

SMART CONSULTING, LLC
7465 MAYFLY LANE
CLINTON, MT 59825
406-728-7755

March 28, 2020

Mr. Marty Haggerty
Prairie Ag Coop (Farmer's Union Oil Company)
P.O. Box 15
Bloomfield, MT 59315

Re: Additional Corrective Action Work Plan Required for Petroleum Release at the Farmers' Union Oil Company, Intersection of Highway 470 and Highway 254, Bloomfield, Dawson county, Montana; Facility ID 11-04222, TREADS ID 19748, Releases 0240 and 3274, Work Plans 33973 and 33974.

Dear Mr. Haggerty,

This Standardized Abbreviated Generic Applications Corrective Action Work Plan (WP) AC-07 summarizes the work to be performed at your Bloomfield station. The Montana DEQ requested this work in a letter dated October 29, 2019. Mr. William Bergum requested additional semi-annual groundwater monitoring and collection of a soil sample in the area of the diesel release (3274) reported on October 1, 1997. Release #3274 involved a leak of diesel #1 at a pipe union near the west wall of the concrete containment berm. The 30-day release report indicated that two feet of impacted soil was removed from the release site, but impacted soil remained at the base of the excavation.

Soil Sampling

SMART Consulting will use a hand-auger to advance a test hole beneath the pipe union where diesel #1 product reportedly dripped into the soil. The surface gravel will be moved to expose fill beneath the pipe union. The auger will be advanced at least two feet to the base of the fill to obtain a soil sample at the base of the soil excavation. SMART Consulting will continue to auger and collect soil samples at one-foot intervals until refusal. Samples will be screened using the PID and a soil sample will be collected from the deepest soil removed by the hand auger. The soil sample(s) will be analyzed for VPH and EPH screen and fractionated if the EPH screen reports greater than 200 mg/kg; ppm. The soil sample(s) will be packed on ice and transported to Pace Analytical in Billings, Montana following chain-of-custody procedures.

Groundwater Monitoring

SMART Consulting will monitor the water levels in all wells at the site. MW7 was abandoned after the surface was crushed by a truck. Wells will be purged using a bladder pump and low-flow techniques to obtain water samples from each well, representative of groundwater. SMART Consulting will record field parameters (DO, SC, ORP, pH and turbidity) while purging using a YSI-556 water meter. When

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parameters stabilize, the discharge hose will be placed in laboratory provided, clean and preserved, water bottles. Discharge water will be collected in 5-gallon buckets. Buckets containing purge water will be dumped on the pavement and allowed to evaporate.

Wells will be monitored and/or sampled according to the table below.

Well	Water Level	VPH	EPH	1,2-DCA	EDB	Methane	Fe/Mn Total	Fe/Mn Dissolved	Sulfate	NO ₂ +NO ₃	NO ₃	TOC	BOD
MW1	X												
MW2	X												
MW3	X												
MW4	X	X	X	X	X	X	X	X	X	X	X	X	X
MW5	X												
MW6	X	X	X	X	X	X	X	X	X	X	X	X	X
MW7													
MW8	X	X	X	X	X	X	X	X	X	X	X	X	X
MW9	X												
MW10	X												
MW11	X	X	X	X	X	X	X	X	X	X	X	X	X

After the first monitoring event, SMART Consulting will provide the DEQ a copy of the laboratory report and will contact the DEQ to discuss the results of the soil and water samples.

Release Closure Plan

SMART Consulting will prepare a release closure plan that includes soil and groundwater findings as well as the results of a receptor survey. SMART Consulting and the DEQ project managers will discuss the release closure plan prior to presentation in the report. SMART Consulting will use the DEQ Excel spreadsheet to present the release closure plan.

Reporting

SMART Consulting will prepare a Standardize Groundwater Monitoring Report (MR-01) detailing the results of both monitoring events. Sample results will be summarized in a table of historic analytical data. Maps of the potentiometric surface measured for each sampling event and a map of petroleum concentrations encountered will be included in the report.

SMART Consulting will validate all laboratory analytical data with the aid of the DEQ Data Validation Summary Form. A section of the report will discuss the data validation process. The main validation task is to review the laboratory quality control data analysis to see if the instruments were calibrated and within control limits. A blind duplicate field blank will be collected from the water sample train and analyzed for VPH constituents. Duplicate soil samples will not be collected as variability makes duplicate sampling meaningless. Any data discrepancies will be discussed with the DEQ project manager immediately and will be noted in the report.

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Costs to complete the groundwater monitoring, soil sampling, laboratory analysis and reporting are attached to this Work Plan.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read "E. W. Smart". The signature is stylized and fluid.

