Olympus Technical Services, Inc.

July 18, 2025

Ms. Rachel Mindt
Petroleum Tank Cleanup Section
Montana Department of Environmental Quality
P.O. Box 200901
Helena, MT 59600-0901

Re: Remedial Investigation Work Plan, WPID# 35016
Town Pump East Helena #1, 418 W Main Street, East Helena, Lewis & Clark County, Montana, Facility ID# 25-08697; Release# 6683; Treads ID# 23791, Olympus WO# C3161

Dear Ms. Mindt:

This letter presents a work plan developed by Olympus Technical Services (Olympus), submitted on behalf of Town Pump, Inc. (Town Pump), for the Town Pump East Helena #1 facility located at 418 West Main Street North Montana Avenue in East Helena, Montana (Site). A Site topographic map is shown on Figure 1 and a Site features map is shown on Figure 2. The Montana Department of Environmental Quality (DEQ) requested this work plan on February 20, 2025 and discussed modifications and resubmittal of the work plan in a meeting on June 20, 2025. This work plan presents a detailed scope of work and cost estimate to advance soil borings and install monitoring wells onsite to delineate petroleum impacts in soil and groundwater.

Release History

The release was discovered on December 30, 2024 during underground storage tank (UST) decommissioning and removal activities and was reported to DEQ as a suspected release. Olympus conducted an initial investigation from December 30, 2024 through January 2, 2025, and field screening was conducted with a photoionization detector (PID). The highest PID response measured during the soil excavation was 640 parts per million (ppm) to a depth of approximately 12 feet below ground surface (bgs) beneath an unleaded premium gasoline UST. Olympus collected a waste characterization sample for analysis of volatile petroleum hydrocarbons (VPH) and extractable petroleum hydrocarbons (EPH). The release was confirmed by analytical data on January 20, 2025. Benzene, ethylbenzene, xylenes, naphthalene, C9-C10 aromatics, C5-C8 aliphatics, and C9-C12 aliphatics concentrations in the waste characterization sample exceeded the Release Confirmation Risk-Based Screening Levels (RBSLs).

UST closure samples collected by Mile High Petroleum from below the USTs and fuel dispenser piping were below the applicable Leaching to Groundwater and Direct Contact Construction RBSLs, except for C9-C18 aliphatics beneath the 8,000-gallon non-ethanol gasoline UST at a depth of approximately 15 feet bgs. Soil analytical results are provided as Table 1.

The excavation was backfilled with native material, including petroleum impacted soil above the Leaching to Groundwater RBSLs for benzene, ethylbenzene, xylenes, naphthalene, C9-C10 aromatics, and C5-C8 aliphatics. The Site was redeveloped for a lease tenant, Creative

Stitches, which began operating at the Site in April 2025. All known USTs and associated piping have been removed from the property.

Facility Conditions

The Site is located in the Helena Valley in the NW ¼ of the SE ¼ of the SW ¼ of section 25, Township 10 north, Range 3 West, of Lewis and Clark County (Figure 1). The area surrounding the Site is comprised of commercial businesses and residential properties. The property is bordered to the south by West Main Street, with US Highway 12 and a railroad mainline track beyond. The property west of the Site was developed as a Town Pump gas station in 2024. The properties to the north and east are residential.

The Site building was remodeled in early 2025 and is currently leased to Creative Stitches, a local quilt shop. The former UST basin and dispenser island area was repaved with asphalt after the excavation.

The Site is located within the EPA East Helena Superfund site boundary for smelter emissions that occurred between 1888 to 2001. The lead and zinc smelter formerly operated by ASARCO was located approximately 2,000 feet southeast of the Site. The primary contaminants of concern are heavy metals.

