BIG SKY CIVIL & ENVIRONMENTAL, INC

March 14, 2025

James Kernaghan
1501 8th Avenue North
Great Falls, MT 59403

Mr. Donnie McCurry
Petroleum Tank Cleanup Section
Montana Department of Environmental Quality
P.O. Box 200901
Helena, MT 59620-0901

RE: Groundwater Monitoring Work Plan (WP) for the Petroleum Release at Kernaghan's Service, 1504 9th Ave North, Great Falls, Cascade County, Montana; Facility ID 07-0450 (TID 18525), Release 3400, Work Plan 35015

Dear Mr. McCurry,

On behalf of our client, Big Sky Civil & Environmental, Inc. (BSCE) has prepared this Groundwater Monitoring Work Plan (WP) for groundwater monitoring and free product (LNAPL) recovery.

Facility History and Release Background

Kernaghan's Service, Inc. is located at 1504 9th Ave North in Great Falls, MT. The facility is located on the east side of 15th Street North, and is surrounded by an alleyway to the south and BNSF railroad right-of-way to the north.

A petroleum release was discovered at the site during underground storage tank (UST) system upgrades in the spring of 1998. Two (2) 4,000 gallon diesel UST's and two (2) 4,000 gallon gasoline UST's were removed. They were replaced with two (2) 5,000 gallon multi-compartment tanks. Fill material and groundwater within the UST basin were determined to be contaminated with petroleum products. 300 cubic yards of contaminated soil were removed from the site during excavation activities in April 1998. Additional contamination was discovered when underground piping was removed in the winter of 1999. Petroleum contamination at the Kernaghan's Service, Inc. appears to consist of gasoline and diesel.

After discovery of the release, remedial investigations (soil boreholes and in some instances monitoring well installation) were performed at the facility in 2000, 2005, 2011 and 2013 followed by groundwater sampling events. Results generally showed elevated concentrations of petroleum hydrocarbons underlying the site.

A 60-day high vacuum dual phase extraction HVDPE Pilot study was completed in fall 2020. Cumulative recovery of petroleum hydrocarbons extracted from the subsurface was estimated to be 4,033 pounds (645 gallons) with 76,120 gallons of groundwater extracted, treated, and discharged to the sanitary sewer during the study. A comprehensive receptor survey is included in Section 3.0 of the AR-07 report dated April 1, 2021, which also details methods and results of the study.

Groundwater at the site was previously encountered between 7.5' and 15' below ground surface (bgs). Light non-aqueous phase liquid (LNAPL), or free product, was encountered at wells MW-19, MW-9 and MW-8 during previous groundwater monitoring events. During the most recent event (October 2023) MW-19 had approximately four-tenths of a foot (0.40') of free product.

Objectives of Work Plan Tasks

- The objective of fieldwork is to assess current concentrations of petroleum contamination and to reduce levels of light non-aqueous phase liquid (LNAPL) in groundwater.

Work Plan Tasks

- Recovery of light non-aqueous phase liquid (LNAPL) will be completed at site monitoring wells containing free product for one year. Based on historical observations, it is anticipated that free product will be collected from MW-19 and possibly MW-8 and MW-9. To collect the product, a passive bailer / skimmer will be utilized, which will be suspended from the well caps. Fieldwork will include periodic monitoring to measure the depth of LNAPL and water, to collect product from the canisters, and to adjust the depth of the passive bailers / skimmers, if required. Field observations will be recorded on field forms. Initially, daily monitoring will be conducted for a week, then weekly monitoring will be conducted for a month, and finally monthly monitoring will be conducted for a year (for a total of 21 events).

- Analytical testing for characterization of the LNAPL will be completed as required for disposal. The LNAPL will be disposed of via incineration at a licensed facility; please see the attached bid and cost estimate for details.

- Groundwater samples will be collected from the following wells for two events: MW-8, MW-9, MW-10, MW-19, MW-20, MW-21, MW-22, and MW-23. If free product (LNAPL) is encountered, no samples will be collected and analyzed from the applicable well.

