SIMCOE LLC
(formerly BPX Energy Inc.)

REVIEWED
By Mike Buchanan at 3:13 pm, Sep 07, 2023

Review of the SIMCOE LLC Remediation Report: **Content Satisfactory**
1. Continue to conduct quarterly groundwater monitoring
2. Continue to operate the SVE system and submit reports regularly
3. Submit the 2023 Remediation Report by or before April 1, 2024.

REMEDIATION REPORT

MUDGE B 012R
(A) SECTION 17, T31N, R11W, NMPM
SAN JUAN COUNTY, NEW MEXICO

PREPARED FOR:
NEW MEXICO OIL CONSERVATION DIVISION

JANUARY 2022

PREPARED BY:
SIMCOE LLC
1100 Main Ave., Suite 101
Durango, Colorado 81301

SIMCOE LLC
Mudge B # 12R
Unit Letter A, Sec. 17, T31N, R11W
Incident #: nCS1528741396 API #: 3004510792

Monitor Well Sampling Dates: **12/28/16, 03/15/17, 06/30/17, 09/20/17, 12/20/17, 03/26/18, 06/28/18, 09/26/18, 12/19/18, 03/29/19, 06/28/19, 09/18/19, 12/19/19, 03/31/20, 06/08/20, 09/17/20, 12/16/20, 03/02/21, 03/03/2021, 06/10/2021, 08/20/2021, 12/08/2021.**

Soil Vapor Extraction System Installation: **May 2019**

Background:

In September 2015, a historical production pit was discovered on the Mudge B #012R well site during a below-grade tank (BGT) replacement project. Soil boring results confirmed the presence of impacted soils at the location of the former pit. Three groundwater monitoring wells, MW #1, MW #2, and MW #3, were installed in areas upgradient of impacts, downgradient of impacts, and at the source of impacts, respectively, within the project area. In May 2019, an SVE system was installed at the Mudge B #012R. The system has been extracting from SVE Point #1 since it commenced operation.

Groundwater Monitor Well Sampling Procedures:

Groundwater sampling was conducted on March 2, March 3, June 10, August 20, and December 8, 2021. Prior to groundwater sample collection, depth-to-water measurements were collected, then approximately three wellbore volumes were purged from each well with new disposable bailers. The groundwater sample was collected following US EPA SW-846 protocol. The groundwater sample was transferred into laboratory-provided containers with the appropriate preservative, stored in a cooler on ice, and submitted with a complete chain-of-custody to Hall Environmental Analysis Laboratory (HEAL) for analysis of volatile organic compounds (VOCs) by US EPA Method 8260B. Cottonwood also collected field measurements of pH, conductivity, and temperature.

Fluids generated during monitor well purging were managed by discarding into the separator below-grade tank (BGT) located on the well site. The BGT contents are eventually disposed through approved NMOCD operational procedures for removal of produced fluids.

Soil Vapor Extraction System Data:

The soil vapor extraction system (SVE) was installed and commenced operation in December 2016. Weekly to monthly monitoring has been ongoing since then. During the regular monitoring, observations are made about the SVE system operation and general condition, organic vapor meter (OVM) readings are collected from the exhaust of the SVE unit, vacuum pressure on the unit is noted, and the quantity of water within the drum located on the unit is noted and the drum drained, if required.

Annual gas samples are also collected from the SVE unit and analyzed for Total Petroleum Hydrocarbons (TPH) Gasoline Range Organics (GRO) by US EPA Method 8015D and benzene, toluene, ethylbenzene, and total xylenes (BTEX) by US EPA Method 8021B.

Summary:

Quarterly sampling of MW #1, installed upgradient of the source of impacts, took place from December 2016 to March 2021. In March 2021, results indicated that the monitoring well had achieved BTEX levels below the New Mexico Water Quality Control Commission (NMWQCC) groundwater standards for eight consecutive quarters. Quarterly sampling of MW #3, installed at the source of impacts, was conducted from December 2016 to December 2021. In December 2021, results indicated that MW #3 had achieved BTEX levels below the NMWQCC standard for eight consecutive quarters.

No BTEX was detected in MW #2 during the 2021 sampling events; however, benzene was above the NMWQCC standard in the June 2020 sampling event, so this groundwater monitoring well has not achieved BTEX levels below the NMWQCC standard for eight consecutive quarters. Two groundwater monitoring wells have achieved eight or more consecutive quarters of sample results below the NMWQCC standard. Monitoring at MW #2 will continue until that monitoring well also achieves eight consecutive quarters below the NMWQCC standard. A groundwater sampling results table is included and the HEAL groundwater sampling laboratory reports from the 2021 groundwater sampling are included.

OVM readings collected during 2021 ranged from 185.2 parts per million (ppm) to 1,210 ppm. A summary of the SVE System Monitoring Data is included. TPH GRO and BTEX were detected in the gas sample collected from the SVE system. The HEAL gas sample laboratory report from the 2021 gas sampling event is included.

Conclusion:

Two of the monitoring wells have achieved BTEX levels below the NMWQCC standard for eight consecutive quarters.

