

May 21, 2026

Ms. Connie Pelican
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**SUBJECT: Groundwater Monitoring Work Plan for Petroleum-Contaminated Media
Pelican Oil Bulk Plant
7 North 18th Street, Billings, Montana
MDEQ Facility ID# 56-05861 (TID 30065); Release 3799 and Work Plan 35176;
Tetra Tech Project No. 117-8567001D**

Dear Ms. Pelican:

Tetra Tech, Inc. (Tetra Tech), on behalf of Pelican Oil Company, has prepared this work plan to perform groundwater monitoring at the Pelican Oil Bulk Facility release located at 7 North 18th Avenue, Billings, Montana (the “site”), as presented on **Figure 1**. This work plan has been prepared in response to a Work Plan Request from Mr. Reed Miner from the Montana Department of Environmental Quality (DEQ) in correspondence dated April 13, 2026 (MDEQ, 2026).

BACKGROUND INFORMATION

Three 500-gallon underground storage tanks (USTs) containing diesel, kerosene, and petroleum solvents were located southwest of the AST area (**Figure 2**). The USTs were removed from the site on July 22, 1992. Petroleum hydrocarbon odors were noted during the excavation of the USTs, and the MDEQ was notified of a release (Release #1270). The diesel and kerosene USTs were pitted and small holes were observed. The petroleum solvent tank was also pitted (Maxim Technologies, 2002). Remedial activities included excavation of impacted soil 12 feet below the ground surface (bgs). However, petroleum hydrocarbon odors were still present at the base of the excavation. TPH concentrations in samples collected below the diesel and kerosene USTs exceeded MDEQ risk-based screening levels (RBSL; MDEQ, 2024). However, TPH concentrations below the solvent tank were below MDEQ RBSLs.

In 1999, underground piping associated with the aboveground storage tank basin was removed (Maxim Technologies, 2002). During this removal, a leak was discovered at a piping connection. Soil samples collected below this point contained a total extractable hydrocarbon (TEH) concentration of 7,200 mg/Kg. This release was reported to the MDEQ (Release #3799).

In September 2002, eight soil borings were advanced on the site. Petroleum hydrocarbons were detected in five soil borings. Soil sample results indicated gasoline range components mixed with diesel components were present within the soil borings. Soil borings advanced upgradient of AST and piping area also displayed gasoline range hydrocarbons, indicating upgradient impacts from an adjacent property (a former service station) have migrated onto the site.

Five monitoring wells, PO-1 through PO-5, (**Figure 2**) were installed at the site in August 2003. Initially, groundwater petroleum hydrocarbon concentrations were detected above the MDEQ RBSLs in all five monitoring wells. Free product at 0.1 feet or less thickness was occasionally detected at the downgradient

monitoring wells PO-3 and PO-4 (Maxim Technologies, 2003). Free product has not been detected in any monitoring wells since 2004.

In November 2019, four monitoring wells, PO-6 through PO-9, (**Figure 2**) were installed to delineate the lateral extent of petroleum hydrocarbon impacts (Tetra Tech, 2020). Impacts to soil and groundwater were found at these monitoring wells.

In April 2021, a groundwater monitoring event was conducted on monitoring wells PO-6, PO-7, PO-8, and PO-9. Monitoring well PO-6 is associated with release 1270, and monitoring wells PO-7, PO-8, and PO-9 are associated with release 3799. Monitoring well PO-6 was also sampled in August of 2021. Based upon the results collected from monitoring well PO-6, release #1270 was closed in a no further corrective action letter received on May 3, 2022 (MDEQ, 2022). However, groundwater analytical results from PO-7, PO-8, and PO-9 indicate that RBSL exceedances persist at the site (Tetra Tech, 2023).

In 2023 a remedial investigation was conducted at the site to determine the extent of the groundwater plume, and soil conditions within the AST basin. Additionally, this investigation was implemented to determine if remedial injection events would be a viable path forward for eventual site closure. The investigation indicated that the site and downgradient properties could benefit from remedial injections. However, the existing AST basin and utilities could potentially limit the treatment areas, limiting the potential for release closure (Tetra Tech, 2023).

