. The smaller shed (northern) was observed to contain an old engine and the aforementioned inground lift that was removed. The larger shed (southern) contained various boxed bedrock core samples and boxes of soil jars belonging to Test Borings, Inc. Snowplows were staged adjacent to the sheds. An emergency generator shed was located on the north side of the North Mill building. No hazardous materials were observed in this shed and there was no staining or unusual cracking of the concrete floor.

The western portion of the site (fill area) was observed to have two piles consisting of asphalt, soil, and concrete pipes. Further to the east was a pile of creosoted wood beams. The origin of these piles was unknown to CTDOT personnel as they indicated frequent illegal dumping occurs on this section of the site. An abandoned barge was observed that was reportedly associated with the drilling company Test Borings, Inc.

A vehicle/equipment compound area was observed on the eastern section of the site. This area was fenced in and contained several state-owned vehicles and drilling equipment owned by Test Borings Inc. A scrap metal dumpster was located in this area. Marin noted that the previous Hart October 1985 investigation indicated this may have been a former solvent storage area, however Marin noted that there was no storage of hazardous

material in this area at the time of their investigation and no evidence of staining or stressed vegetation was noted.

Two catch basins, one on the north side of the North Mill building and one along the northeast corner of the South Mill building were noted. These reportedly discharge directly to Candlewood Hill Brook. Furthermore, all capped floor drains in the South Mill building may have previously discharged to the brook. The report indicated that the only floor drain not capped was in the boiler room of the North Mill building which was reported to discharge to the on-site septic system located in the paved area east of this building. Marin noted that no unusual staining, odors, or stressed vegetation was observed in association with the outfall pipe from the site that discharges to the brook. They also noted several stone and concrete structures on-site associated with past milling and water diversion operations.

In 2014 and 2015 TRC on behalf of DOT removed existing USTs at the site and conducted limited soil removal for the waste oil UST and dispensing pump piping associated with gasoline and diesel USTs.

2.3 Regulatory Criteria

The site is was enrolled in the CTDEEP Voluntary Remediation Program pursuant to CGS Section 22a-133x in 2002. At that time CTDEEP maintained oversight for the investigation and remediation of the site instead of delegating it to a Licensed Environmental Professional. It is our understanding that the Town intends to enroll the site into the Brownfield Redevelopment and Revitalization Program (BRRP) for liability protections prior to acquiring ownership.

Soil and groundwater data obtained by Tighe & Bond and others for the site have been compared to numeric criteria provided in the CTDEEP Remediation Standard Regulations (RSRs), Sections 22a-133k-1 through 22a-133k-3 of the Regulations of Connecticut State Agencies (RCSA) (January 1996, Revised March 2021). Analytical results for COCs not listed in the RSRs were compared to numeric criteria provided in the CTDEEP Technical Support Document: Recommended Numeric Criteria for Common Additional Polluting Substances (APS) and Certain Criteria (December 2015, Revised January 27, 2017).

The RSRs apply to the site since it is currently enrolled in the VRP.

CTDEEP's intent in developing the RSRs was to define the following:

- Minimum remediation performance standards
- Specific numeric clean-up criteria
- A process for establishing alternative site-specific standards, if warranted

The following is a summary of the numeric regulatory criteria that were used to evaluate site soil and groundwater and develop the proposed approach to remediate the site.

2.3.1 Soil Remediation Criteria

The CTDEEP soil remediation criteria applicable to the site include two risk-based goals. Impacts to soil must be remediated to a level that is equal to or less than these criteria:

- The Direct Exposure Criteria (DEC) to protect human health from risks associated with direct exposure to contaminated soil; and
- The Pollutant Mobility Criteria (PMC) to protect groundwater quality from contaminants that could potentially migrate or leach from the soil to groundwater.

Direct Exposure Criteria

Specific numeric exposure criteria for a broad range of contaminants have been established by the CTDEEP. The CTDEEP has established two sets of DEC using exposure assumptions appropriate for residential land use (RES 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. The I/C criteria may only be used if an Environmental Land Use Restriction (ELUR) has been recorded restricting use of the site for residential purposes.

The DEC apply to accessible soil to a depth of 15 fbg. The DEC for substances other than PCBs do not apply to inaccessible soil at a release area provided that, if such inaccessible soil is less than 15 fbg, an Environmental Land Use Restriction (ELUR) is in effect with respect to the subject release area. Inaccessible soil generally means polluted soil, which meets the following:

- More than 4 fbg,
- More than 2 feet below a paved surface, which surface is comprised of a minimum of three inches of bituminous pavement or concrete,
- For soil with certain specific contaminants, directly beneath bituminous pavement,
- Beneath a building or another permanent structure approved by CTDEEP.

Pollutant Mobility Criteria

The PMC are designed to protect groundwater quality by reducing or eliminating the potential for migration of pollutants to groundwater from contaminated soil. Different PMC apply to a property depending on the groundwater quality at the site, as designated by the CTDEEP. In a "GA" groundwater classification area the PMC apply to soil located above the seasonal low water table.

Based on the available data obtained to date, the depth to the seasonal low water table at the site, which typically occurs in the summer months, ranges from 3 to 17 feet across the Site. Additional groundwater gauging is planned to confirm the seasonal low water table prior to implementing remediation, as outlined in this RAP.

2.3.2 Groundwater Remediation Criteria

Several factors influence the remediation goals at a given site, including background water quality, the groundwater classification, the proximity of nearby surface water, existing groundwater uses, and existing buildings and their use. When assessing groundwater remediation requirements, all of these factors must be considered.

The objectives of the groundwater remediation standards include:

- Protect and preserve groundwater in "GA" areas,
- Protect existing use of groundwater regardless of the area's groundwater classification,
- Prevent further degradation of groundwater quality,
- Prevent degradation of surface water from discharges of contaminated groundwater,
- Protect human health.

The RSRs include the following numeric criteria for groundwater, for sites that are located in an area with "GA" classified groundwater:

- Groundwater Protection Criteria (GWPC)

- Surface Water Protection Criteria (SWPC)
- Groundwater Volatilization Criteria (GWVC)

Background Conditions

CTDEEP requires remediation of a groundwater plume in a "GA" area to result in the reduction of each substance therein to a concentration equal to or less than the background concentration for groundwater of such substance. Typically, background groundwater conditions are determined by the sampling of groundwater wells that have been identified not to be within any known or suspected release area at the site.

Groundwater Protection Criteria

Groundwater in a "GA" area may also be remediated to concentrations less than or equal to the GWPC for each substance. The GWPC can be utilized as remediation criteria if:

- The background groundwater concentration is equal to or less than the GWPC;
- If a public water supply distribution system is available within 200 feet of the site;
- If the groundwater plume is not located in an Aquifer Protection Area; and
- If the groundwater plume is not located within the area of influence of any public water supply well.

Surface Water Protection Criteria

The SWPC establish criteria for contaminants in groundwater that are protective of surface water bodies into which the groundwater discharges. Groundwater flowing from the site discharges into Candlewood Hill Brook located on the south side of the site. Therefore, the groundwater analytical results were compared to the SWPC.

A plume containing contaminant concentrations greater than the SWPC may be shown to be in compliance with the SWPC by implementing the following per Section 22a-133k-3(g)(2)(C):

- The 95 percent upper confidence level of the arithmetic mean of all sample results representative of the subject groundwater plume is equal to or less than the applicable SWPC, or
- The concentration of a substance in the portion of the plume that is immediately upgradient of the point at which groundwater discharges to the receiving surface water body is equal to or less than the applicable SWPC.

Groundwater Volatilization Criteria

The Groundwater VC are designed to protect human health from contaminants that may volatilize from contaminated groundwater into overlying buildings. The VC apply to groundwater within 15 feet of the lowest level of a building or the ground surface. Depth to groundwater at the site is less than 15 fbg, therefore, the VC apply to groundwater at the site.

Different VC may apply to a property, depending on land use, either "residential" or "industrial / commercial", as defined by the RSRs. The less stringent I/C VC cannot be used unless an ELUR has been recorded on the property deed restricting the site to industrial/commercial uses. Therefore, the groundwater analytical results were compared to the RES VC.

2.4 Site Geology & Hydrogeology

Topography

According to the most recent topographic map (Figure 1), the surface elevation of the Site is approximately 100 feet above the National Geodetic Vertical Datum (USGS, 2012). Topography across the Site slopes gradually from the west to the east and more moderately from north to south. General topography in the area slopes easterly towards the Higganum Village Center with both northeast and southeast components.

Surficial Materials

According to the Connecticut Environmental Conditions Online (CTECO) system, soil at the Site is identified as Paxton and Montauk fine sandy loam on the northwestern portion, Agawam fine sandy loam on the western portion, Udorthents-Urban land in the central portion, and Rippowam fine sandy loam on the southern portion.

Significant filling has occurred at the site by DOT. Based on investigations, fill material on the eastern portion of the site exists in areas to depths of 2 to 8 feet bg and on the western portion of the site fill material exists to depths of 8 to 10 or more feet bg. The fill material was reported to include non-native soils, asphalt, concrete, metal, brick, coal, coal ash, salt, and street sweepings.

Bedrock Geology

According to the Bedrock Geology Map of Connecticut, the underlying bedrock beneath the Site is the Monson Gneiss formation which consists of light to dark medium to coarse grained gneiss. Based on information obtained from previous environmental investigations, depth to bedrock across the site ranges from 34 feet below grade on the northwestern portion of the Site (i.e. Spar Mill Pond) to 6 feet below grade on the southeastern portion of the Site. Depth to bedrock beneath the two mill buildings is reportedly between 7.5 and 15 feet below grade.

Surface Water

The nearest surface water body to the site is Candlewood Hill Brook, located on the southern portion of the site and is classified as a class A river. According to CTDEEP, a class A river is designated for use as a potential drinking water supply; fish and wildlife habitat; recreational use; agricultural and industrial supply and other legitimate uses including navigation.

Wetlands and floodplain associated with this brook also occupy the southern portion of the site abutting the brook. The channel for the brook has been extensively reconfigured by DOT since 1941, partially due to a flooding event that occurred in 1982 where significant flooding and erosion occurred in the area of the brook.

Groundwater Quality & Flow Direction

Groundwater was encountered between 6 to 10 feet bgs during recent drilling activities and between 3 to 14 feet bgs during recent groundwater sampling. Groundwater flow direction is to the east/southeast towards the Candlewood Hill Brook.

Groundwater at the site is classified as GA by the CTDEEP. Designated uses include existing private and potential public or private supplies and base flow for hydraulically connected surface water bodies. GA classified groundwater is presumed suitable for human consumption without treatment.

The site is not located in a CTDEEP designated Aquifer Protection Area (APA).

Water Supply

There is no public water supply in the Town of Haddam. The site and all other properties rely on groundwater for potable purposes.

F&O indicated that potable water for the site was obtained from an approximately 30-foot-deep dug well, located at the rear (east) of the building.

F&O completed a potable well receptor survey during their Phase I ESA to identify private supply wells within the vicinity of the site. The survey consisted of properties located between 501 and 612 Church Street that are located potentially downgradient of the site.

A potable well was identified at 522 Church Street, located less than 0.25 miles southwest and downgradient of the site, which was the closest downgradient residential supply well to the site. F&O obtained a sample from the supply well in October 2008 and VOCs, ETPH, and PAHs were not detected.

2.5 Previous Investigations

The following previous investigations were completed for the Site. Refer to Tighe & Bond's Phase I ESA report for a detailed discussion of previous investigations. For purposes of this RAP we have provided the following summary of pertinent reports.

Draft Phase I Grab Sampling/Geophysical Report, Fred C. Hart Associates, Inc., October 1985

This report summarized the results of a surface water grab sample and geophysical survey at the Site. The surface water sample was collected from a downgradient location of Candlewood Hill Brook adjacent to the fill area. The report indicated that no surface water contamination was found to be present at this location. The report also detailed the results of a geophysical investigation, via metal detection survey, conducted at the Site in May 1985. The survey was conducted in an area reportedly used for drum burial. The results of the survey indicated one high metal reading precisely in the area of the reported drum burial. Lastly, a steam cleaning area south of the South Mill building, a solvent odor northwest of this building, a solvent storage area within the vehicle and equipment compound area, and a drum storage area north of the wooden sheds were noted. The report stated that the Site was one of 14 DOT facilities concurrently undergoing work plan preparation by Fred C. Hart Associates.

Field Investigation Work Plan for the Higganum Site #25, Fred C Hart Associates, Inc., November 1985

This plan details the investigation designed to determine the location and extent of any buried drums or tar-like substances at the Site. The plan indicated that the findings of this investigation may indicate a need for additional investigative activities in order to further assess the environmental impact of past disposal practices at the Site.

Preliminary Test Results, ConnDOT Salt Storage and Maintenance Faculties Study, Metcalf and Eddy, Inc., January 1986

This report summarized test information, test rationale and sampling schedule, and sampling results. Ground water, surface water, soil, and sediment samples were collected from six locations throughout the Site. Benzene was detected at trace levels (1 ug/L) in one ground water sample sodium and chloride were detected in all three ground water

samples collected. A detailed test was recommended to evaluate potential impacts to on-site and adjacent receptors from past releases at the Site.

Detailed Test Results, ConnDOT Salt Storage and Maintenance Faculties Study, Metcalf and Eddy, Inc., March 1987

This report evaluated the local environmental settings and environmental receptors, a detailed test rationale, hydrogeologic results, chemical data analysis, contaminant transport and fate analysis, and risk assessment in connection with the potential impacts from the Site on area wide ground water within the Village of Higganum. Based on previous investigations, the report recommended that an alternative potable water source (private wells or community water system) be pursued in order to reduce the number of human receptors affected by impacted ground water. In addition, the report recommended that a holding tank be installed at the Site to collected floor drain discharge. At the time of Detailed Test Report, all floor drains discharged directly into Candlewood Hill Brook, which was and still is in violation of state regulations. Several USTs were identified at the Site, at the time of the Detailed Test Report, were identified as exceeding their life expectancy. The replacement of these tanks and soil removal from the area of the floor drain discharge and the fill area was recommended.

Field Investigation Report for the Higganum Site #25, Fred C. Hart Associates, Inc., June 1987

This report summarized the results of all field investigation activities conducted at the Site. The focus of the Hart investigation was on a former disposal area located on the western one-third of the Site. Results of the investigation indicate that the four or five drums reportedly buried at the Site were not present as indicated by a 1985 metal detection survey. However, two empty rusted drums were encountered in the fill area during subsurface investigations (test pit installation). In addition, the past burial of a tar-like substance in the fill area was considered the source of concentrations of base/neutral and acid extractable (BNA) compounds. Benzene was also detected in an upgradient monitoring well but was not believed to be attributable to past DOT waste disposal practices in the fill area. Hart recommended that the large mass of the tar-like substance buried at the Site be removed and properly disposed of. Semi-annual ground water monitoring was also recommended subsequent to the removal of the tar-like substance.

Water Supply Feasibility Study, Metcalf and Eddy, Inc., May 1993

The purpose of the study was to identify and evaluate the alternative for potable water supply remediation and to recommend a remediation plan for the businesses and residences on Candlewood Hill Road. Several of the private wells adjacent to the Site have been impacted by sodium and trichloroethylene (TCE). The source of the sodium contamination was reported to likely have originated from the Site while the TCE contamination was reported to not have originated from the facility. The feasibility study recommended that deep bedrock monitoring wells be installed at the Site to further investigate the source of TCE contamination, and the extent of the CTDOT's responsibility in this matter.

Phase I ESA, Marin Environmental, January 2001

The purpose of this Phase I ESA was to document the current and historical use of the Site and identify potential AOCs/RECs in connection with the Site.

Marin Environmental identified the following 14 AOCs in connection with the Site:

- AOC 1 - Suspect Filled Area (Former Spar Mill Pond)

- AOC 2 - Floor Drains and Conveyance System
- AOC 3 - Hydraulic Lift
- AOC 4 - Former Solvent Storage Area
- AOC 5 - Former Steam Cleaning Area
- AOC 6 - Area of Historic Solvent Odor
- AOC 7 - Utility Pit
- AOC 8 - UST Area East of Building 81-106
- AOC 9 - UST Area North of Building 81-106
- AOC 10 - UST Area North of Building 81-115
- AOC 11 - Former Central UST Area
- AOC 12 - Former Forge Shop
- AOC 13 - Septic Tank and Leach Field
- AOC 14 - Area of Former Drum Storage

Marin Environmental concluded that the Site does not appear to meet the definition of an establishment and recommended the completion of a Phase II ESA to determine if a release had occurred or to further delineate identified releases at the AOCs.

Environmental Condition Assessment Form, HRP Associates, Inc., April 2002

This Environmental Condition Assessment Form (ECAF) documented the environmental assessments to date. The ECAF identified two release areas; Release Area 1 – Drum burial/landfill for the former Spar Mill Pond area on the western portion of the Site. Reportedly four to five drums of herbicides were buried in the former Spar Mill Pond area. A test pit conducted withing the former pond area identified rusted 55-gallon drum, several 5-gallon paint can lids, and fill materials such as wooden beams, logs, asphalt, pipes, and scrap metal. Release Area 2 – Tar Disposal is located on the southwestern portion of the Site. Reportedly, approximately 2,000 gallons of an experimental joint sealer was disposed of in this area. A test pit was excavated within the area and identified a tar-like substance at grade to a depth of 2 feet below grade. The material was excavated and stored in five 85-gallon drums; however, not all of the material was excavated. HRP also identified the following nine Potential Release Areas:

- Potential Release Area 3 – Drum Storage Area
- Potential Release Area 4 – Solvent Odor
- Potential Release Area 5 – Steam Cleaning Area
- Potential Release Area 6 – Possible Solvent Storage Area
- Potential Release Area 7 – Repair Garages
- Potential Release Area 8 – Septic Tank
- Potential Release Area 9 – Underground Storage Tanks
- Potential Release Area 10 – Former Underground Storage Tanks
- Potential Release Area 11 – Salt Storage

Task 240, Diversified Technology Consultants, Inc., November 2005

This report details the sampling of twenty private water supply wells in the vicinity of the Site. The water supply wells were sampled for pesticides, herbicides, VOCs, PAHs, ETPH, chloride, sodium, and metals.

The results of the sampling indicated the presence of the pesticide dieldrin at four properties exceeding the Connecticut Department of Public Health (CTDPH) action levels. DTC concluded that the dieldrin concentration were not related to the Site as dieldrin had not been detected in previous soil samples and each of the four properties was located on the southern side of Candlewood Hill Brook. Elevated concentrations of sodium and chloride were observed in each of the samples. Three of the samples reported concentrations of sodium above the notification level of 28 mg/L.

DTC recommended further investigation and delineation of the release areas and potential release areas identified by HRP in the April 2002 ECAF.

Task 220, Diversified Technology Consultants, Inc., November 2005

This report details the collection of soil, sediment, and groundwater samples to evaluate and delineate the previously release areas and potential release areas identified by HRP.

DTC oversaw the advancement of 33 soil borings and installation of 10 monitoring wells throughout the Site. Fill material in the form of asphalt, concrete, and brick fragments was encountered in most of the borings. Borings advanced in the former Spar Mill Pond area encountered 10 or more feet of fill material.

Seventy-seven soil samples were submitted for laboratory analysis of VOCs, ETPH, total and/or SPLP metals, total and/or SPLP PAHs, PCBs, pesticides, and/or chlorinated herbicides. Seventeen groundwater samples were collected from nine of the ten newly installed monitoring wells and eight existing monitoring wells. The groundwater samples were submitted for laboratory analysis of VOCs, ETPH, PAHs, total and dissolved metals, PCBs, pesticides, and/or herbicides. Five sediment samples were collected from Candlewood Hill Brook and submitted for laboratory analysis of VOCs, ETPH, PAHs, metals, PCBs, pesticides, and herbicides.

ETPH was identified above the laboratory reporting limits in 55 soil samples, above the residential direct exposure criteria (RES DEC) and GA pollutant mobility criteria (GB PMC) in 25 samples, and above the Industrial/commercial DEC (IC DEC) in one sample.

PAHs were identified in several soil samples above the RES DEC, I/C DEC and/or GB PMC.

VOCs were identified in 41 soil samples at concentrations above the laboratory reporting limits VOCs. Only 1,24-trimethylbenzene was identified above the RSR criteria in one sample. Leachable lead was identified in several samples above the GA PMC.

Pesticides; DDD, DDE, and DDT, were detected in soil and sediment samples below RSRs. Dieldrin was not detected in any of the 82 soil or sediment samples. Chlorinated herbicides were not identified in any of the samples.

Arsenic was identified in above the Surface Water Protection Criteria (SWPC) in five of the seventeen groundwater samples and total lead was identified above the SWPC in one of the groundwater samples.

No VOCs, ETPH, PAHs, PCBs, chlorinated pesticides, or chlorinated herbicides were identified in any of the groundwater samples except for a trace concentration of naphthalene in MW-10D.

Based on the results of the Task 220, DTC identified the following 12 release areas;

- **DTC RA-1**

Western portion of the Site, previously identified as HRP Release Area 1. Soil samples collected from 0 to 14 feet below grade reported concentrations of ETPH, PAHs, and 1,2,4-trimethylbenene above the RSR criteria. Low concentrations, below RSR criteria, of 4,4-DDD and 4,4-DDT were also reported in soil samples within this area. Groundwater impacts were not identified in this RA.

- **DTC RA-2**

  Southwestern portion of the Site, previously identified as HRP Release Area 2. Soil samples collected from 0 to 8 feet below grade reported concentrations of ETPH, and PAHs above the RSR criteria. Low concentrations, below RSR criteria, of 4,4-DDT were also reported in soil samples within this area. Groundwater impacts were not identified in this RA.

- **DTC RA-3**

  A storage shed located west of the South Mill building, previously identified as HRP Potential Release Area 3, was reportedly used as a drum storage area. Soil samples collected from 0 to two feet below grade reported concentrations of ETPH, and PAHs above the RSR criteria. Low concentrations, below RSR criteria, of 4,4-DDT were also reported in soil samples within this area.

- **DTC RA-4**

  A former steam cleaning area, previously identified as HRP Potential Release Area 5, was reportedly located on the southwestern corner of the South Mill building. Soil samples collected from 0 to three feet below grade reported concentrations of ETPH, and PAHs above the RSR criteria. No other analytes were detected within this RA.

- **DTC RA-5**

  A former large fenced impoundment area located on the southeastern portion of the Site, previously identified as HRP Potential Release Area 6, was reportedly used for general storage. Soil samples collected from 0 to two feet below grade reported concentrations of ETPH, PAHs, and SPLP lead above the RSR criteria. No other analytes were detected in soil or groundwater within this RA.

- **DTC RA-6**

  The former repair bays in both site buildings and the gasoline pump island between the mill buildings, previously identified as HRP Potential Release Area 7. Soil samples collected from 0 to five feet below grade reported concentrations of ETPH and/or PAHs above the RSR criteria. Total lead and total arsenic were reported in groundwater from MW-4 at concentrations above the GWPC and SWPC.

- **DTC RA-7**

  The septic system and leach field located east of the North Mill building, previously identified as HRP Potential Release Area 8. Soil samples collected from 0 to three feet below grade reported concentrations of PAHs above the RSR criteria. Low concentrations of ETPH and VOCs, below the RSR criteria, were also identified in soils to a depth of three feet. No other analytes were detected in soil or groundwater within this RA.

- **DTC RA-8**

  A diesel fuel UST, previously identified as part of HRP Potential Release Area 9, is located outside the northeast corner of the South Mill building. Soil samples

collected from 0 to six feet below grade reported concentrations of ETPH and PAHs above the RSR criteria. Low concentrations, below RSR criteria, of 4,4-DDT were also reported in soil samples within this area. Groundwater samples collected downgradient of the RA did not contain constituents of concern associated with diesel fuel.

- **DTC RA-9**

  A heating oil UST and a gasoline UST, previously identified as part of HRP Potential Release Area 9, are located to the east of the diesel fuel UST identified in DTC RA-8. Soil samples collected from 0 to eight feet below grade reported concentrations of ETPH, PAHs, total arsenic, and/or SPLP lead above the RSR criteria. Low concentrations, below RSR criteria, of 1,2,4-trimethlynbenze was reported from six to eight feet below grade. Groundwater samples collected downgradient of the RA did not contain constituents of concern associated with gasoline or heating fuel; however, total arsenic was reported above the SWPC in MW-3.

- **DTC RA-10**

  A former heating oil UST and a former diesel UST, previously identified as part of HRP Potential Release Area 10, were reported to be located to the west of the North Mill building. However, as Tighe & Bond noted in our Phase I ESA report, it is not believed that these USTs existed off the northeast corner of the South Mill and a previous consultant misinterpreted mapping.

  Soil samples collected from the west side of the North Mill building from 0 to 8 feet below grade reported concentrations of ETPH and PAHs above the RSR criteria. Groundwater samples collected downgradient of the RA did not contain constituents of concern associated with diesel or heating fuel.

- **DTC RA-11**

  Four former USTs, previously identified as part of HRP Potential Release Area 10, were reportedly located in between the two mill buildings. However, as Tighe & Bond noted in our Phase I ESA report, it is believed there was misinterpretation of mapping and that three former USTs (2 original and 1 replacement) existed in this area. Soil samples collected from 0 to 3 feet bg reported concentrations of PAHs above the RSR criteria. Low concentrations of ETPH, metals, 4,4-DDD, and 4,4-DDT were identified within the RA. Groundwater samples collected downgradient of the RA did not contain constituents of concern associated with diesel or heating fuel.

- **DTC RA-12**

  A former heating oil UST, previously identified as part of HRP Potential Release Area 10, was located to the south of the South Mill building. However, as noted in Tighe & Bond's Phase I ESA, this UST reportedly was washed away in a 1982 flood event. Soil samples collected by DTC from 0 to three feet below grade reported concentrations of ETPH and metals above the RSR criteria. Groundwater samples collected downgradient of the RA did not contain constituents of concern associated with heating fuel.

UST Closure Report, TRC Solutions, January 2015

This UST closure report documents the removal and subsequent sampling for one 4,000-gallon diesel fuel UST, one 4,000-gallon gasoline UST, two 2,000-gallon heating oil USTs, and one 550-gallon waste oil UST.

The 550-gallon waste oil UST was located along the north wall outside of the center of the South Mill building and was constructed of double walled steel. Staining, odors, or signs of a release were not reported following removal of the UST. Confirmatory sidewall samples and a groundwater sample were collected from the UST grave. The UST appeared to be in good condition with no observed holes.

PAHs were reported above the RSR criteria in the confirmatory soil sample collected from the southern sidewall and the groundwater sample collected from within the UST gravel. PAHs were reported above the laboratory reporting limits in the confirmatory samples from that west and east sidewalls. Arsenic was reported above the RES DEC in the confirmatory samples collected from the east and west sidewalls. Several other metals were reported in each of the sidewall samples below the RSR criteria. ETPH was reported in the groundwater sample above the GWPC. Barium and lead were reported in the groundwater sample below the RSR criteria. PCBs and VOCs were not reported in the soil samples or the groundwater sample.

The 2,000-gallon fuel oil UST was located outside of the northeast corner of the North Mill building and was construed of single walled fiberglass. Staining, odors, or signs of a release were not reported following removal of the UST. Confirmatory sidewall samples and a groundwater sample were collected from the UST grave. The UST appeared to be in good condition with no observed holes.

VOCs, PAHs, and ETPH were not reported in any of the confirmatory sidewall samples. Several PAHs and ETPH were reported above the RSR criteria in the groundwater samples collected from the UST grave. Ethylbenzene was also reported in the groundwater sample at a concentration below the RSR criteria.

The 4,000-gallon diesel and gasoline USTs and the 2,000-gallon fuel oil UST were located to the east of the South Mill building. Each of the USTs were constructed of single walled fiberglass. During the removal of the diesel UST, the UST split in half while still in the UST grave. As a result, approximately 50 gallons of residual diesel fuel entered the excavation. Impacted groundwater was removed from the excavation with a vacuum truck that was staged on-site and absorbent pads were utilized to absorb remaining product. The remaining two USTs were cleaned and washed prior to removal activities. Staining, odors, or signs of a release were not reported following removal of the USTs. Confirmatory sidewall samples and a groundwater sample were collected from the UST grave. The USTs appeared to be in good condition with no observed holes.

PAHs were reported above the RSR criteria in one confirmatory soil sample collected within the UST gravel. Elevated concentrations of lead were reported in each of the confirmatory soil samples at concentration below the RSR criteria. ETPH and VOCs were not reported in any of the confirmatory soil samples. Several PAHs were reported above the RSR criteria in the groundwater sample collected from the UST grave. ETPH was reported in the groundwater sample below the GWPC. Lead was reported in the groundwater sample above the RSR criteria. VOCs were not reported in the soil samples or the groundwater sample.

The fuel dispenser island was located in-between the two mill buildings towards the eastern end of the buildings. The product lines were constructed of single walled fiberglass. Staining, odors, or signs of a release were not reported following removal of the product lines. Four confirmatory samples were collected along the piping runs from within the product line trench.

PAHs were reported above the RSR criteria in two confirmatory soil samples collected along the piping trench. Elevated concentrations of lead were reported in each of the confirmatory soil samples at concentration below the RSR criteria. ETPH was reported in

two confirmatory soil samples below the RSR criteria and VOCs were not reported in any of the confirmatory soil samples.

TRC recommended additional excavation along the west, east, and south sidewalls of the waste oil UST and along the fuel line piping. TRC also recommended the installation of permanent groundwater monitoring wells at each of the former UST graves. TRC concluded that no additional soil excavation was necessary at the northern heating oil UST grave or the shared gasoline, diesel, heating oil UST grave.

UST Closure Report Addendum, TRC Solutions, March 2016

This UST closure report addendum documents the additional soil excavation from the waste oil UST grave and fuel line piping, monitoring well installation, and subsequent groundwater sampling following the UST removal activities presented above.

A total of 7.8 tons of additional soil was removed from the waste oil UST grave and the former fuel line trench. Confirmatory soil samples were collected from the east, west, and south sidewalls of the waste oil UST grave and two additional confirmatory soil samples were collected from the fuel line trench. The samples were submitted for analysis of the previously exceeded constituents. Based on the soil analytical results, no additional RSR criteria exceedances were reported.

TRC also oversaw the installation of four monitoring wells downgradient of the UST graves, HMF-MW-1 through HMF-MW-4. Following installation of the monitoring wells, groundwater samples were collected and submitted for analysis of VOCs, PAHs, ETPH, and lead. Several PAHs were reported in each of the groundwater samples at concentrations below the RSR criteria. ETPH, VOCs, and lead were not reported in any of the groundwater samples.

Based on the above results and the initial UST closure sample results, TRC recommended no further action in regard to the former USTs.

Phase I ESA, Fuss & O'Neill, February 2018

The purpose of this Phase I ESA was to document the use of the Site since the 2001 Phase I ESA, update the previously identified AOC/REC, and identify potential new AOCs/RECs in connection with the Site.

At the time of the Phase I the Site was owned by DOT and was vacant. The Site was previously actively utilized as a repair and maintenance facility for DOT. At the time of the Site reconnaissance, only the two, two story brick buildings and the emergency generator shed remained on the Site. Fuss & O'Neill identified the following RECs:

- REC-1: Historic fill/dump area
- REC-2: Buried drums of joint sealer
- REC-3: Drum storage shed
- REC-4: Solvent steam cleaning area
- REC-5: Historic solvent storage area
- REC-6: Repair bays and pump island
- REC-7: Septic tank and leach field
- REC-8: Diesel fuel UST off the northeast corner of the South Mill
- REC-9: Heating oil and gasoline USTs east of the South Mill
- REC-10: Former heating oil and diesel USTs west of the North Mill
- REC-11: Four former USTs between the two Site buildings

- REC-12: Former Heating Oil UST south of the South Mill
- REC-13: Heating oil UST off northeast corner of the North Mill
- REC-14: Waste oil UST north of the South Mill
- REC-15: Interior trenches
- REC-16: Former hydraulic lift area
- REC-17: Interior floors
- REC-18: Potential solvent release area northeast of the South Mill
- REC-19: Former Salt Storage Activities

A summary of these AOCs is provided in Section 4.

Fuss & O'Neill did not identify any Historical or Controlled RECs in connection with the Site.

Fuss & O'Neill also identified the following considerations:

- One potable water supply well is located on the northwest portion of the Site and supplied the Site buildings with water. A grab-sample collected from an interior tap by DTC revealed low level concentrations of sodium, chloride, and barium below the applicable criteria. What is presumed to be a second, out-of-use, potable water supply well is located north of the South Mill building. Although not considered to be RECs, these wells may serve as receptors and possible preferential contaminant migration pathways for impacted groundwater associated with off-site release
- Although not identified as an REC, as with any site where former structures have been razed and with multiple generations of development, the potential for the presence of urban fill containing ash, coal and asphalt fragments exists. In addition, it is possible that storage tanks that had been used to heat former structures could have been abandoned at the Site and could remain in the ground.
- As with any building constructed prior to 1978, there is some potential that hazardous building materials may have been introduced to the soil around the building foundation.
- Evidence of historical agricultural and industrial activities on nearby properties have affected groundwater quality in the Village. This includes chlorinated solvents, the pesticide dieldrin, and chromium. Releases of one or more of these constituents from upgradient properties could adversely affect groundwater quality at the Site.

Phase II/Limited Phase III ESA, Fuss & O'Neill, March 2018

Fuss & O'Neill completed a Phase II ESA for the site in November 2017. A summary of this previous investigation is provided below.

- Twenty soil borings (FOSB-01 through FOSB-20) were advanced and 21 soil samples were collected for laboratory analysis. Additionality, five surficial soil samples (FOSS-01 through FOSS-05) were collected from the bank of Candlewood Hill Brook and four concrete chip samples (FOSB-10, FOSB-11, FOSB-14, and FOSB-15) were collected from the concrete slab floor within the Site mill buildings.
- Two groundwater monitoring wells (FOMW-01 and FOMW-02) were installed and groundwater samples were collected from these wells in addition to eleven existing groundwater wells for laboratory analysis
- Based on the analytical results, Fuss & O'Neill identified the following eight release areas:

- F&O RA-1: Release Area 1 is comprised of REC-1 and REC-2. Petroleum impacts from materials to fill the former Spar Mill Pond are present at concentrations exceeding the DEC from approximately 0 to 14 feet below grade. VOCs and Pesticide impacts exceeding the GA PMC were also historically present in soil above the water table.
- F&O RA-2: Release Area 2 is comprised of REC-6, which included the building repair bays in the western portion of the South Mill building and the majority of the North Mill building as well as the gasoline pump island formerly located between the two buildings. While no release was identified from the repair bays to exterior doorways, a shallow petroleum release to soil (0-5 feet below grade) was identified associated with the piping from the USTs to the pumps or surface releases due to overfills and or spills at the dispenser. The remediation performed by DOT in 2015 appears to have been effective at removing the petroleum-impacted soil in the shallow interval of the former pipe trench between 0 to 4 four feet below the ground surface.
- F&O RA-3: Release Area 3 is comprised of REC-8 and REC-9, which include three former USTs located in one tank grave off the east side of the South Mill building. Constituents of concern were not reported above RSR criteria in the confirmatory soil samples collected in the tank grave at the time the USTs were removed or at depth in the former tank grave during the 2017 event. Formal post remediation groundwater monitoring at this release area has not been performed. Residual petroleum impacts may exist in the vicinity of the stormwater line that extends from Building 81-115 through the southwest portion of the former tank grave to the brook (Figure 2). The trench holding the stormwater pipe could serve as a preferential migration pathway and may have retained oil released during the 2014 UST removal.
- F&O RA-4: Release Area 4 consists of REC-10 which were the mis-reported former heating oil and diesel USTs west of the North Mill. Historical data indicates that a release of petroleum to the surface soil has occurred within an approximate 20 feet square area. The surficial release is comingled with polluted fill at the surface with broken asphalt fragments associated with the deteriorated parking surface.
- F&O RA-5: Release Area 5 consists of REC-13 which was a 2,000-gallon fuel oil UST formerly located off the northeast corner of the North Mill building and was used to fuel the building's heating system. Review of historical soil and groundwater samples and analytical results from the confirmatory samples did not identify evidence that a release from this UST had occurred. However, PAHs, VOCs and ETPH were detected above laboratory reporting limits in a grab groundwater sample collected from the tank grave in 2014.
- F&O RA-6: Release Area 6 consists of the former 550-gallon waste oil UST identified as REC-14. This UST was formerly located north of the offices and repair bays of the South Mill building. A petroleum release was identified during tank removal activities in 2014 requiring soil remediation, which was implemented January 2015 in the tank grave exterior of the building. The former UST is located adjacent to the utility tunnel that extends perpendicular between the mill buildings. The subgrade trench for the utility tunnel could serve as a preferential migration pathway that may have been impacted by the petroleum release from the UST.

- F&O RA-7: Release Area 7 includes REC-16, which is the former hydraulic lift area in the South Mill building. Historically, above and in-ground hydraulic vehicle lifts were formerly located in the repair bay located in the center of building. Visible evidence of a petroleum release was observed in soil at FOSB-10 and the sample collected from this boring had concentrations of ETPH reported in excess of the DEC and PMC. Total lead also exceeded the DEC in this sample. Concentrations of ETPH also exceeded the DEC and/or PMC in the samples analyzed from FOSB-17 and FOSB-19. The petroleum release associated with the former hydraulic lifts is located beneath the building slab in the eastern portion of the building comprising an area of at least 400 square feet with impacted soil located at least two feet above the bedrock, which was encountered at a depth of 8 feet below the building slab.
- F&O RA-8: Release Area 8 includes the building interior concrete floors, identified as REC-17. While surficial petroleum releases to the floor surfaces are evident based on the visible staining observed, analytical results from the limited concrete chip samples collected from the stained areas indicate the floors are not impacted with PCBs. It is noted that, based on the intended reuse of the building and the extent to which the concrete slab floors will be disturbed during redevelopment activities, additional characterization of the concrete floors and subsurface below the floors may be warranted.

- Fuss & O'Neill identified the following data gaps:
  - Monitoring wells were not sampled from each Release Area, due to the inability to locate historical wells or historic wells that no longer provide representative groundwater samples.
  - A deep bedrock aquifer evaluation was not conducted as part of the 2017 investigation activities.
  - Additional soil sampling should be performed at areas of the Site including REC 16 and other locations. In addition, soil samples should be collected from areas of the Site that will be heavily disturbed by renovation construction activities that will generate excess soil.
  - The sampling data indicates that the northern slope of Candlewood Hill Brook adjacent to the site contains polluted fill with concentrations of PAHs that exceed baseline RSR DEC. The brook is a potentially sensitive receptor proximal to the upland release areas that have been identified.
- Release determinations were inconclusive at REC-3, REC-11, and REC-15 where minor incidental petroleum releases may have occurred from these sources which are co-mingled with polluted fill with concentrations exceeding cleanup criteria.

Fuss & O'Neill recommended the development of a Remedial Action Plan to isolate and/or excavate polluted soils at the Site. Fuss & O'Neill also recommended the collection of additional soil and groundwater samples to address data gaps identified above.

Phase I ESA Update, Tighe & Bond, February 2021

The recent Phase I ESA Update completed by Tighe & Bond summarized and updated the RECs for the Site:

- **REC 1 – Former Spar Mill Pond Historic Fill / Dump Area**

The western portion of the Site formerly existed as Spar Mill Pond (pre-1942). This pond was created by diverting water from Candlewood Hill Brook to support on-site mill operations (circa 1800s to 1942). In 1941 DOT began filling the pond with various debris including street sweepings, rock, asphalt, concrete, some metal and other items. It was reported that drums of herbicide were buried in the pond and one drum was found during test pitting activities. However, based on Tighe & Bond's review of the information, the drum was found to contain sandy soils with a white residue on the drum. It was only the white residue that was sampled by Hart Associates and tested positive for pesticides. The drum was not filled with pesticide as reported by others. GPR surveys and test pitting activities were conducted to locate drums however, no additional drums were found.

Extensive investigations have been conducted for this area that identified fill material in the former Spar Mill Pond at depths from 0 to 14 feet bg containing concentrations of PAHs, ETPH, lead, and pesticides exceeding RSR criteria. Significant soil impacts were historically identified in the area of MW-10D which may require excavation.

Arsenic, PAHs, sodium, and chloride were detected in groundwater beneath this area at concentrations exceeding applicable criteria. The upgradient deep well (W-25-1D) was noted in historic groundwater sampling events to have benzene and other gasoline related VOCs which maybe from releases associated with upgradient gasoline stations on Route 154.

Bedrock was reported at depths ranging from 29 to 34 feet bg and depth to groundwater ranges from 11 to 17 feet bg across this area. A silty clay layer was reported below the fill material and above the bedrock.

This area has been referred to by others as Release Area 1.

- **REC 2 – Buried Drums of Joint Sealer**

  It was reported that approximately 2,000 gallons of an experimental joint sealer was buried in the southwestern portion of the Site (between the South Mill building and the Spar Mill Pond area). CTDEEP sampled this material and found it to contain elevated levels of benzene, toluene, and xylenes. Some of the tar was reportedly removed by Hart Associates and it appears that DOT conducted excavation to remove the remaining tar.

  Based on previous investigations, this area was reported to contain 8 to 10 feet of fill material. Soil investigations identified ETPH, PAHs, and pesticides at concentrations exceeding RSR criteria. The soil in the area of D-17 collected from 5 to 7 feet bg was also found to be hazardous with respect to leachable lead content. Groundwater beneath this area was found to contain arsenic, chromium, lead, sodium, and chloride above applicable criteria. Depth to groundwater in this area ranges from 11 to 12 feet bg.

  F&O combined this with REC-1 to be included as Release Area -1

- **REC-3: Former Drum Storage Area**

  A storage shed, located to the west of the South Mill building was reported to have drums stored along its north side. Tighe & Bond noted that this information came from Hart Associates who marked two drums on a site plan in this location. Nothing in the Hart Associates report discussed the drums other than this notation. No information indicating whether the

drums were empty or full or their purpose/origin was provided. None of the other consultants who investigated the Site reported drums in this area. However, in the photos provided by Mr. Kadrle drums were present in this area, but he indicated they were empty, and this area was for empty drum storage.

Investigations of this area identified ETPH, PAHs, and pesticides in soils to depths of 2.5 feet bg. exceeding RSR criteria. Sodium and chloride were the only contaminants detected in groundwater from this area. Depth to groundwater in this area is approximately 4 to 6 feet bg.

This was not identified as a release area by F&O. However, they did recommend additional sampling stating a release determination was inconclusive.

- **REC-4: Former Steam Cleaning Area**

  This area was reported to be on the southwestern side of the South Mill building. Tighe & Bond noted that this information came from Hart Associates who marked "steam cleaning area" on a site plan in this location. Nothing in the Hart Associates report discussed steam cleaning. No information indicating what was cleaned and the process of cleaning was provided. None of the other consultants who investigated the Site seeing steam cleaning operations occurring at the Site. According to Mr. Kadlre trucks and equipment were "hosed" off in this area, but no steam cleaning was conducted no use solvents other than mineral spirits occurred. Tighe & Bond notes that this area was also the possible location of a former kerosene UST as noted in mapping provided by Mr. Kadrle that indicates a "kerosene fill pipe" on the southwest corner of the South Mill building.

  Investigations of this area identified ETPH and PAHs in soils to depths of 3 feet bg. exceeding RSR criteria. Arsenic, sodium, and chloride were detected in groundwater at concentrations exceeding applicable criteria. Depth to groundwater in this area is approximately 4 to 6 feet bg.

  This area was not considered a release area by F&O as they indicated the impact appear to be related to fill material in this area. Tighe & Bond also notes this area was subject to the 1982 flood event and any material existing in this area is likely fill material placed by DOT following the flood.

- **REC-5: Former Solvent Storage Area**

  This area consists of the large, fenced impoundment area on the southeastern portion of the Site which was previously reported as being used for solvent storage. Tighe & Bond noted that this information came from Hart Associates who marked "solvent storage area" on a site plan in this location. Nothing in the Hart Associates report discussed the area other than this notation. No information indicating whether there were drums, how many drums, or their contents was provided. None of the other consultants who investigated the Site reported drums or solvent storage in this area or at the Site other than in association with parts cleaners which were reported to be citrus based or "savosol".

  Investigations of this area identified ETPH, PAHs, lead, and arsenic in soils to depths of 2 feet bg. at concentrations exceeding RSR criteria. Arsenic, sodium, and chloride were detected in groundwater exceeding applicable criteria. Historic investigations reportedly identified VOCs, lead and

petroleum hydrocarbons in soil and groundwater exceeding RSR criteria at sampling point D-3. Depth to groundwater in this area is approximately 2 to 4 feet bg.

This area was not considered a release area by F&O as they indicated the impact appear to be related to fill material in this area.

Tighe & Bond notes that this area formerly contained the original mill building that was demolished by DOT in 1941.

- **REC 6 – Repair Bays and Pump Island**

  This area encompasses the repair bays in the western portion of the South Mill building, the majority of the North Mill building, and the gasoline pump island between the two buildings. The pump island was removed in November 2014 and a petroleum hydrocarbons release was identified below the dispenser piping lines. In December 2015 petroleum impacted soil was removed from the former pump island piping trench along a 40 feet long corridor to a depth of approximately two feet below the ground surface. Confirmatory soil samples were collected and no exceedances of RSR criteria were noted.

  Historic soil sampling in this area identified PAHs exceeding RSR criteria to depths of 4 feet bg. PAHs, lead, sodium, and chloride were detected in groundwater from this area at concentrations exceeding applicable criteria. Depth to groundwater in this area is approximately 4 feet bg.

  F&O identified this REC as Release Area 2 indicating no releases from the repair bays occurred but petroleum releases near the pump island are comingled with fill material and residual petroleum impacts persist at depth below the water table.

- **REC-7: Septic Tank and Leach Field**

  The septic tank and leach field are located east of the North Mill building. This system was reportedly installed in the 1990s. It is unknown if there was a previous septic system in use at the Site. However, mapping provided by Mr. Kadrle suggests that a former leaching system was located to the south of the existing system in the fenced in impoundment area. The floor drains in the North Mill building reportedly discharged directly to the septic tank before they were sealed with concrete sometime in the 1990s. Also, it is assumed that sinks and bathroom facilities in this building also discharge to the septic system.

  PAHs exceeding RSR criteria were identified soils from this area to depths of 3 feet bg. Sodium and chloride were the only contaminants detected in groundwater from this area that exceeded applicable criteria. Depth to groundwater in this area is approximately 5 feet bg.

  F&O did not consider this REC a release area citing that soil impacts appear to be related to fill material.

- **REC 8 – 4,000-gallon Diesel UST**

  This UST was formerly located on the east side of the South Mill building. The UST was reportedly used for fueling DOT vehicles and was removed in November 2014. During the removal, the tank broke and approximately 50 gallons of water and residual product released into the tank grave (Spill

Case No. 2014-05891). Approximately 600 gallons of oil/water was reportedly pumped from the tank grave and transported off-site for disposal.

Confirmatory samples collected from the tank grave following removal identified PAHs in soil and groundwater exceeding RSR criteria. Lead was also detected in the groundwater sample at a concentration exceeding RSR criteria.

Previous soil investigations identified ETPH, PAHs, arsenic, and lead in soils from this area exceeding RSR criteria. Historical groundwater sampling identified select VOCs, PAHs, sodium, and chloride at concentrations exceeding applicable criteria in this area.

F&O identified this REC as Release Area 3 and combined it with REC 9 below.

- **REC 9 – 2,000-gallon Heating Oil & Gasoline USTs**

  Both of these USTs were formerly located in one tank grave on the east side of the South Mill building along with the UST in REC 8. The gasoline UST was used for fueling DOT vehicles, while the heating oil UST was used to heat the South Mill building. The USTs were removed in November 2014.

  Refer to REC 8 above for soil and groundwater results for this area.

- **REC 10 – Former Heating Oil & Diesel USTs**

  It was reported that a heating oil and diesel UST were formerly located near the southwest corner of the North Mill building. However, it appears that in the 2002 ECAF, the map depicting this information, was interpreted upside down. A ground penetrating radar survey conducted in 2017 did not identify anomalies that would be indicative of USTs in place at this location. Tighe & Bond believes that these USTs were actually located at the northeast corner of the South Mill building along with a former diesel fuel dispensing pump.

  Soil investigations completed off the northwest corner of the North Mill building identified ETPH and PAHs in soils from 0 to 2 feet bg exceeding RSR criteria. No groundwater sampling has been conducted for this REC.

  F&O identified this REC as Release Area 4 and indicated a release of petroleum has occurred within a 20 foot square area and is comingled with fill material. F&O recommended additional sampling to fully delineate the release in this area.

  The southeast corner of the South Mill building where these USTs were believed to be located has had investigations and documented releases from the existing USTs in this area (RECs 8 & 9)

- **REC-11: Former Central Underground Storage Tank (UST) Area**

  It was reported that four former USTs, including 2 gasoline and 2 waste oil USTs, were historically located in an area between the two mill buildings. However, similar to REC-10, this information appears incorrect due to an error in reading a map in 2002. Tighe & Bond believes that the USTs depicted in this map include the former 1,000-gallon waste oil UST adjacent to the northcentral side of the South Mill, and a former 3,000-gallon gasoline UST that was associated with the gasoline dispensing pump. Also in this area were two 1,000-gallon gasoline USTs that were reportedly

replaced circa 1980 by the aforementioned 3,000-gallon UST. A ground penetrating radar survey conducted in 2017 did not identify anomalies that would be indicative of USTs in place at this location.

PAHs and pesticides have been detected in soils from this area at depths of 0 to 2 feet bg. Chloride was the only contaminant detected in groundwater from this area exceeding applicable criteria. Depth to groundwater in this area is approximately 4 feet bg.

F&O did not consider this REC a release area and concluded that soil impacts detected in this area are from fill material or incidental releases from the parking lot.

- **REC-12: Former Heating Oil UST**

  A former heating oil UST was reportedly located on the southcentral side of the South Mill building. There is conflicting information regarding former USTs in this location. According to a spill report for the Site, during a flood event in 1982 a heating oil UST and waste crankcase oil UST were washed way from the south side of the South Mill building. Mr. Kadrle confirmed this information. Tighe & Bond also noted in the area of the supposed heating oil UST the words "waste oil tank" painted on the exterior wall of the building. Furthermore, on the mapping provided by Mr. Kadrle, a "kerosene" fill pipe was noted on the southwest corner of the South Mill building which could have been the heating oil UST referred to in the spill report. Also, according to Mr. Kadrle, all of the soil from this area was removed in the flood, so DOT reportedly placed boulders with fill material on top to replace what was eroded away.

  PAHs were the only contaminant detected in soils from this area exceeding RSR criteria. Sodium and chloride were the only groundwater contaminants detected above applicable criteria. Depth to groundwater in this area is approximately 5 feet bg.

  F&O did not consider this REC a release area and attributed soil impacts in this area to fill material containing asphalt.

- **REC 13 – Former Heating Oil UST**

  A 2,000-gallon fuel oil UST was formerly located off the northeast corner of the North Mill building which was used to fuel the building's heating system. This UST was removed in 2014 and may have been a second generation tank in this area replacing a previous 2,000-gallon heating oil UST in 1989.

  No contaminants were detected in the confirmatory soil sample results collected following removal of the tank. However, a groundwater sample collected from the tank grave was found to have ETPH and PAHs exceeding RSR criteria. Depth to groundwater in this area is approximately 12 feet bg.

