February 12, 2025

Town of Montville
c/o Richard S. Cody, Esq.
Suisman Shapiro Attorneys-at-Law
75 State Street
New London, CT 06320

RE: DATA GAP ANALYSIS AND BUDGETARY ESTIMATE TO CLOSE PROPERTY UNDER THE PROPERTY TRANSFER PROGRAM – 14 BRIDGE STREET, MONTVILLE, CONNECTICUT
(HRP# MON3008.RA)

Dear Attorney Cody:

HRP Associates, Inc. (HRP) has prepared the following data gap analysis and budgetary estimate to close the above referenced property (the "Site") under the Connecticut Department of Energy and Environmental Protection (CT DEEP) Voluntary Remediation Program (VRP). As you know, the Site is currently in the VRP under the oversight of a Licensed Environmental Professional (LEP). The Site meets the definition of a "Brownfield Site" as defined in Section 32-763 (formerly 32-9kk) of the Connecticut General Statutes (CGS) and is receiving financial assistance from the Connecticut Department of Economic and Community Development (CT DECD), a registered State agency. An Environmental Condition Assessment Form (ECAF) was filed with CT DEEP on June 19, 2012. The Town of Montville signed the ECAF as the Certifying Party. Environmental investigation and remediation of the property is required to be conducted in accordance with the CT DEEP Remedial Standard Regulations (RSRs). Certain environmental investigations and remedial activities have been conducted for the Site. The attached budgetary estimate is based on the previous investigation and remediation for the Site.

Site History

The Site consists of 1.07 acres with a factory building that was constructed in the late 1800s or early 1900s. The building's original use was a warehouse for bedding products and waste paper/finished paper products. In the late 1950s, the property was purchased by All Time Manufacturing. Site occupants since circa 1985 include Finley Screw Machine Products, Jayfro Corp. (sporting goods manufacturing), Acme Wire Products, Displaymakers (exhibit manufacturers), and Impulse Design (exhibit manufacturers). Onsite operations performed by Impulse Design include woodcutting, gluing, laminating, and painting.

The northern, western, and eastern portions of the property are paved (cap installed in 2018, discussed below). A railroad spur formerly existed along the eastern side of the onsite building. To the south of the building, the land is generally wooded. A dirt path extends south to an adjacent parcel. A small intermittent stream abuts the Site to the south and flows east to Oxoboxo Brook, which is located approximately forty to ninety feet east-northeast of the Site.

Previous Environmental Investigations

Several previous environmental investigations have been conducted at the Site. The investigations were completed by Paul Burgess, LLC from 2008 through 2009 and by HRP in 2012 followed by remedial activities via excavation in 2013. Groundwater monitoring was conducted by HRP from January 2019 to March 2020.

Soils in specific locations on the Site were found to be contaminated with extractable total petroleum hydrocarbons (ETPH), semi-volatile volatile organic compounds (SVOCs)/polynuclear aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and heavy metals (primarily arsenic). Groundwater at limited locations beneath the Site was found to be contaminated with ETPH, PAHs, and heavy metals including lead and zinc. This contamination is presumed to have generally originated from onsite and offsite historical releases and/or historically placed fill material at the Site.

Ten environmental areas of concern (AOCs) on the Site were identified during previous environmental investigations conducted at the Site. Those include:

- AOC-1: Former Heating Oil Underground Storage Tank (UST)
- AOC-2: Fuel Oil Aboveground Storage Tanks (ASTs)
- AOC-3: Former Industrial Operations Inside Building
- AOC-4: Loading Docks
- AOC-5: Septic System
- AOC-6: Former Pond
- AOC-7: Former Railroad Siding
- AOC-8: Former Dumpster Location
- AOC-9: Discharge Vents (interior painting operations)
- AOC-10: Boiler Room Discharge

In addition to the above listed AOCs, the presence of polluted fill was also investigated. Samples to evaluate fill conditions were collected from AOCs 1, 2, and 6, as well as areas outside of any of the identified AOCs. Polluted material was brought to the Site to build up the ground surface, which was identified by the presence of coal ash, wood ash, coal fragments, or asphalt fragments identified in soil samples. ETPH, PAHs, arsenic, chromium, and lead were detected in soil samples collected from the fill material. Polluted fill comprises the majority of subsurface material at the Site as well as the Montville area. A summary table of each AOC including contaminants of concern (COCs), investigation results, and current status is included as **Attachment 1**.

Remedial Activities

Remediation via excavation and offsite disposal of impacted soil was conducted in September through November 2012 at six AOCs (AOC-1, AOC-2, AOC-3, AOC-6, AOC-9, and AOC-10) where

concentrations of COCs in soil were greater than the applicable RSR criteria for the Site. Applicable numeric criteria include the Residential or Industrial Commercial Direct Exposure Criteria (RDEC and ICDEC, respectively) and the GA Pollutant Mobility Criteria (GA PMC), as the Site is located in a GA groundwater classification area.