- During groundwater monitoring, fluid level measurements will be collected and recorded at all site monitoring wells. Samples will be collected at the abovementioned wells using low-flow techniques recommended by Montana DEQ and generally as follows. First, water level measurements will be taken using a

Solinst oil/water interface probe. Next, wells will be purged using a peristaltic pump and field parameters (dissolved oxygen, pH, temperature, conductivity, oxidation-reduction potential and turbidity), and water levels will be measured and recorded in approximately five-minute intervals. Sample collection will begin after stabilization of water levels and field parameters. If stabilization does not occur after 20 minutes or if >2' of water level drawdown is encountered despite use of low-purge rates, samples will be collected immediately as conditions allow.

- Groundwater samples as detailed previously will be sent to Energy Laboratories, Inc. in Helena, MT, for analysis of:
    - Volatile petroleum hydrocarbons (VPH)
    - Lead scavengers (1,2-dichloroethane and ethylene dibromide via EPA method 8260 and 8011, respectively).
    - Extractable petroleum hydrocarbons (EPH) screen, with fractionation if the screen exceeds 1,000 ug/L.

- Purge water will be disposed of according to DEQ's Purge Water Disposal Flowchart.

Reporting

- After completion of the sampling event, a Groundwater Monitoring Report will be submitted to DEQ. At a minimum the report will include: scaled map(s) showing the location of all sampling points and physical features of the site, tabular presentation of cumulative groundwater data, a discussion section identifying results of the completed monitoring, and conclusions & recommendations to resolve the release. The following will be appended to the report: field sampling forms, analytical lab reports, data validation summary forms (DVSFs) and an updated release closure plan (RCP).

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

Quality Assurance / Quality Control

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 the following monitoring well construction and sampling.

Cost Estimate

Attached is a cost estimate for completing the abovementioned groundwater monitoring, analytical testing and report writing.

Schedule

Fieldwork is estimated to begin by Summer/Fall 2025 and be completed by Fall 2026.

Signature

Donnie, thank you for your continued cooperation and assistance with this site. Please feel free to contact us with any questions or concerns you may have regarding this Work Plan.

