BIG SKY CIVIL & ENVIRONMENTAL, INC

September 21, 2020

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

RE: Standardized Generic Applications Corrective Action Work Plan (CAP AC-07)
Kernaghan's Pik N Pump, 1501 8th Avenue North, Great Falls, Cascade County, Montana
Facility ID 07-04508 (TID 18524), Release #4005; WP ID 34168

Dear Mr. McCurry,

Big Sky Civil & Environmental, Inc. (BSCE) has prepared this Corrective Action Plan in response to the Montana DEQ request letter dated September 14, 2020, as it pertains to the subject facility. In accordance with the letter, BSCE proposes to complete a 60-day remediation event utilizing CalClean's High Vacuum Dual Phase Extraction (HVPDE) and mobile groundwater treatment system. Site work and reporting is defined herein.

Fieldwork:

- BSCE will coordinate all fieldwork and related activities with MDEQ and the owner/operator. If any conditions are encountered during fieldwork that may pose a risk to receptors, MDEQ will be notified, the conditions will be immediately addressed and risks will be properly mitigated.

- The HVDPE and groundwater treatment system will be operated 24/7 for a period of 60 days. Once operational, CalClean will determine the optimal operating vacuum. During operation, drawdown and vacuum will be monitored at onsite wells so as to not adversely impact groundwater patterns in the area and to infer the radius of influence of the HVDPE system.

- During operation, CalClean will complete field analyses and submit laboratory analytical data to estimate cleanup levels achieved and help predict the length of time required to achieve site cleanup. All field measurements and analytical data will be submitted to MDEQ including but not limited to the parameters listed in "Table 3" of the December 4, 2019 High Vacuum Dual Phase Extraction Report by CalClean.

- In order to operate the treatment system which includes treated effluent discharge, permits will be required from the City of Great Falls for the disposal into the City's POTW. Similar to the previous event it is anticipated groundwater will be discharged into a nearby sanitary sewer manhole with permission from the City. BSCE will be required to conduct extensive coordination and permitting with the City's Environmental Division prior to startup and during system operations. Permit conditions will require the sampling and analytical testing of system discharge samples every two weeks, including the completion and submission of discharge monitoring reports for all sampling events. The labor required to obtain the permit, conduct sampling and write reports for the City are included in the attached cost estimate.

1324 13th Ave. SW | PO Box 3625 | Great Falls, MT 59403 | PH (406) 727-2185 | FAX (406) 727-3656
www.bigskyce.com

- Free 'gasoline' product can be treated by the mobile water treatment system; however, free 'diesel' product cannot and must be stored in steel drums and disposed of in a safe and legal manner by an oil waste processor. No diesel was encountered during previous extraction events and no diesel is anticipated to be generated from this extraction event.

- Groundwater monitoring will be completed semiannually at the following wells: MW-1, MW-2, MW-15, and MW-17. Samples will be collected using low-flow techniques recommended by MDEQ. One groundwater monitoring event will be completed before the HVDPE event and one will be completed afterwards. Samples will be sent to Energy Labs in Helena, MT and analyzed for VPH, EPH screen (with fractionation if the screen exceeds 1,000 ug/L) and lead scavengers (EDB and 1,2-DCA).

Reporting:

- After concluding the 60-day HVDPE event, a Cleanup Report will be completed. At a minimum the report will include:
    - Data validation summary forms (DVSF) for laboratory analytical data.
    - Updated Release Closure Plan for the subject release.
    - A comprehensive summary of groundwater monitoring events, HVDPE and groundwater treatment, and a discussion of results.
    - BSCE will recommend further actions for remediation at the site, if applicable, based on observations and cleanup results; any recommendations will be supported by the updated RCP.
    - Maps and figures showing: system layout, groundwater contours depicting the hydraulic gradient, and petroleum hydrocarbon concentrations of groundwater underlying the site.
    - Field parameters, groundwater elevation data, and cumulative analytical data will be presented in tabular format for the groundwater monitoring events.
- Standardized CAP and Report formats will be used for all documents submitted to MDEQ.