Exceedances of applicable numeric criteria for residual hydrocarbons, arsenic, and chromium in soil associated with excavated AOCs were identified in excavation confirmation soil samples collected after soil was excavated. Additionally, hydrocarbon and arsenic-polluted fill throughout the Site was identified during a subsequent investigation conducted in December 2012. Therefore, HRP recommended Site-wide paving for the exterior portion of the Site and placement of an Environmental Land Use Restriction (ELUR) to render the soils below the building floor (no demolition) and throughout the Site as inaccessible. Based on Site contaminant conditions, the option to cap soils beneath pavement was selected as the remedial action. Specifically, DEC contaminated soils were addressed with an asphalt cap in 2018, and PMC contaminated soils would be addressed by the use of a self-implementing Coal Ash/Asphalt Exemption (Sec. 22a-133k-2(c)(4)(C)). The ELUR has yet to be implemented at the Site.

During the December 2012 investigation, PAH compounds benzo(a)anthracene, benzo(a)pyrene, and benzo(b)fluoranthene were detected in one sample collected from a depth of zero to two feet below grade (0-2 fbg) at concentrations greater than ten times their respective ICDEC numeric values, which was considered a Significant Environmental Hazard (SEH) per Section 22a-6u of the CGS. HRP submitted an SEH form within the required ninety day timeframe (April 2013). This area was covered with the asphalt cap in 2018 (described below). HRP conducted annual SEH inspections of the cap from 2020 to 2022.

The pavement cap installation was completed between July and September 2018. Activities included the excavation and staging of the former asphalt pavement areas and subbase, drywell, railroad ties and timbers prior to appropriate offsite disposal. The area to the west of the Site building was cleared of trees and brush. New bituminous asphalt pavement was placed over all exterior areas of the Site including the right-of-way driveway to the west of the Site building. The new pavement consisted of a 1.5-inch layer of binder course and a 1.5-inch layer of top/wearing course.

Groundwater

Groundwater contaminated with ETPH, PAHs, lead, and zinc has been identified during previous sampling events conducted at the Site. In order to demonstrate compliance with the RSRs, concentrations of COCs in groundwater for the Site need to be less than their respective applicable RSR criteria during four quarterly sampling events conducted over a two-year period. The Site is located in a "GA" groundwater classification area. In GA groundwater classification areas, compliance with the Groundwater Protection Criteria (GWPC) can be met if the concentrations of contaminants in groundwater do not interfere with existing uses of that groundwater (as opposed to having to be remediated to background conditions), therefore the applicable criteria are the GWPC, surface water protection criteria (SWPC) and volatilization criteria (VC).

Five post remediation groundwater monitoring events were performed between January 2019 and March 2020. Volatile organic compounds (VOCs), lead, and cyanide were compliant with the GWPC, SWPC, and VC for the Site during these events, however, compliance with the applicable criteria has not been demonstrated for ETPH, PAHs, lead, and zinc. HRP recommends continued groundwater monitoring on an annual schedule to evaluate contaminant trends in accordance with VRP requirements.

Recommendations

HRP offers the following recommendations regarding activities that should be conducted regardless of a transfer of ownership and potential enrollment into the Transfer Act:

- Complete annual SEH inspections – HRP previously conducted annual inspections of the asphalt cap related to the SEH condition reported to CT DEEP in April 2013. These inspections are required per CT DEEP to document the condition of the cap and to ensure that the soils located beneath are not disturbed. The most recent inspection was conducted by HRP in June 2022.
- Complete one groundwater sampling event including the four existing Site monitoring wells in order to determine the current condition of groundwater beneath the Site. Groundwater has not been sampled since March 2020. The current groundwater condition could determine the path forward for Site closure, which could include evaluation of alternative groundwater standards, monitored natural attenuation monitoring, or compliance groundwater monitoring.
- ELUR – an ELUR was proposed to be implemented at the Site in order to render soils located beneath the asphalt cap and below the Site building "inaccessible." Per CT DEEP, the Site does not need to be enrolled in the Transfer Act in order for the ELUR to be implemented at the Site. The ELUR documentation has been partially completed; however, ELUR regulations were revised in 2021 resulting in most items required to be redone/revised. The Verification cannot be submitted until the ELUR is recorded on the land records and after groundwater has demonstrated compliance, unless an Interim Verification is submitted.

Costs for the above tasks and others related to Site closure under the Transfer Act/VRP are included in the attached Budgetary Cost Estimate (**Attachment 2**). Cost Opinion Limitations are included as **Attachment 3**. The table summarizes the anticipated scope and associated budgetary cost considerations to advance the property through the VRP and complete environmental closure of the property. This estimate is based on HRP's knowledge of the property, review of provided environmental reports, and experience with the CT VRP. For the purposes of this estimate, it is assumed that:

1) RSR PMC compliance for metals (arsenic, lead, and chromium), petroleum hydrocarbons, and PAHs are achieved by applying the polluted fill exception and the ninety-five percent (95%) Upper Confidence Limit (UCL) statistical method;
2) The existing finishes (pavement with the underlying layer of clean fill/soils) and the proposed ELUR for the remaining contamination will be approved by CT DEEP;

3) The identified lead, zinc, PAH, and ETPH concentrations in groundwater beneath the Site will continue to decrease due to natural attenuation and no groundwater remediation will be necessary; and
4) The existing Site monitoring wells will be usable (no new monitoring well installations will be needed).

The estimate does not include costs for any soil investigation, physical remediation/construction activities, or for maintenance of the pavement.

