



Olympus Technical Services, Inc.

October 22, 2025

Jonathan Love
Montana Department of Environmental Quality
Petroleum Tank Cleanup Section
P.O. Box 200901
Helena, MT 59620-0901

Re: Remedial Investigation Work Plan
Former Town Pump Inc Billings (Formerly named Town Pump Inc Billings #1)
602 North 16th Street
Billings, Yellowstone County, Montana
Facility ID No. 56-08670 (TID 30280), Release No. 2446
DEQ Work Plan ID No. 35101
Olympus Work Order No. A4005

Dear Mr. Love:

Olympus Technical Services, Inc. (Olympus), on behalf of Town Pump, Inc., is submitting this Remedial Investigation Work Plan (RIWP) for the above-referenced Facility (Site). The Montana Department of Environmental Quality (DEQ) Petroleum Cleanup Section requested an RIWP in correspondence dated October 3, 2025. The purpose of the work is to evaluate the extent and magnitude of petroleum impacts to soil and groundwater at the Site. This will be achieved by advancing soil borings, installing groundwater monitoring wells in selected borings, conducting groundwater monitoring, and preparing and submitting a Remedial Investigation Report, final Groundwater Monitoring Report, and updated Release Closure Plan (RCP) detailing the results of the investigation and path for closure of the release.

Site Description

The Site is located in a downtown commercial district of Billings at the southwest intersection of North 16th Street and 6th Avenue North at latitude 45.79350 N and longitude 108.49590 W. The Site occupies a portion of the SW ¼ NE ¼ of Section 33, Township 1 North, Range 26 East, Montana Principal Meridian, Yellowstone County. The Site is shown in Figures 1 through 3. The Site is currently owned by MCM Property Solutions LLC and is utilized as a used automotive dealership under the name of 3 Dog Motors LLC. The southwest portion of the Site is occupied by a small building and surrounding greenspace, with the northeast portion consisting of pavement and parking space.

Previous Site Investigations

In correspondence dated August 24, 1994, DEQ required Town Pump to conduct an investigation in response to a suspected release at the facility. A gasoline release (Release No. 2446) was confirmed in September 1994 during completion of three test pits at the facility. One diesel and three gasoline underground storage tanks (USTs) were removed from the property in July 1995. Interim corrective action consisted of excavation of approximately 350 cubic yards of petroleum impacted soil from the tank basin, which was disposed at the Billings City Landfill in October 1995. Excavation and disposal of the soil was approved by DEQ in correspondence dated September 28, 1995.

A remedial investigation (RI) work plan was submitted on December 14, 1994, and approved by DEQ in correspondence dated March 30, 1995. The USTs were removed from the facility prior to implementation of the RI. Field work conducted in January 1996 included completion of four soil borings, installation of groundwater monitoring wells M1 through M4 in the borings, and an aquifer characterization. The analytical results of groundwater samples collected during the RI and subsequent monitoring events indicated elevated levels of benzene, toluene, ethylbenzene, and total xylenes (BTEX) in three of the four monitoring wells. Non-aqueous phase liquid (NAPL), resembling gasoline, was first observed at the Site in well M3 during a groundwater monitoring event conducted in March 1996.

Subsurface lithology at the Site was assessed from the four soil borings completed in 1996. An unconfined aquifer occurs within unconsolidated sediments consisting of interbedded clay, silt, and silty sand underlain by poorly sorted silty to sandy gravel encountered at approximately 18 feet below ground surface (bgs). Hydraulic conductivities ranging from 2 to 16 gallons per day per foot (gpd/ft), or 1×10^{-4} to 7.5×10^{-4} centimeters per second (cm/sec), were calculated from slug test data generated in January 1996. Calculated groundwater seepage velocities ranged from approximately 2 to 22 feet per year.

Based on the results of the January 1996 RI and subsequent groundwater monitoring, a Cleanup Work Plan was submitted on April 15, 1996. The plan proposed installation of a soil vapor extraction (SVE) and air sparging (AS) remedial system, pilot testing, and system maintenance. DEQ approved the work plan in correspondence dated June 5, 1996, however DEQ indicated that the effectiveness of a SVE system should be evaluated prior to installation of an AS system (Monte Smith, personal communication, July 1996). The SVE system was installed in October 1996 and began operation in November 1996. The SVE remedial system was not augmented with air sparging. The pilot test data collected in July 1996 and monitoring data collected after installation of the SVE system indicated that the original three vapor extraction wells (VEWs) provided an effective area of influence for hydrocarbon recovery. However, beginning in 1997 recovery rates dropped rapidly.