SOIL VAPOR

EXTRACTION

DATA

SIMCOE LLC - Mudge B 012R

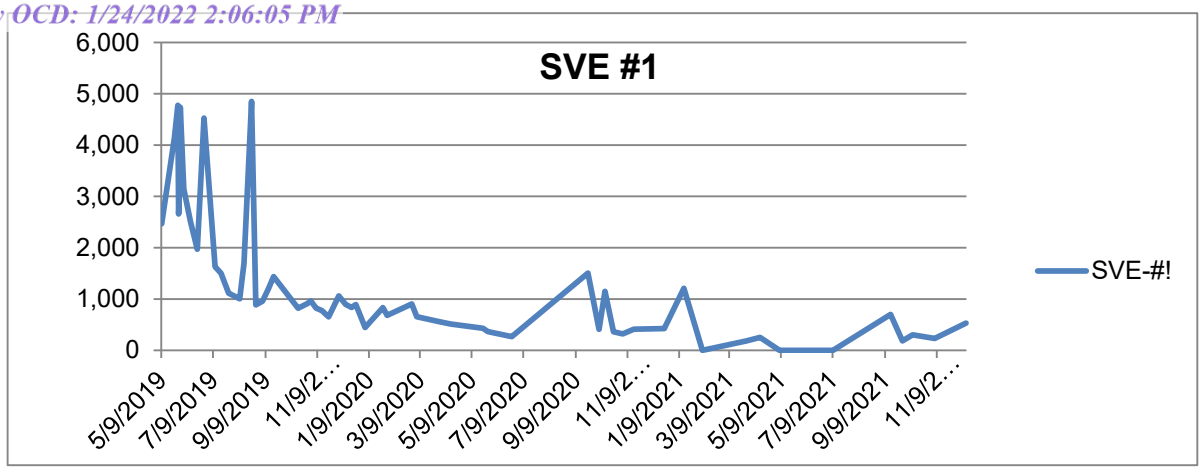
Summary SVE System Monitoring Data

Date	SVE Pt.	Exhaust OVM (ppm)	Exhaust Vacuum (in)	Generator Run Time	System Operational at Time of Arrival?	H_2O Drained from drum?	H_2O Amt. Drained (Gal.)?	Comments
5/9/2019	#1	2,467	30	-	NO	NO		Initial start up
5/13/2019	#1	-	NA	-	NO	NO		Generator not operational.
5/16/2019	#1	-	NA	-	NO	NO		Generator not operational (2nd visit)
5/16/2019	#1	-	NA	-	NO	NO		Generator not operational (2nd visit)
5/24/2019	#1	4,133	-	-	YES	NO		Water level in drum not measured
5/28/2019	#1	4,776	44	-	YES	NO		
5/29/2019	#1	2,658	44	-	YES	NO		
5/30/2019	#1	3,158	44	-	YES	NO		
5/31/2019	#1	4,736	44	-	YES	NO		
6/4/2019	#1	3,146	44	28,539.3	YES	NO		
6/12/2019	#1	2,510	45	28,726.2	YES	NO		Water level in drum not measured
6/20/2019	#1	1,970	44	28,922.3	YES	NO		
6/28/2019	#1	4,526	46	29,110.6	YES	NO		
7/5/2019	#1	-	44	29,278.0	YES	YES	9.50	
7/11/2019	#1	1,629	45	29,426.2	YES	NO		Water level below drain plug
7/18/2019	#1	1,503	45	29,591.5	YES	NO		Dry drum
7/27/2019	#1	1,114	46	29,806.8	YES	NO		Water level below drain plug
8/9/2019	#1	1,004	46	30,120.4	YES	NO		Dry drum
8/14/2019	#1	1,691	46	30,240.0	YES	NO		Water level below drain plug
8/23/2019	#1	4,851	45	30,368.7	NO	NO		Generator not operational at time of arrival (GNO); restarted, then collected readings, dry drum
8/28/2019	#1	886	45	30,422.1	YES	NO		Water level below drain plug
9/5/2019	#1	957	46	30,612.1	YES	NO		Water level below drain plug
9/12/2019	#1	1,200	46	30,725.9	NO	NO		GNO; restarted, then collected readings, water level below drain plug
9/18/2019	#1	1,437	46	30,731.8	NO	NO		GNO; restarted, then collected readings, water level below drain plug
9/25/2019	#1	3,242	46	NA	YES	NO		GNO 45 min. prior to arrival, system shut down after readings
10/1/2019	#1	-	-	NA	NO	NO		GNO; did not measure water in drum or restarted generator
10/8/2019	#1	-	-	30,733.9	NO	NO		GNO; restart only lasted 15 sec.; water level below drain plug
10/17/2019	#1	822	46	30,900.1	YES	YES	9.50	
10/23/2019	#1	-	-	30,991.7	NO	NO		GNO; did not measure water in drum or restarted generator
10/28/2019	#1	912	46	31,064.5	YES	YES	10.50	
11/1/2019	#1	963	46	31,165.0	YES	YES	14.00	
11/7/2019	#1	823	46	31,306.9	YES	YES	13.00	

SIMCOE LLC - Mudge B 012R

Summary SVE System Monitoring Data

Date	SVE Pt.	Exhaust OVM (ppm)	Exhaust Vacuum (in)	Generator Run Time	System Operational at Time of Arrival?	H_2O Drained from drum?	H_2O Amt. Drained (Gal.)?	Comments
11/14/2019	#1	775	46	31,473.9	YES	YES	14.00	
11/22/2019	#1	653	46	31,666.5	YES	YES	15.50	
12/4/2019	#1	1,062	46	31,949.9	NO	YES	25.50	Drained, restarted, then collected data after 5 min. running
12/12/2019	#1	894	46	32,142.6	YES	YES	22.00	
12/19/2019	#1	837	46	32,313.8	YES	YES	23.00	Drained, restarted at 2pm after collecting water samples
12/24/2019	#1	892	46	32,430.4	YES	YES	14.00	Drained, restarted
12/30/2019	#1	NA	47	32,573.4	YES	YES	18.50	Drained, restarted
1/4/2020	#1	446	47	32,692.8	YES	YES	17.00	Drained, restarted
1/9/2020	#1	NA	46	32,814.4	YES	YES	14.50	Drained, restarted
1/10/2020	#1	NA	NA	NA	YES	NO		Unintentionally left inlet valve open, did not measure water in drum
1/15/2020	#1	NA	46	32,959.5	YES	YES	17.00	Drained, restarted
1/25/2020	#1	834	48	33,200.6	NO	YES	26.00	Drained, restarted, then collected data after 12 min. running
1/30/2020	#1	683	46	33,322.0	YES	YES	14.00	Drained, restarted
2/5/2020	#1	NA	46	33,462.4	YES	YES	17.00	Drained, restarted
2/13/2020	#1	NA	NA	33,631.0	NO	YES	15.50	GNO; could not restart generator
2/26/2020	#1	NA	NA	33,653.0	NO	NO		GNO; water below drain port, could not restrart
2/28/2020	#1	903	46	33,674.3	YES	YES	4.00	Drained, restarted
3/5/2020	#1	656	46	33,818.1	YES	NO		Drained, restarted
3/12/2020	#1	NA	48	33,985.1	YES	NO		Unintentionally left inlet valve open
3/25/2020	#1	NA	46	34,297.5	YES	YES	23.50	Drained, restarted
3/31/2020	#1	560	46	34,440.1	YES	YES	9.50	Drained, restarted
4/14/2020	#1	512	46	34,778.8	YES	YES	15.50	Drained, restarted
4/29/2020	#1	NA	46	35,027.0	YES	YES	8.00	Drained, restarted
5/8/2020	#1	NA	46	35,240.6	YES	NO		Dry drum
5/22/2020	#1	431	46	35,576.7	YES	YES	5.50	Drained, restarted
5/28/2020	#1	364	46	35,721.0	YES	NO		Water in drum not measured
6/25/2020	#1	266	45	-	YES	NO		Water in drum below drain port
7/30/2020	#1	NA	NA	-	NO	NO		GNO; water below drain port, could not restrart
8/25/2020	#1	NA	NA	-	NO	NO		GNO; could not restart generator
8/31/2020	#1	NA	NA	-	NO	NO		GNO; could not restart generator
9/17/2020	#1	NA	NA	-	NO	NO		GNO; could not restart generator
9/23/2020	#1	1,506	46	36,781.5	NO	NO		GNO; restarted, then collected readings, dry drum
9/29/2020	#1	NA	NA	-	NO	NO		GNO; restarted, generator shut down < 5 minutes after restart
10/6/2020	#1	409	45	36,946.0	YES	NO		Water in drum below drain port
10/13/2020	#1	1,151	46	37,113.3	YES	NO	2.00	


SVE #1
6,000
5,000
4,000
3,000
2,000
1,000
0
5/9/2019
7/9/2019
9/9/2019
11/9/2…
1/9/2020
3/9/2020
5/9/2020
7/9/2020
9/9/2020
11/9/2…
1/9/2021
3/9/2021
5/9/2021
7/9/2021
9/9/2021
11/9/2…
SVE-#!