If you have any questions or require additional information, please feel free to contact HRP at (860) 674-9570.

Sincerely,

Vincent L. DeLeone, LEP
Associate Project Manager

Lisa D. Aglieco
Project Manager

Attachments

ATTACHMENT 1
Area of Concern Summary Table

Conceptual Site Model Summary
14 Bridge Street
Montville, CT
February 2025

AOC	Description of AOC	Materials of Concern	Potential Release Mechanism	Potential Contaminants of Concern	PHASE II INVESTIGATION		PHASE III INVESTIGATIONS		Phase II/III Investigation Conclusions	Remediation - 2012		Polluted Fill Evaluation Samples (2012)		Remaining Soil Contamination Above Criteria	Current Status
					Investigation Techniques	Contaminants Detected	Investigation Techniques	Contaminants Detected		Post Remediation Confirmation Samples	Results	Investigation Techniques	Results		
1- UST	A former heating fuel UST located on the northern side of the property.	Fuel oil and related compounds	Pipe failure or spills could affect the surface media, shallow soils and groundwater. Deeper soil could be impacted by tank failure.	ETPH, VOCs, Pb, PAHs	1 boring, 1 soil sample	PAHs above criteria; Pb and ETPH below criteria	3 borings, 2 soil samples	ETPH below criteria; PAHs below criteria	PAHs were detected at concentrations greater than the ICDEC, but were attributed to the presence of coal fragments noted in the soil samples. The coal is likely attributable to the former railroad siding on-site and/or fill materials	6 remediation confirmation samples	The UST and associated soils were removed in September 2012. Confirmatory sampling identified PAHs in exceedance of applicable criteria in the bottom, northern and western sidewall soil samples. Additionally, ETPH was identified above the GA PMC and RDEC in the western sidewall sample.	2 soil borings	In December 2012, two soil borings were advanced to a depth of 5 feet to further delineate impacts related to the former fuel oil UST located in the northern portion of the property. ETPH was detected in exceedance of the RDEC and GA PMC from ground surface to 2 feet in depth at SB-324, and PAHs were in exceedance of the RDEC, I/C DEC and GA PMC from ground surface to 2 feet in depth at SB-325. ETPH and PAHs are presumed to be attributed to fill materials.	ETPH and PAHs	No further investigation of AOC #1 is proposed. Contamination could be managed by rendering the area inaccessible by installing a pavement cap and establishing an ELUR preventing the disturbance of soils at the Site. The pavement cap was installed in 2018 and the ELUR has yet to be implemented.
2- Fuel Oil ASTs	Three fuel oil ASTs on the southern end of the building.	Fuel oil and related compounds	Pipe failure, tank failure, or spills could affect the surface media, shallow soils and groundwater.	ETPH, VOCs, Metals, PAHs, PCBs, cyanide	2 borings, 1 soil sample, 2 shallow soil samples	ETPH above criteria	6 borings, 7 soil samples	ETPH and As above criteria. PCBs below criteria.	ETPH was detected in soil at several locations near and downgradient of the ASTs, suggesting a tank leak and/or spill. PCBs were also detected at shallow soil sample SS-2 at a concentration of 3 ppm. Arsenic was also detected at a concentration greater than the I/C DEC southwest of the building.	57 remediation confirmation samples	In October 2012, within the excavated ASTs area of AOC-2 and former pond area of AOC-6 (south of the Site building), confirmatory sampling was conducted. Arsenic and/or lead were identified above applicable criteria within all eastern sidewall samples with the exception of AOC-2-13E, which is located on the southeastern corner of the excavation. Lead and/or ETPH were reported above applicable criteria within three of the five northern sidewall soil samples (northwestern and northeastern extents). Within western sidewalls, lead concentrations above GA PMC were identified in three of the five samples with AOC-2-AST-1W (furthest western extent) also containing ETPH above GA PMC and RDEC. All southern sidewall soil samples exhibited lead and/or ETPH concentrations above applicable criteria with one sample also exceeding I/C DEC for arsenic concentrations (southeastern portion of excavation). Lead and/or ETPH were reported above applicable criteria within nine of the eleven bottom soil samples with ETPH exceedances mostly in the eastern bottom samples.	5 soil borings	A total of five soil borings were sampled at depths of up to 5 feet to define impacts associated with three former fuel oil ASTs and a former pond located south of the Site building in December 2012. Exceedances of RDEC, I/C DEC and GA PMC for PAHs were reported in four samples. Arsenic and chromium (total) were identified above RDEC and I/C DEC. ETPH was reported above RDEC and GA PMC in one sample. The identified contamination is presumed to be attributed to fill materials.	ETPH, PAHs, As and Cr	No further investigation of AOC #2 is proposed. HRP concluded that this contamination could be managed by rendering the area inaccessible by establishing an ELUR preventing the demolition of this portion of the building. The pavement cap was installed in 2018 and the ELUR has yet to be implemented.
