AJM Incorporated
A Full Service Environmental Company
Water Resource Evaluation & Cleanup
Environmental Site Assessments
Fuel System Design and Compliance
Phone/FAX 406 522-0699 Cell 406 600-2045
1805 Kenyon Dr., Bozeman, MT 59715
Dennis@ajminc.net
www.Environmentalconsultingmt.com

July 2, 2020

William Bergum
Montana Department of Environmental Quality
PO Box 200901
Helena, MT 59620-0901

RE: Corrective Action Work Plan CAP-AC-01 to Install Boreholes and Monitoring Wells for Evaluating Soil and Groundwater Hydrocarbon Impacts
Mort Distributing, 310 East Allard Street, Glendive, MT 59330
MT TREADS ID #32400, Release 5372 Work Plan ID No. 33765 (AJM Prj code 1250)

Dear Mr. Bergum:

Pursuant to your correspondence addressed to Mort Distributing (MD) on June 5, 2020, AJM Incorporated (AJM) was retained by MD and has prepared the following work plan to investigate the magnitude and extent of hydrocarbon impacts at their facility located in Glendive, Montana.

This work plan details the installation of soil borings, completion of groundwater monitoring wells, one year of biannual groundwater sampling beginning in late summer 2020, and the preparation of reports. One Remedial Investigation (RIR-01) report will be submitted after the initial sampling event and will include a Release Closure Plan (RCP). Groundwater Monitoring Report (MR-01) will be completed for the second sampling and the RCP will be updated based on further data evaluation.

Site Location/Release History

The MD facility is located at 310 E. Allard Street in Glendive, Dawson County, Montana. The legal description is SW¼, Section 25, Township 16 North, Range 55 East. The responsible party is Mort Distributing. The facility contact is Tim Mort at (406) 356-2177.

During a Phase II Environmental Site Assessment conducted by the Antena Group as part of a purchase of the property in early October 2019, recommendations were to collect subsurface soil and groundwater samples and analyze for petroleum hydrocarbons. During the subsurface investigation, impacted soils and groundwater were encountered at a shallow depth. Based on

visual indication of impacts, a release was reported to Mr. Burk Honzel of the Montana Department of Emergency Services. It was subsequently turned over to the Petroleum Release Section (PRS) for site evaluation and to determine if further investigation is warranted. Based on the laboratory analyses, the PRS determined that hydrocarbon concentrations exceed Montana action levels for both soil and groundwater and that Mort Distributing is required to conduct a full investigation.

At this time, it appears that the impacts observed are of a historical nature. The MD facility is located in a part of Glendive that has had other petroleum facilities associated with bulk distributors in addition to Mort Distributing. No other recent spills have been noted by Mort Distributing personnel. Several large aboveground fuel tanks (ASTs) are connected to a loading rack for truck distribution to various businesses and ranches in the region. MD has a current Spill Prevention Control and Countermeasure (SPCC) Plan in place.

Site Geology/Hydrology and Utilities

Remedial investigation work completed at an adjacent site indicates the soils range from tight clay to coarse sand and gravel. A shallow, fine-grained, sandy, silty perched aquifer has been observed at approximately four feet below ground surface (bgs), extending to approximately ten feet bgs. A significant (ten-foot thick) clay layer has been encountered on adjacent sites. Below the clay layer, a layer of dry soils approximately two to four feet of has been observed atop a deeper aquifer that occurs at approximately 24 feet bgs. This deeper aquifer may extend beyond 34 feet. Although the clay layer could potentially act as a confining layer, the dry soils observed from 20 to 24 feet bgs indicate unconfined conditions in the deeper aquifer.

Local groundwater flow characteristics have been estimated using several wells at adjacent sites. In the shallow aquifer, the estimated groundwater flow direction has ranged from N27°W to N37°W. The deeper aquifer at 25 feet bgs flows in a southwest direction.

The facility is connected to city water supply with the water main located near the center of East Allard Street. The underground receptors which could likely be impacted are the utility corridors including water, sewer, gas, storm water, and fiber optic. All electric power is supplied via overhead lines. However, on-site underground lines do exist and will nee to be located prior to commencement of any drilling activity.

At this time a facility map is not available. However, Attachment 1 contains a copy of the USGS map which shows the MD facility location relative to the City of Glendive and the Yellowstone River. A Google© photo of the site from 2016 with proposed locations of boreholes, shallow and deep monitoring well locations is also attached. A full facility map completed by a local survey professional will be completed once the new wells have been installed.

Work Plan Objectives

Based on the DEQ letter of June 5, 2020, a full evaluation of the magnitude and extent of both soil and groundwater impacts will be attempted at this facility except where structures (above and underground) would prevent soil boring and or well placement. The objective of the remedial work outlined in this CAP will be to characterize the depth and breadth of impacted soil and groundwater. Future remedial action may include soil excavation or other soil treatment technologies. Characterization of both the shallow and deep groundwater aquifers will also be attempted to assess whether remedial action is necessary and to gather data on future remedial options.

PROPOSED SOIL BORING & MONITORING WELL INSTALLATIONS

It is proposed that 12 **soil borings** be installed to characterize shallow soil impacts (refer to the Google© map in Attachment 1 for locations). Based on information from nearby sites, it is not anticipated that shallow soil impacts will be found beyond ten feet below ground surface bgs as the shallow groundwater along with the clay nature of the area prevents hydrocarbons from moving deeper than this. A soil boring log will be completed for each borehole.