Mudge B 012R SVE Layout
API #30-045-10792
(A), S-17, T31N, R11W
SVE System GPS:
36.902742°, -108.008073°
Legend
Enterprise Pipeline
Monitor Well/SVE Point
Mudge B 12R Wellhead
SVE System
N
100 ft
Mudge B 12R Wellhead
MW-1
SVE Point 1
MW-2
SVE System
MW-3
Google Earth

BPX Energy Inc. - Mudge B 12R

SVE - #1 OVM Data

Date	Exhaust OVM (ppm)
5/9/2019	2,467
5/24/2019	4,133
5/28/2019	4,776
5/29/2019	2,658
5/30/2019	3,158
5/31/2019	4,736
6/4/2019	3,146
6/12/2019	2,510
6/20/2019	1,970
6/28/2019	4,526
7/11/2019	1,629
7/18/2019	1,503
7/27/2019	1,114
8/9/2019	1,004
8/14/2019	1,691
8/23/2019	4,851
8/28/2019	886
9/5/2019	957
9/12/2019	1,200
9/18/2019	1,437
10/17/2019	822
10/28/2019	912
11/1/2019	963
11/7/2019	823
11/14/2019	775
11/22/2019	653
12/4/2019	1062
12/12/2019	894
12/19/2019	837
12/24/2019	892
1/4/2020	446
1/25/2020	834
1/30/2020	683.0
2/28/2020	903.0
3/5/2020	656.0
3/31/2020	560.0
4/14/2020	512.0
5/22/2020	431.0
5/28/2020	364.0
6/25/2020	266.0
9/23/2020	1506.0
10/6/2020	409.0
10/13/2020	1151.0
10/23/2020	363.0
11/3/2020	320.2

Date	Exhaust OVM (ppm)
11/16/2020	412
12/22/2020	425
1/14/2021	1210.0
2/5/2021	-
3/29/2021	185.6
4/14/2021	253.2
5/7/2021	-
6/8/2021	-
7/9/2021	-
9/15/2021	699.8
9/29/2021	185.2
10/11/2021	301.6
11/6/2021	232.6
12/13/2021	530.0

GROUNDWATER

LABORATORY

REPORTS

Cottonwood CONSULTING

Mudge B #012R
Groundwater Sampling Results
Simcoe LLC

Well Name	Sample Date	Depth to Water (ft)	Well Depth (ft)	TDS (mg/L)	Conductivity (umhos)	pH	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Total Xylenes (ppb)
MW #1	12/28/16	43.49	49.90	6,120	4,400	6.86	ND	ND	ND	ND
MW #1	03/15/17	42.85	-	-	4,000	7.15	ND	ND	ND	ND
MW #1	06/30/17	42.25	-	-	4,600	6.93	ND	ND	ND	ND
MW #1	09/20/17	42.60	-	-	3,700	6.81	ND	ND	ND	ND
MW #1	12/20/17	41.90	-	-	2,700	6.87	ND	ND	ND	ND
MW #1	03/26/18	41.84	-	-	4,400	7.10	ND	ND	ND	ND
MW #1	06/28/18	41.84	-	-	3,500	6.80	ND	ND	ND	ND
MW #1	09/26/18	41.93	-	-	2,700	6.96	ND	ND	ND	ND
MW #1	12/19/18	42.07	-	-	3,200	7.48	ND	ND	ND	ND
MW #1	03/02/21	-	-	-	-	-	ND	ND	ND	ND
MW #2	12/28/16	42.59	46.40	7,940	4,200	6.70	**320**	250	500	**5,800**
MW #2	03/15/17	41.95	-	-	5,200	6.78	**320**	13	360	**3,700**
MW #2	06/30/17	41.42	-	-	5,800	6.78	**350**	9.3	700	**4,600**
MW #2	09/20/17	41.69	-	-	4,100	6.73	**140**	ND	350	400
MW #2	12/20/17	40.98	-	-	4,200	6.74	**160**	11	190	**1,300**
MW #2	03/26/18	40.88	-	-	5,000	6.91	**140**	11	220	**780**
MW #2	06/28/18	40.83	-	-	4,200	6.91	**110**	ND	270	620
MW #2	09/26/18	40.89	-	-	3,800	7.00	**140**	ND	320	620
MW #2	12/19/18	40.98	-	-	3,900	6.71	**96**	3.6	98	280
MW #2	03/29/19	40.94	-	-	3,100	6.93	**46**	ND	28	130
MW #2	06/28/19	40.49	-	-	2,200	7.21	**26**	ND	7.4	13
MW #2	09/18/19	40.50	-	-	2,100	6.90	3.7	ND	5.6	15
MW #2	12/19/19	40.56	-	-	3,100	7.11	**7.7**	ND	4.4	5.3
MW #2	03/31/20	40.86	-	-	3,500	7.38	1.8	ND	1.2	2.3
MW #2	06/08/20	40.85	-	-	2,600	7.24	**6.6**	1.8	ND	2.3
MW #2	09/17/20	41.17	-	-	1,600	7.09	ND	ND	ND	ND
MW #2	03/02/21	-	-	-	-	-	ND	ND	ND	ND
MW #2	08/20/21	41.85	-	-	8,730	7.94	3.4	ND	ND	ND
MW #2	12/08/21	42.16	-	-	8,570	7.84	1.7	ND	ND	ND
MW #3	12/28/16	42.15	44.00	8,100	4,400	6.72	**15**	ND	ND	**970**
MW #3	03/15/17	41.83	-	-	4,300	7.08	**9.0**	ND	140	**730**
MW #3	06/30/17	41.43	-	-	4,200	6.71	**5.6**	ND	120	ND
MW #3	09/20/17	41.24	-	-	3,300	6.76	**7.6**	ND	87	15
MW #3	12/20/17	41.16	-	-	3,200	6.82	**9.7**	ND	39	7.4
MW #3	03/26/18	41.16	-	-	3,900	6.99	**7.7**	ND	7.3	3.2
MW #3	06/28/18	41.18	-	-	3,400	6.89	**9.1**	ND	1.8	4.7
MW #3	09/26/18	41.20	-	-	2,900	7.03	**13**	ND	ND	ND
MW #3	12/19/18	41.37	-	-	3,700	7.14	**15**	ND	ND	ND
MW #3	03/29/19	41.39	-	-	2,700	7.22	**7.5**	ND	ND	ND
MW #3	06/28/19	40.99	-	-	2,000	7.30	**9.4**	ND	ND	5.2
MW #3	09/18/19	40.78	-	-	1,800	6.89	**13**	ND	ND	ND
MW #3	12/19/19	40.82	-	-	3,400	7.76	**5.2**	ND	ND	ND
MW #3	03/31/20	41.06	-	-	3,100	7.59	5.0	2.1	1.2	7.4
MW #3	06/08/20	41.20	-	-	2,400	7.41	3.1	1.7	ND	3.9
MW #3	09/17/20	41.45	-	-	1,600	7.35	1.5	ND	ND	ND
MW #3	12/16/20	41.59	-	-	3,900	7.54	1.7	ND	ND	ND
MW #3	03/03/21	-	-	-	-	-	ND	ND	ND	ND
MW #3	06/10/21	-	-	-	-	-	1.3	ND	ND	2.4
MW #3	08/20/21	41.95	-	-	8,940	7.84	ND	ND	ND	ND
MW #3	12/08/21	42.10	-	-	8,520	7.71	1.2	ND	ND	ND
NMWQCC Groundwater Standard						6-9	5	1000	700	620