3- Former industrial operations inside building	Drum storage, industrial chemical processes and floor drains.	Waste oil from vehicle changes, industrial adhesive, paints, solvents, and related compounds.	Drum failures or spills could affect sub-slab soil. Spills washed into floor drains could impact deeper soil.	ETPH, VOCs, Metals, PAHs, cyanide	4 borings, 4 soil samples	ETPH above criteria; PAHs and metals, below criteria	4 borings, 4 soil samples	PAHs below criteria. As and Pb below criteria	ETPH contaminated soils were identified beneath the building floor (GP-101) within the former drum storage area at a concentration above the I/C DEC. Based on the chromatography provided by the laboratory, the detected ETPH may have been related to hydraulic oils. Prior to completing the supplemental Phase III investigation, no ETPH was detected in soil samples collected adjacent to and downgradient of the former drum storage area below the loading dock. ETPH was detected in soil from SS-207 at a concentration exceeding the RDEC but not the I/C DEC. No VOCs were detected in the soil samples. No other indications of releases were detected inside the building, including at floor drains.	7 remediation confirmation samples	Confirmatory sampling of the excavated interior former drum storage platform and soil was completed in October 2012. ETPH was reported in exceedance of GA PMC and RDEC within southern sidewall samples only. No other detections were reported.	None	NA	ETPH	No further investigation of AOC #3 is proposed. HRP concluded that this contamination could be managed by rendering the area inaccessible by establishing an ELUR preventing the demolition of this portion of the building, which has yet to be implemented.
4- Loading Docks	Loading docks are located at the northern and southern ends of the building.	Raw material (paints, thinners, solvents, adhesives) deliveries and waste (same materials) shipments.	Container failures, spills, or accidents could affect the surface media, shallow soils, and groundwater.	ETPH, VOCs, Metals, PAHs, PCBs, cyanide	3 borings, 3 soil samples	ETPH, PAHs, metals, PCBs below criteria	2 shallow soil samples	PAHs below criteria; ETPH above criteria	ETPH was detected in one sample at a concentration greater than the RDEC which is likely associated with historical drum storage activities. Low levels of PAHs and metals were detected at concentration less than the RSR numeric criteria. VOCs were not detected in the soil or groundwater samples. No remedial excavations were required for this area.	Not remediated by excavation.	NA	None	NA	ETPH	No further investigation of AOC #4 is proposed. HRP concluded that the contamination could be managed by rendering the soil area inaccessible by installing a pavement cap., which was installed in 2018.
5- Septic System	A septic tank is located on the east side of the building	Waste oil, solvents, paints, adhesives, and related compounds	Discharge from floor drains via plumbing	ETPH, VOCs, Metals, PAHs, PCBs, cyanide	2 borings, 3 soil samples	PAHs and metals below criteria	Not investigated.	NA	No contamination was detected above the RSR numerical criteria in soil and groundwater samples collected near the septic system. Low levels of PAHs were detected in the soil boring advanced prior to the construction of monitoring well MW-1 (2 to 4 feet bgs).	Not remediated by excavation.	NA	None	NA	None	No further investigation or remediation of AOC #5 is proposed.
6- Former Pond	A pond formerly existed on the southeastern portion of the Site. It was subsequently filled.	Waste oil, industrial adhesive, solvents, paints, related compounds, and contaminated fill materials	Possible discharges to pond or contaminated fill.	ETPH, VOCs, Metals, PAHs, PCBs, cyanide	5 borings, 6 soil samples	ETPH above criteria. As and Pb above criteria; other metals and PAHs below criteria.	5 borings, 6 soil samples	Pb below criteria. ETPH and As above criteria	Soil samples collected within the former pond area that was historically filled detected ETPH contamination. Given the close proximity to the ASTs (AOC-2), the contamination is presumed to be attributed to the petroleum release from the ASTs, and/or fill materials. ETPH was detected in soil samples at concentrations above the GA PMC and RDEC but below the I/C DEC. No PCBs were detected above minimum laboratory detection limits. The detected concentrations of lead were below RSR numerical criteria. The detected concentration of arsenic in soil sample was above the I/C DEC and was non-detect by SPLP analysis.	Not remediated by excavation.	Remediated with AOC-2.	5 soil borings	Investigated with AOC-2.	ETPH, As and Pb	No further investigation of AOC #6 is proposed. HRP concluded that the contamination could be managed by rendering the soil area inaccessible by installing a pavement cap, utilizing the polluted fill exemption, and establishing an ELUR preventing the disturbance of soils at the Site. The pavement cap was installed in 2018 and the ELUR has yet to be implemented.
7- Former Railroad Siding	A railroad spur previously existed along the east side of the Site building	Coal ash, waste oil and related compounds	Spills, leaks or accidents could affect the surface media, shallow soils and groundwater.	ETPH, VOCs, Metals, PAHs, PCBs, cyanide	3 borings, 7 soil samples	ETPH, PAHs above criteria; Pb and ETPH below criteria. As and Pb above criteria; other metals and PAHs below criteria	See AOCs #1, 2, 4, 6	See AOCs #1, 2, 4, 6	Coal/ash fragments identified in Site soils are likely attributed to historical use of the former railroad siding and/or fill materials. ETPH and PAHs were detected in the soils which exceeded the applicable RSR numeric criteria. The ETPH and PAH contamination was attributed to the fill materials.	Not remediated by excavation.	NA	NA	NA	As, Pb, PAHs and ETPH	No further investigation of AOC #7 is proposed. HRP concluded that the contamination could be managed by rendering the area inaccessible by installing a pavement cap and establishing an ELUR preventing the disturbance of soils at the Site. The pavement cap was installed in 2018 and the ELUR has yet to be implemented.
8- Former Dumpster Location	A dumpster was formerly located south of the north loading dock	Waste oil, industrial adhesive, solvents, paints, and related compounds	Container failures, overfills, spills, or accidents could affect the surface media, shallow soils and groundwater	ETPH, VOCs, Metals, PAHs	1 boring, 1 soil sample	Compounds less than numeric criteria	Not Tested	NA	No contaminants were identified above RSR numerical criteria in the soil sample collected near the former dumpster location.	Not remediated	NA	NA	NA	None	No further investigation of AOC #8 is proposed