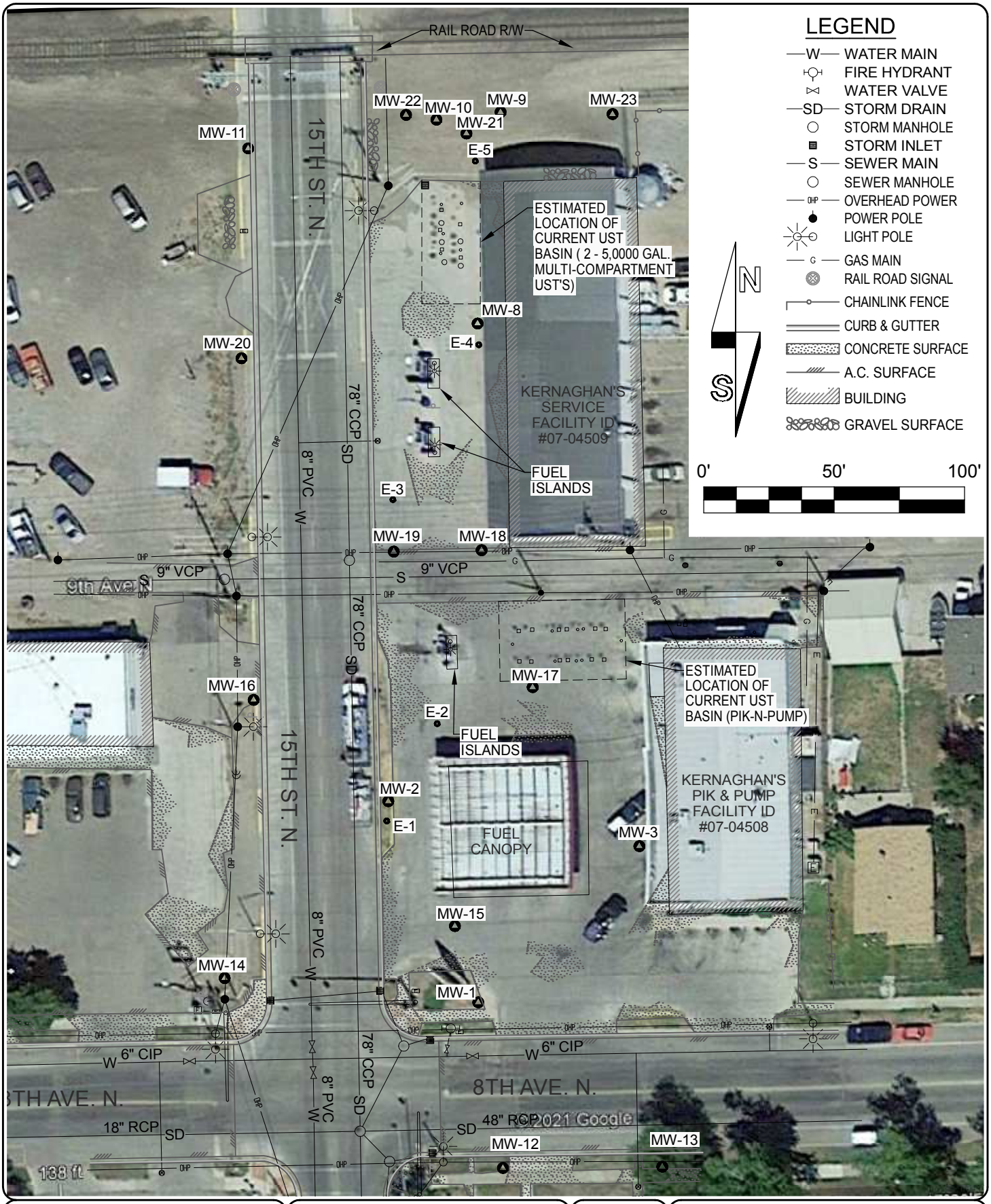
Respectfully,
Big Sky Civil & Environmental, Inc.

Paxton Ellis, P.E.

Joseph N. Murphy, P.E.

encl. Site Map
Cost Estimate

cc: James Kernaghan



TITLE:	PROJECT:	EXHIBIT:	
SITE MAP	KERNAGHAN'S SERVICE, INC. RELEASE #3400	FIG.	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

Petroleum Tank Release Compensation Board

STATE OF MONTANA

P.O. Box 200902 • Helena, MT 59620-0902 • (406) 444-9710

7/28/2022

Groundwater Monitoring and Sampling Summary Sheet

Cost Estimate Expl. | Work Plan Tasks | Unit Cost Worksheet | Help

Monitoring Well Details

13	Total Number of Wells at Site
5	Number of Fluid Level Measurements Only (2)
8	Number of Wells to be Monitored/Sampled (4-11)
2	Average Well Casing Diameter (inches)
10	Average Depth to Groundwater (ft)
20	Average Depth of Wells (ft)

Sampling Method

☑	Low-Flow
X	Low Yield Aquifer
	No Purge
☐	Other (please specify)

of Events - Monitoring/Sampling Interval

Estimated Start Date: Summer 2025

2	Semi-Annual
	Annual
	Bi-Annual
	Other

2 **Total Events**

Sampling Instrument

X	Peristaltic Pump
	Bladder Pump
☐	Submersible Pump
☐	Bailer
☐	Other (please specify)

16	< 25 ft total depth
	25 - 50 ft total depth
	50 - 75 ft total depth
	75 - 100 ft total depth

