

December 20, 2024

Mr. Donnie McCurry
Petroleum Tank Cleanup Section
Montana Department of Environmental Quality
P.O. Box 200901
Helena, MT 59600-0901

Re: Additional Corrective Action Work Plan, WPID# 34967
Guaranteed Muffler Shop, 1339 11th Avenue, Helena, Lewis & Clark County, Montana
Facility ID# 99-95091; Release# 4729; Treads ID# 17298, Olympus WO# A2639

Dear Mr. McCurry:

This letter presents a work plan for the Guaranteed Muffler Shop facility located at 1339 11th Avenue in Helena, Montana (Site). A Site location map is shown on Figure 1 and a Site Aerial map is shown on Figure 2. Olympus Technical Services (Olympus) has prepared this work plan in response to a Department of Environmental Quality (DEQ) letter issued November 8, 2024, requesting corrective action at the Site.

The Guaranteed Muffler Shop facility is in the process of being sold. The prospective buyers plan to demolish the current Site building and redevelop the property into an office building. After discussions with DEQ, the prospective buyer is interested in conducting an opportunistic remedial excavation to remove source area soil that potentially extends beneath the building in the area of the former underground storage tank (UST) basin.

DEQ has requested a work plan for remedial excavation of petroleum impacted soil, confirmation soil sampling, soil vapor assessment, monitoring well abandonment and reinstallation, and one year of post-excavation semi-annual groundwater monitoring to be conducted at the Site. Groundwater monitoring is expected to be conducted under this work plan during high and low water in 2025. This work plan presents a detailed scope of work, detailed cost estimate, and a groundwater monitoring unit cost worksheet for the proposed scope of work.

Scope of Work

Impacted Soil Excavation

Olympus estimates that up 3,500 cubic yards (CY) of petroleum impacted material is present at the Site. An approximate excavation boundary is shown on Figure 3. Olympus plans to use an excavator, front-end loader, and compactor to complete the project. The equipment will be mobilized to the Site by Olympus personnel using a semi and low boy trailer. Mobilization costs include mobilization of 4 personnel out of our Helena, Montana location for two to three weeks.

Prior to excavation activities all onsite utilities will be located and marked. Utility location markings will be maintained throughout the duration of the project. The excavation will be conducted after demolition of the onsite building is completed. Utilities will be disconnected prior to demolitions work. Utility service lines may be encountered during excavation activities and will be maintained or removed as appropriate for Site redevelopment.

Olympus anticipates excavation activities will take approximately two to three weeks to complete. Soil will be removed using an excavator. Excavation will be guided by field screening using a photoionization detector (PID) for Volatile Organic Compounds (VOCs). Soil that does not indicate the presence of VOCs will be considered clean overburden and will be stockpiled onsite. The clean overburden stockpile or stockpiles will be measured by Olympus using a centimeter-grade Trimble GPS and the quantity of CY will be determined based on the data files. Olympus intends to submit the CY quantity as determined by this measurement process as the payment quantity. The data files will be available to DEQ to confirm quantities. Given the small footprint of the Site and limited area for stockpiling, the overburden may have to be removed in increments, then complete the impacted soil excavation for that increment, backfill that portion of the excavation with overburden, and then repeat this sequence until the project is completed. Having Olympus measure clean overburden is preferable due to this incremental approach so that the project will not be delayed waiting for third-party surveyor to measure the stockpiles. Measuring stockpiles is a reliable way to keep track of the amount of clean overburden. Olympus has provided a price per CY removal, stockpiling, measuring, placement, and compaction of the overburden material.

Soil that indicates the presence of VOCs on the PID or is deemed to be impacted through visual observation will be excavated and hauled to Lewis and Clark County Landfill. The excavation will be considered complete when the remaining impacted soils exhibit VOC levels of 20 parts per million (ppm) as measured with a PID. The excavation will not extend beyond the property boundaries.

Following the completion of the excavation and confirmation soil sampling, backfill will be hauled to the Site, placed, and compacted. Backfill will be sourced from Valley Sand and Gravel of Helena, Montana.