In August 2025, Tetra Tech implemented remedial injections at the site. The remedial injections were performed by injecting activated sodium persulfate through two horizontal injection wells, installed through the source area. Post injection groundwater monitoring was conducted to determine the effectiveness of remediation, however, results did not indicate that biodegradation is occurring (Tetra Tech, 2025).

PROPOSED SCOPE OF WORK

The objective of the proposed scope of work is to perform an additional post-remediation groundwater monitoring event to further assess the effectiveness of the remedial injections and to determine additional work needed to resolve the release.

Work Plan Preparation and Project Management

These tasks include preparing this work plan, and project management time necessary for coordination and scheduling of the project. In addition, a site-specific health and safety plan (HASP) will be updated to address activities in this work plan prior to conducting any on-site activities.

GROUNDWATER MONITORING

One groundwater monitoring event will be completed at the site to determine plume stability or degradation following the remedial injections. The following methods will be used for the groundwater monitoring event:

- Depth to groundwater will be measured at all site monitoring wells, which includes three additional wells (PO-1, PO-2, and PO-6) from the proposed wells to be sampled. The depth to water will be measured using an electronic oil/water interface meter. The meter will be decontaminated between each well measurement using Liquinox[®] soap solution and clean potable water rinse.

- Monitoring wells selected for sampling include PO-3, PO-4, PO-5, PO-7, PO-8, PO-9, PO-10, and PO-11. These monitoring wells were selected based on position to the source area and groundwater flow direction.
- The monitoring wells will be purged with low-flow pumping methods using a bladder pump or peristaltic pump. Dedicated polyethylene tubing will be used during sampling. During purging, field instruments will analyze the water for pH, temperature, dissolved oxygen, specific conductivity, oxidation-reduction potential, and turbidity. Purging will continue until the parameters have stabilized within ranges specified in the MDEQ Groundwater Sampling Guidance (**Table 1**; MDEQ 2018). If stabilization of the parameters does not occur during purging, the sample will be collected once three well volumes has been purged. Additionally, water levels will be monitored during purging to ensure minimal drawdown of the water level. The pump will be decontaminated between wells using a Liquinox solution followed by a triple rinse technique. Additionally, a new bladder and/or tubing will be installed between each well.

Table 1; MDEQ, 2018

Water Quality Indicator Parameter	Stabilization Range
pH	± 0.1 units
Specific Conductance	± 3%
Dissolved Oxygen (DO)	± 10%
Turbidity	± 10%
Oxidation/Reduction Potential (ORP)	± 10 millivolts

- Groundwater samples collected from the monitoring wells will be analyzed for VPH and EPH constituents by the Montana Method based on the MADEP method. Following DEQ guidance, if the EPH concentration in water exceeds 1,000 micrograms per liter (µg/L), an EPH fractionation analysis is required (MDEQ, 2020). For cost estimation purposes for this proposal, it will be assumed that seven of the water samples will also be analyzed for EPH fractions.
- Laboratory analysis of intrinsic biodegradation indicators (IBIs) including alkalinity, sulfate, nitrate/nitrite, dissolved iron, dissolved manganese, and methane, will be collected from monitoring wells PO-3, PO-5, PO-8, and PO-10 to determine the impacts of the remedial injection event.

DATA VALIDATION

A data validation will be performed for each laboratory report. Each analytical data package will include a summary report that cross-references the sample identification with the laboratory identification and identifies variations from standard operating procedures; laboratory analytical results; quality control data, which may include but is not limited to surrogate recoveries, initial and continuing calibration blanks and spikes, method blanks, laboratory control blanks and spikes, and matrix spike and matrix spike duplicates; FID chromatograms; chain of custody form(s); and a sample receipt checklist. Additionally, data validation will be included with the investigation report and will follow DEQ’s data validation guidelines as per <https://deq.mt.gov/Portals/112/Land/StateSuperfund/Documents/DataValidationReport.pdf>.

