ENVIRONMENTAL MANAGEMENT, INC.
CONSULTING, ENGINEERING & TRAINING | A BSNC COMPANY

October 1, 2024

BLM-AK Alaska State Office
4700 BLM Road
Anchorage, AK 99507
Attn: Francis Marley
Email: fmarley@blm.gov

SUBJECT: 2023 Monitoring Report
PROJECT REF: BLM Contaminated Soil Landspread Area Red Devil Mine, Red Devil, Alaska

This report describes the 2024 monitoring of the petroleum-contaminated soils being treated in the landspread area conducted by Environmental Management, Inc. (EMI). EMI followed procedures outlined in the approved *2023 Work Plan Addendum*, February 2024. EMI prepared this report under contract with the U.S. Bureau of Land Management (BLM).

PROJECT PURPOSE AND OBJECTIVES

This investigation aimed to assess whether diesel range organics (DRO) concentrations have continued to decrease between sampling events. The project objective was to collect samples of petroleum-contaminated soil from two of the 100' x 100' Decision Units (DU), DUs 4 and 5, using Multi Increment Soil Sampling procedures.

METHODOLOGY

Field activities were conducted on August 14, 2024. Samples were collected using the Incremental Sampling Methodology (ITRC 2012). EMI provided two ADEC Qualified Environmental Professionals (QEPs), Henry Jeanor and Allie Lambe, to conduct the incremental sampling activities. Field activities included locating the landspread, measuring DUs, and collecting soil samples. Further details on the soil sampling methods and laboratory analysis are provided below.

Locating the Landspread

Using a four-wheeler, EMI arrived at the landspread to see it had been completely overgrown, making it very difficult to locate strings or flags that had previously been placed at the site (see photo log). The approximate location of the landspread northwest corner was found using a phone GPS service called OnXmaps. Using a tape measure, EMI marked the northwest corner of DU4 100 feet to the southwest. Soil samples were collected from DU4 after it had been measured and marked. Because DU4's northeast corner should be the approximated location of DU5's southwest corner, it was used to start the same process to measure and mark DU5. Once marked, the rest of the soil samples were collected from DU5.

Soil Sampling and Analytical Methods

Soil samples from DU 4 and 5 were collected from 36 random points in each DU. Each sample collection point was collected approximately 15 feet (five paces) apart to create a roughly evenly distributed 36-

point grid within the 100' x 100' area. Thirty-six equal-sized scoops of soil were collected to make one multi-increment sample. A total of four samples were collected, one from DU4 and one with a duplicate and a triplicate offset by four feet to the north and west from DU5.

Analytical soil samples were collected using clean spoons and placed directly into gallon zip-lock bags. The analytical samples were submitted to SGS of Anchorage, Alaska, for laboratory analysis following the Incremental Sampling Methodology (ITRC 2012) sample preparation protocol. Each sample was analyzed for diesel range organics (DRO) by AK 102.

Investigative-Derived Waste

Investigation-derived waste was limited to personal protective equipment, including nitrile gloves. This waste was disposed of as solid waste.

RESULTS

Four soil samples composed of 36 sample points were collected from DU 4 and 5. Preliminary analytical results are presented below in Table 1.

TABLE 1. PRELIMINARY ANALYTICAL RESULTS AND 95% UPPER CONFIDENCE LIMIT

Analysis	Analyte	MTG Cleanup Level	Unit	SAMPLE ID			
				DU4	DU5	~DU5-2	^DU5-3
AK102	DRO	250	mg/kg	**209**	**756**	**695**	**817**
AK102	DRO 95% UCL	250	mg/kg	**237**	**859**		

Notes:

MTG Cleanup Level	18 AAC 75 Table B1, Method Two, Under 40-Inch Zone Migration to Groundwater Soil Cleanup Level
mg/kg	Milligrams per kilogram
209	DRO was detected at 209 mg/kg, less than the ADEC MTG cleanup level
756	The result exceeds the ADEC MTG cleanup level
UCL	Upper Confidence Limit (as calculated using ProUCL 5.2)
~	Duplicate of sample DU5
^	Triplicate of sample DU5

Surface Observations

The landspread was mostly overgrown and difficult to navigate on foot. The area that was measured out to be DU5 had the least amount of overgrown vegetation. The vegetation was sparse compared to the rest of the landspread and did not grow as tall.

