



GROUNDWATER SAMPLING WORK PLAN

Client:

Sysco Corporation
1370 Enclave Parkway
Houston, TX 77077

Contact: Ms. Jennifer Trodden

Email: Jennifer.Trodden@sysco.com

Sysco Montana

1509 Monad Road
Billings, Montana

January 2026



Prepared by:

Harbor, a Terracon Company

5800 Evergreen Drive
Little Rock, AR 72205

P: 501.663.8800

F: 501.588.0123

www.harborenv.com

Environmental | Safety | Engineering

January 23, 2026

Ms. Rachel Mindt
Montana Department of Environmental Quality
Waste Management and Remediation Division
Petroleum Tank Cleanup Section
2401 Colonial Drive
Helena, MT 59601

Re: Groundwater Monitoring Work Plan
Sysco Montana, 1509 Monad Road, Billings Mt. 59107
Facility ID 56-03530 (TID 29872), Petroleum Release 1647, Work Plan 35103
Terracon Project No. L8257134

Prepared on behalf of:

Sysco Corporation
Ms. Jennifer Trodden MS CSP | Senior Director of Environmental, Health and Safety
USFS and International Operations
Sysco Global Support Center
1390 Enclave Parkway
Houston, TX 77077, USA
P: (281) 584-1390
E: Jennifer.Trodden@sysco.com

Dear Ms. Mindt,

Harbor, a Terracon Company (Harbor) is pleased to submit this Groundwater Monitoring Work Plan on behalf of Sysco Corporation designed to assess groundwater at the above-referenced site. We understand that the Montana Department of Environmental Quality (MDEQ) Petroleum Tank Cleanup Section (PTCS) has requested this work plan to assess existing groundwater contamination at the referenced facility.

Sincerely,

Harbor, A Terracon Company



Thomas Huetter, P.G.
Project Geologist
thuetter@harborenv.com



Lisa Rotenberry
Department Manager II – Regulatory Compliance
Lisa.Rotenberry@harborenv.com

Table Of Contents

| | | |
|-----|--|---|
| 1.0 | Introduction | 1 |
| 2.0 | Facility History/Release Background | 1 |
| 3.0 | Groundwater Monitoring Objectives..... | 1 |
| 4.0 | Work Plan Tasks | 2 |
| 4.1 | <i>Utility Clearance and Safety</i> | 2 |
| 4.2 | <i>Well Survey</i> | 2 |
| 4.3 | <i>Groundwater Sample Collection</i> | 2 |
| 4.4 | <i>Regulatory Screening Levels</i> | 3 |
| 4.5 | <i>Quality Assurance/Quality Control</i> | 4 |
| 4.6 | <i>Investigation Derived Wastes</i> | 4 |
| 5.0 | Schedule and Reporting | 4 |
| 6.0 | Appendices for Work Plan..... | 5 |

Appendix A Figures

- Figure 1: Site Location Map
- Figure 2: Site Aerial Image
- Figure 3: Groundwater Sampling Locations

Appendix B Standard Operating Procedures for Groundwater Sampling

1.0 Introduction

Harbor, a Terracon Company (Harbor) was contracted by Sysco Corporation (Sysco) to prepare this Groundwater Sampling Work Plan for the existing petroleum release (Release ID #1647) at the Sysco Montana property (project site), located at 1509 Monad Road in Billings, Yellowstone County, Montana.

2.0 Facility History/Release Background

Release ID #1647 was initiated in May 1993 when three underground storage tanks (USTs) were removed from the project site at a location along the easternmost warehouse's eastern parking area. The USTs included two 8,500-gallon diesel USTs and one 500-gallon waste oil UST. In September 1993, a remedial investigation was conducted which included the installation of monitoring wells MW-1, MW-2, MW-3 and MW-4. No light non-aqueous phase liquid (LNAPL) also known as "free product" was observed at the time the monitoring wells were installed; however, benzene exceedances were noted.