Eric W. Smart
Principal Geologist

C: CAP Cost WP 33974
Unit Cost CAP WP 33973

Prairie Ag
 Bloomfield, Montana
 GW Monitoring and Soil Sampling
 Cost Estimate CAP 33974

Professional Labor

	Quantity	Unit	Unit Cost	Total
Principal Geologist/Engineer		hour	\$110.00	\$ -
PE/PG/RG		hour	\$93.00	\$ -
Senior Geologist/Engineer		hour	\$90.00	\$ -
Project Geologist/Engineer	3	hour	\$88.00	\$ 264.00
Staff Geologist/Engineer	1	hour	\$83.00	\$ 83.00
CAD Drafter		hour	\$60.00	\$ -
Environmental Technician III		hour	\$59.00	\$ -
Environmental Technician II		hour	\$49.00	\$ -
Environmental Technician I		hour	\$40.00	\$ -
Project Coordinator		hour	\$55.00	\$ -
Word Processor		hour	\$31.00	\$ -
Clerical		hour	\$31.00	\$ -
Professional Labor Subtotal				\$ 347.00

Equipment Rental

Total Station		day	\$100.00	\$ -
YSI Multi-Meter		day	\$60.00	\$ -
Photoionization Detector (PID)	1	day	\$50.00	\$ 50.00
Peristaltic Pump		day	\$50.00	\$ -
Trubidity Meter		day	\$25.00	\$ -
Bladder Pump		day	\$50.00	\$ -
Water Level Indicator		day	\$25.00	\$ -
Hand Auger	1	day	\$25.00	\$ 25.00
Digital Camera		day	\$25.00	\$ -
Equipment Rental Subtotal				\$ 75.00

Supplies

Level D PPE		day	\$25.00	\$ -
Bailers		each	\$8.25	\$ -
Hach Kit		each	\$5.75	\$ -
Silicon Tubing		foot	\$1.50	\$ -
Polyethylene Tubing		foot	\$0.50	\$ -
Vinyl Tubing		foot	\$0.50	\$ -
Filters		each	\$21.00	\$ -
Ice		each	\$1.50	\$ -
Supplies Subtotal				\$ -

Document Production

Photocopies - B&W		each	\$0.10	\$ -
11 x 17 Photocopies - B&W		each	\$0.15	\$ -
Photocopies - Color		each	\$1.00	\$ -
11 x 17 Photocopies - Color		each	\$1.75	\$ -
Report Bindings (PDF)		each	\$45.00	\$ -
Document Production Subtotal				\$ -

Subcontractors & Outside Vendors

VPH Analysis	2	each	\$125.00	\$ 250.00
EPH Screen Analysis	2	each	\$85.00	\$ 170.00
Methane		each	\$60.00	\$ -
1,2-DCA		each	\$80.00	\$ -
EDB		each	\$75.00	\$ -
Total Fe/Mn		each	\$20.00	\$ -
Dissolved Fe/Mn		each	\$20.00	\$ -
Sulfate		each	\$20.00	\$ -
Nitrate+Nitrite as N		each	\$15.00	\$ -
Nitrate as N		each	\$15.00	\$ -
Total Organic Carbon		each	\$35.00	\$ -
Biologic Oxygen Demand		each	\$50.00	\$ -
Sample Shipping & Handling	2	each	\$10.00	\$ 20.00
Subcontractor		each	x10%	\$ -
Outside Services Subtotal				\$ 440.00

Travel & Lodging

Mileage		mile	\$0.550	\$ -
Mileage		mile	\$0.60	\$ -
Mileage - 1-Ton Truck		mile	\$1.30	\$ -
Mileage - F750, 4.5-Ton Truck		day	\$30.50	\$ -
Per Diem		day		\$ -
Lodging				\$ -
Travel & Lodging Subtotal				\$ -

Task 3 Total \$ 862.00

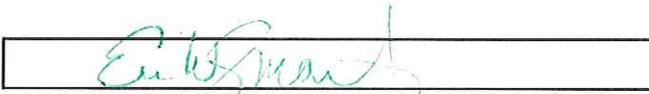
LabTask \$ 4,525.00

Petroleum Tank Release Compensation Board Groundwater Monitoring and Sampling Unit Cost Worksheet

Contractor Information

Company Name: SMART Consulting
 Address: 7465 Mayfly Ln
 City, State, Zip: Clinton, MT 59825
 Cost Estimator: Eric Smart

Phone: 406-360-3361

Signature: 

Date: March 30, 2020

Project Information

Site Name: Farmers Union Oil Company (currently Prairie Ag)
 Address: Hwy 254 and Hwy 470
 City: Bloomfield

Facility ID# 11-04222
 Release # 0240
 WP ID# 33973

Monitoring Well Details

Total Number of Wells at Site
 Number of Water Level Measurements Only ⁽²⁾
 Number of Wells to be Monitored/Sampled ⁽³⁾
 Well Casing Diameter (inches)
 Average Depth to Groundwater (ft)
 Average Depth of Wells (ft)