Cottonwood CONSULTING

Mudge B #012R
Groundwater Sampling Results
Simcoe LLC

Well Name	Sample Date	Fluoride (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	TDS (mg/L)	Nitrate (mg/L)	Iron (mg/L)	Manganese (mg/L)	Naphthalene (mg/L)
MW #1	12/28/16	ND	93	4,400	**6,120**	ND	-	-	ND
MW #2	12/28/16	ND	240	3,400	**7,940**	ND	-	-	21
MW #2	09/18/19	-	-	-	**7,680**	-	0.36	**1.8**	ND
MW #3	12/28/16	ND	150	3,800	**8,100**	ND	-	-	ND
NMWQCC Groundwater Standard		1.6	250.0	600.0	1000	10	1.0	0.2	0.03

Notes:
TDS - Total Dissolved Solids
ft - feet
mg/L - milligrams per liter
umhos - microhms
ppb - parts per billion
"-" - Indicates no data
NMWQCC - New Mexico Water Quality Control Commission
Depth to water measured from top of well casing
Bold values exceed NMWQCC Standard

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

March 11, 2021

Steve Moskal
SIMCOE
1100 Main St.
Durango, CO 81301
TEL: (505) 330-9179
FAX

RE: Mudge B 12 R OrderNo.: 2103243

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 3 sample(s) on 3/4/2021 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2103243**
Date Reported: **3/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: SIMCOE **Client Sample ID:** MW-1
Project: Mudge B 12 R **Collection Date:** 3/2/2021 10:35:00 AM
Lab ID: 2103243-001 **Matrix:** GROUNDWA **Received Date:** 3/4/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**
Benzene	ND	1.0		µg/L	1	3/9/2021 10:04:21 PM
Toluene	ND	1.0		µg/L	1	3/9/2021 10:04:21 PM
Ethylbenzene	ND	1.0		µg/L	1	3/9/2021 10:04:21 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/9/2021 10:04:21 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/9/2021 10:04:21 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/9/2021 10:04:21 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/9/2021 10:04:21 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/9/2021 10:04:21 PM
Naphthalene	ND	2.0		µg/L	1	3/9/2021 10:04:21 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	3/9/2021 10:04:21 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	3/9/2021 10:04:21 PM
Acetone	ND	10		µg/L	1	3/9/2021 10:04:21 PM
Bromobenzene	ND	1.0		µg/L	1	3/9/2021 10:04:21 PM
Bromodichloromethane	ND	1.0		µg/L	1	3/9/2021 10:04:21 PM
Bromoform	ND	1.0		µg/L	1	3/9/2021 10:04:21 PM
Bromomethane	ND	3.0		µg/L	1	3/9/2021 10:04:21 PM
2-Butanone	ND	10		µg/L	1	3/9/2021 10:04:21 PM
Carbon disulfide	ND	10		µg/L	1	3/9/2021 10:04:21 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	3/9/2021 10:04:21 PM
Chlorobenzene	ND	1.0		µg/L	1	3/9/2021 10:04:21 PM
Chloroethane	ND	2.0		µg/L	1	3/9/2021 10:04:21 PM
Chloroform	ND	1.0		µg/L	1	3/9/2021 10:04:21 PM
Chloromethane	ND	3.0		µg/L	1	3/9/2021 10:04:21 PM
2-Chlorotoluene	ND	1.0		µg/L	1	3/9/2021 10:04:21 PM
4-Chlorotoluene	ND	1.0		µg/L	1	3/9/2021 10:04:21 PM
cis-1,2-DCE	ND	1.0		µg/L	1	3/9/2021 10:04:21 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/9/2021 10:04:21 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/9/2021 10:04:21 PM
Dibromochloromethane	ND	1.0		µg/L	1	3/9/2021 10:04:21 PM
Dibromomethane	ND	1.0		µg/L	1	3/9/2021 10:04:21 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/9/2021 10:04:21 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/9/2021 10:04:21 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/9/2021 10:04:21 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/9/2021 10:04:21 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	3/9/2021 10:04:21 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	3/9/2021 10:04:21 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	3/9/2021 10:04:21 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	3/9/2021 10:04:21 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	3/9/2021 10:04:21 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix

