Environmental Resources, LLC
P.O. Box 5305, Bozeman, Montana 59717 Phone (406) 582-8491 email: ruwaller@gmail.com

July 8, 2024

Mr. William Bergum
DEQ-PTCS
P.O. Box 200901
Helena, MT 59620

Subject: Groundwater Monitoring Work Plan
Delta Ford, Malta, Montana
DEQ Facility ID No. 36-09844 (TID 26300)
DEQ Release No. 0730, Work Plan ID 34886

Responsible Party: Mr. Larry Matthews
Delta Ford
P.O. Box 616
Malta, Montana 59538

Dear Mr. Bergum:

Environmental Resources, LLC is pleased to submit this Groundwater Monitoring Work Plan to outline activities associated with groundwater monitoring and reporting 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 June 5, 2024.

Submitted by
Environmental Resources, LLC

Robert H. Waller, Principal Geologist

Attachments: Unit Cost Worksheets

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TABLE OF CONTENTS

List of Appendices

1.0 Executive Summary

Environmental Resources, LLC has been retained by Mr. Larry Matthews to investigate and remediate petroleum contaminated soil and groundwater discovered at the Delta Ford facility in Malta, Montana. Subsurface geology at the project site is characterized by Quaternary alluvium deposited by the Milk River overlain by silty clay and sandy clay fill. Groundwater is encountered at approximately 20-22 feet below ground surface at the project site and generally moves toward the Milk River exhibiting varying flow directions in response to river stage levels. Shallow groundwater resources are not utilized for human consumption near the project site.

The project site was used as an automobile refueling facility from 1954 until 1990. A petroleum release was discovered in 1991 during underground storage tank (UST) removal work. Remediation work consisting of soil vapor extraction (SVE) and excavation has resulted in a significant reduction of dissolved petroleum concentrations beneath the site. Additional groundwater monitoring work has been requested by DEQ.

2.0 Facility Summary and Current Conditions

The Delta Ford (former Pete's Conoco) refueling facility is located at 2 North 1st East, Highway 2 in Malta, Montana. The project site is situated in the southwest quarter of the northwest quarter of Section 18, Township 30 North, Range 30 East, MPM as shown in Figure 1. The site is bordered by U.S. Highway 2 to the south, a trailer park to the north, Horizon refueling facility to the east (former Green's Exxon), and vacant land to the west. The Milk River flows northeasterly approximately 400 feet to the west of the project site.

The project site was used as an automobile refueling facility from 1954 until 1990. Two 5000-gallon underground storage tanks (USTs) used for regular and unleaded gasoline storage, one 1000-gallon UST used for premium unleaded gasoline storage and one 500-gallon UST used for waste oil storage existed on the property prior to acquisition by Delta Ford from Pete Newton in May 1990 (Figure 2). No repairs or modifications are believed to have taken place during the operation period. All three fuel storage tanks were removed in July 1990 and the waste oil tank was removed in April 1993. Numerous test pits were excavated on and near the property to a depth of 12-16 feet below ground surface. All excavations were reported to exhibit signs of petroleum contamination, however, closure soil samples were misplaced and have never been located. Delta Engineering was retained by Mr. Larry Matthews to investigate the extent and magnitude of soil and groundwater contamination following the release discovery. A petroleum release was confirmed on May 14, 1991 through soil sample analytical results.

A soil vapor extraction/air injection system was installed at the project site in March 1994 at the direction of DEQ. A 1.5-horsepower regenerative blower was installed for

use as a means of extracting soil gas and a one-horsepower compressor was installed for use as a means of injecting air into the aquifer.

Environmental Resources submitted a work plan in January 2011 to outline activities associated with removal of contaminated soil. Approximately 1400 cubic yards of petroleum contaminated source soils from beneath the former dispensers was removed and landfarmed.

Twenty groundwater monitoring wells were installed around the project site in several phases as shown on Figure 3. The monitoring well network was last monitored in 2018. DEQ requested additional groundwater monitoring work and the following sections outline methods that will be used to conduct that work.