Scope of Work for Soil Borings:

- Install 12 soil borings using a hollow-stem auger drill rig and collect continuous soil samples from 0 to 10 feet;
- Field analyze soil using heated headspace and photoionization detector (PID) reading;
- Collect soil samples from the depth showing highest PID readings or at the soil/groundwater interface. Submit to laboratory under chain of custody for analyses of extractable petroleum hydrocarbons (**EPH**) and volatile petroleum hydrocarbons **(VPH).**
- Mark all soil boring locations for future survey information.

Install six (6) **shallow groundwater monitoring wells** using a licensed well driller at the locations on the Google© map in Attachment 1. The wells will be placed in the likely areas of petroleum impacts and in the upgradient, downgradient and crossgradient directions. Based on nearby site information, the shallow static water level occurs between three and 9 feet bgs and has never been measured deeper than 10 feet bgs. Well logs will be kept of each well installed.

Scope of Work for Shallow Monitoring Wells:

- Install six two-inch monitoring wells to a depth of 13 feet bgs;
- Collect soil samples from the highest PID reading and/or from soil/water interface as indicated above;
- Use Two-inch flush threaded Schedule 40 PVC, 0.01-slot screen placed from 13 to 3 feet;
- Blank PVC to surface;

- 10-20 Colorado silica sand from 13 to 2 feet bgs;
- Bentonite seal from 2 to 1 foot bgs;
- 8"x12" steel well box cemented in place.

Install three **deep monitoring wells** using a licensed well driller into the deeper aquifer known to occur at approximately 25 feet bgs. Evaluation of the deeper aquifer is warranted to determine whether it has been impacted by surface petroleum release(s). Data from nearby remedial work has shown that this aquifer has a more southwesterly flow direction than the shallow aquifer which tends to flow to the northwest.

Scope of Work for Deep Monitoring Wells:

- Install three wells to 35 feet bgs;
- Use Two-inch flush threaded Schedule 40 PVC, 0.01-slot screen from 35 to 25 feet bgs;
- Blank PVC to surface;
- 10-20 Colorado silica sand from 35 to 24 feet bgs;
- Coated bentonite seal from 24 to 3 feet bgs;
- 12"x12" steel well boxes cemented in place

All wells will be installed in areas that have low traffic flow to help reduce the chance of well head damage. The locations shown on the attached figure may change dependent on client knowledge of surface water drainage and traffic flow.

All soil-derived waste will be stockpiled on site and profiled for removal to the local landfill. One five-point composite sample will be analyzed for EPH and VPH. A local contractor will be used to haul the soils to the landfill at the appropriate time.

A local survey crew will be contracted to provide wellhead elevations and the locations of on-site structures, fuel tanks, and any other features pertinent to the investigation. The survey will tie all elevations into a local United States Geological Survey (USGS) benchmark and will include marked utilities both on-site and within the East Allard Street right-of-way.

GROUNDWATER DEVELOPMENT & SAMPLING

Following well installations, the groundwater will be developed to remove as much sand and silt as possible. A down-hole submersible "Whalen pump" along with appropriate tubing will be used to surge and remove sediment until the silt load is reduced by least 90%. Measurement of the silt load will be taken via in-field turbidity measurements. Based on the analytical data from the soil sampling, the development of wells will proceed from the assumed cleanest well to the most impacted well. The pump will be decontaminated between wells and new tubing will be used in each well.

The first of the groundwater sampling events will be conducted approximately two weeks after the work described above has been completed. This will allow wells to come to equilibrium with surrounding groundwater and will provide better site data. Samples will be collected from the shallow aquifer wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-6 and from the deep aquifer wells DMW-7, DMW-8 and DMW-9.

Groundwater sampling procedures will be conducted in accordance with the AJM Quality Assurance Project Plan (QAPjP) on file with the DEQ. All non-dedicated equipment used for purging, sampling, and depth measurements will be decontaminated with an Alconox wash solution followed by a distilled water triple rinse prior to each use. Static water levels will be obtained prior to purging the wells. If warranted, an oil/water probe may be used to determine if free product is present prior to sampling. The DEQ will be notified in the event free product is observed. A peristaltic pump will be used to sample all shallow wells and a downhole submersible pump will be used to sample the deeper (+20 feet to groundwater) wells.

All samples (unless strong hydrocarbon odors are observed) will be pumped through a flow-through cell and the following parameters measured: pH, conductivity, dissolved oxygen, oxidation reduction potential, and temperature. Using a low-flow sample method (<500 mil/min) as described in the DEQ guidelines, samples will be collected once these parameters fall within 10% of the previous reading. The samples will be sent under chain of Custody to an accredited laboratory for analysis of EPH, VPH and lead scavengers (DCA & EDB). All laboratory analytical data will be validated using DEQ's Data Validation Summary Form (DVSF).

Sampling will be conducted in 2020/2021 during high groundwater conditions in the summer and low groundwater conditions in the fall. Snowy, icy conditions can occur in the late fall and early spring that impairs the ability to obtain samples. All efforts will be made to collect the samples at an appropriate time to ensure that wellheads can be found and ice/snow are not an issue. AJM will contact the DEQ after the first groundwater sampling results have been received from the lab to discuss results.