In June 1994, an additional remedial investigation was completed which included the installation of monitoring wells MW-5 and MW-6, downgradient of and off-site to the east from the UST area. The investigation also included aquifer testing and noted benzene exceedances in groundwater. A soil vapor extraction (SVE) pilot study was conducted in August 1994 on monitoring wells MW-2 and MW-3 and subsequently SVE and air sparge (SVE/AS) remediation was selected as a cleanup action in the corrective action plan. An SVE/AS system was installed in April 1995.

During the operation of the SVE/AS system, ongoing groundwater monitoring and LNAPL measurements were conducted. Sampling efforts occurred twice during the time between the startup of the SVE/AS system (April 1995), the temporary shut-down of the SVE/AS system (June 1996), and the restart of the SVE/AS system (April 2001). Following the increase of LNAPL in monitoring well MW-3, the SVE/AS system was restarted in April 2001 and groundwater sampling continued following the installation of monitoring wells MW-7 to MW-12.

Groundwater sampling was conducted on an annual basis until September 2014, when active sampling ceased at the site as Sysco received no further communication or contact from the MTDEQ regarding next steps. As a result of the sale of the property, Terracon was hired to seek closure actions on release ID #1647.

3.0 Groundwater Monitoring Objectives

This Work Plan has been developed to outline the proposed approach Sysco would like to take to gather sufficient information to characterize groundwater impacts at the project site and to seek closure (no further action) on the Release ID #1647.

The following objectives have been prepared:

- Collect groundwater samples from available wells to evaluate current site conditions.
- Compare results to Montana Tier 1 risk-based screening levels (RBSLs) to evaluate current compliance.
- Utilize collected data to prepare conceptual site model and release closure plan.
- Achieve case closure within as short of time as possible.

4.0 Work Plan Tasks

The following sections outline our field investigation methods.

4.1 *Utility Clearance and Safety*

As no additional drilling is currently proposed for this site, no utility clearance will be conducted for this groundwater sampling event. Should additional wells be requested prior to the sampling activities, Montana 811 will be notified upon receipt of a notice to proceed and no later than 72 hours prior to intrusive activities. In addition, Harbor will also subcontract with a private utility locating service to clear any proposed monitoring well locations.

Harbor has a 100% commitment to the safety of all its employees. As such, and in accordance with our *Incident and Injury Free*[®] safety culture, Harbor will develop a safety plan to be used by personnel during field services. Prior to commencement of on-site activities, Harbor will hold a meeting to review health and safety needs for this specific project. At this time, we anticipate performing fieldwork using United States Environmental Protection Agency (EPA) Level D personnel protective equipment (PPE) which consists of hard hats, safety glasses, protective gloves, high visibility vests, and steel-toed boots.

4.2 *Well Survey*

Harbor proposes to conduct a new well survey by a licensed Montana surveyor to establish accurate well coordinate information (latitude-longitude, or state plane coordinates, as directed by MDEQ) and top of casing elevations for the monitoring wells.

Additionally, the existing wells will be inspected for accessibility and will be gauged with an interface probe to measure depth to groundwater and determine whether any free-phase hydrocarbons are present. The wells will be opened and allowed to equilibrate to atmospheric conditions prior to gauging.

4.3 *Groundwater Sample Collection*

As requested by MDEQ, wells MW-2A, MW-3A, MW-4, MW-5, MW-6, MW-9, MW-10, MW-11, and MW-12 will be sampled. Upon arrival at the site, all of the wells will be opened and allowed to equilibrate to atmospheric conditions. They will then be gauged with the interface probe to ensure an accurate representation of the groundwater potentiometric surface prior to any sampling. The total depth of each well will also be measured. Free product, if encountered will be noted in the field notes. Unless directed

otherwise by MDEQ, samples will not be collected from wells containing free product. The interface probe will be cleaned using an Alconox wash and potable water before beginning the project and before measuring each groundwater monitoring well.