Confirmation soil sampling will be conducted following the DEQ Enforcement Programs *Soil Sampling Guidance for Small Site Excavation*. Two discrete volatile petroleum hydrocarbon (VPH) samples and one five-point composite extractable petroleum hydrocarbon (EPH) sample will be collected from the sidewall of the excavation every 25 feet, and from the floor of the excavation every 625 square feet. Soil confirmation sampling will not be conducted in clean overburden soil, so confirmation sampling will begin within 1 vertical foot of the impacts measuring 20 parts per million (ppm) or greater on the PID or observed visual staining. Cost estimate assumes the excavation of up to 6,000 square feet of soil to a depth of 16 to 18 feet with approximately 6 to 8 feet of clean overburden. The sample frequency in the cost estimate is based on the worst-case quantity and will be adjusted in the field based on impacts observed. Up to one soil sample will be collected from each sidewall and analyzed for lead scavengers. The cost estimate presents the cost of soil sampling at the indicated frequency. Duplicate soil samples will be analyzed at a frequency of approximately one in 20 samples for VPH and EPH, not to exceed two duplicate soil samples.

Excavation oversight will be completed by a staff-level scientist and tasks will include time for planning and coordinating all excavation activities, overseeing the excavation, PID measurements, confirmation soil sampling, dewatering oversight and water management, and associated activities, and managing post-excavation activities.

Excavation Dewatering

Static Water Levels (SWLs) at the site have typically ranged from 7 to 10 feet below ground surface (bgs). It is estimated based on soil analytical results from well MW-3 that petroleum

impacts extend to 16 feet bgs or more. In order to remove the maximum amount of impacted soil at the Site, dewatering the excavation may be necessary. Olympus has provided cost for an 18,000 gallon open top frac tank rental and a carbon filtering system to treat impacted water removed from the excavation. Due to limited space at the Site for stockpiling clean overburden and loading trucks for disposal, Olympus proposes transferring the water to the frac tanks stored at the Olympus yard for storage and treatment. Water will be pumped into a water truck, delivered to the Olympus frac tank, and pumped through carbon treatment system. Olympus will make arrangements with the City of Helena for disposal of the treated water.

In order to discharge the water, several analytical thresholds must be met, so the water in the frac tank will have to be sampled. Analytical results will be rushed to avoid having frac tanks on rent for additional time and to ensure water does not freeze and keeping water storage available. The cost estimate includes a daily rate for dewatering the excavation. Also included is the cost for the carbon filtering system, sampling, and disposal of the water and carbon filters. Olympus anticipates that dewatering the excavation will allow significantly more impacted soil to be removed from the Site, as well, impacted water that is disposed of will assist in bringing the Site to expedited closure.

Monitoring Well Abandonment/ Installation

During excavation activities it may be necessary to abandon and remove one existing monitoring well MW-3 (Figure 2). Abandonment will include backfilling the well casing and screen with bentonite pellets to approximately 3 feet bgs. Olympus will attempt to remove the full casing and screen during removal of the well casing during excavation of petroleum impacted soil below the groundwater interface. Clean overburden and clean imported backfill material will be placed to the approximate original grade. A well abandonment report will be prepared and submitted to the Montana Bureau of Mines and Geology Groundwater Information Center (GWIC).

Montana DEQ has requested that the well be reinstated in order to determine the effectiveness of the excavation. The Site will be redeveloped as an office building in Spring 2025. The footprint of the new building may extend over the current placement of well MW-3. The DEQ project manager will be consulted about placement of a replacement monitoring well prior to field activities. Well replacement will be completed after the construction is completed to avoid damage or destruction of replacement wells.

The soil boring will be advanced to a depth of approximately 20 to 25 feet bgs. Soil samples will not be collected from the boring as the soil will consist of recently imported fill and clean overburden. Olympus will conduct all drilling and well installation activities using direct push technology. A staff scientist will be onsite to assure the well is completed and screened to the appropriate depth.

Groundwater monitoring wells will be constructed of 2-inch diameter threaded PVC well materials, with 10 to 15 feet of 0.010-inch slotted PVC screen, and the remainder of the well will be constructed of blank PVC casing. A threaded end cap will be placed at the base of the well. The annular space around the well casing will be backfilled with 10-20 Colorado silica sand from the base of the boring to a depth of one foot above the top of the well screen, followed by a bentonite seal to approximately one foot bgs, and completed with a traffic-rated flushmount steel monument that will be cemented in place. A locking well cap will be placed on the well. The wells will be developed by the driller and allowed to stabilize at least two weeks prior to sampling. The replacement monitoring well will be surveyed by a licensed surveyor.

Soil Vapor Assessment

A soil vapor assessment is required for the Site by the DEQ Vapor Intrusion Guidance due to the presence of lead scavengers 1,2-dibromoethane (EDB) and 1,2-dichloroethane (DCA) in groundwater at concentrations exceeding the human health standard (HHS). The assessment will be conducted post-excavation during winter months.