  F&O identified this REC as Release Area 5 based on the contaminants detected in groundwater and suggested this may be due to a release of petroleum hydrocarbons from piping which remains below the building slab, or from an off-site source.

- **REC 14 – Waste Oil UST**

  A former 550-gallon waste oil UST was located north of the offices and repair bays of the southern mill building. This UST was removed in

November 2014 and TRC collected 4 confirmatory sidewall samples and one grab groundwater sample from the excavation following tank removal activities. Due to concentrations of PAHs & arsenic in sidewall samples at concentrations greater than RSR criteria, impacted soil was removed from the tank grave in January 2015. Confirmatory samples collected following excavation did not identify contaminants exceeding RSR criteria in soil or groundwater.

F&O identified this REC as Release Area 6 based on the fact that the interior waste oil fill pipe still remains inside the South Mill building beneath the slab and the adjacent utility tunnel could serve as a preferential pathway for migration of release and formal post remediation groundwater monitoring has not been conducted.

Tighe & Bond notes that no petroleum odors or staining was observed in the visible portions of the adjacent utility trench by F&O or at the time of our site visit.

- **REC-15: Interior Trenches**

  Evidence of underground trenches running from east to west in the western portion of the South Mill building were noted by F&O. Tighe & Bond notes that based on mapping provided by Mr. Kadrle, these trenches coincide with piping connecting three former floor drains in the area then discharged out to Candlewood Hill Brook. Based on the concrete covering the trench it may be possible that the floor drain piping was removed, and the area filled with concrete.

  Arsenic was the only contaminant detected in soil samples collected from this area at concentrations exceeding RSR criteria. No groundwater investigations were conducted for this area.

  This was not identified as a release area by F&O. However, they did recommend additional sampling stating a release determination was inconclusive and limited sampling was hindered by the concrete.

- **REC 16 – Former Hydraulic Lift Area**

  Above and below-ground hydraulic lifts were formerly located in the repair bay located in the center of the South Mill building. A DEEP Spill report dated 8/14/1998 describes a release of 70 gallons of hydraulic fluid from the lifts and a former Site manager stated that contaminated soil was removed from the area when the underground lift was replaced with the above- ground lift.

  F&O identified concentrations of ETPH and lead in soils above the RSR criteria within this REC to depths of 8.5 feet bg. No PCBs were detected. F&O indicated bedrock is approximately 8-10 feet bg in this area and depth to groundwater is at approximately 8 feet bg.

  F&O identified this REC as Release Area 7 and estimated the area of impact is approximately 400 square feet is size. They recommended additional characterization to determine the full degree and extend of the release including the potential for installing a well inside the building to determine if the release has impacted the bedrock aquifer.

- **REC 17 – Interior Concrete Floors**

Evidence of petroleum staining, concrete deterioration from salt and chemicals, and rings from drum storage is visible on interior floors throughout the Site buildings. Several interior concrete chip samples were collected by F&O to determine if PCBs are present on the concrete slab floors. None were detected.

F&O identified this REC as Release Area 8 stating that additional characterization of the floors and subsurface below the floors is warranted based on the potential reuse of the buildings.

- **REC-18: Area of Historic Solvent Release Area**

  This area is located off the northeastern corner of the South Mill building. Tighe & Bond noted that this information came from Hart Associates who marked "solvent odor" on a site plan in this location. Nothing in the Hart Associates report discussed the area other than this notation. No information indicating the source of the odor, duration, or exact location was provided. None of the other consultants who investigated the Site reported solvent odors, drums of solvent, or other information pertaining to solvents other than in association with parts cleaners which were reported to be citrus based or "savosol".

  A soil sample collected from this area in 2006 identified naphthalene at a concentration exceeding RSR criteria. No other contaminants were identified in this sample. Sodium and chloride were the only contaminants detected in groundwater exceeding applicable criteria in this area.

  F&O concluded based on historic sample results that impacts in this area were attributed to fill material and not a release of solvents.

- **REC-19: Salt Storage**

  The Site historically was used as a salt storage facility from 1941 through 1973; however, the exact location of the salt storage area is unknown. Previously it was suggested that based on aerial photographs, the storage location was most likely in the area of the former Spar Mill Pond. However, according to Mr. Kadrle, salt was stored in the shed on the west side of the South Mill building and not stored in open areas on the Site.

  Groundwater data collected from the Site identified elevated concentrations of sodium and chloride through the Site and migrating off-site to the south and east. Concentrations exceed DPH criteria for these constituents and higher concentrations appear to exist on the eastern portion of the Site as compared to the western portion of the Site.

- **REC-20: Former Transformer House**

  Historic mapping observed in the files at Town Hall identified the current generator shed as a transformer house. There is potential that PCBs may have been associated with the transformer. No previous sampling has been conducted for this REC.

- **REC-21: Candlewood Hill Brook**

  Although not specifically identified by others, Candlewood Hill Brook is on the Site and is considered REC. Sediment and surface water in Candlewood Hill Brook has had limited sampling and contaminants detected include ETPH, VOCs, PAHs, metals, and pesticides. The source of these

contaminants are likely the fill material and release areas documented at the Site. However, it should be noted that this brook likely has received discharges from all three of Scovils Mills from the 1800s to 1940s. Furthermore, the channel of this brook has been re-worked overtime and most recently re-worked by DOT in 1982 after the aforementioned flood event. Since RSRs do not apply to sediment, consultation will be required with CTDEEP's Ecological Risk Group to determine what remediation will be required for Candlewood Hill Brook.

Phase III ESA, Tighe & Bond, March 2021

A summary of environmental findings for each REC is provided below.

REC-1: Historical Fill/ Dump Area

A release of petroleum and PAHs has been identified due to the historic filling of Spar Mill Pond with construction debris (metal, blast rock, and concrete) and street sweepings. Fill material was observed at the surface to a depth of approximately 20 feet in the center of the former pond. ETPH was identified in soils above the RES DEC and GA PMC at a depth of 0 to 8 feet bgs and in one historic soil boring, MW-10D, above the RES DEC, I/C DEC, and GA PMC at a depth of 10 to 14 feet bgs. VOCs were identified above the GA PMC in MW-10D at a depth of 10 to 14 feet bgs. PAHs were identified above the RES DEC, I/C DEC, and GA PMC in soils from 0 to 8 ft below grade. Several SPLP PAHs were identified above the GWPC.

Total DDT was reported above the GA PMC in soils from o to 8 feet bgs; however, SPLP DDT was not reported above the laboratory reporting limits.

Organic soils, believed to be the bottom of the former pond, were encountered at depths of 10 feet on the eastern side of the former pond to 15 feet in the western side of the former pond. TB-TP-10 was advanced in the center of the former pond. The test pit was excavated to the depth of 20 feet, organic soils were not encountered.

Historic groundwater samples collected in 1986 identified two PAHs, benzo(a)pyrene and benzo(b)fluoranthene, above the GWPC and SWPC in monitoring well W-25-1S. Arsenic was identified above the SWPC in the sample collected in 2006 from W-25-1S. Groundwater samples collected in 2020 identified concentrations of varies metals above the laboratory reporting limits but below the RSR criteria. ETPH, VOCs, PAHs, and pesticides were not reported above the laboratory reporting limits in groundwater within REC-1. As such, a significant release to groundwater does not appear to have occurred at this REC.

Soil remediation is required for this REC to bring the Site into compliance with CTDEEP RSRs.

REC-2: Buried Drums of Joint Sealer

A release of ETPH, and PAHs has been identified in the area of the former buried drums of joint sealer. ETPH was identified above the RES DEC and GA PMC at depths ranging from 0 to 8 feet bgs. VOCs were identified above the GA PMC on the eastern and southern portions of the REC at depths ranging from 10 to 18 feet bgs. PAHs were identified above the RES DEC, I/C DEC, and GA PMC at depths ranging from 0 to 14 feet bgs. Several SPLP PAHs were identified above the GWPC.

Total DDT was reported above the GA PMC in soils from o to 12 feet bgs and heptachlor epoxide was identified above the RES DEC and GA PMC in SB-25-2 at a depth of 10 to 12 feet bgs.

Street sweepings consistent with those found in REC-1 were also identified in REC-2 and releases identified in the area of this REC appear to overlap with releases from the historical fill/Dumping Area (REC-1).

Historic groundwater samples collected in 1986 identified several PAHs above the GWPC and/or SWPC in monitoring well W-25-2. Recent groundwater samples did not identify PAH concentrations above the laboratory reporting limits. Groundwater samples identified concentrations of varies metals above the laboratory reporting limits but below the RSR criteria. ETPH, VOCs, and pesticides were not reported above the laboratory reporting limits in groundwater within REC-2. As such, a release to groundwater does not appear to have occurred at this REC.

Soil remediation is required for this REC to bring the site into compliance with CTDEEP RSRs.

REC-3: Drum Storage Area

PAH, ETPH, and pesticide concentrations were identified above the RSR criteria in shallow soils from 0 to 2.4 ft below grade. Degraded asphalt and fill material in the form of non-native sand were observed in shallow soils within the former drum storage area. Based on this, the impacts are believed to be from asphalt and fill material and not indicative of a release to soil at this REC.

Historic groundwater samples collected in 1986 identified acetone above the laboratory reporting limit but below the RSR criteria in monitoring well D-1. Recent groundwater samples did not identify concentrations of VOCs, ETPH, or PAHs, above the laboratory reporting limits within REC-3. As such, a release to groundwater does not appear to have occurred at this REC.

REC-4: Solvent Steam Cleaning Area

PAH, ETPH, and pesticide concentrations were identified above the RSR criteria in shallow soils from 0 to 3 ft below grade. Chlorinated solvents were not identified in any of the soil samples. Degraded asphalt and fill material in the form of non-native sand were observed in the top five feet of soils within the former solvent steam cleaning area. Based on this, the impacts are believed to be from asphalt and fill material and not indicative of a release at this REC.

Groundwater samples collected in 2007 and 2020 did not identify concentrations of ETPH, PAHs, or VOCs above the laboratory reporting limits in groundwater at REC-4. Low concentrations of barium and zinc were reported below the RSR criteria. As such, a release to groundwater does not appear to have occurred at this REC.

REC-5: Historic Solvent Storage Area

PAH and ETPH concentrations were identified above the RSR criteria in shallow soils from 0 to 5 ft below grade. Chlorinated solvents were not identified in any of the soil samples. Degraded asphalt and fill material in the form of non-native sand, wood, coal, coal ash, bricks, and cinders were observed from grade to depths of nine feet bgs within the historic solvent storage area. Based on this, the impacts are believed to be from asphalt and fill material and not indicative of a release to soil at this REC.

Historic groundwater samples collected from former monitoring well D-3 in 1985 and 1986 identified low concentrations, below RSR criteria, of benzene and acetone, respectively. Samples collected from former monitoring well MW-2 in 2007 and newly install monitoring well MW-104 (at roughly the same location as MW-2) did not identify any VOC or ETPH concentrations above the laboratory reporting limits. Trace concentrations of benzo(a)anthracene and benzo(b)fluoranthene were identified in MW-104. Low concentrations fo barium were identified in both MW-2 in 2006 and MW-104 in 2020, In addition, low concentrations of nickel and zinc were also identified in MW-104. No RSR

exceedances of COCs were identified in current or historic groundwater samples. As such, a release to groundwater does not appear to have occurred at this REC.

REC-6: Repair Bays & Pump Island

Diesel fuel impacts in the form of odors and an elevated PID reading were observed in one soil boing, TB-100, at a depth of 8.5-9 feet bgs to the southwest of the former pump island just above the water table. The soil sample collected from this interval identified low concentrations of ETPH, benzene, and naphthalene below the RSR criteria.

PAH, ETPH, metals and pesticide concentrations were identified above the RSR criteria in shallow soils from 0 to 5 ft below grade in historic soil borings. These impacts are believed to be from degraded asphalt and fill material in the form of non-native sand that was observed from grade to depths of five feet bgs in the area of the repair bays and the former pump island. Based on this, the shallow impacts are believed to be from asphalt and fill material and not indicative of a release at this REC.

A limited release of diesel fuel to soil appears to have occurred in the area of the former pump island and should be evaluated to identify the extent of impacts.

Historic groundwater samples collected from former monitoring wells D-1 and B-9 in 1986 identified low concentrations, below RSR criteria, of acetone. Samples collected from former monitoring well FOMW-01 and existing monitoring well FOMW-02 in 2007 did not identify any VOC laboratory reporting limits. The 2007 groundwater samples identified concentrations of several PAHs above the GWPC and/or SWPC. Concentrations of total DDT, chromium, and lead were also identified in FOMW-01 above the GWPC and/or SWPC.

A groundwater sample collected from FOMW-02 as part of this Phase II/III did not identify concentrations of VOCs, PAHs, pesticides, arsenic, or lead above the laboratory reporting limits. FOMW-01 was unable to be located during recent groundwater sampling events. Concentrations of PAHs, DDT, chromium, and lead above the RSR criteria in FOMW-01 are likely related to fill material and not indicative of a release to groundwater at this REC.

REC-7: Septic Tank & Leach Field

PAH concentrations were identified above the RSR criteria in shallow soils from 0 to 3 ft below grade. Asphalt and fill material in the form of non-native sand were observed from grade to depths of two feet bgs within the area of the septic tank and leach field. Bedding stone, presumed to be the leach field, was observed at a depth of 2 feet below grade in TB-TP-7. Soil impacts were not identified in deeper soils and soils beneath the leach Filed. Based on this, the impacts are believed to be from fill material and not indicative of a release to soil at this REC.

Historic groundwater samples collected from monitoring well MW-1 in 2006 and 2017 did not identify concentration of ETPH, PAHS, PCBS, pesticides, or herbicides above the laboratory reporting limits except for a trace concentration of dibenz(a,h)anthracene in the 2017 sample. Concentrations of barium were identified below the RSR criteria in both samples and lead was identified below the RSR criteria in the 2017 sample.

A groundwater sample collected from MW-1 as part of this Phase II/III identified several PAHs above the GWPC and/or SWPC in both the total and dissolved forms. Total and dissolved lead was also identified above the GWPC and SWPC and total thallium was identified at a concentration of 21 ug/L, above the GWPC of 5 ug/l. Concentrations of PAHs, thallium, and lead above the RSR criteria in MW-01 are likely related to fill material and not indicative of a release to groundwater at this REC.

REC-8: Diesel Fuel UST and REC-9: Heating & Gasoline USTs

During the removal of the USTs in 2015 the diesel UST split while still in the grave resulting in the release of approximately 50 gallons of remnant diesel fuel. Diesel fuel impacts in the form of odors and an elevated PID reading were observed in one soil boing, TB-101, at a depth of five to eleven feet bgs to the northwest of the UST grave above the water table. The soil sample collected from this boring at a depth of 8.5-9 feet bgs identified concentrations of ETPH above the RES DEC and GA PMC. Low concentrations of n- & sec-butylbenzene, and naphthalene were identified below the RSR criteria. A grey silt layer was observed in TB-102 at a depth of 10 to 12.5 feet bgs. A sample collected from the grey silt layer identified PAH concentration above the RES DEC, IC DEC and GA PMC.

PAH, ETPH, metals and pesticide concentrations were identified above the RSR criteria were identified in shallow soils from 0 to 6 ft below grade. These impacts are believed to be from degraded asphalt and fill material in the form of non-native sand, coal, asphalt, and concrete that was observed from grade to depths of five feet bgs in the area of the former UST grave. Based on this, the shallow impacts are believed to be from asphalt and fill material and not indicative of a release at this REC.

A limited release of diesel fuel to soil appears to have occurred in the area of the former diesel fuel UST and should be evaluated to identify the extent of impacts.

Historic groundwater samples collected from former monitoring well D-2 in 1986 identified concentrations of benzene and methylene chloride above the GWPC. Subsequent downgradient groundwater samples collected from former monitoring well MW-3 in 2006 and HMF-MW-1 in 2017 did not identify concentrations of VOCs above the laboratory reporting limits. Arsenic concentrations were identified above the SWPC in former monitoring well MW-3 in 2006.

A grab groundwater sample was collected by TRC in 2014 from the bottom of the UST grave during the removal of the USTs. Concentrations of several PAHs above the GWPC and/or SWPC as well as a low concentration of EPTH were identified in the sample. Since this sample was collected as a grab sample directly from the open excavation, it is assumed the sample was highly turbid. Two monitoring wells, HMF-MW-1 and HMF-MW-2, were installed downgradient of the UST grave. Historic groundwater samples from these monitoring wells collected by TRC in 2015 identified low concentrations of several PAHs in HMF-MW-1 and a low concentration of benzo(b)fluranthene in HMF-MW-2. Concentrations of ETPH, VOCs, and lead were not identified in either sample. Given the fill material identified in soils around the UST, it is likely that the ETPH and PAH concentrations identified in the grab sample are due to soil partials within the groundwater sample and are not representative of the groundwater concentrations.

A groundwater sample collected from HMF-MW-1 as part of this Phase III did not identify any ETPH, VOC, PAH, arsenic, or lead concentrations above the laboratory reporting limits. Concentrations of PAHs the RSR criteria in the grab sample collected from the UST grave are likely related to fill material and not indicative of a release to groundwater at this REC.

REC-10: Former Heating Oil & Diesel USTs

PAH and ETPH concentrations were identified above the RSR in shallow soils from 0 to 2 ft below grade. Degraded asphalt and fill material in the form of non-native sand, bricks, and crushed stone were observed from grade to depths of three feet bgs within the area of the former heating oil and diesel USTs. Based on this, the impacts are believed to be from asphalt and fill material and not indicative of a release to soil at this REC.

Historic groundwater samples collected from former monitoring well FOMW-01 in 2007 identified concentrations of several PAHs, total DDT, chromium, and lead above the GWPC

and/or SWPC. These concentrations are likely related to fill material and not indicative of a release from USTs to groundwater at this REC.

REC-11: Four Former USTs

PAH and total DDT concentrations were identified above the RSR criteria in shallow soils from 0 to 3 ft below grade. Degraded asphalt and fill material in the form of non-native sand and crushed stone were observed from grade to depths of four feet bgs within the area of the four former USTs. Based on this, the impacts are believed to be from asphalt and fill material and not indicative of a release to soil at this REC.

Historic groundwater samples collected from former monitoring well D-9 in 1986 identified a concentration of acetone at 31 ug/L, well below the GWPC of 700 ug/L. No other VOCs were reported above the laboratory reporting limit. The concentration of acetone is likely a result of cross contamination at the laboratory and is not indicative of a release to groundwater at this REC.

REC-12: Former Heating Oil UST

PAH concentrations were identified above the RSR criteria in shallow soils from 0 to 3 ft below grade. Fill material in the form of non-native sand and asphalt fragments were observed from grade to depths of three feet bgs within the area of the former heating oil UST. Based on this, the impacts are believed to be from fill material and not indicative of a release to soil at this REC.

Current and historic groundwater samples from MW-6 did not identify concentrations of ETPH, VOCs, PAHs, PCBs, and/or pesticides above the laboratory reporting limits. Low concentrations of barium, chromium, and zinc were identified in historic groundwater samples collected in 2006 and 2017 below RSR criteria. As such, a release to groundwater from this former UST does not appear to have occurred at this REC.

REC-13: Former Heating Oil UST

PAH, ETPH, and VOC concentrations were not identified above the laboratory reporting limits in confirmatory soil samples collected from the UST grave and one soil boring advanced near the former heating oil UST. Based on this, a release to soil does not appear to have occurred at this REC.

A grab groundwater sample was collected from the UST grave during the removal of the heating oil UST in 2014. Elevated concentrations of ETPH, and PAHs were identified above the GWPC and/or SPWC. Since this sample was collected as a grab sample directly from the open excavation, it is assumed the sample was highly turbid. One monitoring well, HMF-MW-4, was installed downgradient of the UST grave. A groundwater sample from this monitoring well collected by TRC in 2015 did not identify concentrations of ETPH, VOCs, PAHs, or lead above the laboratory reporting limits. Given the proximity of the UST grave to the road and fill material found throughout the Site, it is likely that the ETPH and PAH concentrations identified in the grab sample are due to soil particles within the groundwater sample and are not representative of the groundwater concentrations.

A groundwater sample collected from HMF-MW-4 during this Phase III did not identify concentrations of ETPH or PAHs above the laboratory reporting limits. As such, a release to groundwater does not appear to have occurred from the at this REC.

REC-14: Waste Oil UST

PAH concentrations were identified above the RSR criteria in confirmatory soil sample collected from the south sidewall of the UST grave at a depth of six to seven feet bgs

along the building. Arsenic concentrations were identified above the RSR criteria in the confirmatory samples collected from the east and west sidewalls of the former UST grave at a depth of six to seven feet bgs. According to TRC, the UST appeared to be in good condition upon removal and no signs of a release were observed. One to two feet of soil was removed at each of the sidewalls and the sidewalls were resampled. PAHs were not identified in the south sidewall sample and arsenic was not identified in the east side wall sample above the laboratory reporting limits. Arsenic was identified in the west sidewall sample but at a concentration below the RSR criteria. Based on this, the impacts identified in the original confirmatory samples are believed to be from the backfill material used around the UST during installation and not indicative of a release from the UST.

A historic groundwater samples was collected from former monitoring well MW-5 in 2006. Concentrations of EPTH, VOCs, PAHs, and PCBs were not identify above the laboratory reporting limits. A low concentration of barium was identified at 22.7 ug/L, well below the GWPC of 1,000 ug/L.

A grab groundwater sample was collected from the UST grave during the removal of the heating oil UST in 2014. Elevated concentrations of ETPH, and PAHs were identified above the GWPC and/or SPWC. Since this sample was collected as a grab sample directly from the open excavation, it is assumed the sample was highly turbid. One monitoring well, HMF-MW-3, was installed downgradient of the UST grave. A groundwater sample from this monitoring well collected by TRC in 2015 did not identify concentrations of ETPH, VOCs, PAHs, or lead above the laboratory reporting limits except for benzo(b)fluoranthene at a concentration of 0.03 ug/L. Below the GWPC of 0.08 ug/L. Given the fill materials identified around the UST grave, it is likely that the ETPH and PAH concentrations identified in the grab sample are due to soil particles within the groundwater sample and are not representative of the groundwater concentrations.

REC-15: Interior Trenches

Arsenic concentrations were identified above the RSR criteria in shallow soils from 0 to 2 feet below grade. Fill material in the form of scrap metal, slag, brick, and coal were observed from grade to depths of five feet bgs in soils underneath the western portion of the southern mill building. Based on this, the impacts are believed to be from fill material and not indicative of a release at this REC.

Groundwater quality has not been evaluated at this REC.

REC-16: Former Hydraulic Lift Area

Elevated EPTH concentrations above the RSR criteria and petroleum odors were identified beneath the concrete building slab of the southern mill building in the area of the former hydraulic lifts. The impacts were observed at a depth of five to nine feet which is consistent with the presumed depth of the former hydraulic lift cylinders.

Historic groundwater samples were collected from former monitoring well MW-4 in 2006. Concentrations of arsenic were identified above the SWPC and concentrations of lead were identified above the GWPC and SWPC. Concentrations of EPTH, VOCs, PAHs, PCBs, herbicides, and pesticides were not reported above the laboratory reporting limit.

MW-103 was installed during this Phase III in roughly the same location as MW-4. The groundwater sample collected from MW-103 identified low concentrations of sec-butylbenzene and isopropylbenzene below the RSR criteria. ETPH and PAHs were not identified above the laboratory reporting limits. A petroleum odor was observed on the purge water from MW-104 during well development and sampling.

Based on the petroleum odors identified in the area of the former hydraulic lifts and in the groundwater downgradient of the area, a release to soil and groundwater beneath the South Mill building from the former hydraulic lifts appears to have occurred.

REC-17: Interior Concrete Floor

Staining was observed on the concrete floors of both mill buildings. The observed staining included, petroleum staining, rings from former drum storage, and deteriorating from chemicals and/or salt storage. Several concrete chip samples were previously collected by others to evaluate the stained areas for PCBs. PCBs were not detected in any of the concrete chip samples. The release appears to be limited to staining on top of the concrete. As such, groundwater has not been investigated at this REC. Remedial options should be evaluated based on the potential future use of the Site buildings.

REC-18: Potential Solvent Release Area

PAH and naphthalene concentrations were identified above the RSR criteria in shallow soils from 0 to 2 ft below grade. Degraded asphalt and fill material in the form of non-native sand and crushed stone were observed from grade to depths of four feet bgs within the area of the potential solvent release area. One soil sample, TB-109 (11.5-12 ft) identified concentrations of PAHs and ETPH above the RSR criteria. Asphalt fragments were observed in the soil boring at this interval. Chlorinated solvents were not identified in any of the soil borings. Based on this, the impacts are believed to be from asphalt and fill material and not indicative of a release to soil at this REC.

A historic groundwater sample collected from D-1 in 1986 identified a concentration of acetone at 104 ug/L. This detection is believed to be a result of cross contamination at the laboratory. Concentrations of ETPH, VOCs, PAHS, PCBs, or metals were not identified above the laboratory reporting limits in the groundwater sample collected from former monitoring well MW-8 in 2006.

Several PAHs were identified in the groundwater sample collected from MW-101 at concentrations above the GWPC or SWPC. These concentrations are believed to be due to high turbidity in the groundwater sample and not indicative of a release. Concentrations of ETPH and VOCs were not identified in the sample collected from MW-101 above the laboratory reporting limits.

REC-19: Former Salt Storage Activities

Sodium was identified in serval soil samples collected across the site. Road salt was observed in one soil boring, SB-120, advanced within the footprint of the former salt storage shed at a depth of eight to ten feet bgs.

Chloride concentrations in groundwater across the Site ranged from 8.5 mg/L in the upgradient well W-25-1S to 669 mg/L in former monitoring well D-3 on the eastern, downgradient, side of the Site. The SWPC for chloride is 10 mg/L and the CT Department of Public Health (DPH) maximum contaminate level (MCL) for chloride in drinking water supplies is 250 mg/L. Concentrations of chloride were identified above the CTDPH MCL in MW-8, D-1, D-3, D-8, and D-23.

Sodium concentrations ranged from 9.29 mg/L in the upgradient well W-25-1D to 354 mg/L in D-1, located near the former salt storage shed. RSR criteria has not been established for the sodium in groundwater. CTDPH has established a notification level of 28 mg/L. Several groundwater samples exceed the CTDPH notification level.

As such, a significant release of sodium and chloride to groundwater appears to have occurred at the Site and is migrating with groundwater off site.

Based on findings of this Phase III and previous investigations for the site, the following seven release areas (RA) requiring remediation were identified.

- **Release Area 1**: RA-1 consists of REC-1 and REC-2 due to the presence of ETPH, PAH, and pesticide concentrations above the RSR criteria.
- **Release area 2:** RA-2 was identified at REC-16 for the limited release of diesel fuel at the former dispenser island. Diesel impacts were observed in soil boring TB-100 just above the apparent groundwater table.
- **Release Area 3:** RA-3 consists of REC-8 and REC-9 due to the release of diesel fuel during the removal of the USTs. Diesel impacts were observed in soil boring TB-101 just above the apparent groundwater table.
- **Release Area 4:** RA-4 was identified at REC-16 due to elevated ETPH and PAHs concentrations is soils and apparent hydraulic oil odors at depths consistent with the former hydraulic lifts. Groundwater impacts were also observed in MW-103 in the form of petroleum odors and low concentrations of VOCs. MW-103 is located downgradient of the former hydraulic lift area.
- **Release Area 5:** RA-5 was identified by F&O at REC-17 regarding apparent staining observed on the concrete floors within each building. The release appears to be limited to the surface of the concrete floors and does not appear to have migrated to the subsurface.
- **Release Area 6:** RA-6 was identified in connection with REC-19 due to elevated concentrations of sodium and chloride in groundwater beneath the site. Elevated concentrations of sodium and chloride were observed in downgradient wells along the property line. As such, the concentrations are believed to be migrating off-site and have the potential to impact downgradient water supply wells.
- **Release Area 7:** RA-7 is site-wide and consists of ETPH, PAH, DDT and metals impacted soils and groundwater due to polluted fill material imported at the Site.

Most of the petroleum and PAHs impacts identified in shallow soils are related to polluted fill material observed throughout the Site. For properties with long industrial histories and potential for site-wide polluted fill, it is impossible to determine every area of impact. Therefore, remedial options for these types of sites routinely involve a combination of excavation, capping, implementation of an ELUR, and long-term groundwater monitoring.

Based on available data, remedial scenarios for the Site include:

Soil Excavation – Limited excavation and off-site disposal of soils in the area of the former pump island (RA-2) and the former diesel, gasoline, and heating oil USTs (RA-3) will be needed to remove the diesel impacts in this area just above the water table. It is anticipated that the excavation at RA-2 may include a 100 sq ft area to with disposal of soils located at a depth of 7-9 feet (~8 cubic yards or ~11 tons). The anticipated excavation area around the former diesel, gasoline, and heating oil USTs my include an area of approximately 700 sq ft with disposal of soils located at a depth of 8-9 feet (~26 cubic yards or ~39 tons). Other areas of polluted fill throughout the Site where exceedances of RSR criteria were noted may also require excavation. The volume of these additional soils is estimated to be approximately 4,000 cubic yards. However, attempts could be made to minimize the amount of excavation and off-site disposal of soils through the use of other remedial methods described below. There may be an opportunity for the majority of the polluted fill to be consolidated

and capped on-site with the proposed development or asphalt parking areas as opposed to off-site disposal.

Engineered Control (Capping) – Under the RSRs, capping of soil contamination existing above the groundwater table can be achieved through two options: having four feet of clean fill material overlying impacted soils or having two feet of clean fill covered by asphalt or concrete. This remedial approach should be evaluated for use with contaminated fill material. There are several opportunities with future development to consolidate impacted soils beneath structures or parking areas.

Environmental Land Use Restriction (ELUR) – An ELUR will likely be required for the Site if engineered controls are implemented for the project and to provide the ability to remediate the site to an industrial/commercial standard as opposed to the more stringent residential standard. The ELUR would likely restrict future use of the Site to industrial or commercial use and document the construction and maintenance required to ensure the integrity of the engineer control in perpetuity. The ELUR is placed on the land records for the Site.

Groundwater Remediation – Based on available data, it appears that groundwater remediation may likely be warranted near the former salt storage area located to the west of the South Mill building. This area exhibited some of the highest concentrations of sodium and chloride in Site groundwater samples. In addition, road salt was observed in TB-120 to a depth of 9 feet bgs. This area should be excavated to remove this source of salt.

2.6 Conceptual Site Model & Areas of Concern

A conceptual site model (CSM) is a representation of an environmental system at a site that is used as a tool to identify releases, pathways of migrations, potential receptors, and ultimately risk. The CSM is used to develop work plans and provide a framework to address issues that arise during the investigation of a site. The CSM is refined throughout the site characterization process as new data are acquired. The final CSM will fully define the environmental system at a site and validate the hypotheses regarding the environmental fate of released contaminants.

The following Conceptual Site Model (CSM) was prepared based on the findings of investigations conducted for the site which identified releases at seven of the 21 on-site AOCs. Each Release Area (RA) has been assigned an identification number.

Figure 3 depicts the soil analytical results that were found to exceed RSR criteria and Figure 4 depicts the groundwater analytical results that were found to exceed RSR criteria and groundwater flow direction as calculated by T&B based on 3 groundwater gauging events from October 2020 to March 2021.

The CSM includes the following:

- Description of the site, environments, and RECs
- Nature and extent of contaminants
- Potential release mechanisms for such contaminants
- Evaluation of migration pathways and locations at which environmental media are most likely to have been impacted by a release
- Identification of RECs at which releases have occurred as well as RECs at which releases have not occurred
- Data and rationale to support the conclusion

The CSM is summarized in Table 5.

2.6.1 Description of Site, Environments, and RECs

A description of the site, operational history, hydrogeology, and RECs is provided in Sections 2.4 and 2.5.

2.6.2 Nature and Extent of Contamination

A Phase II/III ESA was performed at the Site to evaluate the current environmental conditions at the Site and delineate historically identified impacts. ETPH, PAHs, VOCs, RCP Metals, and pesticides. Detections of these COCs appears to be limited to shallow soils in the top six feet of soil with limited impacts observed at depths of 9 to 12 feet bgs. Fill material observed at depths ranging from 0 to 5 feet bgs throughout the site and to depths of 12 feet bgs in the former Spar Mill Pond area on the west side of the Site. Fill material consisting of brick, concrete, asphalt, slag, coal, and non-native soils observed throughout the Site may be contributing to some of these elevated PAHs and metals concentrations.

The COCs confirmed in the groundwater at the Site include PAHs and lead. PAH concentrations were identified above the GWPC and/or SWPC in two groundwater samples and lead was identified at a concentration above the GWPC and SWPC in one groundwater sample. Both groundwater samples reportedly had elevated turbidity in the sample. The PAH and lead concentrations are attributed to the elevated turbidity and fill material observed throughout the Site. Groundwater at the Site is approximately 3 to 14 feet bgs.

CTDEEP RSR exceedances for soil are depicted on Figure 3 and CTDEEP RSR exceedances for groundwater are depicted on Figure 4. Detailed results of the previous soil and groundwater sampling are discussed in Section 2 and a summary of analytical results are presented in Tables 2 and 3, respectively.

2.6.3 Potential Release Mechanisms

Common potential release mechanisms fall into three general types depending on the source.

- A release directly onto the ground, asphalt or slabs. Releases onto asphalt or slabs can migrate through cracks over time. This release mechanism applies to the following RECs at the Site: REC-3, REC-4, REC-5, REC-6, REC-17, REC-18, and REC-19.
- Deposition of polluted fill material directly onto the surface and into the subsurface. Polluted fill material could be underneath buildings, roads, or other areas of the site. This release mechanism applies to the following RECs at the Site: REC-1 and REC-2.
- A release from USTs, piping, or other subgrade features (e.g. septic tanks, floor drains, in-ground lifts, sumps, etc.) directly to the subsurface. This release mechanism applies to the following RECs at the Site: REC-6, REC-7, REC-8, REC-9, REC-10, REC-11, REC-12, REC-13, REC-14, REC-15, and REC-16.

2.6.4 Migration Pathways

The migration pathway or transport mechanisms are categorized as three general types depending upon the pathway. Various potential exposure pathways were evaluated to determine if possible risks to public health or the environment exist from the on-site contamination. The evaluation is based on the location and depth of contaminants identified at the site.

Soil Migration Pathway

The site exists with heavily deteriorated and cracked pavement and with two buildings. Impacts to shallow site soils were identified at depths of 0 to 6 feet bgs. Based on this information there is potential for exposure to contaminated surface soils through direct contact in areas where bare soils exist. There is also potential for migration of contaminants from infiltration of precipitation. Where the pavement is in good condition or where a building footprint exists, there is minimal infiltration of precipitation which reduces the opportunity for the leaching of soil contaminants into the groundwater. The site pavement is in poor condition in several locations. There is a potential for migration of contaminations from infiltration of precipitation through the cracks and deteriorating pavement. There is also potential for migration of impacted surface soils through erosion via wind or from flooding along the banks of Candlewood Hill Brook.

Groundwater Migration Pathway

Groundwater beneath the site is approximately 3 to 14 feet bgs. The area surrounding the site is provided potable water via private wells. As such, groundwater is used for drinking water in the area surrounding the site and the potential for contact with groundwater at the site or surrounding area through ingestion is likely. Groundwater beneath the site is believed to discharge to Candlewood Hill Brook on the south side of the site.

Air Migration Pathway

Since the majority of the site is covered with deteriorating pavement with vegetation, buildings, and concrete, the risk for the migration of contaminated surface soil via air erosion (i.e. wind) appears to be minimal. No significant concentrations of VOCs were identified in soils or groundwater at the site that would suggest the risk of vapor intrusion issues.

Section 3
Remedial Objectives

3.1 Objective

COCs have been detected in soil and/or groundwater at concentrations above CTDEEP RSR cleanup criteria at the following AOCs / RAs:

AOC 1 & 2 / RA-1 – Former Spar Mill Pond and Tar Disposal Area

AOC 6 / RA-2 – Former Diesel Fuel Dispenser

AOC 16 / RA-3 – Former in-ground Hydraulic Lift

AOC 19 / RA-4 – Salt Storage Activities

RA-5 – Site wide contaminated fill material

The goal of this RAP is to achieve compliance with the CTDEEP RSRs for soil (RES DEC & GA PMC) and groundwater (GWPC, SWPC, & GW VC). Due to the close proximity of several of the RAs and overlapping impacts to soil and groundwater, "Remediation Areas" have been designated, described below.

3.2 Proposed Redevelopment Plan and Remediation Areas

The Town provided Tighe & Bond with conceptual plan to reuse the existing buildings with potential for additional future development at the site. A copy of this plan is provided in Appendix C. The plan depicts the existing mill buildings with potential for construction of a future third building with paved parking on the west side of the site and near the buildings. A potential kiosk and picnic areas are shown along with landscaped areas along the brook on the southern and western portions of the site. The proposed use of the buildings includes commercial uses such as office, retail, and maker space.

Based on site investigation activities to date, remediation areas have been identified that will require soil and groundwater remedial actions. The locations of the remediation areas are shown on Figure 5 but basically encompasses the entire site. The proposed Remedial Plan is anticipated include the following:

Proposed Soil Remediation Strategy

- Soil excavation and off-site disposal: Includes select areas within RA-1, RA-2, RA-3, RA-4, as noted on Figure 5 and summarized below:
    - RA-1 (REC-1) in the area of MW-10D soil impacts requiring excavation to a depth of 14 feet bg encompassing an area of approximately 600 square feet.
    - RA-1 (REC-2) in the area of D-17 and D-18 soil impacts requiring excavation to a depth of approximately 10 feet bg encompassing an area of approximately 500 square feet.
    - RA-2 (REC-10) former diesel UST and diesel pump on northeast corner of the South Mill building (previously reported as being on southwest corner of North Mill building). Diesel releases have impacted soils from 4 to 8 feet bg to requiring excavation of an area of approximately 200 square feet.

  - RA-3 (REC-16) a release of hydraulic oil has been documented beneath the South Mill building at requires excavation of petroleum impacted soils from approximately 3 feet bg to 8 feet bg in an area encompassing approximately 600 square feet.
  - RA-4 (REC-19) includes the former area of the former salt storage shed where road salt was identified from 0 to 10 feet bg in an area encompassing approximately 400 square feet.

- Capping of soils to render inaccessible for DEC compliance – Under the RSRs, capping of soil contamination existing above the groundwater table can be conducted to achieve compliance with DEC through two options: having four feet of clean fill material overlying impacted soils or having two feet of clean fill covered by asphalt or concrete. This remedial approach will likely be implemented for RA-1 (AOC-1 and AOC-2) and RA-7 (site wide fill material) as it would not be feasible or cost effective to dig out the fill material across 4 acres with some depths extending to 15 feet bg. Soil and groundwater require remediation in due to the presence of ETPH, PAH, lead, and pesticide concentrations above the RSR criteria. There will be several opportunities with future development to consolidate impacted soils beneath existing or future structures and parking areas. Furthermore, it does not appear that this area of the site would meet any of the current DEEP RSR exemptions for wide-spread polluted fill or variance for soils subject to infiltration.
- Engineered Control to render soils Environmentally Isolated for PMC compliance – Under the RSRs, an engineered control can be used to environmentally isolate soils to prevent infiltration of precipitation that would cause migration of contaminants from soil into groundwater. This remedial approach would be incorporated for contaminants existing beneath buildings and for RA-1. An impermeable liner meeting the specifications provided in the RSRs is proposed to be installed on the western portion of the site which is proposed to be a parking area to support future re-use of the site.
- Environmental Land Use Restriction (ELUR) – An ELUR will be required for the Site to restrict future use of the site to an industrial/commercial standard since cleaning up the site to a residential standard at this time does not appear feasible or cost effective based on proposed future use of the site. The ELUR will also document the location of capped soils, as well as construction and maintenance required to ensure the integrity of the engineer control in perpetuity (i.e buildings, impermeable liner, and any pavement used as a cap). The ELUR will be placed on the land records for the site.

Proposed Groundwater Remediation Strategy

For the site, the proposed remediation strategy for groundwater includes a combination of the following:

- Potential calculation of alternative GWPC and SWPC for select contaminants (primarily PAHs).

- Long-term monitored natural attenuation (MNA) of contaminants demonstrating effectiveness of soil remediation and diminishing groundwater plumes.

- Application for a Technical Impracticability (TI) variance for sodium and chloride in groundwater.

Proposed Remediation Strategy for Candlewood Hill Brook

Tighe & Bond is in the process of contacting the CTDEEP Ecological Risk Group to begin discussions on what remediation may be required for sediment and possibly surface water for Candlewood Hill Brook. It is likely that additional sampling will be required to determine the nature and extent of impacts to the brook. It is anticipated that at a minimum, erosion controls will need to be implemented along the banks of the brook where contaminated fill material exists to prevent additional sediment from entering the brook.

Section 4
Remedial Strategies

4.1 Evaluation & Selection

Tighe & Bond evaluated remedial options commonly utilized to remediate soil and groundwater impacted with petroleum hydrocarbons, PAHs, pesticides, and metals, which are the primary COCs for the site. The remedial options evaluated include:

Soil Remedial Options Evaluated:

- Excavation & Off-site Disposal
- In-situ Biological / Chemical Treatment (agents introduced to the subsurface via injection, emplacement into open excavations, and/or in-situ mixing with soil)
- In-situ Mechanical Treatment (soil vapor extraction (SVE), air sparging, dual phase extraction)
- Engineered / Administrative / Institutional Controls

Groundwater Remedial Options Evaluated:

- In-situ Biological / Chemical Treatment
- Monitored Natural Attenuation (MNA)
- In-situ Mechanical Treatment
- Engineered / Administrative / Institutional Controls

Soil Remediation Option Evaluation & Selection

On-site Impacted Soil

Excavation and off-site disposal was selected as the most direct, efficient, and cost effective approach to remediate hot spots associated with Remediation Areas 1, 2, 3, & 4 to achieve compliance with the RSR soil criteria (RES DEC & GA PMC). While excavation and off-site disposal has a higher upfront cost, the likelihood of achieving compliance with the soil standards in a short period of time is much higher than other potential options.

In-situ biological, chemical, and mechanical treatment technologies would not be effective, efficient, and/or cost effective for remediating the on-site impacted soil due primarily to the following reasons:

1. Significant impacts are present at and above the seasonal low water table.

   In-situ biological and chemical treatment technologies work most efficiently when soil is saturated. SVE is only effective at remediating impacts in the vadose zone (above the water table) and air sparging is only effective at remediating impacts below the water table. Mechanical methods require installation of large amounts of infrastructure (vapor extraction / sparge wells and subsurface piping, mechanical / electrical equipment) and long-term maintenance and monitoring, which typically result in high operational costs. All in situ technologies require multiple years to

reduce concentrations of COCs, without assurance of achieving remedial goals in a reasonable period of time.

2. The impacted on-site overburden materials consist of glacial till, which is fine-grained (silt & clay) and very dense (having a low permeability).

   In order for in-situ biological or mechanical remediation technologies to be optimally effective, subsurface soils should have an appreciable degree of permeability to allow distribution of chemical agents / oxygen, withdrawal of soil vapors, etc. Since the on-site overburden materials consist of glacial till with low permeability, in-situ technologies were not considered as a primary remedial option.

Tighe & Bond also evaluated implementation of engineered and administrative controls, such as capping the contaminated material in-place (rendering impacted soil inaccessible & environmentally isolated) and recording an Environmental Land Use Restriction (ELUR) to document the presence of capped soil and/or restrict residential use of the site. In order to qualify as environmentally isolated, contaminants in excess of the GA PMC cannot exist below the depth of the seasonal high water table. Based on the available data, it appears that the majority of impacted soil is located above the seasonal high water table, allowing engineered and administrative controls as a primary remedial option for the site.

Groundwater Remediation Option Evaluation & Selection (Remediation Area 1)

ETPH, PAHs, pesticides, chloride, and metals, AVOCs, and SVOCs have been detected in groundwater at concentrations above the RSR criteria in wells located on-site and also sodium and chloride migrating off-site. Tighe & Bond anticipates that COC concentrations in groundwater will decrease substantially following excavation of the impacted soil from RAs 1 through 4 and constructing an engineered control for RA-1, which is currently serving as an on-going source of contaminants. However, it is possible that COCs could remain at levels above the RSR criteria in groundwater after excavation and implementation of the EC. Tighe & Bond has selected long-term monitored natural attenuation (MNA) as the approach to remediate groundwater to achieve compliance with the RSRs in addition to the potential for calculating alternative GWPC and SWPC or select contaminants.

With regard to the sodium and chloride concentrations in groundwater beneath the site, discussions with CTDEEP have indicated that a Technical Impracticability Variance would likely be granted to obtain compliance with RSRs for these contaminants detected in groundwater.

Section 5
Remedial Action Implementation

This section details the approach to implement the remedial actions proposed in this RAP, which have been designed to achieve compliance with the RSRs.

5.1 Notifications

If prior to implementing remediation, public notice of the proposed remedial actions will be required 45 days prior to the start of remediation activities.

In accordance with statutes, public notice of the remediation will include:

- An announcement in a newspaper having substantial circulation in the area affected by the establishment, and
- Notification of remediation to the Director of Health of the municipality where the site is located (Chatham Health District), and
- Choosing one of the following options: 1) Erecting and maintaining, for at least thirty days, a sign not less than six feet by four feet on the Site, which is clearly visible from the public highway, including the words "ENVIRONMENTAL CLEAN-UP IN PROGRESS AT THIS SITE. FOR FURTHER INFORMATION, CONTACT:" and including a telephone number for interested persons to obtain additional information about the remediation, OR 2) mailing notice of the remediation to the owners of each abutting property.

5.2 Health & Safety Plan

In accordance with 29 CFR 1910.120, a Health and Safety Plan (HASP) will be prepared by the remediation contractor for use during remediation activities. The HASP will include responsibilities of on-site personnel, training requirements, site control, emergency contact information, personal protective equipment, exposure monitoring, and decontamination procedures. It will also be necessary for personnel observing remediation work to have an independent HASP.

5.3 Utility Clearance & Ground Penetrating Radar Survey

Prior to excavation, the proposed areas will be marked and the Connecticut Call Before You Dig (CBYD) service will be contacted to locate public utilities. The remediation contractor will also contact the site owner to determine exact locations of known private utilities prior to commencement of excavation activities. If doubt regarding the location of utility exists, a private utility locating contractor may be used to locate utilities via GPR.

5.4 Contractor Work Plan

The remediation contractor will be required to prepare a work plan specifying the sequencing, means and methods, and a schedule of site remediation activities. This will include safety procedures; building abatement, demolition, and disposal procedures; excavation methods; soil handling, stockpiling, and loading areas; dust control methods;

list of selected disposal facilities; ORC application procedures; and backfill / compaction procedures.

5.5 Hazardous Building Material Abatement

A Hazardous Building Materials Inspection report, dated December 2017, prepared by Fuss & O'Neill identified the following:

- ACM including roofing, window and door caulking, window glazing, and various boiler components. Ten other materials previously sampled by Enviromed were reported by F & O to be ACM including various roofing, chimney, boiler materials, and window caulking and glazing.
- Lead concentrations above 1 mg/Kg were identified on materials throughout the buildings including but not limited to; stairs, doors, windows, ceilings, parking signs, floor striping, and fascia boards.
- tan interior window glazing contained PCBs at a concentration of 1.2 mg/Kg and a second sample of the tan interior window glazing contained a concentration of 0.97 mg/Kg. PCB concentrations were not reported above the laboratory detection limit in the remaining 30 samples.

The following is anticipated as part of the remedial project:

- Abatement and off-site disposal of HBMs,
- Cleaning of any remaining sediment or sludge from floor drains, sumps, and associated piping.
- Removal of bat guano.
- Cleaning and disposal of any remaining ASTs and contents.
- Off-site disposal / recycling of any remaining scrap metal and other solid wastes.
- Pumping and cleaning of the septic tank and off-site disposal of contents, if testing indicates that the tank contains regulated substances.

5.6 Site Controls

Site Access Controls

Access to the site will be controlled by temporary construction fencing erected by the remediation contractor prior to the start of excavation.

Sedimentation & Erosion Controls

The remediation contractor will implement best management practices relative to soil erosion and sedimentation control, which may include installation of hay bales and/or silt fence around the excavation and soil handling / stockpiling areas. An anti-tracking pad will also be constructed to prevent tracking and spreading of site soil by vehicles beyond the footprint of the site.

Dust Suppression Controls

The remediation contractor will be required to implement dust suppression measures during all aspects of the work to prevent off-site migration of particulate matter. It is

anticipated that the generation of dust can be controlled by utilizing good work practices and, if necessary, by misting soil surfaces with water.

5.7 Soil Excavation, Handling/Staging, & Disposal

Impacted soil will be excavated from Remediation Areas 1, 2, 3, & 4 to the extents and depths detailed below and shown on Figure 5. The contractor will be required to use licensed and properly permitted treatment and/or disposal facilities for contaminated soils, subject to review and approval of the Engineer.

- RA-1 (REC-1) in the area of MW-10D soil impacts requiring excavation to a depth of 14 feet bg encompassing an area of approximately 600 square feet.

- RA-1 (REC-2) in the area of D-17 and D-18 soil impacts requiring excavation to a depth of approximately 10 feet bg encompassing an area of approximately 500 square feet.

- RA-2 (REC-10) former diesel UST and diesel pump on northeast corner of the South Mill building (previously reported as being on southwest corner of North Mill building). Diesel releases have impacted soils from 4 to 8 feet bg to requiring excavation of an area of approximately 200 square feet.

- RA-3 (REC-16) a release of hydraulic oil has been documented beneath the South Mill building at requires excavation of petroleum impacted soils from approximately 3 feet bg to 8 feet bg in an area encompassing approximately 600 square feet.

- RA-4 (REC-19) includes the former area of the former salt storage shed where road salt was identified from 0 to 10 feet bg in an area encompassing approximately 400 square feet.

In order to minimize the volume of groundwater entering the excavation, the work should be completed during the summer months when the water table should be at its lowest elevation. Due to the reported density and anticipated low permeability of the on-site surficial materials, Tighe & Bond anticipates that the excavation of Area 1 will yield a minimal amount of groundwater. However, some of the excavation areas proposed will be excavated past the depth of the water table.

The contractor will be required to implement procedures for managing and handling contaminated groundwater during the work if the rate of influx appears to be significant, so that the excavation can be extended vertically to the target depths required to achieve compliance with the RSRs.

Management and handling procedures of contaminated groundwater dewatered from Area 1 could include: 1) dewatering, on-site treatment, and discharge to sanitary sewer, or 2) dewatering and off-site disposal. Any discharges to the sanitary sewer must be completed after registration of the site under the CTDEEP General Permit.

During excavation, representative waste characterization samples will be obtained from Remediation Areas for laboratory analysis. Samples will be obtained during excavation and stockpiling activities. The samples will be analyzed for typical parameters required by disposal facilities.

The remediation contractor will obtain disposal facility approval for the contaminated soil utilizing the waste characterization analytical results prior to transporting any materials off-site.

Temporary stockpiling prior to off-site disposal will occur on and covered with polyethylene sheeting, secured in-place with sandbags or equivalent.