REPORT WRITING

After the soil boring/monitoring well installations have been completed and the first groundwater samples analyzed, an RIR-01 Report will be completed following DEQ guidelines. Only sections which are applicable will be completed. The report will include a Release Closure Plan (RCP) detailing potential options for soil and groundwater clean-up and recommendations for any further remedial alternatives. Following the second sampling event a Groundwater Monitoring Report (MR-01) will be prepared to discuss groundwater impacts and trends and the RCP will be updated. Assuming that the wells can be installed and sampled during the summer of 2020 with a late fall sampling event to follow, it is expected that the first MR-01 report summarizing the biannual events of 2020 will be submitted in early 2021.

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A cost estimate for the above work have been completed along with unit costs for standard groundwater sampling and can be found in Appendix B. Work at this site can begin upon written approval by both the DEQ and the Petroleum Tank Release Compensation Board (PTRCB).

Please do not hesitate to call if there are any questions or if we can provide any additional information.

Sincerely,

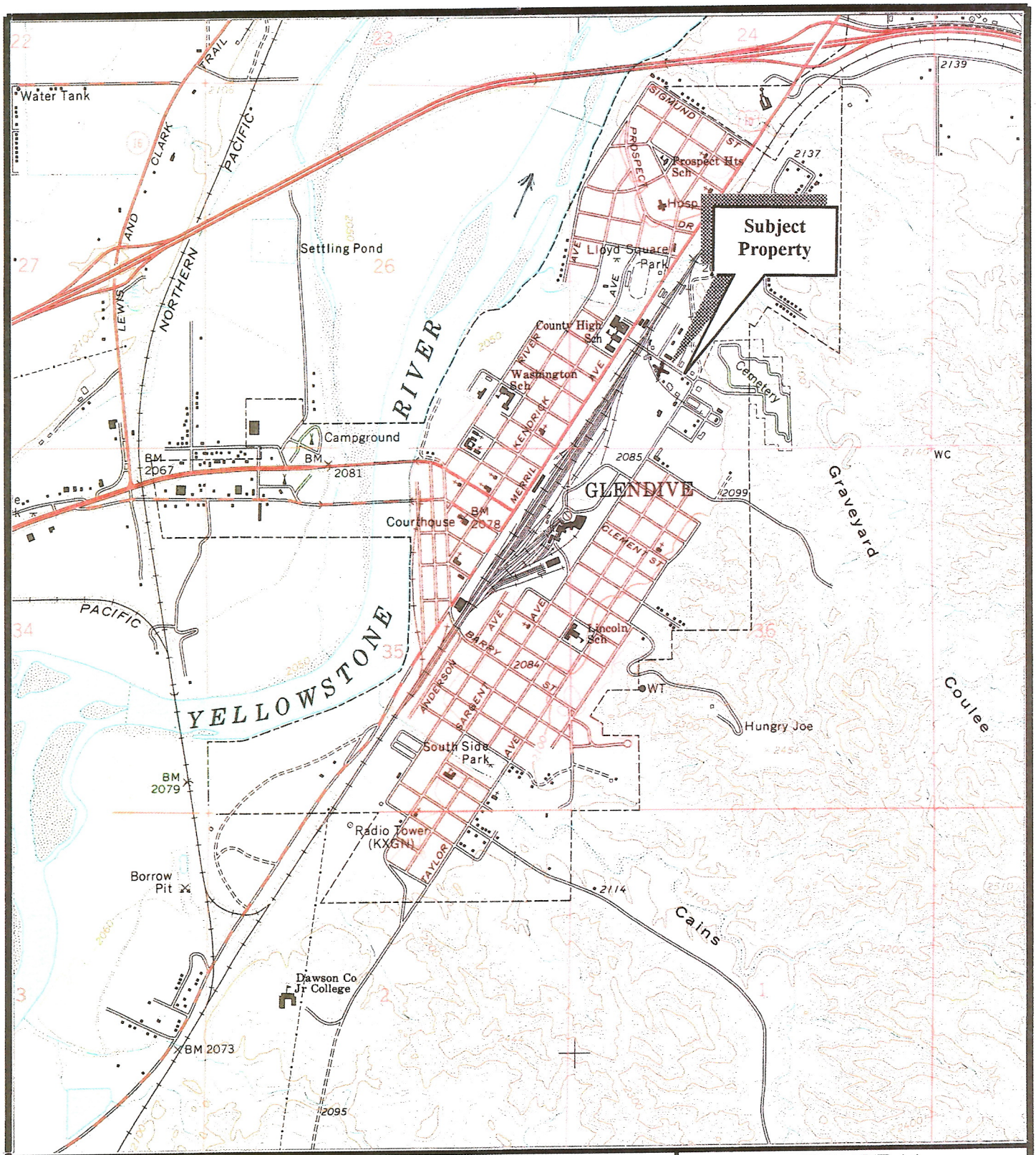
Dennis Franks

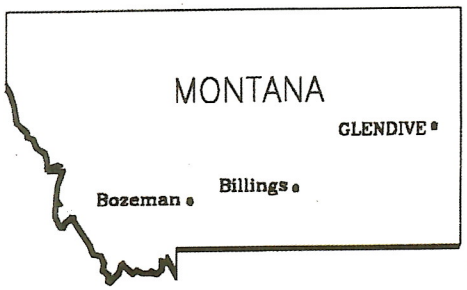
AJM Incorporated
By: Dennis Franks, President

ecc: Tim Mort, Mort Distributing, PO Box 1313, Glendive, MT 59330
PTRCB Staff, PO Box 200902, Helena, MT 59620-0902 (PDF Only)

APPENDIX A

Figures





THIS MAP IS FOR VISUAL PURPOSES ONLY.
ACCURACY CANNOT BE GUARANTEED.