Soil Sampling Results

Preliminary analytical results are included above in Table 1. The final report will include an attached completed laboratory report and data review checklist.

DRO was detected in all samples; one sample was detected below the Migration to Groundwater Cleanup level (MTG; 250 mg/kg), and the three remaining samples were detected between MTG and the Maximum Allowable Concentrations (MAC; 12,500 mg/kg). The sample from DU4 contained 209 mg/kg DRO. The sample from DU5 contained 756 mg/kg DRO, its duplicate (DU5-2) contained 695 mg/kg, and its triplicate (DU5-3) contained 817 mg/kg.

The mean DRO concentration of samples from DU5 was 756 mg/kg, with a standard deviation of 61 mg/kg. The 95% upper confidence limit (UCL) of DRO concentrations in DU5 was 859 mg/kg, assuming Pro UCL's recommended student's t-distribution. Assuming the student's t-distribution should be valid despite having only three results since the Central Limit Theorem applies to typical ISM samples.

Assuming the variation is similar in DU4, the estimated 95% UCL of the mean level of DRO is 237 mg/kg. Preliminary results are presented in Table 1 and the attached laboratory report.

CONCLUSIONS AND RECOMMENDATIONS

The levels of DRO in the treatment areas continue to decrease. DU5 needs further treatment before it is below the MTG cleanup levels. We estimate with 95% confidence that the mean level of DRO in DU4 is below the MTG cleanup level. DRO concentrations in DU5 remain above the MTG cleanup level of 250 mg/Kg (18 AAC 75).

Continuing natural attenuation treatment in the landspread area is recommended for DU5. No further active landspread treatment is needed. We recommend completing a trend analysis of the levels in DU5 to predict when the cleanup will reach 250 mg/kg. Due to the low levels already obtained and the overgrowth in the area, a set of final verification samples in DU5 may not be worth the cost.

If you have any questions or wish to discuss this project further, please do not hesitate to contact the undersigned at (907) 272-9336.

Sincerely,

ENVIRONMENTAL MANAGEMENT, INC.



Allie Lambe, QEP
Environmental Scientist

Attachments

Table 1 – Analytical Soil Results (inset)
Attachment 1 – Photo Log
Attachment 2 – Laboratory Report

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APPENDIX A

PHOTO LOG

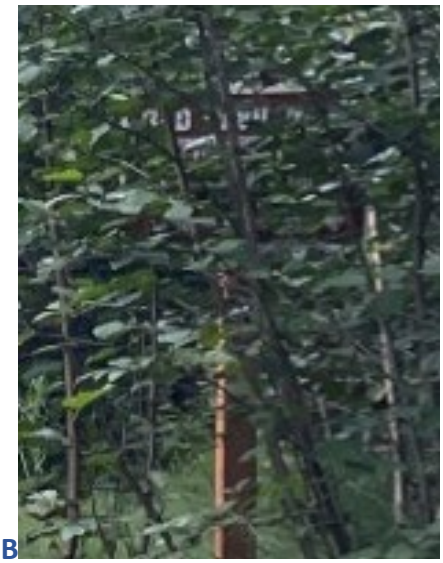
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PHOTO LOG

A



B



C



Photo Set 1: *Red Devil Landfill.* **A** Looking north at end of trail. Sampler walking towards the sign.
B Close up of Red Devil Landfill sign.
C Sampler standing next to tall overgrowth. (August 14, 2024)

PHOTO LOG

A  B 

Photo Set 2: *Old landfarm flag (DU4).* **A** EMI personnel pointing at old flag. **B** Old flag sitting in front of personnel's left foot. (August 14, 2024)

A  B 

C 

Photo Set 3: *DU4 Sampling.* **A** Sample collection from the west region of DU4. **B** Sample collection from the west region of DU4. **C** Sample collection from the east region of DU4. (August 14, 2024)

PHOTO LOG

A 

B 

C 

Photo Set 3: *DU5 Sampling.* **A** Sample collection from the southwest region of DU5.
B Sample collection from the central region of DU5.
C Sample collection point in DU5. (August 14, 2024)

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APPENDIX B

LABORATORY REPORT

Laboratory Report of Analysis

To: Environmental Mgmt Inc (EMI)
206 E Fireweed Ln #201
Anchorage, AK 99503-2703
(907)272-9336

Report Number: **1244541**

Client Project: **Red Devil Land Farm**

Dear Larry Helgeson,

Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of ten years in the event they are required for future reference. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. Any samples submitted to our laboratory will be retained for a maximum of fourteen (14) days from the date of this report unless other archiving requirements were included in the quote.

