BIG SKY CIVIL & ENVIRONMENTAL, INC

October 2, 2025

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

RE: Remedial Investigation Work Plan for the Petroleum Release at the former Sinclair Gas Station, 620 57th Street South, Great Falls, Cascade County, Montana; Facility ID 07-02087, (TID 18422), Release 6504, Work Plan 35078

Dear Ms. Miller,

In accordance with the request letter from the Montana Department of Environmental Quality (DEQ) dated August 13, 2025, Big Sky Civil & Environmental, Inc. (BSCE) has prepared this Remedial Investigation Work Plan for the subject property. The remedial investigation will include installation of monitoring wells and subsurface soil and groundwater sampling to more fully define the extent and magnitude of residual contamination at the subject release site.

Facility History and Release Background

The owner/operator is Set Five LLC, PO Box 161730, Big Sky, MT 59716-1730.

The property was previously owned by Sinclair Oil Corporation and was a fueling station with a convenience store. A petroleum release, 3403, was discovered in April 1998, which was later resolved in 2011. Information pertaining to the previous petroleum release is included in the *Closure Application for Petroleum Release 3403* dated August 11, 2011.[1]

Until September 2022, three (3) USTs were present at the subject site. Tank sizes (and contents) were as follows: 12,000-gallon (gasoline), 8,000 gallon (gasoline) and 8,000 gallon (diesel). Tank removal was completed on September 27 and 28, 2022, by EnergiSystems (Billings, MT). During tank removal, samples were collected at all locations required by the UST removal permit. As certain samples contained a petroleum odor, Robby of EnergiSystems reported the suspected release to Shannon Cala of DEQ on September 27, 2022. The release was confirmed by laboratory analytical results on October 27, 2022. Sample 7 of 13, collected ~3' beneath ground surface (bgs) and below the former northeast fuel dispenser, contained exceedances of DEQ's RBSLs. No other exceedances were encountered.

A remedial investigation (RI) was conducted May through June 2023 at the subject facility, which included the advancement of six (6) boreholes and installation of four (4) monitoring wells. During the RI, detectable levels of petroleum contamination were encountered in subsurface soils and groundwater samples, some of which exceeded DEQ's risk-based screening levels (RBSLs).[3] As such, soil removal activities were completed in November 2023, and approximately 240 banked cubic yards of contaminated soil were removed and hauled to a licensed landfill/landfarm facility. As part of soil removal fieldwork, confirmation soil samples were collected from the base of the soil excavation for laboratory analysis. Analytical results of these samples did not contain concentrations of contaminants above DEQ's RBSLs.[4]

Facility Conditions

As mentioned previously, tank removal was completed at the subject facility in 2022, and the former convenience store was razed and removed from the site. The site currently consists of a vacant lot and contains security fencing, some limited concrete / AC surfacing, and landscape beds. No petroleum storage tanks are currently present. Redevelopment of the site as a carwash was planned; however, this has been placed on a permanent hold and future development and the timeline are unknown.

During previous investigations, soil descriptions were generally listed as follows: sand and silty sand (typically ~1'-5' below ground surface [bgs]), clay (typ. 5'-9' bgs), underlain by firm clay (typ. 9'-15'+ bgs), and sandstone 19'+ bgs.[1,2,3]

Previous monitoring well construction is as follows: the screened interval of MW-1 through MW-3 were 4'-14' bgs, and the screened interval of MW-4 was 3'-13'. Historically, the measured depth to first groundwater at the site has ranged from approximately 2' to 11.5' bgs. The groundwater flow direction was observed to flow north and northwesterly.[3]

Suspected contaminants are gasoline and diesel. Discussions of potential receptors and migration pathways are included in the 2023 RI Report and 2024 Soil Removal Report.

Objectives of Investigation

The objective of this remedial investigation is to more fully define the extent and magnitude of residual petroleum contamination in subsurface soils and groundwater underlying the subject facility. The extent and magnitude of contamination will be used along with site-specific characteristics (soil lithology, location of underground utilities and other potential receptors) to determine if further investigative or remedial work is required and, if so, which remedial options should be implemented to cleanup and resolve the release.

Work Plan Tasks

BSCE proposes to conduct remedial investigation activities at the subject release site as defined herein.