Because the system appeared to be operating ineffectively, with NAPL accumulating in wells M2 through M4, and the downgradient extent of potential groundwater impacts remaining undefined, a Supplemental Remedial Investigation and Cleanup Work Plan was submitted to DEQ on August 28, 1997. The work plan was approved by DEQ in correspondence dated December 9, 1997. Field work completed in April 1998 included the installation of three additional monitoring wells (wells M5 through M7) and three additional VEWs. The monitoring wells were installed off Site property. Although the three VEWs were added to the SVE system to improve performance, hydrocarbon recovery remained minimal. However, the remedial system was effective in facilitating NAPL accumulation in wells M2 and M3, thus inhibiting plume migration offsite and allowing NAPL recovery from the wells. NAPL was not observed in wells M2 and M3 when the system was shut down from August 6 to September 15, 1997. One week after restarting the system, apparent NAPL thicknesses of 5 inches and 14 inches were observed in wells M2 and M3, respectively.

In correspondence dated May 11, 2004, DEQ required submittal of a work plan to conduct high volume NAPL recovery from wells M2 and M3, to install two additional monitoring wells to further assess the extent of impact, and to continue SVE system monitoring. Olympus submitted a work plan on May 24, 2004, and DEQ approved the work plan in correspondence dated July 9, 2004. One high volume NAPL recovery event was conducted on July 21, 2004, with a vacuum truck. Approximately 43 gallons of water and 7 gallons of NAPL were recovered from wells M2 and M3. Each well was pumped dry within 10 minutes of initiating pumping. From

January 1997 to July 2004, approximately 71 gallons of NAPL were recovered from wells M2 and M3. Additional monitoring wells were not installed.

The SVE system blower, which began operation in November 1996, failed in May 2004. In response to the low SVE system recovery rates and SVE system failure, DEQ required additional corrective action. Corrective actions conducted from March to October 2005 included dismantling the SVE system, excavating approximately 280 bank cubic yards of impacted soil, applying 2,650 pounds of slurried ORC at the base of the excavation, installing monitoring well M8 to replace wells M2 through M4 that were removed during the excavation activities, and groundwater monitoring. Well M7, located off Site property approximately 175 feet east-northeast of the Site, was removed during construction of an office building in October 2004. Wells M1, M5, M6, and M8, constructed of 2-inch diameter PVC and completed to depths ranging from 20 to 23 bgs with screened intervals from 10 to 22 feet bgs, remain at the Site.

Groundwater monitoring was not conducted from December 2007 to May 2014 and from December 2003 to July 2004 pending DEQ request for and approval of an updated monitoring work plan, and groundwater monitoring at the Site was discontinued from July 2004 until after completion of the soil excavation and installation of replacement monitoring well M8 in October 2005. Groundwater monitoring conducted since October 2005 included collection of groundwater samples for volatile petroleum hydrocarbons (VPH) analysis and measurement of static water levels. Semi-annual groundwater monitoring was conducted in 2006 and 2007, and annual groundwater monitoring was conducted in 2014 and 2015. In addition, quarterly monitoring of NAPL accumulations and measurement of dissolved oxygen (DO) concentrations in well M8 was conducted in 2006.

NAPL thicknesses ranging from hydrocarbon sheen to greater than 30 inches have been observed in Site monitoring wells M2 and M3. NAPL was not observed in well M3 from March 2001 to June 2002, however, accumulations ranging from approximately 1/16 to 3/4-inches were observed from September 2002 to July 2004. NAPL or petroleum sheen was observed in well M4 in September 1997 (0.1 inches) and May 1998.

Accumulations of NAPL were not observed in Site monitoring wells from July 2004 until May 2014, when an apparent NAPL thickness of 5.2 inches was observed in well M8. There are no registered petroleum release sites adjoining or upgradient from the Site. In May 2014 and June 2015 Olympus conducted groundwater monitoring events that yielded results suggesting that natural attenuation mechanisms would not reduce the concentrations of VPH compounds in groundwater below regulatory standards within a reasonable period of time.

Semi-annual groundwater monitoring was performed at the Site in June and December 2024. Before sampling, all Site wells were redeveloped. No VPH or EPH analytes exceeded Human Health Standards (HHS)/Risk-Based Screening Levels (RBSLs) in groundwater samples collected from M1, M5, or M6 during either event. NAPL was observed in well M8 during both sampling events at 0.8 inches in June and 0.27 inches in December. Based on the results of the semi-annual groundwater monitoring, Olympus recommended additional investigation and corrective actions at the Site.