If there are any questions about the report or services performed during this project, please call Justin at (907) 562-2343. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS North America Inc. for your analytical services. We look forward to working with you again on any additional analytical needs.

Sincerely,
SGS North America Inc.

Justin Nelson
2024.09.25
14:36:04 -08'00'

Justin Nelson Date
Project Manager
Justin.Nelson@sgs.com

Case Narrative

SGS Client: **Environmental Mgmt Inc (EMI)**
SGS Project: **1244541**
Project Name/Site: **Red Devil Land Farm**
Project Contact: **Larry Helgeson**

Refer to sample receipt form for information on sample condition.

MB for HBN 1898708 [XXX/50196] (1783978) MB

AK102 - DRO is detect in the MB above one-half the LOQ. All associated samples are non-DOD.

*QC comments may be associated with the field samples found in this report. When applicable, comments will be applied to associated field samples.

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t 907.562.2343 **f** 907.561.5301 www.us.sgs.com

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Laboratory Qualifiers

Enclosed are the analytical results associated with the above work order. The results apply to the samples as received. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. This document is issued by the Company under its General Conditions of Service accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>. Attention is drawn to the limitation of liability, indenmification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the context or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 (DW Chemistry & Microbiology) & 17-021 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020B, 7470A, 7471B, 8015C, 8021B, 8082A, 8260D, 8270E, 8270E-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). SGS is only certified for the analytes listed on our Drinking Water Certification (DW methods: 200.8, 2130B, 2320B, 2510B, 300.0, 4500-CN-C,E, 4500-H-B, 4500-NO3-F, 4500-P-E and 524.2) and only those analytes will be reported to the State of Alaska for compliance. Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, other regulatory authorities.

The following descriptors or qualifiers may be found in your report:

*	The analyte has exceeded allowable regulatory or control limits.
!	Surrogate out of control limits.
B	Indicates the analyte is found in a blank associated with the sample.
CCV/CVA/CVB	Continuing Calibration Verification
CCCV/CVC/CVCA/CVCB	Closing Continuing Calibration Verification
CL	Control Limit
DF	Analytical Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LLQC/LLIQC	Low Level Quantitation Check
LOD	Limit of Detection (i.e., 3/4 of the LOQ)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
RPD	Relative Percent Difference
TNTC	Too Numerous To Count
U	Indicates the analyte was analyzed for but not detected.

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content. All DRO/RRO analyses are integrated per SOP.

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Sample Summary

Client Sample ID	Lab Sample ID	Collected	Received	Matrix
DU4	1244541001	08/14/2024	08/16/2024	Soil/Solid (dry weight)
DU5	1244541002	08/14/2024	08/16/2024	Soil/Solid (dry weight)
DU5-2	1244541003	08/14/2024	08/16/2024	Soil/Solid (dry weight)
DU5-3	1244541004	08/14/2024	08/16/2024	Soil/Solid (dry weight)

Method	Method Description
AK102	Diesel Range Organics (S)
MI-ITRC ISM (Feb 2012)	MI Sampling/Sieving
SM21 2540G	Percent Solids SM2540G

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Detectable Results Summary

Client Sample ID: **DU4**
Lab Sample ID: 1244541001

	Parameter	Result	Units
ITRC Incremental Samp Method (2012)	Multi-Incremental Sub Sampling	0.00	
Semivolatile Organic Fuels	Diesel Range Organics	209	mg/kg

Client Sample ID: **DU5**
Lab Sample ID: 1244541002

	Parameter	Result	Units
ITRC Incremental Samp Method (2012)	Multi-Incremental Sub Sampling	0.00	
Semivolatile Organic Fuels	Diesel Range Organics	756	mg/kg

Client Sample ID: **DU5-2**
Lab Sample ID: 1244541003

	Parameter	Result	Units
ITRC Incremental Samp Method (2012)	Multi-Incremental Sub Sampling	0.00	
Semivolatile Organic Fuels	Diesel Range Organics	695	mg/kg