- Reports will be submitted following MDEQ electronic submittal requirements.

All sampling 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 were 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 the corrective action cleanup and sampling events.

CalClean provided a quote to complete a 60-day HVDPE event at the subject site, which is included in the attached cost estimate. The estimate also includes costs for completing the abovementioned fieldwork, site remediation, analytical testing, and report writing.

Thank you, Donnie, and 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 - Site Map
Cost estimate
CalClean quote – 60-day HVDPE and mobile groundwater treatment system
Energy Labs – eflluent sampling quote

cc: Jim Kernaghan
1504 9th Avenue North
Great Falls, MT 59403

TITLE:	PROJECT:	EXHIBIT:	
SITE MAP	KERNAGHAN'S PIK N PUMP FACILITY ID #07-04508 RELEASE #4005	FIG.1	bsc&e BIG SKY CIVIL & ENVIRONMENTAL, INC ENGINEERS - PLANNERS - DESIGNERS - LAND SURVEYORS - ENVIRONMENTAL SPECIALISTS 1324 13th Ave. SW P.O. BOX 3625 GREAT FALLS, MT 59403 (406)727-2185 OFFICE (406)727-3656 FAX www.bigskyce.com

COST ESTIMATE
RELEASE 4005

bsc&e | BIG SKY CIVIL & ENVIRONMENTAL, INC

Task	Cost	Unit	Number of Units	Total Cost
Work Plan Prep				
Standardized Generic Application Corrective Action Work Plan (AC-07)		/work plan		$ 2,407.50
Mobilization/Demobilization[1]				
Mileage (21 RT - 20 mi/RT)[1]	$ 9.00	/mile	410	$ 3,690.00
Project Management[2]				
Senior Engineer[2]	$ 145.00	/hr	12	$ 1,740.00
Project Engineer[2]	$ 134.00	/hr	40	$ 5,360.00
Field Work - HVDPE				
Subcontractor: CalClean	$ 161,530.00	/bid	1.07	$ 172,837.10
Staff Engineer - setup/tear down/oversight[3]	$ 115.00	/hr	85	$ 9,775.00
Permitting - Project Engineer (for COGF)[4]	$ 134.00	/hr	8	$ 1,072.00
Effluent Sampling (for COGF)[4]	$ 102.50	/hr	8	$ 820.00
Discharge Monitoring Reports (for COGF)[4]	$ 402.00	/report	5	$ 2,010.00
Groundwater Monitoring				
Set-up for groundwater sampling	$ 86.25	/event	2	$ 172.50
Low-flow GW sampling (4 wells, two events)	$ 211.24	/well	8	$ 2,957.36
Report Preparation				
Cleanup Report		/report		$ 3,500.00
Release Closure Plan (RCP) update		/report		$ 804.00
Data Validation - 7 total; 2 GWM and 5 Effluent Sampling	$ 134.00	/hr	7	$ 938.00
			Estimated Project Expenses	$ 208,083.46
Laboratory Analysis - 8 groundwater samples; 5 effluent samples				
Volatile Petroleum Hydrocarbons (VPH)	$ 125.00	/sample	8	$ 1,000.00
Extractable Petroleum Hydrocarbons (EPH)	$ 80.00	/sample	8	$ 640.00
EPH Fractionation	$ 190.00	/sample	8	$ 1,520.00
Method 8011 - EDB	$ 60.00	/sample	8	$ 480.00
Method 8260 - 1,2-DCA	$ 60.00	/sample	8	$ 480.00
Effluent sampling[4] (see attached quote)	$ 400.00	/event	5	$ 2,000.00
PTRCB sampling fee	$ 18.98	/sample	13	$ 246.74
			Estimate of Per Diem & Lab	$ 6,366.74
			Estimated Total Project Cost	$ 214,450.20

(1) 11 RT for HVDPE, 2 RT GWM, 7 RT sample shipping

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

(3) 8 hrs for each: start day, finish day, and /week of operation (8.6 weeks)