Excavation Verification Sidewall & Bottom Sampling Plan

During excavation, soil samples taken along sidewalls and bottoms of excavations will be observed, field screened, and documented as the work progresses. The contractor will be directed to stop excavation when field screening readings and/or visual and olfactory observations indicate that the limits of contamination appear to have been reached. Excavation verification samples will then be obtained for laboratory analysis, as described below.

For Remediation Area 1 & 2, excavation verification soil samples will be collected at a frequency of one per every 20 linear feet along the sidewalls, and on a 20 foot grid along the base of the excavation. Vertically, one to three soil samples (depending on the depth of excavation) may be obtained at each sidewall sampling location to confirm attainment of the remedial goals at various depth intervals.

For Remediation Area 3, excavation verification soil samples will be collected at a frequency of one per every 10 to 15 linear feet along the sidewalls, and 2 to 3 soil samples will be collected from the base of the excavation.

For Remediation Area 4, no verification soil samples are planned for this release area as it can be visibly verified when the road salt has been removed.

The verification soil samples will be analyzed for one or more of the following parameters: ETPH, PAHs, pesticides, and metals. All samples will be analyzed using the CTDEEP Reasonable Confidence Protocol (RCP) methods.

The excavations will remain open until the results of the verification samples are obtained from the laboratory. The excavations will be backfilled if all samples comply with the I/C DEC and the GA PMC.

If one or more COCs exceed the RSR criteria, the excavation will be extended at the location(s) of sidewall or bottom verification samples containing COCs exceeding the RSR criteria. Additional sidewall and bottom verification samples will then be obtained from the extended portion(s) of the excavation to confirm removal of the contaminated soil.

In addition to the verification samples described above, QA/QC samples will be collected for laboratory analysis. Field duplicate samples will be collected at a frequency of one for each analytical parameter for every 20 verification samples.

5.8 Site Restoration

The excavations areas will be backfilled with clean fill material to restore the areas to the current grade. Representative samples of the proposed clean fill material will be obtained at the source for analytical testing of regulated compounds prior to delivery of the fill to the site.

The sampling frequency will be dependent on the source and consistency of the fill material. At a minimum, three samples will be obtained. If clean fill material is obtained from more than one source, samples will be obtained from each source. Fill materials

found to contain regulated compounds at concentrations exceeding the I/C DEC or the GA PMC will not be allowed to be brought to the site.

5.9 Equipment Decontamination

All moveable equipment, tools, and sampling equipment that contacts contaminated soil, will be decontaminated prior to leaving the site, by dry methods (i.e. removing soil from machines with a broom and/or shovel). Wet methods may be employed if dry methods do not result in an acceptable level of decontamination.

5.10 ELUR & Engineered Controls

ELURs and Engineered Controls (ECs) are the primary methods by which the site will achieve compliance with the DEC and PMC of the RSRs.

An EC will be implemented to render soils environmentally isolated on the western portion of the site in accordance with the RSRs 22a-133k-2(c)(5)(A) to obtain compliance with the GAPMC.

The ELUR will be implemented in accordance with RSRs 22a-133k-2(b)(2)(A) to restrict future use of the site to commercial/industrial use to obtain compliance with the RES DEC. Furthermore, the ELUR will include rendering soils inaccessible in accordance with RSRs 22a-133k-2(b)(3) to obtain compliance with the I/C DEC.

5.11 Remedial Documentation

The work of this RAP should be documented via daily oversight by qualified environmental technicians and a CT Licensed Environmental Professional (LEP).

A Remedial Action Report (RAR) should be prepared to document the environmental remediation work completed pursuant to this RAP.

The RAR should include, at a minimum, the following items:

- A summary of abatement, demolition, and remediation activities
- Photographic log
- A description of and justification for any deviations from this RAP
- Soil shipping / waste manifest documentation for any soils or other wastes disposed off-site
- Analytical results for waste characterization samples, excavation confirmation samples, and samples of clean fill from off-site sources
- Figures depicting confirmation sample locations and final extent of the excavations
- Figures depicting locations of EC and land record filings or EC and ELUR
- Conclusions regarding compliance with the RSR cleanup criteria.

Section 6
Proposed Groundwater Monitoring Plan

Groundwater monitoring is required for the site to document that final groundwater conditions comply with Section 22a-133k-3(g) of the RSRs. The purpose of groundwater monitoring is to confirm the effectiveness of the soil and groundwater remedial actions and to demonstrate compliance with the applicable RSR groundwater criteria for each COC, including the GWPC, RES VC, and SWPC.

This RAP provides a brief description of the proposed groundwater monitoring plan, which will be divided into the following stages:

- A pre-excavation "baseline" sampling event to be completed several weeks prior to excavation.
- Post-excavation "performance" monitoring, which will begin one month after excavation is complete and will continue on a quarterly basis for one year, and then on a semi-annual or annual basis thereafter.
- "Compliance" groundwater monitoring to demonstrate compliance with the RSRs. Compliance groundwater monitoring will begin once the analytical results from the performance groundwater sampling indicate that the concentrations of COCs have decreased below the applicable RSR criteria (GWPC, SWPC, and RES VC).

6.1 Restoration of the Monitoring Well Network

The condition of the existing well network at the site is known. However, several wells will be destroyed during the remediation or during redevelopment of the site.

If redevelopment of the site will occur immediately after remediation, the monitoring well network will not be installed until after redevelopment is complete.

If redevelopment will not take place for more than six months to a year after remediation is complete, the monitoring well network should be replaced so that monitoring can begin to collect the data necessary to evaluate the progress of natural attenuation.

After restoration / redevelopment of the site, new monitoring wells will be installed in key locations across the site to accurately document groundwater conditions after excavation. The locations of the propose new wells will be determined once a development plan is provided for review. The wells will likely be installed by a Geoprobe® 3230 track-mounted rig using Hollow Stem Augers (HAS) and will be constructed with a minimum of ten feet of 2-inch diameter, 0.010-inch slotted Schedule 40 PVC screen and PVC riser.

The wells will be installed with a minimum of seven feet of penetration below the seasonal low water table. The screen will be positioned to intersect the water table. Filter sand will be placed to approximately two feet above the screen. An approximate 1 to 2 foot thick layer of bentonite will be installed above the filter sand. Site soil will be used to fill the annular space to grade. The wells will be finished with a manhole covers and will be locked to prevent unauthorized access.

After installation, the elevations of the new wells will be surveyed relative to an arbitrary datum.

6.2 Baseline & Performance Groundwater Monitoring

Pre-excavation Baseline Monitoring Event

All existing wells will be gauged and sampled several weeks prior to excavating the contaminated soil and implementing the EC. The samples will be analyzed for ETPH, PAHs, pesticides, sodium, chloride, and dissolved metals (arsenic, chromium, and lead). The purpose of this sampling event is to obtain current COC concentration data, to establish a "baseline" to which future sampling events may be compared to gauge the effectiveness of the soil remediation work.

Aquifer parameter data obtained during the baseline event, along with aquifer parameter data obtained during previous events will also be used to determine the magnitude of the effect on groundwater geochemistry due to soil excavation and implementation of the EC.

Performance Monitoring Events

The data from the performance monitoring events will be used to evaluate the effectiveness of soil remediation at reducing COC concentrations in groundwater. Tighe & Bond anticipates that groundwater concentrations will decrease substantially once the contaminated soil within Remediation Area 1 is capped and grossly contaminated soils have been excavated.

The aquifer parameter data obtained during the performance monitoring events will be used to evaluate when changes to the geochemistry (induced by soil excavation and ORC application) have dissipated.

The first four performance monitoring events will be completed on a quarterly basis, with the first event occurring approximately one month after soil excavation is complete. The first four performance monitoring events will likely include all monitoring wells within the on and off-site well network.

After the first year of quarterly monitoring, performance monitoring will continue on a semi-annual or annual basis if COCs persist in groundwater at concentrations exceeding the RSR criteria.

If compliance with the RSRs cannot be achieved in 1 year, the data obtained during the performance monitoring events will be used to evaluate the potential effectiveness of MNA to successfully attain compliance with the RSRs, or whether additional groundwater remedial measures may be necessary (such as injection of additional ORC).

6.3 Compliance Groundwater Monitoring

Performance groundwater monitoring will continue until COC concentrations decrease to below the RSR criteria, at which point "compliance" groundwater monitoring will begin.

As specified in the RSRs, compliance groundwater monitoring in a "GA" area may be discontinued one year after remediation activities are complete, if the monitoring results demonstrate compliance with the GWPC, SWPC, RES VC, or if background conditions are met.

Compliance monitoring will be performed on a quarterly basis, and will be used to determine the following, as required by the RSRs:

1. The effectiveness of soil remediation to prevent the pollution of groundwater by COCs remediated within each of the Remediation Areas, and

2. Whether COC concentrations in groundwater meet the GWPC, SWPC, and RES VC.

6.4 General Groundwater Sampling Plan

Low-flow sampling procedures will be used for all sampling events, and standard aquifer parameters, including temperature, turbidity, dissolved oxygen, and ORP will be monitored and recorded during sampling.

During each sampling event, groundwater samples will be analyzed by a DPH certified laboratory for ETPH per the CTDPH approved method, PAHs by EPA Method 8270, Pesticides, sodium, chloride, and dissolved metals (arsenic, chromium, and lead).

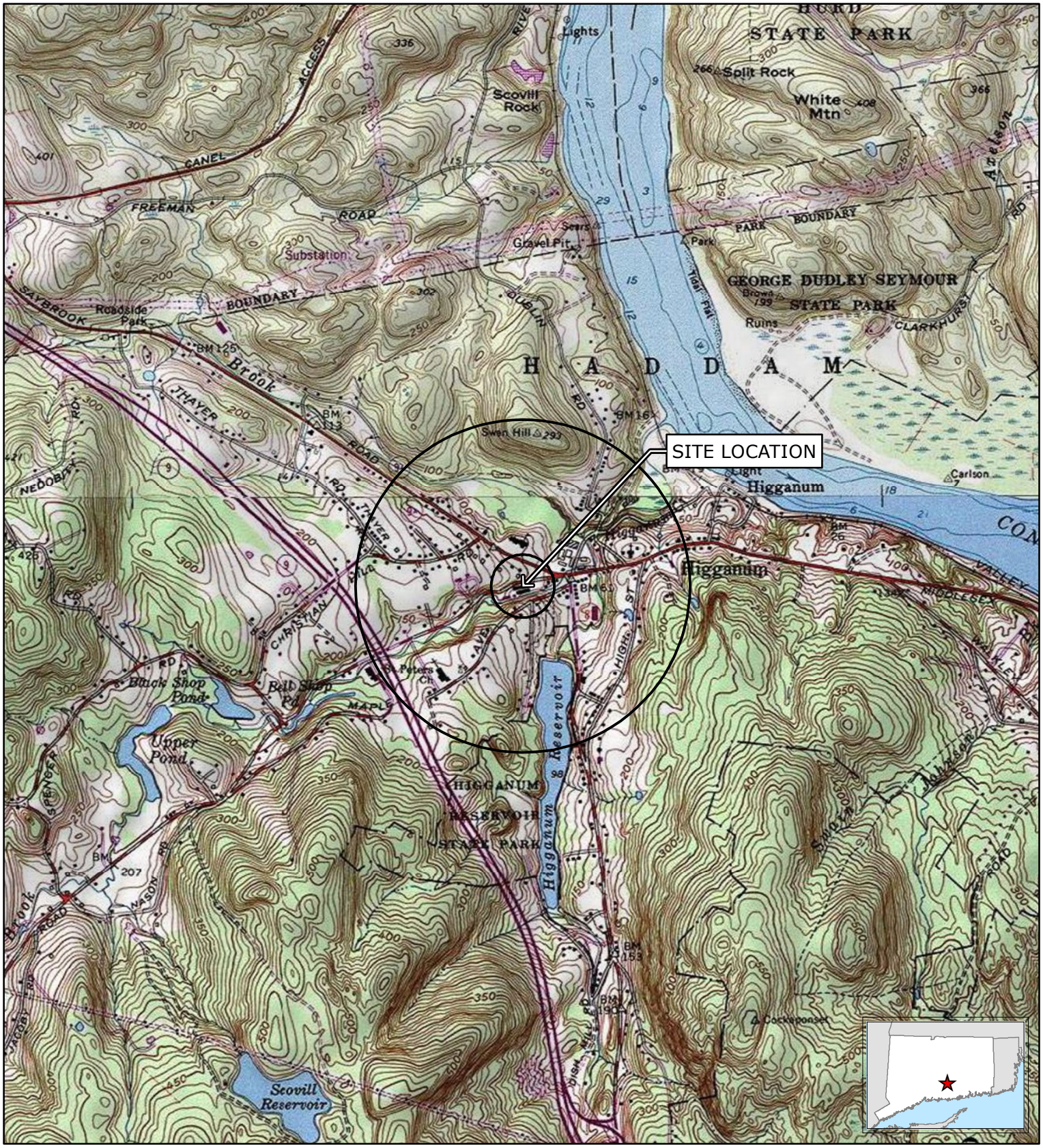
QA/QC measures for each sampling event will include at least one trip blank sample, a field blank sample, and a duplicate sample. The trip blank, field blank, and duplicate sample will be analyzed for each of the COCs listed above. As required by CTDEEP, the laboratory RCPs will be utilized throughout the project.

Section 7
Schedule

A schedule for remediation is not known at this time and will be dependent on the Town obtaining funds for remediation and acquiring ownership of the site as well as selection of a remedial contractor for the project.

Tighe&Bond

APPENDIX A



LEGEND

Tighe&Bond

Based on USGS Topographic Map for
Haddam, CT Revised 2018.
Contour Interval Equals 10 ft.
Circles indicate 500-foot and half-mile radii

1:24,000

0 1,000 2,000

Feet

N

FIGURE 1
SITE LOCATION MAP
Former Scovil Hoe Complex
11 Candlewood Hill Road
Haddam, Connecticut

December 2020

V:\Projects\H\H1532\008 Scovil Hoe Complex\Figure 1 Topo.mxd [Exported By: BCaswell, 12/15/2020, 9:22:18 AM]

H-1532

LEGEND

1985 & 1986 METCALF & EDDY INVESTIGATION

- D-XX SOIL BORING
- D-XX MONITORING WELL
- D-XX FORMER MONITORING WELL
- D-XX SURFACE WATER SAMPLE

1987 FRED C. HART ASSOCIATES INVESTIGATION

- B-XX SOIL BORING
- TP-25-XX TEST PIT
- W-25-X MONITROING WELL

2006 DTC INVESTIGATION

- SB-XX SOIL BORING
- SS-XX SEDIMENT SAMPLE
- MW-XX MONITORING WELL
- MW-XX FORMER MONITORING WELL

2016 TRC UST REMOVAL

- HIG-XX-XX SOIL SAMPLE
- HMF-MW-XX MONITORING WELL
- HMF-MW-XX FORMER MONITORING WELL

2017 FUSS & O'NEIL INVESTIGATION

- FOSB-XX SOIL BORING
- FOSS-XX SEDIMENT SAMPLE
- FOMW-XX MONITORING WELL
- FOMW-XX FORMER MONITORING WELL

2020 TIGHE & BOND INVESTIGATION

- TB-XXX SOIL BORING
- TB-TP-XX TEST PIT
- MW-1XX MONITORING WELL

NOTES

1. BASE MAP AND PREVIOUS SAMPLE LOCATIONS FROM DRAWING TITLED "SITE PLAN, SAMPLING LOCATIONS AND RELEASE AREAS" PREPARED BY FUSS & O'NEILL, INC. DATED FEBRUARY 2018.
2. PREVIOUS SAMPLE LOCATION WERE PROVIDED BY OTHERS AND ARE APPROXIMATE.

0 20' 40'
SCALE: 1" = 20'

Tighe&Bond
Engineers | Environmental Specialists

FORMER SCOVIL HOE MILL

TOWN OF HADDAM

Haddam, Connecticut

MARK	DATE	DESCRIPTION

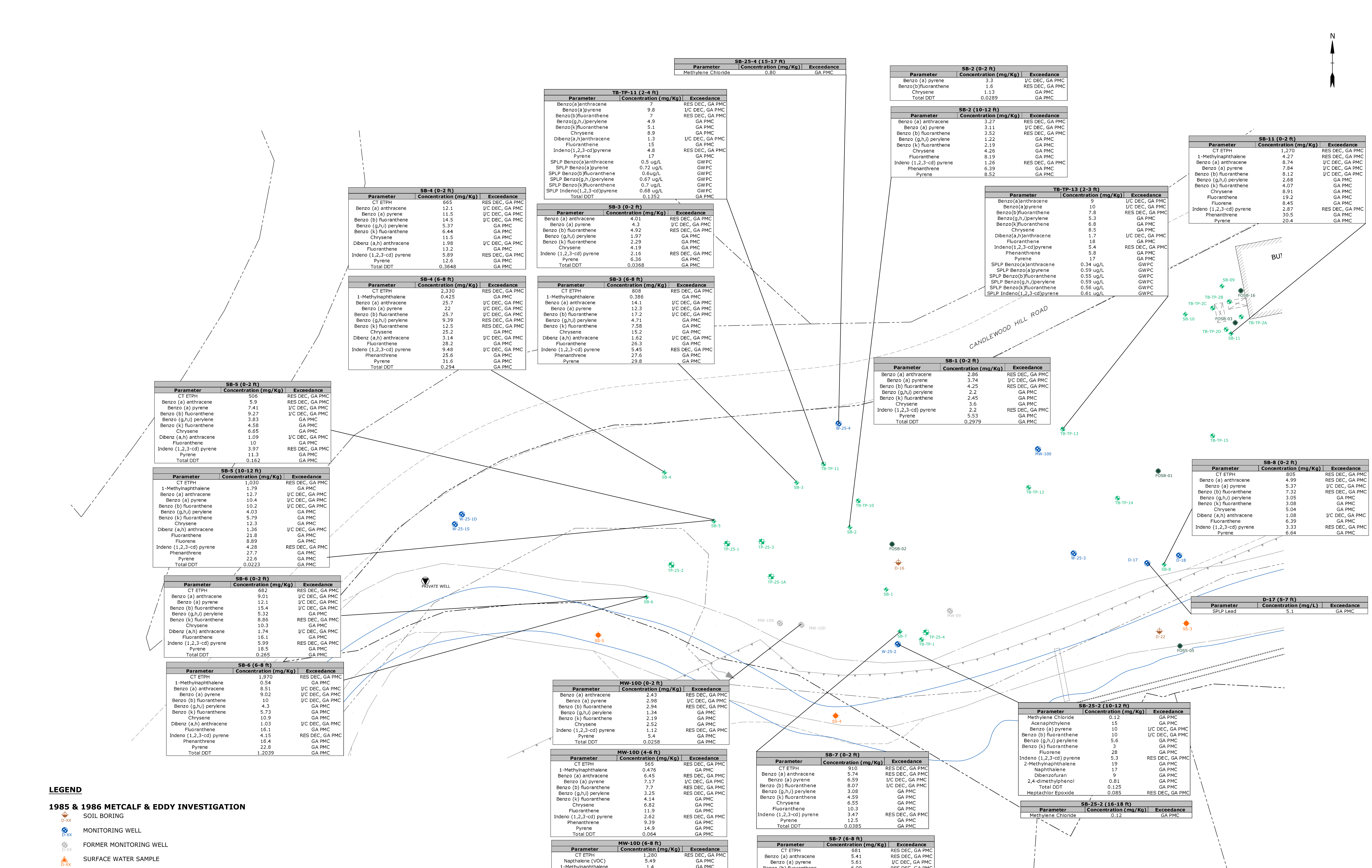
PROJECT NO:	H-1532-008
	10/13/2020
	H-1532-SP.dwg
DRAWN BY:	BPC
CHECKED BY:	LEW
APPROVED BY:	AJV

SAMPLE LOCATION PLAN

SCALE: AS SHOWN

FIGURE 2

Last Saved: 12/21/2020
Plotted On:Dec 22, 2020-12:52pm By: BCaswell
Tighe & Bond:J:\H\H1532 Haddam Brownfields\008 Scovil Hoe Complex\Scovil\Drawings\AutoCAD\Figure\H-1532-SP.dwg



SB-25-4 (15-17 ft)

Parameter	Concentration (mg/Kg)	Exceedance
Methylene Chloride	0.80	GA PMC

TB-TP-11 (2-4 ft)

Parameter	Concentration (mg/Kg)	Exceedance
Benzo(a)anthracene	7	RES DEC, GA PMC
Benzo(a)pyrene	9.8	I/C DEC, GA PMC
Benzo(b)fluoranthene	7	RES DEC, GA PMC
Benzo(g,h,i)perylene	4.9	GA PMC
Benzo(k)fluoranthene	5.1	GA PMC
Chrysene	8.9	GA PMC
Dibenz(a,h)anthracene	1.3	I/C DEC, GA PMC
Fluoranthene	15	GA PMC
Indeno(1,2,3-cd)pyrene	4.8	RES DEC, GA PMC
Pyrene	17	GA PMC
SPLP Benzo(a)anthracene	0.5 ug/L	GWPC
SPLP Benzo(a)pyrene	0.72 ug/L	GWPC
SPLP Benzo(b)fluoranthene	0.6ug/L	GWPC
SPLP Benzo(g,h,i)perylene	0.67 ug/L	GWPC
SPLP Benzo(k)fluoranthene	0.7 ug/L	GWPC
SPLP Indeno(1,2,3-cd)pyrene	0.68 ug/L	GWPC
Total DDT	0.1352	GA PMC

SB-2 (0-2 ft)

Parameter	Concentration (mg/Kg)	Exceedance
Benzo (a) pyrene	3.3	I/C DEC, GA PMC
Benzo(b)fluoranthene	1.6	RES DEC, GA PMC
Chrysene	1.13	GA PMC
Total DDT	0.0289	GA PMC

SB-2 (10-12 ft)

Parameter	Concentration (mg/Kg)	Exceedance
Benzo (a) anthracene	3.27	RES DEC, GA PMC
Benzo (a) pyrene	3.11	I/C DEC, GA PMC
Benzo (b) fluoranthene	3.52	RES DEC, GA PMC
Benzo (g,h,i) perylene	1.22	GA PMC
Benzo (k) fluoranthene	2.19	GA PMC
Chrysene	4.26	GA PMC
Fluoranthene	8.19	GA PMC
Indeno (1,2,3-cd) pyrene	1.26	RES DEC, GA PMC
Phenanthrene	6.39	GA PMC
Pyrene	8.52	GA PMC

SB-11 (0-2 ft)

Parameter	Concentration (mg/Kg)	Exceedance
CT ETPH	1,270	RES DEC, GA PMC
1-Methylnaphthalene	4.27	RES DEC, GA PMC
Benzo (a) anthracene	8.74	I/C DEC, GA PMC
Benzo (a) pyrene	7.84	I/C DEC, GA PMC
Benzo (b) fluoranthene	8.12	I/C DEC, GA PMC
Benzo (g,h,i) perylene	2.68	GA PMC
Benzo (k) fluoranthene	4.07	GA PMC
Chrysene	8.91	GA PMC
Fluoranthene	19.2	GA PMC
Fluorene	8.45	GA PMC
Indeno (1,2,3-cd) pyrene	2.87	RES DEC, GA PMC
Phenanthrene	30.5	GA PMC
Pyrene	20.4	GA PMC

SB-4 (0-2 ft)

Parameter	Concentration (mg/Kg)	Exceedance
CT ETPH	665	RES DEC, GA PMC
Benzo (a) anthracene	12.1	I/C DEC, GA PMC
Benzo (a) pyrene	11.5	I/C DEC, GA PMC
Benzo (b) fluoranthene	14.5	I/C DEC, GA PMC
Benzo (g,h,i) perylene	5.37	GA PMC
Benzo (k) fluoranthene	6.44	GA PMC
Chrysene	11.5	GA PMC
Dibenz (a,h) anthracene	1.98	I/C DEC, GA PMC
Fluoranthene	13.2	GA PMC
Indeno (1,2,3-cd) pyrene	5.89	RES DEC, GA PMC
Pyrene	12.6	GA PMC
Total DDT	0.3648	GA PMC

SB-3 (0-2 ft)

Parameter	Concentration (mg/Kg)	Exceedance
Benzo (a) anthracene	4.01	RES DEC, GA PMC
Benzo (a) pyrene	4.3	I/C DEC, GA PMC
Benzo (b) fluoranthene	4.92	RES DEC, GA PMC
Benzo (g,h,i) perylene	1.97	GA PMC
Benzo (k) fluoranthene	2.29	GA PMC
Chrysene	4.19	GA PMC
Indeno (1,2,3-cd) pyrene	2.16	RES DEC, GA PMC
Pyrene	6.36	GA PMC
Total DDT	0.0368	GA PMC

TB-TP-13 (2-3 ft)

Parameter	Concentration (mg/Kg)	Exceedance
Benzo(a)anthracene	9	I/C DEC, GA PMC
Benzo(a)pyrene	10	I/C DEC, GA PMC
Benzo(b)fluoranthene	7.8	RES DEC, GA PMC
Benzo(g,h,i)perylene	5.3	GA PMC
Benzo(k)fluoranthene	6.8	GA PMC
Chrysene	8.5	GA PMC
Dibenz(a,h)anthracene	1.7	I/C DEC, GA PMC
Fluoranthene	18	GA PMC
Indeno(1,2,3-cd)pyrene	5.4	RES DEC, GA PMC
Phenanthrene	5.8	GA PMC
Pyrene	17	GA PMC
SPLP Benzo(a)anthracene	0.34 ug/L	GWPC
SPLP Benzo(a)pyrene	0.59 ug/L	GWPC
SPLP Benzo(b)fluoranthene	0.55 ug/L	GWPC
SPLP Benzo(g,h,i)perylene	0.59 ug/L	GWPC
SPLP Benzo(k)fluoranthene	0.56 ug/L	GWPC
SPLP Indeno(1,2,3-cd)pyrene	0.61 ug/L	GWPC

SB-4 (6-8 ft)

Parameter	Concentration (mg/Kg)	Exceedance
CT ETPH	2,330	RES DEC, GA PMC
1-Methylnaphthalene	0.425	GA PMC
Benzo (a) anthracene	25.7	I/C DEC, GA PMC
Benzo (a) pyrene	22	I/C DEC, GA PMC
Benzo (b) fluoranthene	25.7	I/C DEC, GA PMC
Benzo (g,h,i) perylene	9.39	RES DEC, GA PMC
Benzo (k) fluoranthene	12.5	RES DEC, GA PMC
Chrysene	25.2	GA PMC
Dibenz (a,h) anthracene	3.14	I/C DEC, GA PMC
Fluoranthene	28.2	GA PMC
Indeno (1,2,3-cd) pyrene	9.48	I/C DEC, GA PMC
Phenanthrene	25.6	GA PMC
Pyrene	31.6	GA PMC
Total DDT	0.294	GA PMC

SB-3 (6-8 ft)

Parameter	Concentration (mg/Kg)	Exceedance
CT ETPH	808	RES DEC, GA PMC
1-Methylnaphthalene	0.386	GA PMC
Benzo (a) anthracene	14.1	I/C DEC, GA PMC
Benzo (a) pyrene	12.3	I/C DEC, GA PMC
Benzo (b) fluoranthene	17.2	I/C DEC, GA PMC
Benzo (g,h,i) perylene	4.71	GA PMC
Benzo (k) fluoranthene	7.58	GA PMC
Chrysene	15.2	GA PMC
Dibenz (a,h) anthracene	1.62	I/C DEC, GA PMC
Fluoranthene	26.3	GA PMC
Indeno (1,2,3-cd) pyrene	5.45	RES DEC, GA PMC
Phenanthrene	27.6	GA PMC
Pyrene	29.8	GA PMC

SB-1 (0-2 ft)

Parameter	Concentration (mg/Kg)	Exceedance
Benzo (a) anthracene	2.86	RES DEC, GA PMC
Benzo (a) pyrene	3.74	I/C DEC, GA PMC
Benzo (b) fluoranthene	4.25	RES DEC, GA PMC
Benzo (g,h,i) perylene	2.2	GA PMC
Benzo (k) fluoranthene	2.45	GA PMC
Chrysene	3.6	GA PMC
Indeno (1,2,3-cd) pyrene	2.2	RES DEC, GA PMC
Pyrene	5.53	GA PMC
Total DDT	0.2979	GA PMC

SB-5 (0-2 ft)

Parameter	Concentration (mg/Kg)	Exceedance
CT ETPH	506	RES DEC, GA PMC
Benzo (a) anthracene	5.9	RES DEC, GA PMC
Benzo (a) pyrene	7.41	I/C DEC, GA PMC
Benzo (b) fluoranthene	9.27	I/C DEC, GA PMC
Benzo (g,h,i) perylene	3.83	GA PMC
Benzo (k) fluoranthene	4.58	GA PMC
Chrysene	6.65	GA PMC
Dibenz (a,h) anthracene	1.09	I/C DEC, GA PMC
Fluoranthene	10	GA PMC
Indeno (1,2,3-cd) pyrene	3.97	RES DEC, GA PMC
Pyrene	11.3	GA PMC
Total DDT	0.162	GA PMC

SB-8 (0-2 ft)

Parameter	Concentration (mg/Kg)	Exceedance
CT ETPH	805	RES DEC, GA PMC
Benzo (a) anthracene	4.99	RES DEC, GA PMC
Benzo (a) pyrene	5.37	I/C DEC, GA PMC
Benzo (b) fluoranthene	7.32	RES DEC, GA PMC
Benzo (g,h,i) perylene	3.05	GA PMC
Benzo (k) fluoranthene	3.08	GA PMC
Chrysene	5.04	GA PMC
Dibenz (a,h) anthracene	1.08	I/C DEC, GA PMC
Fluoranthene	6.39	GA PMC
Indeno (1,2,3-cd) pyrene	3.33	RES DEC, GA PMC
Pyrene	6.64	GA PMC

SB-5 (10-12 ft)

Parameter	Concentration (mg/Kg)	Exceedance
CT ETPH	1,030	RES DEC, GA PMC
1-Methylnaphthalene	1.79	GA PMC
Benzo (a) anthracene	12.7	I/C DEC, GA PMC
Benzo (a) pyrene	10.4	I/C DEC, GA PMC
Benzo (b) fluoranthene	10.2	I/C DEC, GA PMC
Benzo (g,h,i) perylene	4.03	GA PMC
Benzo (k) fluoranthene	5.79	GA PMC
Chrysene	12.3	GA PMC
Dibenz (a,h) anthracene	1.36	I/C DEC, GA PMC
Fluoranthene	21.8	GA PMC
Fluorene	8.89	GA PMC
Indeno (1,2,3-cd) pyrene	4.28	RES DEC, GA PMC
Phenanthrene	27.7	GA PMC
Pyrene	22.6	GA PMC
Total DDT	0.0223	GA PMC

SB-6 (0-2 ft)

Parameter	Concentration (mg/Kg)	Exceedance
CT ETPH	682	RES DEC, GA PMC
Benzo (a) anthracene	9.01	I/C DEC, GA PMC
Benzo (a) pyrene	12.1	I/C DEC, GA PMC
Benzo (b) fluoranthene	15.4	I/C DEC, GA PMC
Benzo (g,h,i) perylene	5.32	GA PMC
Benzo (k) fluoranthene	8.86	RES DEC, GA PMC
Chrysene	10.3	GA PMC
Dibenz (a,h) anthracene	1.74	I/C DEC, GA PMC
Fluoranthene	16.1	GA PMC
Indeno (1,2,3-cd) pyrene	5.99	RES DEC, GA PMC
Pyrene	18.5	GA PMC
Total DDT	0.265	GA PMC

D-17 (5-7 ft)

Parameter	Concentration (mg/L)	Exceedance
SPLP Lead	5.1	GA PMC

SB-6 (6-8 ft)

Parameter	Concentration (mg/Kg)	Exceedance
CT ETPH	1,970	RES DEC, GA PMC
1-Methylnaphthalene	0.54	GA PMC
Benzo (a) anthracene	8.51	I/C DEC, GA PMC
Benzo (a) pyrene	9.02	I/C DEC, GA PMC
Benzo (b) fluoranthene	10	I/C DEC, GA PMC
Benzo (g,h,i) perylene	4.3	GA PMC
Benzo (k) fluoranthene	5.73	GA PMC
Chrysene	10.9	GA PMC
Dibenz (a,h) anthracene	1.03	I/C DEC, GA PMC
Fluoranthene	16.1	GA PMC
Indeno (1,2,3-cd) pyrene	4.15	RES DEC, GA PMC
Phenanthrene	16.4	GA PMC
Pyrene	22.8	GA PMC
Total DDT	1.2039	GA PMC

MW-10D (0-2 ft)

Parameter	Concentration (mg/Kg)	Exceedance
Benzo (a) anthracene	2.43	RES DEC, GA PMC
Benzo (a) pyrene	2.98	I/C DEC, GA PMC
Benzo (b) fluoranthene	2.94	RES DEC, GA PMC
Benzo (g,h,i) perylene	1.34	GA PMC
Benzo (k) fluoranthene	2.19	GA PMC
Chrysene	2.52	GA PMC
Indeno (1,2,3-cd) pyrene	1.12	RES DEC, GA PMC
Pyrene	5.4	GA PMC
Total DDT	0.0258	GA PMC

SB-25-2 (10-12 ft)

Parameter	Concentration (mg/Kg)	Exceedance
Methylene Chloride	0.12	GA PMC
Acenaphthylene	15	GA PMC
Benzo (a) pyrene	10	I/C DEC, GA PMC
Benzo (b) fluoranthene	10	I/C DEC, GA PMC
Benzo (g,h,i) perylene	5.6	GA PMC
Benzo (k) fluoranthene	3	GA PMC
Fluorene	28	GA PMC
Indeno (1,2,3-cd) pyrene	5.3	RES DEC, GA PMC
2-Methylnaphthalene	19	GA PMC
Naphthalene	17	GA PMC
Dibenzofuran	9	GA PMC
2,4-dimethylphenol	0.81	GA PMC
Total DDT	0.125	GA PMC
Heptachlor Epoxide	0.085	RES DEC, GA PMC

SB-7 (0-2 ft)

Parameter	Concentration (mg/Kg)	Exceedance
CT ETPH	910	RES DEC, GA PMC
Benzo (a) anthracene	5.74	RES DEC, GA PMC
Benzo (a) pyrene	6.59	I/C DEC, GA PMC
Benzo (b) fluoranthene	8.07	I/C DEC, GA PMC
Benzo (g,h,i) perylene	3.08	GA PMC
Benzo (k) fluoranthene	4.59	GA PMC
Chrysene	6.55	GA PMC
Fluoranthene	10.3	GA PMC
Indeno (1,2,3-cd) pyrene	3.47	RES DEC, GA PMC
Pyrene	12.5	GA PMC
Total DDT	0.0385	GA PMC

MW-10D (4-6 ft)

Parameter	Concentration (mg/Kg)	Exceedance
CT ETPH	565	RES DEC, GA PMC
1-Methylnaphthalene	0.476	GA PMC
Benzo (a) anthracene	6.45	RES DEC, GA PMC
Benzo (a) pyrene	7.17	I/C DEC, GA PMC
Benzo (b) fluoranthene	7.7	RES DEC, GA PMC
Benzo (g,h,i) perylene	3.25	RES DEC, GA PMC
Benzo (k) fluoranthene	4.14	GA PMC
Chrysene	6.82	GA PMC
Fluoranthene	11.9	GA PMC
Indeno (1,2,3-cd) pyrene	2.62	RES DEC, GA PMC
Phenanthrene	9.39	GA PMC
Pyrene	14.9	GA PMC
Total DDT	0.064	GA PMC

SB-25-2 (16-18 ft)

Parameter	Concentration (mg/Kg)	Exceedance
Methylene Chloride	0.12	GA PMC

MW-10D (6-8 ft)

Parameter	Concentration (mg/Kg)	Exceedance
CT ETPH	1,280	RES DEC, GA PMC
Napthalene (VOC)	5.49	GA PMC
1-Methylnaphthalene	1.4	GA PMC
Benzo (a) anthracene	15	I/C DEC, GA PMC
Benzo (a) pyrene	15.1	I/C DEC, GA PMC
Benzo (b) fluoranthene	15.3	I/C DEC, GA PMC
Benzo (g,h,i) perylene	6.42	GA PMC
Benzo (k) fluoranthene	8.81	RES DEC, GA PMC
Chrysene	16.1	GA PMC
Dibenz (a,h) anthracene	1.81	I/C DEC, GA PMC
Fluoranthene	18.1	GA PMC
Indeno (1,2,3-cd) pyrene	5.56	RES DEC, GA PMC
Phenanthrene	13.9	GA PMC
Pyrene	40.3	GA PMC
Total DDT	0.0509	GA PMC

SB-7 (6-8 ft)

Parameter	Concentration (mg/Kg)	Exceedance
CT ETPH	681	RES DEC, GA PMC
Benzo (a) anthracene	5.41	RES DEC, GA PMC
Benzo (a) pyrene	5.61	I/C DEC, GA PMC
Benzo (b) fluoranthene	6.09	RES DEC, GA PMC
Benzo (g,h,i) perylene	2.22	GA PMC
Benzo (k) fluoranthene	4.08	GA PMC
Chrysene	6.69	GA PMC
Fluoranthene	11.7	GA PMC
Indeno (1,2,3-cd) pyrene	2.52	RES DEC, GA PMC
Phenanthrene	7.19	GA PMC
Pyrene	11.7	GA PMC
Total DDT	0.391	GA PMC

MW-10D (10-14 ft)

Parameter	Concentration (mg/Kg)	Exceedance
CT ETPH	3,810	I/C DEC, GA PMC
Napthalene (VOC)	19.90	GA PMC
1,2,4-Trimethylbenzene	8.65	GA PMC
1-Methylnaphthalene	18.3	GA PMC
Acenaphthene	8.84	GA PMC
Benzo (a) anthracene	17.4	I/C DEC, GA PMC
Benzo (a) pyrene	16.6	I/C DEC, GA PMC
Benzo (b) fluoranthene	15.3	I/C DEC, GA PMC
Benzo (g,h,i) perylene	7.82	GA PMC
Benzo (k) fluoranthene	10.1	RES DEC, GA PMC
Chrysene	20.9	GA PMC
Dibenz (a,h) anthracene	1.94	I/C DEC, GA PMC
Fluoranthene	20.9	GA PMC
Indeno (1,2,3-cd) pyrene	6.15	RES DEC, GA PMC
Naphthalene (PAH)	19.8	GA PMC
Phenanthrene	54	GA PMC
Pyrene	66.7	GA PMC
SPLP Lead	0.0734	GA PMC
Total DDT	0.7541	GA PMC

LEGEND

1985 & 1986 METCALF & EDDY INVESTIGATION

- D-XX SOIL BORING
- D-XX MONITORING WELL
- D-XX FORMER MONITORING WELL
- D-XX SURFACE WATER SAMPLE

1987 FRED C. HART ASSOCIATES INVESTIGATION

- B-XX SOIL BORING
- TP-25-XX TEST PIT
- W-25-X MONITROING WELL

2006 DTC INVESTIGATION

- SB-XX SOIL BORING
- SS-XX SEDIMENT SAMPLE
- MW-XX MONITORING WELL
- MW-XX FORMER MONITORING WELL

2016 TRC UST REMOVAL

- HIG-XX-XX SOIL SAMPLE
- HMF-MW-XX MONITORING WELL
- HMF-MW-XX FORMER MONITORING WELL

2017 FUSS & O'NEIL INVESTIGATION

- FOSB-XX SOIL BORING
- FOSS-XX SEDIMENT SAMPLE
- FOMW-XX MONITORING WELL
- FOMW-XX FORMER MONITORING WELL

2020 TIGHE & BOND INVESTIGATION

- TB-XXX SOIL BORING
- TB-TP-XX TEST PIT
- MW-1XX MONITORING WELL

NOTES

1. BASE MAP AND PREVIOUS SAMPLE LOCATIONS FROM DRAWING TITLED "SITE PLAN, SAMPLING LOCATIONS AND RELEASE AREAS" PREPARED BY FUSS & O'NEILL, INC. DATED FEBRUARY 2018.
2. PREVIOUS SAMPLE LOCATION WERE PROVIDED BY OTHERS AND ARE APPROXIMATE.
3. RES DEC - RESIDENTIAL DIRECT EXPOSURE CRITERIA
4. I/C DEC - INDUSTRIAL COMMERCIAL DIRECT EXPOSURE CRITERIA
5. GA PMC - GA POLLUTANT MOBILITY CRITERIA
6. I/C DEC EXCEEDANCE ALSO INDICATED RES DEC EXCEEDANCE.
7. RESULTS PRESENTED IN MILLIGRAMS PER KILOGRAM (mg/Kg), MICOGRAMS PER LITER (ug/L), OR MILLIGRAMS PER LITER (mg/L).

0 20' 40'
SCALE: 1" = 20'

Tighe&Bond
Engineers | Environmental Specialists

FORMER SCOVIL HOE MILL

TOWN OF HADDAM

Haddam, Connecticut

MARK	DATE	DESCRIPTION

PROJECT NO:	H-1532-008
	3/15/2021
	H-1532-SP.dwg
DRAWN BY:	BPC
CHECKED BY:	AJV
APPROVED BY:	AJV

SOIL EXCEEDANCE LOCATIONS-WEST

SCALE: 1" = 20'

FIGURE 3A

Last Saved: 3/13/2021
Plotted On:Mar 15, 2021-10:19am By: BCaswell
Tighe & Bond: J:\H\H1532 Haddam Brownfields\008 Scovil Hoe Complex\Scovil\Drawings\AutoCAD\Figure\H-1532-SP.dwg

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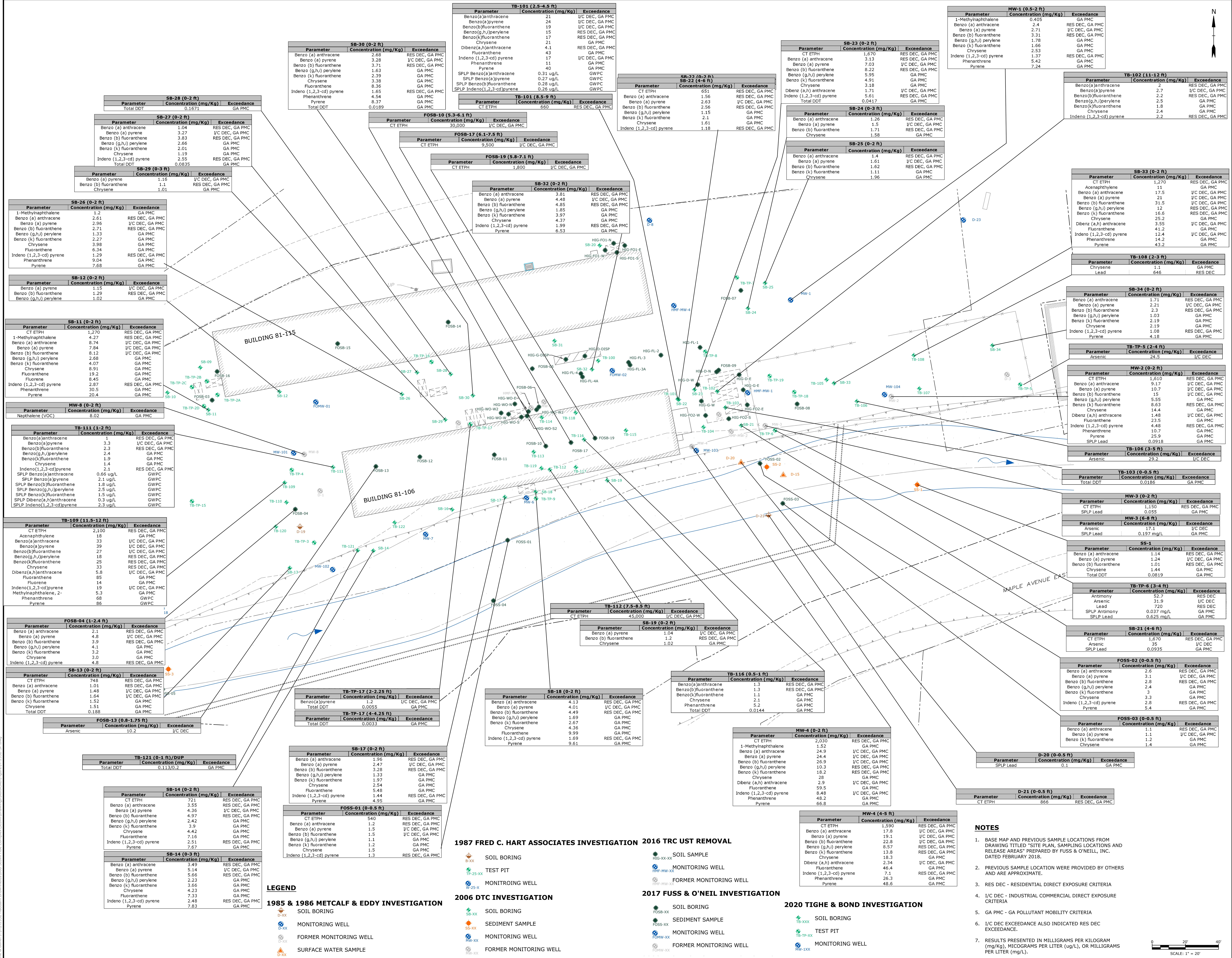


TB-101 (2.5-4.5 ft)

Parameter	Concentration (mg/Kg)	Exceedance
Benzo(a)anthracene	21	I/C DEC, GA PMC
Benzo(a)pyrene	24	I/C DEC, GA PMC
Benzo(b)fluoranthene	19	I/C DEC, GA PMC
Benzo(g,h,i)perylene	15	RES DEC, GA PMC
Benzo(k)fluoranthene	17	RES DEC, GA PMC
Chrysene	21	GA PMC
Dibenz(a,h)anthracene	4.1	RES DEC, GA PMC
Fluoranthene	43	GA PMC
Indeno (1,2,3-cd) pyrene	17	I/C DEC, GA PMC
Phenanthrene	11	GA PMC
Pyrene	40	GA PMC
SPLP Benzo(a)anthracene	0.31 ug/L	GWPC
SPLP Benzo(a)pyrene	0.27 ug/L	GWPC
SPLP Benzo(b)fluoranthene	0.28 ug/L	GWPC
SPLP Indeno(1,2,3-cd)pyrene	0.26 ug/L	GWPC

TB-101 (8.5-9 ft)

Parameter	Concentration (mg/Kg)	Exceedance
CT ETPH	660	RES DEC, GA PMC

SB-30 (0-2 ft)

Parameter	Concentration (mg/Kg)	Exceedance
Benzo (a) anthracene	2.68	RES DEC, GA PMC
Benzo (a) pyrene	3.28	I/C DEC, GA PMC
Benzo (b) fluoranthene	3.71	RES DEC, GA PMC
Benzo (g,h,i) perylene	1.63	GA PMC
Benzo (k) fluoranthene	2.39	GA PMC
Chrysene	3.38	GA PMC
Fluoranthene	8.36	GA PMC
Indeno (1,2,3-cd) pyrene	1.65	RES DEC, GA PMC
Phenanthrene	4.54	GA PMC
Pyrene	8.37	GA PMC
Total DDT	0.0189	GA PMC

SB-28 (0-2 ft)

Parameter	Concentration (mg/Kg)	Exceedance
Total DDT	0.1671	GA PMC

SB-27 (0-2 ft)

Parameter	Concentration (mg/Kg)	Exceedance
Benzo (a) anthracene	1.04	RES DEC, GA PMC
Benzo (a) pyrene	3.27	I/C DEC, GA PMC
Benzo (b) fluoranthene	3.83	RES DEC, GA PMC
Benzo (g,h,i) perylene	2.66	GA PMC
Benzo (k) fluoranthene	2.01	GA PMC
Chrysene	1.19	GA PMC
Indeno (1,2,3-cd) pyrene	2.55	RES DEC, GA PMC
Total DDT	0.0835	GA PMC

SB-29 (0-3 ft)

Parameter	Concentration (mg/Kg)	Exceedance
Benzo (a) pyrene	1.16	I/C DEC, GA PMC
Benzo (b) fluoranthene	1.1	RES DEC, GA PMC
Chrysene	1.01	GA PMC

FOSB-10 (5.3-6.1 ft)

Parameter	Concentration (mg/Kg)	Exceedance
CT ETPH	30,000	I/C DEC, GA PMC

FOSB-17 (6.1-7.5 ft)

Parameter	Concentration (mg/Kg)	Exceedance
CT ETPH	9,500	I/C DEC, GA PMC

FOSB-19 (5.8-7.1 ft)

Parameter	Concentration (mg/Kg)	Exceedance
CT ETPH	1,800	I/C DEC, GA PMC

SB-32 (0-2 ft)

Parameter	Concentration (mg/Kg)	Exceedance
Benzo (a) anthracene	3.81	RES DEC, GA PMC
Benzo (a) pyrene	4.48	I/C DEC, GA PMC
Benzo (b) fluoranthene	4.85	RES DEC, GA PMC
Benzo (g,h,i) perylene	1.85	GA PMC
Benzo (k) fluoranthene	3.97	GA PMC
Chrysene	4.37	GA PMC
Indeno (1,2,3-cd) pyrene	1.99	RES DEC, GA PMC
Pyrene	6.53	GA PMC

SB-22 (0-2 ft)
SB-22 (4-6 ft)

Parameter	Concentration (mg/Kg)	Exceedance
CT ETPH	651	RES DEC, GA PMC
Benzo (a) anthracene	1.56	RES DEC, GA PMC
Benzo (a) pyrene	2.63	I/C DEC, GA PMC
Benzo (b) fluoranthene	2.56	RES DEC, GA PMC
Benzo (g,h,i) perylene	1.15	GA PMC
Benzo (k) fluoranthene	2.1	GA PMC
Chrysene	1.61	GA PMC
Indeno (1,2,3-cd) pyrene	1.18	RES DEC, GA PMC

SB-23 (0-2 ft)

Parameter	Concentration (mg/Kg)	Exceedance
CT ETPH	1,670	RES DEC, GA PMC
Benzo (a) anthracene	3.13	RES DEC, GA PMC
Benzo (a) pyrene	7.03	I/C DEC, GA PMC
Benzo (b) fluoranthene	8.22	RES DEC, GA PMC
Benzo (g,h,i) perylene	5.95	GA PMC
Benzo (k) fluoranthene	4.91	GA PMC
Chrysene	3.18	GA PMC
Dibenz (a,h) anthracene	1.71	I/C DEC, GA PMC
Indeno (1,2,3-cd) pyrene	5.61	RES DEC, GA PMC
Total DDT	0.0417	GA PMC

SB-24 (0-3 ft)

Parameter	Concentration (mg/Kg)	Exceedance
Benzo (a) anthracene	1.26	RES DEC, GA PMC
Benzo (a) pyrene	1.5	I/C DEC, GA PMC
Benzo (b) fluoranthene	1.71	RES DEC, GA PMC
Chrysene	1.58	GA PMC

SB-25 (0-2 ft)

Parameter	Concentration (mg/Kg)	Exceedance
Benzo (a) anthracene	1.4	RES DEC, GA PMC
Benzo (a) pyrene	1.61	I/C DEC, GA PMC
Benzo (b) fluoranthene	1.62	RES DEC, GA PMC
Benzo (k) fluoranthene	1.11	GA PMC
Chrysene	1.96	GA PMC

MW-1 (0.5-2 ft)

