PIONEER
TECHNICAL SERVICES, INC.

July 3, 2019

Mr. Brandon Kingsbury
Petroleum Brownfields Coordinator
Petroleum Tank Cleanup Section
Montana Department of Environmental Quality
P.O. Box 200901
Helena, MT 59620

RE: Abbreviated Monitoring Well Installation Corrective Work Plan (WP) AC-03
Former Jenkins Garage
123 West Elm Street, Three Forks, MT
Facility ID# 16-03254 Release #5291, WP ID 33867

Dear Mr. Kingsbury:

On behalf of Diane Fuhrman, Pioneer Technical Services, Inc. (Pioneer) is submitting the following work plan and cost estimate for your review. As requested in correspondence from the Montana Department of Environmental Quality (DEQ) dated May 20, 2010, Pioneer proposes the scope of work outlined below.

SCOPE OF SERVICES

The scope of the work is to identify and outline the path forward to investigate, remediate, and close petroleum release # 5291 in a timely and cost-effective manner. The project site is the former Jenkins Garage facility in Three Forks, Montana. The location and vicinity of the project is shown on *Figure 1* in Attachment A. The work plan includes performing a Phase II Remedial Investigation (RI) and semiannual groundwater monitoring to further determine the magnitude and extent of residual petroleum contamination in soil and groundwater. The final step is to produce an Additional RI Report (Report RIR-02), which will describe the results of the investigative and monitoring work. The report will list recommendations for future remedial and monitoring work required to resolve the release.

For the project, the work tasks are listed below followed by detailed descriptions of each task and the Cost Estimate and project Schedule.

Task 1 – Perform Project Management and Planning.
Task 2 – Perform Additional Investigate Tasks and Groundwater Monitoring.
Task 3 – Prepare Additional RI Report.

Task 1 – Perform Project Management and Planning

Task 1 will include project management, scheduling, organization, and planning:

- Coordinating subcontractor solicitation and selection.
- Coordinating utility locates.
- Scheduling personnel and subcontractors.
- Coordinating activities with owners and regulators.
- Completing site mobilization and demobilization.
- Preparing a site-specific health and safety plan (HASP).
- Conducting daily site safety briefings.

Prior to mobilization, Pioneer will contact the one-call underground utility locate service to have all public underground utilities located near the project site prior to conducting subsurface intrusive activities (e.g., drilling). Utilities owned and maintained by the facility will be properly identified by the owner. Our team will prepare a site-specific HASP in accordance with the requirements of Occupational Safety and Health Administration (OSHA) Code of Federal Regulations (CFR) 29 CFR 1910.120. The plan will be approved by Pioneer's Corporate Safety Director, who is a Certified Safety Professional. We will ensure that all workers at the site, including our staff and subcontractors have current 40-hour Hazardous Waste Site Operations and Emergency Response (HAZWOPER) certification. Our project manager holds a HAZWOPER 8-hour supervisors training certificate.

We will implement this work plan as approved by the Montana DEQ and the Petroleum Release Compensation Release Board (Petro Board). Upon completion of work, we will manage the payment of the contractors. Related to scheduling, our team will manage and schedule all work to make sure it is completed in a timely manner and the team will be present during the site investigation.

Task 2 – Perform Additional Investigative Tasks and Groundwater Monitoring

Based on the reviews of an historical underground storage tank (UST) program project file and results and findings of the previous remedial investigation detailed in the Phase II Environmental Assessment Report (submitted to DEQ in November 2018 by Pioneer), the DEQ identified several project data gaps that warrant further evaluation and investigation. The data gaps include the following:

1. Lack of source area soil sample data for determining the potential for petroleum constituents to leach to groundwater near identified source areas including the former dispenser, piping run, and tank pad areas. The locations for the proposed soil borings to investigate these areas are shown on Figure 2 in Attachment A.

2. Lack of groundwater quality data near these suspect source areas.

3. Lack of recent groundwater quality data. The most recent groundwater quality data were collected during the fall of 2018. We recommend completing two additional groundwater monitoring events after the new wells are installed.

Details on how we will complete the work to fill these data gaps are provided below.