- Soil Boreholes and Monitor Well Installation
    - Prior to fieldwork, a utility locate request will be submitted to the utility locate notification center (Montana 811 or Montana One Call) using their online access portal.
    - Based on discussion with DEQ, five (5) boreholes will be completed at the subject facility and converted into monitoring wells; the anticipated locations of the soil boreholes and wells are shown on **Fig. 1**. These locations are subject to change based on field observations or if any conflicts with underground utilities exist.
    - During drilling, BSCE will collect soil samples in ~2.5' intervals and field screen the samples using heated head-space screening with a Photoionization Detector (PID). Samples from the interval containing the highest PID reading will be submitted for analytical testing. If no detectable PID readings are encountered, then soil samples will be submitted from the observed groundwater interface. One sample per borehole is anticipated. PID readings and soil descriptions (soil type, color, moisture content, plasticity, etc.) will be recorded for creation of soil boring logs.
    - Select soil samples will be sent to Energy Laboratories, Inc. in Helena, MT and analyzed for volatile petroleum hydrocarbons (VPH) and extractable petroleum hydrocarbons (EPH) screen (with fractionation and PAHs if the screen exceeds 200 mg/kg).
    - The boreholes will be converted into monitor wells with the following construction details: two-inch (2") well casing, screened from ~3'-20' bgs, annular space surrounding the casing will be backfilled with 10/20 silica sand and bentonite chips. Well construction details will be recorded in the field and well construction diagrams will accompany the soil boring logs.
    - The selected well installation contractor (Driller) will upload all monitoring well logs via the Groundwater Information Center (GWIC) website.

- Well Repairs
    - The manholes for MW-1 and MW-2 were damaged during soil removal. As such, replacement manholes are proposed to be installed by the selected well installation contractor.

- Well Development
    - After well installation and assuming groundwater is encountered, the newly installed wells will be developed using a disposable plastic bailer until visibly non-turbid water is achieved. If purge water remains turbid, development will be completed for up to one hour (1 hr), or as conditions allow. Initial and final turbidity/clarity will be recorded during well development. Additional procedures are included in the attached SOPs. After development, the wells will be allowed to equilibrate for a minimum of 30 days prior to sampling.

- Groundwater Monitoring
    - Up to four (4) groundwater monitoring events will be completed at the existing and newly installed wells using low-flow sampling techniques per the Groundwater Sampling Guidance document. First, water level measurements will be taken at all wells using a Solinst oil/water interface probe. Next, wells will be purged using a peristaltic pump and field parameters (dissolved oxygen, pH, temperature, conductivity, oxidation-reduction potential and turbidity) will be measured and recorded in 5-minute intervals on field sampling forms. Purge water will be disposed of as discussed in the *Disposal of IDW* section below. After stabilization of field parameters, samples will be collected and sent to Energy Laboratories, Inc. in Helena, MT.
    - Groundwater samples will be analyzed for VPH and EPH screen (with fractionation and PAHs if the screen is greater than 1,000 ug/L).
    - If greater than 2' of water level drawdown is encountered during purging (using rates less than or equal to 0.20 L/min), then samples will be collected prior to stabilization of water levels and/or field parameters in order to minimize the hydraulic stress on the well and levels of turbidity in the sample(s).

- Topographic Survey
    - After monitoring well installation, a brief topographic survey will be completed. The survey will include the newly installed wells, and other appurtenant physical features for creation of the site plan and related figures.

- Project Management and Work Plan Objectives
    - All fieldwork will be scheduled and coordinated with site owners and the DEQ case manager. Modifications to the work plan, if deemed necessary to complete objectives, will be submitted via written communication.

- Reporting
    - If a change in scope appears necessary, an Interim Data Submittal (IDS) will be prepared and submitted to DEQ detailing the results of the soil and groundwater investigations. The IDS will include cumulative soil and groundwater data tables, updated figures showing the location of all borings and monitoring wells installed at the facility, analytical data packages from the lab, and the completed DVSFs.
    - After the extent and magnitude of the release has been determined, one Remedial Investigation (RI) Report will be prepared and submitted to DEQ. At a minimum the report will include the following: exhibits depicting the location of site features (utilities, former fueling systems, borehole/well locations), all pertinent data tables including cumulative analytical data in tabular format, receptor survey, data interpretations, conclusions, and recommendations of remedial action required to resolve the release. The following will be appended to the report: boring logs and well completion diagrams, groundwater monitoring field forms, laboratory

analytical data, completed DVSFs, and the RCP. Additionally, per DEQ's RI guidance, a desktop receptor survey, a desktop petroleum vapor intrusion (PVI) assessment, and a desktop utility / utility corridor assessment will be completed.