(4) COGF - City of Great Falls; pertains to requirements for discharge authorization permit, sampling, and reporting

***See next page for cost breakdown of: Low-flow sampling, Set-up for sampling, and Sampling fee**

Low-flow sampling:

Task	Cost	Unit	Number of Units	Total Cost
Set-up:				
Senior Eng Tech	$ 102.50	/hr	0.5	$ 51.25
- Time for: Calibration of multimeter probe, decontamination station setup, review of site specific health and safety plan, etc.				
Alconox				$ 10.00
DI water (5 gal)				$ 20.00
Calibration solution				$ 5.00
	Set-up subtotal:			**$ 86.25**
Sampling: per well				
Senior Eng Tech	$ 102.50	/hr	1.25	$ 128.13
Oil/water interface probe	$ 12.00	/hr	1.25	$ 15.00
Combo Meter (DO, pH, cond, temp)	$ 12.50	/hr	1.25	$ 15.63
Turbidity Meter	$ 8.25	/hr	1.25	$ 10.31
Peristaltic Pump	$ 10.50	/hr	1.25	$ 13.13
Tubing Silicone (1')	$ 2.80	/ft	1	$ 2.80
Tubing poly (25')	$ 1.05	/ft	25	$ 26.25
	Sampling (per well) subtotoal :			**$ 211.24**
Sampling fee:				
Senior Eng Tech	$ 102.50	/hr	0.75	$ 76.88
- Time for completion of Chain-of-Custody (COC), packaging/shipping samples and drop off at UPS				
Tape				$ 5.00
Ice				$ 10.00
Shipping				$ 60.00
	Subtotal sampling fee:			**$ 151.88**
	Sampling fee per well:			**$ 18.98**

CALCLEAN, INC.

A partner in protecting America's waters

September 14, 2020

Big Sky Civil & Environmental Inc.
Attn.: Mr. Paxton Ellis
P. O. Box 3625
Great Falls, MT 59403

Re: Quote for HVDPE Project at Kernaghan's Pik N Pump, Great Falls, MT

Dear Mr. Ellis:

Here is our quote for the HVDPE planned for the referenced site:

- 60-day HVDPE event……$98,880 (additional days prorated)
(Includes mob/demob, per diem, generator and manned at least 8 hours per day)

- Air compressor (if needed) $1,000.00

- Sewer Discharge Permit.....Handled by CalClean
- Onsite treatment and discharge of extracted groundwater....$0.40/gallon
(Max. of $28,000 for a 30-day event) (additional days prorated)

- Free Product gasoline…will abate in thermal system
- Free Product diesel….drummed for offsite disposal (will need drums)

- Lab analyses for discharge permit....Billed at cost (est. $1,500)
- Lab analyses for vapor samples….Billed at cost (est. 30 samples @ $100 each….$3,000)
- Tedlar bags for vapor samples……$15/bag (est. 30 bags…$450)
- Courier Cost…..Billed at cost (Est. $700)

Sincerely,

Noel Shenoi
Principal Engineer

Quote #: H2069
Project Manager: Amanda B. Carlson
Expires: 8/20/2021

Analytical Quote

Paxton Ellis
Big Sky Civil and Environmental
PO Box 3625
Great Falls, MT 59403-3625

TAT: 7 days
QC Level: STD

Project Name: HVDPE Sampling

Schedule: Discharge Parameters

Matrix: Aqueous

Comments:

