



Environmental Resources, LLC

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June 1, 2024

Mr. Donnie McCurry
DEQ-PTCS
P.O. Box 200901
Helena, MT 59620

Subject: Emergency Response Work Plan
Cromwell Petroleum, Scobey, Montana
DEQ Facility ID No. 10-01223
DEQ Release No. (pending)

Responsible Party: Mr. Shane Cromwell
Cromwell Petroleum
3 Main Street
Scobey, Montana 59263
(406)-487-2441

Dear Mr. McCurry:

Environmental Resources, LLC is pleased to submit this Emergency Response Work Plan to outline activities associated with Initial Response actions following a dyed diesel fuel release at the above referenced petroleum release site. Submittal of this work plan was requested by the Montana Department of Environmental Quality (DEQ).

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 Cromwell Petroleum to investigate and remediate petroleum contamination resulting from a dyed diesel fuel release at the Cromwell Petroleum facility in Scobey, Montana. The project site is underlain by silty clay and silty sand. Groundwater occurs at approximately 2-5 feet below ground surface. The Cromwell Petroleum release site is located within the city limits of Scobey, Montana at 3 Main Street as shown on Figure 1 (Appendix A). The project site is situated in the northeast quarter of the northwest quarter of Section 15, Township 35 North, Range 48 East, Montana Principal Meridian.

The project site has served as an automobile refueling facility and convenience store since construction. The petroleum storage and dispensing facility consists of five aboveground storage tanks 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 currently in use.

Approximately 2500 gallons of dyed diesel fuel were released from a perforated aboveground storage tank (AST) on May 23, 2024. The Montana Department of Environmental Quality was immediately notified of the release and the leak call was received by Mr. Chris Herman. In addition, the City of Scobey, the local fire department, Disaster and Emergency Services (DES) and the Montana Department of Natural Resources and Conservation (DNRC) were also notified as the release has impacted Montana State School Trust land. The National Response Center (NRC) was not notified since navigable surface water was not impacted.

Dyed diesel fuel was observed in a 36-inch diameter concrete storm drain and the storm drain discharge ditch. The storm drain does not discharge to live surface water. Initial response actions consisted of placing absorbent booms in standing water within the discharge ditch. Subsequent actions consisted of vacuuming all visible dyed diesel fuel product contained within the discharge ditch using a vacuum truck and flushing the storm drain with 1500 gallons of water. Four four-inch diameter recovery wells were installed and actively pumped to recover light non-aqueous phase liquid (LNAPL) beneath the release area.

Future response actions will consist of installing additional recovery wells, delineating the subsurface extent of LNAPL, investigating impacts to groundwater and downgradient utilities and conducting surface soil/water sampling in the impacted storm water discharge ditch.

2.0 Facility Summary and Current Conditions

The AST containment area was constructed in the 1970's and consists of five ASTs used for storage of gasoline and diesel fuel as shown on Figure 2. The ASTs serve a bulk fuel fill rack and a dispenser island for retail fuel sales. The containment area consists of an unlined gravel surface surrounded by a concrete containment wall.

On Thursday May 23, 2024, a petroleum release was discovered in the AST containment resulting from a perforation in the bottom of a dyed diesel fuel tank. It is estimated that approximately 2500 gallons of dyed diesel fuel were released. Dyed diesel fuel was observed on the containment floor and subsequently within a storm water discharge ditch. DEQ was immediately notified of the release. The perforated tank was immediately emptied and secured to prevent further discharge.

An anonymous complaint was received by the DEQ Enforcement Bureau regarding the presence of diesel fuel noticed in a storm water discharge ditch as shown on Figure 3. Remedial actions that were taken upon notification of impacts to the ditch consisted of placing absorbent booms and pads in the discharge ditch. It became obvious that the volume of product within the ditch was more than could be handled by the absorbents and a vacuum truck was subsequently deployed to remove the product. Badger Daylighting arrived onsite on Thursday May 30, 2024 and removed approximately 2800 gallons of mixed stormwater and diesel fuel. An additional 1500 gallons of water resulting from flushing the storm drain were removed. All of the recovered liquids were disposed at Clean Solutions, LLC, 503 U.S. Highway 2 in Bainville, Montana, a licensed Class II resource recovery facility (406) 525-5175.