- Standardized report formats will be used for all documents. Reports and supporting documentation will be submitted following DEQ submittal requirements.

Quality Assurance and Quality Control (QA/QC)

All soil sampling and groundwater monitoring will be completed in strict accordance with BSCE's standard QA/QC procedures. The following procedures will be used during sample collection to provide quality assurance and quality control (QA/QC), to minimize loss of volatiles, and to maintain the suitability of samples for analysis. Sample collection and analytical procedures were consistent with SW-846: *Test Methods for Evaluating Solid Waste,* November 1986, and updates published by the U.S. EPA. QA/QC methods used are defined below:

- All sample containers/preservatives will be supplied by a state-certified laboratory. Analyses will be performed by a state-certified laboratory.
- All samples will be handled in a manner which minimizes the loss of organic compounds to volatilization and biodegradation.
- All samples for analyses will be placed in a cooler on ice (at a temperature of 4° C) immediately following collection.
- Chain-of-custody procedures will be utilized during sampling and delivery.
- Documentation of the sampling and QA/QC procedures including notes will be available for DEQ inspection. These notes will document the procedures for sampling and all other routine activities, along with field notes describing the sequence of activities that took place during fieldwork.

Standard QA/QC operating procedures are on-file with DEQ and are available for review upon request.

Disposal of Investigation Derived Waste (IDW)

If necessary, contaminated soil from the soil borehole investigation will be disposed of at the landfill/landfarm. However, it is anticipated that relatively minor contamination will be encountered during direct push drilling, and possibly none at all. All soil from the borehole investigation will be segregated into clean vs contaminated soil as determined by field observations (presence of staining/odors) and PID readings (e.g., greater than 100 ppm) and disposed of accordingly. Contaminated soil will be temporarily stored onsite until acceptance from the landfill. All purge water from groundwater monitoring and well development will be disposed of in accordance with the disposal flow chart.

Cost Estimate

For soil boreholes and well installation, BSCE sent bid invitations to: Wiley Drilling, Eagle Synergistic, West Central Environmental Consultants (WCEC), and Boland Drilling. After

review of the bids, Wiley Drilling (AKA "WET") appeared to be the most competitive and is included in the attached cost estimate; bids are attached.

For topographic survey, BSCE sent bid invitations to: Backcountry Surveys, Atlas Land Surveys, and Stahly Engineering. After reviewing the bids, Backcountry Surveys appeared to be the most competitive and is included in the attached cost estimate; bids are attached.

Schedule and Reporting

Fieldwork is estimated to begin spring 2026 and finish by the end of 2027. The anticipated schedule by activity is as follows:

Activity Description	Anticipated Completion Timeline
Soil boreholes and well installation	Spring 2026
Groundwater monitoring (four events)	Spring 2026, Fall 2026, Spring 2027, and Fall 2027
Final RI Report	December 31, 2027

Please feel free to contact us with any questions or concerns you may have.