NOTE: BASE MAP IS USGS TOPOGRAPHIC 7.5 MINUTE QUADRANGLE MAP; GLENDIVE, MONTANA, 1967

N

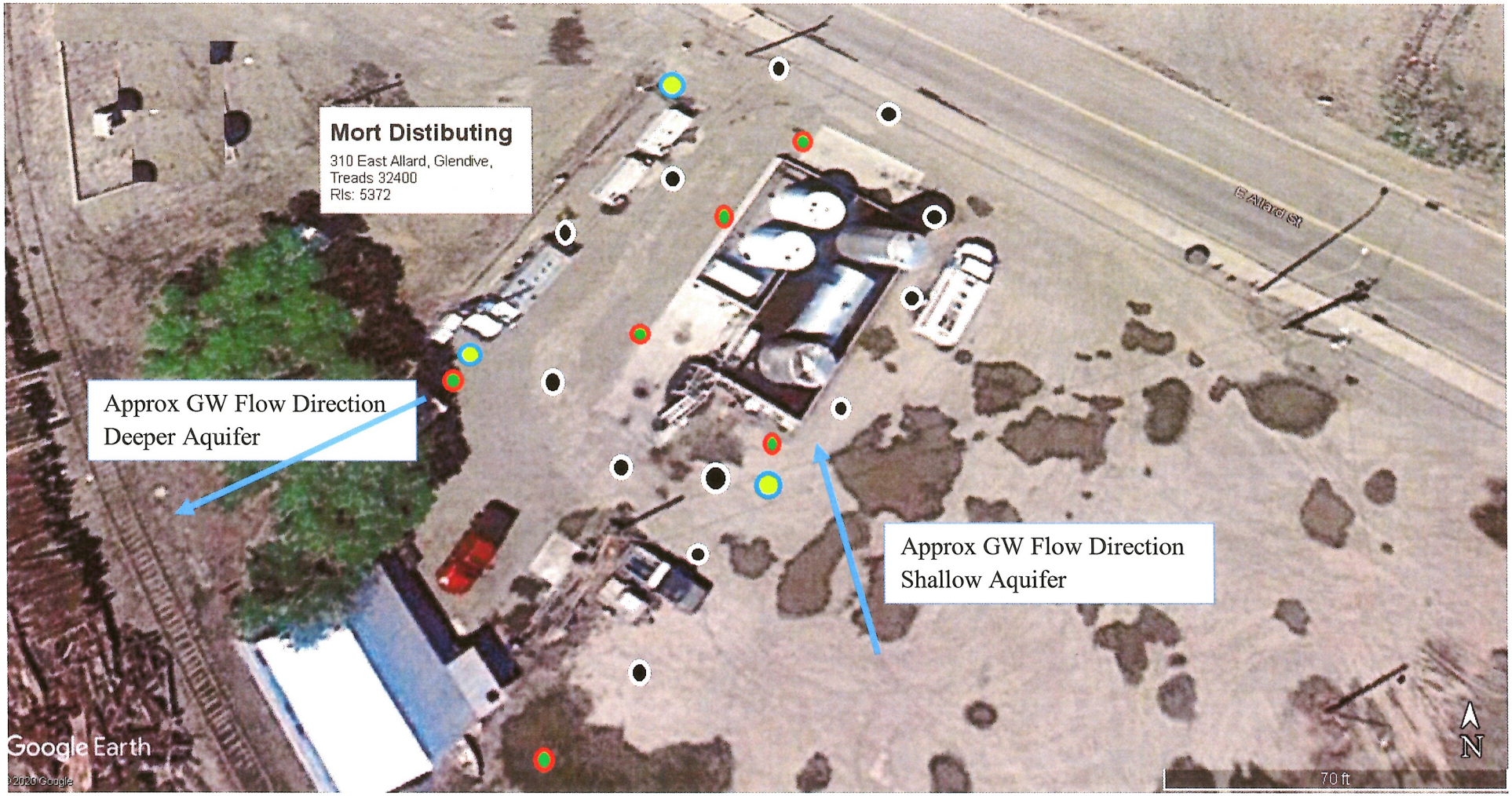
0 2000 4000

SCALE: 1" = 2,000 FEET

FIGURE 1
SITE LOCATION MAP

Mort Distributing
310 E. Allard St.
Glendive, Montana

AJM Incorporated



Google Image is from 2016

= Proposed Shallow Well Locations (screen 3 to 13 feet)

= Proposed soil boreholes (continuous soil collection 0-10 feet bgs)

= Proposed deep wells (screen 25 to 35 feet bgs)

