



Olympus Technical Services, Inc.

March 19, 2025

Jay Shearer
Montana Department of Environmental Quality
Petroleum Tank Cleanup Section
1371 Rimtop Drive
Billings, MT 59105

Re: Monitoring Well Installation and Groundwater Monitoring Work Plan
Edwards Jet Center
1691 Aviation Place, Billings, MT 59105
Facility ID No. 56-07797, Release No. 4744
Work Plan ID 35021
Olympus Project No. A4405

Dear Mr. Shearer:

Olympus Technical Services, Inc. (Olympus), on behalf of Edwards Jet Center, is submitting this Monitoring Well Installation and Groundwater Monitoring Work Plan for the above referenced Facility. The Montana Department of Environmental Quality (DEQ) Petroleum Cleanup Section requested a Work Plan in correspondence dated February 26, 2025. The purpose of the work is to further evaluate groundwater characteristics at the Site. This will be achieved by advancing soil borings, screening soil, installing groundwater monitoring wells via air rotary methods, conducting groundwater monitoring, and preparing and submitting a Monitoring Well Installation and Groundwater Monitoring Report and updated Release Closure Plan (RCP) detailing the results of the investigation and path for closure of the release.

Site Description

This Site is located within the limits of the City of Billings airport and is located at 1691 Aviation Place, in Billings, Montana. The property occupies approximately 0.22 acres and is located within the northwest 1/4, southwest 1/4 of Section 30, Township 1 North, Range 26 East, Yellowstone County, and is approximately located at latitude 45.801525° and longitude -108.524199°. The location of the Site is shown on Figures 1 (Topographic Map) and 2 (Aerial Photograph). The Site is bounded by the City of Billings airport to the west, north, and east, and East Airport Road to the south. A Site Map is provided as Figure 3.

Previous Investigations

The City of Billings owns the Edwards Jet Center Site, while the adjacent fueling areas are owned by Edwards Jet Center (Edwards) and Lynch Flying Service. The Site was formerly and currently utilized as a fueling station with Jet-A fuel underground storage tanks (USTs). Three surface releases of Jet-A fuel have been confirmed at the facility: No. 3176, No. 4744, and No. 5026. All the releases occurred when USTs were overfilled during fuel delivery. Release No. 3176 occurred in February 1999 and has been considered resolved by DEQ. Release No. 5026 occurred in July 2014 and has been considered resolved by DEQ. Release No. 4744 occurred in July 2009 and was investigated in November 2014, and April, June, August, September, and October 2023.

On July 15, 2009, approximately 1,000 gallons of Jet-A fuel was released on the ground during a fuel delivery. Approximately 200 cubic yards of petroleum-impacted soil were excavated and

disposed of on the northwest side of the tank farm. Three of the 20 confirmation soil samples collected from the Site exceeded DEQ Tier 2 Risk-Based Screening Levels (RBSLs).

In November 2014, Olympus investigated Release No. 4744 concurrently with Release No. 5026. As part of the investigation, two hand-auger borings (HB1 and HB2) were advanced to approximately 3 to 4 feet bgs within the tank farm, and eight soil borings (B1 to B8) were advanced to approximately 8 to 10 feet bgs via a direct-push drill rig. In total, 14 soil samples were collected from the borings. The extractable petroleum hydrocarbons (EPH) compound C9-C18 aliphatics exceeded its RBSL in a soil sample collected from approximately 8 1/2 feet bgs in boring B3 (6,080 milligrams per kilogram [mg/kg]) and in the soil sample collected at approximately 4 1/2 feet bgs in boring B5 (5,630 mg/kg). The volatile petroleum hydrocarbon (VPH) compounds C9-C10 aromatics (1,260 mg/kg) and C9-C12 aliphatics (2,320 mg/kg) in the soil sample collected from boring B5 at approximately 4 1/2 feet bgs also exceeded their respective RBSLs. Olympus recommended the petroleum-impacted soil be excavated and removed from the Site when the current USTs are replaced or permanently removed.