16 Total

Quotation

2650 East 40th Ave
Denver, CO 80205
Phone: 303.320.4764 Fax: 303.322.7247
sales@geotechenv.com www.geotechenv.com
EIN# 84-0753199

Quote No: 33811929
Quote Date: 02/24/2025
Customer No: C003823
Salesperson No: REGION_8
Placed By: Paxton Ellis
Ship Via: FEDEX GROUND
Warehouse: Colorado

Bill To
BIG SKY CIVIL & ENVIRONMENTAL, INC
PO BOX 3625
GREAT FALLS, MT 59403
Phone:

Ship To
BIG SKY CIVIL & ENVIRONMENTAL, INC
1324 13TH AVE SW
GREAT FALLS, MT 59404

Line Number	Item No.	Item Description	UOM	Quantity Ordered	Unit Price	Amount
1	86650310	SKIMMER,2",1L,PRC,100MESH W/25 CABLE,SCREENED	EA	3.00	891.00	2,673.00
2	17150001	CAP,EXPANDABLE,LOCKING,2" W/SEAL	EA	3.00	57.00	171.00
3	17150004	HANGER,CABLE,SLIP ON,SS4 WELL CAP HANGER	EA	3.00	16.00	48.00

Order Header Comments

Region 8

Gross Amount	$2,892.00
Freight	
Balance Due	$2,892.00

Quote Total Does Not Include Taxes or Shipping/Handling.

Clean Harbors Environmental Services, Inc.
42 Longwater Drive
Norwell, MA 02061
www.cleanharbors.com

March 10, 2025

Attn: Mr. Paxton Ellis
Big Sky Civil & Environmental, Inc
1324 13th Avenue Southwest
Great Falls, MT 59404

Quote #4887369

Dear Mr. Ellis:

Thank you for using Clean Harbors Environmental Services, Inc. (Clean Harbors) for your waste management needs. Per your request, we are sending you this quotation to provide you an estimated total for our services. Please note, this quotation is based upon the inventory you provided. Also, this quote estimate does not include any local, state and federal fees/taxes applying to the generating location/receiving facilities as well as applicable sales taxes and will be added to your invoice as applicable.

We offer our clients a broad spectrum of environmental services and the ability to dispose of hazardous material at or through a Clean Harbors' owned and operated facility. In addition to managing your waste streams, a Clean Harbors' professional can assist you with:

- Waste Transportation & Disposal
- Laboratory Chemical Packing
- Field Services
- 24-Hour Environmental Emergency Response
- Industrial Services
- InSite Services

Clean Harbors has the appropriate permits and licenses for the acceptance and disposal of the waste streams identified within this quotation.

I look forward to servicing your environmental needs. If you have any questions or need further assistance, you may reach me at the number below.

Sincerely,

Central Customer Service
Phone: 877-333-4244
Fax: 781-792-1010
Email: wastepickup@cleanharbors.com

DISPOSAL

Profile/ Waste Code	Waste Description	Qty	UOM	Price	Total
A22K	LOW BTU ORGANIC LIQUID	1	55 gallon drum	$369.00	$369.00
			Total		**$369.00**

TRANSPORTATION

Dispatch Location	Qty	Price	UOM	Total
EMR Missoula MT - HUB	1	$110.00	container	*$1,096.00

*Minimum charge $1,096.00 per trip.

A demurrage charge of $115.00 per hour will apply as follows:

Number of Containers	Allowable Loading Time
1 to 10	0.5 hour(s)

ESTIMATED E-MANIFEST FEE (quantity 3)	**$81.00**
ESTIMATED RECOVERY FEE	**$249.05**
ESTIMATED WASTE FEE	**$0.05**
QUOTE TOTAL ESTIMATE	**$1,795.10**

GENERAL CONDITIONS

1. Except where superseded by an existing services agreement the following terms and conditions apply to this quoted business.
2. Prices firm for 30 days.
3. Terms: Net 15 Days
4. Interest will be charged at 1.5% per month or the maximum allowed by law for all past due amounts.
5. Local, state and federal fees/taxes applying to the generating location/receiving facilities are not included in disposal pricing and will be added to each invoice as applicable.
6. Materials subject to additional charges if they do not conform to the listed specifications.
7. All drums for disposal must be in D.O.T. approved containers and in good condition.
8. All containers must be marked with Clean Harbors' profile number.
9. Clean Harbors will provide a manifest and necessary labels for transportation with a charge of $1.80 per label.