The groundwater in the Helena Valley generally flows north- to northeast towards the Missouri River. The nearest surface water body is Prickly Pear Creek, located approximately 2,200 feet east of the former UST basin. The Site geology is summarized in the Montana Bureau of Mines and Geology (MBMG) *Geologic Map of the Helena Valley, West Central Montana (Open File Report 689)* published in 2017. The Site is underlain by Pleistocene-age Pediment deposits comprised of poorly sorted pebble and cobble gravel with a sandy, silt matrix. The Site is likely underlain by the Eocene-age Climbing Arrow Formation, which consists of poorly sorted coarse, ash-rich sand and silt with floating larger angular clasts of varying size and lithologies. This ash layer is commonly encountered throughout the Helena Valley at depths ranging from approximately 14 to 35 feet below ground surface. Nearby monitoring wells associated with the ASARCO investigation encountered groundwater between approximately 24 to 28 ft bgs within the volcanic ash layer.

East Helena's public water supply wells are located north of the Site on Wylie Drive between 1.2 and 1.9 miles north-northwest, and east of the Site along McClellan Creek approximately 4 miles southeast. Private wells are located within 1,000 feet of the Site.

Scope of Work

Receptor Survey

Olympus will conduct a receptor survey to identify potential receptors and migration pathways in the area of the petroleum impacted soil. Olympus will review available historical records, maps, and data for the Site. Montana One Call will be notified a minimum of 72 hours before beginning drilling operations. A private utility locator will be subcontracted prior to drilling operations to confirm the public utility locate markings, mark all known service lines onsite, and clear each proposed soil boring location of utilities. The locates completed by GeoSearch Services, LLC. of Great Falls, Montana include ground-penetrating radar, which can estimate the depth of utilities if ideal subsurface conditions are present. Olympus will confirm with local utilities (water, sewer,

electrical, gas, and telecommunication, etc.) the depth and construction details of the public utilities as part of this investigation.

Olympus will identify surface water within one mile of the Site, groundwater wells within one-half mile of the Site, and foundation types for buildings within 500 feet of the Site. The results of this survey will be presented in the Remedial Investigation Report and incorporated into the Release Closure Plan (RCP) conceptual site model.

Soil Boring and Monitoring Well Installation

Olympus will advance up to six soil borings to a depth of approximately 30 feet bgs using air rotary drilling methods due to the presence of large cobbles in the Site area. The locations of the proposed soil borings are shown of Figure 2. The actual locations of the proposed soil borings will be determined in the field based on the utility clearance and accessibility. Public and private utility locates will be conducted prior to drilling activities.

Continuous soil samples will be collected during drilling operations. Air rotary soil cuttings will be collected in a roll-off bin for disposal at the Lewis and Clark County landfill. Soil characteristics will be logged using the Unified Soil Classification System (USCS). Soil cuttings will be collected in approximate 1-2 foot intervals to field screen for volatile organic compounds (VOCs) with a PID utilizing a headspace method.

Up to three soil samples will be collected from each soil boring to represent worst-case impacts (i.e., PID readings above 100 ppm), the groundwater interface, or the bottom of the boring. Should no impacts be identified, one sample will be collected from the groundwater interface. The actual number and depth of soil samples will be determined in the field.

All soil samples will be collected into laboratory-supplied containers, stored on ice, and submitted under chain-of-custody procedures to Energy Laboratories, Inc. (Energy) of Helena, Montana. The samples will be analyzed for VPH and EPH Screen. Soil samples exceeding DEQ's fractionation limit for EPH screen may be further analyzed for EPH fractions upon review of the analytical results. One field duplicate will be collected and analyzed for VPH and EPH Screen. Extra soil volume will be collected for one VPH sample for the laboratory to use for VPH matrix spike/matrix spike duplicate analysis.

Olympus will complete a minimum of four soil borings as monitoring wells to characterize the local groundwater flow direction and hydraulic gradient; however, up to six wells may be installed based on field observations. The soil borings/monitoring wells will be placed as follows:

- Source area well in the former UST basin near the former 8,000-gallon non-ethanol gasoline UST;
- Source area well in the former fuel dispenser island;
- Assumed downgradient well along the northeast boundary of the UST basin;
- Assumed crossgradient well along the western boundary of the UST basin;
- Assumed cross-gradient soil boring east of the dispenser island; and
- Assumed upgradient soil boring along the southern property boundary.