APPENDIX B

Well/Borehole Installation Cost and Bid Specs

Groundwater Sample Unit Cost Work Sheet

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AJM Project Code: 1250

COST ESTIMATE
CAP-RI0-01 WORK PLAN
Mort Distributing
310 E. ALLARD ST,GLENDIVE, MT
WP ID 34097
2020

TASK	UNITS	QUANTITY/RATE	COST
Task I - Work Plan Prep			
Write CAP-RIO-01	1 unit	1500 per unit	$1,500.00
Task II - Project Mangaement			
Project Management, Engineer II Contracts, city permits drill in ROW, scheduling	25 hours @	120.00 per hour	$3,000.00
Project Management, Scientist II, safety plan, locates,	20 hours @	110.00 per hour	$2,200.00
Task III - Boreholes & MW			
Scientist II	40 hours @	115.00 per hour	$4,600.00
Mobilization, Scientist II	18 hours @	115.00 per hour	$2,070.00
Mileage	800 miles @	0.590 per mile	$472.00
Per Diem	10 days @	30.50 per day	$305.00
Hotel	7 night @	150.00 per night	$1,050.00
Tech III well develop	16 hours @	108.00 per hour	$1,728.00
Per Diem	3 days @	46.00 per day	$138.00
Equipment, bailers, Pump, tubing,decon supplies	1 unit @	1000.00 per unit	$1,000.00
Hotel	3 night @	150.00 per night	$450.00
soil samples	25 samples @ (does not include fractionation)	250.00 per sample	$6,250.00
mark up	25 samples @	10.00 per sample	$250.00
Subcntractors			
Haztech	293 feet @ (includes mob and perdiem)	64 foot	$18,752.00
Survey Crew Cost Est.(Interstate Eng)	1 unit @	3500 unit	$3,500.00
Soil Waste Disposal	1 unit @	1500 unit	$1,500.00
	Contractor markup	7%	$1,662.64
			$50,427.64
Task IV - Report Writing			
RIR-01	1 report	3320.00 per Rpt	$3,320.00
RCP	1 report	1800.00 per Rpt	$1,800.00
Cost to complete Task I through IV			***$55,547.64***

Groundwater Sample Cost can be found on Attached PTRCB Unit Cost Sheet

NOTE: all subcontractor costs to include: travel, labor, materials, and equipment
Any and all costs are subject to a 20% increase due to winter conditions.
This is only an estimate. Final invoicing for work completed by AJM will be based on time and materials.
AJM will use their appropriate staff to conduct this work.

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GROUNDWATER MONITORING AND SAMPLING
UNIT COST WORKSHEET
Montana Department of Environmental Quality
Petroleum Release Section/Petroleum Fund Services Section
Estimated Start Date Fall 2020
WP ID 3097

Consultant Information

Company Name: AJM, Inc
Address: 1805 Kenyon Dr.
City, State, Zip: Bozeman, MT 59715
Phone: (406) 522-0699
Cost Estimator: Dennis Franks,

Project Information

Site Name: Mort Distributing
Address: 310 E. Allard St.
City: Glendive, Montana

Facility Treads ID # 32400
Release # 5372

Monitoring Well Details
Total Number of Wells at Sites 9
Number of Wells to be monitored: 9
Number of Wells to be monitored/sampled: 9
310 Allard (MW-1,3,4,5,6,DMW-7,8,9);
Well Casing Diameter (inches) 2"
Average Depth to Groundwater (ft) 4' and 25 ft,
Average Depth of Wells (ft) 13' and 35 ft

Monitoring/Sampling Interval
Estimated Start Date: Fall 2020,
☐ Quarterly (# of events)
X Semi-annual (# of events 2)
☐ Annual (# of events_____)

☐ Other (please specify) _____

Well Purging Method
☐ Hand bailing
X Peristalic Pump
X Submersible Pump
☐ Micropurge
☐ No Purge
☐ Other (please specify) _____

Other Services
X Free Product measurements
☐ System Maintenance
☐ 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-PRS and DEQ-PFSS staffs. This item should be estimated 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 estimated 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, and handle disposal of contaminated purge water. The cost should be estimated on a per well basis.

(4) Report Preparation: Includes all costs (labor and materials) project managment, report preparation, and report submittal, including all office related costs, per groundwater sampling event.

(5) 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.

(6) PTRCB Sampling Fee: Includes all costs related to management of the sample including: sample container, cooler, ice, packing, and office related handling charges. The sample is defined as the laboratory ID number on the laboratory invoice.

GROUNDWATER MONITORING AND SAMPLING
UNIT COST WORKSHEET

Mort Distributing 310 E. Allard, Glendive WP 34097

Task	Unit Cost	Number of Units	Total Cost
Project Management: Engineer III	$115/hr	10	$1150
Project Management: Sci I	$110/hr	20	$2200
Mobilization/Demobilization[1] Site Prep/Mobilization/Demobilization/Initial/final Decon	$2.96/mile	2 x 730 = 1460 miles	$4321
Field Work			
Product Level Measurements [2] (est. up to 4 per event)	$50/well	8	$400
MW Monitoring/Purging/Sampling[3] VPH, EPH, [Lead Scav 1st year)] MW-1,2,3,4,5,6	$220/well	2x6 = 12	$2640
MW Monitoring/Purging/Sampling[3] VPH, EPH, [Lead Scav 1st year)] DMW-7,8,9	$250/well	2x3 = 6	$1500
Appropriate filter media for NA sampling	$20/well	As needed	$
Daily onsite decon/calibration	$120/day	2	$240
Report Preparation[4]			
Sampling Report (MR-01 format) ()	$2000/report	1	$2000
Release Closure Plan (RCP) ()	$1200/report	1	$1200

The costs below are estimates, not bids. Lodging and laboratory analysis will be paid at actual cost when documented by receipts/invoices.