Scope of Work

The scope of work consists of the following primary tasks:

Task 1 – Work Plan

This WP fulfills DEQ's request for a Remedial Investigation Work Plan.

Task 2 – Project Management

Project management will include coordination with DEQ, Town Pump, and Petroleum Tank Release Compensation Board (PTRCB) personnel, preparation of the Site Health and Safety Plan, project planning, utility locate notifications, scheduling, coordination with subcontractors, oversight of project details, equipment, and personnel, setup of project files, reviewing historical reports, maps and data for the Facility, and other various tasks related to project management. The costs for project management are included in Task 2 of the cost estimate.

Task 3 – Miscellaneous (Right of Way Permit City of Billings)

Olympus will prepare and submit required forms to the City of Billings for a right-of-way permit to install one monitoring well down-gradient of the Site across 6th Avenue North. The costs in Task 3 will cover actual costs billed by the City of Billings for the permit.

Task 4 – Mobilization

Task 4 in the cost estimate details mobilization costs out of our Billings, Montana office for four trips for a Staff Scientist to provide oversight during soil boring and monitoring well installation, four trips for a Technician II and Technician III (Senior) for drilling and well installation, four trips for a Technician III to complete the two semi-annual groundwater sampling events, and 12 trips (monthly) for a Technician III to check and replace absorbent socks to be placed in M8 to recover NAPL. The drill rig and associated materials and equipment will be mobilized to the Site by Olympus personnel.

Task 5 – Fieldwork

Task 5 in the cost estimate presents the cost for staff scientist oversight of field activities, including private utility locates, soil borings, monitoring well installation, and well development.

Proposed boring and monitoring well locations are shown on Figure 3. During the advancement of soil borings, samples will be continuously collected in five-foot intervals and logged by a staff geologist. Lithologic boring logs for each soil boring and monitoring well will be prepared using the Unified Soil Classification System. Soil will be field screened using visual observations and by using a RAE Systems MiniRae™ Lite photoionization detector (PID) for screening soils for volatile organic chemicals (VOCs), utilizing a headspace method. The PID will be calibrated daily using fresh air and span gas calibration points. The span gas will consist of isobutylene at a concentration of 100 parts per million (ppm).

Task 5 also includes costs for a Technician III to check and replace absorbent socks (monthly) in M8 for one year. Used socks will be placed in a 55-gallon drum stored at the Site. The socks will be weighed before and after to determine NAPL recovery amounts.

Task 6 – Soil Boring and Monitoring Well Installation/Development

Task 6 includes labor, materials, and equipment costs associated with advancing soil borings for collecting soil samples and installing monitoring wells. The cost is provided on a per-foot

basis for drilling and well installation. The total number and estimated depth of borings and monitoring wells required will be determined in the field. Up to eight soil borings will be advanced to 20 feet bgs using Olympus' direct push Geoprobe® 7822DT drill rig are estimated for completion of this WP.

Up to six groundwater monitoring wells will be installed to collect groundwater samples, to determine the extent and magnitude of petroleum impacts to soil, groundwater, and other receptors. Monitoring wells will be completed in selected borings based on field screening results. We have assumed that up to six monitoring wells will be completed at the Site for budgeting purposes.

Two-inch diameter monitoring wells will be installed by a licensed Montana Monitoring Well Constructor (MWC). The wells will be constructed with 10 feet of flush-threaded Schedule 40 polyvinyl chloride (PVC) casing and 10 feet of pre-packed screens, including screen points and locking plugs. Wells will be backfilled with 10/20 silica sand to approximately 1-foot above the screened interval, bentonite pellets to approximately 2 feet bgs, and concrete to the surface. Wells will be completed with flush mount well monuments encased in concrete collars, well lids will be labeled, and the top of casing will be marked with the approximate north direction. The ground surface will be completed to match existing conditions.

The wells will be developed following a pumping and surging method before sampling according to Olympus' Standard Operating Procedures (SOPs) and DEQ guidance. Purge water will be disposed of according to *Disposal of Untreated Purge Water from Monitoring Wells* (DEQ, 2015). Disposal costs are not included in this estimate since it is unknown whether purge water will be discharged to the surface or require disposal. The wells will not be sampled for at least one week following development.