Soil Boring Installation - Direct Push Drilling – and Sampling

We will advance up to 12 soil borings using the Pioneer Geoprobe, direct-push drilling rig and equipment to conduct additional soil investigations near the former aboveground storage tank (AST) area, along the piping run, and near the sanitary sewer. Figure 2 (in Attachment A) shows the location of 9 proposed soil borings. The remaining 3 borings will be considered opportunity borings, whose locations will be based on the information gathered from advancing the initial 9 borings. The soil borings will be advanced to the proposed depth of 15 feet. Using a direct-push rig will minimize disturbance and the amount of investigation derived waste (IDW) (cuttings) generated during this portion of the investigation.

A Pioneer geologist or engineer will supervise drilling operations and be present to collect, screen, and log soil types. Soil samples will be collected at 5-foot intervals and the field team will log the soil type and consistencies and document any visible signs of petroleum impacts. Standard headspace readings will be collected using a photoionization (PID) meter. A portion of e placed into a previously labeled, airtight container and allowed s ydrocarbons, if present, to volatilize. After the equilibration period, the f h sample with a PID by inserting the sampling probe into the headspace o D readings from each soil sample collected from each borehole will be r and the sample with the highest reading or other signs indicating p be selected for laboratory analysis. If no organic vapors are recorded, the sample collected closest to the water table at the time of drilling will be submitted for analysis. One sample from each boring will be submitted for laboratory analysis. Following boring installation, a licensed surveyor will survey the boring locations.

Borings indicating contamination should have composite VPH and EPH samples lab composited

The selected samples will be placed into a laboratory-supplied container and the container labeled, stored on ice, and submitted to Energy Laboratories Inc. (ELI) in Billings, Montana, for volatile petroleum hydrocarbons (VPH) and extractable petroleum hydrocarbons (EPH) screens. If the EPH screen result is greater than 200 milligrams per kilogram (mg/kg), the sample will be submitted for EPH fractionation analysis. For this work plan, we assume 8 soil samples will need to be fractioned. Chain-of-custody documentation will accompany the samples.

Groundwater Monitoring Well Installation

To further determine the extent and magnitude of the dissolved-phase groundwater plume, we will install 4 additional groundwater monitoring wells. The well installation phase will take place following the direct-push soil boring work. This will allow the team to review the soil field data and allow for modifications to the well locations or possibly the number of wells needed.

For the groundwater monitoring well installation phase, the team will use the Geoprobe unit. The monitoring wells will be constructed with 2-inch diameter, schedule 40 polyvinyl chloride (PVC) pipe. All well screens and piping will be delivered to the site factory wrapped. Each well will be constructed using of a prepack well screen consisting of 0.010-inch, factory-slotted PVC screen covered with a 65-mesh stainless steel screen and filled with 20/40 mesh silica sand. The wells will be screened from 5-15 feet below ground surface. The remainder of the borehole will be completed with PVC riser pipe to grade. The annular space between the prepack well screen and the borehole will have 0.10-0.20 inch sand completion to 2 feet above the screen whereas the

remaining annual space between the well casing and the borehole will have a bentonite seal. The wells will be secured with bolt-down covers set in concrete.

During the work, a Pioneer geologist or engineer will supervise drilling operations and be present to collect, screen, and log soil types. Soil samples will be collected continuously, and the team will log the soil type and consistencies and document any visible signs of petroleum impacts. The team will collect soil samples using the same procedures listed previously under the ***Soil Boring Installation, Direct Push Drilling, and Sampling*** section above.

Following well installation, a licensed surveyor will survey the new wells and the top of casings will be determined to within 0.01 feet of mean sea level.

Groundwater Sampling

Following the installation of the direct push borings and monitoring wells, the team will complete 2 groundwater monitoring events for the new and existing monitoring wells. One event will occur within 2 weeks after the new wells are installed and next event will occur 6 months later. The team will collect groundwater samples from each of the 8 site wells: existing wells MW-01, MW-02, MW-03, MW-04, and new wells MW-05, MW-06, MW-07, and MW-08, plus one duplicate. Prior to groundwater sample collection, each monitor well will be gauged for the presence of light non-aqueous phase liquid (LNAPL). The wells will be gauged using an electronic interface probe capable of detecting water or LNAPL hydrocarbons to within 0.01 feet. Groundwater samples will be collected from all wells that do not contain LNAPL.