3.0 Purpose and Objectives

The purpose of this investigation is to assess current groundwater quality beneath the project site. Specific objectives of the investigation include:

1) Conduct an initial site inspection to assess the condition of monitoring wells associated with the release site. Contact DEQ if any monitoring wells are found to require replacement, repair or abandonment.
2) Monitor groundwater semi-annually for one year during high and low groundwater conditions in May and November.
3) Collect groundwater samples for laboratory analysis from monitoring wells using low flow sampling methodology.
4) Analyze samples at an analytical laboratory in accordance with Montana Tier 1 Risk-Based Corrective Action Guidance for Petroleum Releases. Also analyze groundwater samples for lead scavengers and Intrinsic Biodegradation Indicators (IBIs).
5) Validate all laboratory data.
6) Prepare an Interim Data Submittal (IDS).
7) Update the Release Closure Plan (RCP).
8) Prepare a Groundwater Monitoring Report.

4.0 Scope of Work

4.1 Groundwater Sample Collection and Analysis

Groundwater samples will be collected from monitoring wells MW-3, MW-5R, MW-6, MW-9, MW-10, MW-12, MW-13 and MW-17 on a semi-annual schedule during May and November. Groundwater elevations will be measured in all of the site monitoring wells prior to purging and sample collection. All of the well covers will be opened and the locking caps removed at least 30 minutes prior to obtaining water level measurements. Static water levels will be measured from a reference point on top of the north side of each well casing using a Keck ET-89 electronic water levels indicator. The water level indicator will be decontaminated prior to each measurement. Decontamination will be accomplished by scrubbing the indicator tip in an *Alconox®* wash solution, rinsing with a 10% methanol solution and triple rinsing with distilled water.

Following measurement of the static water levels, sample collection will commence using a submersible pump and low flow sampling methods. Indicator parameters 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 Volatile Petroleum Hydrocarbons (VPH), for lead scavengers 1,2 DCA and EDB and for IBIs at Energy Labs in Helena, MT.

4.2 Investigation Derived Waste

Drill cuttings, excess sample materials, drilling fluids, and water removed from a well during installation, development, and sampling 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.

4.3 Reporting

An IDS will be prepared and submitted following completion of the first semi-annual groundwater monitoring event. One Groundwater Monitoring Report will be prepared following completion of the second groundwater monitoring event. The RCP will be updated and included in the final report along with Data Validation Summary Forms (DVSF) and field data collection sheets.

4.4 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.

4.5 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

Costs for groundwater monitoring are outlined on the attached Unit Cost Worksheets included in Appendix B.