Client Sample ID: **DU5-3**
Lab Sample ID: 1244541004

	Parameter	Result	Units
ITRC Incremental Samp Method (2012)	Multi-Incremental Sub Sampling	0.00	
Semivolatile Organic Fuels	Diesel Range Organics	817	mg/kg

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Results of **DU4**

Client Sample ID: **DU4**
Client Project ID: **Red Devil Land Farm**
Lab Sample ID: 1244541001
Lab Project ID: 1244541

Collection Date: 08/14/24 20:00
Received Date: 08/16/24 13:15
Matrix: Soil/Solid (dry weight)
Solids (%):81.6
Location:

Results by **ITRC Incremental Samp Method (2012)**

Parameter	Date Analyzed
Multi-Incremental Sub Sampling	08/23/24 16:01

Batch Information

Analytical Batch: SPT12125
Analytical Method: MI-ITRC ISM (Feb 2012)
Analyst: CJG
Analytical Date/Time: 08/23/24 16:01
Container ID: 1244541001-A

Print Date: 09/25/2024 2:07:30PM

Results of **DU4**

Client Sample ID: **DU4**
Client Project ID: **Red Devil Land Farm**
Lab Sample ID: 1244541001
Lab Project ID: 1244541

Collection Date: 08/14/24 20:00
Received Date: 08/16/24 13:15
Matrix: Soil/Solid (dry weight)
Solids (%):81.6
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	209		18.3	8.25	mg/kg	1		09/09/24 12:54
Surrogates								
5a Androstane (surr)	110		50-150		%	1		09/09/24 12:54

Batch Information

Analytical Batch: XFC17015
Analytical Method: AK102
Analyst: KFC
Analytical Date/Time: 09/09/24 12:54
Container ID: 1244541001-C

Prep Batch: XXX50196
Prep Method: SW3550C
Prep Date/Time: 08/27/24 09:11
Prep Initial Wt./Vol.: 30.075 g
Prep Extract Vol: 5 mL

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Results of **DU5**

Client Sample ID: **DU5**
Client Project ID: **Red Devil Land Farm**
Lab Sample ID: 1244541002
Lab Project ID: 1244541

Collection Date: 08/14/24 20:30
Received Date: 08/16/24 13:15
Matrix: Soil/Solid (dry weight)
Solids (%):78.4
Location:

Results by **ITRC Incremental Samp Method (2012)**

Parameter	Date Analyzed
Multi-Incremental Sub Sampling	08/23/24 16:01

Batch Information

Analytical Batch: SPT12125
Analytical Method: MI-ITRC ISM (Feb 2012)
Analyst: CJG
Analytical Date/Time: 08/23/24 16:01
Container ID: 1244541002-A

Print Date: 09/25/2024 2:07:30PM

Results of **DU5**

Client Sample ID: **DU5**
Client Project ID: **Red Devil Land Farm**
Lab Sample ID: 1244541002
Lab Project ID: 1244541

Collection Date: 08/14/24 20:30
Received Date: 08/16/24 13:15
Matrix: Soil/Solid (dry weight)
Solids (%):78.4
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	756		19.1	8.59	mg/kg	1		09/09/24 13:04
Surrogates								
5a Androstane (surr)	101		50-150		%	1		09/09/24 13:04

Batch Information

Analytical Batch: XFC17015
Analytical Method: AK102
Analyst: KFC
Analytical Date/Time: 09/09/24 13:04
Container ID: 1244541002-C

Prep Batch: XXX50196
Prep Method: SW3550C
Prep Date/Time: 08/27/24 09:11
Prep Initial Wt./Vol.: 30.079 g
Prep Extract Vol: 5 mL

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Results of **DU5-2**

Client Sample ID: **DU5-2**
Client Project ID: **Red Devil Land Farm**
Lab Sample ID: 1244541003
Lab Project ID: 1244541

Collection Date: 08/14/24 20:30
Received Date: 08/16/24 13:15
Matrix: Soil/Solid (dry weight)
Solids (%):79.2
Location:

Results by **ITRC Incremental Samp Method (2012)**

Parameter	Date Analyzed
Multi-Incremental Sub Sampling	08/23/24 16:01

Batch Information

Analytical Batch: SPT12125
Analytical Method: MI-ITRC ISM (Feb 2012)
Analyst: CJG
Analytical Date/Time: 08/23/24 16:01
Container ID: 1244541003-A