Groundwater samples will be collected with a peristaltic pump and dedicated tubing for each well to prevent cross contamination. The EPA Low-Flow (Minimal Drawdown) Groundwater Sampling Procedures (April 1996) will be utilized to collect the groundwater samples. Groundwater will be purged through a flow-through cell connected to a YSI ProDSS (or equivalent) multi-parameter instrument that will enable continuous measurement of pH in standard units (SU), dissolved oxygen (DO) in milligrams per liter (mg/L), specific conductance in microSiemens per centimeter ($\mu\text{S}/\text{cm}$), temperature in degrees Celsius ($^{\circ}\text{C}$), oxidation-reduction potential (ORP) in millivolts (mV), and turbidity in nephelometric turbidity units (NTU). These parameters will be logged on a groundwater sampling record at five-minute intervals until the parameters have stabilized.

The parameters will be considered stabilized when three successive readings are within ± 0.1 SU for pH, $\pm 5\%$ for conductivity, $\pm 0.2^{\circ}\text{C}$ for temperature, and turbidity less than 20 NTU. Upon stabilization, groundwater samples will be collected from each well while the well pump tubing is still in place (the discharge tubing will be disconnected from the flow-through cell prior to sample collection). The laboratory-supplied sample containers will then be filled out of the pump discharge tubing while maintaining the low-flow setting.

In some cases, it may not be possible to achieve stabilization of the water quality parameters. In those cases, the well will be purged until either three casing volumes are removed or the well pumps dry. If the well purges dry before water quality parameters stabilize, the well will be allowed to recharge, and a sample will be directly collected from the well using the low-flow method.

Groundwater samples will be placed in clean, lab-supplied containers and preserved on ice. The samples will be logged on a chain-of-custody and transported to Energy Laboratories, Inc., a Montana-certified laboratory in Billings, Montana for analysis of Montana-modified Massachusetts Method volatile petroleum hydrocarbons (MA-VPH) and extractable petroleum hydrocarbons (EPH). The sample coolers and completed chain-of-custody forms will be relinquished to the analytical laboratory for analysis on a standard turnaround time.

Standard Operating Procedures (SOPs) to be followed during the implementation of the groundwater sampling activities are included in Appendix B.

4.4 *Regulatory Screening Levels*

The laboratory analytical results will be compared to current Environmental Protection Agency (EPA) maximum contaminant levels (MCLs) and MDEQ RBSLs. If an MCL is not established for an analyte, the results will be screened against the US EPA RSL for tap water.

4.5 *Quality Assurance/Quality Control*

The sample analyses will be conducted by Energy Laboratories, Inc. under their QC Program, which includes the final analytical report with qualifiers where necessary; case narratives, chain-of-custody records; and results for method blanks, a matrix spike and matrix spike duplicate analyses with control limits; laboratory control sample and laboratory control sample duplicate summary with control limits; reporting limits listed on all reports; and surrogate recoveries.

Field duplicates will be selected at random and collected at a rate of 10% of groundwater samples. One trip blank sample will be prepared by the lab and sent with the sample cooler to the field. The trip blank will be returned unopened with the collected groundwater samples and analyzed for MA-VPH and EPH. One field blank sample will be collected and included in the sample transport for groundwater samples analyzed for MA-VPH and EPH.

Groundwater sample records and field notes will be completed during the field work. The work will be conducted following Harbor's Standard Operating Procedures, which were included in Appendix B.

Site-specific conditions may require an adjustment to the field program and a deviation from this Work Plan to accommodate site-specific needs. If an adjustment or deviation becomes necessary, the activities and reasoning will be documented and implemented. Such adjustments (for example, adjustments in sampling locations) may introduce some degree of variability, which will be reconciled with project information by evaluating whether contaminant levels may be underestimated or overestimated, and how this may affect eventual site management or cleanup approaches, if applicable.