Groundwater samples will be collected in accordance with low-flow sample techniques. To ensure representative groundwater samples are collected, the water quality parameters of the following intrinsic bioremediation indicators (IBIs) will be monitored and allowed to stabilize during the purging process prior to sample collection: temperature, conductivity, dissolved oxygen, pH, turbidity, and oxygen reduction potential. Depth to water will also be measured during purging.

All groundwater samples will be collected with a bladder or peristaltic pump and disposable tubing and transferred to the appropriate laboratory containers. New, decontaminated containers will be supplied by the laboratory prior to sample collection. Groundwater samples will be submitted for laboratory analysis of VPH and EPH screens. This plan accounts for four groundwater samples to be fractioned for polyaromatic hydrocarbons (PAHs). Each sample container will be preserved as directed by the laboratory, labeled, and packaged on ice. The samples will be delivered to ELI in Billings, Montana. Chain-of-custody documentation will accompany the samples.

Task 3 – Prepare Additional RI Report (RIR-02)

Following the completion of the evaluation and investigative tasks, Pioneer will prepare an Additional RI Report (Report RIR-02). The report will follow the Montana DEQ Report format and will include the following:

- Facility map illustrating locations of utilities, former fuel systems, test pits, soil borings, and groundwater monitoring wells.

- Tables summarizing locations/depth of field data, laboratory analytical data for soil and air samples, and cumulative laboratory analytical data for groundwater water samples.
- Laboratory analytical reports for soil and groundwater samples.
- Logs, field data sheets, and related field data.
- Diagrams of former fuel system.
- Data and recommendations relevant for further remediation and/or closure of the release.

COST ESTIMATES

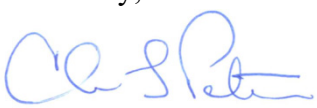
The detailed cost estimate to perform this scope of work is on the worksheet in Attachment B.

SCHEDULE

We expect to begin work on this project within 30 days following receipt of both Montana DEQ and Petro Board approvals and obligations, which are expected sometime in the summer or fall of 2019. The project as described in this work plan will last up to 12 months. Therefore, the final report will be issued in the summer of 2020.

If you have any questions about this project or the proposed scope of work, please call me at (406) 702-2430 or email me at cpeterson@pioneer-technical.com.