An additional subsurface investigation was performed in 2023 by Olympus. Twenty soil borings were advanced adjacent-north of the southern tank farm to depths of approximately 10 feet bgs. In total, 45 soil samples, including one duplicate, were collected from the soil borings. The VPH compound C9-C10 aromatics was detected at concentrations above the Leaching RBSL in soil samples B21-8, B121-8 (duplicate), and B23-6. The VPH compound C9-C12 aliphatics was reported at concentrations above the Direct Contact (DC) Construction RBSL in soil samples B17-2.1/9.9 and B21-2.1/9.7 and above the Leaching RBSL in soil sample B17-8. The EPH compound C9-C18 aliphatics was detected at concentrations exceeding the DC Construction RBSL in soil samples B21-2.1/9.7 and B23-2.1/9. The RBSL exceedances were all below their relevant Tier 2 DC Construction RBSLs.

Two deep borings, M1 and M2, were advanced on the north side of the tank basins to depths of approximately 70 feet bgs via an air rotary drill rig. M1 and M2 were then completed as monitoring wells. The wells were installed to evaluate the depth at which groundwater is present at the Site, if petroleum impacts are present in the groundwater, and if so, the magnitude of those impacts. Groundwater was encountered at depths of approximately 65 feet bgs. Three soil samples were collected from each boring as well as one duplicate sample. No DEQ HHS/RBSL exceedances were reported in the soil samples. Two groundwater samples and one duplicate sample were collected from the onsite wells. No DEQ HHS/RBSL exceedances were reported.

In late September 2023, Olympus was alerted by Edwards that excavation at the site was expected to occur at the beginning of October 2023. This excavation was anticipated to install three new USTs in the area where the 2009 excavation occurred, to the north and west of the existing tank farms and associated with Release No. 4744. Due to the planned excavation providing an opportune time for cost-efficiency to conduct this work, Olympus provided oversight and confirmation sampling during the excavation activities. The excavation covered an area of approximately 2,700 square feet and 12 feet deep, with approximately 1,200 cubic yards of soil removed. Visual and photoionization detector (PID) field screening, indicated that some residual hydrocarbon impacts were present in soil and bedrock from the walls and floor of the excavation; however, no exceedances of VPH or EPH compounds were detected in laboratory analysis. The imported fill was sampled for total RCRA metals and did not have applicable screening level exceedances. The excavated soil was planned for use elsewhere at the airport, and laboratory analysis for the characterization sample did not indicate applicable screening level exceedances. The excavation oversight provided evidence that the accessible mass of petroleum-impacted soil was removed to the extent practicable.

We understand that the primary scope of work will consist of the following:

- Project management including acquiring access to adjacent properties and facilities as needed, development of a health and safety plan, and project scheduling and coordination;
- Install two monitoring wells to approximately 70 feet bgs. Installation of these wells will likely require the use of an air-rotary drill rig;
- Development of all newly installed groundwater monitoring wells;
- Conduct two groundwater monitoring events. The event will be conducted a minimum of one week after the wells are developed;
- Submit groundwater samples for laboratory analysis of VPH and EPH Screen. EPH fractionation analysis will be performed on groundwater samples containing an EPH Screen concentration exceeding 1,000 µg/L;
- Validate all laboratory analytical data using DEQ's Data Validation Summary Forms;
- Prepare and submit an Interim Data Submittal (IDS) following installation of soil borings/wells and collection of the first round of groundwater samples;
- Update the Release Closure Plan (RCP); and,
- Prepare and submit a Monitoring Well Installation and Groundwater Monitoring Report.

Work Plan Scope of Work

The scope of work for the project can be divided into 13 tasks: work plan preparation, project management, monitoring well installation by a subcontractor and oversight by a staff scientist, monitoring well survey by a subcontractor, laboratory analysis, and reporting (including data validation, and preparation of an IDS, updated RCP, and Monitoring Well Installation and Groundwater Monitoring Report). A site map (Figure 3) and a cost schedule for the proposed work are attached. The scope of proposed work is summarized below.

Task 1: Work Plan Preparation

This document serves as the standard Monitoring Well Installation and Groundwater Monitoring Work Plan (WP) required by DEQ.

Task 2: Project Management

Task 2 in the cost estimate presents the cost for 14 hours for an Olympus project scientist to provide project management. Project management will include scheduling of personnel and work activities; notifying Montana One Call a minimum of 72-hours prior to beginning drilling for utility locates; oversight of field work; coordination with Owner/Operator, property owners, DEQ, and other state and local governmental entities, as necessary; and any other activities necessary to complete the project.