One vapor probe will be installed near or downgradient of the source area to a depth of 5 feet post-excavation. One soil vapor sample will be analyzed for air-phase hydrocarbons (APH) and VOCs by EPA Method TO-15 (SIM). A minimum of three volumes of air will be purged through the probe and associated tubing before sample collection at a rate not exceeding 200 milliliters per minute. Field leak checks will be completed according to Section 4.7 of the September 2021 DEQ Montana Vapor Intrusion Guide. Once the field leak check is complete, a 15-minute grab sample will be collected into batch-certified summa canisters and submitted under chain-of-custody procedures to Pace Analytical of Mount Juliet, Tennessee.

Groundwater Sample Collection and Analyses

The proposed scope of work includes semi-annual groundwater monitoring during approximate low and high groundwater condition (anticipated May/June and November/December 2025). Groundwater monitoring will be completed post-excavation once replacement monitoring wells have been installed and developed. Groundwater monitoring will include the measurement of SWLs and the collection of groundwater samples from the six Site wells for laboratory analyses. SWLs will be measured using an electronic water level probe to develop a groundwater potentiometric map of the Site.

Groundwater samples will be collected from the six Site wells following Olympus standard operating procedure. Groundwater will be purged from wells using a peristaltic pump operating at low flow, steady state conditions. Groundwater field parameters of dissolved oxygen, specific conductivity, temperature, pH, oxidation reduction potential, and turbidity will be measured in 3-to-5-minute intervals, and measurements will be recorded on groundwater sample information forms. Upon parameter stabilization, groundwater samples will be collected into laboratory supplied bottles, preserved, stored on ice, and submitted by chain-of-custody procedure to Energy Laboratories (Energy) in Helena, Montana, for volatile petroleum hydrocarbons (VPH), extractable petroleum hydrocarbons (EPH), and lead scavengers (EDB and DCA). Groundwater samples with EPH screen concentrations that exceed 1,000 micrograms per liter (ug/L) may be further analyzed for EPH fractions based on a review of the analytical data.

Quality assurance/quality control (QA/QC) procedures will be followed for the provision of reliable, accurate and defensible data. One field duplicate groundwater sample will be collected during each monitoring event to test for precision related to sampling methods. The QA/QC sample will be analyzed for VPH and EPH screen only. QA/QC samples will be collected into laboratory supplied jars, stored on ice, and submitted to Energy under chain-of-custody procedure.

Interim Data Submittal

Olympus will present the results of the excavation confirmation sampling in an interim data submittal (IDS) following receipt of the analytical laboratory report. The IDS will include a discussion of the results, updated data tables, excavation and confirmation sample location maps, and analytical laboratory reports with accompanying data validation summary forms.

Olympus will present the results for the first groundwater monitoring event in an interim data submittal following receipt of the analytical laboratory report. The Interim Data Submittal will include a discussion of the results, updated data tables, updated potentiometric and groundwater analytical maps, monitoring well completion logs, groundwater field forms, and analytical laboratory reports with accompanying data validation summary forms.

Release Closure Plan

The Release Closure Plan (RCP) developed by NorthWind Portage, Inc. will be updated for the Site based on the results of the groundwater monitoring events. The RCP will be included with the Corrective Action Report, and will include discussion and results of investigative, post-investigative, and corrective action work to date, as well as updates to the conceptual site model, exposure pathways, and remedial alternatives.

Cleanup Report

Olympus will present the results for the excavation, soil vapor assessment, well installation, and two groundwater monitoring events in one Corrective Action Report, as requested by DEQ, following receipt of the analytical results of the second monitoring event. The summary report will include a discussion of the results, site maps, tabulated analytical data, monitoring well completion logs, groundwater sample information forms, analytical laboratory reports, QA/QC review of the analytical data, time trend graphs, RCP, and conclusions and recommendations based on the monitoring results.

Cost Estimate

The cost estimate is divided into 21 tasks as shown on the attached detailed cost estimate. The costs for project management, excavation oversight, and soil vapor sampling are at approved hourly rates. The costs for soil excavation, overburden excavation and replacement, and backfill related tasks are based on unit rates and estimated quantities. The actual quantities for soil excavation will be based on the tonnage from weight tickets from the Lewis and Clark County Landfill. Overburden quantities will be based on field surveys of backfill stockpiles. Backfill quantities will be based on weight tickets from Valley Sand and Gravel. Costs for other tasks are based on units and rates as shown on the detailed cost estimate.