Parameter	Concentration (mg/Kg)	Exceedance
1-Methylnaphthalene	0.405	GA PMC
Benzo (a) anthracene	2.4	RES DEC, GA PMC
Benzo (a) pyrene	2.71	I/C DEC, GA PMC
Benzo (b) fluoranthene	3.31	RES DEC, GA PMC
Benzo (g,h,i) perylene	1.78	GA PMC
Benzo (k) fluoranthene	1.66	GA PMC
Chrysene	2.53	GA PMC
Indeno (1,2,3-cd) pyrene	1.37	RES DEC, GA PMC
Phenanthrene	5.42	GA PMC
Pyrene	7.24	GA PMC

TB-102 (11-12 ft)

Parameter	Concentration (mg/Kg)	Exceedance
Benzo(a)anthracene	2	RES DEC, GA PMC
Benzo(a)pyrene	2.7	I/C DEC, GA PMC
Benzo(b)fluoranthene	2.2	RES DEC, GA PMC
Benzo(g,h,i)perylene	2.5	GA PMC
Benzo(k)fluoranthene	1.8	GA PMC
Chrysene	2.4	GA PMC
Indeno (1,2,3-cd) pyrene	2.2	RES DEC, GA PMC

SB-26 (0-2 ft)

Parameter	Concentration (mg/Kg)	Exceedance
1-Methylnaphthalene	1.2	GA PMC
Benzo (a) anthracene	2.61	RES DEC, GA PMC
Benzo (a) pyrene	2.96	I/C DEC, GA PMC
Benzo (b) fluoranthene	2.71	RES DEC, GA PMC
Benzo (g,h,i) perylene	1.33	GA PMC
Benzo (k) fluoranthene	2.27	GA PMC
Chrysene	3.98	GA PMC
Fluoranthene	6.34	GA PMC
Indeno (1,2,3-cd) pyrene	1.29	RES DEC, GA PMC
Phenanthrene	9.04	GA PMC
Pyrene	7.68	GA PMC

SB-12 (0-2 ft)

Parameter	Concentration (mg/Kg)	Exceedance
Benzo (a) pyrene	1.15	I/C DEC, GA PMC
Benzo (b) fluoranthene	1.29	RES DEC, GA PMC
Benzo (g,h,i) perylene	1.02	GA PMC

SB-11 (0-2 ft)

Parameter	Concentration (mg/Kg)	Exceedance
CT ETPH	1,270	RES DEC, GA PMC
1-Methylnaphthalene	4.27	RES DEC, GA PMC
Benzo (a) anthracene	8.74	I/C DEC, GA PMC
Benzo (a) pyrene	7.84	I/C DEC, GA PMC
Benzo (b) fluoranthene	8.12	I/C DEC, GA PMC
Benzo (g,h,i) perylene	2.68	GA PMC
Benzo (k) fluoranthene	4.07	GA PMC
Chrysene	8.91	GA PMC
Fluoranthene	19.2	GA PMC
Fluorene	8.45	GA PMC
Indeno (1,2,3-cd) pyrene	2.87	RES DEC, GA PMC
Phenanthrene	30.5	GA PMC
Pyrene	20.4	GA PMC

MW-8 (0-2 ft)

Parameter	Concentration (mg/Kg)	Exceedance
Napthalene (VOC)	8.02	GA PMC

TB-111 (1-2 ft)

Parameter	Concentration (mg/Kg)	Exceedance
Benzo(a)anthracene	1	RES DEC, GA PMC
Benzo(a)pyrene	3.3	I/C DEC, GA PMC
Benzo(b)fluoranthene	2.3	RES DEC, GA PMC
Benzo(g,h,i)perylene	2.4	GA PMC
Benzo(k)fluoranthene	1.9	GA PMC
Chrysene	1.4	GA PMC
Indeno(1,2,3-cd)pyrene	2.1	RES DEC, GA PMC
SPLP Benzo(a)anthracene	0.66 ug/L	GWPC
SPLP Benzo(a)pyrene	2.1 ug/L	GWPC
SPLP Benzo(b)fluoranthene	1.8 ug/L	GWPC
SPLP Benzo(g,h,i)perylene	2.5 ug/L	GWPC
SPLP Benzo(k)fluoranthene	1.5 ug/L	GWPC
SPLP Dibenz(a,h)anthracene	0.3 ug/L	GWPC
SPLP Indeno(1,2,3-cd)pyrene	2.3 ug/L	GWPC

TB-109 (11.5-12 ft)

Parameter	Concentration (mg/Kg)	Exceedance
CT ETPH	2,100	RES DEC, GA PMC
Acenaphthylene	18	GA PMC
Benzo(a)anthracene	33	I/C DEC, GA PMC
Benzo(a)pyrene	39	I/C DEC, GA PMC
Benzo(b)fluoranthene	27	I/C DEC, GA PMC
Benzo(g,h,i)perylene	18	RES DEC, GA PMC
Benzo(k)fluoranthene	25	RES DEC, GA PMC
Chrysene	33	RES DEC, GA PMC
Dibenz(a,h)anthracene	5.8	I/C DEC, GA PMC
Fluoranthene	85	GA PMC
Fluorene	14	GA PMC
Indeno(1,2,3-cd)pyrene	19	I/C DEC, GA PMC
Methylnaphthalene, 2-	5.3	GA PMC
Phenanthrene	68	GWPC
Pyrene	86	GWPC

SB-33 (0-2 ft)

Parameter	Concentration (mg/Kg)	Exceedance
CT ETPH	1,270	RES DEC, GA PMC
Acenaphthylene	11	GA PMC
Benzo (a) anthracene	17.5	I/C DEC, GA PMC
Benzo (a) pyrene	21	I/C DEC, GA PMC
Benzo (b) fluoranthene	31.5	I/C DEC, GA PMC
Benzo (g,h,i) perylene	12	RES DEC, GA PMC
Benzo (k) fluoranthene	16.6	RES DEC, GA PMC
Chrysene	25.2	GA PMC
Dibenz (a,h) anthracene	3.55	I/C DEC, GA PMC
Fluoranthene	41.2	GA PMC
Indeno (1,2,3-cd) pyrene	12.4	I/C DEC, GA PMC
Phenanthrene	14.2	GA PMC
Pyrene	43.2	GA PMC

TB-108 (2-3 ft)

Parameter	Concentration (mg/Kg)	Exceedance
Chrysene	1.1	GA PMC
Lead	646	RES DEC

SB-34 (0-2 ft)

Parameter	Concentration (mg/Kg)	Exceedance
Benzo (a) anthracene	1.71	RES DEC, GA PMC
Benzo (a) pyrene	2.21	I/C DEC, GA PMC
Benzo (b) fluoranthene	2.3	RES DEC, GA PMC
Benzo (g,h,i) perylene	1.03	GA PMC
Benzo (k) fluoranthene	2.19	GA PMC
Chrysene	2.19	GA PMC
Indeno (1,2,3-cd) pyrene	1.08	RES DEC, GA PMC
Pyrene	4.18	GA PMC

TB-TP-5 (2-4 ft)

Parameter	Concentration (mg/Kg)	Exceedance
Arsenic	24.5	I/C DEC

MW-2 (0-2 ft)

Parameter	Concentration (mg/Kg)	Exceedance
CT ETPH	1,610	RES DEC, GA PMC
Benzo (a) anthracene	9.17	I/C DEC, GA PMC
Benzo (a) pyrene	10.7	I/C DEC, GA PMC
Benzo (b) fluoranthene	15	I/C DEC, GA PMC
Benzo (g,h,i) perylene	5.55	GA PMC
Benzo (k) fluoranthene	8.63	RES DEC, GA PMC
Chrysene	14.4	GA PMC
Dibenz (a,h) anthracene	1.48	I/C DEC, GA PMC
Fluoranthene	23.5	GA PMC
Indeno (1,2,3-cd) pyrene	4.48	RES DEC, GA PMC
Phenanthrene	10.7	GA PMC
Pyrene	25.9	GA PMC
SPLP Lead	0.0918	GA PMC

TB-106 (3-5 ft)

Parameter	Concentration (mg/Kg)	Exceedance
Arsenic	29.2	I/C DEC

TB-103 (0-0.5 ft)

Parameter	Concentration (mg/Kg)	Exceedance
Total DDT	0.0186	GA PMC

MW-3 (0-2 ft)

Parameter	Concentration (mg/Kg)	Exceedance
CT ETPH	1,150	RES DEC, GA PMC
SPLP Lead	0.055	GA PMC

MW-3 (6-8 ft)

Parameter	Concentration (mg/Kg)	Exceedance
Arsenic	17.1	I/C DEC
SPLP Lead	0.197 mg/L	GA PMC

SS-1

Parameter	Concentration (mg/Kg)	Exceedance
Benzo (a) anthracene	1.14	RES DEC, GA PMC
Benzo (a) pyrene	1.24	I/C DEC, GA PMC
Benzo (b) fluoranthene	1.01	RES DEC, GA PMC
Chrysene	1.44	GA PMC
Total DDT	0.0819	GA PMC

TB-TP-6 (3-4 ft)

Parameter	Concentration (mg/Kg)	Exceedance
Antimony	52.7	RES DEC
Arsenic	31.9	I/C DEC
Lead	720	RES DEC
SPLP Antimony	0.037 mg/L	GA PMC
SPLP Lead	0.625 mg/L	GA PMC

SB-21 (4-6 ft)

Parameter	Concentration (mg/Kg)	Exceedance
CT ETPH	1,670	RES DEC, GA PMC
Arsenic	35	I/C DEC
SPLP Lead	0.0935	GA PMC

FOSS-02 (0-0.5 ft)

Parameter	Concentration (mg/Kg)	Exceedance
Benzo (a) anthracene	2.6	RES DEC, GA PMC
Benzo (a) pyrene	3.1	I/C DEC, GA PMC
Benzo (b) fluoranthene	2.8	RES DEC, GA PMC
Benzo (g,h,i) perylene	2.4	GA PMC
Benzo (k) fluoranthene	3	GA PMC
Chrysene	3.3	GA PMC
Indeno (1,2,3-cd) pyrene	2.8	RES DEC, GA PMC
Pyrene	5.4	GA PMC

FOSS-03 (0-0.5 ft)

Parameter	Concentration (mg/Kg)	Exceedance
Benzo (a) anthracene	1.1	RES DEC, GA PMC
Benzo (a) pyrene	1.1	I/C DEC, GA PMC
Benzo (k) fluoranthene	1.2	GA PMC
Chrysene	1.4	GA PMC

D-20 (0-0.5 ft)

Parameter	Concentration (mg/Kg)	Exceedance
SPLP Lead	0.1	GA PMC

D-21 (0-0.5 ft)

Parameter	Concentration (mg/Kg)	Exceedance
CT ETPH	866	RES DEC, GA PMC

FOSB-04 (1-2.4 ft)

Parameter	Concentration (mg/Kg)	Exceedance
Benzo (a) anthracene	2.1	RES DEC, GA PMC
Benzo (a) pyrene	4.8	I/C DEC, GA PMC
Benzo (b) fluoranthene	3.9	RES DEC, GA PMC
Benzo (g,h,i) perylene	4.1	GA PMC
Benzo (k) fluoranthene	3.2	GA PMC
Chrysene	3.0	GA PMC
Indeno (1,2,3-cd) pyrene	4.8	RES DEC, GA PMC

SB-13 (0-2 ft)

Parameter	Concentration (mg/Kg)	Exceedance
CT ETPH	748	RES DEC, GA PMC
Benzo (a) anthracene	1.01	RES DEC, GA PMC
Benzo (a) pyrene	1.48	I/C DEC, GA PMC
Benzo (b) fluoranthene	1.64	I/C DEC, GA PMC
Benzo (k) fluoranthene	1.52	GA PMC
Chrysene	1.51	GA PMC
Total DDT	0.188	GA PMC

FOSB-13 (0.8-1.75 ft)

Parameter	Concentration (mg/Kg)	Exceedance
Arsenic	10.2	I/C DEC

TB-TP-17 (2-2.25 ft)

Parameter	Concentration (mg/Kg)	Exceedance
Benzo(a)pyrene	1.2	I/C DEC, GA PMC
Total DDT	0.0055	GA PMC

TB-TP-17 (4-4.25 ft)

Parameter	Concentration (mg/Kg)	Exceedance
Total DDT	0.0033	GA PMC

TB-121 (0-1 ft)/DUP

Parameter	Concentration (mg/Kg)	Exceedance
Total DDT	0.113/0.2	GA PMC

SB-14 (0-2 ft)

Parameter	Concentration (mg/Kg)	Exceedance
CT ETPH	721	RES DEC, GA PMC
Benzo (a) anthracene	3.55	RES DEC, GA PMC
Benzo (a) pyrene	4.36	I/C DEC, GA PMC
Benzo (b) fluoranthene	4.97	RES DEC, GA PMC
Benzo (g,h,i) perylene	2.42	GA PMC
Benzo (k) fluoranthene	3.9	GA PMC
Chrysene	4.42	GA PMC
Fluoranthene	7.16	GA PMC
Indeno (1,2,3-cd) pyrene	2.51	RES DEC, GA PMC
Pyrene	7.67	GA PMC

SB-14 (0-3 ft)

Parameter	Concentration (mg/Kg)	Exceedance
Benzo (a) anthracene	3.49	RES DEC, GA PMC
Benzo (a) pyrene	5.14	I/C DEC, GA PMC
Benzo (b) fluoranthene	5.66	RES DEC, GA PMC
Benzo (g,h,i) perylene	2.23	GA PMC
Benzo (k) fluoranthene	3.66	GA PMC
Chrysene	4.23	GA PMC
Fluoranthene	7.33	GA PMC
Indeno (1,2,3-cd) pyrene	2.48	RES DEC, GA PMC
Pyrene	7.83	GA PMC

SB-17 (0-2 ft)

Parameter	Concentration (mg/Kg)	Exceedance
Benzo (a) anthracene	1.96	RES DEC, GA PMC
Benzo (a) pyrene	2.47	I/C DEC, GA PMC
Benzo (b) fluoranthene	3.28	RES DEC, GA PMC
Benzo (g,h,i) perylene	1.33	GA PMC
Benzo (k) fluoranthene	1.97	GA PMC
Chrysene	2.54	GA PMC
Fluoranthene	5.48	GA PMC
Indeno (1,2,3-cd) pyrene	1.44	RES DEC, GA PMC
Pyrene	4.95	GA PMC

FOSS-01 (0-0.5 ft)

Parameter	Concentration (mg/Kg)	Exceedance
CT ETPH	540	RES DEC, GA PMC
Benzo (a) anthracene	1.2	RES DEC, GA PMC
Benzo (a) pyrene	1.5	I/C DEC, GA PMC
Benzo (b) fluoranthene	1.5	I/C DEC, GA PMC
Benzo (g,h,i) perylene	1.1	GA PMC
Benzo (k) fluoranthene	1.2	GA PMC
Chrysene	1.5	GA PMC
Indeno (1,2,3-cd) pyrene	1.3	RES DEC, GA PMC

SB-18 (0-2 ft)

Parameter	Concentration (mg/Kg)	Exceedance
Benzo (a) anthracene	4.13	RES DEC, GA PMC
Benzo (a) pyrene	4.01	I/C DEC, GA PMC
Benzo (b) fluoranthene	4.49	RES DEC, GA PMC
Benzo (g,h,i) perylene	1.69	GA PMC
Benzo (k) fluoranthene	2.67	GA PMC
Chrysene	4.36	GA PMC
Fluoranthene	9.99	GA PMC
Indeno (1,2,3-cd) pyrene	1.69	RES DEC, GA PMC
Pyrene	9.61	GA PMC

TB-112 (7.5-8.5 ft)

Parameter	Concentration (mg/Kg)	Exceedance
CT ETPH	45,000	I/C DEC, GA PMC

SB-19 (0-2 ft)

Parameter	Concentration (mg/Kg)	Exceedance
Benzo (a) pyrene	1.04	I/C DEC, GA PMC
Benzo (b) fluoranthene	1.2	RES DEC, GA PMC
Chrysene	1.02	GA PMC

TB-116 (0.5-1 ft)

Parameter	Concentration (mg/Kg)	Exceedance
Benzo(a)anthracene	1.3	RES DEC, GA PMC
Benzo(b)fluoranthene	1.3	RES DEC, GA PMC
Benzo(k)fluoranthene	1.1	GA PMC
Chrysene	2.1	GA PMC
Phenanthrene	5.2	GA PMC
Total DDT	0.0144	GA PMC

MW-4 (0-2 ft)

Parameter	Concentration (mg/Kg)	Exceedance
CT ETPH	2,030	RES DEC, GA PMC
1-Methylnaphthalene	1.52	GA PMC
Benzo (a) anthracene	24.9	I/C DEC, GA PMC
Benzo (a) pyrene	24.4	I/C DEC, GA PMC
Benzo (b) fluoranthene	26.9	I/C DEC, GA PMC
Benzo (g,h,i) perylene	10.3	RES DEC, GA PMC
Benzo (k) fluoranthene	18.2	RES DEC, GA PMC
Chrysene	28	GA PMC
Dibenz (a,h) anthracene	2.9	I/C DEC, GA PMC
Fluoranthene	59.5	GA PMC
Indeno (1,2,3-cd) pyrene	8.48	I/C DEC, GA PMC
Phenanthrene	48.2	GA PMC
Pyrene	66.8	GA PMC

MW-4 (4-5 ft)

Parameter	Concentration (mg/Kg)	Exceedance
CT ETPH	1,590	RES DEC, GA PMC
Benzo (a) anthracene	17.8	I/C DEC, GA PMC
Benzo (a) pyrene	19.1	I/C DEC, GA PMC
Benzo (b) fluoranthene	22.8	I/C DEC, GA PMC
Benzo (g,h,i) perylene	8.57	RES DEC, GA PMC
Benzo (k) fluoranthene	13.8	RES DEC, GA PMC
Chrysene	18.3	GA PMC
Dibenz (a,h) anthracene	2.34	I/C DEC, GA PMC
Fluoranthene	46.4	GA PMC
Indeno (1,2,3-cd) pyrene	7.1	RES DEC, GA PMC
Phenanthrene	26.3	GA PMC
Pyrene	48.6	GA PMC

LEGEND

1985 & 1986 METCALF & EDDY INVESTIGATION
- D-XX SOIL BORING
- D-XX MONITORING WELL
- D-XX FORMER MONITORING WELL
- D-XX SURFACE WATER SAMPLE

1987 FRED C. HART ASSOCIATES INVESTIGATION
- B-XX SOIL BORING
- TP-25-XX TEST PIT
- W-25-X MONITROING WELL

2006 DTC INVESTIGATION
- SB-XX SOIL BORING
- SS-XX SEDIMENT SAMPLE
- MW-XX MONITORING WELL
- MW-XX FORMER MONITORING WELL

2016 TRC UST REMOVAL
- HIG-XX-XX SOIL SAMPLE
- HMF-MW-XX MONITORING WELL
- HMF-MW-XX FORMER MONITORING WELL

2017 FUSS & O'NEIL INVESTIGATION
- FOSB-XX SOIL BORING
- FOSS-XX SEDIMENT SAMPLE
- FOMW-XX MONITORING WELL
- FOMW-XX FORMER MONITORING WELL

2020 TIGHE & BOND INVESTIGATION
- TB-XXX SOIL BORING
- TB-TP-XX TEST PIT
- MW-1XX MONITORING WELL

NOTES

1. BASE MAP AND PREVIOUS SAMPLE LOCATIONS FROM DRAWING TITLED "SITE PLAN, SAMPLING LOCATIONS AND RELEASE AREAS" PREPARED BY FUSS & O'NEILL, INC. DATED FEBRUARY 2018.
2. PREVIOUS SAMPLE LOCATION WERE PROVIDED BY OTHERS AND ARE APPROXIMATE.
3. RES DEC - RESIDENTIAL DIRECT EXPOSURE CRITERIA
4. I/C DEC - INDUSTRIAL COMMERCIAL DIRECT EXPOSURE CRITERIA
5. GA PMC - GA POLLUTANT MOBILITY CRITERIA
6. I/C DEC EXCEEDANCE ALSO INDICATED RES DEC EXCEEDANCE.
7. RESULTS PRESENTED IN MILLIGRAMS PER KILOGRAM (mg/Kg), MICOGRAMS PER LITER (ug/L), OR MILLIGRAMS PER LITER (mg/L).

0 20' 40'
SCALE: 1" = 20'

FORMER SCOVIL HOE MILL

TOWN OF HADDAM

Haddam, Connecticut

MARK	DATE	DESCRIPTION

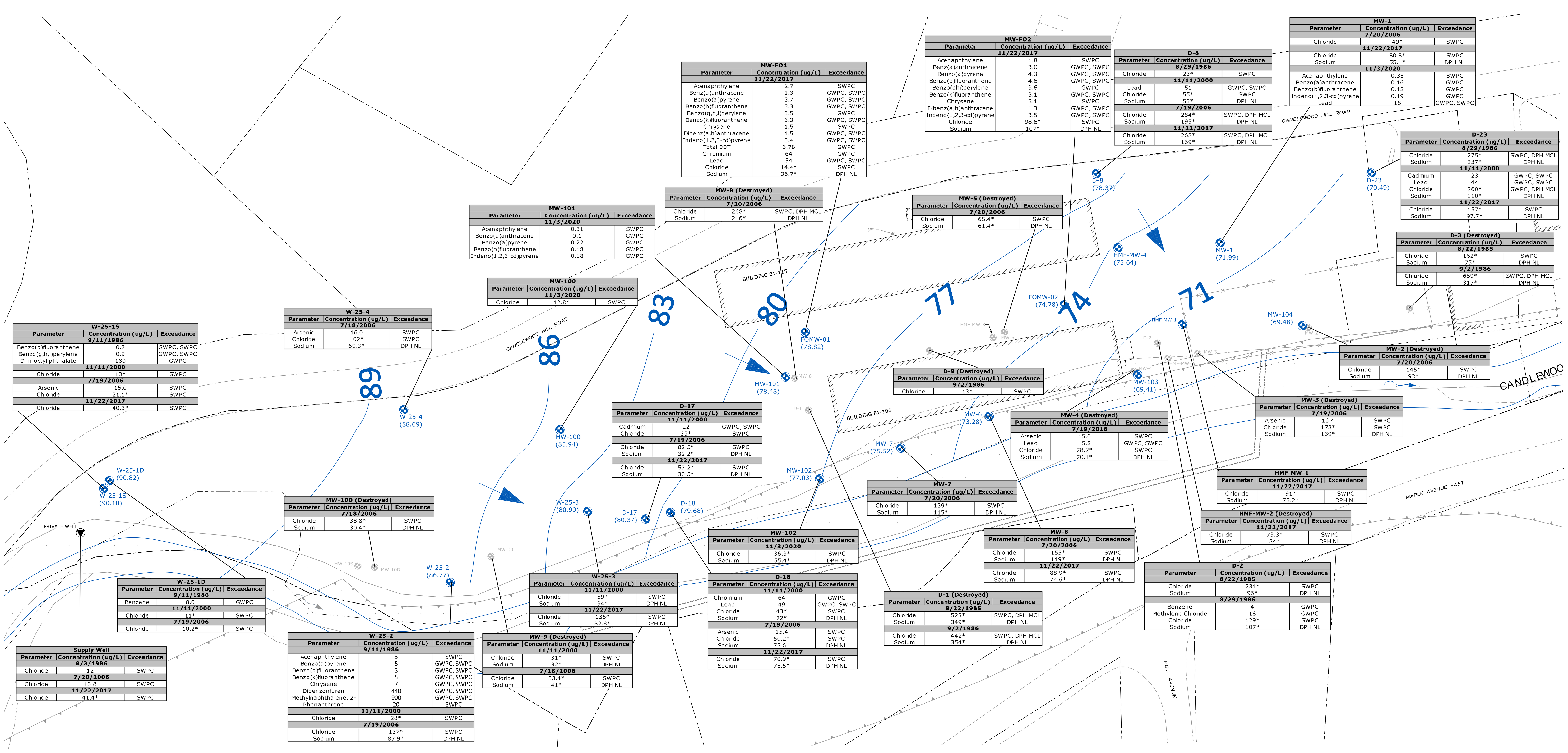
PROJECT NO:	H-1532-008
	3/15/2021
	H-1532-SP.dwg
DRAWN BY:	BPC
CHECKED BY:	AJV
APPROVED BY:	AJV

SOIL EXCEEDANCE LOCATIONS-EAST

SCALE: AS SHOWN

FIGURE 3B

Last Saved: 3/13/2021
Plotted On:Mar 15, 2021-10:20am By: BCaswell
Tighe & Bond: J:\H\H1532 Haddam Brownfields\008 Scovil Hoe Complex\Scovil\Drawings\AutoCAD\Figure\H-1532-SP.dwg



W-25-1S		
Parameter	Concentration (ug/L)	Exceedance
9/11/1986		
Benzo(b)fluoranthene	0.7	GWPC, SWPC
Benzo(g,h,i)perylene	0.9	GWPC, SWPC
Di-n-octyl phthalate	180	GWPC
11/11/2000		
Chloride	13*	SWPC
7/19/2006		
Arsenic	15.0	SWPC
Chloride	21.1*	SWPC
11/22/2017		
Chloride	40.3*	SWPC

W-25-4		
Parameter	Concentration (ug/L)	Exceedance
7/18/2006		
Arsenic	16.0	SWPC
Chloride	102*	SWPC
Sodium	69.3*	DPH NL

MW-101		
Parameter	Concentration (ug/L)	Exceedance
11/3/2020		
Acenaphthylene	0.31	SWPC
Benzo(a)anthracene	0.1	GWPC
Benzo(a)pyrene	0.22	GWPC
Benzo(b)fluoranthene	0.18	GWPC
Indeno(1,2,3-cd)pyrene	0.18	GWPC

MW-100		
Parameter	Concentration (ug/L)	Exceedance
11/3/2020		
Chloride	12.8*	SWPC

MW-FO1		
Parameter	Concentration (ug/L)	Exceedance
11/22/2017		
Acenaphthylene	2.7	SWPC
Benz(a)anthracene	1.3	GWPC, SWPC
Benzo(a)pyrene	3.7	GWPC, SWPC
Benzo(b)fluoranthene	3.3	GWPC, SWPC
Benzo(g,h,i)perylene	3.5	GWPC
Benzo(k)fluoranthene	3.3	GWPC, SWPC
Chrysene	1.5	SWPC
Dibenz(a,h)anthracene	1.5	GWPC, SWPC
Indeno(1,2,3-cd)pyrene	3.4	GWPC, SWPC
Total DDT	3.78	GWPC
Chromium	64	GWPC
Lead	54	GWPC, SWPC
Chloride	14.4*	SWPC
Sodium	36.7*	DPH NL

MW-8 (Destroyed)		
Parameter	Concentration (ug/L)	Exceedance
7/20/2006		
Chloride	268*	SWPC, DPH MCL
Sodium	216*	DPH NL

MW-FO2		
Parameter	Concentration (ug/L)	Exceedance
11/22/2017		
Acenaphthylene	1.8	SWPC
Benz(a)anthracene	3.0	GWPC, SWPC
Benzo(a)pyrene	4.3	GWPC, SWPC
Benzo(b)fluoranthene	4.6	GWPC, SWPC
Benzo(ghi)perylene	3.6	GWPC
Benzo(k)fluoranthene	3.1	GWPC, SWPC
Chrysene	3.1	SWPC
Dibenz(a,h)anthracene	1.3	GWPC, SWPC
Indeno(1,2,3-cd)pyrene	3.5	GWPC, SWPC
Chloride	98.6*	SWPC
Sodium	107*	DPH NL

D-8		
Parameter	Concentration (ug/L)	Exceedance
8/29/1986		
Chloride	23*	SWPC
11/11/2000		
Lead	51	GWPC, SWPC
Chloride	55*	SWPC
Sodium	53*	DPH NL
7/19/2006		
Chloride	284*	SWPC, DPH MCL
Sodium	195*	DPH NL
11/22/2017		
Chloride	268*	SWPC, DPH MCL
Sodium	169*	DPH NL

MW-1		
Parameter	Concentration (ug/L)	Exceedance
7/20/2006		
Chloride	49*	SWPC
11/22/2017		
Chloride	80.8*	SWPC
Sodium	55.1*	DPH NL
11/3/2020		
Acenaphthylene	0.35	SWPC
Benzo(a)anthracene	0.16	GWPC
Benzo(b)fluoranthene	0.18	GWPC
Indeno(1,2,3-cd)pyrene	0.19	GWPC
Lead	18	GWPC, SWPC

D-23		
Parameter	Concentration (ug/L)	Exceedance
8/29/1986		
Chloride	275*	SWPC, DPH MCL
Sodium	237*	DPH NL
11/11/2000		
Cadmium	23	GWPC, SWPC
Lead	44	GWPC, SWPC
Chloride	260*	SWPC, DPH MCL
Sodium	110*	DPH NL
11/22/2017		
Chloride	157*	SWPC
Sodium	97.7*	DPH NL

MW-5 (Destroyed)		
Parameter	Concentration (ug/L)	Exceedance
7/20/2006		
Chloride	65.4*	SWPC
Sodium	61.4*	DPH NL

D-3 (Destroyed)		
Parameter	Concentration (ug/L)	Exceedance
8/22/1985		
Chloride	162*	SWPC
Sodium	75*	DPH NL
9/2/1986		
Chloride	669*	SWPC, DPH MCL
Sodium	317*	DPH NL

MW-2 (Destroyed)		
Parameter	Concentration (ug/L)	Exceedance
7/20/2006		
Chloride	145*	SWPC
Sodium	93*	DPH NL

D-9 (Destroyed)		
Parameter	Concentration (ug/L)	Exceedance
9/2/1986		
Chloride	13*	SWPC

D-17		
Parameter	Concentration (ug/L)	Exceedance
11/11/2000		
Cadmium	22	GWPC, SWPC
Chloride	33*	SWPC
7/19/2006		
Chloride	82.5*	SWPC
Sodium	32.2*	DPH NL
11/22/2017		
Chloride	57.2*	SWPC
Sodium	30.5*	DPH NL

MW-4 (Destroyed)		
Parameter	Concentration (ug/L)	Exceedance
7/19/2016		
Arsenic	15.6	SWPC
Lead	15.8	GWPC, SWPC
Chloride	78.2*	SWPC
Sodium	70.1*	DPH NL

MW-3 (Destroyed)		
Parameter	Concentration (ug/L)	Exceedance
7/19/2006		
Arsenic	16.4	SWPC
Chloride	178*	SWPC
Sodium	139*	DPH NL

MW-7		
Parameter	Concentration (ug/L)	Exceedance
7/20/2006		
Chloride	139*	SWPC
Sodium	115*	DPH NL

HMF-MW-1		
Parameter	Concentration (ug/L)	Exceedance
11/22/2017		
Chloride	91*	SWPC
Sodium	75.2*	DPH NL

MW-10D (Destroyed)		
Parameter	Concentration (ug/L)	Exceedance
7/18/2006		
Chloride	38.8*	SWPC
Sodium	30.4*	DPH NL

MW-102		
Parameter	Concentration (ug/L)	Exceedance
11/3/2020		
Chloride	36.3*	SWPC
Sodium	55.4*	DPH NL

HMF-MW-2 (Destroyed)		
Parameter	Concentration (ug/L)	Exceedance
11/22/2017		
Chloride	73.3*	SWPC
Sodium	84*	DPH NL

MW-6		
Parameter	Concentration (ug/L)	Exceedance
7/20/2006		
Chloride	155*	SWPC
Sodium	119*	DPH NL
11/22/2017		
Chloride	88.9*	SWPC
Sodium	74.6*	DPH NL

W-25-1D		
Parameter	Concentration (ug/L)	Exceedance
9/11/1986		
Benzene	8.0	GWPC
11/11/2000		
Chloride	11*	SWPC
7/19/2006		
Chloride	10.2*	SWPC

W-25-3		
Parameter	Concentration (ug/L)	Exceedance
11/11/2000		
Chloride	59*	SWPC
Sodium	34*	DPH NL
11/22/2017		
Chloride	136*	SWPC
Sodium	82.8*	DPH NL

D-18		
Parameter	Concentration (ug/L)	Exceedance
11/11/2000		
Chromium	64	GWPC
Lead	49	GWPC, SWPC
Chloride	43*	SWPC
Sodium	72*	DPH NL
7/19/2006		
Arsenic	15.4	SWPC
Chloride	50.2*	SWPC
Sodium	75.6*	DPH NL
11/22/2017		
Chloride	70.9*	SWPC
Sodium	75.5*	DPH NL

D-1 (Destroyed)		
Parameter	Concentration (ug/L)	Exceedance
8/22/1985		
Chloride	523*	SWPC, DPH MCL
Sodium	349*	DPH NL
9/2/1986		
Chloride	442*	SWPC, DPH MCL
Sodium	354*	DPH NL

D-2		
Parameter	Concentration (ug/L)	Exceedance
8/22/1985		
Chloride	231*	SWPC
Sodium	96*	DPH NL
8/29/1986		
Benzene	4	GWPC
Methylene Chloride	18	GWPC
Chloride	129*	SWPC
Sodium	107*	DPH NL

Supply Well		
Parameter	Concentration (ug/L)	Exceedance
9/3/1986		
Chloride	12	SWPC
7/20/2006		
Chloride	13.8	SWPC
11/22/2017		
Chloride	41.4*	SWPC

W-25-2		
Parameter	Concentration (ug/L)	Exceedance
9/11/1986		
Acenaphthylene	3	SWPC
Benzo(a)pyrene	5	GWPC, SWPC
Benzo(b)fluoranthene	3	GWPC, SWPC
Benzo(k)fluoranthene	5	GWPC, SWPC
Chrysene	7	GWPC, SWPC
Dibenzofuran	440	GWPC, SWPC
Methylnaphthalene, 2-	900	GWPC, SWPC
Phenanthrene	20	SWPC
11/11/2000		
Chloride	28*	SWPC
7/19/2006		
Chloride	137*	SWPC
Sodium	87.9*	DPH NL

MW-9 (Destroyed)		
Parameter	Concentration (ug/L)	Exceedance
11/11/2000		
Chloride	31*	SWPC
Sodium	32*	DPH NL
7/18/2006		
Chloride	33.4*	SWPC
Sodium	41*	DPH NL

LEGEND

1985 & 1986 METCALF & EDDY INVESTIGATION

D-XX MONITORING WELL

D-XX FORMER MONITORING WELL

1987 FRED C. HART ASSOCIATES INVESTIGATION

W-25-X MONITROING WELL

2006 DTC INVESTIGATION

MW-XX MONITORING WELL

MW-XX FORMER MONITORING WELL

2016 TRC UST REMOVAL

HMF-MW-XX MONITORING WELL

HMF-MW-XX FORMER MONITORING WELL

2020 TIGHE & BOND INVESTIGATION

MW-1XX MONITORING WELL

GROUNDWATER CONTOUR (3')

81 GROUNDWATER ELEVATION

PRESUMED DIRECTION OF GROUNDWATER FLOW

NOTES

1. BASE MAP AND PREVIOUS SAMPLE LOCATIONS FROM DRAWING TITLED "SITE PLAN, SAMPLING LOCATIONS AND RELEASE AREAS" PREPARED BY FUSS & O'NEILL, INC. DATED FEBRUARY 2018.
2. PREVIOUS SAMPLE LOCATION WERE PROVIDED BY OTHERS AND ARE APPROXIMATE.
3. GWPC - GROUNDWATER PROTECTION CRITERIA
4. SWPC - SURFACE WATER PROTECTION CRITERIA
5. DPH NL - CONNECTICUT DEPARTMENT OF PUBLIC HEALTH NOTIFICATION LEVEL
6. DPH MCL - CONNECTICUT DEPARTMENT OF PUBLIC HEALTH MAXIMUM CONTAMINANT LEVEL
7. RESULTS PRESENTED IN MICROGRAMS PER LITER (ug/L)
8. *RESULTS FOR CHLORIDE AND SODIUM PRESENTED IN MICROGRAMS PER LITER (mg/L)
9. MONITORING WELLS WITHOUT ELEVATIONS WERE NOT INCLUDED IN GROUNDWATER FLOW DIRECTION CALCULATIONS
10. GROUNDWATER ELEVATIONS MEASURED ON MARCH 11, 2021

0 30' 60'
SCALE: 1" = 30'

Tighe&Bond
Engineers | Environmental Specialists

FORMER SCOVIL HOE MILL

TOWN OF HADDAM

Haddam, Connecticut

MARK	DATE	DESCRIPTION
PROJECT NO:	H-1532-008	
	12/15/2020	
	H-1532-SP.dwg	
DRAWN BY:	BPC	
CHECKED BY:	LEW	
APPROVED BY:	AJV	

GROUNDWATER EXCEEDANCE LOCATIONS AND GROUNDWATER FLOW MAP

SCALE: 1" = 30'

FIGURE 4

Last Saved: 3/15/2021
Plotted On:Mar 15, 2021-12:03pm By: BCaswell
Tighe & Bond: J:\H\H1532 Haddam Brownfields\008 Scovil Hoe Complex\Scovil\Drawings\AutoCAD\Figure\H-1532-SP.dwg

Tighe&Bond
Engineers | Environmental Specialists

N

CANDLEWOOD HILL ROAD

289'-10"

161'-11 3/4"

SB-4 (0-2 ft)	
Parameter	Exceedance
CT ETPH	GA PMC
PAHs	GA PMC / I/C DEC
Total DDT	GA PMC
SB-4 (6-8 ft)	
Parameter	Exceedance
CT ETPH	GA PMC
PAHs	GA PMC / I/C DEC
Total DDT	GA PMC

SB-3 (0-2 ft)	
Parameter	Exceedance
PAHs	GA PMC / I/C DEC
Total DDT	GA PMC
SB-3 (6-8 ft)	
Parameter	Exceedance
CT ETPH	GA PMC
PAHs	GA PMC / I/C DEC

SB-25-4 (15-17 ft)	
Parameter	Exceedance
VOCs	GA PMC

TB-TP-11 (2-4 ft)	
Parameter	Exceedance
PAHs	GA PMC / I/C DEC
SPLP PAHs	GWPC
Total DDT	GA PMC

SB-5 (0-2 ft)	
Parameter	Exceedance
CT ETPH	GA PMC
PAHs	GA PMC / I/C DEC
Total DDT	GA PMC
SB-5 (10-12 ft)	
Parameter	Exceedance
CT ETPH	GA PMC
PAHs	GA PMC / I/C DEC
Total DDT	GA PMC

SB-2 (0-2 ft)	
Parameter	Exceedance
PAHs	GA PMC / I/C DEC
Total DDT	GA PMC
SB-2 (10-12 ft)	
Parameter	Exceedance
PAHs	GA PMC / I/C DEC

SB-6 (0-2 ft)	
Parameter	Exceedance
CT ETPH	GA PMC
PAHs	GA PMC / I/C DEC
Total DDT	GA PMC
SB-6 (6-8 ft)	
Parameter	Exceedance / Exceedance
CT ETPH	GA PMC
PAHs	GA PMC / I/C DEC
Total DDT	GA PMC

SB-1 (0-2 ft)	
Parameter	Exceedance
PAHs	GA PMC / I/C DEC
Total DDT	GA PMC

MW-10D (0-2 ft)	
Parameter	Exceedance
PAHs	GA PMC / I/C DEC
Total DDT	GA PMC
MW-10D (4-6 ft)	
Parameter	Exceedance
CT ETPH	GA PMC
PAHs	GA PMC / I/C DEC
Total DDT	GA PMC
MW-10D (6-8 ft)	
Parameter	Exceedance
CT ETPH	GA PMC
VOCs	GA PMC
PAHs	GA PMC / I/C DEC
Total DDT	GA PMC
MW-10D (10-14 ft)	
Parameter	Exceedance
CT ETPH	GA PMC / I/C DEC
VOCs	GA PMC
PAHs	GA PMC / I/C DEC
SPLP Lead	GA PMC
Total DDT	GA PMC

SB-7 (0-2 ft)	
Parameter	Exceedance
CT ETPH	GA PMC
PAHs	GA PMC / I/C DEC
Total DDT	GA PMC
SB-7 (6-8 ft)	
Parameter	Exceedance
CT ETPH	GA PMC
PAHs	GA PMC / I/C DEC
Total DDT	GA PMC

SB-25-2 (10-12 ft)	
Parameter	Exceedance
VOCs	GA PMC
PAHs	GA PMC / I/C DEC
Total DDT	GA PMC
Heptachlor Epoxide	GA PMC
SB-25-2 (16-18 ft)	
Parameter	Exceedance
VOCs	GA PMC

TB-TP-13 (2-3 ft)	
Parameter	Exceedance
PAHs	GA PMC / I/C DEC
SPLP PAHs	GWPC

SB-11 (0-2 ft)	
Parameter	Exceedance
CT ETPH	GA PMC
PAHs	GA PMC / I/C DEC

SB-8 (0-2 ft)	
Parameter	Exceedance
CT ETPH	GA PMC
PAHs	GA PMC / I/C DEC

D-17 (5-7 ft)	
Parameter	Exceedance
SPLP Lead	GA PMC

LEGEND

1985 & 1986 METCALF & EDDY INVESTIGATION
- D-XX — SOIL BORING
- D-XX — MONITORING WELL
- D-XX — FORMER MONITORING WELL
- D-XX — SURFACE WATER SAMPLE

1987 FRED C. HART ASSOCIATES INVESTIGATION
- B-XX — SOIL BORING
- TP-25-XX — TEST PIT
- W-25-X — MONITROING WELL

2006 DTC INVESTIGATION
- SB-XX — SOIL BORING
- SS-XX — SEDIMENT SAMPLE
- MW-XX — MONITORING WELL
- MW-XX — FORMER MONITORING WELL

2016 TRC UST REMOVAL
- HIG-XX-XX — SOIL SAMPLE
- HMF-MW-XX — MONITORING WELL
- HMF-MW-XX — FORMER MONITORING WELL

2017 FUSS & O'NEIL INVESTIGATION
- FOSB-XX — SOIL BORING
- FOSS-XX — SEDIMENT SAMPLE
- FOMW-XX — MONITORING WELL
- FOMW-XX — FORMER MONITORING WELL

2020 TIGHE & BOND INVESTIGATION
- TP-XX — SOIL BORING
- TB-TP-XX — TEST PIT
- MW-1XX — MONITORING WELL

REMEDIAL PLAN
- AREAS TO BE EXCAVATION
- COMPLIANCE WITH DEC - INACCESSIBLE SOIL
- COMPLIANCE FOR PMC - ENGINEERED CONTROL FOR ENVIRONMENTAL ISOLATION

NOTES

1. BASE MAP AND PREVIOUS SAMPLE LOCATIONS FROM DRAWING TITLED "SITE PLAN, SAMPLING LOCATIONS AND RELEASE AREAS" PREPARED BY FUSS & O'NEILL, INC. DATED FEBRUARY 2018.
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4. I/C DEC - INDUSTRIAL COMMERCIAL DIRECT EXPOSURE CRITERIA
5. GA PMC - GA POLLUTANT MOBILITY CRITERIA
6. I/C DEC EXCEEDANCE ALSO INDICATED RES DEC EXCEEDANCE.

0 20' 40'
SCALE: 1" = 20'

FORMER SCOVIL HOE MILL

TOWN OF HADDAM

Haddam, Connecticut

MARK	DATE	DESCRIPTION

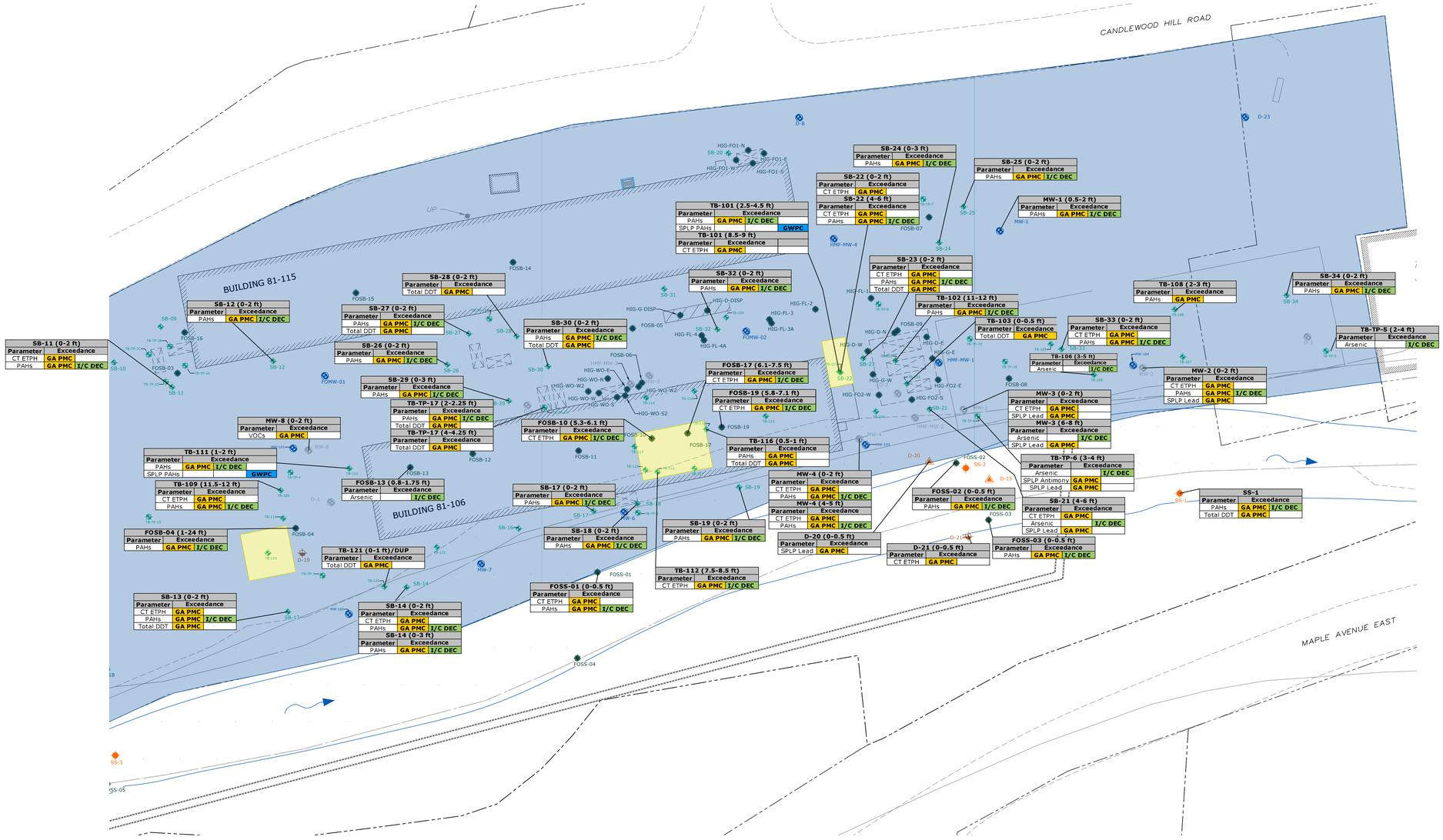
PROJECT NO:	H-1532-008
DATE:	04/05/2020
FILE:	H-1532-SP.dwg
DRAWN BY:	BPC
CHECKED BY:	JLL
APPROVED BY:	AJV

SOIL REMEDIATION AREAS-WEST

SCALE: 1" = 20'

FIGURE 5A

Last Saved: 4/5/2021
Plotted On: Apr 06, 2021 10:13am By: JLL
J:\Projects\1532 Haddam, Brownfields\008 Scovil Hoe Common\Drawings\AutoCAD\Figures\H-1532-SP.dwg



LEGEND

1985 & 1986 METCALF & EDDY INVESTIGATION
- D-XX — SOIL BORING
- D-XX — MONITORING WELL
- D-XX — FORMER MONITORING WELL
- D-XX — SURFACE WATER SAMPLE

1987 FRED C. HART ASSOCIATES INVESTIGATION
- B-XX — SOIL BORING
- TP-25-XX — TEST PIT
- W-25-X — MONITROING WELL

2006 DTC INVESTIGATION
- SB-XX — SOIL BORING
- SS-XX — SEDIMENT SAMPLE
- MW-XX — MONITORING WELL
- MW-XX — FORMER MONITORING WELL

2016 TRC UST REMOVAL
- HIG-XX-XX — SOIL SAMPLE
- HMF-MW-XX — MONITORING WELL
- HMF-MW-XX — FORMER MONITORING WELL

2017 FUSS & O'NEIL INVESTIGATION
- FOSB-XX — SOIL BORING
- FOSS-XX — SEDIMENT SAMPLE
- FOMW-XX — MONITORING WELL
- FOMW-XX — FORMER MONITORING WELL

2020 TIGHE & BOND INVESTIGATION
- TB-XXX — SOIL BORING
- TB-TP-XX — TEST PIT
- MW-1XX — MONITORING WELL

REMEDIAL PLAN
- AREAS TO BE EXCAVATION
- COMPLIANCE WITH DEC - INACCESSIBLE SOIL
- COMPLIANCE FOR PMC - ENGINEERED CONTROL FOR ENVIRONMENTAL ISOLATION

NOTES

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4. I/C DEC - INDUSTRIAL COMMERCIAL DIRECT EXPOSURE CRITERIA
5. GA PMC - GA POLLUTANT MOBILITY CRITERIA
6. I/C DEC EXCEEDANCE ALSO INDICATED RES DEC EXCEEDANCE.

