BIG SKY CIVIL & ENVIRONMENTAL, INC

March 16, 2020

Mr. Donnie McCurry, Environmental Science Specialist
MDEQ Petroleum Tank Cleanup Section
P.O. Box 200901
Helena, MT 59620-0901

RE: Groundwater Monitoring Corrective Action Plan (CAP_MR-01)
Holter Lake Lodge, 1 Beartooth Rd, Wolf Creek, Lewis and Clark County, Montana
Facility ID 25-04300, Release #3834; WP ID 34018

Dear Mr. McCurry,

In accordance with the Montana DEQ (MDEQ) request letter dated January 16, 2020, Big Sky Civil & Environmental, Inc. (BSCE) has prepared this Work Plan for Semiannual Groundwater Monitoring at the subject property.

Purpose and Objectives

Groundwater monitoring will be completed so as to assess success and rates of natural attenuation. Additionally, a release closure plan (RCP) will be completed for the purpose of evaluating additional remedial work that may be required to fully resolve the release and move the site toward closure.

Proposed Work

BSCE proposes to conduct groundwater monitoring/reporting at the subject release site as defined herein.

- During a site visit conducted summer of 2019, it appeared EX MW-2 had been covered with concrete debris. BSCE recommends removal of the debris, and assessment of the condition of the well prior to groundwater monitoring. Anticipated labor to complete debris removal, access the well, assess the condition and report findings to DEQ is in included in the attached cost estimate.

- Semiannual groundwater monitoring will be completed during seasonal high and low groundwater for a total of two events. First, static water levels will be measured and recorded. Then wells will be purged, and field parameters will be collected (dissolved oxygen, pH, temperature, turbidity, conductivity and oxygen reduction potential). Finally, groundwater samples will be collected from all site wells: MW-1, MW-2, MW-3, MW-4, EX MW-1, and EX MW-2, and will be submitted for laboratory analytical testing. Groundwater monitoring will be completed using low-flow methods. However, groundwater is deep at MW-1 and MW-4 (~30'-40' bgs). To use low-flow sampling methods at MW-1 and MW-4, a bladder pump is required. Costs to complete sampling at MW-1 and MW-4 using a bladder pump are included in the cost estimate, see attached. Bailers (not low-flow method) might be used to collect samples at deeper site wells at a reduced rate, but only if approved by MDEQ.

- Samples will be submitted to TestAmerica in Tacoma WA for analysis of: Volatile Petroleum Hydrocarbons (VPH) and Intrinsic Biodegradation Indicators (IBIs), including: methane, ferrous iron, manganese, nitrates/nitrites, and sulfates.

- Results of the fieldwork will be discussed with MDEQ and WP modifications will be submitted as necessary to complete work plan objectives.

- After completion of groundwater monitoring and analytical testing, one Standardized Groundwater Monitoring Report (MR-01) will be prepared and submitted to MDEQ. At a minimum the report will include the following: updated exhibits depicting the location of site features, existing monitoring wells, analytical data in tabular format, lab reports, data validation summary forms, Release Closure Plan, data interpretations, conclusions, and recommendations for additional work – if deemed necessary – to resolve the release and achieve site closure.

- Reports and supporting documentation will be submitted following DEQ submittal requirements.

- Standardized MDEQ report formats will be used for all documents.

All sampling and groundwater monitoring will be completed in strict accordance with BSCE's standard QA/QC procedures. The following procedures will be used during sample collection to provide quality assurance and quality control (QA/QC), to minimize loss of volatiles, and to maintain the suitability of samples for analysis. Sample collection and analytical procedures are consistent with SW-846: *Test Methods for Evaluating Solid Waste*, November 1986, and updates published by the U.S. EPA. QA/QC methods used are defined below:

- All sample containers/preservatives will be supplied by a state-certified laboratory. Analyses will be performed by a state-certified laboratory.
- All samples will be handled in a manner which minimizes the loss of organic compounds to volatilization and biodegradation.
- All samples for analyses will be placed in a cooler on ice (at a temperature of 4° C) immediately following collection.
- Chain-of-custody procedures will be utilized during sampling and delivery.
- Documentation of the sampling and QA/QC procedures including notes will be available for DEQ inspection. These notes will document the procedures for sampling and all other routine activities, along with field notes describing the sequence of activities that took place during fieldwork.

See attached cost estimate for the above-mentioned work. Note: one groundwater monitoring report is requested for two monitoring events. Subsequently, the cost of the report has been increased to account for additional labor required for report creation; see footnote (3) in cost estimate.

Please feel free to contact us with any questions or concerns you may have.

Respectfully,

Big Sky Civil & Environmental, Inc.

Joseph N. Murphy, P.E.