Sincerely,



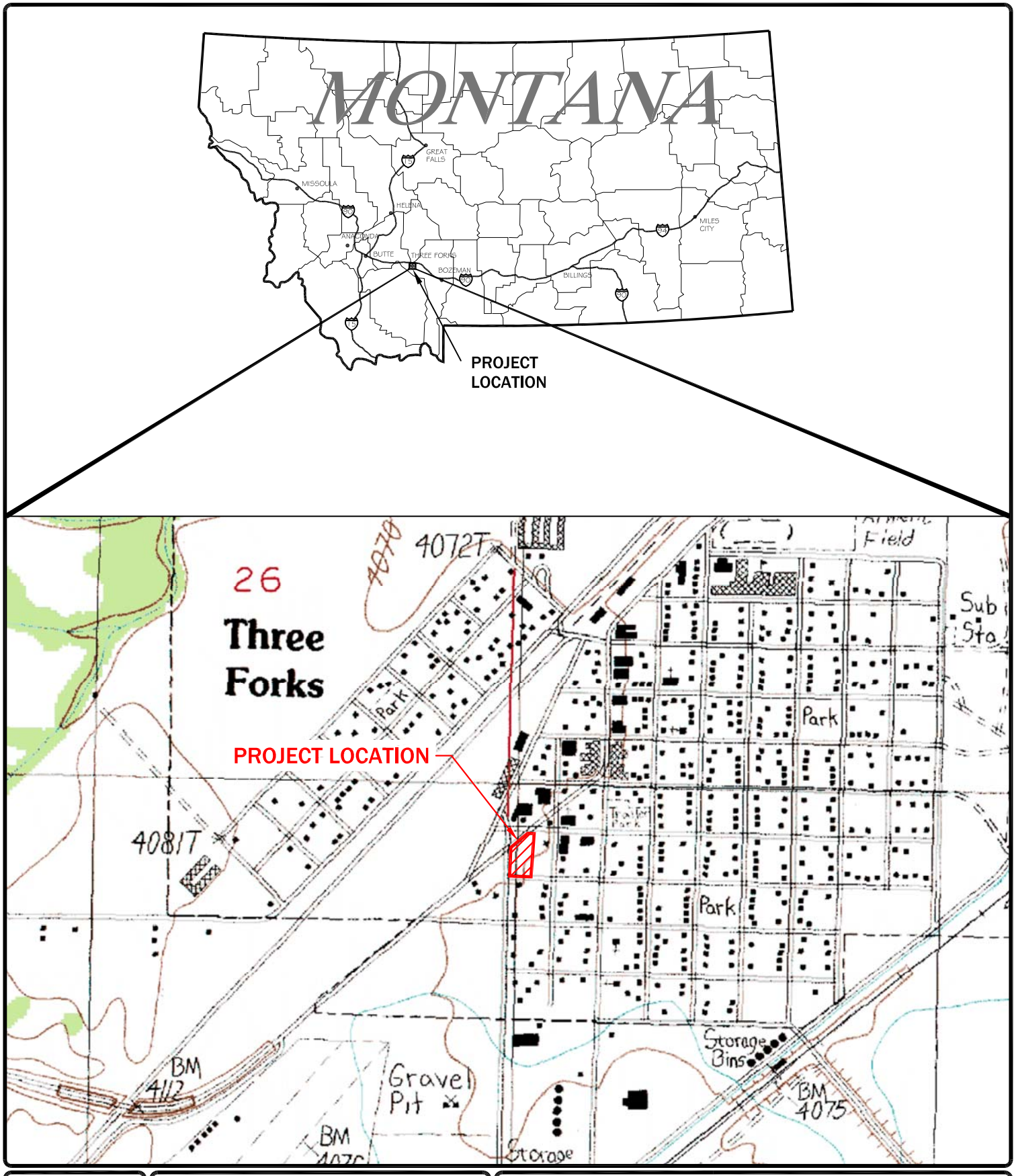
Charles L. Peterson, P.G.
Project Manager

Attachment A: Figures
Figure 1. Location and Vicinity Map
Figure 2. Proposed Boring and Well Sample Locations

Attachment B: Cost Estimate

cc: Diane Fuhrman, Box 429, 211 S. Main Street, Suite A, Three Forks, Montana 59752
JoAnne Adydan, PTRCB, Helena, MT 59620