Reporting

Following completion of field activities and receipt of the laboratory analytical reports, Tetra Tech will prepare a Groundwater Monitoring Report summarizing methodologies and results of field activities. The report will discuss recommendations and include an updated release closure plan to discuss methods to resolve the release.

SCHEDULE AND COSTS

Tetra Tech will initiate this work plan upon receiving written authorization to proceed from Pelican Oil Company and approval of the work plan from the DEQ. The activities outlined in this work plan are expected to be completed by the end of July 2026.

Tetra Tech's estimated project costs are shown on the estimated cost worksheet included in **Appendix A**. Please note we have named the tasks according to the Montana Petroleum Tank Release and Compensation Board guidance for Standard Corrective Action Task Names.

We appreciate the opportunity to provide this work plan and look forward to working with you on this project. If you have any questions or comments regarding this work plan, please do not hesitate to call me in our Billings, Montana office at (406) 248-9161.

Respectfully Submitted,

Tetra Tech, Inc.



Nickolas Woehlert
Environmental Geologist



Steven Marie, P.E.
Senior Engineer

Attachments:

Figure 1 – Site Location Map

Figure 2 – Site Detail Map

Appendix A – Tetra Tech Cost Estimate

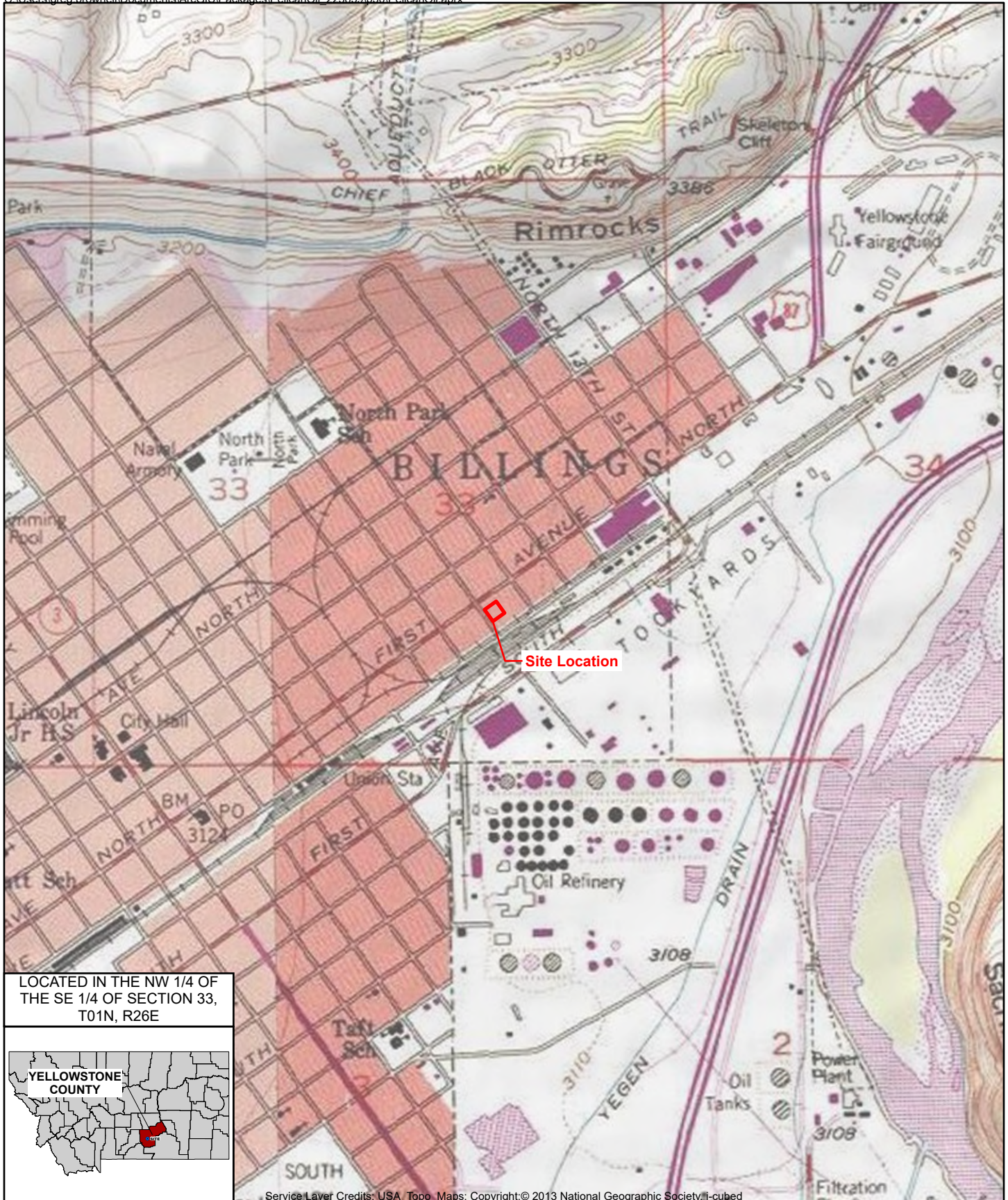
cc: Reed Miner, MDEQ rminer@mt.gov

REFERENCES