0 20' 40'
SCALE: 1" = 20'

N

Tighe&Bond
Engineers | Environmental Specialists

FORMER SCOVIL HOE MILL

TOWN OF HADDAM

Haddam, Connecticut

MARK	DATE	DESCRIPTION

PROJECT NO:	H-1532-008
DATE:	04/05/2021
FILE:	H-1532-SP.dwg
DRAWN BY:	BPC
CHECKED BY:	JLL
APPROVED BY:	AJV

SOIL REMEDIATION AREAS-EAST

SCALE: AS SHOWN

FIGURE 5B

Last Saved: 4/5/2021
Printed On: Apr 06, 2021 - 10:08am By: JLL
File: X:\H1532 Haddam Brownfields\006 Scovil Hoe Complex\Design\AutoCAD\Figure\H-1532-SP.dwg

APPENDIX B

TABLE 1
Summary of Soil Analytical Data by REC
Former Scovil Hoe Mill
11 Candlewood Hill Road
Haddam, CT

Tighe&Bond

REC-1 Historic Fill / Dump Area (Western Portion of Site)

Sample ID	RES DEC (CTDEEP RSRs)	I/C DEC	GA PMC	GWPC	SB-1	SB-1	SB-2	SB-2	SB-3	SB-3	SB-4	SB-4	SB-5	SB-5	SB-6	SB-6	SS-4	SS-5	MW-10D	MW-10D	MW-10D	MW-10D	FOSB-02	TB-TP-10	TB-TP-11
Sample Date					6/8/2006	6/8/2006	6/8/2006	6/8/2006	6/8/2006	6/8/2006	6/8/2006	6/8/2006	6/8/2006	6/8/2006	6/8/2006	6/8/2006	7/18/2006	7/18/2006	6/21/2006	6/21/2006	6/21/2006	6/21/2006	11/15/2017	10/1/2020	10/1/2020
Sample Depth					0-2 ft	10-12 ft	0-2 ft	10-12 ft	0-2 ft	6-8 ft	0-2 ft	6-8 ft	0-2 ft	10-12 ft	0-2 ft	6-8 ft	Sediment	Sediment	0-2 ft	4-6 ft	6-8 ft	10-14 ft	10-12 ft	2 - 4 ft	2 - 4 ft
ETPH (mg/kg)	500	2,500	500	NA	311	<	123	321	432	808	665	2,330	506	1,030	682	1,970	<	49.6	224	565	1,280	**3,810**	< 57	<260	290
SPLP CT ETPH (ug/L)	NA	NA	NA	250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VOCs (mg/kg)																									
Acetone	500	1,000	14	NA	<	<	<	<	<	<	<	<	<	<	<	<	<	0.24	<	<	<	<	<	-	-
Benzene	21	200	0.02	NA	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	-	-
Butylbenzene, n-	500	1,000	7	NA	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	0.928	<	-	-
Butylbenzene, sec-	500	1,000	7	NA	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	0.236	<	-	-
Carbon disulfide	500	1,000	0.8	NA	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	< 0.0056	-	-
Chloroform	100	940	0.12	NA	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	-	-
Ethylbenzene	500	1,000	10.1	NA	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	0.381	< 0.0056	-	-
Isopropylbenzene (cumene)	500	1,000	0.5	NA	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	0.279	<	-	-
Isopropyltoluene, 4- (p-Cymene)	500	1,000	0.5	NA	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	0.23	<	-	-
Methylene Chloride (Dichloromethane)	82	760	0.1	NA	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	-	-
Naphthalene	1,000	2,500	5.6	NA	<	<	0.0753	<	<	<	<	0.482	<	0.123	0.0457	1.1	<	<	1.07	0.897	5.49	19.9	< 0.0056	-	-
Propylbenzene, n-	500	1,000	1	NA	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	1.11	<	-	-
Tetrachloroethylene (PCE)	12	110	0.1	NA	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	-	-
Toluene	500	1,000	20	NA	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	-	-
Trichloroethane, 1,1,1-	500	1,000	4	NA	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	-	-
Trichloroethylene (TCE)	56	520	0.1	NA	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	-	-
Trimethylbenzene, 1,2,4-	500	1,000	2.8	NA	<	<	<	<	<	<	<	<	<	<	<	0.439	<	<	<	<	<	8.65	<	-	-
Trimethylbenzene, 1,3,5-	500	1,000	2.8	NA	<	<	<	<	<	<	<	<	<	<	<	0.138	<	<	<	<	<	2.79	<	-	-
Xylene (Total)	500	1,000	19.5	NA	<	<	<	<	<	<	<	<	<	<	<	0.0707	<	<	<	<	<	1.574	< 0.0056	-	-
Xylene, m,p-	500	1,000	19.5	NA	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	0.963	< 0.0056	-	-
Xylene, o-	500	1,000	19.5	NA	<	<	<	<	<	<	<	<	<	<	<	0.0707	<	<	<	<	<	0.611	< 0.0056	-	-
PAHs (mg/kg)																									
Acenaphthene	1,000	2,500	8.4	NA	<	<	<	<	<	<	<	0.764	<	1.56	<	0.378	<	<	<	0.36	0.905	8.84	< 0.15	<0.24	<0.25
Acenaphthylene	1,000	2,500	8.4	NA	1.02	<	0.34	1.19	1.86	3.33	2.09	7.82	2.09	4.96	2.65	4.32	<	<	0.762	2.46	5.29	8.11	< 0.15	0.38	2.7
Anthracene	1,000	2,500	40	NA	0.668	<	0.206	1.65	0.896	4.05	1.21	8.39	1.46	8.81	1.87	3.1	<	<	0.637	2.31	5.6	9.09	< 0.15	<0.24	1.1
Benz (a) anthracene	1	7.8	1	NA	2.86	<	0.951	3.27	4.01	**14.1**	**12.1**	**25.7**	5.9	**12.7**	**9.01**	**8.51**	0.462	0.662	2.43	6.45	**15**	**17.4**	< 0.15	0.73	6.9
Benzo (a) pyrene	1	1	1	NA	**3.74**	<	**1.22**	**3.11**	**4.3**	**12.3**	**11.5**	**22**	**7.41**	**10.4**	**12.1**	**9.02**	0.478	0.652	**2.98**	**7.17**	**15.1**	**16.6**	< 0.15	0.75	**9.8**
Benzo (b) fluoranthene	1	7.8	1	NA	4.25	<	1.46	3.52	4.92	**17.2**	**14.5**	**25.7**	**9.27**	**10.2**	**15.4**	**10**	0.342	0.485	2.94	7.7	**15.3**	**15.3**	< 0.15	0.5	7
Benzo (g,h,i) perylene	8.4	78	1	NA	2.2	<	0.69	1.22	1.97	4.71	5.37	9.39	3.83	4.03	5.32	4.3	0.374	0.430	1.34	3.25	6.42	7.82	< 0.15	0.46	*4.9*
Benzo (k) fluoranthene	8.4	78	1	NA	2.45	<	0.853	2.19	2.29	7.58	6.44	12.5	4.58	5.79	8.86	5.73	0.405	0.547	2.19	4.14	8.81	10.1	< 0.15	0.54	5.1
Chrysene	84	780	1	NA	3.6	<	1.13	4.26	4.19	15.2	11.5	25.2	6.65	12.3	10.3	10.9	0.6	0.781	2.52	6.82	16.1	20.9	< 0.15	0.96	*8.9*
Dibenz (a,h) anthracene	1	1	1	NA	0.509	<	0.193	0.371	0.69	**1.62**	**1.98**	**3.14**	**1.09**	**1.36**	**1.74**	**1.03**	<	<	0.318	0.876	**1.81**	**1.94**	< 0.15	<0.24	**1.3**
Fluoranthene	1,000	2,500	5.6	NA	4.66	<	1.55	8.19	5.01	26.3	13.2	28.2	10	21.8	16.1	16.1	1.36	1.67	4.04	11.9	18.1	20.9	< 0.15	1.3	15
Fluorene	1,000	2,500	5.6	NA	<	<	<	0.377	0.382	2.45	<	3.29	<	8.89	<	1.87	<	<	0.217	1.29	2.61	10.1	< 0.15	<0.24	<0.25
Indeno (1,2,3-cd) pyrene	1	7.8	1	NA	2.2	<	0.71	1.26	2.16	5.45	5.89	**9.48**	3.97	4.28	5.99	4.15	0.334	0.404	1.12	2.62	5.56	6.15	< 0.15	0.41	*4.8*
1-Methylnaphthalene	21	200	0.2	NA	<	<	<	<	<	0.386	<	0.425	<	1.79	<	0.54	<	<	<	0.476	1.4	18.3	-	-	-
2-Methylnaphthalene	270	1,000	0.56	NA	<	<	<	<	<	<	<	0.434	<	1.32	<	0.466	<	<	<	0.357	1.15	17.1	< 0.15	<0.24	<0.25
Naphthalene	1,000	2,500	5.6	NA	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	0.337	19.8	< 0.15	<0.24	<0.25
Phenanthrene	1,000	2,500	4	NA	1.76	<	0.494	6.39	2.14	27.6	2.11	25.6	3.41	27.7	3.83	16.4	0.796	1.04	2.17	9.39	13.9	54	< 0.15	0.64	3.3
Pyrene	1,000	2,500	4	NA	5.53	<	1.91	8.52	6.36	29.8	12.6	31.6	11.3	22.6	18.5	22.8	1.04	1.42	5.4	14.9	40.3	66.7	< 0.15	1.7	17
Dibenzofuran	68	1,000	0.2	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenol	1,000	2,500	80	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-methylphenol	1,000	2,500	2.8	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-dimethylphenol	140	2,500	0.3	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
bis(2-Exylhexl)phthalate	44	410	1	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLP PAHs (ug/l)																									
Acenaphthene	1,000	2500	8.4	*420*	-	-	-	-	<	-	-	<	-	-	-	-	-	-	-	<	<	0.0142	-	-	<0.5
Acenaphthylene	NA	NA	NA	420	-	-	-	-	<	-	-	<	-	-	-	-	-	-	-	<	<	<	-	-	<0.3
Benzo(a)anthracene	NA	NA	NA	0.06	-	-	-	-	<	-	-	<	-	-	-	-	-	-	-	<	<	<	-	-	0.5
Benzo(a)pyrene	NA	NA	NA	0.2	-	-	-	-	<	-	-	<	-	-	-	-	-	-	-	<	<	<	-	-	0.72
Benzo(b)fluoranthene	NA	NA	NA	0.08	-	-	-	-	<	-	-	<	-	-	-	-	-	-	-	<	<	<	-	-	0.6
Benzo(g,h,i)perylene	NA	NA	NA	*0.48*	-	-	-	-	<	-	-	<	-	-	-	-	-	-	-	<	<	<	-	-	0.67
Benzo(k)fluoranthene	NA	NA	NA	0.5	-	-	-	-	<	-	-	<	-	-	-	-	-	-	-	<	<	<	-	-	0.7
Chrysene	NA	NA	NA	*4.8*	-	-	-	-	<	-	-	<	-	-	-	-	-	-	-	<	<	<	-	-	0.63
Dibenz(a,h)anthracene	NA	NA	NA	*0.1*	-	-	-	-	<	-	-	<	-	-	-	-	-	-	-	<	<	<	-	-	<0.1
Fluoranthene	NA	NA	NA	280	-	-	-	-	<	-	-	5.37	-	-	-	-	-	-	-	<	5.05	<	-	-	1.1
Fluorene	NA	NA	NA	280	-	-	-	-	<	-	-	<	-	-	-	-	-	-	-	<	5.91	17.4	-	-	<0.5
Indeno(1,2,3-cd)pyrene	NA	NA	NA	*0.1*	-	-	-	-	<	-	-	<	-	-	-	-	-	-	-	<	<	<	-	-	0.68
Phenanthrene	NA	NA	NA	200	-	-	-	-	<	-	-	5.8	-	-	-	-	-	-	-	<	74.1	19	-	-	0.31
Pyrene	NA	NA	NA	200	-	-	-	-	<	-	-	<	-	-	-	-	-	-	-	<	<	<	-	-	0.96
1-Methylnaphthalene	--	--		5	-	-	-	-	<	-	-	<	-	-	-	-	-	-	-	<	<	36.4	-		
Chlorinated Pesticides (mg/kg)																									
DDD, 4,4-	NE	NE	NE	NA	<	<	<	<	<	<	<	<	<	<	<	0.467	<	<	0.0252	0.042	0.0286	0.432	-	<0.0014	0.007
DDE, 4,4-	NE	NE	NE	NA	0.0229	<	<	<	<	<	0.0228	<	<	<	<	0.0399	<	<	<	<	<	0.0491	-	<0.0023	0.0082
DDT, 4,4-	NE	NE	NE	NA	0.275	<	0.0289	<	0.0368	<	0.342	0.294	0.162	0.0223	0.265	0.697	<	<	0.0276	0.022	0.0223	0.273	-	<0.0014	0.12
DDT (Total)	1.8	17	0.003	NA	0.2979	<	0.0289	<	0.0368	<	0.3648	0.294	0.162	0.0223	0.265	1.2039	<	<	0.0528	0.064	0.0509	0.7541	-	<0.0023	*0.1352*
Heptachlor Epoxide	0.067	0.63	0.02	NA	<	<	<	<	<	<	<	<	<	<	<	<	<	<	0	0	0	0	-	<0.0068	<0.007
SPLP DDT (ug/L)																									
DDD, 4,4-	NA	NA	NA	NE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005
DDE, 4,4-	NA	NA	NA	NE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005
DDT, 4,4-	NA	NA	NA	NE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.04
Chlorinated Herbicides (mg/kg)																									
Various Herbicides	Varies	Varies	Varies	NA	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	-	-	-
PCBs (mg/kg)																									
PCBs (Total)	1	10	0.0005	NA	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	-	-	-
Total Metals (mg/kg)																									
Aluminum	50,000	50,000	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Antimony	27	8,200	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<3.1	<3.4
Arsenic	10	10	NA	NA	<	<	<	<	<	<	<	<	<	<	<	<	<	<	2.69	2.18	1.9	1.66	< 0.74	<0.63	2.2
Barium	4,700	140,000	NA	NA	21.4	12.3	15.5	26	30.1	35.3	31.3	33.2	25.9	27.6	20.8	29.1	14.4	16.1	27.5	28.1	23.5	28.4	10.7	20.8	43.9
Beryllium	2	2	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.25	<0.27
Cadmium	34	1,000	NA	NA	<	<	0.303	<	<	<	0.299	<	<	<	<	<	<	<	<	<	<	0.236	< 0.37	0.46	0.53
Calcium	NE	NE	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium (Total)	NE	NE	NA	NA	5.15	5.37	6.07	6.33	8.07	8.68	6.23	4.89	7.05	3.67	9.27	4.36	2.89	3.37	9.67	7.27	5.97	7.3	4.58	6.13	15.8
Cobalt	20	610	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	2500	76,000	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.7	17.3
Iron	NE	NE	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	400	1,000	NA	NA	112	5.28	11	19.9	5.08	79.8	33.3	90.7	69.1	32.3	53.5	70.7	2.69	3.45	37.7	45.6	40.4	159	4.59	3.1	18.8
Magnesium	NE	NE	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	3400	50000	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury	20	610	NA	NA	0.104	<	0.111	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	< 0.03	<0.03	<0.03
Nickel	1400	7500	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.1	9
Potassium	NE	NE	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	340	10,000	NA	NA	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	< 1.5	<1.3	<1.3
Silver	340	10,000	NA	NA	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	< 0.37	<0.31	<0.34
Thallium	5.4	160	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2.8	<3
Vanadium	470	14,000	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17.8	23.8
Zinc	20000	610,000	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	31.8
SPLP Metals (mg/l)																									
Antimony	NA	NA	0.006	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	NA	NA	0.05	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<	-	-	-
Barium	NA	NA	1	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0157	-	-	-
Beryllium	NA	NA	0.004	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	NA	NA	0.005	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<	-	-	-
Chromium (Total)	NA	NA	0.05	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<	-	-	-
Copper	NA	NA	1.3	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	NA	NA	0.015	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0734	-	-	-
Mercury	NA	NA	0.002	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<	-	-	-
Nickel	NA	NA	0.1	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	NA	NA	0.05	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<	-	-	-
Silver	NA	NA	0.036	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<	-	-	-
Thallium	NA	NA	0.005	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	NA	NA	0.05	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	NA	NA	5	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium (mg/Kg)	NE	NE	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	204	176
Chloride (mg/Kg)	NE	NE	NE	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<31	<32

REC-2 Buried Drums of Joint Sealer (Southwatern Portion of Site)

Sample ID	CTDEEP SAMPLE	TP-25-1A	SB-25-2	SB-25-2	SB-25-4	SB-35-5	SB-35-7	D-16	D-22	SB-7	SB-7	SB-8	SB-8	D-17	D-18	SS-3	TB-TP-12	TB-TP-13
Sample Date		3/27/1986	7/31/1986	7/31/1986	4/3/1987	3/30/1987	4/2/1987	3/27/1987	3/27/1987	6/8/2006	6/8/2006	6/8/2006	6/8/2006	3/27/1987	3/27/1987	7/18/2006	10/1/2020	10/1/2020
Sample Depth	Unknown	Unkown	10-12 ft	16-18 ft	15-17 ft	30-32 ft	5-7 ft	5-13 ft	0-0.5 ft	0-2 ft	6-8 ft	0-2 ft	6-8 ft	5-7 ft	0-3 ft	Sediment	4 - 6 ft	2 - 3 ft
ETPH (mg/kg)		-	-	-	-	-	-	-	143**	910	681	805	<	-	106	41.2	<51	250
SPLP CT ETPH (ug/L)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VOCs (mg/kg)																		
Acetone	<	-	0.02	0.022	<	-	-	-	0.593	<	<	<	<	<	-	0.536	-	-
Benzene	0.2	-	0.001	0.001	<	-	-	-	<	<	<	<	<	<	-	<	-	-
Butylbenzene, n-	<	-	-	-	-	-	-	-	-	<	<	<	<	-	-	<	-	-
Butylbenzene, sec-	<	-	-	-	-	-	-	-	-	<	<	<	<	-	-	<	-	-
Carbon disulfide	<	-	0.001	0.002	<	-	-	-	<	<	<	<	<	<	-	<	-	-
Chloroform	<	-	0.006	0.006	<	-	-	-	-	<	<	<	<	-	-	<	-	-
Ethylbenzene	<	-	-	0.001	<	-	-	-	-	<	<	<	<	-	-	<	-	-
Isopropylbenzene (cumene)	<	-	-	-	-	-	-	-	-	<	<	<	<	-	-	<	-	-
Isopropyltoluene, 4- (p-Cymene)	<	-	-	-	-	-	-	-	-	<	<	<	<	-	-	<	-	-
Methylene Chloride (Dichloromethane)	<	-	0.12	0.12	0.8	-	-	-	<	<	<	<	<	0.015	-	<	-	-
Naphthalene	<	-	-	-	-	-	-	-	-	0.0495	0.225	0.0473	<	-	-	<	-	-
Propylbenzene, n-	<	-	-	-	-	-	-	-	-	<	<	<	<	-	-	<	-	-
Tetrachloroethylene (PCE)	<	-	<	0.001	<	-	-	-	-	<	<	<	<	<	-	<	-	-
Toluene	2.5	-	0.001	0.002	<	-	-	-	<	<	<	<	<	<	-	<	-	-
Trichloroethane, 1,1,1-	<	-	0.001	0.001	<	-	-	-	<	<	<	<	<	0.018	-	<	-	-
Trichloroethylene (TCE)	<	-	0.002	0.001	<	-	-	-	-	<	<	<	<	-	-	<	-	-
Trimethylbenzene, 1,2,4-	<	-	-	-	-	-	-	-	-	<	<	<	<	-	-	<	-	-
Trimethylbenzene, 1,3,5-	<	-	-	-	-	-	-	-	-	<	<	<	<	-	-	<	-	-
Xylene (Total)	7.5	-	0.002	<	<	-	-	-	-	<	<	<	<	-	-	<	-	-
Xylene, m,p-	<	-	-	-	-	-	-	-	-	<	<	<	<	-	-	<	-	-
Xylene, o-	<	-	-	-	-	-	-	-	-	<	<	<	<	-	-	<	-	-
PAHs (mg/kg)																		
Acenaphthene	-	-	7.3	<	<	-	-	-	-	<	<	<	<	-	-	<	<0.23	<0.24
Acenaphthylene	-	-	15	<	<	-	-	-	-	1.84	2.06	2.38	<	-	-	<	0.58	3.3
Anthracene	-	-	<	<	<	-	-	-	-	1.68	2.8	1.54	<	-	-	<	0.37	2.2
Benz (a) anthracene	-	-	<	0.39	<	-	-	-	-	5.74	5.41	4.99	<	-	-	0.601	0.9	**9**
Benzo (a) pyrene	-	-	**10**	<	<	-	-	-	-	**6.59**	**5.61**	**5.37**	<	-	-	0.659	**1.1**	**10**
Benzo (b) fluoranthene	-	-	**10**	<	<	-	-	-	-	**8.07**	6.09	7.32	<	-	-	0.495	0.94	7.8
Benzo (g,h,i) perylene	-	-	5.6	<	<	-	-	-	-	3.08	2.22	3.05	<	-	-	0.461	0.8	*5.3*
Benzo (k) fluoranthene	-	-	3	<	<	-	-	-	-	4.59	4.08	3.08	<	-	-	0.575	0.89	6.8
Chrysene	-	-	<	0.42	<	-	-	-	-	6.55	6.69	5.04	<	-	-	0.776	*1.2*	*8.5*
Dibenz (a,h) anthracene	-	-	<	<	<	-	-	-	-	0.974	0.598	**1.08**	<	-	-	<	<0.23	**1.7**
Fluoranthene	-	-	1.4	0.52	<	-	-	-	-	10.3	11.7	6.39	<	-	-	1.66	1.6	18
Fluorene	-	-	28	<	<	-	-	-	-	<	0.612	0.591	<	-	-	<	<0.23	0.37
Indeno (1,2,3-cd) pyrene	-	-	5.3	<	<	-	-	-	-	3.47	2.52	3.33	<	-	-	0.411	0.75	*5.4*
1-Methylnaphthalene	-	-	-	-	-	-	-	-	-	<	<	<	<	-	-	<	-	-
2-Methylnaphthalene	-	-	19	<	<	-	-	-	-	<	<	<	<	-	-	<	<0.23	<0.24
Naphthalene	-	-	17	<	<	-	-	-	-	<	<	<	<	-	-	<	<0.23	0.56
Phenanthrene	-	-	0.43	0.98	<	-	-	-	-	3.01	7.19	3.92	<	-	-	0.880	1.2	5.8
Pyrene	-	-	<	0.75	<	-	-	-	-	12.5	11.7	6.64	<	-	-	1.39	1.8	17
Dibenzofuran	-	-	9	<	<	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenol	-	-	0.66	<	<	-	-	-	-	-	-	-	-	-	-	-	-	-
4-methylphenol	-	-	1	<	<	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-dimethylphenol	-	-	0.81	<	<	-	-	-	-	-	-	-	-	-	-	-	-	-
bis(2-Exylhexl)phthalate	-	-	<	<	0.43	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLP PAHs (ug/l)																		
Acenaphthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5
Acenaphthylene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.3
Benzo(a)anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.34
Benzo(a)pyrene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.59
Benzo(b)fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.55
Benzo(g,h,i)perylene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.59
Benzo(k)fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.56
Chrysene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.51
Dibenz(a,h)anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
Fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.81
Fluorene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5
Indeno(1,2,3-cd)pyrene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.61
Phenanthrene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.11
Pyrene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.74
1-Methylnaphthalene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Chlorinated Pesticides (mg/kg)																		
DDD, 4,4-	-	0.019	0.125	<0.0013	<0.0016	-	-	-	-	<	<	<	<	-	-	<	<0.0022	<0.003
DDE, 4,4-	-	<0.0013	<0.0013	<0.0013	<0.0016	-	-	-	-	<	<	<	<	-	-	<	<0.0013	<0.0017
DDT, 4,4-	-	<0.0013	<0.0013	<0.0013	<0.0016	-	-	-	-	0.0385	0.391	<	<	-	-	<	<0.003	<0.003
DDT (Total)	-	0.019	0.125	<0.0013	<0.0016	-	-	-	-	0.0385	0.391	<	<	-	-	<	<0.003	<0.003
Heptachlor Epoxide	-	0.0033	0.085	<0.0013	<0.0016	-	-	-	-	<	<	<	<	-	-	<	<0.0066	<0.007
SPLP DDT (ug/L)																		
DDD, 4,4-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DDE, 4,4-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DDT, 4,4-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorinated Herbicides (mg/kg)																		
Various Herbicides	-	-	-	-	-	-	-	-	-	<	<	<	<	-	-	<	-	-
PCBs (mg/kg)																		
PCBs (Total)	-	-	-	-	<0.16	-	-	-	-	<	<	<	<	-	-	<	-	-
Total Metals (mg/kg)																		
Aluminum	-	-	5510	4320	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Antimony	-	-	<5.0	<5.0	-	-	-	-	-	-	-	-	-	-	-	-	<3.2	<3.5
Arsenic	-	-	1.87	<0.50	<	-	-	-	-	<	1.8	8.46	1.89	-	-	<	<0.64	3.99
Barium	-	-	6.4	7.7	-	-	-	-	-	25.1	31	58.3	31.9	-	-	17.4	12.1	39.2
Beryllium	-	-	<0.75	<0.75	<	-	-	-	-	-	-	-	-	-	-	-	<0.26	0.32
Cadmium	-	-	<0.75	<0.75	<	-	-	-	-	0.35	<	0.558	0.36	-	-	<	<0.32	1.37
Calcium	-	-	267	482	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium (Total)	-	-	2.89	2.6	<	-	-	-	-	7.4	5.93	12.1	6.45	-	-	4.87	4.34	10.3
Cobalt	-	-	1.16	<0.75	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	-	-	6.62	6.51	-	-	-	-	-	-	-	-	-	-	-	-	2.9	19.1
Iron	-	-	10100	6740	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	-	-	14	<1.5	2.3	-	-	-	-	38.9	98.8	30.9	17.1	-	-	6.08	6.61	26.9
Magnesium	-	-	1680	2090	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	-	-	70	48.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury	-	-	<0.05	<0.05	<	-	-	-	-	<	<	<	<	-	-	<	<0.03	0.34
Nickel	-	-	<0.75	<0.75	-	-	-	-	-	-	-	-	-	-	-	-	2.8	8.78
Potassium	-	-	732	628	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	-	-	<0.50	<0.50	<	-	-	-	-	<	<	<	<	-	-	<	<1.3	<1.4
Silver	-	-	<0.75	<0.75	<	-	-	-	-	<	<	<	<	-	-	<	<0.32	<0.35
Thallium	-	-	<5.0	<5.0	-	-	-	-	-	-	-	-	-	-	-	-	<2.9	<3.1
Vanadium	-	-	11.6	16.1	-	-	-	-	-	-	-	-	-	-	-	-	10.1	27.9
Zinc	-	-	18.6	10.7	-	-	-	-	-	-	-	-	-	-	-	-	14	33
SPLP Metals (mg/l)																		
Antimony	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	-	-	-	-	-	-	-	-	-	-	-	-	-	<	<	-	-	-
Barium	-	-	-	-	-	-	-	-	-	-	-	-	-	0.7	0.5	-	-	-
Beryllium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	-	-	-	-	-	-	-	-	-	-	-	-	-	<	<	-	-	-
Chromium (Total)	-	-	-	-	-	-	-	-	-	-	-	-	-	<	<	-	-	-
Copper	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	-	-	-	-	-	-	-	-	-	-	-	-	-	5.1	<	-	-	-
Mercury	-	-	-	-	-	-	-	-	-	-	-	-	-	<	<	-	-	-
Nickel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	-	-	-	-	-	-	-	-	-	-	-	-	-	<	<	-	-	-
Silver	-	-	-	-	-	-	-	-	-	-	-	-	-	<	<	-	-	-
Thallium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium (mg/Kg)	-	-	180	398	-	-	-	213	-	-	-	-	-	281	1320	-	41	-
Chloride (mg/Kg)	-	-	-	-	-	-	-	76	-	-	-	-	-	101	141	-	<31	-

REC-3 Drum Storage Shed / REC-4 Solvent Steam Cleaning Area

Sample ID	SB-13 (REC-3)	SB-13 (REC-3)	D-19 (REC-3)	FOSB-04 (REC-3)	TB-TP-3 (REC-3)	TB-TP-3 (REC-3)	SB-14 (REC-4)	SB-14 (REC-4)	TB-121 (REC-4)	DUP (REC-4)	TB-121 (REC-4)	MW-7 (REC-4)	SB-33
Sample Date	6/8/2006	6/8/2006	3/27/1987	11/15/2017	9/28/20	9/28/20	6/8/2006	6/8/2006	9/30/20	9/30/20	9/30/20	6/20/2006	6/9/2006
Sample Depth	0-2 ft	2-4 ft	0-6 ft	1-2.4 ft	1 - 2 ft	3 - 4 ft	0-2 ft	0-3 ft	0 - 1 ft	0 - 1 ft	2 - 3.5 ft	4-4.5 ft	0-2 ft
ETPH (mg/kg)	748	97.3		310	<54	<54	721	441	-	-	<51	<	794
SPLP CT ETPH (ug/L)	-	-	-	-	-	-	-	-	-	-	-	-	-
VOCs (mg/kg)													
Acetone	<	<	-	<	-	-	<	<	-	-	<0.25	<	<
Benzene	<	<	-	<	-	-	<	<	-	-	<0.005	<	<
Butylbenzene, n-	<	<	-	<	-	-	<	<	-	-	<0.005	<	<
Butylbenzene, sec-	<	<	-	<	-	-	<	<	-	-	<0.005	<	<
Carbon disulfide	<	<	-	< 0.0048	-	-	<	<	-	-	<0.005	<	<
Chloroform	<	<	-	<	-	-	<	<	-	-	<0.005	<	<
Ethylbenzene	<	<	-	< 0.0048	-	-	<	<	-	-	<0.005	<	<
Isopropylbenzene (cumene)	<	<	-	<	-	-	<	<	-	-	<0.005	<	<
Isopropyltoluene, 4- (p-Cymene)	<	<	-	<	-	-	<	<	-	-	<0.005	<	<
Methylene Chloride (Dichloromethane)	<	<	-	<	-	-	<	<	-	-	<0.01	<	<
Naphthalene	<	0.205	-	< 0.0048	-	-	0.37	0.237	-	-	<0.005	<	0.0461
Propylbenzene, n-	<	<	-	<	-	-	<	<	-	-	<0.005	<	<
Tetrachloroethylene (PCE)	<	<	-	<	-	-	<	<	-	-	<0.005	<	<
Toluene	<	<	-	<	-	-	<	<	-	-	<0.005	<	<
Trichloroethane, 1,1,1-	<	<	-	<	-	-	<	<	-	-	<0.005	<	<
Trichloroethylene (TCE)	<	<	-	<	-	-	<	<	-	-	<0.005	<	<
Trimethylbenzene, 1,2,4-	<	<	-	<	-	-	<	<	-	-	<0.005	<	<
Trimethylbenzene, 1,3,5-	<	<	-	<	-	-	<	<	-	-	<0.005	<	<
Xylene (Total)	<	<	-	< 0.0048	-	-	<	<	-	-	<0.005	<	<
Xylene, m,p-	<	<	-	< 0.0048	-	-	<	<	-	-	<0.005	<	<
Xylene, o-	<	<	-	< 0.0048	-	-	<	<	-	-	<0.005	<	<
PAHs (mg/kg)													
Acenaphthene	<	<	-	< 0.14	<0.25	<0.25	<	<	-	-	-	<	<
Acenaphthylene	1.12	0.392	-	2.5	<0.25	<0.25	2.19	2.28	-	-	-	0.155	10.7
Anthracene	<	<	-	0.88	<0.25	<0.25	1.39	1.66	-	-	-	0.138	7.63
Benz (a) anthracene	1.01	0.213	-	2.1	<0.25	<0.25	3.55	3.49	-	-	-	0.251	**17.5**
Benzo (a) pyrene	**1.48**	0.286	-	**4.8**	<0.25	<0.25	**4.36**	**5.14**	-	-	-	0.31	**21**
Benzo (b) fluoranthene	1.64	0.254	-	3.9	<0.25	<0.25	4.97	5.66	-	-	-	0.253	**31.5**
Benzo (g,h,i) perylene	0.916	0.197	-	4.1	<0.25	<0.25	2.42	2.23	-	-	-	0.172	12
Benzo (k) fluoranthene	1.52	0.191	-	3.2	<0.25	<0.25	3.9	3.66	-	-	-	0.223	16.6
Chrysene	1.51	0.38	-	3.0	<0.25	<0.25	4.42	4.23	-	-	-	0.248	25.2
Dibenz (a,h) anthracene	<	<	-	0.89	<0.25	<0.25	0.662	0.714	-	-	-	<	**3.55**
Fluoranthene	2.52	0.303	-	2.1	<0.25	<0.25	7.16	7.33	-	-	-	0.514	41.2
Fluorene	<	<	-	< 0.14	<0.25	<0.25	<	<	-	-	-	<	<
Indeno (1,2,3-cd) pyrene	0.979	0.163	-	4.8	<0.25	<0.25	2.51	2.48	-	-	-	<	**12.4**
1-Methylnaphthalene	<	<	-	-	-	-	<	<	-	-	-	<	<
2-Methylnaphthalene	<	<	-	< 0.14	<0.25	<0.25	<	<	-	-	-	<	<
Naphthalene	<	<	-	0.17	<0.25	<0.25	<	<	-	-	-	<	<
Phenanthrene	0.93	0.148	-	0.41	<0.25	<0.25	2.55	2.27	-	-	-	0.313	14.2
Pyrene	2.95	0.508	-	2.8	<0.25	<0.25	7.67	7.83	-	-	-	0.645	43.2
Dibenzofuran	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenol	-	-	-	-	-	-	-	-	-	-	-	-	-
4-methylphenol	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-dimethylphenol	-	-	-	-	-	-	-	-	-	-	-	-	-
bis(2-Exylhexl)phthalate	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLP PAHs (ug/l)													
Acenaphthene	-	-	-	-	-	-	-	-	-	-	-	-	<
Acenaphthylene	-	-	-	-	-	-	-	-	-	-	-	-	<
Benzo(a)anthracene	-	-	-	-	-	-	-	-	-	-	-	-	<
Benzo(a)pyrene	-	-	-	-	-	-	-	-	-	-	-	-	<
Benzo(b)fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	<
Benzo(g,h,i)perylene	-	-	-	-	-	-	-	-	-	-	-	-	<
Benzo(k)fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	<
Chrysene	-	-	-	-	-	-	-	-	-	-	-	-	<
Dibenz(a,h)anthracene	-	-	-	-	-	-	-	-	-	-	-	-	<
Fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	<
Fluorene	-	-	-	-	-	-	-	-	-	-	-	-	<
Indeno(1,2,3-cd)pyrene	-	-	-	-	-	-	-	-	-	-	-	-	<
Phenanthrene	-	-	-	-	-	-	-	-	-	-	-	-	<
Pyrene	-	-	-	-	-	-	-	-	-	-	-	-	<
1-Methylnaphthalene	-	-	-	-	-	-	-	-	-	-	-	-	<
Chlorinated Pesticides (mg/kg)													
DDD, 4,4-	<	<	-	-	-	-	-	-	0.015	0.022	-	-	-
DDE, 4,4-	<	<	-	-	-	-	-	-	0.031	0.048	-	-	-
DDT, 4,4-	0.188	<	-	-	-	-	-	-	0.067	0.13	-	-	-
DDT (Total)	0.188	<	-	-	-	-	-	-	*0.113*	*0.2*	-	-	-
Heptachlor Epoxide	<	<	-	-	-	-	-	-	<0.0072	<0.0072	-	-	-
SPLP DDT (ug/L)													
DDD, 4,4-	-	-	-	-	-	-	-	-	<0.005	<0.005	-	-	-
DDE, 4,4-	-	-	-	-	-	-	-	-	<0.02	<0.005	-	-	-
DDT, 4,4-	-	-	-	-	-	-	-	-	<0.01	<0.005	-	-	-
Chlorinated Herbicides (mg/kg)													
Various Herbicides	<	<	-	-	-	-	-	-	-	-	-	-	-
PCBs (mg/kg)													
PCBs (Total)	<	<	-	-	-	-	<	<	-	-	-	<	-
Total Metals (mg/kg)													
Aluminum	-	-	-	-	-	-	-	-	-	-	-	-	-
Antimony	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	<	<	-	2.36	-	-	<	2.16	-	-	-	<	3
Barium	12	43.2	-	25.5	-	-	34.3	38.8	-	-	-	26.4	33.4
Beryllium	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	<	<	-	0.38	-	-	0.79	0.525	-	-	-	<	0.347
Calcium	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium (Total)	9.6	12.2	-	19.5	-	-	11.7	17.8	-	-	-	1.55	9.56
Cobalt	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	81.3	8.44	-	26.6	-	-	63	54.6	-	-	-	<	63.1
Magnesium	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury	<	<	-	< 0.03	-	-	<	<	-	-	-	<	<
Nickel	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	<	<	-	< 1.4	-	-	<	<	-	-	-	<	<
Silver	<	<	-	< 0.34	-	-	<	<	-	-	-	<	<
Thallium	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLP Metals (mg/l)													
Antimony	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	-	-	-	-	-	-	-	-	-	-	-	-	-
Barium	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium (Total)	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium (mg/Kg)	-	-	411	-	-	-	-	-	-	-	428	-	-
Chloride (mg/Kg)	-	-	111	-	-	-	-	-	-	-	<10	-	-

CTDEEP RSRs- Connecticut Department of Energy and Environmental Protection Remediation Standard Regulations (June 27, 2013) and *Technical Support Document: Recommended Numeric Criteria for Common Additional Polluting Substances and Certain Alternative Criteria (September 20, 2018)*
Criteria in italics note parameters that are CTDEEP Additional Polluting Substances (September 20, 2018)
RES DEC = Residential Direct Exposure Criteria
I/C DEC = Industrial/Commercial Direct Exposure Criteria.
GA PMC = GA Pollutant Mobility Criteria.
* For PAHs, SPLP results were compared to the Groundwater Protection Criteria to determine compliance with the GAPMC.
**ETPH most closely resembled karosene or #6 oil
"-"- Sample not analyzed
Only parameters reported above detection limits are summarized above
mg/kg = milligrams per kilogram.
mg/L = milligrams per liter.
ug/l = micrograms per liter.
CT ETPH - Connecticut Extractable Total Petroleum Hydrocarbons
VOCs- Volatile Organic Compounds
PAHs- Polycyclic Aromatic Hydrocarbons
PCBs - Polychlorinated Biphenyls
BRL - Below repoting limit
< = not detected, see laboratory reports for specific detection limits
<## = not detected, detection limit provided
NA = not analyzed for this compound.
NE = no criteria established.
Boxed values indicate exceedances of RES DEC
Bold values indicate exceedances of I/C DEC
Gray shaded values indicate exceedance of GB PMC
Blue Text indicates exceedance of GWPC
Results prior to 9/28/2020 were provided by others

TABLE 1
Summary of Soil Analytical Data by REC
Former Scovil Hoe Mill
11 Candlewood Hill Road
Haddam, CT

				REC-5 Historic Solvent Storage Area																	
Sample ID	CTDEEP RSRs			SB-33	SB-34	SB-34	SS-1	MW-2	MW-2	FOSB-08	TB-106	TB-106	TB-107	TB-107	TB-108	TB-108	TB-TP-5	TB-TP-5	TB-TP-6	TB-TP-19	TB-TP-19
Sample Date	RES DEC	I/C DEC	GA PMC	6/9/2006	6/9/2006	6/9/2006	7/18/2006	6/19/2006	6/19/2006	11/15/2017	9/29/20	9/29/20	9/29/20	9/29/20	9/29/20	9/29/20	9/28/20	9/28/20	9/28/20	10/1/2020	10/1/2020
Sample Depth				2-4 ft	0-2 ft	4-6 ft	Sediment	0-2 ft	6-7.5 ft	0.5-1.5 ft	1 - 3 ft	3 - 5 ft	0 - 5 ft	8 - 8.5 ft	1 - 2 ft	2 - 3 ft	2 - 4 ft	5 - 5.25 ft	3 - 4 ft	2 - 2.25 ft	3 - 3.25 ft
ETPH (mg/kg)	500	2,500	500	41.7	165	<	202	1,610	<	260	-	85	-	<54	-	<54	<55	<56	66	110	<53
SPLP CT ETPH (ug/L)	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VOCs (mg/kg)																					
Acetone	500	1,000	14	<	<	<	<	<	<	<	-	-	<0.27	-	-	-	<0.24	<0.26	-	-	-
Benzene	21	200	0.02	<	<	<	<	<	<	<	-	-	<0.0054	-	-	-	<0.0049	<0.0051	-	-	-
Butylbenzene, n-	500	1,000	7	<	<	<	<	<	<	<	-	-	<0.0054	-	-	-	<0.0049	<0.0051	-	-	-
Butylbenzene, sec-	500	1,000	7	<	<	<	<	<	<	<	-	-	<0.0054	-	-	-	<0.0049	<0.0051	-	-	-
Carbon disulfide	500	1,000	0.8	<	<	<	<	<	<	< 0.0057	-	-	<0.0054	-	-	-	<0.0049	<0.0051	-	-	-
Chloroform	100	940	0.12	<	<	<	<	<	<	<	-	-	<0.0054	-	-	-	<0.0049	<0.0051	-	-	-
Ethylbenzene	500	1,000	10.1	<	<	<	<	<	<	< 0.0057	-	-	<0.0054	-	-	-	<0.0049	<0.0051	-	-	-
Isopropylbenzene (cumene)	500	1,000	0.5	<	<	<	<	<	<	<	-	-	<0.0054	-	-	-	<0.0049	<0.0051	-	-	-
Isopropyltoluene, 4- (p-Cymene)	500	1,000	0.5	<	<	<	<	<	<	<	-	-	<0.0054	-	-	-	<0.0049	<0.0051	-	-	-
Methylene Chloride (Dichloromethane)	82	760	0.1	<	<	<	<	<	<	<	-	-	<0.011	-	-	-	<0.0098	<0.01	-	-	-
Naphthalene	1,000	2,500	5.6	<	<	<	<	0.192	<	< 0.0057	-	-	<0.0054	-	-	-	<0.0049	<0.0051	-	-	-
Propylbenzene, n-	500	1,000	1	<	<	<	<	<	<	<	-	-	<0.0054	-	-	-	<0.0049	<0.0051	-	-	-
Tetrachloroethylene (PCE)	12	110	0.1	<	<	<	<	<	<	<	-	-	<0.0054	-	-	-	<0.0049	<0.0051	-	-	-
Toluene	500	1,000	20	<	<	<	<	<	<	<	-	-	<0.0054	-	-	-	<0.0049	<0.0051	-	-	-
Trichloroethane, 1,1,1-	500	1,000	4	<	<	<	<	<	<	<	-	-	<0.0054	-	-	-	<0.0049	<0.0051	-	-	-
Trichloroethylene (TCE)	56	520	0.1	<	<	<	<	<	<	<	-	-	<0.0054	-	-	-	<0.0049	<0.0051	-	-	-
Trimethylbenzene, 1,2,4-	500	1,000	2.8	<	<	<	<	<	<	<	-	-	<0.0054	-	-	-	<0.0049	<0.0051	-	-	-
Trimethylbenzene, 1,3,5-	500	1,000	2.8	<	<	<	<	<	<	<	-	-	<0.0054	-	-	-	<0.0049	<0.0051	-	-	-
Xylene (Total)	500	1,000	19.5	<	<	<	<	<	<	< 0.0057	-	-	<0.0054	-	-	-	<0.0049	<0.0051	-	-	-
Xylene, m,p-	500	1,000	19.5	<	<	<	<	<	<	< 0.0057	-	-	<0.0054	-	-	-	<0.0049	<0.0051	-	-	-
Xylene, o-	500	1,000	19.5	<	<	<	<	<	<	< 0.0057	-	-	<0.0054	-	-	-	<0.0049	<0.0051	-	-	-
PAHs (mg/kg)																					
Acenaphthene	1,000	2,500	8.4	<	<	<	<	<	<	< 0.15	-	<0.24	-	<0.25	-	<0.25	<0.26	<0.26	<0.27	<0.25	<0.25
Acenaphthylene	1,000	2,500	8.4	<	0.649	<	0.226	4.36	<	< 0.15	-	<0.24	-	<0.25	-	0.53	<0.26	<0.26	<0.27	0.44	<0.25
Anthracene	1,000	2,500	40	<	0.798	<	0.326	2.68	<	< 0.15	-	<0.24	-	<0.25	-	0.29	<0.26	<0.26	<0.27	<0.25	<0.25
Benz (a) anthracene	1	7.8	1	<	1.71	<	1.14	**9.17**	<	0.21	-	<0.24	-	<0.25	-	0.73	<0.26	<0.26	0.37	0.39	<0.25
Benzo (a) pyrene	1	1	1	<	**2.21**	<	**1.24**	**10.7**	<	0.3	-	<0.24	-	<0.25	-	0.88	<0.26	<0.26	0.42	0.64	<0.25
Benzo (b) fluoranthene	1	7.8	1	<	2.3	<	1.01	**15**	<	0.31	-	<0.24	-	<0.25	-	0.94	0.28	<0.26	0.42	0.63	<0.25
Benzo (g,h,i) perylene	8.4	78	1	<	1.03	<	0.911	5.55	<	0.43	-	<0.24	-	<0.25	-	0.74	0.44	<0.26	0.3	0.51	<0.25
Benzo (k) fluoranthene	8.4	78	1	<	2.19	<	0.948	8.63	<	0.42	-	<0.24	-	<0.25	-	0.75	<0.26	<0.26	0.36	0.54	<0.25
Chrysene	84	780	1	<	2.19	<	1.44	14.4	<	0.46	-	<0.24	-	<0.25	-	*1.1*	<0.26	<0.26	0.45	0.7	<0.25
Dibenz (a,h) anthracene	1	1	1	<	0.243	<	0.256	**1.48**	<	< 0.15	-	<0.24	-	<0.25	-	<0.25	<0.26	<0.26	<0.27	<0.25	<0.25
Fluoranthene	1,000	2,500	5.6	<	3.27	<	2.82	23.5	<	0.59	-	<0.24	-	<0.25	-	1.9	<0.26	<0.26	0.65	1	<0.25
Fluorene	1,000	2,500	5.6	0.187	<	<	<	<	<	< 0.15	-	<0.24	-	<0.25	-	<0.25	<0.26	<0.26	<0.27	<0.25	<0.25
Indeno (1,2,3-cd) pyrene	1	7.8	1	<	1.08	<	0.798	4.48	<	0.45	-	<0.24	-	<0.25	-	0.7	0.4	<0.26	0.32	0.52	<0.25
1-Methylnaphthalene	21	200	0.2	<	<	<	<	<	<	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	270	1,000	0.56	<	<	<	<	<	<	< 0.15	-	<0.24	-	<0.25	-	<0.25	<0.26	<0.26	<0.27	<0.25	<0.25
Naphthalene	1,000	2,500	5.6	<	<	<	<	<	<	< 0.15	-	<0.24	-	<0.25	-	<0.25	<0.26	<0.26	<0.27	<0.25	<0.25
Phenanthrene	1,000	2,500	4	<	0.882	<	1.64	10.7	<	0.37	-	<0.24	-	<0.25	-	1.6	<0.26	<0.26	0.38	0.7	<0.25
Pyrene	1,000	2,500	4	0.184	4.18	<	2.55	25.9	0.164	0.56	-	<0.24	-	<0.25	-	1.5	<0.26	<0.26	0.62	0.88	<0.25
Dibenzofuran	68	1,000	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenol	1,000	2,500	80	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-methylphenol	1,000	2,500	2.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-dimethylphenol	140	2,500	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
bis(2-Exylhexl)phthalate	44	410	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLP PAHs (ug/l)																					
Acenaphthene	1,000	2500	8.4	-	-	-	-	<	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene	NA	NA	NA	-	-	-	-	<	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)anthracene	NA	NA	NA	-	-	-	-	<	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)pyrene	NA	NA	NA	-	-	-	-	<	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b)fluoranthene	NA	NA	NA	-	-	-	-	<	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)perylene	NA	NA	NA	-	-	-	-	<	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene	NA	NA	NA	-	-	-	-	<	-	-	-	-	-	-	-	-	-	-	-	-	-
Chrysene	NA	NA	NA	-	-	-	-	<	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenz(a,h)anthracene	NA	NA	NA	-	-	-	-	<	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	NA	NA	NA	-	-	-	-	<	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluorene	NA	NA	NA	-	-	-	-	<	-	-	-	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	NA	NA	NA	-	-	-	-	<	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	NA	NA	NA	-	-	-	-	<	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	NA	NA	NA	-	-	-	-	<	-	-	-	-	-	-	-	-	-	-	-	-	-
1-Methylnaphthalene	--	--						<													
Chlorinated Pesticides (mg/kg)																					
DDD, 4,4-	NE	NE	NE	-	-	-	<	-	-	-	<0.0015	-	-	-	<0.0014	-	-	-	-	-	-
DDE, 4,4-	NE	NE	NE	-	-	-	<	-	-	-	<0.0015	-	-	-	<0.0014	-	-	-	-	-	-
DDT, 4,4-	NE	NE	NE	-	-	-	0.0819	-	-	-	<0.0015	-	-	-	<0.0014	-	-	-	-	-	-
DDT (Total)	1.8	17	0.003	-	-	-	0.0819	-	-	-	<0.0015	-	-	-	<0.0014	-	-	-	-	-	-
Heptachlor Epoxide	0.067	0.63	0.02	-	-	-	<	-	-	-	<0.0076	-	-	-	<0.0069	-	-	-	-	-	-
SPLP DDT (ug/L)																					
DDD, 4,4-	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DDE, 4,4-	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DDT, 4,4-	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorinated Herbicides (mg/kg)																					
Various Herbicides	Varies	Varies	Varies	-	-	-	<	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCBs (mg/kg)																					
PCBs (Total)	1	10	0.0005	-	-	-	<	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Metals (mg/kg)																					
Aluminum	50,000	50,000	NA	-	-	-	-	-	-	-											
Antimony	27	8,200	NA	-	-	-	-	-	-	-	-	23.5	-	<3.2	-	11.9	20	<3.6	52.7	3.6	<3.5
Arsenic	10	10	NA	**30.4**	5.97	<	<	3.11	3.25	7.89	-	**29.2**	-	0.86	-	9.75	**24.5**	2.6	**31.9**	8.3	0.9
Barium	4,700	140,000	NA	66.3	51.8	12.7	10	30	28.3	72.4	-	55.8	-	15.4	-	196	75.7	21.5	75.2	101	18.9
Beryllium	2	2	NA	-	-	-	-	-	-	-	-	<0.28	-	0.73	-	<0.29	<0.27	0.43	<0.33	<0.27	0.46
Cadmium	34	1,000	NA	2.48	0.474	<	<	0.329	0.331	7.95	-	16.1	-	0.76	-	9.3	18.5	0.75	10.2	2.94	0.64
Calcium	NE	NE	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium (Total)	NE	NE	NA	17.9	6.97	6.54	3.61	10.6	7.1	35.8	-	23.7	-	3.33	-	31.3	43.2	9.56	23.3	12.5	9.79
Cobalt	20	610	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	2500	76,000	NA	-	-	-	-	-	-	-	-	104	-	11.7	-	117	110	7.9	165	28.3	5.8
Iron	NE	NE	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	400	1,000	NA	275	23.3	1.74	21.9	122	3.39	80.6	-	188	-	3.04	-	646	158	10.6	720	160	2.35
Magnesium	NE	NE	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	3400	50000	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury	20	610	NA	0.696	0.0951	<	<	<	<	0.04	-	<0.07	-	<0.03	-	0.06	<0.13	<0.03	0.38	<0.07	<0.03
Nickel	1400	7500	NA	-	-	-	-	-	-	-	-	43.8	-	3.86	-	48.5	64.7	5.2	51.9	14	6.17
Potassium	NE	NE	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	340	10,000	NA	<	<	<	<	<	<	< 1.5	-	<1.4	-	<1.3	-	<1.4	<1.4	<1.4	<1.7	<1.4	<1.4
Silver	340	10,000	NA	<	<	<	<	<	<	< 0.38	-	<0.35	-	<0.32	-	<0.36	<0.34	<0.36	<0.42	<0.34	<0.35
Thallium	5.4	160	NA	-	-	-	-	-	-	-	-	<3.2	-	<2.9	-	<3.2	<3.1	<3.2	<3.7	<3	<3.1
Vanadium	470	14,000	NA	-	-	-	-	-	-	-	-	18.9	-	17.7	-	33.7	24.2	28.6	25.3	21.5	26.8
Zinc	20000	610,000	NA	-	-	-	-	-	-	-	-	99.3	-	48.9	-	162	129	14.3	198	85.2	14.2
SPLP Metals (mg/l)																					
Antimony	NA	NA	0.006	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.037	-	-
Arsenic	NA	NA	0.05	<	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.033	-	-
Barium	NA	NA	1	0.0295	-	-	-	0.0285	-	-	-	-	-	-	-	-	-	-	0.038	-	-
Beryllium	NA	NA	0.004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-
Cadmium	NA	NA	0.005	<	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	-
Chromium (Total)	NA	NA	0.05	<	-	-	-	0.0064	-	-	-	-	-	-	-	-	-	-	<0.01	-	-
Copper	NA	NA	1.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.045	-	-
Lead	NA	NA	0.015	<	-	-	-	0.0918	-	-	-	-	-	-	-	-	-	-	0.625	-	-
Mercury	NA	NA	0.002	<	-	-	-	<	-	-	-	-	-	-	-	-	-	-	<0.0005	-	-
Nickel	NA	NA	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-
Selenium	NA	NA	0.05	<	-	-	-	<	-	-	-	-	-	-	-	-	-	-	<0.02	-	-
Silver	NA	NA	0.036	<	-	-	-	<	-	-	-	-	-	-	-	-	-	-	<0.01	-	-
Thallium	NA	NA	0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	-
Vanadium	NA	NA	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.013	-	-
Zinc	NA	NA	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.097	-	-
Sodium (mg/Kg)	NE	NE	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloride (mg/Kg)	NE	NE	NE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