Work Plan development, groundwater monitoring, the interim data submittal, and groundwater monitoring report will be invoiced at unit cost rates approved by the Petroleum Tank Release Compensation Board (PTRCB). A unit cost worksheet for groundwater monitoring is attached to this work plan which lists PTRCB approved rates for 2024. Work completed in 2025 will be invoiced at PTRCB rates updated for 2025.

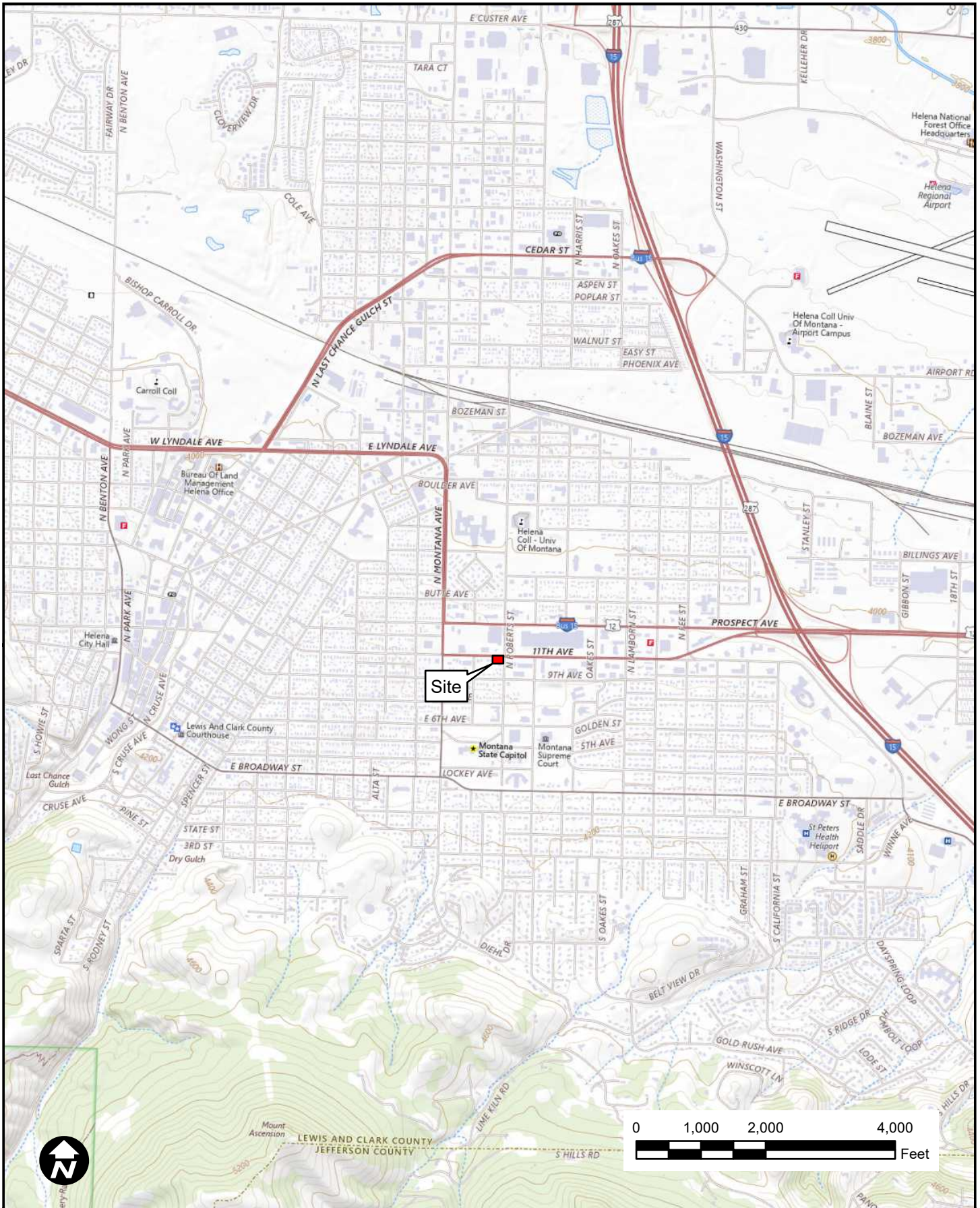
Olympus appreciates the opportunity to assist you with this project. Building demolition is expected to begin in early January 2025, and the opportunistic remedial excavation is expected to begin in February 2025. Please call me at 406-443-3087 with comments or questions regarding the proposed scope of work or the project.