Monitoring well installation reports will be prepared by the MWC and submitted to the Montana Bureau of Mines and Geology (MBMG) Ground Water Information Center (GWIC) within 60 days of well installation.

Task 7 – Miscellaneous (Traffic Control)

Task 7 includes costs for traffic control during installation of the down-gradient well within right-of-way areas on the south side of 6th Avenue North.

Task 8 – Survey (Well)

The top of the casing and well monument surfaces for all Site wells will be surveyed for location, in Montana State Plane, and elevation, in feet above mean sea level (amsl), by a registered Montana Professional Land Surveyor (PLS). Task 8 in the cost estimate includes the costs for the subcontracted surveyor, Kehl Surveying. There was an attempt to acquire three bids from subcontractors, but only two responded.

Task 9 – Survey (Private Locate)

Prior to drilling activities, on-site utilities will be located and marked. Montana 811 (Montana One Call) will be notified a minimum of 72 hours before beginning drilling. A private utility locator will be subcontracted to locate private utilities. Utility location markings will be maintained throughout the project. Task 9 in the attached cost estimate details costs for private utility locates.

Task 10 – Monitoring (Groundwater)

Groundwater monitoring will be conducted semi-annually for one year. Wells M1, M5, M6, and M8, and the six new wells will be sampled for a total of 10 wells. Monitoring will include:

- Measurement of groundwater static water levels (SWLs) in all Site monitoring wells during each groundwater monitoring event using an electronic water level probe.
- Collection of groundwater samples, including a field duplicate, using low-flow methods in general accordance with DEQ's *Groundwater Sampling Guidance*. Groundwater samples will be collected with a peristaltic pump. Field measurements of groundwater quality parameters, including pH, oxidation-reduction potential, specific conductivity, dissolved oxygen, turbidity, and temperature will be recorded during groundwater sample collection. Depth to groundwater measurements will be recorded during the low-flow pumping and sampling procedure.
- All groundwater samples will be submitted for laboratory analysis of VPH, EPH screen, and IBIs (1st event only). The cost estimate assumes up to 50% of samples may require further fractionation of EPH compounds.

Task 10 in the cost estimate includes the costs for project setup, mobilization, and well sampling on a unit cost basis. It is anticipated that the wells will not be completed in a low-yield aquifer. A groundwater monitoring worksheet is attached to this work plan.

Task 11 – Laboratory Analysis w/ Fee (Soil Sampling)

One soil sample will be collected from the location of the boring advanced near the northern pump island at a depth of approximately 3 feet bgs where previous impacts were identified or highest indications of impacts. One soil sample will be collected from the boring advanced at the former location of T4-S at a depth of approximately 15 feet bgs or highest indications of impacts. Up to three soil samples will be collected from the remaining borings at the highest indications of impacts, at the groundwater interface, and/or at the top and bottom of the smear zone to supplement previous data for future injections. Should no impacts be identified, one sample will be collected from the groundwater interface. All soil samples will be collected in laboratory-supplied containers and immediately placed on ice and in coolers. The samples will be transported via chain-of-custody procedure and submitted for analysis of volatile petroleum hydrocarbons (VPH) and extractable petroleum hydrocarbon (EPH) screen. The cost estimate assumes up to 50% of collected samples may require further fractionation of EPH compounds. Samples will be submitted to Energy Laboratories, Inc. in Billings, Montana (Energy). One duplicate will also be collected and analyzed for VPH only.

Task 12 – Laboratory Analysis w/ Fee (Groundwater Monitoring)

Task 12 in the cost estimate presents the laboratory analytical costs for the two groundwater monitoring events. Groundwater samples will be analyzed for VPH and EPH screen. The cost estimate assumes up to 50% of collected samples may require further fractionation of EPH compounds. IBIs will be analyzed only during the first event only. Samples will be submitted to Energy Laboratories, Inc. in Billings, Montana (Energy). One duplicate will be collected during each event and analyzed for VPH only.



Task 13 – Reporting

This task includes data validation, updating the release closure plan (RCP), and preparation of two reports (one Remedial Investigation Report (RIR) following soil borings advancement, well installation, and the first groundwater sampling event and one Groundwater Monitoring Report (GWM) following the second groundwater monitoring event). The RCP will be updated twice and submitted with the RIR and GWM monitoring reports. Task 13 of the cost estimate includes unit cost prices for completing these reports.