4.6 *Investigation Derived Wastes*

Investigation derived waste (IDW) will include purged groundwater, decontamination water, and sampling expendables (pump tubing, nitrile gloves, etc.). The purged groundwater and decontamination water will be placed in a 55-gallon drum and labeled as non-hazardous waste. Upon receipt of the groundwater analytical results, the water will be profiled for disposal at an appropriate facility. Sampling expendables will be placed in an appropriate trash receptacle.

5.0 **Schedule and Reporting**

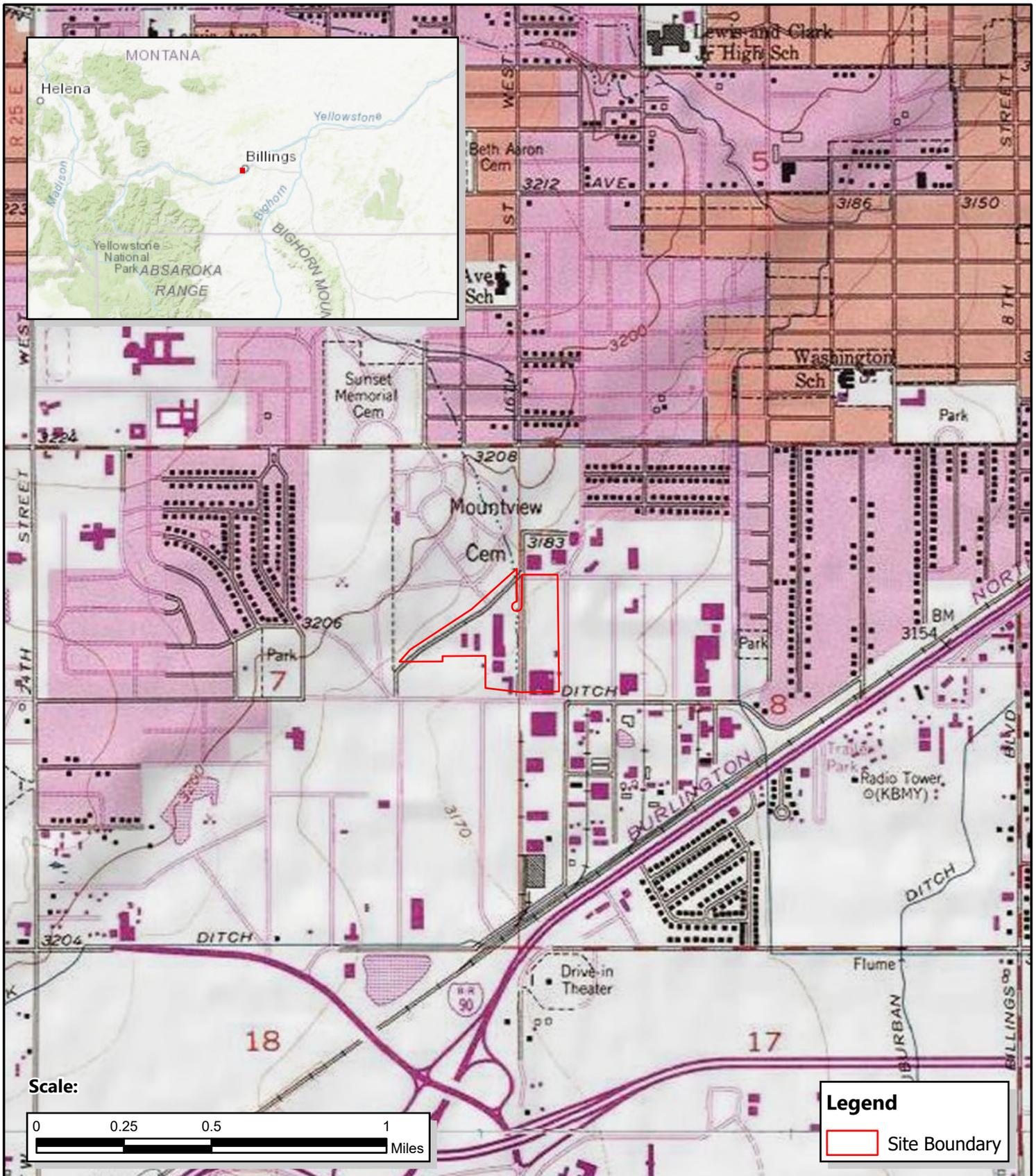
Upon approval of the work plan, Harbor will begin preparing for field work. This will include contacting the analytical laboratory to obtain appropriate sample containers and pre-task planning prior to mobilizing to the site. Harbor anticipates scheduling and conducting the field work as soon as practical, weather permitting. A report will be prepared and submitted within 30 days of receipt of laboratory analytical data. Following the validation of field and laboratory data, the data and information will be reconciled with the project objectives to assess the overall success of sampling activities. The report will include, at a minimum, site observations (e.g., subsurface lithology, distribution of impacts, boring and test pit logs) comprehensive analytical results and QA/QC tables, deviations from this Work Plan, and sample location maps.