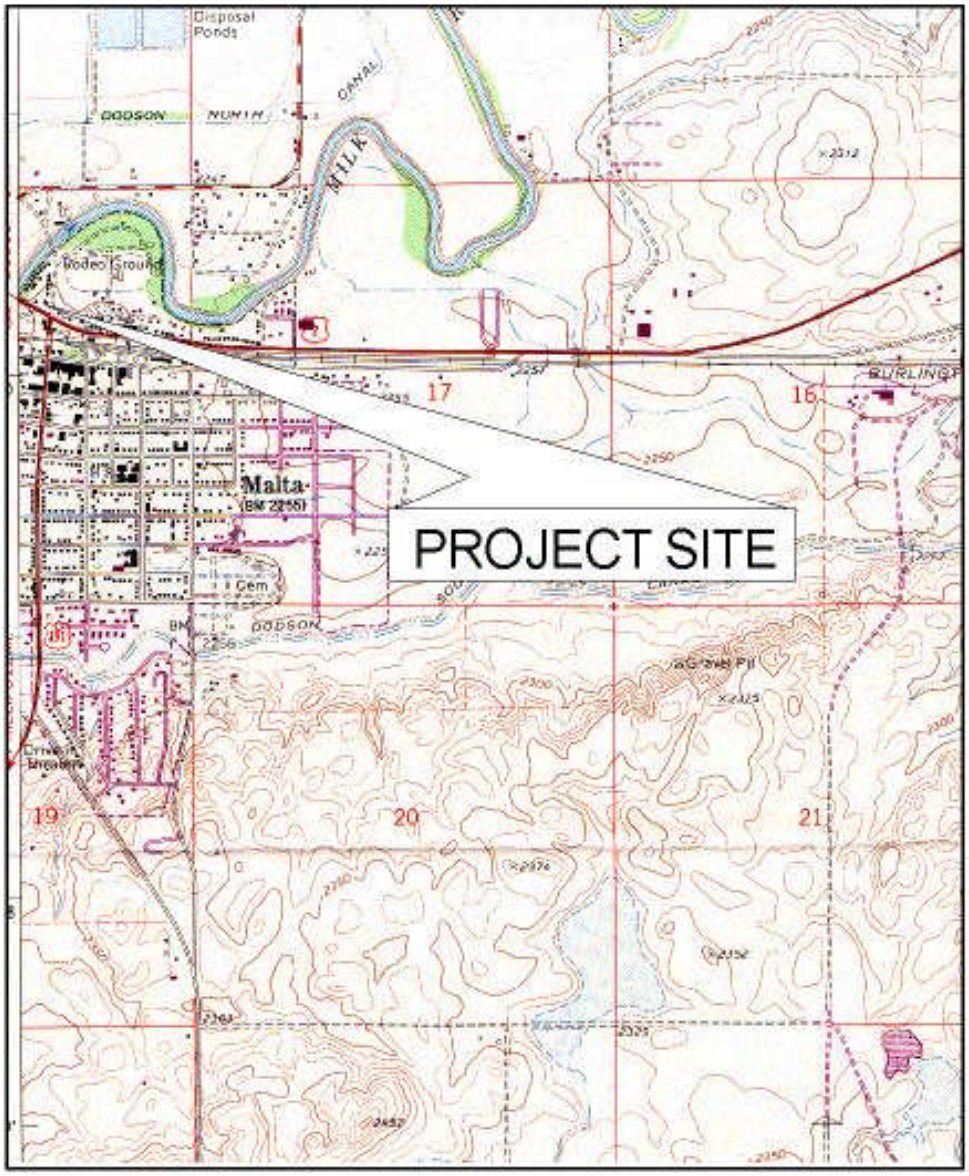
6.0 Limitations

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

Robert H. Waller, Principal Geologist

Appendix A
Figures



SCALE: 1" = 2000'