Print Date: 09/25/2024 2:07:30PM

Results of **DU5-2**

Client Sample ID: **DU5-2**
Client Project ID: **Red Devil Land Farm**
Lab Sample ID: 1244541003
Lab Project ID: 1244541

Collection Date: 08/14/24 20:30
Received Date: 08/16/24 13:15
Matrix: Soil/Solid (dry weight)
Solids (%):79.2
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	695		18.9	8.52	mg/kg	1		09/09/24 13:13
Surrogates								
5a Androstane (surr)	84.4		50-150		%	1		09/09/24 13:13

Batch Information

Analytical Batch: XFC17015
Analytical Method: AK102
Analyst: KFC
Analytical Date/Time: 09/09/24 13:13
Container ID: 1244541003-C

Prep Batch: XXX50196
Prep Method: SW3550C
Prep Date/Time: 08/27/24 09:11
Prep Initial Wt./Vol.: 30.019 g
Prep Extract Vol: 5 mL

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Results of **DU5-3**

Client Sample ID: **DU5-3**
Client Project ID: **Red Devil Land Farm**
Lab Sample ID: 1244541004
Lab Project ID: 1244541

Collection Date: 08/14/24 20:30
Received Date: 08/16/24 13:15
Matrix: Soil/Solid (dry weight)
Solids (%):79.1
Location:

Results by **ITRC Incremental Samp Method (2012)**

Parameter	Date Analyzed
Multi-Incremental Sub Sampling	08/23/24 16:01

Batch Information

Analytical Batch: SPT12125
Analytical Method: MI-ITRC ISM (Feb 2012)
Analyst: CJG
Analytical Date/Time: 08/23/24 16:01
Container ID: 1244541004-A

Print Date: 09/25/2024 2:07:30PM

Results of **DU5-3**

Client Sample ID: **DU5-3**
Client Project ID: **Red Devil Land Farm**
Lab Sample ID: 1244541004
Lab Project ID: 1244541

Collection Date: 08/14/24 20:30
Received Date: 08/16/24 13:15
Matrix: Soil/Solid (dry weight)
Solids (%):79.1
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	817		19.0	8.53	mg/kg	1		09/09/24 13:23
Surrogates								
5a Androstane (surr)	87.9		50-150		%	1		09/09/24 13:23

Batch Information

Analytical Batch: XFC17015
Analytical Method: AK102
Analyst: KFC
Analytical Date/Time: 09/09/24 13:23
Container ID: 1244541004-C

Prep Batch: XXX50196
Prep Method: SW3550C
Prep Date/Time: 08/27/24 09:11
Prep Initial Wt./Vol.: 30.017 g
Prep Extract Vol: 5 mL

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Method Blank

Blank ID: MB for HBN 1898636 [SPT/12126]
Blank Lab ID: 1783703

Matrix: Soil/Solid (dry weight)

QC for Samples:
1244541001, 1244541002, 1244541003, 1244541004

Results by **SM21 2540G**

Parameter	Results	LOQ/CL	DL	LOD	Units
Total Solids	100				%

Batch Information

Analytical Batch: SPT12126
Analytical Method: SM21 2540G
Instrument:
Analyst: CJG
Analytical Date/Time: 8/24/2024 2:17:00PM

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Duplicate Sample Summary

Original Sample ID: 1244523009
Duplicate Sample ID: 1783704
QC for Samples:
1244541001, 1244541002, 1244541003, 1244541004

Analysis Date: 08/24/2024 14:17
Matrix: Soil/Solid (dry weight)

Results by **SM21 2540G**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Total Solids	87.4	88.0	%	0.68	(< 15)

Batch Information

Analytical Batch: SPT12126
Analytical Method: SM21 2540G
Instrument:
Analyst: CJG

Print Date: 09/25/2024 2:07:40PM

Duplicate Sample Summary

Original Sample ID: 1244559027
Duplicate Sample ID: 1783705
QC for Samples:
1244541001, 1244541002, 1244541003, 1244541004

Analysis Date: 08/24/2024 14:17
Matrix: Soil/Solid (dry weight)

Results by **SM21 2540G**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Total Solids	80.9	80.4	%	0.66	(< 15)

Batch Information

Analytical Batch: SPT12126
Analytical Method: SM21 2540G
Instrument:
Analyst: CJG