Analytical Report
Lab Order **2103243**
Date Reported: **3/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: SIMCOE **Client Sample ID:** MW-1
Project: Mudge B 12 R **Collection Date:** 3/2/2021 10:35:00 AM
Lab ID: 2103243-001 **Matrix:** GROUNDWA **Received Date:** 3/4/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**
1,1-Dichloropropene	ND	1.0		µg/L	1	3/9/2021 10:04:21 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	3/9/2021 10:04:21 PM
2-Hexanone	ND	10		µg/L	1	3/9/2021 10:04:21 PM
Isopropylbenzene	ND	1.0		µg/L	1	3/9/2021 10:04:21 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	3/9/2021 10:04:21 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	3/9/2021 10:04:21 PM
Methylene Chloride	ND	3.0		µg/L	1	3/9/2021 10:04:21 PM
n-Butylbenzene	ND	3.0		µg/L	1	3/9/2021 10:04:21 PM
n-Propylbenzene	ND	1.0		µg/L	1	3/9/2021 10:04:21 PM
sec-Butylbenzene	ND	1.0		µg/L	1	3/9/2021 10:04:21 PM
Styrene	ND	1.0		µg/L	1	3/9/2021 10:04:21 PM
tert-Butylbenzene	ND	1.0		µg/L	1	3/9/2021 10:04:21 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/9/2021 10:04:21 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/9/2021 10:04:21 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/9/2021 10:04:21 PM
trans-1,2-DCE	ND	1.0		µg/L	1	3/9/2021 10:04:21 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/9/2021 10:04:21 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/9/2021 10:04:21 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/9/2021 10:04:21 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/9/2021 10:04:21 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/9/2021 10:04:21 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/9/2021 10:04:21 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	3/9/2021 10:04:21 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/9/2021 10:04:21 PM
Vinyl chloride	ND	1.0		µg/L	1	3/9/2021 10:04:21 PM
Xylenes, Total	ND	1.5		µg/L	1	3/9/2021 10:04:21 PM
Surr: 1,2-Dichloroethane-d4	89.7	70-130		%Rec	1	3/9/2021 10:04:21 PM
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	3/9/2021 10:04:21 PM
Surr: Dibromofluoromethane	103	70-130		%Rec	1	3/9/2021 10:04:21 PM
Surr: Toluene-d8	103	70-130		%Rec	1	3/9/2021 10:04:21 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2103243**
Date Reported: **3/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: SIMCOE **Client Sample ID:** MW-2
Project: Mudge B 12 R **Collection Date:** 3/2/2021 11:15:00 AM
Lab ID: 2103243-002 **Matrix:** GROUNDWA **Received Date:** 3/4/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**
Benzene	ND	1.0		µg/L	1	3/9/2021 10:33:05 PM
Toluene	ND	1.0		µg/L	1	3/9/2021 10:33:05 PM
Ethylbenzene	ND	1.0		µg/L	1	3/9/2021 10:33:05 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/9/2021 10:33:05 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/9/2021 10:33:05 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/9/2021 10:33:05 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/9/2021 10:33:05 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/9/2021 10:33:05 PM
Naphthalene	ND	2.0		µg/L	1	3/9/2021 10:33:05 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	3/9/2021 10:33:05 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	3/9/2021 10:33:05 PM
Acetone	ND	10		µg/L	1	3/9/2021 10:33:05 PM
Bromobenzene	ND	1.0		µg/L	1	3/9/2021 10:33:05 PM
Bromodichloromethane	ND	1.0		µg/L	1	3/9/2021 10:33:05 PM
Bromoform	ND	1.0		µg/L	1	3/9/2021 10:33:05 PM
Bromomethane	ND	3.0		µg/L	1	3/9/2021 10:33:05 PM
2-Butanone	ND	10		µg/L	1	3/9/2021 10:33:05 PM
Carbon disulfide	ND	10		µg/L	1	3/9/2021 10:33:05 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	3/9/2021 10:33:05 PM
Chlorobenzene	ND	1.0		µg/L	1	3/9/2021 10:33:05 PM
Chloroethane	ND	2.0		µg/L	1	3/9/2021 10:33:05 PM
Chloroform	ND	1.0		µg/L	1	3/9/2021 10:33:05 PM
Chloromethane	ND	3.0		µg/L	1	3/9/2021 10:33:05 PM
2-Chlorotoluene	ND	1.0		µg/L	1	3/9/2021 10:33:05 PM
4-Chlorotoluene	ND	1.0		µg/L	1	3/9/2021 10:33:05 PM
cis-1,2-DCE	ND	1.0		µg/L	1	3/9/2021 10:33:05 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/9/2021 10:33:05 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/9/2021 10:33:05 PM
Dibromochloromethane	ND	1.0		µg/L	1	3/9/2021 10:33:05 PM
Dibromomethane	ND	1.0		µg/L	1	3/9/2021 10:33:05 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/9/2021 10:33:05 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/9/2021 10:33:05 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/9/2021 10:33:05 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/9/2021 10:33:05 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	3/9/2021 10:33:05 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	3/9/2021 10:33:05 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	3/9/2021 10:33:05 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	3/9/2021 10:33:05 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	3/9/2021 10:33:05 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2103243**
Date Reported: **3/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: SIMCOE **Client Sample ID:** MW-2
Project: Mudge B 12 R **Collection Date:** 3/2/2021 11:15:00 AM
Lab ID: 2103243-002 **Matrix:** GROUNDWA **Received Date:** 3/4/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**
1,1-Dichloropropene	ND	1.0		µg/L	1	3/9/2021 10:33:05 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	3/9/2021 10:33:05 PM
2-Hexanone	ND	10		µg/L	1	3/9/2021 10:33:05 PM
Isopropylbenzene	ND	1.0		µg/L	1	3/9/2021 10:33:05 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	3/9/2021 10:33:05 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	3/9/2021 10:33:05 PM
Methylene Chloride	ND	3.0		µg/L	1	3/9/2021 10:33:05 PM
n-Butylbenzene	ND	3.0		µg/L	1	3/9/2021 10:33:05 PM
n-Propylbenzene	ND	1.0		µg/L	1	3/9/2021 10:33:05 PM
sec-Butylbenzene	ND	1.0		µg/L	1	3/9/2021 10:33:05 PM
Styrene	ND	1.0		µg/L	1	3/9/2021 10:33:05 PM
tert-Butylbenzene	ND	1.0		µg/L	1	3/9/2021 10:33:05 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/9/2021 10:33:05 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/9/2021 10:33:05 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/9/2021 10:33:05 PM
trans-1,2-DCE	ND	1.0		µg/L	1	3/9/2021 10:33:05 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/9/2021 10:33:05 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/9/2021 10:33:05 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/9/2021 10:33:05 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/9/2021 10:33:05 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/9/2021 10:33:05 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/9/2021 10:33:05 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	3/9/2021 10:33:05 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/9/2021 10:33:05 PM
Vinyl chloride	ND	1.0		µg/L	1	3/9/2021 10:33:05 PM
Xylenes, Total	ND	1.5		µg/L	1	3/9/2021 10:33:05 PM
Surr: 1,2-Dichloroethane-d4	90.9	70-130		%Rec	1	3/9/2021 10:33:05 PM
Surr: 4-Bromofluorobenzene	95.1	70-130		%Rec	1	3/9/2021 10:33:05 PM
Surr: Dibromofluoromethane	90.2	70-130		%Rec	1	3/9/2021 10:33:05 PM
Surr: Toluene-d8	97.1	70-130		%Rec	1	3/9/2021 10:33:05 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2103243**
Date Reported: **3/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: SIMCOE **Client Sample ID:** MW-3
Project: Mudge B 12 R **Collection Date:** 3/3/2021 9:00:00 AM
Lab ID: 2103243-003 **Matrix:** GROUNDWA **Received Date:** 3/4/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**
Benzene	ND	1.0		µg/L	1	3/9/2021 11:01:43 PM
Toluene	ND	1.0		µg/L	1	3/9/2021 11:01:43 PM
Ethylbenzene	ND	1.0		µg/L	1	3/9/2021 11:01:43 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/9/2021 11:01:43 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/9/2021 11:01:43 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/9/2021 11:01:43 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/9/2021 11:01:43 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/9/2021 11:01:43 PM
Naphthalene	ND	2.0		µg/L	1	3/9/2021 11:01:43 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	3/9/2021 11:01:43 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	3/9/2021 11:01:43 PM
Acetone	ND	10		µg/L	1	3/9/2021 11:01:43 PM
Bromobenzene	ND	1.0		µg/L	1	3/9/2021 11:01:43 PM
Bromodichloromethane	ND	1.0		µg/L	1	3/9/2021 11:01:43 PM
Bromoform	ND	1.0		µg/L	1	3/9/2021 11:01:43 PM
Bromomethane	ND	3.0		µg/L	1	3/9/2021 11:01:43 PM
2-Butanone	ND	10		µg/L	1	3/9/2021 11:01:43 PM
Carbon disulfide	ND	10		µg/L	1	3/9/2021 11:01:43 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	3/9/2021 11:01:43 PM
Chlorobenzene	ND	1.0		µg/L	1	3/9/2021 11:01:43 PM
Chloroethane	ND	2.0		µg/L	1	3/9/2021 11:01:43 PM
Chloroform	ND	1.0		µg/L	1	3/9/2021 11:01:43 PM
Chloromethane	ND	3.0		µg/L	1	3/9/2021 11:01:43 PM
2-Chlorotoluene	ND	1.0		µg/L	1	3/9/2021 11:01:43 PM
4-Chlorotoluene	ND	1.0		µg/L	1	3/9/2021 11:01:43 PM
cis-1,2-DCE	ND	1.0		µg/L	1	3/9/2021 11:01:43 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/9/2021 11:01:43 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/9/2021 11:01:43 PM
Dibromochloromethane	ND	1.0		µg/L	1	3/9/2021 11:01:43 PM
Dibromomethane	ND	1.0		µg/L	1	3/9/2021 11:01:43 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/9/2021 11:01:43 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/9/2021 11:01:43 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/9/2021 11:01:43 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/9/2021 11:01:43 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	3/9/2021 11:01:43 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	3/9/2021 11:01:43 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	3/9/2021 11:01:43 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	3/9/2021 11:01:43 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	3/9/2021 11:01:43 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2103243**
Date Reported: **3/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: SIMCOE **Client Sample ID:** MW-3
Project: Mudge B 12 R **Collection Date:** 3/3/2021 9:00:00 AM
Lab ID: 2103243-003 **Matrix:** GROUNDWA **Received Date:** 3/4/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**
1,1-Dichloropropene	ND	1.0		µg/L	1	3/9/2021 11:01:43 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	3/9/2021 11:01:43 PM
2-Hexanone	ND	10		µg/L	1	3/9/2021 11:01:43 PM
Isopropylbenzene	ND	1.0		µg/L	1	3/9/2021 11:01:43 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	3/9/2021 11:01:43 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	3/9/2021 11:01:43 PM
Methylene Chloride	ND	3.0		µg/L	1	3/9/2021 11:01:43 PM
n-Butylbenzene	ND	3.0		µg/L	1	3/9/2021 11:01:43 PM
n-Propylbenzene	ND	1.0		µg/L	1	3/9/2021 11:01:43 PM
sec-Butylbenzene	ND	1.0		µg/L	1	3/9/2021 11:01:43 PM
Styrene	ND	1.0		µg/L	1	3/9/2021 11:01:43 PM
tert-Butylbenzene	ND	1.0		µg/L	1	3/9/2021 11:01:43 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/9/2021 11:01:43 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/9/2021 11:01:43 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/9/2021 11:01:43 PM
trans-1,2-DCE	ND	1.0		µg/L	1	3/9/2021 11:01:43 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/9/2021 11:01:43 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/9/2021 11:01:43 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/9/2021 11:01:43 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/9/2021 11:01:43 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/9/2021 11:01:43 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/9/2021 11:01:43 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	3/9/2021 11:01:43 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/9/2021 11:01:43 PM
Vinyl chloride	ND	1.0		µg/L	1	3/9/2021 11:01:43 PM
Xylenes, Total	ND	1.5		µg/L	1	3/9/2021 11:01:43 PM
Surr: 1,2-Dichloroethane-d4	84.2	70-130		%Rec	1	3/9/2021 11:01:43 PM
Surr: 4-Bromofluorobenzene	98.7	70-130		%Rec	1	3/9/2021 11:01:43 PM
Surr: Dibromofluoromethane	95.5	70-130		%Rec	1	3/9/2021 11:01:43 PM
Surr: Toluene-d8	92.2	70-130		%Rec	1	3/9/2021 11:01:43 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2103243**
11-Mar-21