6.0 Appendices for Work Plan

Appendix A of this work plan contains site location maps and a sample location map. Appendix B contains Harbor's Standard Operating Procedures for groundwater sampling.

Appendix A

Figures

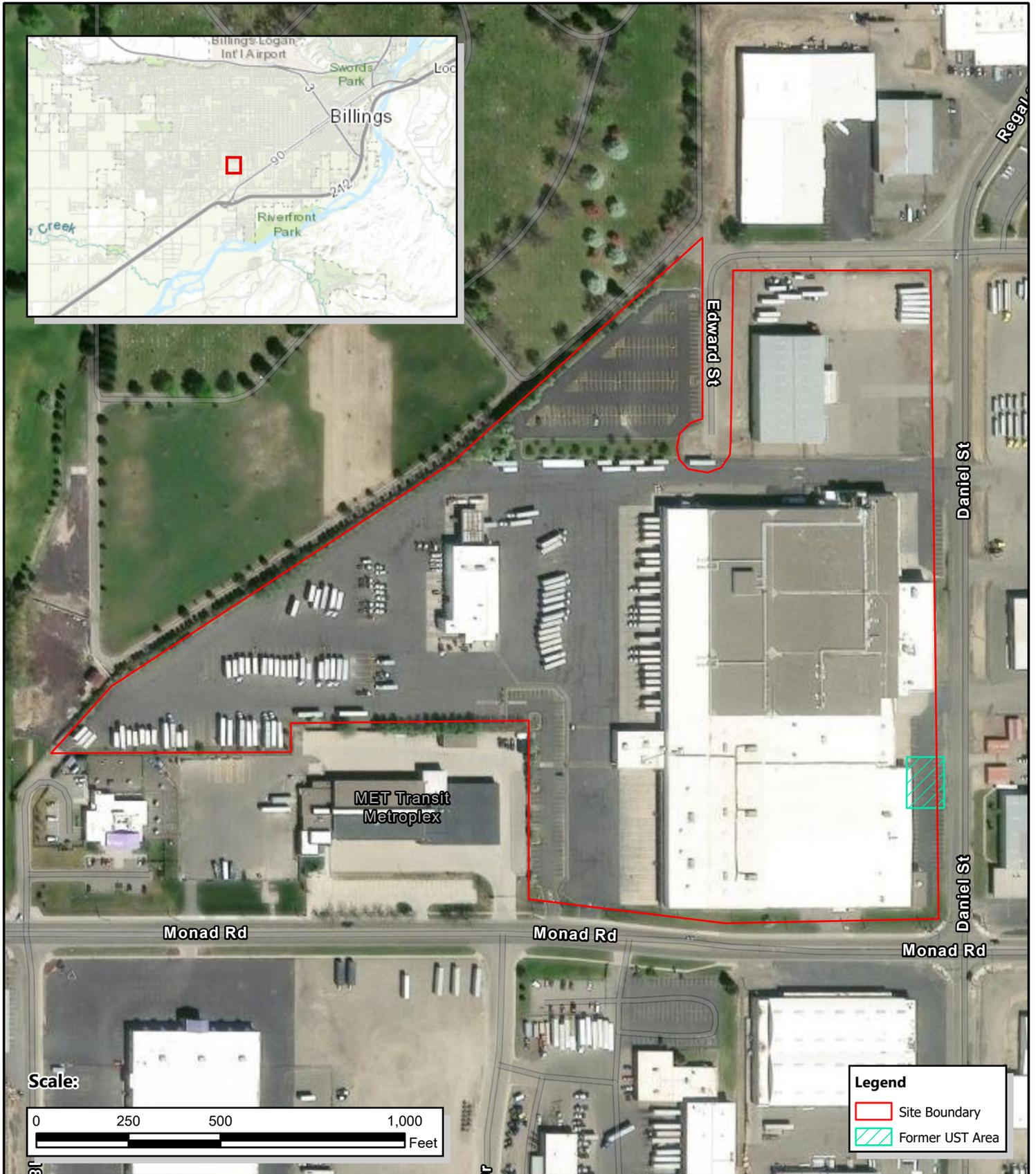


Harbor
 A Terracon Company
 5800 Evergreen Drive
 Little Rock, AR 72205
 P: 501.663.8800
 www.HarborEnv.com

Client:




Figure 1 - Site Location Map
 Sysco Montana
 Facility ID 56-03530
 Billings, Yellowstone County, MT
 Date: 12/18/2025
 Drawn by: TH
 Checked by: LR
 Revision No: 0