ATTACHMENT A
FIGURES



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UNITS: IF
SOURCE: BING MAPS

SCALE IN FEET
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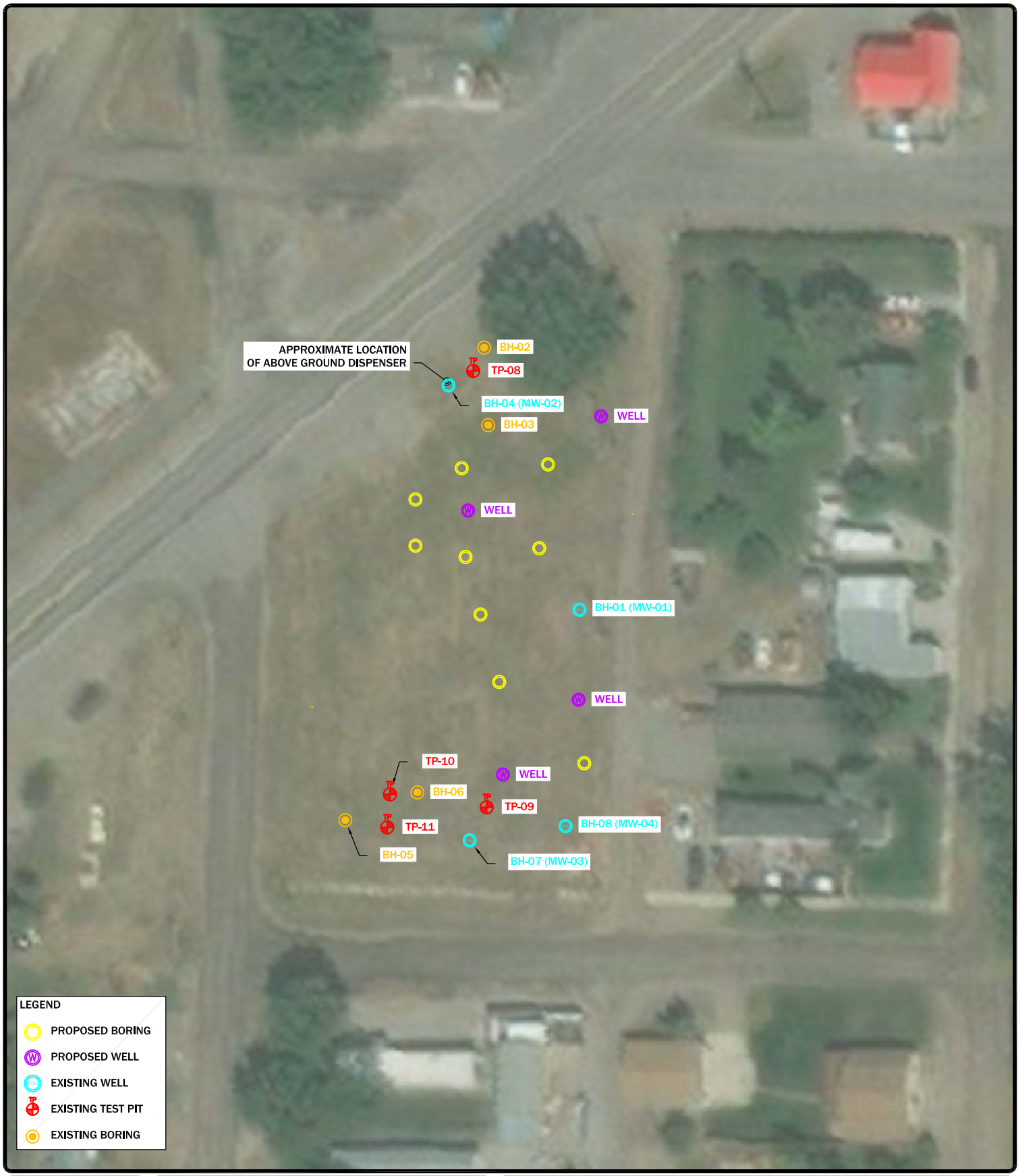
FIGURE 1

FORMER JENKINS GARAGE SITE LOCATION MAP

PIONEER TECHNICAL SERVICES, INC.
2310 BROADWATER AVE, STE. 1
BILLLINGS, MT 59102
(406) 545-4805

DATE: 10/2018



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DATUM: NAD83, NAVD88
UNITS: IF
SOURCE: BING MAPS

SCALE IN FEET
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FIGURE 2

PIONEER TECHNICAL SERVICES, INC.
2310 BROADWATER AVE, STE. 1
BILLLINGS, MT 59102
(406) 545-4805

FORMER JENKINS GARAGE SITE THREE FORKS, MT PROPOSED BORING AND WELL SAMPLE LOCATIONS

DATE: 07-02-19

7/2/2019 10:30:41 AM B:\MONTANA DEQ UST PROGRAM\THREE FORKS-JENKINS GARAGE\DWG\UPDATED FIGURES\TF-FJG-FG-PLN-006-18.DWG

ATTACHMENT B
COST ESTIMATE

Table 1: Cost Estimate

PROJECT: Former jenkins Garage

Client: Diane Fuhrman
Site Address: 123 West Elm Street
Project Location: Three Forks, MT

Start Date: Summer 2019
End Date : Summer 2020
Pioneer Project Manager: Charlie Peterson

Project Description: former Jenkins Garage ID # 16-03254, Release#5291, WP 33867

Description of Services: Phase II Remedial Investigation and Seminannual Monitoring