Task 3: Mobilization

Task 3 in the cost estimate presents the cost for two mobilizations of a staff scientist to provide oversight during monitoring well installation, two mobilizations of a Tech III for groundwater monitoring, and one mobilization of a staff scientist to mark boring locations for utility notifications.

Task 4: Monitoring Well Installation

Bedrock was previously encountered at approximately 10 feet bgs, therefore, an air-rotary drill rig is required to install the deep monitoring wells. Two monitoring wells will be installed to approximately 70 feet bgs with a screened interval from 20 to 70 feet bgs as shown on Figure 2. The wells will be gauged after installation and developed if groundwater is present. Drill cuttings will be collected at 5-foot intervals and analyzed in the field with a PID utilizing a headspace method. If PID results exceed 100 ppm a soil sample will be collected for EPH Screen and VPH. Costs have been provided for collection of up to two soil samples per boring. Task 4 in the cost estimate presents the cost for subcontracting an air-rotary drill rig to install the monitoring wells.

Task 5: Monitoring Well Installation Oversight

Task 5 in the cost estimate presents the cost for 24 hours of staff scientist oversight of monitoring well installation and well development. The staff scientist will adjust placement of the monitoring wells based on utility locations markings, conduct field screening of the drill cuttings, log the soil according to the Unified Soil Classification System, direct well construction based on field observations, and collect soil samples for laboratory analysis if PID results exceed 100 ppm. The staff scientist will also oversee private utility locate marking and monitoring well survey.

Task 6: Survey (Monitoring Wells)

Task 6 in the cost estimate presents the cost for a subcontracted Professional Land Surveyor (PLS) to mobilize to the Site and conduct a survey of newly installed Site wells. The top of the casing and well monument surfaces for the wells will be surveyed for location, in Montana State Plane, and elevation, in North American Vertical Datum (NAVD) feet above mean sea level.

Task 7: Groundwater Monitoring

Task 7 in the cost estimate details the costs for one Technician III (Senior) to conduct groundwater monitoring on the four Site wells for two events. The first groundwater monitoring event will be conducted following installation and development of the two new monitoring wells, and is anticipated to be completed during high groundwater 2025. The second monitoring event is anticipated for low groundwater 2025. Monitoring will include:

- Measurement of groundwater static water levels (SWLs) in all Site monitoring wells during the 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 bladder pump. Field measurements of groundwater quality parameters including pH, oxidation-reduction potential, specific conductivity, dissolved oxygen, and turbidity will be recorded during the low-flow pumping and sampling procedure.

- All groundwater samples will be submitted for laboratory analysis of VPH and EPH Screen.

Task 8. Laboratory Analysis

Soil and groundwater samples will be submitted for VPH and EPH Screen laboratory analysis. EPH fractionation analysis will be performed on groundwater samples exceeding 1,000 µg/L and 200 mg/kg for soil.

- Groundwater Monitoring: Collection of 4 groundwater samples and one field duplicate during each event for a total of 10 groundwater samples for VPH and EPH screen. The estimate assumes 1/2 of the groundwater samples will require fractionation.
- The cost estimate also includes collection of up to 4 soil samples for VPH and EPH Screen analysis and one duplicate for VPH analysis. The cost estimate assumes 1/2 the soil samples will require fractionation.

Task 9: Reporting (IDS)

Task 9 in the cost estimate presents the costs to prepare and submit an IDS following installation of groundwater monitoring wells and completion of the first groundwater monitoring event. The IDS will include tabulated soil and groundwater laboratory analytical data, figures illustrating the boring and well locations and the groundwater potentiometric surface, well completion logs and field sheets, data validation review, and final laboratory reports. The IDS will be submitted within 6 weeks of receipt of the groundwater sample analytical report.

Task 10: Reporting (RCP)

Task 10 in the cost estimate presents the costs to update and submit an RCP. Additional corrective action identified during the RI to bring the Release to closure will be discussed.

Task 11: Monitoring Well Installation and Groundwater Monitoring Report

Task 11 in the cost estimate presents the costs to prepare and submit a Monitoring Well Installation and Groundwater Monitoring Report summarizing the results of the investigation following completion of all tasks under this work plan. The report will include tabulated groundwater laboratory analytical data, Site figures, monitoring well completion logs, field sheets, data validation review, final laboratory reports, and a discussion of recommendations for the Site.