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February 2025

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					Investigation Techniques	Contaminants Detected	Investigation Techniques	Contaminants Detected		Post Remediation Confirmation Samples	Results	Investigation Techniques	Results		
9- Discharge Vents (interior painting operations)	Air discharge vents are located on the west side of the building	Paints, solvents, and related compounds	Discharge from vents could affect the surface media, shallow soils and groundwater	ETPH, Metals, PAHs,	1 shallow soil sample	ETPH and PAHs above criteria; metals below criteria	3 shallow soil samples	ETPH above criteria; PAHs below criteria	Initial investigations identified PAHs at concentrations above the I/C DEC in a soil sample collected near the former air discharge vents. ETPH was also detected in the soil sample slightly exceeding the RDEC. ETPH was detected in each soil sample at a concentration exceeding the RDEC but below the I/C DEC. Several PAHs were detected in each of three subsequent delineation soil samples. Concentrations of PAHs by mass analysis exceeded the RDEC, I/C DEC, and/or GA PMC. The contaminants are likely associated with former interior painting operations and/or a release of a petroleum-based product and/or fill materials.	9 remediation confirmation samples, 5 borings for widespread polluted fill determination	During October 2012 confirmatory sampling was conducted at the area of exterior excavated soil directly adjacent to the discharge vents on the western side of the Site building, PAHs were reported above applicable criteria in all sidewall and bottom soil samples. ETPH was identified in exceedance of GA PMC and RDEC in both bottom samples, one of two eastern sidewall samples, the southern sidewall sample, and one of two western sidewall samples.	4 soil borings	In December 2012, four soil borings were advanced west of the Site building adjacent to discharge vents to depths of up to 5 feet. Exceedances of RDEC, I/C DEC and GA PMC for PAHs were reported at SB-304 (0-2'), SB-305 (1-4'), SB-306 (1-5'), and SB-307 (0-5'). Additionally, arsenic concentrations above RDEC and I/C DEC and ETPH concentrations in exceedance of RDEC and GA PMC were identified at SB-307 (0-5').	As, PAHs and ETPH	No further investigation of AOC #9 is proposed. HRP concluded that the contamination could be managed by rendering the area inaccessible by installing a pavement cap, utilizing the polluted fill exemption, and establishing an ELUR preventing the disturbance of soils at the Site. The pavement cap was installed in 2018 and the ELUR has yet to be implemented. The polluted fill variance will be included in the Verification Report.
10- Boiler Room Discharge	A rubber hose discharged to the building exterior outside the boiler room.	Waste Oils and related compounds	Discharge and infiltration could affect the surface media, shallow soils and groundwater	ETPH, VOCs, Metals, PAHs, PCBs, cyanide	1 shallow soil sample	As above criteria; other metals below criteria; ETPH and PAHs ND	3 shallow soil samples	Arsenic above criteria; PAHs and Pb below criteria	Arsenic was detected at a concentration above the I/C DEC and lead was detected at a concentration below the RSR numerical criteria. No ETPH or PAHs were detected.	4 remediation confirmation samples, 4 borings for widespread polluted fill delineation	Post-excavation confirmatory sampling conducted in October 2012 revealed arsenic concentrations above I/C DEC and RDEC in the bottom soil sample taken from the excavated area within AOC-10. Soil borings SB-310, SB-311 and SB-312 were sampled in December 2012 to delineate soil impacts adjacent to the boiler room southwest of the Site building. Concentrations of PAHs were above RDEC, I/C DEC, and GA PMC at SB-310 (0-2.5'). Detected PAHs and ETPH in two samples were below RSR criteria. No exceedances of applicable criteria for PAHs, ETPH, and metals were noted for SB-311 and SB-312.	NA	NA	As and PAHs	No further investigation of AOC #10 is proposed. HRP concluded that the contamination could be managed by rendering the area inaccessible by installing a pavement cap, utilizing the polluted fill exemption, and establishing an ELUR preventing the disturbance of soils at the Site. The pavement cap was installed in 2018 and the ELUR has yet to be implemented.