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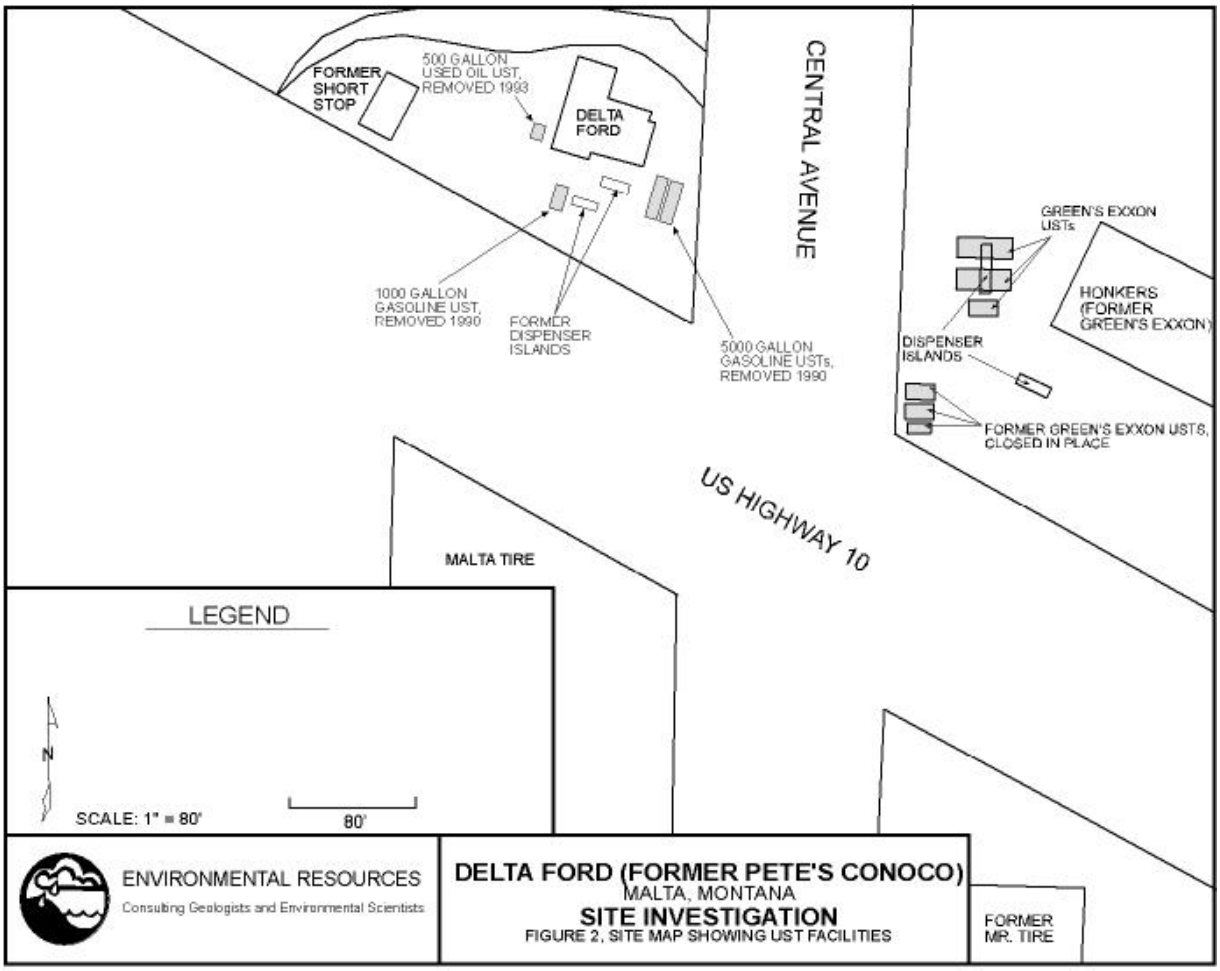
DELTA FORD