Task 12: Data Validation

Task 12 in the cost estimate presents the costs to validate analytical results using DEQ's Data Validation Summary Form.

Task 13: Private Locate

A private locator will be subcontracted to clear borehole locations and mark utilities in the field.

Cost

The cost to complete the scope of work outlined above is estimated at \$35,059.39 as detailed on the attached cost schedule. The cost estimate is based on the following assumptions:

- A private utility locator will be subcontracted prior to well installation;
- An air rotary drilling company will be subcontracted to install a total of 2 groundwater monitoring wells;
- A PLS will be subcontracted to provide surveyed locations and elevations for each monitoring well on Site; and,
- Two groundwater monitoring events will be conducted.

Please contact me if you have any questions.

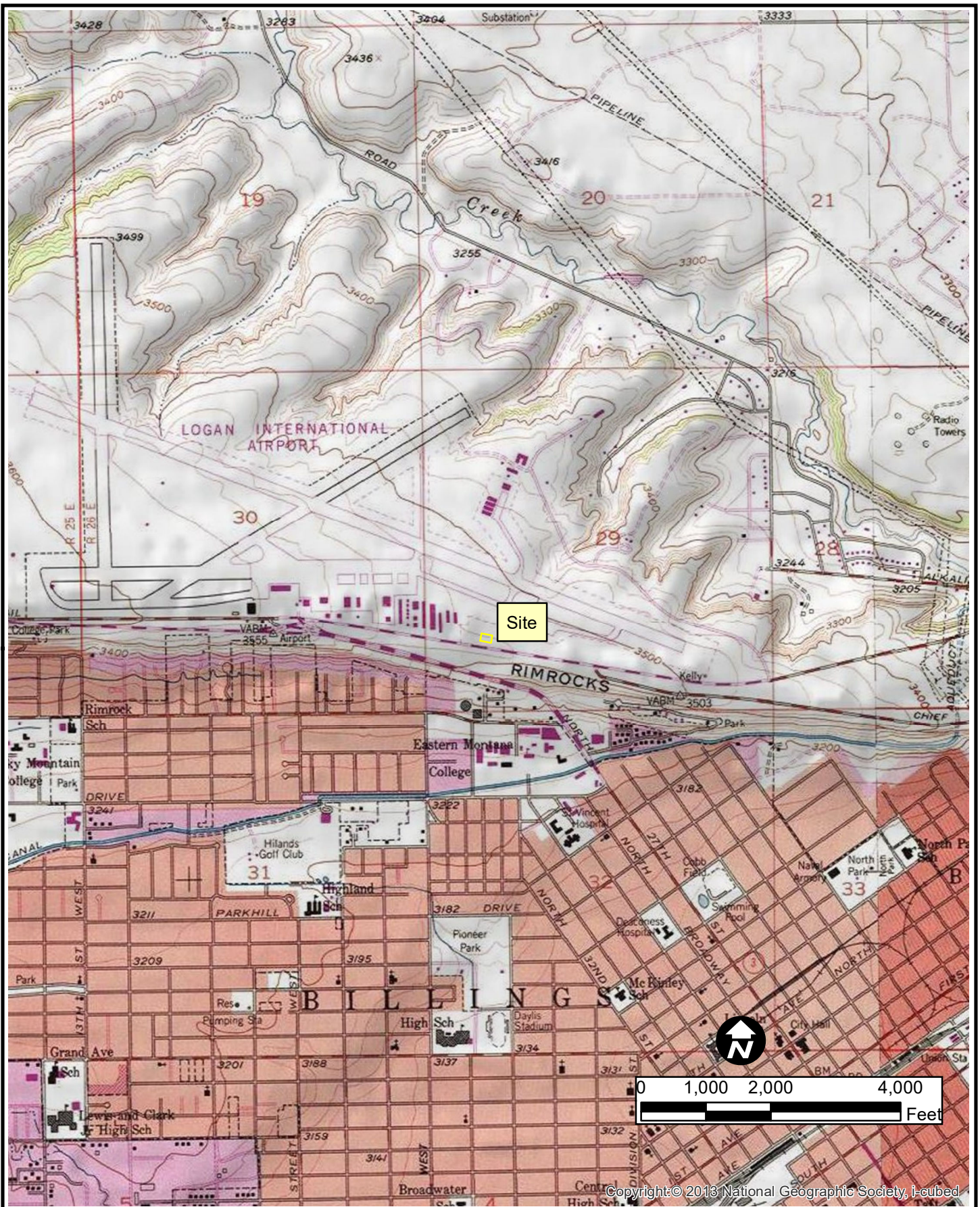
Sincerely,
Olympus Technical Services, Inc.