Sitewide Polluted Fill	Polluted material brought to the Site to build up the ground surface. Polluted fill comprises the majority of subsurface material at the Site as well as the Montville area.	Coal ash, wood ash, coal fragments, or asphalt fragments,	The fill was emplaced over various intervals to expand the landmass and was not prohibited by law at the time of placement.	ETPH, PAHs, arsenic, chromium, and lead	Not Investigated	NA	Not Investigated	NA	Soils in specific locations on the Site were found to be contaminated with ETPH, SVOCs/PAHs, PCBs and heavy metals (primarily arsenic). This contamination is presumed to have generally originated from on-site historical releases and/or historically placed fill material at the Site.	Not remediated by excavation.	NA	34 borings outside identified AOCs	As presented in the September 2017 RAP, HRP conducted 95% UCL calculations pursuant to the RSRs for arsenic and chromium. Using the Environmental Protection Agency (EPA) software ProUCL 5.1, 95% UCL arsenic and chromium concentrations were calculated at values below applicable DEC. Therefore, fill polluted with PAHs and petroleum hydrocarbons on-site can be rendered inaccessible directly beneath bituminous concrete or the site building with an environmental land use restriction.	As, PAH and ETPH	HRP conducted 95% UCL calculations pursuant to the RSRs for arsenic and chromium. UCL arsenic and chromium concentrations were calculated at values below applicable DEC. Therefore, fill polluted with PAHs and ETPH on-Site can be rendered inaccessible directly beneath bituminous concrete or the Site building with an ELUR. No further investigation is proposed. The pavement cap was installed in 2018 and the ELUR has yet to be implemented.
Groundwater	Groundwater flows to the east towards the Oxoboxo Brook. Site was connected to public water on 11/29/2011.	NA	Identified releases from AOCs and fill material.	ETPH, PAHs, cyanide, arsenic, chromium, and lead	Three monitoring wells (MW-1, MW-2 and MW-3) and the interior potable well were sampled in January 18, 2008.	ETPH was detected at a concentration slightly exceeding the GWPC in monitoring well MW-3. Zinc was also detected in MW-3 at a concentration slightly exceeding the SWPC of 0.123 mg/L. No VOCs, cyanide or PAHs were detected in the groundwater samples. No COCs detected in the potable well.	Not Investigated	NA	NA	All previously-existing overburden monitoring wells were destroyed during remediation due to location within the proposed excavation/repaving areas. Four monitoring wells (MW-1 through MW-4) were installed in December 2018 upon completion of remediation activities in areas downgradient of remediation areas and/or hydrologically relevant. Additionally, one potable well is present within the Site building.	Groundwater monitoring was performed on January 17, 2019, April 24, 2019, July 24, 2019, October 31, 2019 and March 24, 2020. No VOCs were detected in the groundwater during the five monitoring events. Cyanide was detected at concentrations less than the GWPC and SWPC. No VOCs or cyanide were detected above RSR criteria in the groundwater samples collected from the Site during the quarterly monitoring events conducted since 2019. Therefore, VOCs and cyanide are compliant with applicable groundwater criteria for the Site. Several PAHs were reported at concentrations exceeding GWPC and SWPC in groundwater collected at monitoring well MW-2. Acenaphthylene and Chrysene were detected at concentrations exceeding SWPC in groundwater collected at monitoring wells MW-2 and/or MW-3. Various PAHs were also detected below applicable criteria in groundwater samples collected at monitoring wells MW-2, MW-3, and MW-4. PAHs were not detected above SWPC in downgradient wells; therefore, SWPC compliance was demonstrated for PAHs in groundwater at the Site. However, groundwater compliance with GWPC is not demonstrated for PAHs at the Site. Zinc was detected at concentrations greater than the SWPC in the groundwater from MW-2 and MW-4 (downgradient well), therefore SWPC compliance is not demonstrated. Lead was detected at concentrations exceeding the GWPC and SWPC in MW-2, therefore GWPC compliance is not demonstrated for the GWPC. Lead was not detected above SWPC in downgradient wells; therefore, SWPC compliance was demonstrated for lead in groundwater at the Site. ETPH was detected at concentrations greater than the GWPC and SWPC in groundwater collected from monitoring wells; therefore, SWPC and GWPC compliance was not demonstrated for ETPH in groundwater at the Site.	NA	NA	ETPH, Pb, Zn, PAHs	HRP recommended continuing groundwater monitoring on an annual schedule to evaluate contaminant trends in accordance with Voluntary Remediation Program requirements. Sample filtering for select groundwater samples should be conducted to evaluate the effect of turbidity on lead and zinc concentrations. Given the GWPC and/or SWPC exceedances for metals, PAHs, and ETPH, compliance with the RSRs for groundwater is unlikely in the near future without a remedial activity and/or the potential use of alternative methods of compliance.