	REC-6 Repair Bays & Pump Island																					
Sample ID	SB-12	SB-19	SB-31	SB-31	SB-32	SB-32	MW-4	MW-4	MW-4	MW-5	FOMW-01	FOMW-02	FOSB-01	HIG-FL-1	HIG-FL-2	HIG-FL-3	HIG-FL-3A	HIG-FL-4	HIG-FL-4A	HIG-G-DISP	HIG-D-DISP	TB-100
Sample Date	6/8/2006	6/8/2006	6/9/2006	6/9/2006	6/9/2006	6/9/2006	6/19/2006	6/19/2006	6/19/2006	6/20/2006	11/15/2017	11/15/2017	11/15/2017	6	4	5	6	3	5	1.5	1.5	8.5 - 9 ft
Sample Depth	0-2 ft	0-2 ft	0-2 ft	2-4 ft	0-2 ft	2-4 ft	0-2 ft	4-5 ft	6-7.5 ft	6-8 ft	0.5-2 ft	6-7.5 ft	6-7.5 ft	11/20/14	11/20/14	11/20/14	1/12/15	11/20/14	1/12/15	11/20/14	11/20/14	9/29/20
ETPH (mg/kg)	178	106	71.6	<	389	<	2,030	1,590	<	<	< 53	< 55	< 55	<	<	120	-	220	-	<	<	300
SPLP CT ETPH (ug/L)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VOCs (mg/kg)																						
Acetone	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	-	<	-	<	<	<14
Benzene	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	-	<	-	<	<	<0.13
Butylbenzene, n-	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	-	<	-	<	<	0.2
Butylbenzene, sec-	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	-	<	-	<	<	<0.33
Carbon disulfide	<	<	<	<	<	<	<	<	<	<	< 0.0054	< 0.28	< 0.0044	<	<	<	-	<	-	<	<	<0.33
Chloroform	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	-	<	-	<	<	<0.13
Ethylbenzene	<	<	<	<	<	<	<	0.106	<	<	< 0.0054	< 0.28	< 0.0044	<	<	<	-	<	-	<	<	<0.33
Isopropylbenzene (cumene)	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	-	<	-	<	<	<0.33
Isopropyltoluene, 4- (p-Cymene)	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	-	<	-	<	<	<0.33
Methylene Chloride (Dichloromethane)	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	-	<	-	<	<	<0.33
Naphthalene	<	0.158	<	<	0.761	<	0.207	0.176	<	<	< 0.25	< 0.28	< 0.0044	<	<	<	-	<	-	<	<	0.14
Propylbenzene, n-	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	-	<	-	<	<	<0.33
Tetrachloroethylene (PCE)	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	-	<	-	<	<	<0.13
Toluene	<	<	<	<	<	<	<	0.549	<	<	<	<	<	<	<	<	-	<	-	<	<	<0.33
Trichloroethane, 1,1,1-	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	-	<	-	<	<	<0.33
Trichloroethylene (TCE)	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	-	<	-	<	<	<0.13
Trimethylbenzene, 1,2,4-	<	<	<	<	<	<	<	0.528	<	<	<	<	<	<	<	<	-	<	-	<	<	<0.33
Trimethylbenzene, 1,3,5-	<	<	<	<	<	<	<	0.19	<	<	<	<	<	<	<	<	-	<	-	<	<	<0.33
Xylene (Total)	<	<	<	<	<	<	<	1.766	<	<	< 0.0054	< 0.28	< 0.0044	<	<	<	-	<	-	<	<	<0.33
Xylene, m,p-	<	<	<	<	<	<	<	1.36	<	<	< 0.0054	< 0.28	< 0.0044	<	<	<	-	<	-	<	<	<0.33
Xylene, o-	<	<	<	<	<	<	<	0.406	<	<	< 0.0054	< 0.28	< 0.0044	<	<	<	-	<	-	<	<	<0.33
PAHs (mg/kg)																						
Acenaphthene	<	<	<	<	<	<	1.1	2.05	<	<	< 0.14	< 0.15	< 0.15	<	<	<	<	<	<	<	<	<0.25
Acenaphthylene	0.662	0.284	<	<	1.33	<	6.67	3.96	<	<	< 0.14	< 0.15	< 0.15	<	<	2	<	1.3	<	<	<	<0.25
Anthracene	<	0.486	0.262	<	1.32	<	9.91	7.56	<	<	< 0.14	< 0.15	< 0.15	<	<	1.1	<	0.55	<	<	<	<0.25
Benz (a) anthracene	0.431	0.932	0.244	<	3.81	<	**24.9**	**17.8**	<	<	< 0.14	< 0.15	< 0.15	<	<	5.3	<	1.1	<	<	<	<0.25
Benzo (a) pyrene	**1.15**	**1.04**	0.428	<	**4.48**	<	**24.4**	**19.1**	<	<	< 0.14	< 0.15	< 0.15	0.29	<	**5.6**	<	**2.1**	<	<	<	<0.25
Benzo (b) fluoranthene	1.29	1.2	0.401	<	4.85	<	**26.9**	**22.8**	<	<	< 0.14	< 0.15	< 0.15	0.37	<	7.1	<	2.9	<	<	<	<0.25
Benzo (g,h,i) perylene	1.02	0.409	0.241	<	1.85	<	10.3	8.57	<	<	0.34	< 0.15	< 0.15	0.28	<	4.1	<	2	<	<	<	<0.25
Benzo (k) fluoranthene	0.74	0.872	0.349	<	3.97	<	18.2	13.8	<	<	< 0.14	< 0.15	< 0.15	<	<	2.2	<	0.85	<	<	<	<0.25
Chrysene	0.551	1.02	0.462	<	4.37	<	28	18.3	<	<	< 0.14	0.16	< 0.15	<	<	6.4	<	0.91	<	<	<	<0.25
Dibenz (a,h) anthracene	0.23	<	<	<	0.584	<	**2.9**	**2.34**	<	<	< 0.14	< 0.15	< 0.15	<	<	<	<	0.51	<	<	<	<0.25
Fluoranthene	0.591	2.11	0.719	<	5.27	<	59.5	46.4	<	<	< 0.14	0.18	< 0.15	0.28	<	9	<	1.2	<	<	<	<0.25
Fluorene	<	<	<	<	<	<	4.61	2.51	<	<	< 0.14	< 0.15	< 0.15	<	<	0.25	<	<	<	<	<	<0.25
Indeno (1,2,3-cd) pyrene	0.831	0.395	0.216	<	1.99	<	**8.48**	7.1	<	<	0.26	< 0.15	< 0.15	<	<	3.4	<	1.7	<	<	<	<0.25
1-Methylnaphthalene	<	<	<	<	<	<	1.52	<	<	<	-	-	-	-	-	<	<	<	<	-	-	-
2-Methylnaphthalene	<	<	<	<	<	<	1.23	<	<	<	< 0.14	< 0.15	< 0.15	<	<	<	<	<	<	<	<	<0.25
Naphthalene	<	<	<	<	<	<	<	<	<	<	< 0.14	< 0.15	< 0.15	<	<	<	<	<	<	<	<	<0.25
Phenanthrene	<	0.851	0.297	<	2.1	<	48.2	26.3	<	<	< 0.14	< 0.15	< 0.15	<	<	2	<	0.28	<	<	<	<0.25
Pyrene	0.885	2.44	0.75	<	6.53	<	66.8	48.6	<	<	< 0.14	0.24	< 0.15	0.36	<	9.8	<	1.4	<	<	<	<0.25
Dibenzofuran	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-methylphenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-dimethylphenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
bis(2-Exylhexl)phthalate	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLP PAHs (ug/l)																						
Acenaphthene	-	-	-	-	-	-	<	<	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene	-	-	-	-	-	-	<	<	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)anthracene	-	-	-	-	-	-	<	<	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)pyrene	-	-	-	-	-	-	<	<	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b)fluoranthene	-	-	-	-	-	-	<	<	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)perylene	-	-	-	-	-	-	<	<	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene	-	-	-	-	-	-	<	<	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chrysene	-	-	-	-	-	-	<	<	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenz(a,h)anthracene	-	-	-	-	-	-	<	<	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	-	-	-	-	-	-	<	<	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluorene	-	-	-	-	-	-	<	<	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	-	-	-	-	-	-	<	<	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	-	-	-	-	-	-	<	<	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	-	-	-	-	-	-	<	<	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1-Methylnaphthalene	-	-	-	-	-	-	<	<	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorinated Pesticides (mg/kg)																						
DDD, 4,4-	-	-	-	-	-	-	-	-	<	-	-	-	-	-	-	-	-	-	-	-	-	-
DDE, 4,4-	-	-	-	-	-	-	-	-	<	-	-	-	-	-	-	-	-	-	-	-	-	-
DDT, 4,4-	-	-	-	-	-	-	-	-	<	-	-	-	-	-	-	-	-	-	-	-	-	-
DDT (Total)	-	-	-	-	-	-	-	-	<	-	-	-	-	-	-	-	-	-	-	-	-	-
Heptachlor Epoxide	-	-	-	-	-	-	-	-	<	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLP DDT (ug/L)																						
DDD, 4,4-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DDE, 4,4-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DDT, 4,4-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorinated Herbicides (mg/kg)																						
Various Herbicides	-	-	-	-	-	-	-	-	-	<	-	-	-	-	-	-	-	-	-	-	-	-
PCBs (mg/kg)																						
PCBs (Total)	-	<	<	<	<	<	<	<	<	<	-	-	-	-	-	-	-	-	-	-	-	-
Total Metals (mg/kg)																						
Aluminum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Antimony	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	-	3.31	<	1.77	7.75	<	6.66	9.83	1.69	3.08	2.48	1.21	0.74	-	-	-	-	-	-	-	-	-
Barium	-	33.3	62.3	48.1	46.6	6.92	24.3	29.8	16.6	22.9	79.6	56.9	52	-	-	-	-	-	-	-	-	-
Beryllium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	-	<	0.294	0.299	0.492	<	0.344	0.436	<	<	0.47	0.43	< 0.36	-	-	-	-	-	-	-	-	-
Calcium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium (Total)	-	12.6	9.93	5.74	5.78	3.61	15.2	19.9	5.52	2.16	14.8	8.78	16.6	-	-	-	-	-	-	-	-	-
Cobalt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	-	19.8	3.78	16.8	160	2.12	104	69.6	24.3	1.43	3.82	12.3	1.72	7.1	3.7	19.5	-	8.11	-	2.61	3.71	-
Magnesium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury	-	<	<	<	0.0882	<	<	<	<	<	< 0.03	< 0.03	< 0.03	-	-	-	-	-	-	-	-	-
Nickel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	-	<	<	<	1.91	<	<	<	<	<	< 1.4	< 1.5	< 1.4	-	-	-	-	-	-	-	-	-
Silver	-	<	<	<	<	<	<	<	<	<	< 0.36	< 0.37	< 0.36	-	-	-	-	-	-	-	-	-
Thallium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLP Metals (mg/l)																						
Antimony	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Barium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium (Total)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium (mg/Kg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloride (mg/Kg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

	REC-7 Septic Tank & Leach Field											
Sample ID	SB-24	SB-25	SB-25	MW-1	MW-1	FOSB-07	TB-TP-7	D-20	D-21	SB-21	SB-21	SB-22
Sample Date	6/9/2006	6/9/2006	6/9/2006	6/20/2006	6/20/2006	11/15/2017	9/28/20	3/27/1987	3/27/1987	6/9/2006	6/9/2006	6/9/2006
Sample Depth	0-3 ft	0-2 ft	2-4 ft	0.5-2 ft	5-6 ft	2-3 ft	3 - 4 ft	0-0.5 ft	0-0.5 ft	4-6 ft	6-8 ft	0-2 ft
ETPH (mg/kg)	154	192	<	242	<	< 63	-	<	699**	1,670	<	552
SPLP CT ETPH (ug/L)	-	-	-	-	-	-	-	-	-	-	-	-
VOCs (mg/kg)												
Acetone	<	<	<	<	<	<	-	<	<	<	<	<
Benzene	<	<	<	<	<	<	-	0.002	0.002	<	<	<
Butylbenzene, n-	<	<	<	<	<	<	-	-	-	<	<	<
Butylbenzene, sec-	<	<	<	<	<	<	-	-	-	<	<	<
Carbon disulfide	<	<	<	<	<	< 0.006	-	<	<	<	<	<
Chloroform	<	<	<	<	<	<	-	-	-	<	<	<
Ethylbenzene	<	<	<	<	<	< 0.006	-	-	-	<	<	<
Isopropylbenzene (cumene)	<	<	<	<	<	<	-	-	-	<	<	<
Isopropyltoluene, 4- (p-Cymene)	<	<	<	<	<	<	-	-	-	<	<	<
Methylene Chloride (Dichloromethane)	<	<	<	<	<	<	-	<	<	<	<	<
Naphthalene	<	<	<	0.778	<	< 0.006	-	-	-	0.121	<	0.279
Propylbenzene, n-	<	<	<	<	<	<	-	-	-	<	<	<
Tetrachloroethylene (PCE)	<	<	<	<	<	<	-	-	-	<	<	<
Toluene	<	<	<	<	<	<	-	<	<	<	<	<
Trichloroethane, 1,1,1-	<	<	<	<	<	<	-	<	<	<	<	<
Trichloroethylene (TCE)	<	<	<	<	<	<	-	-	-	<	<	<
Trimethylbenzene, 1,2,4-	<	<	<	<	<	<	-	-	-	<	<	<
Trimethylbenzene, 1,3,5-	<	<	<	<	<	<	-	-	-	<	<	<
Xylene (Total)	<	<	<	<	<	< 0.006	-	-	-	<	<	<
Xylene, m,p-	<	<	<	<	<	< 0.006	-	-	-	<	<	<
Xylene, o-	<	<	<	<	<	< 0.006	-	-	-	<	<	<
PAHs (mg/kg)												
Acenaphthene	<	<	<	0.285	<	< 0.17	<0.25	-	-	-	-	<
Acenaphthylene	0.661	0.392	<	1.19	<	< 0.17	<0.25	-	-	-	-	0.332
Anthracene	1.6	0.965	<	1.43	<	< 0.17	<0.25	-	-	-	-	0.805
Benz (a) anthracene	1.26	1.4	<	2.4	<	< 0.17	<0.25	-	-	-	-	0.656
Benzo (a) pyrene	**1.5**	**1.61**	<	**2.71**	<	< 0.17	<0.25	-	-	-	-	0.776
Benzo (b) fluoranthene	1.71	1.62	<	3.31	<	< 0.17	<0.25	-	-	-	-	0.876
Benzo (g,h,i) perylene	0.969	0.667	<	1.78	<	< 0.17	<0.25	-	-	-	-	0.348
Benzo (k) fluoranthene	0.965	1.11	<	1.66	<	< 0.17	<0.25	-	-	-	-	0.773
Chrysene	1.58	1.96	<	2.53	<	< 0.17	<0.25	-	-	-	-	0.886
Dibenz (a,h) anthracene	0.265	<	<	0.472	<	< 0.17	<0.25	-	-	-	-	<
Fluoranthene	3.51	3.55	<	5.01	<	< 0.17	<0.25	-	-	-	-	1.88
Fluorene	0.422	<	<	0.837	<	< 0.17	<0.25	-	-	-	-	<
Indeno (1,2,3-cd) pyrene	0.929	0.708	<	1.37	<	< 0.17	<0.25	-	-	-	-	0.356
1-Methylnaphthalene	<	<	<	0.405	<	-	-	-	-	-	-	<
2-Methylnaphthalene	<	<	<	0.387	<	< 0.17	<0.25	-	-	-	-	<
Naphthalene	<	<	<	<	<	< 0.17	<0.25	-	-	-	-	<
Phenanthrene	3.56	1.31	<	5.42	<	< 0.17	<0.25	-	-	-	-	1.3
Pyrene	3.29	3.28	<	7.24	<	< 0.17	<0.25	-	-	-	-	2.27
Dibenzofuran	-	-	-	-	-	-	-	-	-	-	-	-
Phenol	-	-	-	-	-	-	-	-	-	-	-	-
4-methylphenol	-	-	-	-	-	-	-	-	-	-	-	-
2,4-dimethylphenol	-	-	-	-	-	-	-	-	-	-	-	-
bis(2-Exylhexl)phthalate	-	-	-	-	-	-	-	-	-	-	-	-
SPLP PAHs (ug/l)												
Acenaphthene	-	-	-	<	-	-	-	-	-	-	-	-
Acenaphthylene	-	-	-	<	-	-	-	-	-	-	-	-
Benzo(a)anthracene	-	-	-	<	-	-	-	-	-	-	-	-
Benzo(a)pyrene	-	-	-	<	-	-	-	-	-	-	-	-
Benzo(b)fluoranthene	-	-	-	<	-	-	-	-	-	-	-	-
Benzo(g,h,i)perylene	-	-	-	<	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene	-	-	-	<	-	-	-	-	-	-	-	-
Chrysene	-	-	-	<	-	-	-	-	-	-	-	-
Dibenz(a,h)anthracene	-	-	-	<	-	-	-	-	-	-	-	-
Fluoranthene	-	-	-	<	-	-	-	-	-	-	-	-
Fluorene	-	-	-	6.05	-	-	-	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	-	-	-	<	-	-	-	-	-	-	-	-
Phenanthrene	-	-	-	12	-	-	-	-	-	-	-	-
Pyrene	-	-	-	<	-	-	-	-	-	-	-	-
1-Methylnaphthalene				<								
Chlorinated Pesticides (mg/kg)												
DDD, 4,4-	<	<	<	<	<	-	-	-	-	-	-	<
DDE, 4,4-	<	<	<	<	<	-	-	-	-	-	-	<
DDT, 4,4-	<	<	<	<	<	-	-	-	-	-	-	<
DDT (Total)	<	<	<	<	<	-	-	-	-	-	-	<
Heptachlor Epoxide	<	<	<	<	<	-	-	-	-	-	-	<
SPLP DDT (ug/L)												
DDD, 4,4-	-	-	-	-	-	-	-	-	-	-	-	-
DDE, 4,4-	-	-	-	-	-	-	-	-	-	-	-	-
DDT, 4,4-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorinated Herbicides (mg/kg)												
Various Herbicides	<	<	<	<	<	-	-	-	-	-	-	-
PCBs (mg/kg)												
PCBs (Total)	<	<	<	<	<	< 0.43	-	-	-	-	-	-
Total Metals (mg/kg)												
Aluminum	-	-	-	-	-	-	-	-	-	-	-	-
Antimony	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	2.24	<	<	3.45	1.81	< 0.80	-	-	-	**35**	1.85	-
Barium	86.2	34.5	19.9	58.4	25.3	15.8	-	-	-	38.9	17.5	-
Beryllium	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	0.281	<	0.338	0.346	0.312	0.71	-	-	-	0.663	<	-
Calcium	-	-	-	-	-	-	-	-	-	-	-	-
Chromium (Total)	8.6	6.01	3.23	14.6	3.15	10.2	-	-	-	8.16	3.16	-
Cobalt	-	-	-	-	-	-	-	-	-	-	-	-
Copper	-	-	-	-	-	-	-	-	-	-	-	-
Iron	-	-	-	-	-	-	-	-	-	-	-	-
Lead	11	12.8	11.7	5.26	37	< 0.40	-	-	-	209	6.26	-
Magnesium	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	-	-	-	-	-	-	-	-	-	-	-	-
Mercury	<	<	<	<	<	< 0.03	-	-	-	<	<	-
Nickel	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	<	<	<	<	<	< 1.6	-	-	-	3.32	<	-
Silver	<	<	<	<	<	< 0.40	-	-	-	<	<	-
Thallium	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	-	-	-	-	-	-	-	-	-	-	-	-
SPLP Metals (mg/l)												
Antimony	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	-	-	-	-	-	-	-	<	-	<	-	-
Barium	-	-	-	-	-	-	-	<	-	0.015	-	-
Beryllium	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	-	-	-	-	-	-	-	<	-	<	-	-
Chromium (Total)	-	-	-	-	-	-	-	<	-	<	-	-
Copper	-	-	-	-	-	-	-	-	-	-	-	-
Lead	-	-	-	-	-	-	-	0.11	-	0.0935	-	-
Mercury	-	-	-	-	-	-	-	<	-	<	-	-
Nickel	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	-	-	-	-	-	-	-	<	-	<	-	-
Silver	-	-	-	-	-	-	-	<	-	<	-	-
Thallium	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	-	-	-	-	-	-	-	-	-	-	-	-
Sodium (mg/Kg)	-	-	-	-	-	-	-	-	-	-	-	-
Chloride (mg/Kg)	-	-	-	-	-	-	-	-	-	-	-	-

CTDEEP RSRs- Connecticut Department of Energy and Environmental Protection Remedia
Standard Regulations (June 27, 2013) and *Technical Support Document: Recommended*
Criteria for Common Additional Polluting Substances and Certain Alternative Criteria (Se
2018)
Criteria in italics note parameters that are CTDEEP Additional Polluting Substances (Sept
RES DEC = Residential Direct Exposure Criteria
I/C DEC = Industrial/Commercial Direct Exposure Criteria.
GA PMC = GA Pollutant Mobility Criteria.
* For PAHs, SPLP results were compared to the Groundwater Protection Criteria to deter
compliance with the GAPMC.
**ETPH most closely resembled karosene or #6
oil
"-"- Sample not analyzed
Only parameters reported above detection limits are summarized above
mg/kg = milligrams per kilogram.
mg/L = milligrams per liter.
ug/l = micrograms per liter.
CT ETPH - Connecticut Extractable Total Petroleum Hydrocarbons
VOCs- Volatile Organic Compounds
PAHs- Polycyclic Aromatic Hydrocarbons
PCBs - Polychlorinated Biphenyls
BRL - Below repoting limit
< = not detected, see laboratory reports for specific detection limits
<## = not detected, detection limit provided
NA = not analyzed for this compound.
NE = no criteria established.
Boxed values indicate exceedances of RES DEC
Bold values indicate exceedances of I/C DEC
Gray shaded values indicate exceedance of GB PMC
Blue Text indicates exceedance of GWPC
Results prior to 9/28/2020 were provided by others

Tighe&Bond

TABLE 1
Summary of Soil Analytical Data by REC
Former Scovil Hoe Mill
11 Candlewood Hill Road
Haddam, CT

																									REC-10 Former Heating Oil & Diesel USTs								REC-11 Four Former USTs												REC-12 Former Heating Oil UST				REC-13 Former Heating Oil UST (NE corner)					
Sample ID	CTDEEP RSRs			SB-22	SB-22	SB-23	SB-23	SS-2	MW-3	MW-3	HIG-D-N	HIG-D-W	HIG-G-W	HIG-FO2-W	HIG-FO2-S	HIG-FO2-E	HIG-G-E	HIG-D-E	FOSB-09	TB-101	TB-101	TB-102	TB-103	TB-TP-8	SB-9	SB-9	SB-10	SB-10	SB-11	SB-11	FOSB-03	FOSB-16	SB-26	SB-26	SB-27	SB-27	SB-28	SB-28	SB-29	SB-30	SB-30	TB-TP-16	TB-TP-17	TB-TP-17	SB-17	SB-18	MW-6	MW-6	SB-20	HIG-FO1-N	HIG-FO1-S	HIG-FO1-E	HIG-FO1-W	FOSB-06
Sample Date	RES DEC	I/C DEC	GA PMC	6/9/2006	6/9/2006	6/9/2006	6/9/2006	7/18/2006	6/19/2006	6/19/2006	#######	#######	#######	11/19/2014	11/19/2014	11/19/2014	#######	#######	11/15/2017	9/29/20	9/29/20	9/29/20	9/29/20	5 - 5.25 ft	6/8/2006	6/8/2006	6/8/2006	6/8/2006	6/8/2006	6/8/2006	11/15/2017	11/16/2017	6/9/2006	6/9/2006	6/9/2006	6/9/2006	6/9/2006	6/9/2006	6/9/2006	6/9/2006	6/9/2006	10/1/2020	10/1/2020	10/1/2020	6/8/2006	6/8/2006	6/20/2006	6/20/2006	6/9/2006	11/17/2014	11/17/2014	11/17/2014	11/17/2014	11/15/2017
Sample Depth				4-6 ft	6-8 ft	0-2 ft	2-4 ft	Sediment	0-2 ft	6-8 ft	5-6 ft	5-6 ft	5-6 ft	5-6 ft	5-6 ft	5-6 ft	5-6 ft	5-6 ft	11.25-11.5 ft	2.5 - 4.5 ft	8.5 - 9 ft	11 - 12 ft	0 - 0.5 ft	9/28/20	0-2 ft	4-6 ft	0-2 ft	2-4 ft	0-2 ft	2-4 ft	6-8 ft	1-2.5 ft	0-2 ft	2-4 ft	0-2 ft	2-4 ft	0-2 ft	2-4 ft	0-3 ft	0-2 ft	2-4 ft	2 - 4 ft	2 - 2.25 ft	4 - 4.25 ft	0-2 ft	0-3 ft	0-2 ft	7-8.5 ft	6-8 ft	9-10 ft	9-10 ft	9-10 ft	9-10 ft	6.8-7.2 ft
ETPH (mg/kg)	500	2,500	500	651	431	836	<	45.2	1,150	214	<	<	<	<	<	<	<	<	< 55	<270	660	190	-	<54	467	<	54.8	<	1,270	41.5	< 53	< 56	365	72.7	320	<	50	<	153	236	<	<53	52	<56	343	352	<	437	<	<	<	<	<	< 61
SPLP CT ETPH (ug/L)	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VOCs (mg/kg)																																																						
Acetone	500	1,000	14	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	-	<14	<0.26	-	<0.27	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	-	-	-	<	<	<	<	<	<	<	<	<	<
Benzene	21	200	0.02	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	-	<0.15	<0.0052	-	<0.0054	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	-	-	-	<	<	<	<	<	<	<	<	<	<
Butylbenzene, n-	500	1,000	7	<	0.174	<	<	<	<	<	<	<	<	<	<	<	<	<	<	-	0.53	<0.0052	-	<0.0054	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	-	-	-	<	<	<	<	<	<	<	<	<	<
Butylbenzene, sec-	500	1,000	7	<	0.167	<	<	<	<	<	<	<	<	<	<	<	<	<	<	-	0.99	<0.0052	-	<0.0054	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	-	-	-	<	<	<	<	<	<	<	<	<	<
Carbon disulfide	500	1,000	0.8	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	< 0.0048	-	<0.37	<0.0052	-	<0.0054	<	<	<	<	<	<	< 0.0042	< 0.0053	<	<	<	<	<	<	<	<	<	-	-	-	<	<	<	<	<	<	<	<	<	< 0.0051
Chloroform	100	940	0.12	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	-	<0.15	<0.0052	-	<0.0054	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	-	-	-	<	<	<	<	<	<	<	<	<	<
Ethylbenzene	500	1,000	10.1	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	< 0.0048	-	<0.37	<0.0052	-	<0.0054	<	<	<	<	<	<	< 0.0042	< 0.0053	<	<	<	<	<	<	<	<	<	-	-	-	<	<	<	<	<	<	<	<	<	< 0.0051
Isopropylbenzene (cumene)	500	1,000	0.5	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	-	<0.37	<0.0052	-	<0.0054	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	-	-	-	<	<	<	<	<	<	<	<	<	<
Isopropyltoluene, 4- (p-Cymene)	500	1,000	0.5	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	-	<0.37	<0.0052	-	<0.0054	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	-	-	-	<	<	<	<	<	<	<	<	<	<
Methylene Chloride (Dichloromethane)	82	760	0.1	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	-	<0.37	<0.01	-	<0.011	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	-	-	-	<	<	<	<	<	<	<	<	<	<
Naphthalene	1,000	2,500	5.6	<	<	<	<	<	0.145	0.0536	<	<	<	<	<	<	<	<	< 0.0048	-	0.21	<0.0052	-	<0.0054	0.142	0.607	0.0445	<	0.905	0.228	< 0.0042	< 0.0053	0.491	0.0914	0.0705	<	<	<	<	0.0791	<	-	-	-	0.115	0.288	<	<	<	<	<	<	<	< 0.0051
Propylbenzene, n-	500	1,000	1	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	-	<0.37	<0.0052	-	<0.0054	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	-	-	-	<	<	<	<	<	<	<	<	<	<
Tetrachloroethylene (PCE)	12	110	0.1	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	-	<0.15	<0.0052	-	<0.0054	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	-	-	-	<	<	<	<	<	<	<	<	<	<
Toluene	500	1,000	20	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	-	<0.37	<0.0052	-	<0.0054	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	-	-	-	<	<	<	<	<	<	<	<	<	<
Trichloroethane, 1,1,1-	500	1,000	4	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	-	<0.37	<0.0052	-	<0.0054	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	-	-	-	<	<	<	<	<	<	<	<	<	<
Trichloroethylene (TCE)	56	520	0.1	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	-	<0.15	<0.0052	-	<0.0054	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	-	-	-	<	<	<	<	<	<	<	<	<	<
Trimethylbenzene, 1,2,4-	500	1,000	2.8	0.0517	<	<	<	<	<	0.0711	<	<	<	<	<	<	<	<	<	-	<0.37	<0.0052	-	<0.0054	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	-	-	-	<	<	<	<	<	<	<	<	<	<
Trimethylbenzene, 1,3,5-	500	1,000	2.8	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	-	<0.37	<0.0052	-	<0.0054	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	-	-	-	<	<	<	<	<	<	<	<	<	<
Xylene (Total)	500	1,000	19.5	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	< 0.0048	-	<0.37	<0.0052	-	<0.0054	<	<	<	<	<	<	< 0.0042	< 0.0053	<	<	<	<	<	<	<	<	<	-	-	-	<	<	<	<	<	<	<	<	<	< 0.0051
Xylene, m,p-	500	1,000	19.5	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	< 0.0048	-	<0.37	<0.0052	-	<0.0054	<	<	<	<	<	<	< 0.0042	< 0.0053	<	<	<	<	<	<	<	<	<	-	-	-	<	<	<	<	<	<	<	<	<	< 0.0051
Xylene, o-	500	1,000	19.5	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	< 0.0048	-	<0.37	<0.0052	-	<0.0054	<	<	<	<	<	<	< 0.0042	< 0.0053	<	<	<	<	<	<	<	<	<	-	-	-	<	<	<	<	<	<	<	<	<	< 0.0051
PAHs (mg/kg)																																																						
Acenaphthene	1,000	2,500	8.4	<	<	<	<	<	-	-	<	<	<	<	<	<	<	<	< 0.14	<0.25	<0.25	<0.27	-	-	0.269	<	<	<	2.2	<	< 0.15	< 0.15	0.627	<	<	<	<	<	<	<	<	<0.25	<0.24	<0.25	<	<	<	<	<	<	<	<	<	< 0.16
Acenaphthylene	1,000	2,500	8.4	1.42	<	4.59	<	<	-	-	<	<	<	<	<	<	<	<	< 0.14	4.4	<0.25	1	-	-	0.417	<	<	<	3.97	<	< 0.15	< 0.15	1.68	0.185	1.72	<	<	<	0.26	0.887	<	<0.25	0.67	0.43	1.33	1.43	<	0.14	<	<	<	<	<	< 0.16
Anthracene	1,000	2,500	40	0.439	<	1.66	<	<	-	-	<	<	<	<	<	<	<	<	< 0.14	4.2	<0.25	0.59	-	-	1.82	<	<	<	9.46	<	< 0.15	< 0.15	3.22	0.991	0.993	<	<	<	<	2.15	<	<0.25	0.36	<0.25	1.13	2.35	<	0.162	<	<	<	<	<	< 0.16
Benz (a) anthracene	1	7.8	1	1.56	<	3.13	<	0.569	-	-	<	<	<	<	0.63	<	<	<	< 0.14	**21**	<0.25	2	-	-	1.08	<	0.173	<	**8.74**	<	< 0.15	< 0.15	2.61	0.392	1.04	<	<	<	1	2.68	<	<0.25	0.84	0.61	1.96	4.13	<	0.426	<	<	<	<	<	< 0.16
Benzo (a) pyrene	1	1	1	**2.63**	<	**7.03**	<	0.588	-	-	<	<	<	<	0.55	<	<	<	< 0.14	**24**	<0.25	**2.7**	-	-	**1.1**	<	0.296	<	**7.84**	<	< 0.15	< 0.15	**2.96**	0.404	**3.27**	<	<	<	**1.16**	**3.28**	<	<0.25	**1.2**	0.8	**2.47**	**4.01**	0.143	0.478	<	<	<	<	<	< 0.16
Benzo (b) fluoranthene	1	7.8	1	2.56	<	**8.22**	<	0.425	-	-	<	<	<	<	0.74	<	<	<	< 0.14	**19**	<0.25	2.2	-	-	0.962	<	0.285	<	**8.12**	<	< 0.15	< 0.15	2.71	0.417	3.83	<	<	<	1.1	3.71	<	<0.25	0.95	0.66	3.28	4.49	0.185	0.48	<	<	<	<	<	< 0.16
Benzo (g,h,i) perylene	8.4	78	1	1.15	<	5.95	<	0.454	-	-	<	<	<	<	<	<	<	<	< 0.14	*15*	<0.25	*2.5*	-	-	0.419	<	0.186	<	2.68	<	< 0.15	< 0.15	1.33	<	2.66	<	<	<	0.575	1.63	<	<0.25	0.95	0.51	1.33	1.69	<	0.254	<	<	<	<	<	< 0.16
Benzo (k) fluoranthene	8.4	78	1	2.1	<	4.91	<	0.506	-	-	<	<	<	<	<	<	<	<	< 0.14	17	<0.25	1.8	-	-	0.818	<	0.221	<	4.07	<	< 0.15	< 0.15	2.27	0.249	2.01	<	<	<	0.911	2.39	<	<0.25	0.88	0.57	1.97	2.67	<	0.36	<	<	<	<	<	< 0.16
Chrysene	84	780	1	1.61	<	3.18	<	0.735	-	-	<	<	<	<	0.68	<	<	<	< 0.14	*21*	<0.25	*2.4*	-	-	1.37	<	0.249	<	8.91	<	< 0.15	< 0.15	3.98	0.633	1.19	<	<	<	1.01	3.38	<	<0.25	0.89	0.65	2.54	4.36	<	0.48	<	<	<	<	<	< 0.16
Dibenz (a,h) anthracene	1	1	1	0.295	<	**1.71**	<	<	-	-	<	<	<	<	<	<	<	<	< 0.14	**4.1**	<0.25	0.34	-	-	<	<	<	<	0.857	<	< 0.15	< 0.15	0.389	<	0.747	<	<	<	<	0.429	<	<0.25	0.24	<0.25	0.369	0.464	<	<	<	<	<	<	<	< 0.16
Fluoranthene	1,000	2,500	5.6	1.65	<	1.89	<	1.67	-	-	<	<	<	<	1.3	<	<	<	< 0.14	43	0.34	3.6	-	-	3.94	0.291	0.375	<	19.2	<	< 0.15	< 0.15	6.34	1.23	1.51	<	<	<	1.84	8.36	<	<0.25	0.74	0.67	5.48	9.99	0.309	0.797	<	<	<	<	<	< 0.16
Fluorene	1,000	2,500	5.6	<	<	<	<	<	-	-	<	<	<	<	<	<	<	<	< 0.14	0.25	<0.25	0.27	-	-	0.752	<	<	<	8.45	<	< 0.15	< 0.15	2.16	0.364	<	<	<	<	<	<	<	<0.25	<0.24	<0.25	0.255	0.525	<	<	<	<	<	<	<	< 0.16
Indeno (1,2,3-cd) pyrene	1	7.8	1	1.18	<	5.61	<	0.404	-	-	<	<	<	<	<	<	<	<	< 0.14	**17**	<0.25	*2.2*	-	-	0.43	<	0.161	<	2.87	<	< 0.15	< 0.15	1.29	<	2.55	<	<	<	0.57	1.65	<	<0.25	0.95	0.5	1.44	1.69	<	0.175	<	<	<	<	<	< 0.16
1-Methylnaphthalene	21	200	0.2	<	<	<	<	<	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.388	<	<	<	4.27	<	-	-	1.2	<	<	<	<	<	<	<	<	-	-	-	<	<	<	<	<	-	-	-	-	-
2-Methylnaphthalene	270	1,000	0.56	<	<	<	<	<	-	-	<	<	<	<	<	<	<	<	< 0.14	0.29	<0.25	<0.27	-	-	<	<	<	<	2.93	<	< 0.15	< 0.15	0.521	<	<	<	<	<	<	<	<	<0.25	<0.24	<0.25	<	<	<	<	<	<	<	<	<	< 0.16
Naphthalene	1,000	2,500	5.6	<	<	<	<	<	-	-	<	<	<	<	<	<	<	<	< 0.14	0.42	<0.25	<0.27	-	-	<	<	<	<	2.17	<	< 0.15	< 0.15	<	<	<	<	<	<	<	<	<	<0.25	<0.24	<0.25	<	<	<	<	<	<	<	<	<	< 0.16
Phenanthrene	1,000	2,500	4	0.439	<	<	<	1.04	-	-	<	<	<	<	0.66	<	<	<	< 0.14	11	<0.25	1.9	-	-	3.91	0.293	<	<	30.5	<	< 0.15	< 0.15	9.04	1.52	1.02	<	<	<	<	4.54	<	<0.25	0.34	<0.25	2.51	3.9	<	0.468	<	<	<	<	<	< 0.16
Pyrene	1,000	2,500	4	2.5	<	3.45	<	1.3	-	-	<	<	<	<	1.2	<	<	<	< 0.14	40	0.45	3.5	-	-	2.81	0.267	0.451	<	20.4	<	< 0.15	< 0.15	7.68	1.35	1.94	<	<	<	1.72	8.37	<	<0.25	1.1	0.87	4.95	9.61	0.382	1.24	<	<	<	<	<	< 0.16
Dibenzofuran	68	1,000	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenol	1,000	2,500	80	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-methylphenol	1,000	2,500	2.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-dimethylphenol	140	2,500	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
bis(2-Exylhexl)phthalate	44	410	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLP PAHs (ug/l)																																																						
Acenaphthene	1,000	2500	8.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)anthracene	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)pyrene	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b)fluoranthene	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)perylene	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chrysene	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenz(a,h)anthracene	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.89	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluorene	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.77	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1-Methylnaphthalene	--	--		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorinated Pesticides (mg/kg)																																																						
DDD, 4,4-	NE	NE	NE	<	<	<	<	<	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0014	-	-	-	-	-	-	-	-	-	<	<	0.0352	<	0.0679	<	<	<	<	<0.0014	<0.0014	<0.0015	-	-	<	-	-	-	-	-	-	-
DDE, 4,4-	NE	NE	NE	<	<	<	<	<	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0036	-	-	-	-	-	-	-	-	-	<	<	<	<	<	<	<	<	<	<0.0014	<0.0014	<0.0015	-	-	<	-	-	-	-	-	-	-
DDT, 4,4-	NE	NE	NE	<	<	0.0417	<	<	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.015	-	-	-	-	-	-	-	-	-	<	<	0.0483	<	0.0992	<	<	0.0189	<	<0.0014	0.0055	0.0033	-	-	<	-	-	-	-	-	-	-
DDT (Total)	1.8	17	0.003	<	<	0.0417	<	<	-	-	-	-	-	-	-	-	-	-	-	-	-	-	*0.0186*	-	-	-	-	-	-	-	-	-	<	<	0.0835	<	0.1671	<	<	0.0189	<	<0.0014	*0.0055*	*0.0033*	-	-	<	-	-	-	-	-	-	-
Heptachlor Epoxide	0.067	0.63	0.02	<	<	<	<	<	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.007	-	-	-	-	-	-	-	-	-	<	<	<	<	<	<	<	<	<	<0.0072	<0.0069	<0.0075	-	-	<	-	-	-	-	-	-	-
SPLP DDT (ug/L)																																																						
DDD, 4,4-	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DDE, 4,4-	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DDT, 4,4-	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorinated Herbicides (mg/kg)																																																						
Various Herbicides	Varies	Varies	Varies	-	-	-	-	<	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<	-	-	-	-	-	-	-
PCBs (mg/kg)																																																						
PCBs (Total)	1	10	0.0005	-	-	-	-	<	-	-	-	-	-	-	-	-	-	-	< 0.36	-	-	-	-	-	-	-	-	-	-	-	-	-	<	<	<	<	<	<	<	<	<	-	-	-	<	<	<	<	-	-	-	-	-	< 0.41
Total Metals (mg/kg)																																																						
Aluminum	50,000	50,000	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Antimony	27	8,200	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<3.2	<3.7	<3.6	-	-	-	-	-	-	-	-	-	-
Arsenic	10	10	NA	-	-	-	-	<	2.99	**17.1**	-	-	-	-	-	-	-	-	< 0.70	7.77	-	-	-	-	-	-	-	-	-	-	< 0.66	0.8	2.18	<	9.11	<	1.89	<	7.47	2.96	<	<0.64	4.78	4.14	5.99	<	3.6	3.01	-	-	-	-	-	1.18
Barium	4,700	140,000	NA	-	-	-	-	8.9	20	62.4	-	-	-	-	-	-	-	-	21.2	54.4	-	-	-	-	-	-	-	-	-	-	25.6	22.2	65.6	32.3	47.4	31.1	65.6	15.1	25.5	54.7	14.1	48.6	71	23.8	65.8	24	31.6	54.7	-	-	-	-	-	69.7
Beryllium	2	2	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.26	<0.3	<0.29	-	-	-	-	-	-	-	-	-	-
Cadmium	34	1,000	NA	-	-	-	-	<	0.266	0.902	-	-	-	-	-	-	-	-	< 0.35	1.95	-	-	-	-	-	-	-	-	-	-	< 0.33	< 0.39	<	<	0.335	<	0.298	<	0.42	0.328	<	0.69	0.78	0.78	0.694	<	<	0.294	-	-	-	-	-	< 0.37
Calcium	NE	NE	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium (Total)	NE	NE	NA	-	-	-	-	3.02	12	7.43	-	-	-	-	-	-	-	-	2.03	13.9	-	-	-	-	-	-	-	-	-	-	8.1	9.86	7.87	15	9.24	4.78	7.42	5.54	7.84	8.88	6.55	0.41	15.7	9.91	31.2	6.55	13.9	13.4	-	-	-	-	-	4.26
Cobalt	20	610	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	2500	76,000	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	35.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.8	24.3	10.1	-	-	-	-	-	-	-	-	-	-
Iron	NE	NE	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	400	1,000	NA	-	-	-	-	4.42	180	405	4.11	2.95	2.66	3.21	74.1	25.8	4.43	4.82	< 0.35	147	-	-	-	-	-	-	-	-	-	-	1.01	2.05	9.54	3.57	64.8	3.06	3.03	2.21	19.8	3.47	1.29	<0.32	8.33	8.32	56	47.9	16.2	64.3	-	-	-	-	-	< 0.37
Magnesium	NE	NE	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	3400	50000	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury	20	610	NA	-	-	-	-	<	<	0.132	-	-	-	-	-	-	-	-	< 0.03	<0.07	-	-	-	-	-	-	-	-	-	-	< 0.03	< 0.03	<	<	<	<	<	<	<	<	<	<0.03	<0.03	<0.03	<	<	<	<	-	-	-	-	-	< 0.03
Nickel	1400	7500	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.36	12	4.49	-	-	-	-	-	-	-	-	-	-
Potassium	NE	NE	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	340	10,000	NA	-	-	-	-	<	<	<	-	-	-	-	-	-	-	-	< 1.4	<1.3	-	-	-	-	-	-	-	-	-	-	< 1.3	< 1.6	<	<	<	<	<	<	<	<	<	<1.3	<1.5	<1.4	<	<	<	<	-	-	-	-	-	< 1.5
Silver	340	10,000	NA	-	-	-	-	<	<	<	-	-	-	-	-	-	-	-	< 0.35	<0.33	-	-	-	-	-	-	-	-	-	-	< 0.33	< 0.39	<	<	<	<	<	<	<	<	<	<0.32	<0.37	<0.36	<	<	<	<	-	-	-	-	-	< 0.37
Thallium	5.4	160	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2.9	<3.3	<3.2	-	-	-	-	-	-	-	-	-	-
Vanadium	470	14,000	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	34.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.3	38.2	29.9	-	-	-	-	-	-	-	-	-	-
Zinc	20000	610,000	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	135	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	36.1	35.6	17.5	-	-	-	-	-	-	-	-	-	-
SPLP Metals (mg/l)																																																						
Antimony	NA	NA	0.006	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	NA	NA	0.05	-	-	-	-	-	<	<	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Barium	NA	NA	1	-	-	-	-	-	0.0108	0.0219	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	NA	NA	0.004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	NA	NA	0.005	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium (Total)	NA	NA	0.05	-	-	-	-	-	<	<	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	NA	NA	1.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	NA	NA	0.015	-	-	-	-	-	0.055	0.197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury	NA	NA	0.002	-	-	-	-	-	<	<	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	NA	NA	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	NA	NA	0.05	-	-	-	-	-	<	<	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	NA	NA	0.036	-	-	-	-	-	<	<	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	NA	NA	0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	NA	NA	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	NA	NA	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium (mg/Kg)	NE	NE	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloride (mg/Kg)	NE	NE	NE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

CTDEEP RSRs- Connecticut Department of Energy and Environmental Protection Remedia
Standard Regulations (June 27, 2013) and *Technical Support Document: Recommended Criteria for Common Additional Polluting Substances and Certain Alternative Criteria (Se*
2018)
Criteria in italics note parameters that are CTDEEP Additional Polluting Substances (Sept
RES DEC = Residential Direct Exposure Criteria
I/C DEC = Industrial/Commercial Direct Exposure Criteria.
GA PMC = GA Pollutant Mobility Criteria.
* For PAHs, SPLP results were compared to the Groundwater Protection Criteria to deter
compliance with the GAPMC.
**ETPH most closely resembled karosene or #6
oil
"-"- Sample not analyzed
Only parameters reported above detection limits are summarized above
mg/kg = milligrams per kilogram.
mg/L = milligrams per liter.
ug/l = micrograms per liter.
CT ETPH - Connecticut Extractable Total Petroleum Hydrocarbons
VOCs- Volatile Organic Compounds
PAHs- Polycyclic Aromatic Hydrocarbons
PCBs - Polychlorinated Biphenyls
BRL - Below repoting limit
< = not detected, see laboratory reports for specific detection limits
<## = not detected, detection limit providec
NA = not analyzed for this compound.
NE = no criteria established.
Boxed values indicate exceedances of RES DEC
Bold values indicate exceedances of I/C DEC
Gray shaded values indicate exceedance of GB PMC
Blue Text indicates exceedance of GWPC
Results prior to 9/28/2020 were provided by others

TABLE 1
Summary of Soil Analytical Data by REC
Former Scovil Hoe Mill
11 Candlewood Hill Road
Haddam, CT