Analyses	Method	Reporting Limit	Analyte Price
Inorganics			
Sulfide, Iodine Titrimetric	A4500-S F	5 mg/L	$0.00
REMARKS: High Sulfide Concentration			
Sulfide, Methylene Blue Colorimetric	A4500-S D	0.04 mg/L	$48.00
REMARKS: Low Sulfide Concentration			
Metals, Total			
Mercury, Total	E245.1	0.005 ug/L	$40.00
Metals by ICP/ICPMS, Total			$144.00
Arsenic	E200.7_8	1 ug/L	**
Cadmium	E200.7_8	0.03 ug/L	**
Chromium	E200.7_8	5 ug/L	**
Copper	E200.7_8	2 ug/L	**
Lead	E200.7_8	0.3 ug/L	**
Nickel	E200.7_8	2 ug/L	**
Selenium	E200.7_8	1 ug/L	**
Silver	E200.7_8	0.2 ug/L	**
Zinc	E200.7_8	8 ug/L	**
** Included in Metals by ICP/ICPMS, Total Price			
Volatile Organic Compounds			
Purgeable Organics - BTEX Only			$60.00
Benzene	E624.1	0.5 ug/L	**
Ethylbenzene	E624.1	0.5 ug/L	**
m+p-Xylenes	E624.1	1 ug/L	**
Methyl tert-butyl ether (MTBE)	E624.1	0.5 ug/L	**

o-Xylene	E624.1	0.5 ug/L	**
Toluene	E624.1	0.5 ug/L	**
Xylenes, Total	E624.1	2 ug/L	**

** Included in Purgeable Organics - BTEX Only Price

Semi-volatile Organic Compounds

Semi-Volatile Organic Compounds			$96.00
1-Methylnaphthalene	E625.1	10 ug/L	**
2-Methylnaphthalene	E625.1	10 ug/L	**
Acenaphthene	E625.1	10 ug/L	**
Anthracene	E625.1	10 ug/L	**
Benzo(a)anthracene	E625.1	0.1 ug/L	**
Benzo(a)pyrene	E625.1	0.06 ug/L	**
Benzo(b)fluoranthene	E625.1	5 ug/L	**
Chrysene	E625.1	0.1 ug/L	**
Dibenzo(a,h)anthracene	E625.1	0.1 ug/L	**
Fluoranthene	E625.1	10 ug/L	**
Indeno(1,2,3-cd)pyrene	E625.1	0.08 ug/L	**
Naphthalene	E625.1	10 ug/L	**
Pyrene	E625.1	10 ug/L	**

** Included in Semi-Volatile Organic Compounds Price

Preps For Discharge Parameters

Mercury Digestion by E245.1	E245.1	$0.00
Metals Digestion by E200.2	E200.2	$12.00
Separatory Funnel SW3510C Liquid-Liquid Ext.	SW3510C	$0.00

Schedule Price/Sample: $400.00

Schedule Name	Schedule Total
Discharge Parameters	$400.00

Quote Sub Total:	$400.00
Discount:	0.00%
Misc Charges:	$0.00
Quote Total:	$400.00

Comments: Shipping is $20.00 per cooler for ground and $90 for overnight for coolers up to 45 lbs.

Sample kits (sample containers and preservative) are provided at no additional cost and will include ground shipping to sampling location, if applicable.

EnergySource, a secure online data portal, is available 24/7 to access analytical reports and data sets and available to all clients at no extra charge.

Trip Blanks are included and Trip Blank analysis is provided at no additional charge.

Samples will be stored for approximately 3 months following the sample receipt date. Extended storage may be available upon request. A $2 per sample disposal fee is applied for non-hazardous samples. Hazardous sample disposal will remain the responsibility of the sample owner and will be returned for proper disposal. Disposal by the lab may result in additional charges.

Samples requiring in-lab filteration may be subject to an additional $20 filtering charge. According to 40CFR136, samples for Dissolved Metals should be filtered and preserved within 15 minutes of collection.

Energy Laboratories, Inc reserves the right to dilute samples as necessary to not damage instrumentation. If you request that samples be analyzed undiluted, additional charges may apply.

In the absense of a QAPP or SOW, Energy Laboratories follows the method procedures as outlined by our Standard Operating Procedures (SOPs). Please note pricing is based upon sample analysis for the target compound list(s) enclosed. Project-specific requirements that vary from this may result in a revision of pricing.

A 20% surcharge may apply for QAQC packages requiring a Level IV data validation package.

If cost is an issue, we may be able to adjust our pricing to better accommodate your budget.

To assure that the quoted analysis and pricing specifications are provided, please include the Quote ID number referenced above on the Chain of Custody or sample submittal documents.