VOCs = Volatile Organic Compounds
Metals = 8 RCRA Metals plus Cu, Ni, Zn
ETPH = Extractable Total Petroleum Hydrocarbons
PCBs = Polychlorinated Biphenyls
PAHs = Polycyclic Aromatic Hydrocarbons
NA = not applicable
ND = non-detect
IDEC = Industrial/Commercial Direct Exposure Criteria
ppb = parts per billion
ppm = parts per million
As = arsenic
Pb = lead
Zn - zinc
GW = groundwater
AOC = Area of Concern
AST = Aboveground Storage Tank
UST = Underground Storage Tank

ATTACHMENT 2
Budgetary Cost Estimate

PRELIMINARY COST ESTIMATE
ENVIRONMENTAL SUBSURFACE INVESTIGATION AND REMEDIATION

14 Bridge Street
Montville, Connecticut
HRP# MON3008.RA

February 2025

TASK No.	TASK ITEM	DESCRIPTION & GOALS	ESTIMATED COST		
1	Significant Environmental Hazard (SEH) Inspection of Pavement Cap	An annual inspection of the pavement cap is required until the ELUR is implemented at the Site (Task 7) at which point the ELUR inspection would be conducted which would include the cap. The most recent inspection was conducted by HRP in June 2022. HRP will submit the necessary inspection report to CT DEEP. Cost included is for one inspection.	$1,900	to	$1,900
2	Form III and ECAF Filing	Preparation and submittal of a Form III and Environmental Condition Assessment Form (ECAF), pursuant to requirements of the CT DEEP Property Transfer Program. Includes CT DEEP filing fee of $3,000.	$9,300	to	$11,100
3	Completion of Investigation Submittal	Preparation of a completion of investigation report and CT DEEP completion of investigation (COI) form submittal documenting the completed environmental investigations pursuant to the Remediation Standard Regulations (CT RSRs).	$4,600	to	$6,900
4	Environmental Use Restriction	Recordation of an Environmental Use Restriction (EUR) for the site; includes A-2 survey/EUR survey map preparation costs and estimated legal fees for subordination agreements, land record filing, etc. Includes CT DEEP filing fee of $5,000. The EUR documentation has been partially completed; however, EUR regulations were revised in 2021 resulting in most items required to be redone/revised.	$22,000	to	$30,000
5	Alternative Standards Calculations and Requests	Evaluate the use of alternative CT RSR groundwater standards if groundwater continues to be out of compliance with the RSRs, and requests to use alternative standards for CT DEEP approval, as necessary.	$4,000	to	$6,000
6	Groundwater Monitoring - one event	Groundwater at the Site has not been sampled since March 2020. Conduct a groundwater monitoring event to evaluate the current condition of groundwater beneath the Site. Sampling would include the four (4) existing monitoring wells for compounds that exceed RSRs (PAHs, lead, zinc and ETPH). Collection of filtered (10-micron) samples to evaluate metals due to turbidity, laboratory analysis of groundwater samples for compounds that exceed RSRs, and report preparation. If results are not favorable, annual groundwater monitoring should begin to evaluate natural attenuation (Task 7). If results are favorable, then compliance groundwater monitoring may begin (Task 9).	$4,000	to	$5,000
7	Groundwater Monitoring - 10 annual events.	Conduct annual groundwater monitoring to evaluate natural attenuation over a 10 year period consisting of: 10 annual events for the four (4) existing Site monitoring wells for compounds that exceed RSRs, collection of filtered (10-micron) samples to evaluate metals due to turbidity, laboratory analysis of groundwater samples for compounds that exceed RSRs, and annual report preparation (10 annual reports).	$40,000	to	$60,000
8	EUR Inspections	Conduct annual EUR inspections over a 10 year period, including documentation. This cost estimate includes one 5-year comprehensive inspection to be conducted by a LEP five years following the implementation of the EUR. EUR inspections beyond 10 years will be required, but are not included in this cost estimate.	$22,000	to	$26,000
9	Final Compliance Groundwater Monitoring	Completion of quarterly compliance/post-remediation groundwater monitoring pursuant to the CT RSRs, using 4 monitoring wells assuming a one year duration (4 sampling events). Includes preparation of a groundwater report.	$16,000	to	$20,000
10	Site Verification	Verification of completed environmental investigations and remediation by a licensed environmental professional (LEP) pursuant to CT RSRs. The Verification cannot be submitted until the EUR is recorded on the land records and groundwater is compliant with the RSRs (four quarters over a 2 year period with concentrations of compounds less than their applicable RSR criteria). An interim verification for soil compliance may be necessary if groundwater compliance is not achieved.	$21,000	to	$29,000
		TOTAL ESTIMATED PROJECTION	**$144,800**	**to**	**$195,900**
		TOTAL ESTIMATED PROJECTION WITH 20% CONTINGENCY	**$173,760**	**to**	**$235,080**

This cost estimate is subject to the Cost Opinion Limitations included in Attachment 3.

This preliminary cost estimate is based on the environmental information pertaining to the Site that is known to-date.

This cost estimate includes tasks deemed necessary to achieve compliance with Connecticut Department of Energy and Environmental Protection (CT DEEP) Remediation Standard Regulations (CT RSRs). The Site is anticipated to enter the Connecticut Transfer Act Program and be delegated to an licensed environmental professional (LEP). Site verification, presumably by a LEP, of completed environmental work will ultimately be required.

It is assumed the future use of the property will be commercial/industrial.

This cost estimate assumes that no additional soil remediation is necessary.

This cost estimate assumes that RSR Pollutant Mobility Criteria (PMC) compliance for metals (arsenic, lead and chromium), petroleum hydrocarbons, and semi-volatile organic compounds (SVOCs) are achieved by applying the polluted fill exemption and the 95% UCL statistical method.

This cost estimate assumes that the existing finishes (pavement with the underlying layer of clean fill/soils) will be the proposed EUR for remaining soil contamination will be approved by CT DEEP.