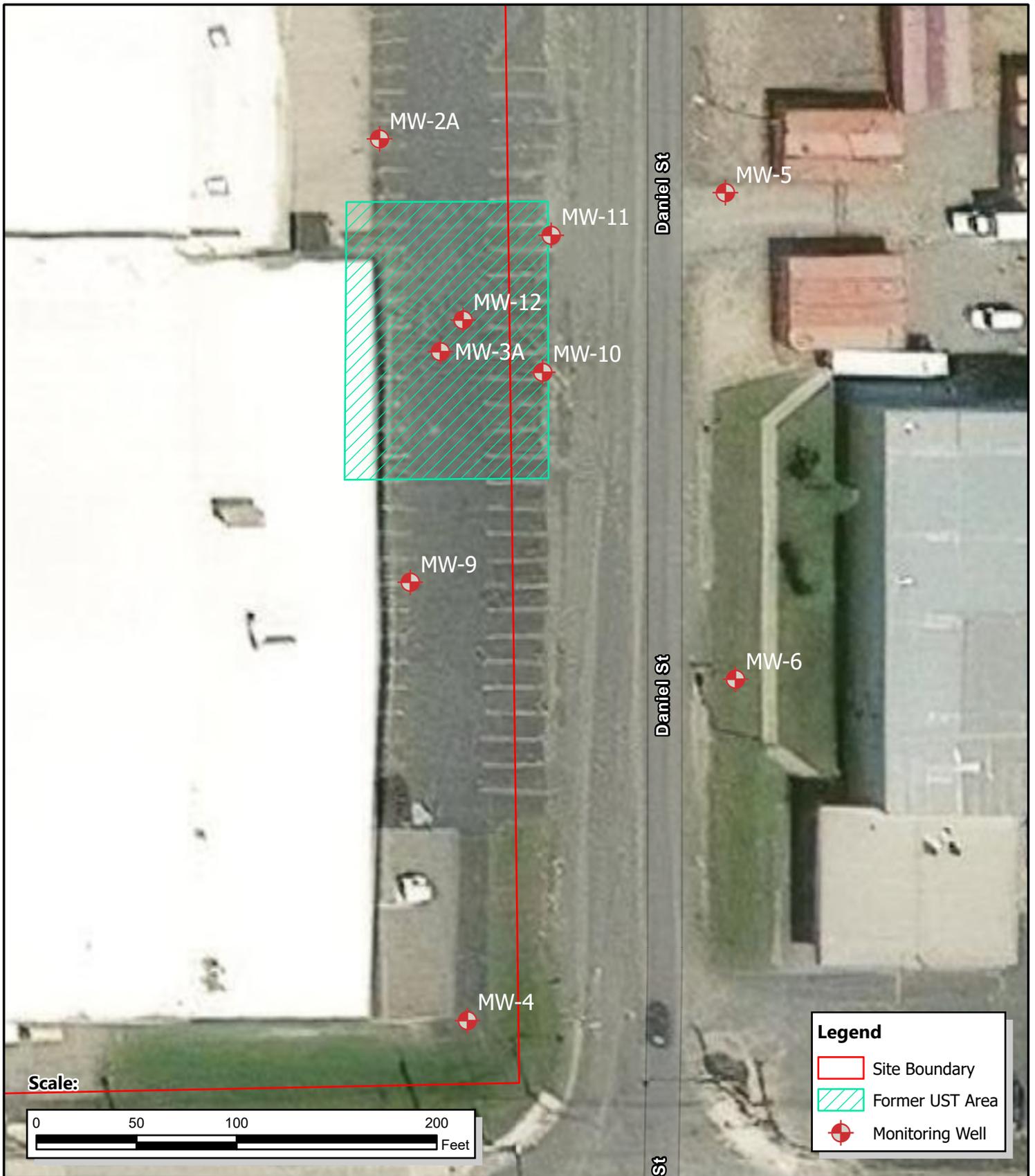


Harbor
 A Terracon Company
 5800 Evergreen Drive
 Little Rock, AR 72205
 P: 501.663.8800
 www.HarborEnv.com

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Figure 2 - Site Aerial Image
 Sysco Montana
 Facility ID 56-03530
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Legend

- Site Boundary
- Former UST Area
- ⊕ Monitoring Well

Harbor
 A Terracon Company
 5800 Evergreen Drive
 Little Rock, AR 72205
 P: 501.663.8800
 www.HarborEnv.com

Client:
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Figure 3 - Monitoring Well Locations
 Sysco Montana
 Facility ID 56-03530
 Billings, Yellowstone County, MT
 Date: 12/18/2025
 Drawn by: TH
 Checked by: LR
 Revision No: 0

Appendix B
Standard Operating Procedures

| | |
|--|------------------------|
| Title: Groundwater Sampling – Low Flow Groundwater Sampling | SOP Number: SOP E.1940 |
| | Page 1 of 3 |

1. OBJECTIVE

To collect a representative groundwater sample from the sampling point for chemical analysis. This procedure should be used when attempting to minimize stress to the aquifer due to monitoring well sampling. This procedure includes the documentation of sampling methods, supplies and protocol to reduce potential for inaccurate representative samples and or cross-contamination during the sampling event.

2. EQUIPMENT

- Groundwater Elevation Data form;
- Laboratory Chain-of-Custody form;
- Sample labels;
- Field logbook;
- Indelible ink pen;
- pH, temperature, and specific conductance meter;
- Turbidity meter;
- Sample containers and packing material;
- Cooler with ice pack and packing media;
- Well purging equipment and sampling device – low-flow pump;
- Keys for locking cap on well and secure shed;
- Deionized (DI) water;
- Drums for purge water; and
- Site map

3. DOCUMENTATION

- Record all pertinent sampling information on the sampling container label, sampling information form, chain-of-custody, and shipping form.
- Pertinent data will vary based on the parameter and the form; however, the following data must be recorded - time, date, job number, project name, sampling location, samplers name, sampling methodology, parameters to be analyzed, stabilization data, and general observations.
- Make appropriate entries in the chain-of-custody form at time of sample collection - ensure that the chain-of-custody protocol required for the project is maintained

Standard Operating Procedure E.1940

4. PERSONAL PROTECTIVE EQUIPMENT

- a) Wear and maintain Terracon-approved PPE at project sites and in laboratories as required by project, task, and/or work environment, except when in a PPE-Free Zone. This includes use of the Core PPE Kit.