	CTDEEP RSRs			REC-14 Waste Oil UST								REC-15 Interior Trenches		
Sample ID				TB-118	HIG-FO1-N	HIG-FO1-S	HIG-FO1-S2	HIG-FO1-E	HIG-FO1-E2	HIG-FO1-W	HIG-FO1-W2	FOSB-11	FOSB-12	FOSB-13
Sample Date	RES DEC	I/C DEC	GA PMC	9/30/20	11/17/2014	11/17/2014	1/12/2015	11/17/2014	1/12/2015	11/17/2014	1/12/2015	11/16/2017	11/16/2017	11/16/2017
Sample Depth				2 - 4 ft	6-7 ft	6-7 ft	6	6-7 ft	6	6-7 ft	6	5.5-7 ft	0.5-1.5 ft	0.8-1.75 ft
ETPH (mg/kg)	500	2,500	500	<54	<	<	-	<	-	<	-	< 52	< 56	< 54
SPLP CT ETPH (ug/L)	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-
VOCs (mg/kg)														
Acetone	500	1,000	14	-	<	<	-	<	-	<	-	<	<	<
Benzene	21	200	0.02	-	<	<	-	<	-	<	-	<	<	<
Butylbenzene, n-	500	1,000	7	-	<	<	-	<	-	<	-	<	<	<
Butylbenzene, sec-	500	1,000	7	-	<	<	-	<	-	<	-	<	<	<
Carbon disulfide	500	1,000	0.8	-	<	<	-	<	-	<	-	< 0.0048	< 0.0043	< 0.0066
Chloroform	100	940	0.12	-	<	<	-	<	-	<	-	<	<	<
Ethylbenzene	500	1,000	10.1	-	<	<	-	<	-	<	-	< 0.0048	< 0.0043	< 0.0066
Isopropylbenzene (cumene)	500	1,000	0.5	-	<	<	-	<	-	<	-	<	<	<
Isopropyltoluene, 4- (p-Cymene)	500	1,000	0.5	-	<	<	-	<	-	<	-	<	<	<
Methylene Chloride (Dichloromethane)	82	760	0.1	-	<	<	-	<	-	<	-	<	<	<
Naphthalene	1,000	2,500	5.6	-	<	<	-	<	-	<	-	< 0.0048	< 0.39	< 0.0066
Propylbenzene, n-	500	1,000	1	-	<	<	-	<	-	<	-	<	<	<
Tetrachloroethylene (PCE)	12	110	0.1	-	<	<	-	<	-	<	-	<	<	<
Toluene	500	1,000	20	-	<	<	-	<	-	<	-	<	<	<
Trichloroethane, 1,1,1-	500	1,000	4	-	<	<	-	<	-	<	-	<	<	<
Trichloroethylene (TCE)	56	520	0.1	-	<	<	-	<	-	<	-	<	<	<
Trimethylbenzene, 1,2,4-	500	1,000	2.8	-	<	<	-	<	-	<	-	<	<	<
Trimethylbenzene, 1,3,5-	500	1,000	2.8	-	<	<	-	<	-	<	-	<	<	<
Xylene (Total)	500	1,000	19.5	-	<	<	-	<	-	<	-	< 0.0048	< 0.0043	< 0.0066
Xylene, m,p-	500	1,000	19.5	-	<	<	-	<	-	<	-	< 0.0048	< 0.0043	< 0.0066
Xylene, o-	500	1,000	19.5	-	<	<	-	<	-	<	-	< 0.0048	< 0.0043	< 0.0066
PAHs (mg/kg)														
Acenaphthene	1,000	2,500	8.4	<0.25	<	0.33	<	<	-	<	-	< 0.14	< 0.15	< 0.15
Acenaphthylene	1,000	2,500	8.4	<0.25	<	0.3	<	<	-	<	-	< 0.14	< 0.15	< 0.15
Anthracene	1,000	2,500	40	<0.25	<	<	<	<	-	<	-	< 0.14	< 0.15	< 0.15
Benz (a) anthracene	1	7.8	1	<0.25	<	1.2	<	<	-	0.33	-	< 0.14	< 0.15	0.17
Benzo (a) pyrene	1	1	1	<0.25	<	**1.2**	<	<	-	0.31	-	< 0.14	< 0.15	< 0.15
Benzo (b) fluoranthene	1	7.8	1	<0.25	<	1.6	<	<	-	0.44	-	< 0.14	< 0.15	0.15
Benzo (g,h,i) perylene	8.4	78	1	<0.25	<	0.91	<	<	-	0.3	-	< 0.14	< 0.15	< 0.15
Benzo (k) fluoranthene	8.4	78	1	<0.25	<	0.44	<	<	-	<	-	< 0.14	< 0.15	0.16
Chrysene	84	780	1	<0.25	<	1.1	<	<	-	0.29	-	< 0.14	< 0.15	0.23
Dibenz (a,h) anthracene	1	1	1	<0.25	<	<	<	<	-	<	-	< 0.14	< 0.15	< 0.15
Fluoranthene	1,000	2,500	5.6	<0.25	<	2.2	<	<	-	0.42	-	< 0.14	< 0.15	0.32
Fluorene	1,000	2,500	5.6	<0.25	<	<	<	<	-	<	-	< 0.14	< 0.15	< 0.15
Indeno (1,2,3-cd) pyrene	1	7.8	1	<0.25	<	0.71	<	<	-	<	-	< 0.14	< 0.15	< 0.15
1-Methylnaphthalene	21	200	0.2	-	<	<	-	<	-	<	-	-	-	-
2-Methylnaphthalene	270	1,000	0.56	<0.25	<	<	<	<	-	<	-	< 0.14	< 0.15	< 0.15
Naphthalene	1,000	2,500	5.6	<0.25	<	<	<	<	-	<	-	< 0.14	< 0.15	< 0.15
Phenanthrene	1,000	2,500	4	<0.25	<	0.93	<	<	-	<	-	< 0.14	< 0.15	0.15
Pyrene	1,000	2,500	4	<0.25	<	2.2	<	0.27	-	0.53	-	< 0.14	< 0.15	0.33
Dibenzofuran	68	1,000	0.2	-	<	<	-	<	-	<	-	-	-	-
Phenol	1,000	2,500	80	-	<	<	-	<	-	<	-	-	-	-
4-methylphenol	1,000	2,500	2.8	-	<	<	-	<	-	<	-	-	-	-
2,4-dimethylphenol	140	2,500	0.3	-	<	<	-	<	-	<	-	-	-	-
bis(2-Exylhexl)phthalate	44	410	1	-	<	<	-	<	-	0.33	-	-	-	-
SPLP PAHs (ug/l)														
Acenaphthene	1,000	2500	8.4	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)anthracene	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)pyrene	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-
Benzo(b)fluoranthene	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)perylene	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-
Chrysene	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-
Dibenz(a,h)anthracene	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-
Fluorene	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-
Pyrene	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-
1-Methylnaphthalene	--	--			-	-	-	-	-	-	-	-	-	-
Chlorinated Pesticides (mg/kg)														
DDD, 4,4-	NE	NE	NE	-	-	-	-	-	-	-	-	-	-	-
DDE, 4,4-	NE	NE	NE	-	-	-	-	-	-	-	-	-	-	-
DDT, 4,4-	NE	NE	NE	-	-	-	-	-	-	-	-	-	-	-
DDT (Total)	1.8	17	0.003	-	-	-	-	-	-	-	-	-	-	-
Heptachlor Epoxide	0.067	0.63	0.02	-	-	-	-	-	-	-	-	-	-	-
SPLP DDT (ug/L)														
DDD, 4,4-	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-
DDE, 4,4-	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-
DDT, 4,4-	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-
Chlorinated Herbicides (mg/kg)														
Various Herbicides	Varies	Varies	Varies	-	-	-	-	-	-	-	-	-	-	-
PCBs (mg/kg)														
PCBs (Total)	1	10	0.0005	<0.36	<	<	-	<	-	<	-	< 0.35	< 0.38	< 0.36
Total Metals (mg/kg)														
Aluminum	50,000	50,000	NA	-	-	-	-	-	-	-	-	-	-	-
Antimony	27	8,200	NA	<3.3	-	-	-	-	-	-	-	-	-	-
Arsenic	10	10	NA	0.83	8.4	9.2	-	**12.8**	<	**16.6**	4.7	3.21	0.94	**10.2**
Barium	4,700	140,000	NA	19.8	21.9	23.2	-	22.4	-	49.8	-	30.1	23.9	52.4
Beryllium	2	2	NA	0.41	-	-	-	-	-	-	-	-	-	-
Cadmium	34	1,000	NA	0.71	<	<	-	<	-	0.38	-	0.56	< 0.41	4.67
Calcium	NE	NE	NA	-	-	-	-	-	-	-	-	-	-	-
Chromium (Total)	NE	NE	NA	8.43	1.71	9.73	-	7.23	-	8.4	-	19.3	8.63	14.8
Cobalt	20	610	NA	-	-	-	-	-	-	-	-	-	-	-
Copper	2500	76,000	NA	8.2	-	-	-	-	-	-	-	-	-	-
Iron	NE	NE	NA	-	-	-	-	-	-	-	-	-	-	-
Lead	400	1,000	NA	11.3	1.76	8.9	-	5.35	-	6.82	-	0.95	3.27	129
Magnesium	NE	NE	NA	-	-	-	-	-	-	-	-	-	-	-
Manganese	3400	50000	NA	-	-	-	-	-	-	-	-	-	-	-
Mercury	20	610	NA	<0.03	<	<	-	<	-	<	-	< 0.03	< 0.03	0.05
Nickel	1400	7500	NA	6.5	-	-	-	-	-	-	-	-	-	-
Potassium	NE	NE	NA	-	-	-	-	-	-	-	-	-	-	-
Selenium	340	10,000	NA	<1.3	<	<	-	<	-	<	-	< 1.3	< 1.6	< 1.4
Silver	340	10,000	NA	<0.33	-	-	-	-	-	-	-	< 0.32	< 0.41	< 0.36
Thallium	5.4	160	NA	<3	-	-	-	-	-	-	-	-	-	-
Vanadium	470	14,000	NA	25	-	-	-	-	-	-	-	-	-	-
Zinc	20000	610,000	NA	17	-	-	-	-	-	-	-	-	-	-
SPLP Metals (mg/l)														
Antimony	NA	NA	0.006	-	-	-	-	-	-	-	-	-	-	-
Arsenic	NA	NA	0.05	-	-	-	-	-	-	-	-	-	-	-
Barium	NA	NA	1	-	-	-	-	-	-	-	-	-	-	-
Beryllium	NA	NA	0.004	-	-	-	-	-	-	-	-	-	-	-
Cadmium	NA	NA	0.005	-	-	-	-	-	-	-	-	-	-	-
Chromium (Total)	NA	NA	0.05	-	-	-	-	-	-	-	-	-	-	-
Copper	NA	NA	1.3	-	-	-	-	-	-	-	-	-	-	-
Lead	NA	NA	0.015	-	-	-	-	-	-	-	-	-	-	-
Mercury	NA	NA	0.002	-	-	-	-	-	-	-	-	-	-	-
Nickel	NA	NA	0.1	-	-	-	-	-	-	-	-	-	-	-
Selenium	NA	NA	0.05	-	-	-	-	-	-	-	-	-	-	-
Silver	NA	NA	0.036	-	-	-	-	-	-	-	-	-	-	-
Thallium	NA	NA	0.005	-	-	-	-	-	-	-	-	-	-	-
Vanadium	NA	NA	0.05	-	-	-	-	-	-	-	-	-	-	-
Zinc	NA	NA	5	-	-	-	-	-	-	-	-	-	-	-
Sodium (mg/Kg)	NE	NE	NA	-	-	-	-	-	-	-	-	-	-	-
Chloride (mg/Kg)	NE	NE	NE	-	-	-	-	-	-	-	-	-	-	-

	REC-16 Former Hydraulic Lift Area										REC-17 Interior Concrete Floors	
Sample ID	FOSB-10	FOSB-17	FOSB-19	TB-112	TB-112	TB-114	TB-115	TB-116	TB-116	TB-119	FOSB-14	FOSB-15[DUP]
Sample Date	11/16/2017	11/16/2017	11/16/2017	9/30/20	9/30/20	9/30/20	9/30/20	9/30/20	9/30/20	9/30/20	11/16/2017	11/16/2017
Sample Depth	5.3-6.1 ft	6.1-7.5 ft	5.8-7.1 ft	7.5 - 8.5 ft	8.5 - 9 ft	7 - 8 ft	5 - 6.5 ft	0.5 - 1 ft	7 - 8 ft	6 - 8 ft	1.5-2.5 ft	1-2.5 ft
ETPH (mg/kg)	**30,000**	**9,500**	1,800	**45,000**	490	<53	-	-	300	<53	< 58	< 54
SPLP CT ETPH (ug/L)	-	-	-	-	-	-	-	-	-	-	-	-
VOCs (mg/kg)												
Acetone	<	<	<	-	-	-	-	-	-	-	<	<
Benzene	<	<	<	-	-	-	-	-	-	-	<	<
Butylbenzene, n-	<	<	<	-	-	-	-	-	-	-	<	<
Butylbenzene, sec-	<	<	<	-	-	-	-	-	-	-	<	<
Carbon disulfide	< 0.0057	< 0.0047	< 0.005	-	-	-	-	-	-	-	< 0.005	< 0.0048
Chloroform	<	<	<	-	-	-	-	-	-	-	<	<
Ethylbenzene	0.0084	< 0.0047	< 0.005	-	-	-	-	-	-	-	< 0.005	< 0.0048
Isopropylbenzene (cumene)	<	<	<	-	-	-	-	-	-	-	<	<
Isopropyltoluene, 4- (p-Cymene)	<	<	<	-	-	-	-	-	-	-	<	<
Methylene Chloride (Dichloromethane)	<	<	<	-	-	-	-	-	-	-	<	<
Naphthalene	0.18	< 0.28	< 0.21	-	-	-	-	-	-	-	< 0.005	< 0.32
Propylbenzene, n-	<	<	<	-	-	-	-	-	-	-	<	<
Tetrachloroethylene (PCE)	<	<	<	-	-	-	-	-	-	-	<	<
Toluene	<	<	<	-	-	-	-	-	-	-	<	<
Trichloroethane, 1,1,1-	<	<	<	-	-	-	-	-	-	-	<	<
Trichloroethylene (TCE)	<	<	<	-	-	-	-	-	-	-	<	<
Trimethylbenzene, 1,2,4-	<	<	<	-	-	-	-	-	-	-	<	<
Trimethylbenzene, 1,3,5-	<	<	<	-	-	-	-	-	-	-	<	<
Xylene (Total)	0.031	< 0.0047	< 0.005	-	-	-	-	-	-	-	< 0.005	< 0.0048
Xylene, m,p-	0.017	< 0.0047	< 0.005	-	-	-	-	-	-	-	< 0.005	< 0.0048
Xylene, o-	0.014	< 0.0047	< 0.005	-	-	-	-	-	-	-	< 0.005	< 0.0048
PAHs (mg/kg)												
Acenaphthene	0.17	< 0.13	< 0.15	<8.4	<0.26	-	<0.24	<0.24	-	-	< 0.15	< 0.14
Acenaphthylene	< 0.16	< 0.13	< 0.15	<8.4	<0.26	-	<0.24	0.85	-	-	< 0.15	< 0.14
Anthracene	0.22	< 0.13	< 0.15	<16	<0.26	-	<0.24	0.46	-	-	< 0.15	< 0.14
Benz (a) anthracene	0.39	< 0.13	< 0.15	<7.5	<0.26	-	<0.24	1.3	-	-	< 0.15	0.15
Benzo (a) pyrene	0.38	< 0.13	< 0.15	<7.3	<0.26	-	<0.24	0.86	-	-	< 0.15	0.15
Benzo (b) fluoranthene	0.33	< 0.13	< 0.15	<7.6	<0.26	-	<0.24	1.3	-	-	< 0.15	0.16
Benzo (g,h,i) perylene	0.37	< 0.13	< 0.15	<7.2	<0.26	-	<0.24	0.75	-	-	< 0.15	< 0.14
Benzo (k) fluoranthene	0.42	< 0.13	< 0.15	<7.4	<0.26	-	<0.24	1.1	-	-	< 0.15	0.17
Chrysene	0.49	< 0.13	< 0.15	<7.5	<0.26	-	<0.24	*2.1*	-	-	< 0.15	0.25
Dibenz (a,h) anthracene	< 0.16	< 0.13	< 0.15	<7.2	<0.26	-	<0.24	<0.24	-	-	< 0.15	< 0.14
Fluoranthene	0.83	< 0.13	< 0.15	<7.2	<0.26	-	<0.24	4.6	-	-	< 0.15	0.41
Fluorene	0.51	< 0.13	< 0.15	<7.4	<0.26	-	<0.24	<0.24	-	-	< 0.15	< 0.14
Indeno (1,2,3-cd) pyrene	0.35	< 0.13	< 0.15	<7.4	<0.26	-	<0.24	0.74	-	-	< 0.15	< 0.14
1-Methylnaphthalene	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	< 0.16	< 0.13	< 0.15	<6.7	<0.26	-	<0.24	<0.24	-	-	< 0.15	< 0.14
Naphthalene	< 0.16	< 0.13	< 0.15	<6.4	<0.26	-	<0.24	<0.24	-	-	< 0.15	< 0.14
Phenanthrene	0.93	< 0.13	< 0.15	<6.4	<0.26	-	<0.24	5.2	-	-	< 0.15	0.32
Pyrene	1.7	< 0.13	< 0.15	<7.7	<0.26	-	<0.24	3.8	-	-	< 0.15	0.42
Dibenzofuran	-	-	-	-	-	-	-	-	-	-	-	-
Phenol	-	-	-	-	-	-	-	-	-	-	-	-
4-methylphenol	-	-	-	-	-	-	-	-	-	-	-	-
2,4-dimethylphenol	-	-	-	-	-	-	-	-	-	-	-	-
bis(2-Exylhexl)phthalate	-	-	-	-	-	-	-	-	-	-	-	-
SPLP PAHs (ug/l)												
Acenaphthene	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)anthracene	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)pyrene	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b)fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)perylene	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-
Chrysene	-	-	-	-	-	-	-	-	-	-	-	-
Dibenz(a,h)anthracene	-	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-
Fluorene	-	-	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	-	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	-	-	-	-	-	-	-	-	-	-	-	-
1-Methylnaphthalene	-	-	-								-	
Chlorinated Pesticides (mg/kg)												
DDD, 4,4-	-	-	-	-	-	-	-	<0.003	-	-	-	-
DDE, 4,4-	-	-	-	-	-	-	-	0.0024	-	-	-	-
DDT, 4,4-	-	-	-	-	-	-	-	0.012	-	-	-	-
DDT (Total)	-	-	-	-	-	-	-	*0.0144*	-	-	-	-
Heptachlor Epoxide	-	-	-	-	-	-	-	<0.0069	-	-	-	-
SPLP DDT (ug/L)												
DDD, 4,4-	-	-	-	-	-	-	-	-	-	-	-	-
DDE, 4,4-	-	-	-	-	-	-	-	-	-	-	-	-
DDT, 4,4-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorinated Herbicides (mg/kg)												
Various Herbicides	-	-	-	-	-	-	-	-	-	-	-	-
PCBs (mg/kg)												
PCBs (Total)	< 0.40	< 0.34	< 0.36	<0.44	<0.37	<0.34	-	-	<0.36	<0.35	< 0.38	< 0.36
Total Metals (mg/kg)												
Aluminum	-	-	-	-	-	-	-	-	-	-	-	-
Antimony	-	-	-	-	-	-	-	-	<3.3	-	-	-
Arsenic	9.19	< 0.66	< 0.65	-	-	-	-	-	1.49	-	< 0.82	1.24
Barium	367	17.8	21.1	-	-	-	-	-	43.9	-	15.4	39.6
Beryllium	-	-	-	-	-	-	-	-	0.41	-	-	-
Cadmium	1.98	0.5	< 0.33	-	-	-	-	-	0.66	-	< 0.41	0.67
Calcium	-	-	-	-	-	-	-	-	-	-	-	-
Chromium (Total)	28.2	11.9	10.4	-	-	-	-	-	11	-	7.75	18.5
Cobalt	-	-	-	-	-	-	-	-	-	-	-	-
Copper	-	-	-	-	-	-	-	-	10.9	-	-	-
Iron	-	-	-	-	-	-	-	-	-	-	-	-
Lead	498	3.32	0.78	-	-	-	-	-	3.12	-	0.82	4.77
Magnesium	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	-	-	-	-	-	-	-	-	-	-	-	-
Mercury	< 0.03	< 0.03	< 0.03	-	-	-	-	-	<0.03	-	< 0.03	< 0.03
Nickel	-	-	-	-	-	-	-	-	4.44	-	-	-
Potassium	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	< 1.5	< 1.3	< 1.3	-	-	-	-	-	<1.3	-	< 1.6	< 1.3
Silver	< 0.37	< 0.33	< 0.33	-	-	-	-	-	<0.33	-	< 0.41	< 0.32
Thallium	-	-	-	-	-	-	-	-	<2.9	-	-	-
Vanadium	-	-	-	-	-	-	-	-	30.7	-	-	-
Zinc	-	-	-	-	-	-	-	-	25.5	-	-	-
SPLP Metals (mg/l)												
Antimony	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	-	-	-	-	-	-	-	-	-	-	-	-
Barium	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	-	-	-	-	-	-	-	-	-	-	-	-
Chromium (Total)	-	-	-	-	-	-	-	-	-	-	-	-
Copper	-	-	-	-	-	-	-	-	-	-	-	-
Lead	-	-	-	-	-	-	-	-	-	-	-	-
Mercury	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	-	-	-	-	-	-	-	-	-	-	-	-
Silver	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	-	-	-	-	-	-	-	-	-	-	-	-
Sodium (mg/Kg)	-	-	-	-	-	-	-	-	-	-	-	-
Chloride (mg/Kg)	-	-	-	-	-	-	-	-	-	-	-	-

	REC-18 Potential Solvent Release Area								REC-19	Candlewood Hill Brook Sediment						
Sample ID	MW-8	MW-8	TB-109	TB-109	TB-110	TB-111	TB-TP-4	TB-TP-4	TB-120	FOSS-01	FOSS-02	FOSS-03	FOSS-04	FOSS-05	FOSB-05	FOSB-18
Sample Date	6/19/2006	6/19/2006	9/29/20	9/29/20	9/29/20	9/29/20	9/28/20	9/28/20	9/30/20	11/14/2017	11/14/2017	11/14/2017	11/14/2017	11/14/2017	11/15/2017	11/16/2017
Sample Depth	0-2 ft	4-6 ft	1 - 2 ft	11.5 - 12 ft	1 - 2 ft	1 - 2 ft	1 - 2 ft	3 - 4 ft	7 - 8 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	1-2.5 ft	5.5-7.2 ft
ETPH (mg/kg)	-	-	-	2,100	<53	400	-	-	<52	540	< 290	< 60	110	< 280	< 53	< 53
SPLP CT ETPH (ug/L)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VOCs (mg/kg)																
Acetone	<	<	<0.22	-	<0.22	<0.22	<0.26	-	<0.27	-	-	-	-	-	<	<
Benzene	<	<	<0.0044	-	<0.0044	<0.0045	<0.0052	-	<0.0054	<	<	<	<	<	<	<
Butylbenzene, n-	<	<	<0.0044	-	<0.0044	<0.0045	<0.0052	-	<0.0054	-	-	-	-	-	<	<
Butylbenzene, sec-	<	<	<0.0044	-	<0.0044	<0.0045	<0.0052	-	<0.0054	-	-	-	-	-	<	<
Carbon disulfide	<	<	<0.0044	-	<0.0044	<0.0045	<0.0052	-	<0.0054	-	-	-	-	-	< 0.0051	0.008
Chloroform	<	<	<0.0044	-	<0.0044	<0.0045	<0.0052	-	<0.0054	<	<	<	<	<	<	<
Ethylbenzene	<	<	<0.0044	-	<0.0044	<0.0045	<0.0052	-	<0.0054	-	-	-	-	-	< 0.0051	< 0.0052
Isopropylbenzene (cumene)	<	<	<0.0044	-	<0.0044	<0.0045	<0.0052	-	<0.0054	-	-	-	-	-	<	<
Isopropyltoluene, 4- (p-Cymene)	<	<	<0.0044	-	<0.0044	<0.0045	<0.0052	-	<0.0054	-	-	-	-	-	<	<
Methylene Chloride (Dichloromethane)	<	<	<0.0088	-	<0.0088	<0.0089	<0.01	-	<0.011	-	-	-	-	-	<	<
Naphthalene	8.02	0.0735	<0.0044	-	<0.0044	<0.0045	<0.0052	-	<0.0054	-	-	-	-	-	< 0.0051	< 0.0052
Propylbenzene, n-	<	<	<0.0044	-	<0.0044	<0.0045	<0.0052	-	<0.0054	-	-	-	-	-	<	<
Tetrachloroethylene (PCE)	<	<	<0.0044	-	<0.0044	<0.0045	<0.0052	-	<0.0054	<	<	<	<	<	<	<
Toluene	<	<	<0.0044	-	<0.0044	<0.0045	<0.0052	-	<0.0054	-	-	-	-	-	<	<
Trichloroethane, 1,1,1-	<	<	<0.0044	-	<0.0044	<0.0045	<0.0052	-	<0.0054	<	<	<	<	<	<	<
Trichloroethylene (TCE)	<	<	<0.0044	-	<0.0044	<0.0045	<0.0052	-	<0.0054	<	<	<	<	<	<	<
Trimethylbenzene, 1,2,4-	<	<	<0.0044	-	<0.0044	<0.0045	<0.0052	-	<0.0054	-	-	-	-	-	<	<
Trimethylbenzene, 1,3,5-	<	<	<0.0044	-	<0.0044	<0.0045	<0.0052	-	<0.0054	-	-	-	-	-	<	<
Xylene (Total)	<	<	<0.0044	-	<0.0044	<0.0045	<0.0052	-	<0.0054	-	-	-	-	-	< 0.0051	< 0.0052
Xylene, m,p-	<	<	<0.0044	-	<0.0044	<0.0045	<0.0052	-	<0.0054	-	-	-	-	-	< 0.0051	< 0.0052
Xylene, o-	<	<	<0.0044	-	<0.0044	<0.0045	<0.0052	-	<0.0054	-	-	-	-	-	< 0.0051	< 0.0052
PAHs (mg/kg)																
Acenaphthene	-	-	-	3.5	<0.25	<0.24	<0.25	<0.24	-	< 0.18	< 0.15	< 0.16	< 0.38	< 0.15	< 0.14	< 0.14
Acenaphthylene	-	-	-	18	<0.25	2.1	<0.25	<0.24	-	0.6	0.84	0.21	< 0.38	0.16	< 0.14	< 0.14
Anthracene	-	-	-	16	<0.25	0.91	<0.25	<0.24	-	0.38	0.68	0.43	< 0.38	0.17	< 0.14	< 0.14
Benz (a) anthracene	-	-	-	**33**	<0.25	1.3	<0.25	<0.24	-	1.2	2.6	1.1	< 0.38	0.53	< 0.14	< 0.14
Benzo (a) pyrene	-	-	-	**39**	<0.25	**3.3**	<0.25	<0.24	-	**1.5**	**3.1**	**1.1**	< 0.38	0.59	< 0.14	< 0.14
Benzo (b) fluoranthene	-	-	-	**27**	<0.25	2.3	<0.25	<0.24	-	1.5	2.8	0.87	< 0.38	0.5	< 0.14	< 0.14
Benzo (g,h,i) perylene	-	-	-	*18*	<0.25	*2.4*	<0.25	<0.24	-	1.1	2.4	0.83	< 0.38	0.45	< 0.14	< 0.14
Benzo (k) fluoranthene	-	-	-	25	<0.25	1.9	<0.25	<0.24	-	1.2	3	1.2	0.41	0.58	< 0.14	< 0.14
Chrysene	-	-	-	*33*	<0.25	*1.4*	<0.25	<0.24	-	1.5	3.3	1.4	0.45	0.72	< 0.14	< 0.14
Dibenz (a,h) anthracene	-	-	-	**5.8**	<0.25	0.46	<0.25	<0.24	-	0.19	0.4	< 0.16	< 0.38	< 0.15	< 0.14	< 0.14
Fluoranthene	-	-	-	85	<0.25	0.65	<0.25	<0.24	-	2.6	5.6	2.7	0.78	1.2	< 0.14	< 0.14
Fluorene	-	-	-	14	<0.25	<0.24	<0.25	<0.24	-	< 0.18	0.23	< 0.16	< 0.38	< 0.15	< 0.14	< 0.14
Indeno (1,2,3-cd) pyrene	-	-	-	**19**	<0.25	*2.1*	<0.25	<0.24	-	1.3	2.8	0.9	< 0.38	0.48	< 0.14	< 0.14
1-Methylnaphthalene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	-	-	-	*5.3*	<0.25	<0.24	<0.25	<0.24	-	< 0.18	< 0.15	< 0.16	< 0.38	< 0.15	< 0.14	< 0.14
Naphthalene	-	-	-	3.7	<0.25	<0.24	<0.25	<0.24	-	< 0.18	< 0.15	< 0.16	< 0.38	< 0.15	< 0.14	< 0.14
Phenanthrene	-	-	-	68	<0.25	<0.24	<0.25	<0.24	-	0.9	2.4	1.5	0.39	0.5	< 0.14	< 0.14
Pyrene	-	-	-	86	<0.25	1.7	<0.25	<0.24	-	2.6	5.4	2.5	0.71	1.2	< 0.14	< 0.14
Dibenzofuran	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-methylphenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-dimethylphenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
bis(2-Exylhexl)phthalate	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLP PAHs (ug/l)																
Acenaphthene	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	-
Acenaphthylene	-	-	-	-	-	1.3	-	-	-	-	-	-	-	-	-	-
Benzo(a)anthracene	-	-	-	-	-	0.66	-	-	-	-	-	-	-	-	-	-
Benzo(a)pyrene	-	-	-	-	-	2.1	-	-	-	-	-	-	-	-	-	-
Benzo(b)fluoranthene	-	-	-	-	-	1.8	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)perylene	-	-	-	-	-	2.5	-	-	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene	-	-	-	-	-	1.5	-	-	-	-	-	-	-	-	-	-
Chrysene	-	-	-	-	-	0.8	-	-	-	-	-	-	-	-	-	-
Dibenz(a,h)anthracene	-	-	-	-	-	0.3	-	-	-	-	-	-	-	-	-	-
Fluoranthene	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	-
Fluorene	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	-	-	-	-	-	2.3	-	-	-	-	-	-	-	-	-	-
Phenanthrene	-	-	-	-	-	<0.06	-	-	-	-	-	-	-	-	-	-
Pyrene	-	-	-	-	-	1.1	-	-	-	-	-	-	-	-	-	-
1-Methylnaphthalene		-								-	-	-	-	-	-	-
Chlorinated Pesticides (mg/kg)																
DDD, 4,4-	-	-	-	-	<0.0014	-	-	-	-	-	-	-	-	-	-	-
DDE, 4,4-	-	-	-	-	<0.0014	-	-	-	-	-	-	-	-	-	-	-
DDT, 4,4-	-	-	-	-	<0.0014	-	-	-	-	-	-	-	-	-	-	-
DDT (Total)	-	-	-	-	<0.0014	-	-	-	-	-	-	-	-	-	-	-
Heptachlor Epoxide	-	-	-	-	<0.0071	-	-	-	-	-	-	-	-	-	-	-
SPLP DDT (ug/L)																
DDD, 4,4-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DDE, 4,4-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DDT, 4,4-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorinated Herbicides (mg/kg)																
Various Herbicides	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCBs (mg/kg)																
PCBs (Total)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Metals (mg/kg)																
Aluminum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Antimony	-	-	-	-	<3.4	<3.2	-	-	-	-	-	-	-	-	-	-
Arsenic	-	-	-	-	2.58	2.22	-	-	-	3.93	2.32	< 0.75	1.8	< 0.76	6.29	1.01
Barium	-	-	-	-	92.6	106	-	-	-	71.9	45.3	18.4	27.2	15.1	61.1	32.8
Beryllium	-	-	-	-	0.31	0.28	-	-	-	-	-	-	-	-	-	-
Cadmium	-	-	-	-	0.75	1.06	-	-	-	0.63	< 0.35	< 0.38	0.54	< 0.38	< 0.36	0.43
Calcium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium (Total)	-	-	-	-	15.8	19.4	-	-	-	25.3	17	3.88	5.25	4	16	10.3
Cobalt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	-	-	-	-	25.8	30.3	-	-	-	-	-	-	-	-	-	-
Iron	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	-	-	-	-	7.45	7.2	-	-	-	60.9	28	9.96	32.5	7.65	3.04	7.22
Magnesium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury	-	-	-	-	<0.03	<0.03	-	-	-	< 0.03	< 0.03	< 0.03	< 0.04	< 0.03	< 0.03	< 0.03
Nickel	-	-	-	-	14.6	14.6	-	-	-	-	-	-	-	-	-	-
Potassium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	-	-	-	-	<1.4	<1.3	-	-	-	< 1.8	< 1.4	< 1.5	< 2.1	< 1.5	< 1.5	< 1.4
Silver	-	-	-	-	<0.34	<0.32	-	-	-	< 0.44	< 0.35	< 0.38	< 0.52	< 0.38	< 0.36	< 0.35
Thallium	-	-	-	-	<3.1	<2.9	-	-	-	-	-	-	-	-	-	-
Vanadium	-	-	-	-	28.5	35.7	-	-	-	-	-	-	-	-	-	-
Zinc	-	-	-	-	34.9	41.2	-	-	-	-	-	-	-	-	-	-
SPLP Metals (mg/l)																
Antimony	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Barium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium (Total)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium (mg/Kg)	-	-	-	-	181	-	-	-	144	-	-	-	-	-	-	-
Chloride (mg/Kg)	-	-	-	-	<11	-	-	-	<11	-	-	-	-	-	-	-

CTDEEP RSRs- Connecticut Department of Energy and Environmental Protection Remedi
Standard Regulations (June 27, 2013) and *Technical Support Document: Recommended Criteria for Common Additional Polluting Substances and Certain Alternative Criteria (Se[p] 2018)*
Criteria in italics note parameters that are CTDEEP Additional Polluting Substances (Sept
RES DEC = Residential Direct Exposure Criteria
I/C DEC = Industrial/Commercial Direct Exposure Criteria.
GA PMC = GA Pollutant Mobility Criteria.
* For PAHs, SPLP results were compared to the Groundwater Protection Criteria to deter[mine] compliance with the GAPMC.
**ETPH most closely resembled karosene or #6 oil
"-"- Sample not analyzed
Only parameters reported above detection limits are summarized above
mg/kg = milligrams per kilogram.
mg/L = milligrams per liter.
ug/l = micrograms per liter.
CT ETPH - Connecticut Extractable Total Petroleum Hydrocarbons
VOCs- Volatile Organic Compounds
PAHs- Polycyclic Aromatic Hydrocarbons
PCBs - Polychlorinated Biphenyls
BRL - Below repoting limit
< = not detected, see laboratory reports for specific detection limits
<## = not detected, detection limit providec
NA = not analyzed for this compound.
NE = no criteria established.
Boxed values indicate exceedances of RES DEC
Bold values indicate exceedances of I/C DEC
Gray shaded values indicate exceedance of GB PMC
Blue Text indicates exceedance of GWPC
Results prior to 9/28/2020 were provided by others

TABLE 2
Summary of Groundwater Analytical Data by REC
Former Scovil Hoe Mill
11 Candlewood Hill Road
Haddam, CT

REC-1 Historic Fill / Dump Area (Western Portion of Site) & REC-2 Buried Drums of Joint Sealer (Southwatern Portion of Site)

Sample Name	CTDEEP RSRs				W-25-1D						W-25-1S					
Sample Date	GWPC	SWPC	RES VC	IC VC	9/11/1986	11/11/2000	7/19/2006	11/22/2017	11/4/2020	3/11/2021	9/11/1986	11/11/2000	7/19/2006	11/22/2017	11/4/2020	3/11/2021
ETPH (ug/l)	250	250	250	250	<	<100	<	-	-	-	-	<100	<	-	-	-
VOCs (ug/l)																
Acetone	700	*10,000*	50,000	50,000	14	<	<	<	-	<25	13	<	<	<	-	<25
Benzene	1	710	215	530	**8**	<	<	<	-	<0.7	<5	<	<	<	-	<0.7
Butylbenzene, sec-	*350*	*10,000*	*1,500*	*20,100*	<	<	<	<	-	<1	<	<	<	<	-	<1
Chloroform	6	14,100	26	62	<	<	<	<	-	<1	<	<	<	<	-	<1
Ethylbenzene	700	580,000	50,000	50,000	<	1.6	<	<	-	<1	<	<	<	<	-	<1
Isopropylbenzene (cumene)	*25*	*210*	*900*	*2,200*	<	<	<	<	-	<1	<	<	<	<	-	<1
Methylene Chloride (Dichloromethane)	5	48,000	160	2,200	<	<	<	<	-	<1	<	<	<	<	-	<1
Naphthalene	280	*210*	NE	NE	<	<	<	<	-	<1	<	<	<	<	-	<1
Toluene	1,000	4,000,000	23,500	50,000	<	1.6	<	<	-	<1	<	<	<	<	-	<1
Trichlorobenzene, 1,2,3-					<	<	<	<	-	<1	<	<	<	<	-	<1
Trichlorobenzene,1,2,4-	*70*	*9.6*	*12*	*660*	<	<	<	<	-	<1	<	<	<	<	-	<1
Trichloroethane					<	<	<	<	-	<1	<	<	<	<	-	<1
Trichloroethane, 1,1,2-	5	1,260	8,000	19,600	<	<	<	<	-	<1	<	<	<	<	-	<1
Trichloroethylene (TCE)	5	2,340	219	540	<	<	<	<	-	<1	<	<	<	<	-	<1
Trichlorofluoromethane	*1,000*	*10,000*	*1,300*	*4,300*	<	<	<	<	-	<1	<	<	<	<	-	<1
Trichloropropane, 1,2,3-					<	<	<	<	-	<1	<	<	<	<	-	<1
Trichlorotrifluoroethane, 1,1,2-	*1,000*	*320*	*330*	*810*	<	<	<	<	-	<1	<	<	<	<	-	<1
Trimethylbenzene, 1,2,4-	*140*	*150*	*940*	*12,800*	<	5.6	<	<	-	<1	<	<	<	<	-	<1
Trimethylbenzene, 1,3,5-	*140*	*260*	*730*	*10,000*	<	<	<	<	-	<1	<	<	<	<	-	<1
Vinyl Chloride	2	15,750	2	2	<	<	<	<	-	<1	<	<	<	<	-	<1
Xylene (Total)	530	*270*	21,300	50,000	<	7.4	<	<	-	<1	<	<	<	<	-	<1
Xylene, m,p-	NE	NE	NE	NE	<	<	<	<	-	<1	<	<	<	<	-	<1
Xylene, o-	NE	NE	NE	NE	<	<	<	<	-	<1	<	<	<	<	-	<1
PAHs(ug/l)																
Acenaphthene	*420*	*150*	*30,500*	*50,000*	<	-	<	< 0.05	-	-	<	-	<	< 0.05	-	-
Acenaphthylene	420	0.3	NA	NA	<	-	<	< 0.05	-	-	<	-	<	< 0.05	-	-
Anthracene	2,000	1,100,000	NA	NA	<	-	<	< 0.05	-	-	<	-	<	< 0.05	-	-
Benzo(a)anthracene	0.06	0.3	NA	NA	<	-	<	< 0.05	-	-	<	-	<	< 0.05	-	-
Benzo(a)pyrene	0.2	0.3	NA	NA	<	-	<	< 0.05	-	-	**0.7**	-	<	< 0.05	-	-
Benzo(b)fluoranthene	0.08	0.3	NA	NA	<	-	<	< 0.05	-	-	**0.9**	-	<	< 0.05	-	-
Benzo(g,h,i)perylene	*0.48*	*150*	NA	NA	<	-	<	< 0.05	-	-	<	-	<	< 0.05	-	-
Benzo(k)fluoranthene	0.5	0.3	NA	NA	<	-	<	< 0.05	-	-	<	-	<	< 0.05	-	-
Chrysene	*4.8*	*0.54*	NA	NA	<	-	<	< 0.05	-	-	<	-	<	< 0.05	-	-
Dibenz(a,h)anthracene	*0.1*	*0.3*	NA	NA	<	-	<	< 0.01	-	-	<	-	<	< 0.01	-	-
Dibenzonfuran	*7*	*40*	460	5,800	<	-	-	-	-	-	<	-	-	-	-	-
Di-n-octyl phthalate	*100*	*NE*	NA	NA	50	-	-	-	-	-	**180**	-	-	-	-	-
Fluoranthene	280	3,700	NA	NA	<	-	<	< 0.05	-	-	<	-	<	< 0.05	-	-
Fluorene	280	140,000	NA	NA	<	-	<	< 0.05	-	-	2	-	<	< 0.05	-	-
Indeno(1,2,3-cd)pyrene	*0.1*	*0.54*	NA	NA	<	-	<	< 0.05	-	-	<	-	<	< 0.05	-	-
Methylnaphthalene, 2-	*28*	*62*	NA	NA	<	-	<	< 0.05	-	-	<	-	<	< 0.05	-	-
Naphthalene	280	*210*	NA	NA	<	-	<	< 0.09	-	-	<	-	<	< 0.09	-	-
Phenanthrene	200	*14*	NA	NA	<	-	<	< 0.05	-	-	2	-	<	< 0.05	-	-
Pyrene	200	110,000	NA	NA	<	-	<	< 0.05	-	-	3	-	<	< 0.05	-	-
PCBs (ug/l)																
Total PCBS	0.5	0.5	NA	NA	-	-	<	-	-	-	-	-	<	-	-	-
Chlorinated Herbicides (ug/l)	Varies	Varies	Varies	Varies	-	BRL	BRL	-	-	-	-	BRL	BRL	-	-	-
2,4-D	70	1,700	NA	NA	-	<	<	-	-	-	-	<	<	-	-	-
2,4,5-T	NE	NE	NA	NA	-	<	<	-	-	-	-	<	<	-	-	-
2,4,5-TP	NE	NE	NA	NA	-	<	<	-	-	-	-	<	<	-	-	-
2,4-DB	70	1,700	NA	NA	-	<	<	-	-	-	-	<	<	-	-	-
Dalapon			NA	NA	-	<	<	-	-	-	-	<	<	-	-	-
Dicamba	210	2,200	NA	NA	-	<	<	-	-	-	-	<	<	-	-	-
Dinoseb			NA	NA	-	<	<	-	-	-	-	<	<	-	-	-
Dichloroprop	25	120	NA	NA	-	<	<	-	-	-	-	<	<	-	-	-
MCPB			NA	NA	-	<	<	-	-	-	-	<	<	-	-	-
MCPA			NA	NA	-	<	<	-	-	-	-	<	<	-	-	-
MCPP			NA	NA	-	<	<	-	-	-	-	<	<	-	-	-
Chlorinated Pesticides (ug/l)																
BHC, Alpha- (α-Lindane)	*0.05*	*0.11*			<	<	<	-	<0.024	-	<	<	<	-	<0.024	-
DDD, 4,4-					<	<	<	-	<0.047	-	<	<	<	-	<0.047	-
DDE, 4,4-	NE	NE	NE	NE	<	<	<	-	<0.047	-	<	<	<	-	<0.047	-
DDT, 4,4-	NE	NE	NE	NE	<	<	<	-	<0.047	-	<	<	<	-	<0.047	-
DDT (Total)	*0.1*	NE	NE	NE	<	<	<	-	<0.047	-	<	<	<	-	<0.047	-
Total Metals (ug/l)																
Antimony					<100	-	-	-	<5	<5	<100	-	-	-	<5	<5
Arsenic	50	4	NA	NA	<10	<	<	< 4	<4	<4	<10	<	15.0	< 4	<4	<4
Barium	1,000	2,200	NA	NA	-	<	9.8	9	9	9	-	<	12.6	16	15	63
Beryllium	4	4	NA	NA	<4	-	-	-	<1	<1	<4	-	-	-	<1	<1
Cadmium	5	6	NA	NA	<4	<	<	< 1	<1	<1	<4	<	<	< 1	<1	<1
Chromium	50	110	NA	NA	<20	<	<	1	<1	<1	<20	<	<	< 1	<1	<1
Copper	1,300	48	NA	NA	<20	-	-	-	<5	<5	<20	-	-	-	<5	<5
Lead	15	13	NA	NA	<40	<	<	3	<2	<2	<40	<	<	< 2	<2	<2
Mercury	2	0.4	NA	NA	-	<2	<	< 0.2	<0.2	<0.2	-	<2	<	< 0.2	<0.2	<0.2
Nickel	100	880	NA	NA	<20	-	-	-	<1	<1	<20	-	-	-	<1	2
Selenium	50	50	NA	NA	<5	<	<	< 10	<10	<10	<5	<	<	< 10	<10	<10
Silver	36	12	NA	NA	<10	<	<	< 1	<1	<1	<10	<	<	< 1	<1	<1
Thallium	5.0	63	NA	NA	-	-	-	-	<0.5	<0.5	-	-	-	-	<0.5	<0.5
Vanadium	50.0	NE	NA	NA	<200	-	-	-	3	2	<200	-	-	-	<2	<2
Zinc	5,000	123	NA	NA	20	-	-	-	<4	<4	20	-	-	-	<4	<4
Dissolved Metals (ug/l)																
Barium	1,000	2,200	NA	NA	-	310	<	-	-		-	250	10.8	-	-	
Lead	15	13	NA	NA	-	<	-	-	-		-	<	-	-	-	
Inorganics (mg/L)																
Chloride	250*	10	NA	NA	-	11	10.2	8.5	-	-	-	13	21.1	40.3	-	-
Sodium	28**	NE	NA	NA	-	6.6	10	9.29	-	-	-	7.4	16	25.2	-	-

Sample Name	W-25-2				MW-DUP	W-25-2	W-25-3					W-25-4		
Sample Date	9/11/1986	11/11/2000	7/18/2006	11/4/2020	11/4/2020	3/11/2021	9/11/1986	11/11/2000	11/22/2017	11/4/2020	3/11/2021	7/18/2006	11/4/2020	3/11/2021
ETPH (ug/l)	-	<100	<	<67	<66	-	-	<100	-	<66	-	<	<69	-
VOCs (ug/l)														
Acetone	<10	<	<	<25	<25	<25	<10	<	<	<25	<25	<	-	<25
Benzene	<5	<	<	<0.7	<0.7	<0.7	<5	<	<	<0.7	<0.7	<	-	<0.7
Butylbenzene, sec-	<	<	<	<1	<1	<1	<	<	<	<1	<1	<	-	<1
Chloroform	<	<	<	<1	<1	<1	<	<	<	<1	<1	<	-	<1
Ethylbenzene	<	<	<	<1	<1	<1	<	<	<	<1	<1	<	-	<1
Isopropylbenzene (cumene)	<	<	<	<1	<1	<1	<	<	<	<1	<1	<	-	<1
Methylene Chloride (Dichloromethane)	<	<	<	<1	<1	<1	<	<	<	<1	<1	<	-	<1
Naphthalene	<	<	<	<1	<1	<1	<	<	<	<1	<1	<	-	<1
Toluene	<	<	<	<1	<1	<1	<	<	<	<1	<1	<	-	<1
Trichlorobenzene, 1,2,3-	<	<	<	<1	<1	<1	<	<	<	<1	<1	<	-	<1
Trichlorobenzene,1,2,4-	<	<	<	<1	<1	<1	<	<	<	<1	<1	<	-	<1
Trichloroethane	<	<	<	<1	<1	<1	<	<	<	<1	<1	<	-	<1
Trichloroethane, 1,1,2-	<	<	<	<1	<1	<1	<	<	<	<1	<1	<	-	<1
Trichloroethylene (TCE)	<	<	<	<1	<1	<1	<	<	<	<1	<1	<	-	<1
Trichlorofluoromethane	<	<	<	<1	<1	<1	<	<	<	<1	<1	<	-	<1
Trichloropropane, 1,2,3-	<	<	<	<1	<1	<1	<	<	<	<1	<1	<	-	<1
Trichlorotrifluoroethane, 1,1,2-	<	<	<	<1	<1	<1	<	<	<	<1	<1	<	-	<1
Trimethylbenzene, 1,2,4-	<	<	<	<1	<1	<1	<	<	<	<1	<1	<	-	<1
Trimethylbenzene, 1,3,5-	<	<	<	<1	<1	<1	<	<	<	<1	<1	<	-	<1
Vinyl Chloride	<	<	<	<1	<1	<1	<	<	<	<1	<1	<	-	<1
Xylene (Total)	<	<	<	<1	<1	<1	<	<	<	<1	<1	<	-	<1
Xylene, m,p-	<	<	<	<1	<1	<1	<	<	<	<1	<1	<	-	<1
Xylene, o-	<	<	<	<1	<1	<1	<	<	<	<1	<1	<	-	<1
PAHs(ug/l)														
Acenaphthene	2	-	<	<0.47	<0.47	-	<	-	< 0.05	<0.47	-	<	<0.47	-
Acenaphthylene	3	-	<	<0.28	<0.28	-	<	-	< 0.05	<0.28	-	<	<0.28	-
Anthracene	4	-	<	<0.47	<0.47	-	<	-	< 0.05	<0.47	-	<	<0.47	-
Benzo(a)anthracene	<	-	<	<0.05	<0.05	-	<	-	< 0.05	<0.05	-	<	<0.05	-
Benzo(a)pyrene	**5**	-	<	<0.19	<0.19	-	<	-	< 0.05	<0.19	-	<	<0.19	-
Benzo(b)fluoranthene	**3**	-	<	<0.07	<0.07	-	<	-	< 0.05	<0.07	-	<	<0.07	-
Benzo(g,h,i)perylene	<	-	<	<0.45	<0.45	-	<	-	< 0.05	<0.45	-	<	<0.45	-
Benzo(k)fluoranthene	**5**	-	<	<0.28	<0.28	-	<	-	< 0.05	<0.28	-	<	<0.28	-
Chrysene	**7**	-	<	<0.47	<0.47	-	<	-	< 0.05	<0.47	-	<	<0.47	-
Dibenz(a,h)anthracene	<	-	<	<0.09	<0.09	-	<	-	< 0.01	<0.09	-	<	<0.09	-
Dibenzonfuran	**440**	-	-	-	-	-	<	-	-	-	-	-	-	-
Di-n-octyl phthalate	10	-	-	-	-	-	<	-	-	-	-	-	-	-
Fluoranthene	13	-	<	<0.47	<0.47	-	<	-	< 0.05	<0.47	-	<	<0.47	-
Fluorene	7	-	<	<0.47	<0.47	-	<	-	< 0.05	<0.47	-	<	<0.47	-
Indeno(1,2,3-cd)pyrene	<	-	<	<0.09	<0.09	-	<	-	< 0.05	<0.09	-	<	<0.09	-
Methylnaphthalene, 2-	**900**	-	<	<0.47	<0.47	-	<	-	< 0.05	<0.47	-	<	<0.47	-
Naphthalene	0.7	-	<	<0.47	<0.47	-	<	-	< 0.09	<0.47	-	<	<0.47	-
Phenanthrene	20	-	<	<0.06	<0.06	-	<	-	< 0.05	<0.06	-	<	<0.06	-
Pyrene	16	-	<	<0.47	<0.47	-	<	-	< 0.05	<0.47	-	<	<0.47	-
PCBs (ug/l)														
Total PCBS	-	-	<	-	-	-	-	-	-	-	-	<	-	-
Chlorinated Herbicides (ug/l)	-	BRL	BRL	-	-	-	-	BRL	-	-	-	BRL	-	-
2,4-D	-	<	<	-	-	<5	-	<	-	-	-	<	-	-
2,4,5-T	-	<	<	-	-	<2.5	-	<	-	-	-	<	-	-
2,4,5-TP	-	<	<	-	-	<2.5	-	<	-	-	-	<	-	-
2,4-DB	-	<	<	-	-	<50	-	<	-	-	-	<	-	-
Dalapon	-	<	<	-	-	<2.5	-	<	-	-	-	<	-	-
Dicamba	-	<	<	-	-	<2.5	-	<	-	-	-	<	-	-
Dinoseb	-	<	<	-	-	<5	-	<	-	-	-	<	-	-
Dichloroprop	-	<	<	-	-	<5	-	<	-	-	-	<	-	-
MCPB	-	<	<	-	-	-	-	<	-	-	-	<	-	-
MCPA	-	<	<	-	-	-	-	<	-	-	-	<	-	-
MCPP	-	<	<	-	-	-	-	<	-	-	-	<	-	-
Chlorinated Pesticides (ug/l)														
BHC, Alpha- (α-Lindane)	<	<	<	<0.024	<0.024	<0.024	<	<	-	<0.024	<0.024	<	<0.025	-
DDD, 4,4-	<	<	<	<0.047	<0.047	<0.048	<	<	-	<0.047	<0.047	<	<0.049	-
DDE, 4,4-	<	<	<	<0.047	<0.047	<0.048	<	<	-	<0.047	<0.047	<	<0.049	-
DDT, 4,4-	<	<	<	<0.047	<0.047	<0.048	<	<	-	<0.047	<0.047	<	<0.049	-
DDT (Total)	<	<	<	<0.047	<0.047	ND	<	<	-	<0.047	ND	<	<0.049	-
Total Metals (ug/l)														
Antimony	<100	-	-	<5	<5	<5	<100	-	-	<5	<5	-	<5	<5
Arsenic	<10	<	<	<4	<4	<4	<10	<	< 4	<4	<4	16.0	<4	<4
Barium	-	<	31.4	15	15	41	-	<	37	25	21	26.8	28	39
Beryllium	<4	-	-	<1	<1	<1	<4	-	-	<1	<1	-	<1	<1
Cadmium	<4	<	<	<1	<1	<1	<4	<	< 1	<1	<1	<	<1	<1
Chromium	<20	<	<	<1	<1	<1	<20	<	< 1	<1	<1	<	<1	<1
Copper	<20	-	-	<5	<5	<5	<20	-	-	<5	<5	-	<5	<5
Lead	<40	<	<	<2	<2	<2	<40	<	4	<2	<2	<	<2	<2
Mercury	-	<2	<	<0.2	<0.2	<0.2	-	<2	< 0.2	<0.2	<0.2	<	<0.2	<0.2
Nickel	<20	-	-	1	<1	4	<20	-	-	<1	<1	-	2	2
Selenium	<5	<	<	<10	<10	<10	<5	<	< 10	<10	<10	<	<10	<10
Silver	<10	<	<	<1	<1	<1	<10	<	< 1	<1	<1	<	<1	<1
Thallium	-	-	-	<0.5	<0.5	<0.5	-	-	-	<0.5	<0.5	-	<0.5	<0.5
Vanadium	<200	-	-	2	<2	<2	<200	-	-	<2	<2	-	<2	<2
Zinc	20	-	-	<4	<4	16	30	-	-	<4	<4	-	23	32
Dissolved Metals (ug/l)														
Barium	-	430	29.5	-	-		-	570	-	-		24.4	-	
Lead	-	<	-	-	-		-	<	-	-		-	-	
Inorganics (mg/L)														
Chloride	-	28	137	-	-	-	-	59	136	-	-	102	-	-
Sodium	-	25	87.9	-	-	-	-	34	82.8	-	-	69.3	-	-