This cost estimate assumes that the identified lead, zinc, SVOC, and extractable total petroleum hydrocarbons (ETPH) concentrations in groundwater beneath the Site will continue to decrease due to natural attenuation and no groundwater remediation will be necessary.

This cost estimate assumes that the existing Site monitoring wells will be usable (no new monitoring well installations will be needed).

This cost estimate assumes that there are no off-site contaminant migration issues.

This cost estimate does not include long term (beyond 10 years) groundwater monitoring, EUR/engineered control monitoring/maintenance, or financial assurance.

This cost estimate does not include any soil vapor mitigation.

This cost estimate does not include demolition/removal or construction/installation/renovation of any buildings, structures, or utilities.

ATTACHMENT 3
Cost Opinion Limitations

PURPOSE OF ESTIMATE

1. HRP Associates, Inc. ("HRP") prepared the order of magnitude estimate for the Site (the "Estimate") for the exclusive use of the addressee of the Estimate (such addressee being hereinafter referred to as the "Client"). HRP prepared the Estimate for the Client for the limited purpose set forth therein. Reliance by any party other than the Client, for any use or purpose, without HRP's prior written permission, shall be at that party's sole risk, and without any liability to HRP.

BASIS OF ESTIMATE; ASSUMPTIONS

2. The Estimate is based on the Site background described therein as well as the other assumptions set forth herein and reflects HRP's professional judgment based on its current knowledge of the Site and previous experience with similar sites. The costs set forth in the Estimate must be considered not as scientific or engineering certainties, but rather as HRP's professional opinions based on the limited data gathered during the course of evaluation of the Site and HRP's work related thereto.

3. In preparing the Estimate, HRP used the degree of skill and care ordinarily exercised by qualified professionals performing the same type of services at the same time, under similar conditions, and at the same or a similar property. No warranty, expressed or implied, is made.

4. HRP's opinion of cost is based on limited data available to HRP, which may not be sufficient to identify each and every condition existing at the Site which may (i) constitute noncompliance with applicable governmental statutes, rules, and regulations, (ii) reveal the presence of hazardous materials and/or (iii) require additional investigation and/or remediation.

5. The projected costs set forth in the Estimate relate solely to those conditions which are described therein.

6. Observations described in the Estimate were made under the conditions stated therein. Where access to portions of a structure or the Site was unavailable or limited, HRP renders no opinion as to the condition of those portions of the Site or structure.

7. The conclusions presented in the Estimate are based solely upon the evaluations, observations and services described therein, and not on scientific tasks or procedures beyond the scope described in the Estimate or the time and budgetary constraints imposed by the Client.

8. While the preliminary opinion of cost set forth in the Estimate represents HRP's professional judgment in this matter, actual conditions encountered during further investigation or remediation may result in higher or lower costs.

9. The preliminary opinion of cost set forth in the Estimate includes only those cost items identified and should not be assumed to include other costs such as legal, administrative, permitting or others. The preliminary opinion of cost does not include any financial assurance fees that may be incurred if remediation of the Site requires use of an engineered control or on-going monitoring costs associated with an environmental land use restriction. The preliminary opinion of cost set forth in the Estimate also does not include any costs with respect to third-party claims, fines, penalties, or other charges which may be assessed against any responsible party because of either the existence of present conditions or the future existence or discovery of any such conditions at the Site.

10. The Estimate contains approximate cost opinions for purposes of evaluating alternative investigative and/or remedial strategies or programs. These estimates may involve approximate quantity evaluations and Unit cost assumptions. Actual quantities and unit costs may vary. In

addition, the Estimate may include as components thereof estimated amounts to be charged by third-party contractors and service providers. Unless stated otherwise in the Estimate, HRP has not obtained bids or quotes from contractors or other third parties. A preliminary cost opinion of the nature set forth in the Estimate is likely to vary substantially from contractors' or other third party's bid prices and is not to be considered the equivalent of nor as reliable as contractors' or other third party's bid prices. Prices for similar work undertaken in the future will also be subject to changes in market pricing, which are not within HRP's control. Detailed quantity, unit cost and other third-party cost estimating should be performed by professional, experienced cost estimators to determine actual cost.

RELIANCE ON INFORMATION PROVIDED BY OTHERS

11. In preparing the Estimate, HRP may have relied on certain information provided by the Client, state, and local officials, and/or other parties referenced therein available to HRP at the time of the evaluation. HRP did not attempt to independently verify the accuracy or completeness of all information reviewed or received during the course of this evaluation.

STATUTES AND REGULATIONS

12. HRP used reasonable care in identifying and interpreting statutes and regulations which are relevant to the costs estimated. These statutes and regulations are subject to various, and possibly contradictory, interpretations. Compliance with codes and regulations by other parties is beyond HRP's control.

13. Governmental agencies' interpretations, requirements, and enforcement policies may vary from region to region, district office to district office, from state to state, and between federal and state agencies. In addition, statutes, rules, standards, and regulations may be legislatively changed and inter-agency and intra-agency policies may be changed from present practices. HRP has used its experience and professional judgment in making assumptions regarding how current statutes, rules, standards, regulations and regulatory policies may affect remediation costs, but HRP cannot predict how any such statutes, rules, standards, regulations or regulatory policies (or interpretations, requirements or enforcement policies related thereto) may be changed in the future.