Monitoring wells will be installed by a licensed Montana Monitoring Well Constructor (MWC). Monitoring wells will be constructed of 2-inch diameter threaded PVC well materials with 10 to 15 feet of 0.010 slotted screen. The total depth of the well is anticipated to be 30 feet bgs, but the actual depth will be determined based on field observations. The annulus will be filled with

10/20 Colorado Silica Sand from the base of the boring to a depth of at least two feet above the top of the well screen. Bentonite chips will be placed in the annulus above the sand to a depth of approximately two feet bgs. The well will be completed with a traffic-rated steel flushmount monument encased in a concrete collar, and a locking well cap will be used to seal the well casing. A Montana-licensed professional surveyor will be contracted to survey the horizontal position of the well in the North American Datum of 1983 Montana State Plane coordinate system in feet, and the vertical elevation of the top of casing in the North American Vertical Datum of 2011 in feet above mean sea level.

The monitoring wells will be developed using a high-flow submersible development pump and surge block method. A minimum of three surge intervals will be completed to establish hydraulic conductivity through the filter pack to the aquifer. Groundwater will be allowed to stabilize at least one week prior to sampling the monitoring wells.

Groundwater Monitoring

Semi-annual groundwater monitoring events will be conducted at the Site during approximate low and high groundwater conditions (anticipated November/December 2025 and May/June 2026). The analytical results of the first event will be submitted to DEQ in an interim data submittal following receipt of the laboratory reports. Groundwater monitoring will include measuring static water levels (SWLs) using an electronic water level probe to develop a potentiometric map of the Site.

Groundwater samples will be collected from up to six Site monitoring wells following Olympus' standard operating procedures for low-flow sampling. A bladder pump operating under low-flow conditions will be utilized to collect groundwater samples. Field parameters of dissolved oxygen (DO), oxygen reduction potential (ORP), pH, specific conductivity (SC), temperature, turbidity, and SWLs will be measured in 3-5 minute intervals. Upon groundwater parameter stabilization, groundwater samples will be collected into laboratory-supplied containers, preserved, stored on ice, and submitted under chain-of-custody procedures to Energy. The samples will be analyzed for VPH and EPH. Groundwater samples exceeding DEQ’s fractionation limit for EPH screen may be further analyzed for EPH fractions upon review of the analytical results. During the first groundwater monitoring event, groundwater samples will also be analyzed for lead scavengers, 1,2-dichloroethane (DCA) and 1,2-dibromoethane (EDB). Lead scavengers will be included in subsequent events if analytes are detected at concentrations above the Human Health Standard (HHS).

Quality assurance/quality control (QA/QC) procedures will be followed to test for the provision of reliable, accurate, and defensible data. QA/QC samples will be collected to verify the precision and accuracy of the laboratory generated data. One duplicate groundwater sample will be collected per event to test for precision related to sampling methods. Field duplicates will be analyzed for VPH and EPH only.

Interim Data Submittal

Olympus will present the results of the soil boring/well installation and first groundwater monitoring event in an Interim Data Submittal (IDS) following the receipt of all laboratory reports. The IDS will include a cover letter, updated site map, potentiometric and groundwater analytical maps, data tables, soil boring/monitoring well logs, groundwater sampling forms, and analytical reports with accompanying data validation summary forms.

Release Closure Plan

A Release Closure Plan (RCP) will be developed for the Site based on the results of the soil boring and groundwater monitoring events. The RCP will include a Site history, discussion and results of investigative, post-investigative, and corrective action work to date; as well as development of a conceptual site model, and evaluation of exposure pathways and remedial alternatives required to resolve the release.

Remedial Investigation Report

Olympus will present the results of the soil investigation, receptor survey, and two semi-annual groundwater monitoring events in one remedial investigation report following the receipt of the second groundwater monitoring event. The report will include a discussion of investigation results, site maps, tabulated analytical data, soil boring/monitoring well logs, groundwater sampling forms, laboratory reports, data validation summary forms, RCP, and conclusions and recommendations based on the monitoring results.