Sample Name	D-17				D-18				MW-9		MW-10D	MW-100	
Sample Date	11/11/2000	7/19/2006	11/22/2017	3/11/2021	11/11/2000	7/19/2006	11/22/2017	3/11/2021	11/11/2000	7/18/2006	7/18/2006	11/3/2020	3/11/2021
ETPH (ug/l)	<100	<	-	<66		<	-	<67		<	<	-	-
VOCs (ug/l)													
Acetone	<	<	<	<25	<	<	<	<25	<	<	<	-	-
Benzene	<	<	<	<0.7	<	<	<	<0.7	<	<	<	-	-
Butylbenzene, sec-	<	<	<	<1	<	<	<	<1	<	<	<	-	-
Chloroform	<	<	<	<1	<	<	<	<1	<	<	<	-	-
Ethylbenzene	1.8	<	<	<1	<	<	<	<1	<	<	<	-	-
Isopropylbenzene (cumene)	<	<	<	<1	<	<	<	<1	<	<	<	-	-
Methylene Chloride (Dichloromethane)	<	<	<	<1	<	<	<	<1	<	<	<	-	-
Naphthalene	<	<	<	<1	<	<	<	<1	<	<	1	-	-
Toluene	<	<	<	<1	<	<	<	<1	<	<	<	-	-
Trichlorobenzene, 1,2,3-	<	<	<	<1	<	<	<	<1	<	<	<	-	-
Trichlorobenzene,1,2,4-	<	<	<	<1	<	<	<	<1	<	<	<	-	-
Trichloroethane	<	<	<	<1	<	<	<	<1	<	<	<	-	-
Trichloroethane, 1,1,2-	<	<	<	<1	<	<	<	<1	<	<	<	-	-
Trichloroethylene (TCE)	<	<	<	<1	<	<	<	<1	<	<	<	-	-
Trichlorofluoromethane	<	<	<	<1	<	<	<	<1	<	<	<	-	-
Trichloropropane, 1,2,3-	<	<	<	<1	<	<	<	<1	<	<	<	-	-
Trichlorotrifluoroethane, 1,1,2-	<	<	<	<1	<	<	<	<1	<	<	<	-	-
Trimethylbenzene, 1,2,4-	2.7	<	<	<1	<	<	<	<1	<	<	<	-	-
Trimethylbenzene, 1,3,5-	<	<	<	<1	<	<	<	<1	<	<	<	-	-
Vinyl Chloride	<	<	<	<1	<	<	<	<1	<	<	<	-	-
Xylene (Total)	8.7	<	<	<1	<	<	<	<1	<	<	<	-	-
Xylene, m,p-	6.2	<	<	<1	<	<	<	<1	<	<	<	-	-
Xylene, o-	2.5	<	<	<1	<	<	<	<1	<	<	<	-	-
PAHs(ug/l)													
Acenaphthene	-	<	< 0.05	-	-	<	< 0.05	-	-	<	<	<0.5	-
Acenaphthylene	-	<	< 0.05	-	-	<	< 0.05	-	-	<	<	<0.3	-
Anthracene	-	<	< 0.05	-	-	<	0.06	-	-	<	<	<0.5	-
Benzo(a)anthracene	-	<	< 0.05	-	-	<	< 0.05	-	-	<	<	<0.05	-
Benzo(a)pyrene	-	<	< 0.05	-	-	<	< 0.05	-	-	<	<	<0.2	-
Benzo(b)fluoranthene	-	<	< 0.05	-	-	<	< 0.05	-	-	<	<	<0.07	-
Benzo(g,h,i)perylene	-	<	< 0.05	-	-	<	< 0.05	-	-	<	<	<0.48	-
Benzo(k)fluoranthene	-	<	< 0.05	-	-	<	< 0.05	-	-	<	<	<0.3	-
Chrysene	-	<	< 0.05	-	-	<	< 0.05	-	-	<	<	<0.5	-
Dibenz(a,h)anthracene	-	<	< 0.01	-	-	<	< 0.01	-	-	<	<	<0.1	-
Dibenzonfuran	-	-	-	-	-	-	-	-	-	-	-	-	-
Di-n-octyl phthalate	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	-	<	< 0.05	-	-	<	< 0.05	-	-	<	<	<0.5	-
Fluorene	-	<	< 0.05	-	-	<	< 0.05	-	-	<	<	<0.5	-
Indeno(1,2,3-cd)pyrene	-	<	< 0.05	-	-	<	< 0.05	-	-	<	<	<0.1	-
Methylnaphthalene, 2-	-	<	< 0.05	-	-	<	< 0.05	-	-	<	<	<0.5	-
Naphthalene	-	<	< 0.09	-	-	<	< 0.09	-	-	<	<	<0.5	-
Phenanthrene	-	<	< 0.05	-	-	<	< 0.05	-	-	<	<	<0.06	-
Pyrene	-	<	< 0.05	-	-	<	< 0.05	-	-	<	<	<0.5	-
PCBs (ug/l)													
Total PCBS	-	<	-	-	-	<	<0.47	-	-	<	<	-	-
Chlorinated Herbicides (ug/l)	BRL	BRL	-	-	BRL	BRL	-	-	BRL	BRL	BRL	-	
2,4-D	<	<	-	-	<	<	-	-	<	<	<	-	<5
2,4,5-T	<	<	-	-	<	<	-	-	<	<	<	-	<2.5
2,4,5-TP	<	<	-	-	<	<	-	-	<	<	<	-	<2.5
2,4-DB	<	<	-	-	<	<	-	-	<	<	<	-	<50
Dalapon	<	<	-	-	<	<	-	-	<	<	<	-	<2.5
Dicamba	<	<	-	-	<	<	-	-	<	<	<	-	<2.5
Dinoseb	<	<	-	-	<	<	-	-	<	<	<	-	<5
Dichloroprop	<	<	-	-	<	<	-	-	<	<	<	-	<5
MCPB	<	<	-	-	<	<	-	-	<	<	<	-	-
MCPA	<	<	-	-	<	<	-	-	<	<	<	-	-
MCPP	<	<	-	-	<	<	-	-	<	<	<	-	-
Chlorinated Pesticides (ug/l)													
BHC, Alpha- (α-Lindane)	<	<	-	<0.024		<	-	<0.024	<	<	<	<0.025	<0.024
DDD, 4,4-	<	<	-	<0.048		<	-	<0.047	<	<	<	<0.05	<0.048
DDE, 4,4-	<	<	-	<0.048	<	<	-	<0.047	<	<	<	<0.05	<0.048
DDT, 4,4-	<	<	-	<0.048	<	<	-	<0.047	<	<	<	<0.05	<0.048
DDT (Total)	<	<	-	ND	<	<	-	ND	<	<	<	<0.05	ND
Total Metals (ug/l)													
Antimony	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	<	<	< 4	-	<	15.4	< 4	-	<	<	<	-	-
Barium	170	16.4	15	-	600	13.9	23	-	<	8.6	24.7	-	-
Beryllium	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	**22**	<	< 1	-	<	<	< 1	-	<	<	<	-	-
Chromium	<	<	< 1	-	**64**	<	1	-	<	<	<	-	-
Copper	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	13	<	3	<2	**49**	<	< 2	<2	<	<	<	-	-
Mercury	<2	<	< 0.2	-	<2	<	< 0.2	-	<2	<	<	-	-
Nickel	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	<	<	< 10	-	14	<	< 10	-	<	<	<	-	-
Silver	<	<	< 1	-	<	<	< 1	-	<	<	<	-	-
Thallium	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Metals (ug/l)													
Barium	410	15.5	-		300	11.5	-		240	<	19.2	-	
Lead	<	-	-		<	-	-		<	-	-	-	
Inorganics (mg/L)													
Chloride	33	82.5	57.2	-	43	50.2	70.9	-	31	33.4	38.8	*12.8*	-
Sodium	16	32.2	30.5	-	72.0	75.6	75.5	-	32.0	41	30.4	9.45	-

Sample Name	REC-2 MW-102	REC-3 Drum Storage MW-7		REC-4 Solvent Cleaning Area D-3		MW-2	MW-3	MW-104	REC-6 Repair Bays and Pump Island FOMW-01		FOMW-02		REC-7 Septic Tan[k] MW-1	
Sample Date	11/4/2020	7/20/2006	11/3/2020	8/22/1985	9/2/1986	7/20/2006	7/19/2006	11/3/2020	11/22/2017	3/11/2021	11/22/2017	11/3/2020	7/20/2006	11/22/2017
ETPH (ug/l)	<68	<	<66	<	-	<	<	<67	-	-	-	-	<	-
VOCs (ug/l)														
Acetone	<25	<	<25	<	4	<	<	<25	<	-	<	-	<	<
Benzene	<0.7	<	<0.7	1	<	<	<	<0.7	<	-	<	-	<	<
Butylbenzene, sec-	<1	<	<1	<	<	<	<	<1	<	-	<	-	<	<
Chloroform	<1	<	<1	<	<	<	<	<1	<	-	<	-	<	<
Ethylbenzene	<1	<	<1	<	<	<	<	<1	<	-	<	-	<	<
Isopropylbenzene (cumene)	<1	<	<1	<	<	<	<	<1	<	-	<	-	<	<
Methylene Chloride (Dichloromethane)	<1	<	<1	<	<	<	<	<1	<	-	<	-	<	<
Naphthalene	<1	<	<1	<	<	<	<	<1	<	-	<	-	<	<
Toluene	<1	<	<1	<	<	<	<	<1	<	-	<	-	<	<
Trichlorobenzene, 1,2,3-	<1	<	<1	<	<	<	<	<1	<	-	<	-	<	<
Trichlorobenzene,1,2,4-	<1	<	<1	<	<	<	<	<1	<	-	<	-	<	<
Trichloroethane	<1	<	<1	<	<	<	<	<1	<	-	<	-	<	<
Trichloroethane, 1,1,2-	<1	<	<1	<	<	<	<	<1	<	-	<	-	<	<
Trichloroethylene (TCE)	<1	<	<1	<	<	<	<	<1	<	-	<	-	<	<
Trichlorofluoromethane	<1	<	<1	<	<	<	<	<1	<	-	<	-	<	<
Trichloropropane, 1,2,3-	<1	<	<1	<	<	<	<	<1	<	-	<	-	<	<
Trichlorotrifluoroethane, 1,1,2-	<1	<	<1	<	<	<	<	<1	<	-	<	-	<	<
Trimethylbenzene, 1,2,4-	<1	<	<1	<	<	<	<	<1	<	-	<	-	<	<
Trimethylbenzene, 1,3,5-	<1	<	<1	<	<	<	<	<1	<	-	<	-	<	<
Vinyl Chloride	<1	<	<1	<	<	<	<	<1	<	-	<	-	<	<
Xylene (Total)	<1	<	<1	<	<	<	<	<1	<	-	<	-	<	<
Xylene, m,p-	<1	<	<1	<	<	<	<	<1	<	-	<	-	<	<
Xylene, o-	<1	<	<1	<	<	<	<	<1	<	-	<	-	<	<
PAHs(ug/l)														
Acenaphthene	<0.48	<	<0.48	-	-	<	<	<0.47	0.05	<0.49	0.1	<0.48	<	< 0.05
Acenaphthylene	<0.29	<	<0.29	-	-	<	<	<0.28	2.7	<0.29	1.8	<0.29	<	< 0.05
Anthracene	<0.48	<	<0.48	-	-	<	<	<0.47	1.1	<0.49	0.86	<0.48	<	< 0.05
Benzo(a)anthracene	<0.05	<	<0.05	-	-	<	<	0.05	**1.3**	**0.11**	**3.0**	<0.05	<	< 0.05
Benzo(a)pyrene	<0.19	<	<0.19	-	-	<	<	<0.19	**3.7**	**0.36**	**4.3**	<0.19	<	< 0.05
Benzo(b)fluoranthene	<0.07	<	<0.07	-	-	<	<	0.07	**3.3**	**0.36**	**4.6**	<0.07	<	< 0.05
Benzo(g,h,i)perylene	<0.46	<	<0.46	-	-	<	<	<0.45	**3.5**	**0.54**	**3.6**	<0.46	<	< 0.05
Benzo(k)fluoranthene	<0.29	<	<0.29	-	-	<	<	<0.28	**3.3**	<0.29	**3.1**	<0.29	<	< 0.05
Chrysene	<0.48	<	<0.48	-	-	<	<	<0.47	1.5	<0.49	3.1	<0.48	<	< 0.05
Dibenz(a,h)anthracene	<0.1	<	<0.1	-	-	<	<	<0.09	**1.5**	<0.1	**1.3**	<0.1	<	0.01
Dibenzonfuran	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Di-n-octyl phthalate	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	<0.48	<	<0.48	-	-	<	<	<0.47	1.6	<0.49	4.3	<0.48	<	< 0.05
Fluorene	<0.48	<	<0.48	-	-	<	<	<0.47	0.23	<0.49	0.28	<0.48	<	< 0.05
Indeno(1,2,3-cd)pyrene	<0.1	<	<0.1	-	-	<	<	<0.09	**3.4**	**0.62**	**3.5**	<0.1	<	< 0.05
Methylnaphthalene, 2-	<0.48	<	<0.48	-	-	<	<	<0.47	0.35	<0.49	0.33	<0.48	<	< 0.05
Naphthalene	<0.48	<	<0.48	-	-	<	<	<0.47	0.35	<0.49	0.39	<0.48	<	< 0.10
Phenanthrene	<0.06	<	<0.06	-	-	<	<	<0.06	0.34	<0.06	1.0	<0.06	<	< 0.05
Pyrene	<0.48	<	<0.48	-	-	<	<	<0.47	2.5	<0.49	5.2	<0.48	<	< 0.05
PCBs (ug/l)														
Total PCBS	-	<	-	-	-	<	<	-	-	-	< 0.50	-	<	<0.10
Chlorinated Herbicides (ug/l)	-	-	-	-	-	BRL	BRL	-	-	-	-	-	BRL	-
2,4-D	-	-	-	-	-	<	<	-	-	-	-	-	<	-
2,4,5-T	-	-	-	-	-	<	<	-	-	-	-	-	<	-
2,4,5-TP	-	-	-	-	-	<	<	-	-	-	-	-	<	-
2,4-DB	-	-	-	-	-	<	<	-	-	-	-	-	<	-
Dalapon	-	-	-	-	-	<	<	-	-	-	-	-	<	-
Dicamba	-	-	-	-	-	<	<	-	-	-	-	-	<	-
Dinoseb	-	-	-	-	-	<	<	-	-	-	-	-	<	-
Dichloroprop	-	-	-	-	-	<	<	-	-	-	-	-	<	-
MCPB	-	-	-	-	-	<	<	-	-	-	-	-	<	-
MCPA	-	-	-	-	-	<	<	-	-	-	-	-	<	-
MCPP	-	-	-	-	-	<	<	-	-	-	-	-	<	-
Chlorinated Pesticides (ug/l)														
BHC, Alpha- (α-Lindane)	-	-	-	-	-	<	<	-	<	<0.024	-	<0.024	<	<
DDD, 4,4-	-	-	-	-	-	<	<	-	< 2.6	0.075	-	<0.047	<	< 0.052
DDE, 4,4-	-	-	-	-	-	<	<	-	0.78	0.044	-	<0.047	<	< 0.052
DDT, 4,4-	-	-	-	-	-	<	<	-	3	0.23	-	<0.05	<	< 0.052
DDT (Total)	-	-	-	-	-	<	<	-	**3.78**	**0.35**	-	<0.05	<	< 0.052
Total Metals (ug/l)														
Antimony	-	-	<5	-	-	-	-	<5	-	<5	-	-	-	-
Arsenic	-	<	<4	-	-	<	16.4	<4	< 4	<4	< 4	<4	<	<4
Barium	-	9.6	14	-	-	23.2	32	23	146	28	16	-	22	18
Beryllium	-	-	<1	-	-	-	-	<1	-	<1	-	-	-	-
Cadmium	-	<	<1	-	-	<	<	<1	< 1	<1	< 1	-	<	<1
Chromium	-	<	<1	-	-	<	<	<1	**64**	2	4	-	<	<1
Copper	-	-	<5	-	-	-	-	<5	-	6	-	-	-	-
Lead	-	<	<2	-	-	<	<	<2	**54**	2	9	<2	<	4
Mercury	-	<	<0.2	-	-	<	<	<0.2	< 0.2	<0.2	< 0.2	-	<	<0.2
Nickel	-	-	<1	-	-	-	-	1	-	1	-	-	-	-
Selenium	-	<	<10	-	-	<	<	<10	< 10	<10	< 10	-	<	<10
Silver	-	<	<1	-	-	<	<	<1	< 1	<1	< 1	-	<	<1
Thallium	-	-	<0.5	-	-	-	-	<0.5	-	<0.5	-	-	-	-
Vanadium	-	-	<2	-	-	-	-	<2	-	3	-	-	-	-
Zinc	-	-	4	-	-	-	-	64	-	36	-	-	-	-
Dissolved Metals (ug/l)														
Barium	-	<	-	-	-	17.5	28.1	-	-		-	-	18.9	-
Lead	-	-	-	-	-	-	-	-	-		-	-	-	-
Inorganics (mg/L)														
Chloride	*36.3*	139	-	162	**669**	145	178	-	14.4	-	98.6	-	49	80.8
Sodium	55.4	115	-	75	317	93	139	-	36.7	-	107	-	24.3	55.1

CTDEEP RSRs- Connecticut Department of Energy and Environmental Protection Remediation Standard Regulations (June 27, 2013) and *Technical Support Document: Recommended Numeric Criteria for Common Additional Polluting Substances and Certain Alternative Criteria (September 20, 2018).*
Criteria in italics note parameters that are CTDEEP Additional Polluting Substances (September 20, 2018)
Results prior to 11/3/2020 were provided by others
NE- Not Established
NA- Not Applicable
< = not detected, see laboratory reports for specific detection limits.
< xx indicates compound was not detected. Detection limit is provided.
"-"- Sample not analyzed
Only parameters reported above detection limits are summarized above
Results presented in milligrams per liter (mg/L)
Results presented in micrograms per liter (µg/L)
CT ETPH - Connecticut Extractable Total Petroleum Hydrocarbons
VOCs- Volatile Organic Compounds
PAHs- Polycyclic Aromatic Hydrocarbons
PCBs - Polychlorinated Biphenyls
BRL - Below repoting limit
*Department of Public Health (DPH) maximum contaminate level for chloride in water supplies is 250 mg/l.
**Department of Public Health (DPH) notification level for sodium is 28 mg/l. No RSR criteria have been established.
Bold blue values indicate exceedance of the GWPC
Grey shadded values indicate exceedance of the SWPC

TABLE 2
Summary of Groundwater Analytical Data by REC
Former Scovil Hoe Mill
11 Candlewood Hill Road
Haddam, CT

					k and Leachfield		REC-8 and REC-9 Former Gasoline, Diesel, and Heating Oil Usts								REC-11	REC-12 Former Heating Oil UST			REC-13 Former Heating Oil UST			REC-14 Waste Oil UST			REC-16			REC-18 Potential Solvent Release Area				REC-19 Former Salt Storage Activities													
Sample Name	CTDEEP RSRs					MW-1 FF	D-2		HIG-GDF-GW	HMF-MW-1			HMF-MW-2		D-9	MW-6			HIG-FO1-GW	HMF-MW-4		MW-5	HIG-WO-GW	HMF-MW-3	MW-4	MW-103	MW-103	MW-8	MW-101	D-1		D-8				D-8	D-23				D-23-FF		Supply Well (PW-1)		
Sample Date	GWPC	SWPC	RES VC	IC VC	11/3/2020	11/3/2020	8/22/1985	8/29/1986	11/8/2014	5/20/2015	11/22/2017	11/3/2020	5/20/2015	11/22/2017	9/2/1986	7/20/2006	11/22/2017	11/3/2020	11/17/2014	5/30/2015	11/3/2020	7/20/2006	11/17/2014	5/30/2015	7/19/2006	11/3/2020	3/11/2021	7/20/2006	11/3/2020	8/22/1985	9/2/1986	8/29/1986	11/11/2000	7/19/2006	11/22/2017	3/11/2021	8/29/1986	11/11/2000	11/22/2017	3/11/2021	3/11/2021	9/3/1986	7/20/2006	11/22/2017	3/12/2021
ETPH (ug/l)	250	250	250	250	<69	-	<	-	82	<	-	<67	<	-	-	<	-	<66	**1,500**	<	<66	<	**560**	<	<	<67	-	<	<69	<	-	-	<100	<	-	-	-	<100	-	-	-	-	<	-	-
VOCs (ug/l)																																													
Acetone	700	*10,000*	50,000	50,000	<25	-	<	83	<	<	<	<25	<	<	31	<	<	<25	<	<	-	<	<	<	<	<25	-	<	<25	<	104	-	<	<	<	<25	-	<	<	<25	-	-	<	<	-
Benzene	1	710	215	530	<0.7	-	<	**4**	<	<	<	<0.7	<	<	<	<	<	<0.7	<	<	-	<	<	<	<	<0.7	-	<	<0.7	<	<	-	<	<	<	<0.7	-	<	<	<0.7	-	-	<	<	<0.5
Butylbenzene, sec-	*350*	*10,000*	*1,500*	*20,100*	<1	-	<	<	<	<	<	<1	<	<	<	<	<	<1	<	<	-	<	<	<	<	1.6	-	<	<1	<	<	-	<	<	<	<1	-	<	<	<1	-	-	<	<	<0.5
Chloroform	6	14,100	26	62	<1	-	<	6	<	<	<	<1	<	<	<	<	<	<1	<	<	-	<	<	<	<	<1	-	<	<1	<	<	-	<	<	<	<1	-	<	<	<1	-	-	<	<	<0.5
Ethylbenzene	700	580,000	50,000	50,000	<1	-	<	<	<	<	<	<1	<	<	<	<	<	<1	3.7	<	-	<	<	<	<	<1	-	<	<1	<	<	-	<	<	<	<1	-	<	<	<1	-	-	<	<	<0.5
Isopropylbenzene (cumene)	*25*	*210*	*900*	*2,200*	<1	-	<	<	<	<	<	<1	<	<	<	<	<	<1	<	<	-	<	<	<	<	1.6	-	<	<1	<	<	-	<	<	<	<1	-	<	<	<1	-	-	<	<	<0.5
Methylene Chloride (Dichloromethane)	5	48,000	160	2,200	<1	-	<	**18**	<	<	<	<1	<	<	<	<	<	<1	<	<	-	<	<	<	<	<1	-	<	<1	<	<	-	<	<	<	<1	-	<	<	<1	-	-	<	<	<0.5
Naphthalene	280	*210*	NE	NE	<1	-	<	<	<	<	<	<1	<	<	-	<	<	<1	<	<	-	<	<	<	<	<1	-	<	<1	<	<	-	<	<	<	<1	-	<	<	<1	-	-	<	<	<0.5
Toluene	1,000	4,000,000	23,500	50,000	<1	-	<	<	<	<	<	<1	<	<	<	<	<	<1	<	<	-	<	<	<	<	<1	-	<	<1	<	<	-	<	<	<	<1	-	<	<	<1	-	-	<	<	<0.5
Trichlorobenzene, 1,2,3-					<1	-	<	<	<	<	<	<1	<	<	<	<	<	<1	<	<	-	<	<	<	<	<1	-	<	<1	<	<		<	<	<	<1	-	<	<	<1	-	-	<	<	<0.5
Trichlorobenzene,1,2,4-	*70*	*9.6*	*12*	*660*	<1	-	<	<	<	<	<	<1	<	<	<	<	<	<1	<	<	-	<	<	<	<	<1	-	<	<1	<	<		<	<	<	<1	-	<	<	<1	-	-	<	<	<0.5
Trichloroethane					<1	-	<	<	<	<	<	<1	<	<	<	<	<	<1	<	<	-	<	<	<	<	<1	-	<	<1	<	<		<	<	<	<1	-	<	<	<1	-	-	<	<	-
Trichloroethane, 1,1,2-	5	1,260	8,000	19,600	<1	-	<	<	<	<	<	<1	<	<	<	<	<	<1	<	<	-	<	<	<	<	<1	-	<	<1	<	<		<	<	<	<1	-	<	<	<1	-	-	<	<	<0.5
Trichloroethylene (TCE)	5	2,340	219	540	<1	-	<	<	<	<	<	<1	<	<	<	<	<	<1	<	<	-	<	<	<	<	<1	-	<	<1	<	<		<	<	<	<1	-	<	<	<1	-	-	<	<	<0.5
Trichlorofluoromethane	*1,000*	*10,000*	*1,300*	*4,300*	<1	-	<	<	<	<	<	<1	<	<	<	<	<	<1	<	<	-	<	<	<	<	<1	-	<	<1	<	<		<	<	<	<1	-	<	<	<1	-	-	<	<	<0.5
Trichloropropane, 1,2,3-					<1	-	<	<	<	<	<	<1	<	<	<	<	<	<1	<	<	-	<	<	<	<	<1	-	<	<1	<	<		<	<	<	<1	-	<	<	<1	-	-	<	<	<0.5
Trichlorotrifluoroethane, 1,1,2-	*1,000*	*320*	*330*	*810*	<1	-	<	<	<	<	<	<1	<	<	<	<	<	<1	<	<	-	<	<	<	<	<1	-	<	<1	<	<		<	<	<	<1	-	<	<	<1	-	-	<	<	<0.5
Trimethylbenzene, 1,2,4-	*140*	*150*	*940*	*12,800*	<1	-	<	<	<	<	<	<1	<	<	<	<	<	<1	<	<	-	<	<	<	<	<1	-	<	<1	<	<	-	<	<	<	<1	-	<	<	<1	-	-	<	<	<0.5
Trimethylbenzene, 1,3,5-	*140*	*260*	*730*	*10,000*	<1	-	<	<	<	<	<	<1	<	<	<	<	<	<1	<	<	-	<	<	<	<	<1	-	<	<1	<	<	-	<	<	<	<1	-	<	<	<1	-	-	<	<	<0.5
Vinyl Chloride	2	15,750	2	2	<1	-	<	<	<	<	<	<1	<	<	<	<	<	<1	<	<	-	<	<	<	<	<1	-	<	<1	<	<	-	<	<	<	<1	-	<	<	<1	-	-	<	<	<0.5
Xylene (Total)	530	*270*	21,300	50,000	<1	-	<	<	<	<	<	<1	<	<	<	<	<	<1	<	<	-	<	<	<	<	<1	-	<	<1	<	<	-	<	<	<	<1	-	<	<	<1	-	-	<	<	<0.5
Xylene, m,p-	NE	NE	NE	NE	<1	-	<	<	<	<	<	<1	<	<	<	<	<	<1	<	<	-	<	<	<	<	<1	-	<	<1	<	<	-	<	<	<	<1	-	<	<	<1	-	-	<	<	<0.5
Xylene, o-	NE	NE	NE	NE	<1	-	<	<	<	<	<	<1	<	<	<	<	<	<1	<	<	-	<	<	<	<	<1	-	<	<1	<	<	-	<	<	<	<1	-	<	<	<1	-	-	<	<	<0.5
PAHs(ug/l)																																													
Acenaphthene	*420*	*150*	*30,500*	*50,000*	<0.47	<0.49	-	-	<	<	< 0.05	<0.47	<	< 0.05	-	<	< 0.05	<0.47	<	<	<0.49	<	0.06	<	<	<0.48	-	<	<0.49	-	-	-	-	<	< 0.05	-	-	-	< 0.05	-	-	-	<	< 0.05	-
Acenaphthylene	420	0.3	NA	NA	0.35	<0.29	-	-	0.65	<	< 0.05	<0.28	<	< 0.05	-	<	< 0.05	<0.28	0.19	<	<0.29	<	1.2	<	<	<0.29	-	<	0.31	-	-	-	-	<	< 0.05	-	-	-	< 0.05	-	-	-	<	< 0.05	-
Anthracene	2,000	1,100,000	NA	NA	0.74	<0.49	-	-	0.32	<	< 0.05	<0.47	<	< 0.05	-	<	< 0.05	<0.47	0.13	<	<0.49	<	0.51	<	<	<0.48	-	<	<0.49	-	-	-	-	<	< 0.05	-	-	-	0.09	-	-	-	<	< 0.05	-
Benzo(a)anthracene	0.06	0.3	NA	NA	**0.16**	**0.11**	-	-	**1.1**	0.04	< 0.05	<0.05	<	< 0.05	-	<	< 0.05	<0.05	**0.32**	<	<0.05	<	**2.1**	<	<	<0.05	-	<	**0.1**	-	-	-	-	<	< 0.05	-	-	-	< 0.05	-	-	-	<	< 0.05	-
Benzo(a)pyrene	0.2	0.3	NA	NA	<0.19	<0.19	-	-	**1.6**	0.03	< 0.05	<0.19	<	< 0.05	-	<	< 0.05	<0.19	**0.47**	<	<0.2	<	**3.1**	<	<	<0.19	-	<	**0.22**	-	-	-	-	<	< 0.05	-	-	-	0.06	-	-	-	<	< 0.05	<0.02
Benzo(b)fluoranthene	0.08	0.3	NA	NA	**0.18**	**0.14**	-	-	**2.6**	0.06	< 0.05	<0.07	<	< 0.05	-	<	< 0.05	<0.07	**0.83**	<	<0.07	<	**5.1**	0.03	<	<0.07	-	<	**0.18**	-	-	-	-	<	< 0.05	-	-	-	0.07	-	-	-	<	< 0.05	-
Benzo(g,h,i)perylene	*0.48*	*150*	NA	NA	<0.45	<0.47	-	-	**1.4**	<	< 0.05	<0.45	<	< 0.05	-	<	< 0.05	<0.45	0.38	<	<0.47	<	**2.9**	<	<	<0.46	-	<	<0.47	-	-	-	-	<	< 0.05	-	-	-	0.06	-	-	-	<	< 0.05	-
Benzo(k)fluoranthene	0.5	0.3	NA	NA	<0.28	<0.29	-	-	**1**	0.02	< 0.05	<0.28	<	< 0.05	-	<	< 0.05	<0.28	0.4	<	<0.29	<	**1.9**	<	<	<0.29	-	<	<0.29	-	-	-	-	<	< 0.05	-	-	-	0.05	-	-	-	<	< 0.05	-
Chrysene	*4.8*	*0.54*	NA	NA	<0.47	<0.49	-	-	1.5	0.03	< 0.05	<0.47	<	< 0.05	-	<	< 0.05	<0.47	0.43	<	<0.49	<	3.3	<	<	<0.48	-	<	<0.49	-	-	-	-	<	< 0.05	-	-	-	< 0.05	-	-	-	<	< 0.05	-
Dibenz(a,h)anthracene	*0.1*	*0.3*	NA	NA	<0.09	<0.1	-	-	<	<	< 0.01	<0.09	<	< 0.01	-	<	< 0.01	<0.09	<	<	<0.1	<	<	<	<	<0.1	-	<	<0.1	-	-	-	-	<	< 0.01	-	-	-	0.02	-	-	-	<	< 0.01	-
Dibenzonfuran	*7*	*40*	460	5,800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Di-n-octyl phthalate	*100*	*NE*	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	280	3,700	NA	NA	<0.47	<0.49	-	-	2.3	0.19	< 0.05	<0.47	<	< 0.05	-	<	< 0.05	<0.47	0.9	<	<0.49	<	6.7	<	<	<0.48	-	<	<0.49	-	-	-	-	<	< 0.05	-	-	-	< 0.05	-	-	-	<	< 0.05	-
Fluorene	280	140,000	NA	NA	<0.47	<0.49	-	-	<	<	< 0.05	<0.47	<	< 0.05	-	<	< 0.05	<0.47	<	<	<0.49	<	0.16	<	<	<0.48	-	<	<0.49	-	-	-	-	<	< 0.05	-	-	-	< 0.05	-	-	-	<	< 0.05	-
Indeno(1,2,3-cd)pyrene	*0.1*	*0.54*	NA	NA	**0.19**	**0.12**	-	-	**1.1**	<	< 0.05	<0.09	<	< 0.05	-	<	< 0.05	<0.09	**0.3**	<	<0.1	<	**2.2**	<	<	<0.1	-	<	**0.18**	-	-	-	-	<	< 0.05	-	-	-	< 0.05	-	-	-	<	< 0.05	-
Methylnaphthalene, 2-	*28*	*62*	NA	NA	<0.47	<0.47	-	-	<	<	< 0.05	<0.47	<	< 0.05	-	<	< 0.05	<0.47	0.19	<	<0.49	<	<	<	<	<0.48	-	<	<0.49	-	-	-	-	<	< 0.05	-	-	-	< 0.05	-	-	-	<	< 0.05	-
Naphthalene	280	*210*	NA	NA	<0.47	<0.49	-	-	<	<	< 0.09	<0.47	<	< 0.09	-	<	< 0.10	<0.47	0.1	<	<0.49	<	0.23	<	<	<0.48	-	<	<0.49	-	-	-	-	<	< 0.09	-	-	-	< 0.10	-	-	-	<	< 0.10	-
Phenanthrene	200	*14*	NA	NA	<0.06	<0.06	-	-	0.79	0.4	< 0.05	<0.06	<	< 0.05	-	<	< 0.05	<0.06	0.38	<	<0.06	<	2.2	<	<	<0.06	-	<	0.09	-	-	-	-	<	< 0.05	-	-	-	< 0.05	-	-	-	<	< 0.05	-
Pyrene	200	110,000	NA	NA	0.68	<0.49	-	-	2.5	0.18	< 0.05	<0.47	<	< 0.05	-	<	< 0.05	<0.47	1	<	<0.49	<	6.8	<	<	<0.48	-	<	<0.49	-	-	-	-	<	< 0.05	-	-	-	< 0.05	-	-	-	<	< 0.05	-
PCBs (ug/l)																																													
Total PCBS	0.5	0.5	NA	NA	-	-	-	-	-	-	< 0.47	-	-	-	-	<	-	-	-	-	-	<	<	-	<	-	-	<	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<	-	-
Chlorinated Herbicides (ug/l)	Varies	Varies	Varies	Varies	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	BRL	-	-	-	-	-	-	-	BRL	-	-	-	-	BRL	-	-	-	-	BRL	-	-
2,4-D	70	1,700	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<	-	-	-	-	-	-	-	<	-	-	-	-	<	-	-	-	-	<	-	-
2,4,5-T	NE	NE	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<	-	-	-	-	-	-	-	<	-	-	-	-	<	-	-	-	-	<	-	-
2,4,5-TP	NE	NE	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<	-	-	-	-	-	-	-	<	-	-	-	-	<	-	-	-	-	<	-	-
2,4-DB	70	1,700	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<	-	-	-	-	-	-	-	<	-	-	-	-	<	-	-	-	-	<	-	-
Dalapon			NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<	-	-	-	-	-	-	-	<	-	-	-	-	<	-	-	-	-	<	-	-
Dicamba	210	2,200	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<	-	-	-	-	-	-	-	<	-	-	-	-	<	-	-	-	-	<	-	-
Dinoseb			NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<	-	-	-	-	-	-	-	<	-	-	-	-	<	-	-	-	-	<	-	-
Dichloroprop	25	120	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<	-	-	-	-	-	-	-	<	-	-	-	-	<	-	-	-	-	<	-	-
MCPB			NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<	-	-	-	-	-	-	-	<	-	-	-	-	<	-	-	-	-	<	-	-
MCPA			NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<	-	-	-	-	-	-	-	<	-	-	-	-	<	-	-	-	-	<	-	-
MCPP			NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<	-	-	-	-	-	-	-	<	-	-	-	-	<	-	-	-	-	<	-	-
Chlorinated Pesticides (ug/l)																																													
BHC, Alpha- (α-Lindane)	*0.05*	*0.11*			<0.024		-	-	-		-	-		-	-	-	-	<0.024	-		-	-	-		<	-	-	-	-	<	-	-	<	-	<	-	-	<	-	-	-		<	<	-
DDD, 4,4-					<0.048		-	-	-		-	-		-	-	-	-	<0.048	-		-	-	-		<	-	-	-	-	<	-	-	<	-	< 0.047	-	-	<	-	-	-		<	< 0.051	-
DDE, 4,4-	NE	NE	NE	NE	<0.048	-	-	-	-	-	-	-	-	-	-	-	-	<0.048	-	-	-	-	-	-	<	-	-	-	-	<	-	-	<	-	< 0.047	-	-	<	-	-	-	-	<	< 0.051	-
DDT, 4,4-	NE	NE	NE	NE	<0.048	-	-	-	-	-	-	-	-	-	-	-	-	<0.048	-	-	-	-	-	-	<	-	-	-	-	<	-	-	<	-	< 0.047	-	-	<	-	-	-	-	<	< 0.051	-
DDT (Total)	*0.1*	NE	NE	NE	<0.048	-	-	-	-	-	-	-	-	-	-	-	-	<0.048	-	-	-	-	-	-	<	-	-	-	-	<	-	-	<	-	< 0.047	-	-	<	-	-	-	-	<	< 0.051	-
Total Metals (ug/l)																																													
Antimony					<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	-	-	-	-	-	-	-	<5	-	-	-	<5	-	-	-	-	<0.4
Arsenic	50	4	NA	NA	<4	-	-	-	-	-	< 4	<4	-	< 4	-	<	< 4	<4	-	-	-	<	-	-	15.6	-	<4	<	-	-	-	-	<	<	< 4	<4	-	<	< 4	<4	-	-	<	< 4	<0.5
Barium	1,000	2,200	NA	NA	42	-	-	-	-	-	10	-	-	7	-	59.2	20	-	-	-	-	22.7	-	-	34.6	-	11	<	-	-	-	-	330	<	72	120	-	210	19	12	-	-	3	< 2	13
Beryllium	4	4	NA	NA	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	<1	-	-	-	<1	-	-	-	-	<0.3
Cadmium	5	6	NA	NA	<1	-	-	-	-	-	< 1	-	-	< 1	-	<	< 1	-	-	-	-	<	-	-	<	-	<1	<	-	-	-	-	<	<	< 1	<1	-	**23**	< 1	<1	-	-	<	< 1	<1
Chromium	50	110	NA	NA	8	-	-	-	-	-	< 1	-	-	< 1	-	8.9	2.0	-	-	-	-	<	-	-	<	-	<1	<	-	-	-	-	<	<	< 1	<1	-	<	< 1	<1	-	-	<	< 1	<1
Copper	1,300	48	NA	NA	38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	-	-	-	-	-	-	-	17	-	-	-	<5	-	-	-	-	2
Lead	15	13	NA	NA	**34**	-	-	-	-	<	< 2	<2	<	5	-	<	8	-	-	<	-	<	-	<	**15.8**	-	<2	<	-	-	-	-	**51**	<	< 2	2	-	**44**	4	<2	-	-	<	4	1
Mercury	2	0.4	NA	NA	<0.2	-	-	-	-	-	< 0.2	-	-	< 0.2	-	<	< 0.2	-	-	-	-	<	-	-	<	-	<0.2	<	-	-	-	-	<2	<	< 0.2	<0.2	-	<2	< 0.2	<0.2	-	-	<	< 0.2	<0.2
Nickel	100	880	NA	NA	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	1	-	-	-	3	-	-	-	-	<1
Selenium	50	50	NA	NA	<10	-	-	-	-	-	< 10	-	-	< 10	-	<	< 10	-	-	-	-	<	-	-	<	-	<10	<	-	-	-	-	<	<	< 10	<10	-	<	< 10	<10	-	-	<	< 10	<1
Silver	36	12	NA	NA	<1	-	-	-	-	-	< 1	-	-	< 1	-	<	< 1	-	-	-	-	<	-	-	<	-	<1	<	-	-	-	-	<	<	< 1	<1	-	<	< 1	<1	-	-	<	< 1	<1
Thallium	5.0	63	NA	NA	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-	<0.5	-	-	-	<0.5	-	-	-	-	<0.3
Vanadium	50.0	NE	NA	NA	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	-	-	-	-	-	-	-	-	<2	-	-	-	<2	-	-	-	-	<1
Zinc	5,000	123	NA	NA	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	58	-	-	-	-	-	-	-	-	13	-	-	-	<4	-	-	-	-	6
Dissolved Metals (ug/l)																																													
Barium	1,000	2,200	NA	NA	-	-	-	-	-	-	-	-	-	-	-	10.5	-	-	-	-	-	<	-	-	21.7	-		-	-	-	-	-	540	-	-		-	440	-		8	-	2.5	-	-
Lead	15	13	NA	NA	-	**18**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	<	-	-		-	<	-		<2	-	-	-	-
Inorganics (mg/L)																																													
Chloride	250*	10	NA	NA	-	-	231	129	-	-	91	-	-	73.3	13	155	88.9	-	-	-	-	65.4	-	-	78.2	-	-	**268**	-	**523**	**442**	23	55	**284**	**268**	**469**	**375**	**260**	157	*55.5*	-	12	13.8	41.4	48.1
Sodium	28**	NE	NA	NA	-	-	96	107	-	-	75.2	-	-	84	10	119	74.6	-	-	-	-	61.4	-	-	70.1	-	-	216	-	349	354	14	43	195	169	254	237	110	97.7	50.3	-	10	9.96	11.4	14,100

CTDEEP RSRs- Connecticut Department of Energy and Environmental Protection Remediation Standard Regulations (June 27, 2013) and *Technical Support Document: Recommended Numeric Criteria for Common Additional Polluting Substances and Certain Alternative Criteria (September 20, 2018).*
Criteria in italics note parameters that are CTDEEP Additional Polluting Substances (September 20, 2018)
Results prior to 11/3/2020 were provided by others
NE- Not Established
NA- Not Applicable
< = not detected, see laboratory reports for specific detection limits.
< xx indicates compound was not detected. Detection limit is provided.
"-"- Sample not analyzed
Only parameters reported above detection limits are summarized above
Results presented in milligrams per liter (mg/L)
Results presented in micrograms per liter (μg/L)
CT ETPH - Connecticut Extractable Total Petroleum Hydrocarbons
VOCs- Volatile Organic Compounds
PAHs- Polycyclic Aromatic Hydrocarbons
PCBs - Polychlorinated Biphenyls
BRL - Below repoting limit
*Department of Public Health (DPH) maximum contaminate level for chloride in water supplies is 250 mg/l.
**Department of Public Health (DPH) notification level for sodium is 28 mg/l. No RSR criteria have been established.
Bold blue values indicate exceedance of the GWPC
Grey shadded values indicate exceedance of the SWPC

Preliminary Opinion of Probable Costs
Project Name: Former DOT Higganum Facility
Project Location: 11 Candlewood Hill Road
Description: OPC for Draft RAP
Date: April 5, 2021
Version: 1

Tighe&Bond
Engineers | Environmental Specialists

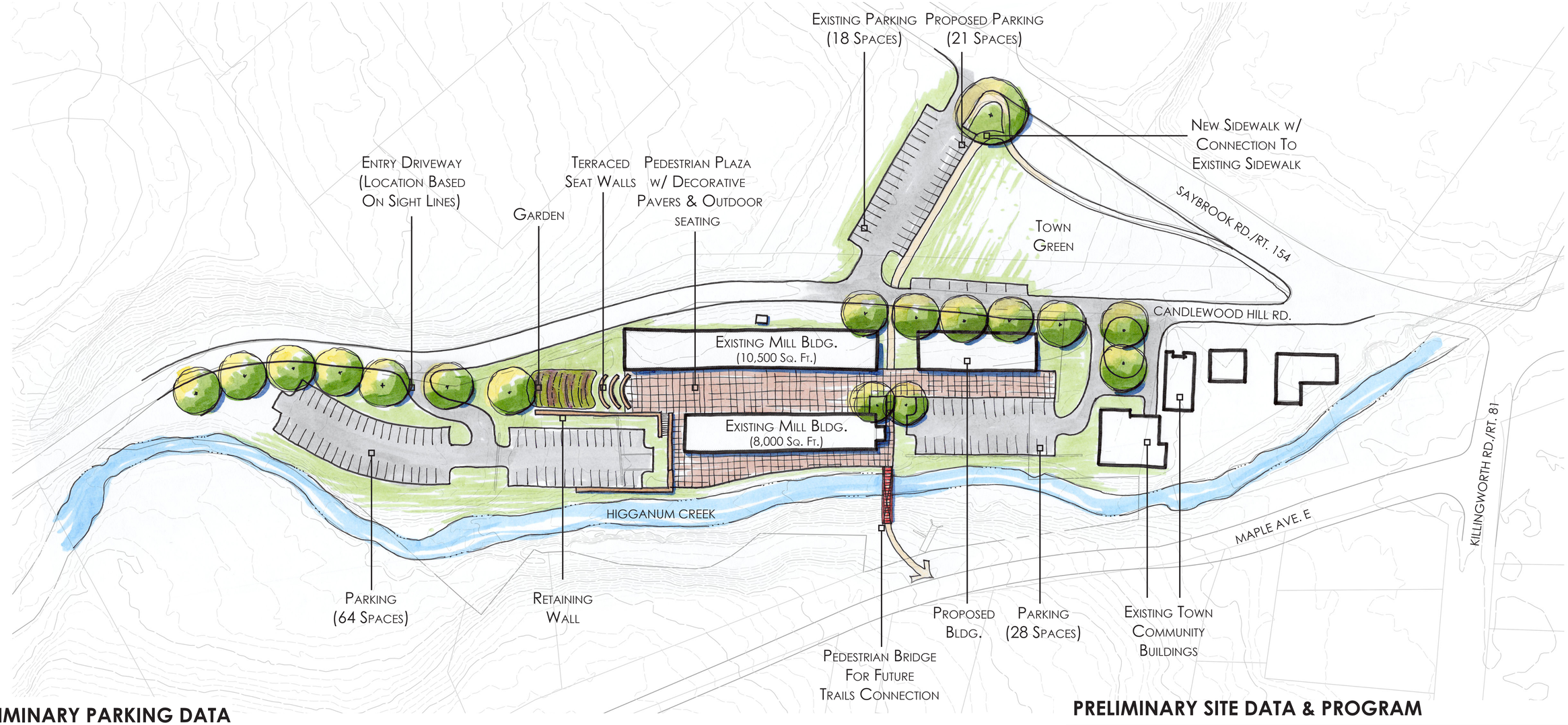
Item No.	Item	Quantity	Unit	Unit Cost	Item Cost
	Site Remediation				
1	Mobilization/Demobilization	1	LS	$5,000	$5,000
2	Erosion, Dust, & Site Controls / Contractor Health & Safety	NA	LS	$10,000	$10,000
3	Abatement of hazardous building materials identified by F&O	Lump sum			$96,000
4	Removal of vermiculite blow-in insulation in wall cavities	2,000	SF	$10	$20,000
5	Clean interior Concrete Slabs and seal gaps in floors	Lump sum			$6,000
6	Excavate & Dispose of Concrete Slabs (24" thick) in area of hydraulic lift	600	Tons	$25	$15,000
7	Excavation and off-site disposal of soils in accordance with RAP (non-haz soils)	1,610	Tons	$180	$289,800
8	Allowance for disposal of hazardous soils containing lead	100	Tons	$350	$35,000
9	Allowance for groundwater dewatering, handling, treatment, & discharge to brook	NA	LS	$50,000	$50,000
10	Remove & Dispose of deteriorated pavement as Clean C&D Material	1,000	Cubic Yard	$50	$50,000
11	Grade Site & Consolidate Excess Soil Western portion of Site	1,050	Tons	$95	$99,750
12	Install Geotextile Liner Across Entire western portion of site (Approx. 150 by 300 ft Area)	45,000	Square Foot	$6	$270,000
13	Backfill & Compact Clean Process Material (1 foot thick) Across western portion of site	3,500	Tons	$40	$140,000
				Subtotal =	**$1,086,550**
	Parking Lot Construction				
14	Install Pavement Across Exterior Areas (Minimum 3" Thick)	75,000	Square Foot	$6	$450,000
15	Install Stormwater Drainage System	NA	LS	$75,000	$75,000
16	A-2 ELUR Survey	NA	LS	$30,000	$30,000
17	Reroute potable water line	NA	LS	$5,000	$5,000
				Subtotal =	**$560,000**
	Professional Services				
18	Review & Approval of Engineered Control Variance Application, Technical Impracticability Variance & Remedial Action Plan for CTDEEP	NA	LS	$20,000	$20,000
19	Remediation Coordination, Observation, & Verification Sampling	NA	LS	$75,000	$75,000
20	Installation of Monitoring Well Replacements	NA	LS	$30,000	$30,000
21	Environmental Land Use Restriction	NA	LS	$15,000	$15,000
22	Remedial Action Report for CTDEEP	NA	LS	$20,000	$20,000
23	Four Quarters of Groundwater Compliance Monitoring	NA	LS	$50,000	$50,000
				Subtotal =	**$210,000**
				Total (Items 1-23)	**$1,856,550**
				Contingency (15%)	**$278,483**
				Total	**$2,135,033**

Notes and Assumptions:

Costs are based on recent as-completed pricing for a similar remediation/site redevelopment projects

Remediation quantities estimated based on Tighe & Bond Draft RAP
OPC assumes minimal RCRA Hazardous Waste.
OPC does not include any costs associated with restoration of the existing buildings.
OPC does not include any off-site investigation or remediation
OPC does not include any investigation or remediation that may be required for Candlewood Hill Brook

APPENDIX C



PRELIMINARY PARKING DATA

PARKING

TOTAL PARKING REQUIRED
129 SPACES (Including Town Community Buildings)
PARKING PROVIDED
131 SPACES (Including the Town Green)

PARKING RATIOS

RESTAURANT
10 SPACES PER 1,000 SQ. FT.
OFFICE/ARTIST/FLEX/SPECIALTY
3 SPACES PER 1,000 SQ. FT.
RESIDENTIAL
1.5 SPACES PER UNIT

PRELIMINARY SITE DATA & PROGRAM

EXISTING MILL BUILDINGS (2) = 18,500 GSF* (1 STORY)

RESTAURANT = 5,000 NSF* (70 SEATS MAX.)
OFFICE / ARTIST/ FLEX SPACE / SPECIALTY SHOPS = 12,300 NSF

PROPOSED BUILDING = 14,400 GSF (3 STORIES)
= 4,800 GSF PER FLOOR

OFFICE / ARTIST / FLEX SPACE / SPECIALTY SHOPS = 4,500 NSF (1ST FLOOR)
RESIDENTIAL TOWNHOUSE (6 UNITS) = 1,400 NSF EACH (2ND & 3RD FLOOR)

PRELIMINARY PARKING REQUIREMENTS

RESTAURANT (DINE-IN) : 50 SPACES
OFFICE / ARTIST / FLEX SPACE / SPECIALTY SHOPS = 55 SPACES
RESIDENTIAL : 9 SPACES
COMMUNITY BUILDINGS : 15 SPACES

* GSF = GROSS SQUARE FOOTAGE
* NSF = NET SQUARE FOOTAGE

PRELIMINARY REDEVELOPMENT OPTION