



## Environmental Resources, LLC

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October 13, 2025

Ms. Grace Miller  
DEQ-PTCS  
P.O. Box 200901  
Helena, MT 59620

Subject: Remedial Investigation Work Plan  
Equity Co-op, Malta, Montana  
DEQ Facility ID No. 36-10706, (TID 26305)  
DEQ Release No. 6670, Work Plan No. 35029

Responsible Party: Equity Coop  
Janni Wiese  
428 South 1st Street East  
Malta, Montana 59538

Dear Ms. Miller:

Environmental Resources, LLC is pleased to submit this Remedial Investigation Work Plan to outline activities associated with additional investigation of subsurface petroleum contamination at the above referenced petroleum release site. Submittal of this work plan was requested by the Montana Department of Environmental Quality (DEQ) in a letter dated March 25, 2025.

Submitted by  
Environmental Resources, LLC

Robert H. Waller, Principal Geologist

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## **1.0 EXECUTIVE SUMMARY**

Environmental Resources, LLC has been retained by Equity Coop to investigate and remediate petroleum contaminated soil and groundwater resulting from a surface spill at the Equity Coop petroleum storage facility in Malta, Montana. A petroleum release consisting of approximately 560 gallons of dyed diesel fuel was reported to DEQ on August 15, 2024.

The Equity Co-op petroleum release site is located within the city limits of Malta, Montana as shown on Figure 1. The petroleum storage and dispensing facility consists of an aboveground storage tank system used for storing gasoline and diesel fuel, a bulk fuel loading rack and a dispenser island served by underground piping. The aboveground storage tanks are still in use.

Subsurface geology at the project site is characterized by floodplain deposits of the nearby Milk River that consist of intervals of fine-grained silty sand, sand, and sandy silt interbedded with thin layers of silty clay and sandy clay. Near surface floodplain deposits are underlain by coarse alluvium at depth. Groundwater is encountered at approximately 17-20 feet below ground surface at the project site. Shallow groundwater resources are not utilized for human consumption near the project site.

## **2.0 FACILITY SUMMARY AND CURRENT CONDITIONS**

A petroleum release was reported to DEQ on August 15, 2024 following a 560-gallon dyed diesel fuel surface spill. Initial response actions consisted of applying absorbent granules to the spill area. It is apparent, based on volume of the recovered absorbent material, that most of the spilled dyed diesel fuel was absorbed by the surficial soils with a minimal amount of the spilled petroleum absorbed by the applied absorbent granules. It is not known if the release has impacted shallow groundwater beneath the project site.

A previous gasoline release was discovered during underground petroleum product piping repair activities on April 1, 1994. Matney-Frantz Engineering supervised excavation of approximately 80 cubic yards of petroleum contaminated soil and installed a soil vapor extraction line in the finished excavation. Installation of a groundwater monitoring well network was completed during several phases of investigation as shown on Figure 2.

DEQ has requested a Remedial Investigation to determine the extent and magnitude of the dyed diesel fuel release. The following sections outline the methods that will be used to conduct the additional investigative activities.

### **3.0 PURPOSE AND OBJECTIVES**

The purpose of this investigation is to determine the extent and magnitude of petroleum contamination in soil and groundwater beneath the project site and to assess risks that the petroleum release may pose to environmental receptors. Specific objectives of the investigation include:

- Install five soil borings and complete one of the borings as a groundwater monitoring well.
- Collect soil samples from the soil borings and analyze for Volatile Petroleum Hydrocarbons (VPH) and Extractable Petroleum Hydrocarbons (EPH) Screen. Samples that exceed the 200 mg/kg EPH screening level will be fractionated.
- Conduct groundwater monitoring quarterly for one year at selected Facility monitoring wells. Gauge fluid levels at all Facility monitoring wells.
- Collect groundwater samples at select monitoring wells using low flow sampling methodology.
- Analyze groundwater samples for VPH and EPH Screen. Samples that exceed the 300 µg/L EPH screening level will be fractionated.
- Validate all laboratory analytical data using DEQ's Data Validation Summary Form (DVSF).
- Prepare an Interim Data Submittal (IDS) for each interim groundwater monitoring event.
- Prepare a Release Closure Plan (RCP).
- Prepare and submit a Remedial Investigation Report.

### **4.0 SCOPE OF WORK**

#### **4.1 Soil Boring and Monitoring Well Completion**

Five soil borings will be advanced at the locations shown on Figure 3. All underground utilities will be located prior to commencing site work. The soil borings will be advanced to 20 feet below ground surface (groundwater is encountered at 14-16 feet) using a hollow-stem auger drilling rig. One of the soil borings will be completed at 27 feet below ground surface as a groundwater monitoring well with 20 feet of 0.020" slotted well screen and 7 feet of blank casing. The annulus around the well screen will be filled with 10-20 mesh Colorado silica from total depth to approximately one foot above the top of the screened interval and bentonite chips will be used to fill the remaining annulus to ground surface. The monitoring well will be completed with a bolt-down steel manhole cover and fitted with a locking compression plug.

A lithologic log will be completed in the field as each boring is drilled. The borings will be completed in accordance with all applicable local, state and federal laws, rules and administrative requirements.