Cost Estimate

The cost to complete the scope of work outlined above is detailed on the attached cost schedule. Work Plan development, mobilization, soil boring installation, well development, groundwater monitoring, IDS, RCP, data validation, and remedial investigation report costs will be invoiced at unit cost rates approved by PTRCB. Unit cost worksheets for RI work plan preparation and reporting, soil boring and well installation, and groundwater monitoring are attached to this work plan. Any work completed beyond 2025 will be invoiced at PTRCB rates updated for that year. Project management and field oversight activities will be invoiced on a time and materials basis.

Schedule

Remedial Investigation activities would ideally begin in the Fall of 2025, upon DEQ approval of this work plan. The utility locate, receptor survey, and drilling activities are expected to be completed in one week, including mobilization/demobilization of the drilling crew. Olympus will provide at least one week advance notice of Site work. Please contact me at 406-443-3087 with comments or questions regarding the proposed scope of work or the project.

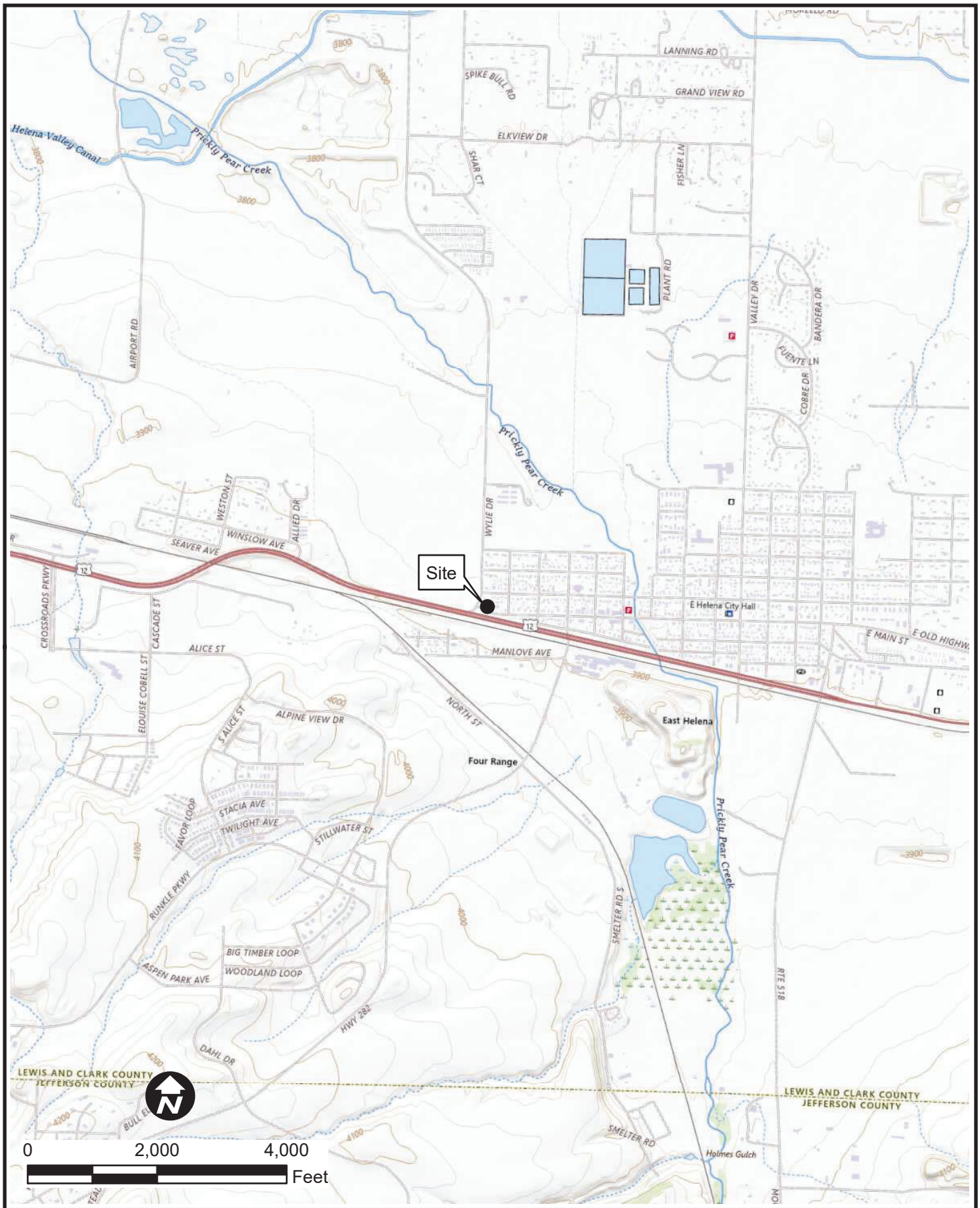
Sincerely,

Diane Tackett

Diane Tackett, PG
Project Geologist

Attachments: Figures 1& 2
Table 1
Work Plan Cost Estimate
Groundwater Monitoring and Sampling Unit Cost Worksheet
Soil Boring/Monitoring Well Installation Unit Cost Worksheet
Subcontractor Estimates

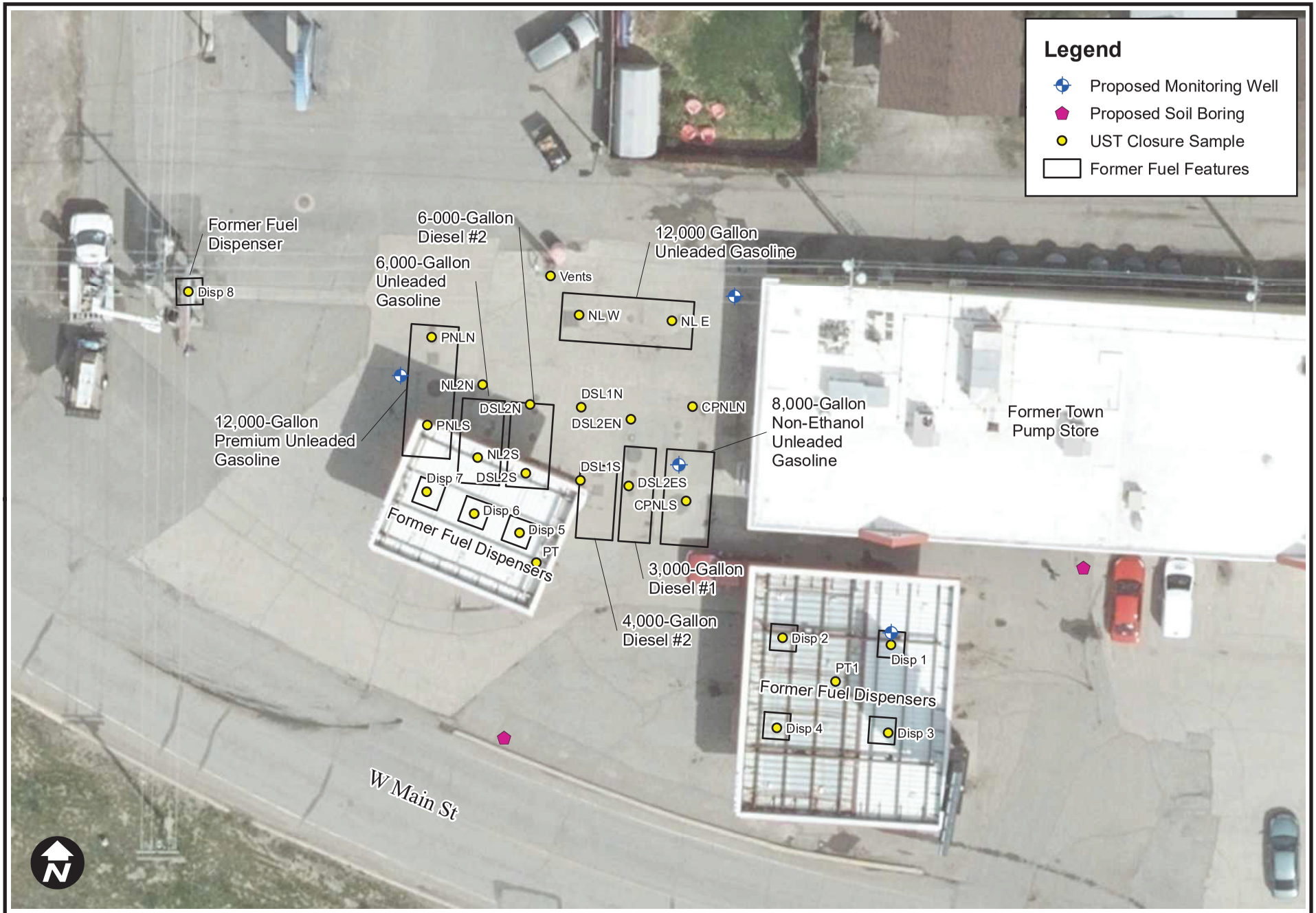
cc: Paul Townsend, Town Pump, P.O. Box 6000, Butte, MT 59702