GENERAL CONDITIONS

10. A Profile Approval Fee of $125 and Profile Recertification fee of $35 for recertification will be charged upon profile approval or recertification.
11. Clean Harbors supports many invoice delivery options (E-mail, Electronic Invoicing, EDI, Etc.). Pricing is based on Clean Harbors' standard invoice delivery method of E-mail. If another delivery method is required there could be an additional service fee per invoice. Any alternate delivery methods must be reviewed and approved by Clean Harbors prior to acceptance and implementation.
12. Compressed gas cylinders requiring special handling due to inoperable valves will be assessed an additional charge of $400.00 per cylinder. Cylinders larger than medium size will be quoted case by case. This charge may be sent as supplemental invoice.
13. Compressed gas cylinders requiring special handling due to stuck valve cap will be assessed an additional charge of $25.00 per cylinder. This charge may be sent as supplemental invoice.
14. A variable Recovery Fee (that fluctuates with the DOE national average diesel price), currently at 17.0%, will be applied to the total invoice. For more information regarding our recovery fee calculation please go to: www.cleanharbors.com/contact-us/customer-resources.
15. Transportation rates are based on milkrun pickups. Additional costs may be incurred for out of milkrun service.
16. Pickups that require same day or next day service may be subject to additional charges.
17. Pickups cancelled within 72 hours of scheduling will be subject to cancellation charges.
18. Transportation charges to the final disposal facility will be charged in addition to local transportation to our truck to truck hub/local facility and will vary with logistics and routing.
19. Out of Service (OSD) for PCB incinerables should be clearly identified in Section 14 of the manifest. Prices for these items are only effective if received within 6 months of the OSD.
20. Standard disposal conversions (excluding minimums) apply to containers other than 5 gallon drums: 6-20g 60%, 21-30g 75%, 31-55g 100%, 56-85g 145%, FBIN 350%, TOT2(<300gal TOTE) 500%, TOTE 630%.
21. In the event that legal or other action is required to collect unpaid invoice balances, Customer agrees to pay all costs of collection, including reasonable attorneys' fees, and agrees to the jurisdiction of the Commonwealth of Massachusetts.
22. E-Manifests: EPA Requires electronic filing and reporting of manifest. To cover the cost of the E-Manifest and administrative cost of entering manifest into the system and managing the data, Clean Harbors will charge $27 per manifest on every invoice.
23. Unless specifically noted, these rates are not valid where Prevailing Wages and / or certified payroll apply. Any Prevailing Wage rates will be quoted on a case-by-case basis.

WASTE CLASSIFICATIONS SPECIFICATIONS

Waste Code	Description
A22K	**Low Btu Organic Liquid** DRUM SPECIFICATIONS: pH 4-11, no D002 Acids allowed

WASTE CLASSIFICATIONS SPECIFICATIONS

Waste Code	Description
A22K	**Low Btu Organic Liquid** Ammonia less than 10 percent Source of PCB <50 ppm Heating value less than 5000 BTUs per pound Less than 5 percent organic halogens Less than 5 percent Sulfur Viscosity less than 150 centipoise Must not set-up in water or with organic solvents Less than one inch of solids in the drum No pesticides PRIMARY DISPOSAL METHOD: DESTRUCTION INCINERATION

ACKNOWLEDGEMENT

Your signature below indicates your acceptance of the pricing and terms detailed in the quote above.

Thank you for the opportunity to be of service.

Signature PO# Date

Print Name

Quote # 4887369