Additional work conducted on Thursday May 30, 2024 consisted of investigating the extent of LNAPL near the AST containment. Four four-inch diameter recovery wells were installed using a ten-inch diameter post hole auger. The borings were installed to a depth of approximately 6-7 feet below ground surface. The borings were cased with an eight foot section of four inch PVC pipe perforated vertically. The annulus around each recovery pipe was filled with ½ inch washed gravel. LNAPL recovery was facilitated using a surface mounted transfer pump discharging into a 250-gallon plastic tank. Approximately 100 gallons of diesel fuel were recovered as of Friday May 31, 2024. LNAPL recovery was also conducted in the well bore of monitoring well MW-9 associated with a neighboring petroleum release site (Figure 3).

Upon further investigation, it was discovered that diesel product entered the storm drain through a four-inch diameter French drain that was presumably installed to dewater the site during construction of the AST containment. The drainpipe discharged directly into the storm drain collection box. The French drain was capped with a PVC plug. On Friday May 31, 2024 the City of Scobey flushed the impacted storm drain with

approximately 1500 gallons of water discharged from a nearby fire hydrant. All of the flush water was removed with the vacuum truck. No appreciable amounts of LNAPL were observed during the flushing operation. It is not known if impacted sediments are present within the storm sewer that could contribute to further discharge of contaminants. Layout of the impacted storm sewer and discharge ditch is shown on Figure 4.

3.0 Purpose and Objectives

The purpose of this investigation is to assess current groundwater quality beneath the project site, determine the extent and magnitude of the release, recover LNAPL to the extent practicable and remediate the release. Specific objectives of the investigation include:

- 1) Eliminate further discharge of LNAPL and impacted groundwater to the storm sewer.
- 2) Inspect the impacted storm sewer for possible entry of additional diesel fuel contamination and for the presence of impacted sediments.
- 3) Install, monitor and maintain a temporary free product recovery system. Properly store and dispose of recovered LNAPL and impacted groundwater collected during LNAPL recovery.
- 4) Monitor existing neighboring groundwater monitoring wells for the presence of LNAPL.
- 5) Collect soil and storm sewer discharge standing water samples to quantify impacts to the storm sewer discharge area.
- 6) Analyze samples at an analytical laboratory in accordance with Montana Tier 1 Risk-Based Corrective Action Guidance for Petroleum Releases.
- 7) Validate all laboratory data.
- 8) Prepare a report summarizing all activities conducted in response to the petroleum release.

4.0 Scope of Work

4.1 Storm Sewer Contaminant Mitigation

Diesel fuel introduction into the storm sewer situated at the northeast corner of the intersection of Daniels Street and Railroad Avenue in Scobey, Montana was discovered on Tuesday May 28, 2024. The pathway for entry into the storm sewer was determined to be a French drain, most likely installed for dewatering purposes during construction of the bulk fuel storage facility in the 1970s. An estimated 150-200 gallons of dyed diesel fuel entered the storm drain sometime between Thursday May 23, 2024 and Tuesday May 28, 2024. The French drain was capped and no additional diesel fuel entry into the storm sewer has been noted. It is not known if LNAPL is migrating along

the bedding for the drain pipe. The level of the drain pipe bedding is at least 12 inches above the local static groundwater elevation but could still provide a migration pathway.

The storm sewer was flushed with approximately 1500 gallons of water discharged from a fire hydrant situated at the northwest corner of Daniels Street and Railroad Avenue. Flushing was conducted by City of Scobey personnel and the flush water was collected with a vacuum truck. The collected water was disposed at Clean Solutions, LLC in Bainville, Montana. No appreciable amounts of diesel fuel were discharged from the storm sewer as a result of the water flush. It is not known if petroleum contaminated sediment is present in the storm sewer line. Integrity of the storm sewer near the petroleum release site is also not known. A utility inspection camera will be inserted into the storm sewer to inspect the line for potentially contaminated sediment and for cracks or other potential entry points for contaminants.

4.2 LNAPL Recovery and Disposal

Groundwater monitoring well MW-9 (installed for Grain Growers petroleum release site situated west of Cromwell facility) is situated a few feet west of the AST containment. Inspection of the monitoring well on Wednesday May 30, 2024 indicated the presence of 4.2 feet of floating diesel fuel product. Recovery of the product was implemented using a bailer initially and later using a surface mounted transfer pump.