Client: SIMCOE
Project: Mudge B 12 R

Sample ID: **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **A75823** RunNo: **75823**
Prep Date: Analysis Date: **3/9/2021** SeqNo: **2682704** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	98.4	70	130			
Toluene	19	1.0	20.00	0	97.3	70	130			
Chlorobenzene	20	1.0	20.00	0	100	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	88.4	70	130			
Trichloroethene (TCE)	16	1.0	20.00	0	80.7	70	130			
Surr: 1,2-Dichloroethane-d4	8.8		10.00		87.6	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		98.6	70	130			
Surr: Dibromofluoromethane	8.3		10.00		83.3	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID: **mb1** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **A75823** RunNo: **75823**
Prep Date: Analysis Date: **3/9/2021** SeqNo: **2682705** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2103243**
11-Mar-21

Client: SIMCOE
Project: Mudge B 12 R

Sample ID: **mb1** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **A75823** RunNo: **75823**
Prep Date: Analysis Date: **3/9/2021** SeqNo: **2682705** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2103243**
11-Mar-21

Client: SIMCOE
Project: Mudge B 12 R

Sample ID: **mb1**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **A75823**	RunNo: **75823**
Prep Date:	Analysis Date: **3/9/2021**	SeqNo: **2682705** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.0		10.00		90.2	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		98.3	70	130			
Surr: Dibromofluoromethane	9.6		10.00		95.8	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

Sample Log-In Check List

Client Name: SIMCOE Work Order Number: 2103243 RcptNo: 1

Received By: Juan Rojas 3/4/2021 7:50:00 AM

Completed By: Desiree Dominguez 3/4/2021 8:58:02 AM

Reviewed By: ENM 3/4/21

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☑ No ☐ NA ☐
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: (<2 or >12 unless noted)
Adjusted?
Checked by: DAD 3/4/21

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.1	Good	Yes			

Chain-of-Custody Record

Client: Simcoe LLC
Bill to IKAV Energy
Mailing Address: 1199 Main St. Ste 101
Durango CO 81301
Phone #: 505 330 9179
email or Fax#: SMostal@IKAVEnergy.com
QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)
Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: Mudge B 12R
Project #: TBD
Project Manager: Steve Mostal
Sampler: " "
On Ice: ☒ Yes ☐ No
# of Coolers: 1
Cooler Temp(including CF): 7.3-0.2=7.1 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2103243	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
3/2/21	1035	GW	MW1	40 mL x3	Ice/HCl	-001								X		
3/2/21	1115	↓	MW2	↓		-002								X		
3/3/21	9:00	↓	MW3	40 mL x2	↓	-003								X		

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
3/3/21	1555				3/3/21	1555
3/3/21	1753			courier	3/4/21	7:15 0

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

June 22, 2021

Steve Moskal
SIMCOE
1100 Main St.
Durango, CO 81301
TEL: (505) 330-9179
FAX:

RE: Mudge B 12R OrderNo.: 2106654

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 1 sample(s) on 6/11/2021 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2106654**
Date Reported: **6/22/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: SIMCOE **Client Sample ID:** MW-3
Project: Mudge B 12R **Collection Date:** 6/10/2021 12:30:00 PM
Lab ID: 2106654-001 **Matrix:** GROUNDWA **Received Date:** 6/11/2021 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**
Benzene	1.3	1.0		µg/L	1	6/18/2021 4:43:53 PM
Toluene	ND	1.0		µg/L	1	6/18/2021 4:43:53 PM
Ethylbenzene	ND	1.0		µg/L	1	6/18/2021 4:43:53 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/18/2021 4:43:53 PM
1,2,4-Trimethylbenzene	5.0	1.0		µg/L	1	6/18/2021 4:43:53 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/18/2021 4:43:53 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/18/2021 4:43:53 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/18/2021 4:43:53 PM
Naphthalene	ND	2.0		µg/L	1	6/18/2021 4:43:53 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	6/18/2021 4:43:53 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	6/18/2021 4:43:53 PM
Acetone	10	10		µg/L	1	6/18/2021 4:43:53 PM
Bromobenzene	ND	1.0		µg/L	1	6/18/2021 4:43:53 PM
Bromodichloromethane	ND	1.0		µg/L	1	6/18/2021 4:43:53 PM
Bromoform	ND	1.0		µg/L	1	6/18/2021 4:43:53 PM
Bromomethane	ND	3.0		µg/L	1	6/18/2021 4:43:53 PM
2-Butanone	ND	10		µg/L	1	6/18/2021 4:43:53 PM
Carbon disulfide	ND	10		µg/L	1	6/18/2021 4:43:53 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	6/18/2021 4:43:53 PM
Chlorobenzene	ND	1.0		µg/L	1	6/18/2021 4:43:53 PM
Chloroethane	ND	2.0		µg/L	1	6/18/2021 4:43:53 PM
Chloroform	ND	1.0		µg/L	1	6/18/2021 4:43:53 PM
Chloromethane	ND	3.0		µg/L	1	6/18/2021 4:43:53 PM
2-Chlorotoluene	ND	1.0		µg/L	1	6/18/2021 4:43:53 PM
4-Chlorotoluene	ND	1.0		µg/L	1	6/18/2021 4:43:53 PM
cis-1,2-DCE	ND	1.0		µg/L	1	6/18/2021 4:43:53 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/18/2021 4:43:53 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/18/2021 4:43:53 PM
Dibromochloromethane	ND	1.0		µg/L	1	6/18/2021 4:43:53 PM
Dibromomethane	ND	1.0		µg/L	1	6/18/2021 4:43:53 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/18/2021 4:43:53 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/18/2021 4:43:53 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/18/2021 4:43:53 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/18/2021 4:43:53 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	6/18/2021 4:43:53 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	6/18/2021 4:43:53 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	6/18/2021 4:43:53 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	6/18/2021 4:43:53 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	6/18/2021 4:43:53 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix

Analytical Report
Lab Order **2106654**
Date Reported: **6/22/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: SIMCOE **Client Sample ID:** MW-3
Project: Mudge B 12R **Collection Date:** 6/10/2021 12:30:00 PM
Lab ID: 2106654-001 **Matrix:** GROUNDWA **Received Date:** 6/11/2021 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**
1,1-Dichloropropene	ND	1.0		µg/L	1	6/18/2021 4:43:53 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	6/18/2021 4:43:53 PM
2-Hexanone	ND	10		µg/L	1	6/18/2021 4:43:53 PM
Isopropylbenzene	ND	1.0		µg/L	1	6/18/2021 4:43:53 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	6/18/2021 4:43:53 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	6/18/2021 4:43:53 PM
Methylene Chloride	ND	3.0		µg/L	1	6/18/2021 4:43:53 PM
n-Butylbenzene	ND	3.0		µg/L	1	6/18/2021 4:43:53 PM
n-Propylbenzene	ND	1.0		µg/L	1	6/18/2021 4:43:53 PM
sec-Butylbenzene	ND	1.0		µg/L	1	6/18/2021 4:43:53 PM
Styrene	ND	1.0		µg/L	1	6/18/2021 4:43:53 PM
tert-Butylbenzene	ND	1.0		µg/L	1	6/18/2021 4:43:53 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/18/2021 4:43:53 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/18/2021 4:43:53 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/18/2021 4:43:53 PM
trans-1,2-DCE	ND	1.0		µg/L	1	6/18/2021 4:43:53 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/18/2021 4:43:53 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/18/2021 4:43:53 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/18/2021 4:43:53 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/18/2021 4:43:53 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/18/2021 4:43:53 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/18/2021 4:43:53 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	6/18/2021 4:43:53 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/18/2021 4:43:53 PM
Vinyl chloride	ND	1.0		µg/L	1	6/18/2021 4:43:53 PM
Xylenes, Total	2.4	1.5		µg/L	1	6/18/2021 4:43:53 PM
Surr: 1,2-Dichloroethane-d4	96.3	70-130		%Rec	1	6/18/2021 4:43:53 PM
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	6/18/2021 4:43:53 PM
Surr: Dibromofluoromethane	105	70-130		%Rec	1	6/18/2021 4:43:53 PM
Surr: Toluene-d8	103	70-130		%Rec	1	6/18/2021 4:43:53 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2106654**
22-Jun-21

Client: SIMCOE
Project: Mudge B 12R

Sample ID: **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **A79201** RunNo: **79201**
Prep Date: Analysis Date: **6/18/2021** SeqNo: **2780225** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	111	70	130			
Toluene	21	1.0	20.00	0	106	70	130			
Chlorobenzene	20	1.0	20.00	0	97.6	70	130			
1,1-Dichloroethene	24	1.0	20.00	0	118	70	130			
Trichloroethene (TCE)	21	1.0	20.00	0	107	70	130			
Surr: 1,2-Dichloroethane-d4	12		10.00		123	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	9.5		10.00		94.8	70	130			
Surr: Toluene-d8	9.6		10.00		96.3	70	130			

Sample ID: **mb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **A79201** RunNo: **79201**
Prep Date: Analysis Date: **6/18/2021** SeqNo: **2780227** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2106654**
22-Jun-21

Client: SIMCOE
Project: Mudge B 12R

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **A79201**	RunNo: **79201**
Prep Date:	Analysis Date: **6/18/2021**	SeqNo: **2780227** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2106654**
22-Jun-21

Client: SIMCOE
Project: Mudge B 12R

Sample ID: **mb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **A79201** RunNo: **79201**
Prep Date: Analysis Date: **6/18/2021** SeqNo: **2780227** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		107	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID: **2106654-001ams** SampType: **MS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **MW-3** Batch ID: **A79201** RunNo: **79201**
Prep Date: Analysis Date: **6/18/2021** SeqNo: **2780230** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	25	1.0	20.00	1.275	118	70	130			
Toluene	22	1.0	20.00	0	111	70	130			
Chlorobenzene	21	1.0	20.00	0	104	70	130			
1,1-Dichloroethene	23	1.0	20.00	0	116	70	130			
Trichloroethene (TCE)	23	1.0	20.00	0	115	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		105	70	130			
Surr: 4-Bromofluorobenzene	9.4		10.00		93.9	70	130			
Surr: Dibromofluoromethane	11		10.00		109	70	130			
Surr: Toluene-d8	10		10.00		105	70	130			

Sample ID: **2106654-001amsd** SampType: **MSD** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **MW-3** Batch ID: **A79201** RunNo: **79201**
Prep Date: Analysis Date: **6/18/2021** SeqNo: **2780231** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	1.275	103	70	130	12.9	20	
Toluene	21	1.0	20.00	0	105	70	130	5.42	20	
Chlorobenzene	20	1.0	20.00	0	98.7	70	130	5.36	20	
1,1-Dichloroethene	20	1.0	20.00	0	102	70	130	12.7	20	
Trichloroethene (TCE)	21	1.0	20.00	0	103	70	130	10.5	20	
Surr: 1,2-Dichloroethane-d4	11		10.00		109	70	130	0	0	
Surr: 4-Bromofluorobenzene	9.7		10.00		97.2	70	130	0	0	
Surr: Dibromofluoromethane	10		10.00		101	70	130	0	0	
Surr: Toluene-d8	10		10.00		102	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

Sample Log-In Check List

Client Name: **SIMCOE** Work Order Number: **2106654** RcptNo: **1**

Received By: **Juan Rojas** **6/11/2021 7:30:00 AM**

Completed By: **Desiree Dominguez** **6/11/2021 8:28:41 AM**

Reviewed By: SGL 6/11/21

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☑	No ☐	NA ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: (<2 or >12 unless noted)

Adjusted?