Olympus Technical Services, Inc.	Site Topographic Map Town Pump #1 East Helena, Montana	FIGURE 1

F1_Topo.mxd

USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed May, 2020.



Olympus Technical Services, Inc.

0 25 50 Feet

Site Features Map
Town Pump #1
East Helena, Montana

FIGURE 2

F2_SiteMap.mxd

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Table 1. Soil Analytical Results for VPH and EPH (mg/kg)

Sample ID	Depth BGS (ft)	Sample Date	MTBE	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Naph-thalene	C9-C10 Aromatics	C5-C8 Aliphatics	C9-C12 Aliphatics	TPH	EPH screen	C9-C18 Aliphatics	C19-C36 Aliphatics	C11-C22 Aromatics	TEH
Release Confirmation RBSL[1]			**0.078**	**0.07**	**21**	**8.4**	**75**	**2.9**	**60**	**90**	**160**	**--**	**--**	**290**	**25,000**	**370**	**--**
Leaching to Groundwater (0-10)[2]			**0.078**	**0.07**	**21**	**26**	**320**	**12**	**130**	**220**	**11,000**	**NSL**	**NSL**	**53,000**	**NA**	**370**	**NSL**
Direct Contact Construction[3]			**9,100**	**190**	**14,000**	**1,200**	**1,900**	**120**	**4,000**	**2,000**	**3,000**	**NSL**	**NSL**	**6,000**	**1,600,000**	**33,000**	**NSL**
Waste Characterization																	
C3161-WC	8	1/2/2025	<0.12	**0.082**	**4.3**	**44**	**359**	**60**	**3,170**	**540**	**2,560**	**5,320**	**2,070**	--	--	--	--
UST Closure Samples																	
NL2N	16	12/30/2024	<0.10	<0.052	<0.052	<0.052	<0.052	<0.10	<2.1	<2.1	<2.1	<2.1	<20	--	--	--	--
NL2S	16	12/30/2024	<0.11	<0.053	<0.053	<0.053	<0.053	<0.11	<2.1	<2.1	<2.1	<2.1	<20	--	--	--	--
PT1	4	12/30/2024	<0.11	<0.057	**0.076**	**0.040 J**	**0.31**	**0.084 J**	**8.9**	**1.2 J**	**11**	**28**	**398**	**213**	**66**	**53**	**341**
PNLN	15	12/30/2024	<0.10	<0.052	<0.052	<0.052	<0.052	<0.10	<2.1	<2.1	<2.1	<2.1	<20	--	--	--	--
PNLS	15	12/30/2024	<0.12	<0.060	<0.060	<0.060	**0.27**	<0.12	**2.0 J**	**2.7**	**4.3**	**9.9**	**10 J**	--	--	--	--
DSL2 N	15	12/31/2024	<0.11	<0.054	<0.054	<0.054	<0.054	<0.11	<2.1	<2.1	**1.8 J**	**2.8**	**7.8J**	--	--	--	--
DSL2 S	15	12/31/2024	<0.11	<0.054	<0.054	<0.054	<0.054	<0.11	<2.2	<2.2	<2.2	<2.2	<20	--	--	--	--
DSL1 N	16	12/31/2024	<0.10	<0.052	**0.13**	**0.40**	**3.1**	**0.94**	**110**	**25**	**106**	**217**	**7.7 J**	--	--	--	--
DSL1 S	16	12/31/2024	<0.11	<0.054	<0.054	<0.054	**0.10**	<0.11	**7.1**	<2.2	**10**	**19**	**14 J**	--	--	--	--