Sincerely,
Olympus Technical Services, Inc.



Diane Tackett, PG
Project Geologist

Attachments: Figures 1, 2, and 3
Detailed Cost Estimate
Soil Boring Unit Cost Worksheet
Groundwater Monitoring and Sampling Unit Cost Work Sheet

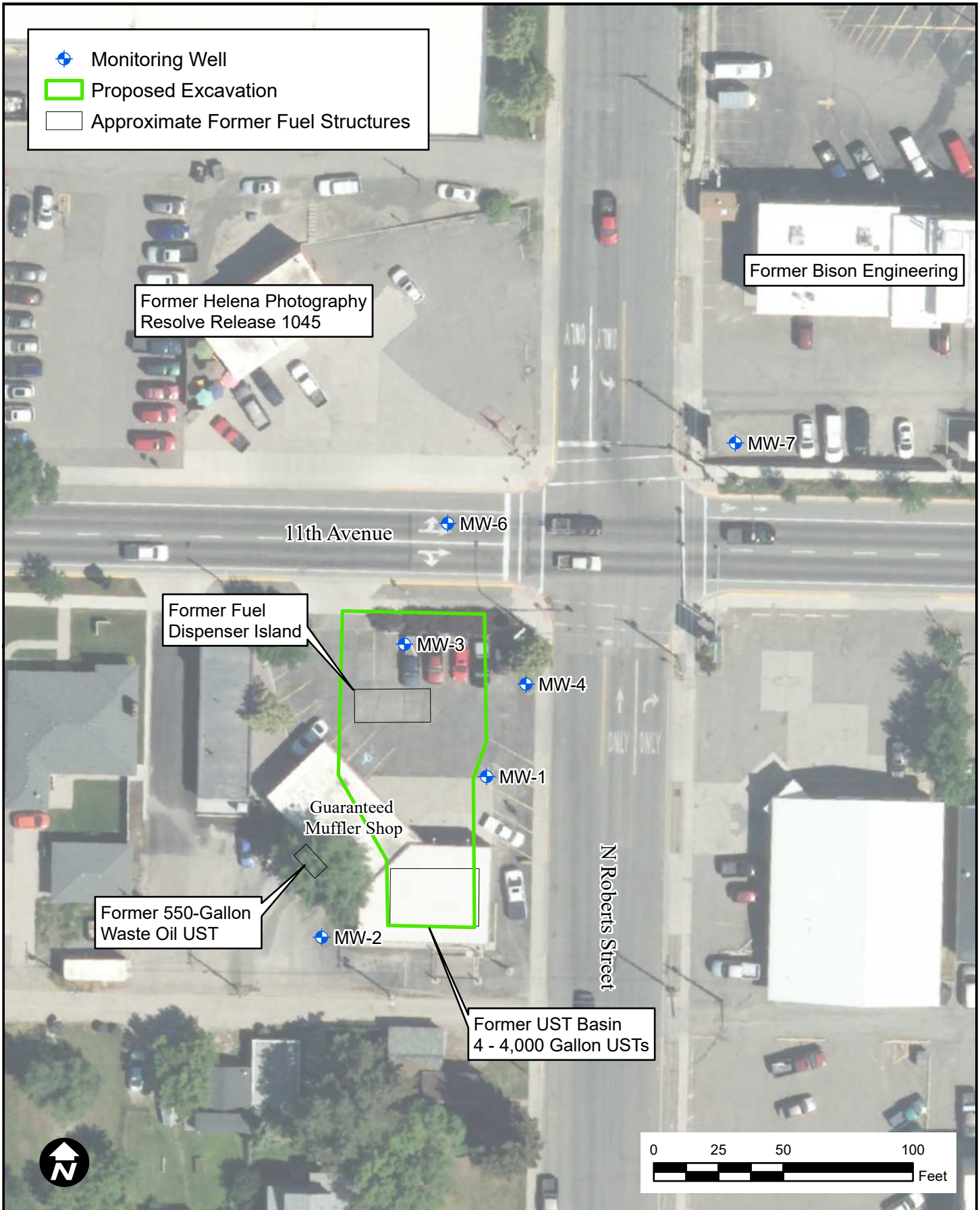


 **Olympus Technical Services, Inc.**

**Site Location Map
Guaranteed Muffler Shop
Helena, Montana**

**FIGURE
1**





Olympus Technical Services, Inc.

Proposed Excavation Map
 Guaranteed Muffler Shop
 Helena, Montana

FIGURE
 3