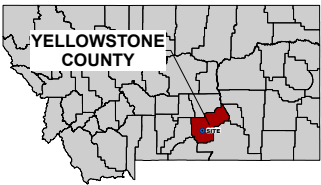
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- MDEQ, 2022. No Further Corrective Action Required for the Petroleum Release at GM Petroleum Distributors/Pelican Oil Bulk Plant, 7 North 18th Street, Billings, Yellowstone County, Montana; Facility ID 56-05861 (TID 30065), Release 1270. May 3.
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- MDEQ, 2026. Work Plan Requested to Monitor Petroleum-Contaminated Media at the GM Petroleum Distributor (Former Pelican Oil Bulk Plant), 7 North 18th Street, Billings, Yellowstone County, Montana; Facility ID 56-05861 (TID 30065), Petroleum Release 3799, Work Plan 35176
- Tetra Tech, 2020. 2019 Groundwater Investigation and Monitoring Report and Contaminated Media Investigation in Utility Trench, Pelican Oil Bulk Plant, 7 North 18th Street, Billings, Montana, MDEQ Facility ID No. 56-05861; Releases 1270 & 3799; Work Plan ID #10980 and #10981; and Work Plan ID #33818 and #33817, Tetra Tech Project No. 117-8567001. March.
- Tetra Tech, 2023. Remedial Investigation Report, Pelican Oil Bulk Plant, 7 North 18th Street, Billings, Montana, MDEQ Facility ID No. 56-05861; Release 3799; (TID 30065), Work Plan 34595, Tetra Tech Project No. 117-8567001C. August.
- Tetra Tech, 2025. 2024 Remedial action Documentation Report, Pelican Oil Bulk Plant, 7 North 18th Street, Billings, Montana, MDEQ Facility ID No. 56-05861; Release 3799; Work Plan 34595, Tetra Tech Project No. 117-8567001D. May.