TASK 1: Project Management and Planning

CATEGORY	EMPLOYEE	PRICE/UNIT	UNITS	QUANTITY	PRICE
Project Manager	Charlie Peterson	$ 130.00	hrs	8	$ 1,040.00
Health and Safety Plan	Patty Navarro	$ 111.00	hrs	2	$ 222.00
				Total Labor=	**$ 1,262.00**
OTHER DIRECT COST					
CATEGORY		**PRICE/UNIT**	**UNITS**	**QUANTITY**	**PRICE**
Vehicle (Mileage)-Locates	#55	$ 0.630	Mileage	100	$ 63.00
				Task 1 Total Direct Cost=	**$ 63.00**
				Task 1 Total Cost =	**$ 1,325.00**

TASK 2: Perform Additional Site Investigation Tasks

CATEGORY	EMPLOYEE	PRICE/UNIT	UNITS	QUANTITY	PRICE
Senior Geologist	Charlie Peterson	$ 130.00	hrs	2.0	$ 260.00
Staff Engineer	Jason Decker	$ 111.00	hrs	24.0	$ 2,664.00
				Total Labor=	**$ 2,924.00**
OTHER DIRECT COST					
CATEGORY		**PRICE/UNIT**	**UNITS**	**QUANTITY**	**PRICE**
Vehicle (Mileage)	#73	$ 0.630	Mileage	700	$ 441.00
Pioneer-Geoprobe	Geoprobe Mob/Demob	$ 1.000	Each	800	$ 800.00
Pioneer-Geoprobe	Geoprobe Drilling - Boreholes	$ 19.550	Each	195	$ 3,812.25
PioneerGeoprobe	Geoprobe Drilling - 2-Inch Wells	$ 36.500	Each	60	$ 2,190.00
Pioneer Geoprobe	Lodging	$ 100.000	Night	2	$ 200.00
Pioneer Geoprobe	Per Diem	$ 30.500	Day	4	$ 122.00
Site Engineer/Geologist	Lodging	$ 100.000	Night	2	$ 200.00
Site Engineer/Geologist	Per Diem	$ 30.500	Day	4	$ 122.00
Sampler	Lodging	$ 100.000	Night	2	$ 200.00
Sampler	Per Diem	$ 30.500	Day	4	$ 122.00
Pioneer-Survey	Survey Crew Mob/Demob	$ 0.630	Each	100	$ 63.00
Pioneer-Survey	Survey Crew	$ 210.000	Each	9	$ 1,890.00
Pioneer-Survey	Survey Equipment	$ 12.000	Each	9	$ 108.00
Energy Labs	Soils-VPH	$ 120.000	Each	20	$ 2,400.00
Energy Labs	Soils-EPH Screen	$ 75.000	Each	20	$ 1,500.00
Energy Labs	Soils-EPH Fractions with PAHs	$ 175.000	Each	8	$ 1,400.00
Energy Labs	Waters-VPH	$ 120.000	Each	18	$ 2,160.00
Energy Labs	Waters-EPH Screen	$ 75.000	Each	18	$ 1,350.00
Energy Labs	Waters-EPH Fractions w/ PAHs	$ 175.000	Each	8	$ 1,400.00
Pioneer	Lab Sample Fee-Soils	$ 10.000	Each	20	$ 200.00
Pioneer	Lab Sample Fee-Waters	$ 10.000	Each	16	$ 160.00
Pioneer-Sample Crew	Sample Crew Mob/Demob	$ 3.500	Each	100	$ 350.00
Pioneer	GW Sample Collection Fee	$ 186.000	Each	16	$ 2,976.00
				Task 2 Total Direct Cost =	**$ 24,166.25**
				Task 2 Total Cost=	**$ 27,090.25**

Task 3: Prepare Report (RIR-02)

CATEGORY	EMPLOYEE	PRICE/UNIT	UNITS	QUANTITY	PRICE
Report RIR-02	Petro Unit Rate	$ 3,175.00	Each	1	$ 3,175.00
				Total Labor=	**$ 3,175.00**
				Task 4 Total Cost=	**$ 3,175.00**
				Total Cost All Tasks -	**$ 31,590.25**