Cost

The cost to complete the scope of work outlined above is estimated at \$74,697.28, detailed on the attached cost schedule. The cost estimate is based on the following assumptions:

- Olympus' direct-push drill rig will be used to advance soil borings and install monitoring wells, and unit costs for drilling and well installation are provided in the attached cost estimate;
- Site conditions are amenable to direct-push borings.
- A total of eight soil borings will be advanced, with up to six borings completed as monitoring wells;
- A Professional Land Surveyor will be subcontracted to provide surveyed locations and elevations for each monitoring well on Site, including previously installed wells; and,
- Semi-annual groundwater sampling will be conducted for one year.

Please contact me if you have any questions regarding this plan.

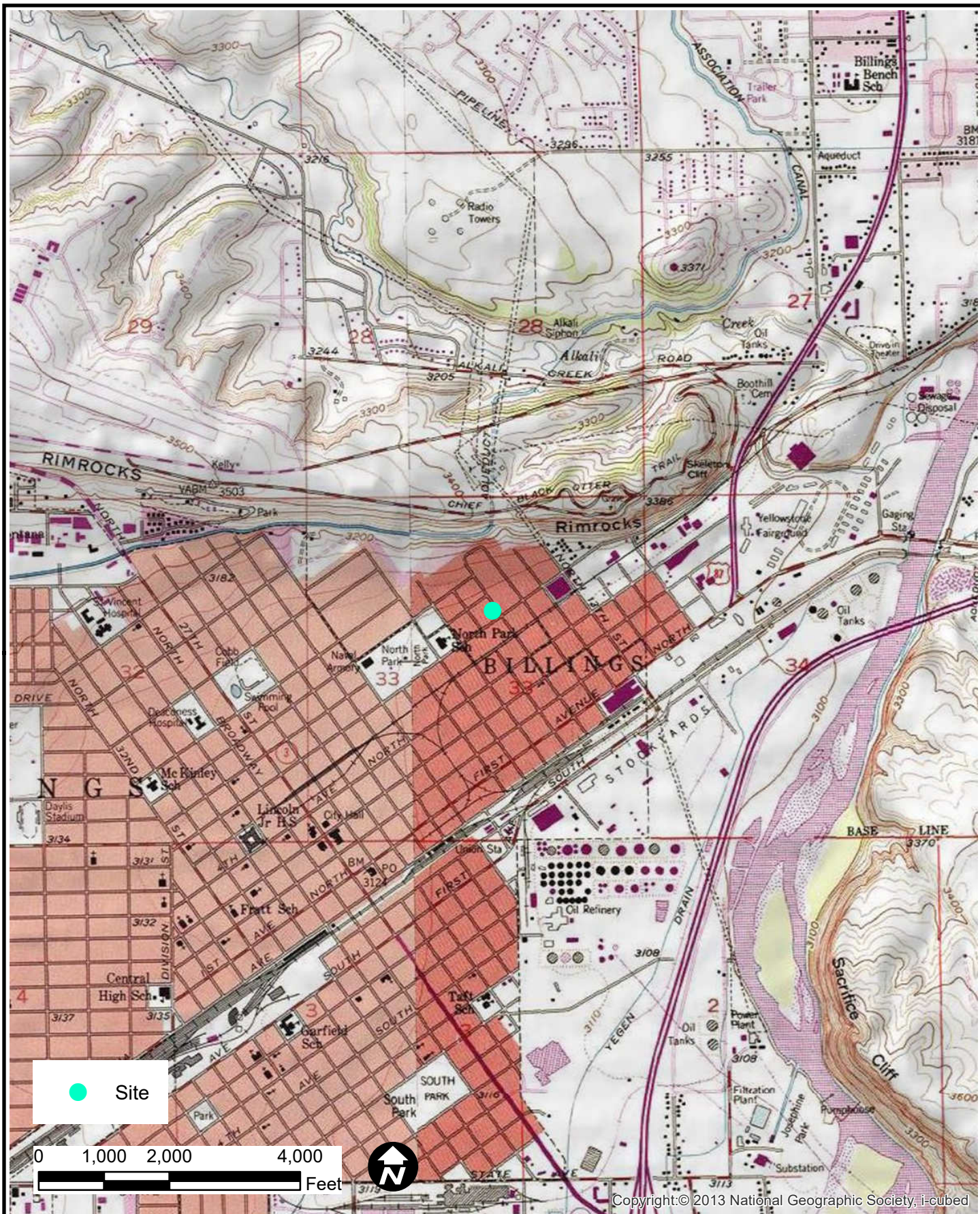
Sincerely,



Ethan J. Perro, PG
Project Geologist

Attachments: Figure 1: Location Map
Figure 2: Aerial Photograph
Figure 3: Site Map
Work Plan Cost Estimate
Groundwater Monitoring and Sampling Unit Cost Worksheet
Soil Boring/Monitoring Well Installation Unit Cost Worksheet
Subcontractor Estimates