FIGURES



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117-8567001D
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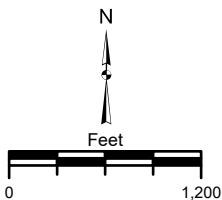
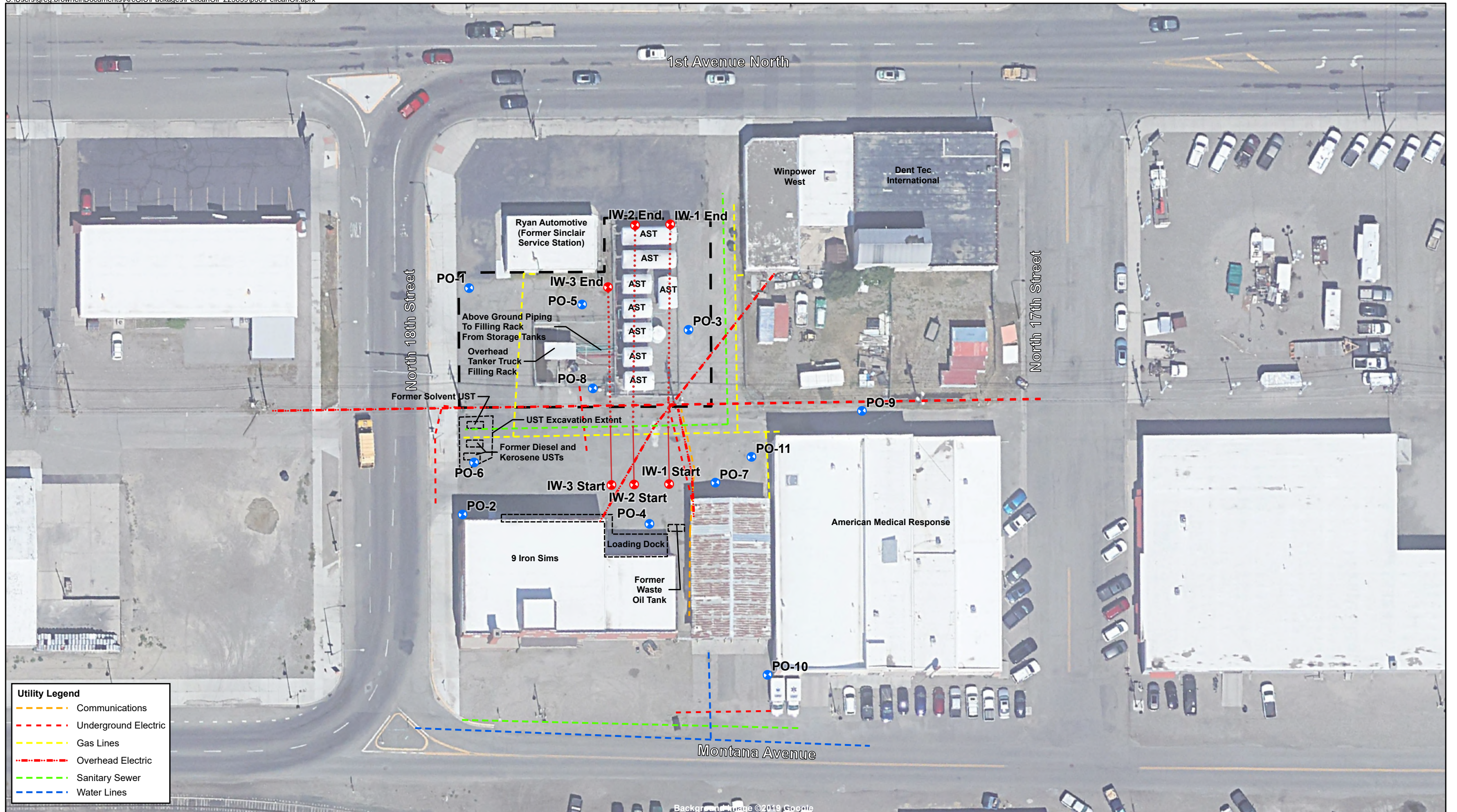
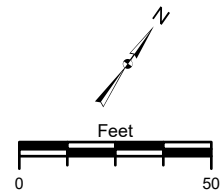


Figure 1
Site Location Map
Pelican Oil Bulk Plant
7 North 18th Street
Billings, Montana



117-8567001D
1/29/2026



- + Monitor Well Location
- + Injection Well Location
- Property Boundary
- Horizontal Well Location (Dotted where perforated)

Figure 2
Site Detail Map
Pelican Oil Bulk Plant
7 North 18th Street
Billings, Montana



APPENDIX A

Cost Estimate