Ethan J. Perro, P.G.
Environmental Division Manager

Attachments: Figure 1 – Topographic Map
Figure 2 – Aerial Image
Figure 3 – Site Map
Cost Schedule
Groundwater Monitoring Tool

cc: Robb Bergeson, Edwards Jet Center, 1691 Aviation Place, Billings, MT 59105



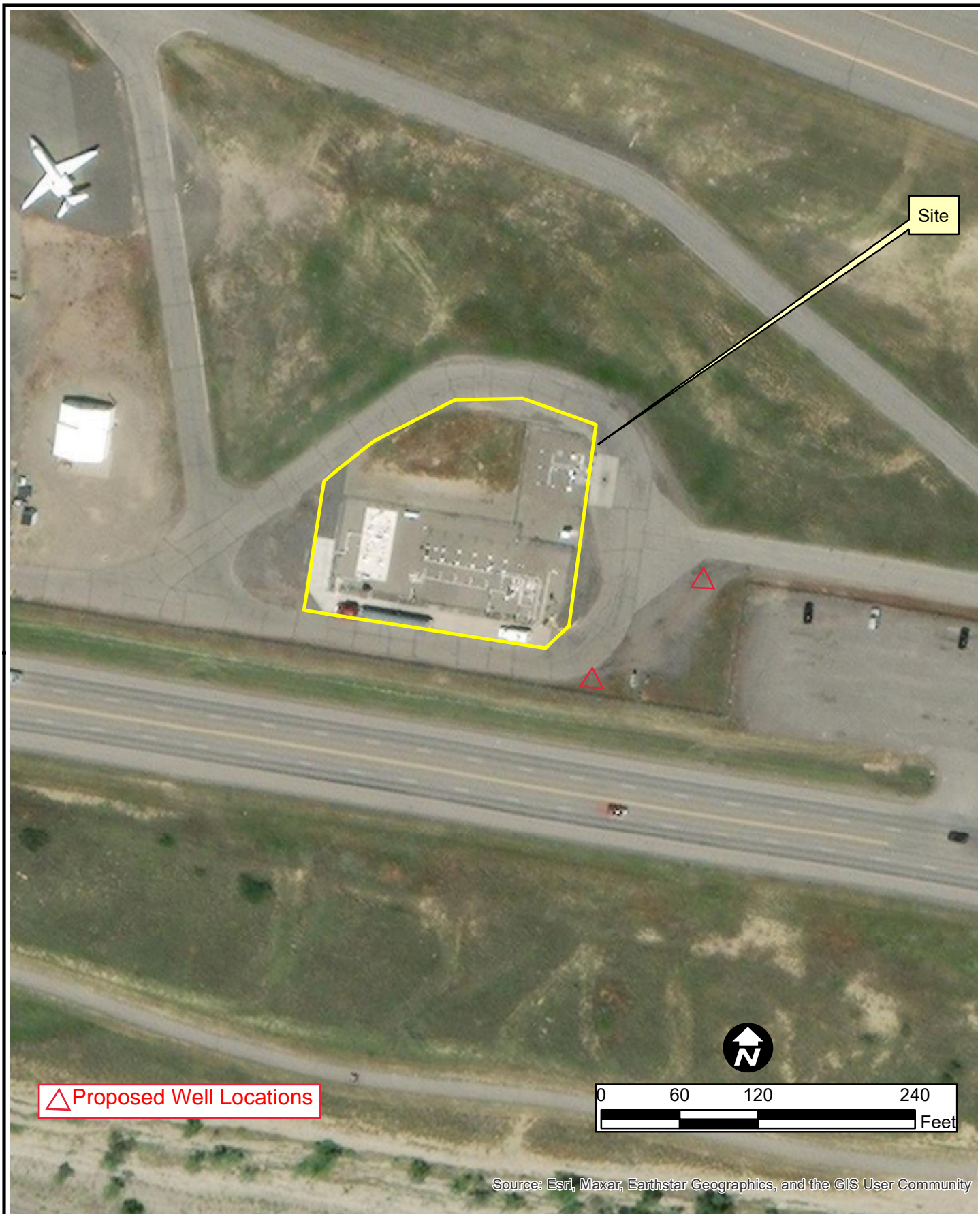
Copyright © 2013 National Geographic Society, Inc.