DSL2 EN	16	12/31/2024	<0.10	<0.052	<0.052	<0.052	<0.052	<0.10	<2.1	**0.78 J**	**3.3**	**4.9**	**9.2 J**	--	--	--	--
DSL2 ES	16	12/31/2024	<0.11	<0.054	<0.054	<0.054	<0.054	<0.11	<2.2	<2.2	<2.2	<2.2	<20	--	--	--	--
CPNL N	17	1/2/2025	<0.11	<0.053	**0.14**	**2.5**	**28**	**9.1**	**375**	**24**	**329**	**649**	**215**	**54**	<11	**45**	**163**
CPNL S	17	1/2/2025	<0.11	<0.054	<0.054	<0.054	<0.054	<0.11	<2.1	<2.1	<2.1	<2.1	<20	--	--	--	--
NL E	16	1/2/2025	<0.10	<0.052	<0.052	<0.052	<0.052	<0.10	<2.1	<2.1	**1.5 J**	**2.2**	**38**	--	--	--	--
NL W	16	1/2/2025	<0.11	<0.056	<0.056	<0.056	**0.074**	<0.11	<2.2	<2.2	**1.4 J**	**2.0 J**	**32**	--	--	--	--
Disp1	4	1/8/2025	<0.12	<0.060	**0.057 J**	**0.052 J**	**0.74**	**0.18**	**38**	**7.0**	**37**	**86**	**1,250**	**587**	**222**	**167**	**991**
Disp2	4	1/8/2025	<0.11	<0.053	<0.053	<0.053	<0.053	<0.11	<2.1	<2.1	<2.1	<2.1	<20	--	--	--	--
Disp3	4	1/8/2025	<0.12	<0.059	<0.059	<0.059	<0.059	<0.12	<2.3	<2.3	<2.3	<2.3	<20	--	--	--	--
Disp4	4	1/8/2025	<0.12	<0.061	<0.061	<0.061	**0.080**	**0.17**	**17**	<2.5	**18**	**54**	**458**	**165**	**102**	**36**	**306**
Disp5	4	1/8/2025	<0.12	<0.058	<0.058	<0.058	**0.068**	**0.18**	**24**	**1.9 J**	**26**	**79**	**277**	**106**	**59**	**40**	**207**
Disp6	4	1/8/2025	<0.12	<0.062	<0.062	<0.062	<0.062	<0.12	<2.5	<2.5	<2.5	<2.5	**16 J**	--	--	--	--
Disp7	4	1/8/2025	<0.11	<0.055	<0.055	<0.055	<0.055	<0.11	<2.2	<2.2	<2.2	<2.2	<20	--	--	--	--
Disp8	4	1/8/2025	<0.10	<0.052	**0.58**	**0.18**	**0.92**	<0.10	**6.1**	**15**	**7.2**	**34**	**2,330**	**699**	**701**	**200**	**1,600**
Vents	5	1/8/2025	<0.12	<0.061	<0.061	**0.048 J**	**0.11**	**0.083 J**	**24**	**1.6 J**	**24**	**70**	**377**	**182**	**82**	**56**	**321**
PT	5	1/8/2025	<0.12	<0.059	<0.059	<0.059	<0.059	<0.12	<2.4	<2.4	**2.6**	**4.8**	**207**	**79**	**58**	**16**	**152**

1 - Release Confirmation RBSL, DEQ February 2024
2 - Tier 1 RBSL for leaching to groundwater (0-10 feet), DEQ February 2024
3 - Tier 1 RBSL for Direct Contact Construction Workers, DEQ February 2024
NSL - No screening level
< indicates concentration not detected above the referenced laboratory reporting limit.
-- not analyzed
BOLD values indicate concentration exceeds RBSL or Leaching to Groundwater

622	Release confirmed to soil onsite
872	Concentration exceeds Tier 1 Leaching to Groundwater (0-10 ft) RBSLs
2,370	Concentration exceeds Tier 1 Direct Contact to Construction Worker RBSLs