MALTA, MONTANA

SITE INVESTIGATION

FIGURE 1, REGIONAL SITE LOCATION MAP


FORMER SHORT STOP
500 GALLON USED OIL UST, REMOVED 1993
DELTA FORD
CENTRAL AVENUE
GREEN'S EXXON USTs
HONKERS (FORMER GREEN'S EXXON)
1000 GALLON GASOLINE UST, REMOVED 1990
FORMER DISPENSER ISLANDS
5000 GALLON GASOLINE USTs, REMOVED 1990
DISPENSER ISLANDS
FORMER GREEN'S EXXON USTS, CLOSED IN PLACE
US HIGHWAY 10
MALTA TIRE
LEGEND
N
SCALE: 1" = 80'
80'
ENVIRONMENTAL RESOURCES
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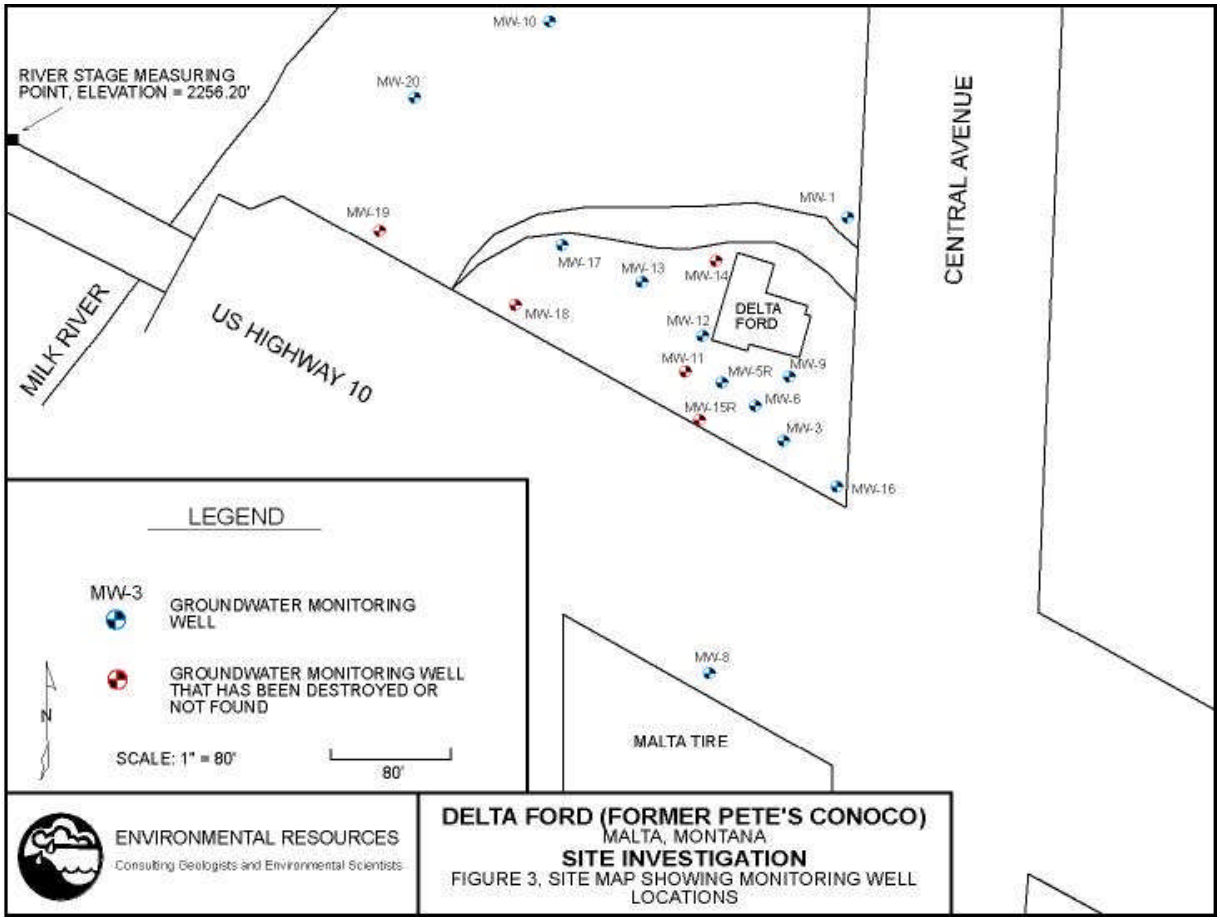
DELTA FORD (FORMER PETE'S CONOCO)
MALTA, MONTANA
SITE INVESTIGATION
FIGURE 2, SITE MAP SHOWING UST FACILITIES
FORMER MR. TIRE


RIVER STAGE MEASURING POINT, ELEVATION = 2256.20'
MW-10
MW-20
MW-19
MW-1
MW-17
MW-13
MW-14
MW-18
MW-12
DELTA FORD
MW-11
MW-5R
MW-9
MW-15R
MW-6
MW-3
MW-16
MW-8
MILK RIVER
US HIGHWAY 10
CENTRAL AVENUE
MALTA TIRE
LEGEND
MW-3
GROUNDWATER MONITORING WELL
GROUNDWATER MONITORING WELL THAT HAS BEEN DESTROYED OR NOT FOUND
N
SCALE: 1" = 80'
80'
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DELTA FORD (FORMER PETE'S CONOCO)
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SITE INVESTIGATION
FIGURE 3, SITE MAP SHOWING MONITORING WELL LOCATIONS