Per Diem(specify number of individuals__1__)			
Per Diem: Motel	$150/ day	6	$900
Per Diem: Food	$30.5/day	10	$305
Laboratory Analysis[5]			
Volatile Petroleum Hydrocarbons (VPH)	$175/sample	18	$3150
Extractable Petroleum Hydrocarbons (EPH) "screen"	$100/sample	18	$1800
EDB & DCA (lead scavengers)	$180/sample	18	3240
Laboratory Sample Shipping	150/round	2	300
PTRCB sampling fee[6]	$10/*sample*	18	$180
Other (please specify) _			
		Avg. Cost/sample event	$12763

Special Conditions/Costs: Invoices will be provided for lab and hotel costs in the request for reimbursement.
Additional Comments/Costs: Winter costs may also include time and materials for metal locator rental, well acquisition and deicing. EPH fractionation will increase each analysis by $180/sample.

Specifications FOR BOREHOLE & WELL INSTALLATION

PROJECT NAME AND LOCATION:
Mort Distributing
310 E. Allard St
Glendive, MT

Proposed Work
Install 11 Soil Sampling Boreholes to 10 feet (continuous split spoon sample cores)
Install 6 Shallow Groundwater Monitoring Wells to 13 feet (continuous split spoon sample cores)
Install 3 Deeper Groundwater Monitoring Wells to 35 feet. (continuous split spoon sample cores)

Type of rig to be used:	**Hollow Stem Auger**
Casing Shallow Wells:	**13 feet w/ 10 ft 0.010-slot screen 2-inch casing (20/10 sand 13-2', bentonite (2-1')**
Casing Deeper Wells:	**35 feet w/ 10 ft 0.010-slot screen 2-inch casing (20/10 sand 35-24), COATED bentonite (24-3')**
Surface cover at site:	**Allard Street Asphalt (2 wells?) & Mostly Gravel, dirt**
Soil sampling:	**Collect continuous soil samples from grade to TD**
Complete Wells:	**Cement in 8-inch well boxes FOR 6 shallow wells**
Complete Wells:	**Cement in 12-inch well boxes FOR 3 deeper wells**
	All boxes must be cemented in-place with at least one foot of concrete on all sides of box, and only sand within the box to allow for drainage
Disposal of cuttings:	**On site**

DRILL COMPANY REQUIREMENTS

- Drilling company must provide a Montana licensed monitoring well installer during well construction activities. The licensed installer must provide all appropriate documentation (well logs) to DNRC and AJM Inc.
- Drilling company must provide all appropriate safety equipment for their employees.
- Appropriate safety equipment for traffic control shall be provided by drilling company (drilling next to or in Allard Street right of way will be part of this project).
- Certificates of Insurance (Workman's Compensation and Liability) must be provided to AJM.
- Once the bid is awarded, a contract between AJM and the drilling company will be completed.
- Decontamination of drilling equipment shall be conducted prior to arriving on site, and between each well (water source at site is limited)
- The bid shall include all mobilization, equipment and per diem costs.
- AJM will call in the utility locate at least 48 hours prior to drilling.

GEOLOGY AT SITE: Some Asphalt , Road base gravel from grade to 2 feet bgs, Fine sandy silty/clay from 2 to 13 ft bgs for shallow wells; Stiff dry clay aquitard from 18 feet to 24 feet, then sandy gravel in deeper aquifer. Groundwater occurs between 3 to 7 feet bgs and then again at 24 feet.

Bid will be awarded based on total mobilization cost, drill and well completion price divided by total footage to get $/ft.

Per diem ($30.50/man/day) and actual hotel receipts will be paid in addition to drill costs.

Call Dennis at 406-600-2045 with questions.
See attached figure for general borehole/well locations.

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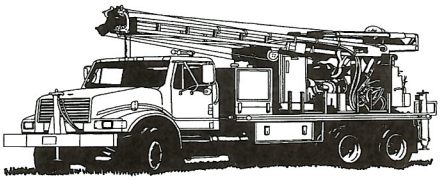
HAZ TECH Drilling, Inc.



P.O. Box 30622
2910 Hannon Road, Suite #6
Billings, MT 59107
Phone: 406-896-1164 or 800-359-1502
Fax: 406-896-1462

Proposal

TO: AJM Incorporated
ATTN: Dennis Franks
1805 Canyon Drive
Bozeman, MT 59715
Ph-406-522-0699

Description:
11 borings to 10'. 6 wells to 13' with 10' of .010 screen and 8" X 12" mount covers. 3 wells to 35' with 10' of .010 screen, coated pellets and 12" X 12' covers.