Following discovery of LNAPL in monitoring well MW-9, four four-inch diameter PVC recovery wells were installed around the northwest corner of the AST containment. The recovery wells were installed using a post hole auger to approximately 6-7 feet below ground surface. The borings were cased with an eight foot section of vertically perforated four inch diameter PVC pipe. The annulus around each recovery pipe was filled with ½ inch washed gravel to above the LNAPL level at approximately three feet below ground surface. Drilling was halted to the east due to lack of product in the easternmost recovery well but that well later developed approximately 0.7 feet of LNAPL. LNAPL recovery was facilitated using a surface mounted transfer pump discharging into a 250-gallon plastic tank. Approximately 100 gallons of diesel fuel were recovered as of Friday May 31, 2024. Additional temporary recovery wells will be installed to roughly define the lateral extent of LNAPL and to facilitate placement of permanent recovery wells. Proposed additional temporary recovery wells will be installed at the locations shown on Figure 5.

4.3 Storm Sewer Discharge Area Soil and Water Sampling

Soil and water samples will be collected from the storm sewer discharge area to document impacts to soil and standing stormwater discharge. Approximately 800 feet of the discharge ditch was impacted by the petroleum release. Discreet soil samples will be collected from the floor of the impacted ditch at approximate 100 foot intervals. Soil

samples will be collected from the top 12 inches of soil using a garden spade. The sample collection tool will be decontaminated between samples by washing the tool in an Alconox solution and triple rinsing with distilled water followed by a 10% methanol wash.

Soil samples will be collected in laboratory provided sample jars and will be properly labeled and placed on ice in a cooler for delivery to the analytical laboratory. Soil samples will be analyzed for Volatile Petroleum Hydrocarbons (VPH) and for Extractable Petroleum Hydrocarbons (EPH) Screen at Energy Laboratories in Helena, Montana. If the EPH Screen results exceed 200 mg/kg Total Extractable Hydrocarbons (TEH), the samples will be subjected to additional fractionation.

Water samples will be collected from three points along the discharge ditch from standing stormwater discharge if present. Water will be collected from beneath the water surface using a peristaltic pump or disposable polyethylene bailer. Water samples will be collected into appropriate laboratory provided sample containers, preserved and placed on ice while awaiting transport to the laboratory. Water samples will be analyzed for VPH and for EPH Screen. Samples that exceed 1000 µg/L TEH will be subjected to additional fractionation.

4.4 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. Recovered diesel fuel will be burned in a used oil furnace. Recovered petroleum impacted water will be either evaporated onsite or transported to Clean Solutions, LLC in Bainville, Montana. Used petroleum absorbent material such as booms and pads will be placed in an open head drum and sent to Clean Solutions, LLC for disposal.

4.5 Reporting

An Emergency Response Summary Report will be prepared following completion of all site activities. The report will summarize all response actions and results and make recommendations for further site work.

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.

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

Project cost estimates are included in Appendix B.