Paxton Ellis, E.I.

encl. Figure 1
Cost estimate

cc: Ralph Beltrone, 7901 E. Luke Lane, Scottsdale, AZ 85250

TITLE:	PROJECT:	EXHIBIT:
MW LOCATIONS	HOLTER LAKE LODGE	FIG 1

bsc&e
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FIELDWORK/SAMPLING COST ESTIMATE

Task	Cost	Unit	Number of Units	Total Cost
Senior Engineer[1]	$ 145.00	/hr	1	$ 145.00
Project Engineer[1]	$ 134.00	/hr	8	$ 1,072.00
Mobilization/Demobilization				
Mobilization/Demobilization[2] (2 RT - 150 mi/RT)	$ 3.00	/mile	300	$ 900.00
Groundwater Monitoring				
Low-flow GW sampling (4 wells, two events)	$ 212.00	/well	8	$ 1,696.00
Debris Removal and Well Assessment	$ 102.50	/hr	4	$ 410.00
Metal Detector	$ 8.25	/hr	8	$ 66.00
Low-flow sampling at MW-1 and MW-4 (two events)				
Senior Engineering Technician (III)[3]	$ 102.50	/hr	8	$ 820.00
Bladder pump and controller rental				$ 345.00
Tubing (air and water) (45'/well, 2 wells, 2 events)				$ 102.00
Bladders (4 bladder)	$ 9.00	/unit	4	$ 36.00
Combo meter (1.5 hr/well)	$ 12.50	/hr	6	$ 75.00
Oil/Water interface probe (1.5 hr/well)	$ 12.00	/hr	6	$ 72.00
Turbidity meter (1.5 hr/well)	$ 7.00	/hr	6	$ 42.00
Shipping costs associated with rental				$ 45.00
Work Plan & Report Preparation				
Work Plan prep (CAP_MR-01)	$ 850.00	/report	1	$ 850.00
Report_MR-01 (two events)[4]	$ 1,815.00	/report	1.5	$ 2,722.50
Data Validation Summary Forms (x2 events)	$ 134.00	/hr	2	$ 268.00
Release Closure Plan (RCP)[5]	$ 1,500.00	/report	1	$ 1,500.00
			Estimated Project Expenses	$ 11,166.50
Laboratory Analysis - 12 water samples				
Volatile Petroleum Hydrocarbons (VPH)	$ 125.00	/sample	12	$ 1,500.00
EPA 300.0 (Nitrate, Nitrate as N)	$ 49.00	/sample	12	$ 588.00
EPA 300.0 (Sulfate)	$ 15.00	/sample	12	$ 180.00
RSK 175 (Methane)	$ 120.00	/sample	12	$ 1,440.00
EPA 200.7 (Iron and Manganese)	$ 26.00	/sample	12	$ 312.00
RCRA metals (EPA 6010, 7470/1)	$ 76.00	/sample	0	$ -
PTRCB sampling fee	$ 10.00	/sample	12	$ 120.00
Misc. Costs (copies, etc.)				$ 50.00
			Estimate of Per Diem & Lab	$ 4,190.00
			Estimated Total Project Cost	$ 15,356.50

(1) Project Management (scheduling, DEQ/client correspondence, Health and safety plan updates, etc.)

(2) RT - Round trip: 2 RT - Groundwater Monitoring, 2 RT sample shipping; includes time to load/unload

(3) 1.5 hours for sampling per well, plus 1 hr COC, packaging, shipping, handling, etc. per event

(4) Report prep takes additional time to include two events (tables - analytical results, figures - gradient maps, etc.) Cost increase from $1,815 (typical) to $2,722.50. (1.5 times)

(5) First RCP ever completed for release

* See attached invoice from a 2019 job where a bladder pump was rented

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geotech

Invoice

Geotech Environmental Equipment, Inc.
2650 East 40th Avenue
Denver, CO 80205
Phone 303.320.4764 FAX 303.322.7242
sales@geotechenv.com www.geotechenv.com
Federal ID# 84-0753199

Invoice No: 603702
Invoice Date: 11/21/2019
Order No: 00565480
Customer No: 000006605298
Salesperson No: 011 CUSTOMER SERVICE
Account Terms: NEED CA/TERMS
Payment Method: CC
Purchase Ord No:
Placed By: **Paxton Ellis**

Bill To: **BIG SKY CIVIL & ENVIRONMENTAL, INC.**
ATTN: A.P. *
P.O. BOX 3625
GREAT FALLS, MT 59403
UNITED STATES OF AMERICA

Ship To: **BIG SKY CIVIL & ENVIRONMENTAL, INC.**
ATTN: PAXTON ELLIS
1324 13TH AVE, SW
GREAT FALLS, MT 59404
UNITED STATES OF AMERICA

Phone No: **(406) 727-2185** Ext No:

Shipping Date	Ship Via	Bill Frt Carrier #	Location
11/12/2019	FEDEX GROUND	474413365	CO

Line No.	Item No.	Description	Quantity Required	Shipped	B.O.	Unit Price	Amount
FOR 4 DAYS 11/12/19 THRU 11/20/19							
1	R8550020	RENTAL,PBP,1.66X18 DEFAULT HB=A:0.170 D:0.25	1	1		$120.00	$120.00
RENTAL UNIT #6756 RETURNED							
2	R8550024	RENTAL,GEOCONTROLLER PRO BUILT IN AIR COMPRESSOR	1	1		$225.00	$225.00
RENTAL UNIT #6762 RETURNED							
3	77050624	TUBING,PE,.170x1/4,100FT COIL POLYETHYLENE	1	1		$22.00	$22.00
4	77050625	TUBING,PE,1/4x3/8,100FT COIL POLYETHYLENE	1	1		$29.00	$29.00
5	21150055	BLADDER,PE,1.66x18,PBP,EACH	4	4		$9.00	$36.00

PAID

Sale Amount	**$432.00**
Shipping/Handling:	**$ 0.00**
Sales Tax 0.00	**$0.00**
Invoice Amount	**$432.00**
Payment Applied	**$0.00**
Amount Due	**$432.00**

If you have questions, please contact CUSTOMER SERVICE at the above number.