Print Date: 09/25/2024 2:07:40PM

Method Blank

Blank ID: MB for HBN 1898708 [XXX/50196]
Blank Lab ID: 1783978

Matrix: Soil/Solid (dry weight)

QC for Samples:
1244541001, 1244541002, 1244541003, 1244541004

Results by **AK102**

Parameter	Results	LOQ/CL	DL	LOD	Units
Diesel Range Organics	11.3J	20.0	9.00	15.0	mg/kg
Surrogates					
5a Androstane (surr)	101	60-120		0	%

Batch Information

Analytical Batch: XFC17015
Analytical Method: AK102
Instrument: Agilent 7890B R
Analyst: KFC
Analytical Date/Time: 9/9/2024 12:26:00PM

Prep Batch: XXX50196
Prep Method: SW3550C
Prep Date/Time: 8/27/2024 9:11:00AM
Prep Initial Wt./Vol.: 22.5 g
Prep Extract Vol: 5 mL

Print Date: 09/25/2024 2:07:45PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1244541 [XXX50196]
Blank Spike Lab ID: 1783979
Date Analyzed: 09/09/2024 12:35

Spike Duplicate ID: LCSD for HBN 1244541 [XXX50196]
Spike Duplicate Lab ID: 1783980
Matrix: Soil/Solid (dry weight)

QC for Samples: 1244541001, 1244541002, 1244541003, 1244541004

Results by **AK102**

	Blank Spike (mg/kg)			Spike Duplicate (mg/kg)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Diesel Range Organics	1110	1190	107	1110	1200	108	(75-125)	0.63	(< 20)
Surrogates									
5a Androstane (surr)	22.2		105	22.2		105	(60-120)	0.06	

Batch Information

Analytical Batch: **XFC17015**
Analytical Method: **AK102**
Instrument: **Agilent 7890B R**
Analyst: **KFC**

Prep Batch: **XXX50196**
Prep Method: **SW3550C**
Prep Date/Time: **08/27/2024 09:11**
Spike Init Wt./Vol.: 22.2 mg/kg Extract Vol: 5 mL
Dupe Init Wt./Vol.: 22.2 mg/kg Extract Vol: 5 mL

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ISM Samples

SGS North America Inc.
CHAIN OF CUSTODY RECORD

1244541

Profile #: 334932 Int.: JG

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Section 1

CLIENT: Environmental Management, Inc.

CONTACT: Larry Helgeson | PHONE #: 907-272-9336

PROJECT NAME: Red Devil Land Farm | Project/Permit Number: 18407 | NPDL Number(DOD):

REPORTS TO: EMI | E-MAIL: lhelgeson@bsrc.net

INVOICE TO: EMI | QUOTE #: | P.O. #:

Instructions: Sections 1 - 5 must be filled out. Omissions may delay the onset of analysis.

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Section 3 — Preservative

Section 2

RESERVED for lab use	SAMPLE IDENTIFICATION	DATE mm/dd/yy	TIME HH:MM	MATRIX/ MATRIX CODE	# CONTAINERS	Sample Type: Comp / Grab / MI	Analysis*: DRO (AK102)									REMARKS/LOC ID
1AD	DU4	8/14/24	20:00	soil	1	ISM	X									
2AD	DU5	8/14/24	20:30	soil	1	ISM	X									
3AD	DU5-2	8/14/24	20:30	soil	1	ISM	X									
4AD	DU5-3	8/14/24	20:30	soil	1	ISM	X									

NOTE: *The following analyses require specific method and/or compound list: BTEX, Metals, PFAS

Comments:

Section 4

DOD Project? YES NO

Data Deliverables Requested: DataView, Level 4, SEDD, ERPIMS, EQUIS, Other:_____

Turnaround Time Requested: Standard / Rush / Requested Rush Report Date:_____

SGS Sample Receipt (Lab Use Only)

Delivery Method: Client / Commercial

Did each cooler have a corresponding COC? Yes / No

Chain of Custody Seal Condition: INTACT / BROKEN / ABSENT

COC Seal Location(s):_____

Section 5

RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:
	8/16/24	1315	

Cooler ID	Temperature (°C)	Therm. ID
1.	1.8	D51
2.		
3.		

If more than three coolers are received, or for documentation of non-compliant coolers, use form FS-0029.