DATE: 6/12/2020

PROJECT: 310 E. Allard St
Glendive, MT

TERMS: Net 30 Days

	UNITS EST.	UNIT PRICE	AMOUNT EST.
	**********	**********	**********
Mob/ Demob, Per Mile	450	$3.25	$1,462.50
Support Truck, Per Day	7	$150.00	$1,050.00
Perdiem, Per Crew Day	7	$61.00	$427.00
Lodging, Per Night, Estimated	6	$250.00	$1,500.00
Auger Drilling, Per Ft	293	$21.50	$6,299.50
Well Installation 13' Wells, Per Ft	78	$31.00	$2,418.00
Well Installation 35' Wells, Per Ft	105	$44.00	$4,620.00
8" x12" Flush Mount Vaults	6	$100.00	$600.00
12" x12" Flush Mount Vaults	3	$125.00	$375.00
			**********
ESTIMATED TOTAL:			$18,752.00

Notes:
1) Client is responsible to clear location of utilities.
2) Client is responsible for disposal of drill cuttings.
3) Client will be invoiced only the amounts used.
4) We assume that site is accessible by truck mount drill rig.

Proposal By: Paul Bray

SK GEOTECHNICAL

Quote for Contract Drilling Services

Contractor Information

Company Name	SK Geotechnical Corporation
Address	P. O. Box 80190
City, State, Zip	Billings, Montana 59108-0190
Cost Estimator	Chad Binstock
Phone	(406) 652-3930
Signature	

Date 06/12/20

Work plan	
Phase I	
Phase II	
Phase III	

Project Information and Specifications

Site Name	Mort Distributing
Address	310 E. Allard St
City	Glendive, MT

Facility ID #	
Release #	
Proposal #	P-20067

Type of Drilling Equipment

Hollow-Stem Augers	X
Air Rotary	
Direct Push	
Other (please specify)	

Soil Boring

Number of Borings		20
Boring Diameter (in.)		9
Depth (per boring - ft)		10, 13, 35
Surface	Concrete	
	Asphalt	X
	Barren	X
Soil Disposal	Onsite Stockpile	X
	Drums	NA
Abandonment	Bentonite	NA
	Soil Cuttings	NA

Soil Sampling

Continuous Soil Sampli	X
Interval Soil Sampling	
No Soil Sampling	

Monitoring Well Specifications

Number of Wells		9
Surface	Concrete	X
	Asphalt	
	Barren	
Depth (per well)		6-13, 3-35
Est. Depth to GW (ft)		3-7
Boring Diameter (in.)		9
Casing Dia. &Type (in.)		2
Blank Casing Length (ft		3, 25
Screen Length (ft)		10
Type of Filter Sand		10-20
Depth and Type of Seal		bentonite
Surface Completion	Flush Mount	8" and 12"
	Stovepipe	
Well Development	Surface Discharge	NA
	Drums	NA

Cost Estimate Explanation:

- Mobilization/Demobilization: Includes costs and mileage to transport equipment, materials, and personnel to and from the site location.
- Soil Boring Installation: Includes cost (labor, equipment and materials) to drill, collect soil samples and abandon soil borings, as well as decontaminate equipment. Assumes level "D" personal protective equipment.
- Monitoring Well Installation: Includes all costs (labor, equipment and materials) to complete monitoring well to specifications and according to Montana Well Drillers Board rules, as well as decontaminate equipment. Cutting can be stockpiled or spread on site. Decontamination water can be surface discharged. Assumes level "D" personal protective equipment.
- Drilling Standby: Drilling standby will be provided on an hourly basis.
- Well Development: Performed only as requested by client per unit cost. Assume surging, bailing and/or pumping for approximately 1 1/2 hours per well.
- Monitoring well abandonment: Includes all costs (labor, equipment and materials) to abandon well location according to Montana Well Drillers Board rules. Abandonment costs will provided at a per well unit rate.
- Proposed unit rates are good for 60 days.
- Special Conditions/Costs: We propose to utilize our CME-75 or D-120 drill rig from our Billings, MT office to perform the work. • Additional Comments/Costs: SK Geotechnical does not have an air-rotary drill rig, and we are not proposing to subcontract air-rotary drilling to perform the soil borings and install the monitoring wells if they cannot be drilled with hollow-stem auger techniques.

UNIT COST WORKSHEET

Project: Mort Distributing Proposal: P-20067

Task	Unit Cost	Number of Units	Total Cost
Project Setup, Mobilization and Demobilization (1)			
Project Setup, coordination, and drill Instructions	$500.00	1	$500.00
Drilling Rig, per mile	$3.10	440	$1,364.00
Support Vehicle, per mile	$2.65	440	$1,166.00
		Subtotal	**$3,030.00**
Per Diem			
Motel, per person (2), per day	$120.00	10	$1,200.00
Meals, per person (2), per day	$30.50	12	$366.00
		Subtotal	**$1,566.00**
Soil Boring Installation (2)			
Boring with 4.25-inch auger, per foot	$18.00	293	$5,274.00
Split Spoon Sampling, 2" ID	$12.00	171	$2,052.00
		Subtotal	**$7,326.00**
Monitoring Well Installation (3)			
2-inch monitoring well, per foot, estimated 13 and 35	$46.00	183	$8,418.00
Surface protection, each	$150.00	9	$1,350.00
		Subtotal	**$9,768.00**
Drilling Standby and Meetings (4)			
Standby, Well disconnect and meetings, per hour	$190.00		$0.00
		Subtotal	**$0.00**
$/foot=$74.03		**Total Project Expenses**	**$21,690.00**

Special Conditions/Costs: We propose to utilize our CME-75 or D-120 drill rig from our Billings, MT office to perform the work. On-site steam cleaning of down-hole equipment is included in the above costs. Cuttings will be stockpiles or spread on-site.