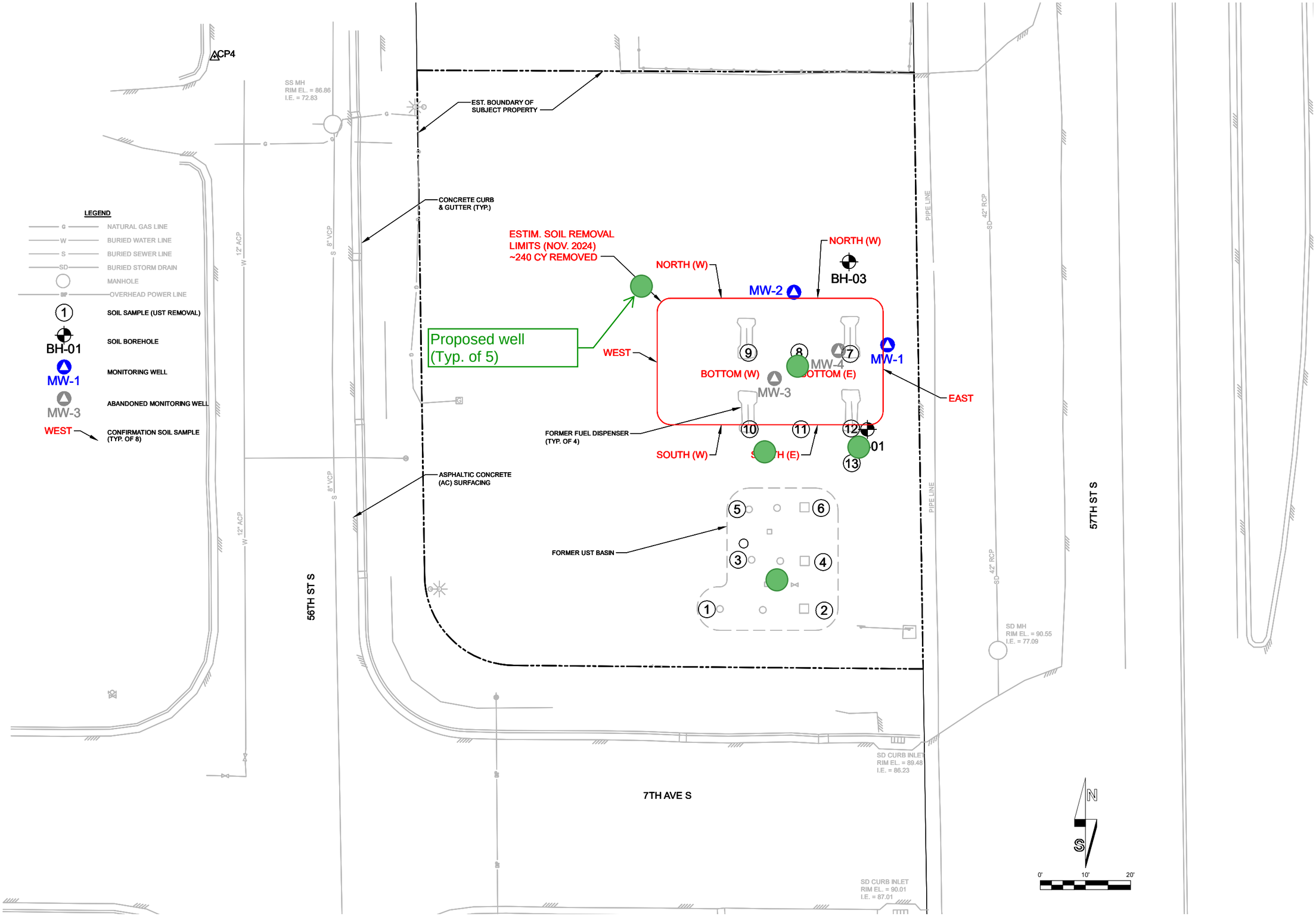
Respectfully,

Big Sky Civil & Environmental, Inc.

Paxton Ellis, P.E.

encl. Fig. 1 – Site Map
Standard Operating Procedures (SOPs)
Cost Estimate
Bids for Soil Boreholes and Well Installation
Bids for Topographic Survey

cc: W.J. Woods, Set Five LLC



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PROFESSIONAL SEAL

BY: JPE
DATE: 1/4/2024

OWNER:

SET FIVE LLC

PROJECT NAME:

GF
SINCLAIR
ENVIRO

SHEET TITLE:

SITE MAP

DRAWING INFORMATION:

BSCE PROJECT NUMBER: 22CU
OWNER FILE NUMBER: XXXX
CADD FILE NAME: 22CU-SOIL_REMOVAL-FIG
ASSOCIATED PROJECTS: 21T

SHEET:

2 OF 2

References

[1] Montana DEQ, 2011. *Closure Application for Petroleum Release 3403, Facility: Sinclair Retail 25001, Facility ID: 07-02087, Great Falls, Cascade County.*

[2] Lorenzen Soil Mechanics Inc., 2022. *Woods Car Wash, Geotechnical Engineering Report, Great Falls, Montana.*

[3] Big Sky Civil and Environmental Inc., 2023. *Remedial Investigation Report Former Sinclair Gas Station, 620 57th Street South, Great Falls, Montana, Facility ID 07-02087 (TID 18422), Release 6504, Work Plan 34638, Date: December 11, 2023*

[4] Big Sky Civil and Environmental Inc., 2024. *Soil Removal Report For Petroleum Release, Former Sinclair Gas Station, 620 57th Street South Great Falls, Cascade County, Montana, Facility ID 07-02087, TID 18422, Release 6504, Work Plan 34638, Report Date: January 10, 2024*