Note: If temp. is outside 0-6° and samples were not taken <8 hours ago OR are waste samples, Client or PM should initial here or attach an email change order to proceed with analysis. If ice is present, note on form F102B.

Intials:_____

Laboratory Use Only

http://www.sgs.com/terms-and-conditions

F083-Blank_COC_20181228

SGS

1244541

SAMPLE RECEIPT FORM

Project Manager Completion				
Was all necessary information recorded on the COC upon receipt? (temperature, COC seals, etc.?)	Yes	No	N/A	
Was temperature between 0-6° C?	Yes	No	N/A	If "No", are the samples either exempt* or sampled <8 hours prior to receipt?
Were all analyses received within holding time*?	Yes	No	N/A	
Was a method specified for each analysis, where applicable? If no, please note correct methods.	Yes	No	N/A	
Are compound lists specified, where applicable? For project specific or special compound lists please note correct analysis code.	Yes	No	N/A	
If rush was requested by the client, was the requested TAT approved?	Yes	No	N/A	If "NO", what is the approved TAT?
If SEDD Deliverables are required, were Location ID's and an NPDL Number provided?	Yes	No	N/A	*If "NO", contact client for information.*
Sample Login Completion				
Do ID's on sample containers match COC?	Yes	No	N/A	
If provided on containers, do dates/times collected match COC?	Yes	No	N/A	Note: If times differ <1 hr., record details below and login per COC.
Were all sample containers received in good condition?	Yes	No	N/A	
Were proper containers (type/mass/volume/preservative) received for all samples? **See form F-083 "Sample Guide"*	Yes	No	N/A	*Note: If 200.8/6020 Total Metals are received unpreserved, preserve and note HNO3 lot here: If 200.8/6020 Dissolved Metals are received unpreserved, log in for LABFILTER and do not preserve. For all non-metals methods, inform Project Manager.*
Were Trip Blanks (VOC, GRO, Low-Level Hg, etc.) received with samples, where applicable*?	Yes	No	N/A	
Were all VOA vials free of headspace >6mm?	Yes	No	N/A	
Were all soil VOA samples received field extracted with Methanol?	Yes	No	N/A	
Did all soil VOA samples have an accompanying unpreserved container for % solids?	Yes	No	N/A	
If special handling is required, were containers labelled appropriately? e.g. MI/ISM, foreign soils, lab filter, Ref Lab, limited volume	Yes	No	N/A	
For Rush/Short Holding time, was the lab notified?	Yes	No	N/A	
For any question answered "NO", was the Project Manager notified?	Yes	No	N/A	PM Initials:
Was Peer Review of sample numbering/labelling completed?	Yes	No	N/A	Reviewer Initials: JB
Additional Notes/Clarification where Applicable, including resolution of "No" answers when a change order is not attached:				

Sample Containers and Preservatives

Container Id	Preservative	Container Condition	Container Id	Preservative	Container Condition
1244541001-A	No Preservative Required	OK			
1244541001-B	No Preservative Required	OK			
1244541001-C	No Preservative Required	OK			
1244541001-D	No Preservative Required	OK			
1244541002-A	No Preservative Required	OK			
1244541002-B	No Preservative Required	OK			
1244541002-C	No Preservative Required	OK			
1244541002-D	No Preservative Required	OK			
1244541003-A	No Preservative Required	OK			
1244541003-B	No Preservative Required	OK			
1244541003-C	No Preservative Required	OK			
1244541003-D	No Preservative Required	OK			
1244541004-A	No Preservative Required	OK			
1244541004-B	No Preservative Required	OK			
1244541004-C	No Preservative Required	OK			
1244541004-D	No Preservative Required	OK			

Container Condition Glossary

Containers for bacteriological, low level mercury and VOA vials are not opened prior to analysis and will be assigned condition code OK unless evidence indicates than an inappropriate container was submitted.

OK - The container was received at an acceptable pH for the analysis requested.
BU - The container was received with headspace greater than 6mm.
DM - The container was received damaged.
FR - The container was received frozen and not usable for Bacteria or BOD analyses.
IC - The container provided for microbiology analysis was not a laboratory-supplied, pre-sterilized container and therefore was not suitable for analysis.
NC- The container provided was not preserved or was under-preserved. The method does not allow for additional preservative added after collection.
PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.
PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added.
QN - Insufficient sample quantity provided.