5. PROCEDURES

Preparation

- Meet with Project Manager;
- Obtain the sample containers, forms, and equipment necessary to complete the sampling event;
- Calibrate all field equipment i.e., temperature, pH, specific conductance meter and turbidity meter;
- Document equipment calibration in field logbook; and
- Establish sampling sequence.

Contamination minimization

- Use plastic sheet if necessary so equipment and supplies do not touch the ground;
- Wear disposable sampling gloves;
- Use proper bailing techniques (hand over hand) to prevent string from touching the ground.
- Follow protocol for reducing cross-contamination between samples such as use of single-use disposable supplies, use of dedicated flexible tubing, and decontamination procedures to clean pumps and equipment

Monitoring Well Purging (using a bailer)

- Document all field activities in field logbook and field forms
- Water levels - collect and record water levels
- Minimize disturbances, which may aerate the sample (i.e., lower bailer slowly into water, pour slowly into sample container, etc.);
- If a specific number of well volumes is required for purging, determine the required purge volume in gallons based on the current groundwater elevation and well geometry;
- Record purge volumes to indicate appropriate amount of water has been removed before collecting representative samples;
- Disposal of water – don't dispose of on-site by dumping on permeable ground
Purge water should be disposed into containers such as drums;
- If a well is purged to dryness, the purging process is complete. Allow the well to recover sufficiently to collect the required volume of groundwater sample.

Standard Operating Procedure E.1940

Monitoring Well Purging (using a low-flow pump)

- Minimize disturbances, which may aerate the sample or stir up sediment (i.e. lower pump and/or tubing slowly into well, avoid making contact with bottom of the well, etc.).
- If a specific number of well volumes is required for purging, determine the required purge volume in gallons based on the current groundwater elevation and well geometry.
- If purge volumes are based on stabilization of field indicator parameters (temperature, pH, conductance, turbidity, dissolved oxygen, etc.), conduct purging based on required stabilization criteria (see section e1 below).
- Determine proper depth of the tubing or pump (i.e., top of the screen, middle, or bottom; may vary for groundwater monitoring wells vs. piezometers).
- Record purge volumes to indicate appropriate amount of water that has been removed before collecting representative samples.
- Disposal of water – Purge water should be disposed into containers such as drums for later disposal.
- If a low flow purging/sampling method is required, check with the PM for details regarding maximum draw down and flow rates. Typically, low flow drawdowns should not exceed 0.33 feet and flow rates range between 0.1 and 0.5 liters per minute.
- If a well is purged to dryness, the purging process is complete. Allow the well to recover sufficiently to collect the required volume of groundwater sample.

Sampling

- Use a low-flow sampling pump
- Determine proper depth of purging device, approximately half the distance of the water column or approximate middle of the well screen
- Attach new section of pump tubing to pump or use tubing dedicated to the well
- Lower pump slowly (to minimize disturbance) into well to midpoint of sampling zone
- Start pump at its lowest setting and slowly increase speed until discharge occurs.
- Check water level and adjust pump speed to maintain drawdown at less than four (4) inches and pump no faster than 0.1 L/min
- Stabilization parameters
 - Record turbidity, temperature, pH, and specific conductance at regular intervals
 - Pump until measured parameters are stabilized
- Transfer the groundwater sample directly to the laboratory prepared sample containers
- Fill sample containers by allowing pump discharge to flow gently down the side of the container with minimal disturbance

Standard Operating Procedure E.1940

- Do not over-fill sample containers which contain a preservative
- Place samples in cooler with ice
- Record all pertinent sampling information on the sampling container label, sampling information form, chain-of-custody, and shipping form.

6. REFERENCES

Low Stress (Low Flow) Purging and Sampling Procedure for the Collection of Ground Water Samples from Monitoring Wells, EPA Region 1, July 30, 1996, Revision 2.