6.0 Limitations

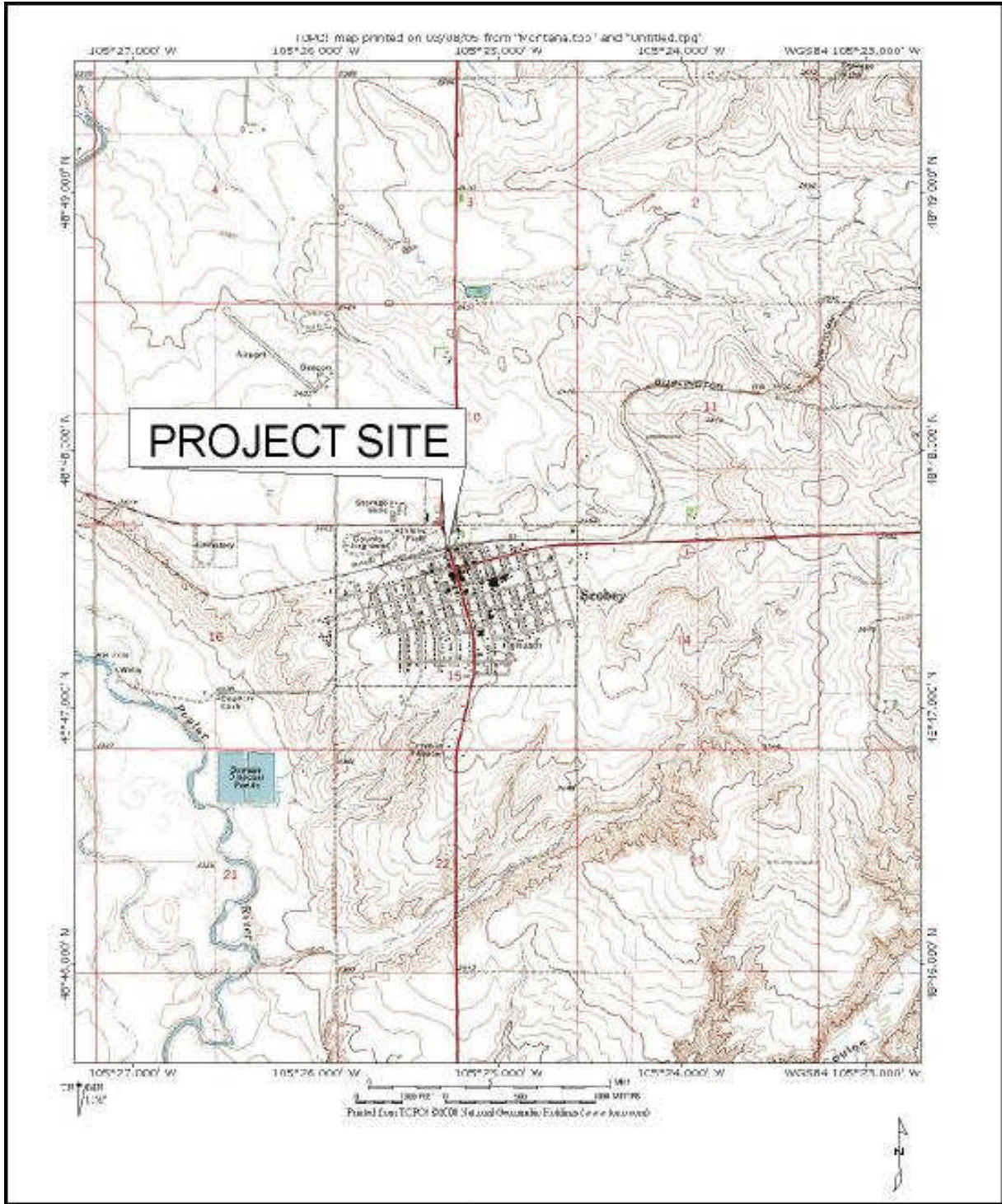
This work was performed in accordance with generally accepted practices of other consulting firms conducting similar studies. Environmental Resources, LLC observed that degree of care and skill generally exercised by other consultants under similar conditions. Our findings and conclusions must not be 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

A handwritten signature in black ink, appearing to read "Robert Waller". The signature is written in a cursive, flowing style.

Robert H. Waller, Principal Geologist

Appendix A
Figures



ENVIRONMENTAL RESOURCES
 Consulting Geologists and Environmental Scientists


CROMWELL PETROLEUM
 SCOBEE, MONTANA
SITE INVESTIGATION
 FIGURE 1, REGIONAL SITE LOCATION MAP




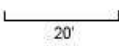
MW-9
(GRAIN
GROWERS)

PERFORATED
#1 DIESEL AST

LEGEND

 GROUNDWATER MONITORING WELL

 N

SCALE 1" = 20' 

 **ENVIRONMENTAL RESOURCES**
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CROMWELL PETROLEUM
SCOBEEY, MONTANA
SITE INVESTIGATION
FIGURE 2, SITE MAP SHOWING PETROLEUM STORAGE
TANKS AND SITE FEATURES

Google Earth



N 105°25'19.39"W elev 2458ft eye alt 2631

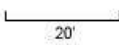


MW-9
(GRAIN
GROWERS)

PERFORATED
#1 DIESEL AST

LEGEND

 GROUNDWATER MONITORING WELL
 LNAPL RECOVERY WELL

SCALE 1" = 20' 

 ENVIRONMENTAL RESOURCES
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CROMWELL PETROLEUM
SCOBEEY, MONTANA
SITE INVESTIGATION
FIGURE 3. SITE MAP SHOWING LNAPL RECOVERY WELL
LOCATIONS

Google Earth

N 105°25'19.39"W elev 2458ft eye alt 2631