Well Purging Method

- Hand Bailing
- Peristaltic Pump
- Submersible Pump
- Micropurge
- No Purge
- Other (please specify)

Monitoring/Sampling Interval

Estimated Start Date:
 Quarterly # of events
 Semi-annual # of events
 Annual # of events
 Other # of events (specify)

Other Services

- Free Product Recovery
- Groundwater Well survey
- Wellhead retrofit/reconstruction
- Other (please specify)

Cost Estimate Explanation:

- ⁽¹⁾ **Mobilization/Demobilization:** Includes all costs and mileage to transport equipment, materials, and personnel to and from the site location. More than one mobilization event will require justification and pre-approval by the DEQ-PTCS and Board staffs. This item should be on a per mile unit rate.
- ⁽²⁾ **Water Level Measurements:** Includes all costs (labor, equipment, materials, and well consumables) to measure groundwater depth, collect other groundwater information from well, and decontaminate equipment. The well monitoring costs should be on a per well basis and does not include purging and sampling of the well.
- ⁽³⁾ **Well Monitoring/Purging/Sampling:** Includes all costs (labor, equipment, materials, and well consumables) to monitor (see above), purge, sample groundwater, decontaminate equipment, take water level measurements and handle disposal of contaminated purge water. The cost should be on a per well basis.
- ⁽⁴⁾ **Laboratory Analysis:** Includes all laboratory costs for all wells, for duration of project. It is realized that some laboratory analyses will not be conducted for every event and that the well sampling frequency may change.
- ⁽⁵⁾ **PTRCB Sampling Fee:** Includes all costs related to management of the sample including: sample container, cooler, packing, shipping, handling, sample preservation, and office related handling charges. The Sample is defined as the laboratory ID number on the laboratory invoice.
- ⁽⁶⁾ **Report Preparation and Project Management:** Includes all costs (labor and materials) project management, report preparation, and report submittal, including all office related costs, per groundwater sampling event.

Groundwater Monitoring and Sampling Unit Cost Worksheet

Task	Unit Cost	Number of Units	Total Cost
Work Plan Preparation	\$457.00	1	\$457.00
Project Management	\$88.00 /hr	6	\$528.00
Mobilization/Demobilization ⁽¹⁾	\$2.07 /mile	1,200	\$2,484.00
Field Work			
Water Level Measurements ⁽²⁾	\$44.00 /well	12	\$528.00
Well Monitoring/Purging/Sampling ⁽³⁾	\$200.00 /well	8	\$1,600.00
Other Service (please specify) <input type="text" value="EPH/VPH/IBI/EDB/DCA Analysis"/>	\$500.63	8	\$4,005.04
Other Service (please specify) <input type="text" value="Dir. Costs: Water Filters, YSI Turbidity Meter"/>	\$35.00	8	\$280.00
Lodging & Per Diem (Lodging – actual only)			
Lodging: # of people <input type="text" value="1"/>	\$95.00 /person per day	4	\$380.00
Food: # of people <input type="text" value="1"/> (\$30.50 max a day allowed)	\$30.50 /person per day	4	\$122.00
(Breakfast \$7.50, Lunch \$8.50, Dinner \$14.50)			
Laboratory Analysis ⁽⁴⁾			
Volatile Petroleum Hydrocarbons (VPH)	/sample		\$0.00
Extractable Petroleum Hydrocarbons (EPH)			
EPH "screen"	/sample		\$0.00
EPH "fractions"	/sample		\$0.00
BTEX/MTBE/Naphthalene only-method:	/sample		\$0.00
Polyaromatic Hydrocarbons (PAHs)	/sample		\$0.00
PtrCB sampling fee (\$10.00 allowed) ⁽⁵⁾	\$10.00 /sample	8	\$80.00
Other (please specify) <input type="text" value="EPH VPH IBI EDB DCA Analysis"/>	\$500.63 /sample	8	\$4,005.04
Other (please specify) <input type="text"/>	/sample		\$0.00
Report Preparation ⁽⁶⁾			
Quarterly	/report		\$0.00
Semi-annual	/report		\$0.00
Annual	\$2,082.70 /report	1	\$2,082.70
Other (Please specify) <input type="text" value="RCP"/>	\$1,056.00	1	\$1,056.00
Monitoring & Sampling Total:			\$17,607.78

Additional Conditions/Comments/Costs:

Annual Report includes \$320 for data evaluation and conceptual model development.

If you require assistance, call 406-444-9710
 Submit completed form to:
 Petroleum Tank Release Compensation Board
 PO Box 200902, Helena MT 59620-0902