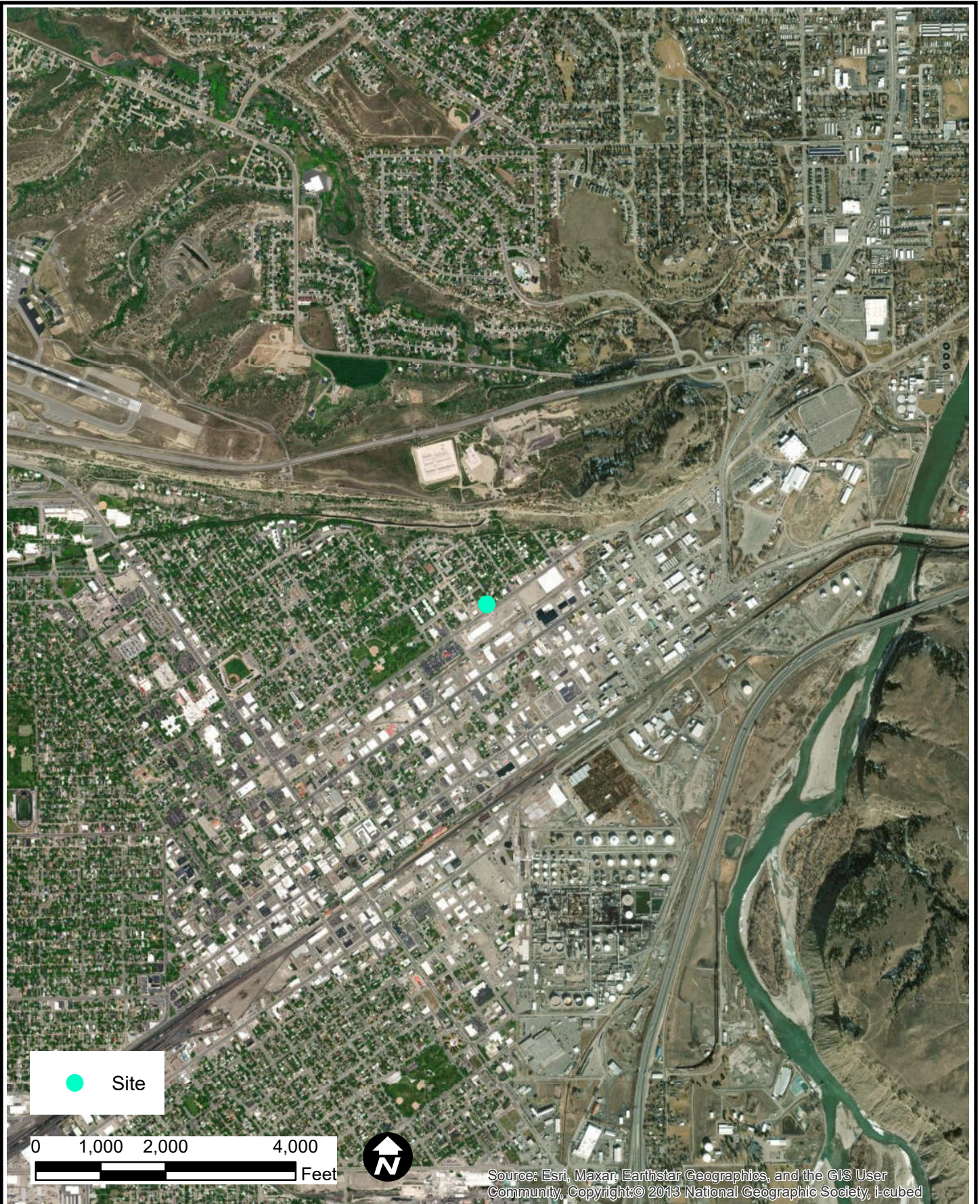
cc: Paul Townsend, Town Pump, P.O. Box 6000, Butte, MT 59702



Olympus Technical Services, Inc.

Topographic Map

FIGURE
1



Olympus Technical Services, Inc.

Aerial Photograph

FIGURE
2



Olympus Technical Services, Inc.

Site Map

FIGURE
3