Olympus Technical Services, Inc.

Topographic Map

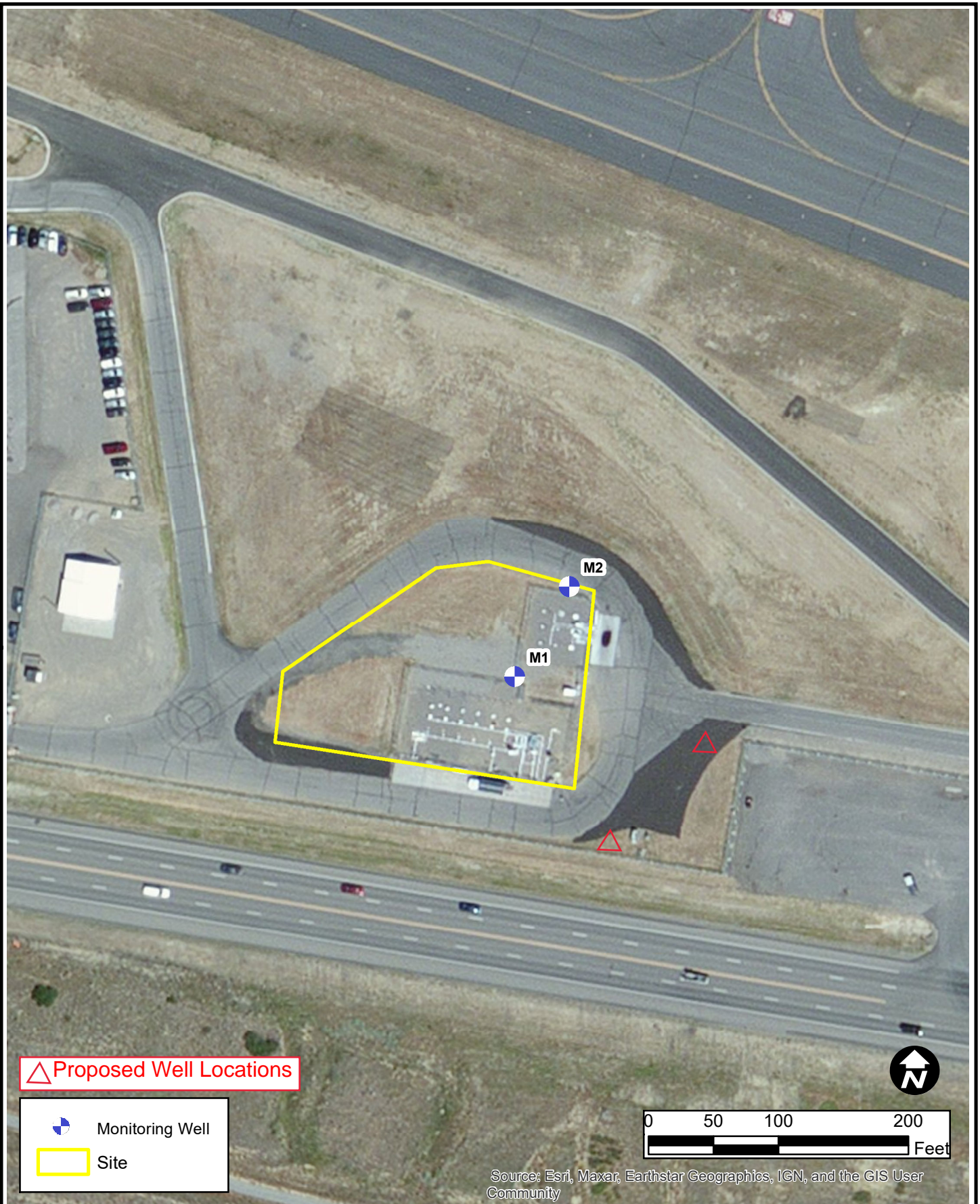
FIGURE
1



Olympus Technical Services, Inc.

Aerial Photograph

**FIGURE
2**



Olympus Technical Services, Inc.

Site Map

FIGURE
3