Drill cuttings will be logged for lithology, texture, color, moisture and volatile petroleum content. All soil samples will be visually classified for texture using the Unified Soil Classification System (USCS) according to ASTM-D-2488. Soil samples from two foot intervals and from obvious areas of petroleum discoloration will be analyzed for volatile petroleum hydrocarbons using a Photovac 2020 photo ionization detector (PID) with a standard heated jar headspace method. Discreet laboratory soil samples will be retained from selected intervals based on field screening. At a minimum, soil samples will be collected from two feet below ground surface (since this is a surface spill), from the lowest interval in the 2-14 feet depth range that continues to exhibit diesel fuel contamination (assuming that petroleum contamination is present and diminishes prior to reaching groundwater), from the air-water interface at approximately 14-16 feet below ground surface and from the bottom of the borings. Up to four soil samples will be retained from each boring for VPH and EPH Screen analysis at Energy Labs in Helena, MT. One QA/QC soil sample will be collected and analyzed for VPH and EPH Screen from a worst case contaminated interval from one of the soil borings.

#### **4.2 Well Development**

The newly installed monitoring well will be developed for a minimum of one hour using a submersible pump until at least ten well volumes of groundwater are removed and no further improvements in water clarity are noted. Turbidity will be measured and recorded prior to and following development. The newly installed monitoring well will be surveyed for elevation within  $\pm 0.01$  feet by a Montana Registered Land Surveyor and referenced to a local USGS benchmark.

#### **4.3 Groundwater Sample Collection and Analysis**

Groundwater samples will be collected following a 72-hour stabilization period following well development. Groundwater samples will be collected from the newly installed monitoring well and from existing groundwater monitoring wells MW-1 and MW-3 during four quarterly monitoring events. Additionally, one QA/QC groundwater sample will be collected from a monitoring well that is anticipated to exhibit the highest levels of petroleum contamination during each monitoring event.

Prior to sample collection, data will be collected from all onsite monitoring wells and recorded in a field notebook. All of the well covers will be opened and the locking compression caps will be removed upon arrival at the project site. The wells will be allowed to equilibrate to the atmosphere for at least 30 minutes prior to measuring static

water levels. Following the equilibration period, a thoroughly decontaminated oil/water interface probe will be used to check for and measure free phase petroleum contaminant thicknesses.

An electronic water level indicator will be used to measure the static water level in each well casing. The water level indicator tip will be scrubbed in an Alconox or similar wash solution and triple rinsed with de-ionized water prior to and following each measurement. All of the depth to water measurements will be collected from a reference point used to determine the casing elevation for each well.

Following measurement of the static water levels, sample collection will commence using a submersible pump and low flow sampling methods. Indicator parameters turbidity, oxidation-reduction potential, dissolved oxygen, pH, specific conductance and temperature will be measured during sample purging. Samples will be collected when the measured indicator parameters stabilize according to Section 2.5 of the DEQ Groundwater Sampling Guidance (2018). Samples will be decanted into appropriate sample containers, preserved and placed on ice while awaiting delivery to the analytical laboratory. Groundwater samples will be analyzed for VPH and EPH Screen at Energy Labs, Helena, MT.

#### **4.4 Investigation Derived Waste**

Drill cuttings, excess sample materials, drilling fluids, and water removed from a well during installation, development, and aquifer testing and all other investigation derived wastes will be disposed of according to all applicable local, state and federal laws and regulations governing the disposition of investigation derived wastes. Drill cuttings will be drummed and characterized for disposal. Development and purge water discharged from the site monitoring wells will be disposed according to DEQ's purge water disposal flowchart.

#### **4.5 Reporting**

A Remedial Investigation Report will be prepared following completion of this Remedial Investigation Work Plan. An IDS will be prepared following completion of each monitoring event. All laboratory data will be validated using DEQ's Data Validation Summary Form. A Release Closure Plan will be prepared following completion of the last groundwater monitoring event.

#### **4.6 Investigative Methods**

Methods practiced during this investigation will follow generally accepted practices of similar consulting firms in the same geographical area. Quality Assurance/ Quality Control methods will be employed throughout all phases of this investigation to ensure meaningful and reproducible results and data. Standard Operating Procedures (SOP) for soil and groundwater sampling are included in Appendix D.

#### **4.7 Health and Safety**

Health and safety issues will be addressed throughout this investigation to prevent exposure of site workers and other onsite personnel to potentially hazardous situations and chemical compounds. Several physical hazards will inherently be present throughout the field investigation while heavy equipment is being utilized for soil borings and monitoring well installation. Site specific health and safety precautions and information will be contained in a Health and Safety Plan which will remain onsite during all field activities.

#### **5.0 BUDGET/SCHEDULE**

A detailed cost summary is attached in Appendix B.

The proposed scope of work is anticipated to be completed by February 2027. We anticipate that the drilling will be completed in December 2025 and four quarters of groundwater monitoring will be completed in December 2026. Report submittal will be completed in January-February 2027.

## 6.0 LIMITATIONS

This work was performed in accordance with generally accepted practices of other consulting firms conducting similar studies. Environmental Resources, LLC observed that degree of care and skill generally exercised by other consultants under similar conditions. Our findings and conclusions must not be considered as scientific certainties, but as opinions based upon our professional judgment based upon the data gathered during the course of this investigation. Other than this, no warranty is implied or intended.

Submitted by  
Environmental Resources, LLC

A handwritten signature in black ink, appearing to read "Robert Waller". The signature is fluid and cursive, with the first name "Robert" and last name "Waller" clearly distinguishable.

Robert H. Waller, Principal Geologist

## **Appendix A**

### **Figures**