Additional Comments/Costs: SK Geotechnical does not have an air-rotary drill rig, and we are not proposing to subcontract air-rotary drilling to perform the soil borings and install the monitoring wells if they cannot be drilled with hollow-stem auger techniques. Weather needs to be 30 degrees and rising for work requiring

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Petroleum Tank Release Compensation Board

Soil Boring/Monitoring Well Installation Unit Cost Worksheet

Contractor Information

Company Name: Boland Drilling
Address: 4701 N Star Blvd
City, State, Zip: Great Falls, MT 59405
Cost Estimator: Chris Boland
Signature:

Phone: 406-761-1063
6/9/2020

Project Information and Specifications

Mort Distrbuting
310 E. Allard St.
Glendive

Facility ID #
Release #
WP ID #

Type of Drilling Equipment

Hollow-Stem Augers	x
Air Rotary	
Direct Push	
Other (please specify)	

Soil Boring

Number of Borings	20
Boring Diameter (inches)	8
Depth (per boring - ft)	10,13,35

Surface: Concrete Asphalt Barren
Soil Disposal: (Onsite) Stockpile Drums
Abandonment: Bentonite Soil Cuttings

Soil Sampling

Continuous Soil Sampling	
Interval Soil Sampling (specify interval)	
No Sampling	

Monitoring Well Specifications

Number of Wells	9
Surface: Concrete Asphalt Barren	
Depth (per well)	13&35
Estimated Depth to Groundwater (ft)	
Boring Diameter (inches)	8
Casing Diameter and type (inches)	2" pvc

Surface Completion: (Flush Mount) Aboveground

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 of either the drilling rig or support vehicle will require justification and pre-approval by the DEQ-PRS and Board staffs. This item should be estimated on a per mile unit rate

(2) Soil Boring Installation: Includes all costs (labor, equipment, and materials) to drill, collect soil samples and abandon soil borings, as well as decontaminate equipment. Drilling costs should be estimated using a per foot unit rate. Unit cost should include handling of contaminated soil by stockpiling or placing in drums. Assume level "C" personal protective equipment.

(3) Monitoring Well Installation: Includes all costs (labor, equipment, and materials) to drill, collect soil samples, and complete monitoring well to specifications and according to Montana Well Drillers Board rules, as well as decontaminate equipment. Drilling costs should be estimated using a per foot unit rate. Unit cost should include handling of contaminated soil by stockpiling or placing in drums. Assume level "C" personal protective equipment.

(4) Drilling Standy: Drilling standby should be estimated on an hourly basis. Prior approval and justification for accumulating standby time is needed prior to billing.

(5) Well Development: Includes all costs (labor, equipment, and materials) to develop monitoring wells. This task should be estimated using a per well unit rate.

(6) Monitoring Well Abandonment: Includes all costs (labor, equipment, and materials) to properly abandon a well location according to the Montana Well Drillers Board rules. Abandonment costs should be estimated using a per well unit rate.

Soil Boring/Monitoring Well Installation Unit Cost Worksheet

TASK		UNIT COST		NUMBER OF UNITS	TOTAL COST
Mobilization/Demobilization (1)					
Mobilization/Demobilization: Drilling Rig	$	2.50	/mile	700	$ 1,750.00
Mobilization/Demobilization: Support Vehicle	$	1.50	/mile	700	$ 1,050.00
Soil Boring Installation (2)					
Drilling (0'-50' range per boring)	$	38.00	/foot	293	$ 11,134.00
Drilling (50'-100' range per boring)			/foot		$ -
Other (please specify) _____					$ -
Monitoring Well Installation (3)					
Drilling (0'-50' range per well)	$	34.00	/foot	183	$ 6,222.00
Drilling (50'-100' range per well)			/foot		$ -
Other (please specify) _____					$ -
Drilling Standby (4)					
-prior approval needed	$	150.00	/hour		$ -
Well Development (5)					
Well Development	$	175.00	/hour		$ -
Monitoring Well Abandonment (6)					
Abandonment	$	350.00	/well		$ -
Lodging may only be paid at actual costs when documented by receipts.					
Per Diem					
Lodging: number of individuals	3	$ 125.00	/person per day	4	$ 1,500.00
Food: number of individuals =	3	$ 30.50	/person per day	5	$ 457.50
(Breakfast 5.00, Lunch 6.00, Dinner 12.00)					
				TOTAL PROJECT EXPENSE	$ **22,113.50**

D.O.T. Drums $95.00

Additional Conditions/Comments/Costs:

Drill soil borings and construct mnitor wells at Mort Distributing in Glendive.

If you require assistance, call 406-841-5090.

Submit completed form to:

Petroleum Tank Release Compensation Board PO Box 200902, Helena MT 59620-0902