Checked by: KPG 6/11/21

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.7	Good	Yes			
2	0.4	Good	Yes			

Chain-of-Custody Record

Client: Simcoe LLC

Mailing Address: 1199 Main St. Ste 101 Durango Co 81301

Phone #: 805-338-9179

email or Fax#: Steven.mostad@IKAVEnergy.com

QA/QC Package:
☑ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance ☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☑ Standard ☐ Rush

Project Name: Mudge B #2R

Project #: TBD

Project Manager: Steven Mostad

Sampler: " "

On Ice: ☑ Yes ☐ No

# of Coolers: 2

Cooler Temp(including CF): 1.9-0.2 = 1.7 (°C)

0.6-0.2=0.4

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2106654	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
6/10/21	12:30	GW	MW-3	VOAx3	HCl/Ice	-001								X		

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
6/10/21	1610		Natasha Dye		6/11/21	1610
6/11/21	1730	Natasha Dye		courier	6/11/21	7:30

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

September 01, 2021

Steve Moskal
SIMCOE
1100 Main St.
Durango, CO 81301
TEL: (505) 330-9179
FAX

RE: MUDGE B 12R OrderNo.: 2108C74

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 2 sample(s) on 8/24/2021 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2108C74**
Date Reported: **9/1/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: SIMCOE **Client Sample ID:** MW #2
Project: MUDGE B 12R **Collection Date:** 8/20/2021 1:20:00 PM
Lab ID: 2108C74-001 **Matrix:** AQUEOUS **Received Date:** 8/24/2021 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**
Benzene	3.4	1.0		µg/L	1	8/28/2021 12:26:00 PM
Toluene	ND	1.0		µg/L	1	8/28/2021 12:26:00 PM
Ethylbenzene	ND	1.0		µg/L	1	8/28/2021 12:26:00 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	8/28/2021 12:26:00 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/28/2021 12:26:00 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/28/2021 12:26:00 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/28/2021 12:26:00 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/28/2021 12:26:00 PM
Naphthalene	ND	2.0		µg/L	1	8/28/2021 12:26:00 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	8/28/2021 12:26:00 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	8/28/2021 12:26:00 PM
Acetone	ND	10		µg/L	1	8/28/2021 12:26:00 PM
Bromobenzene	ND	1.0		µg/L	1	8/28/2021 12:26:00 PM
Bromodichloromethane	ND	1.0		µg/L	1	8/28/2021 12:26:00 PM
Bromoform	ND	1.0		µg/L	1	8/28/2021 12:26:00 PM
Bromomethane	ND	3.0		µg/L	1	8/28/2021 12:26:00 PM
2-Butanone	ND	10		µg/L	1	8/28/2021 12:26:00 PM
Carbon disulfide	ND	10		µg/L	1	8/28/2021 12:26:00 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	8/28/2021 12:26:00 PM
Chlorobenzene	ND	1.0		µg/L	1	8/28/2021 12:26:00 PM
Chloroethane	ND	2.0		µg/L	1	8/28/2021 12:26:00 PM
Chloroform	ND	1.0		µg/L	1	8/28/2021 12:26:00 PM
Chloromethane	ND	3.0		µg/L	1	8/28/2021 12:26:00 PM
2-Chlorotoluene	ND	1.0		µg/L	1	8/28/2021 12:26:00 PM
4-Chlorotoluene	ND	1.0		µg/L	1	8/28/2021 12:26:00 PM
cis-1,2-DCE	ND	1.0		µg/L	1	8/28/2021 12:26:00 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/28/2021 12:26:00 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/28/2021 12:26:00 PM
Dibromochloromethane	ND	1.0		µg/L	1	8/28/2021 12:26:00 PM
Dibromomethane	ND	1.0		µg/L	1	8/28/2021 12:26:00 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/28/2021 12:26:00 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/28/2021 12:26:00 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/28/2021 12:26:00 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/28/2021 12:26:00 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	8/28/2021 12:26:00 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	8/28/2021 12:26:00 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	8/28/2021 12:26:00 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	8/28/2021 12:26:00 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	8/28/2021 12:26:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix

Analytical Report
Lab Order **2108C74**
Date Reported: **9/1/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: SIMCOE **Client Sample ID:** MW #2
Project: MUDGE B 12R **Collection Date:** 8/20/2021 1:20:00 PM
Lab ID: 2108C74-001 **Matrix:** AQUEOUS **Received Date:** 8/24/2021 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**
1,1-Dichloropropene	ND	1.0		µg/L	1	8/28/2021 12:26:00 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	8/28/2021 12:26:00 PM
2-Hexanone	ND	10		µg/L	1	8/28/2021 12:26:00 PM
Isopropylbenzene	ND	1.0		µg/L	1	8/28/2021 12:26:00 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	8/28/2021 12:26:00 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	8/28/2021 12:26:00 PM
Methylene Chloride	ND	3.0		µg/L	1	8/28/2021 12:26:00 PM
n-Butylbenzene	ND	3.0		µg/L	1	8/28/2021 12:26:00 PM
n-Propylbenzene	ND	1.0		µg/L	1	8/28/2021 12:26:00 PM
sec-Butylbenzene	ND	1.0		µg/L	1	8/28/2021 12:26:00 PM
Styrene	ND	1.0		µg/L	1	8/28/2021 12:26:00 PM
tert-Butylbenzene	ND	1.0		µg/L	1	8/28/2021 12:26:00 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/28/2021 12:26:00 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/28/2021 12:26:00 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	8/28/2021 12:26:00 PM
trans-1,2-DCE	ND	1.0		µg/L	1	8/28/2021 12:26:00 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/28/2021 12:26:00 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/28/2021 12:26:00 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/28/2021 12:26:00 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/28/2021 12:26:00 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/28/2021 12:26:00 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/28/2021 12:26:00 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	8/28/2021 12:26:00 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/28/2021 12:26:00 PM
Vinyl chloride	ND	1.0		µg/L	1	8/28/2021 12:26:00 PM
Xylenes, Total	ND	1.5		µg/L	1	8/28/2021 12:26:00 PM
Surr: 1,2-Dichloroethane-d4	83.3	70-130		%Rec	1	8/28/2021 12:26:00 PM
Surr: 4-Bromofluorobenzene	98.3	70-130		%Rec	1	8/28/2021 12:26:00 PM
Surr: Dibromofluoromethane	81.8	70-130		%Rec	1	8/28/2021 12:26:00 PM
Surr: Toluene-d8	96.9	70-130		%Rec	1	8/28/2021 12:26:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2108C74**
Date Reported: **9/1/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: SIMCOE **Client Sample ID:** MW #3
Project: MUDGE B 12R **Collection Date:** 8/20/2021 1:03:00 PM
Lab ID: 2108C74-002 **Matrix:** AQUEOUS **Received Date:** 8/24/2021 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**
Benzene	ND	1.0		µg/L	1	8/28/2021 12:49:00 PM
Toluene	ND	1.0		µg/L	1	8/28/2021 12:49:00 PM
Ethylbenzene	ND	1.0		µg/L	1	8/28/2021 12:49:00 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	8/28/2021 12:49:00 PM
1,2,4-Trimethylbenzene	13	1.0		µg/L	1	8/28/2021 12:49:00 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/28/2021 12:49:00 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/28/2021 12:49:00 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/28/2021 12:49:00 PM
Naphthalene	ND	2.0		µg/L	1	8/28/2021 12:49:00 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	8/28/2021 12:49:00 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	8/28/2021 12:49:00 PM
Acetone	ND	10		µg/L	1	8/28/2021 12:49:00 PM
Bromobenzene	ND	1.0		µg/L	1	8/28/2021 12:49:00 PM
Bromodichloromethane	ND	1.0		µg/L	1	8/28/2021 12:49:00 PM
Bromoform	ND	1.0		µg/L	1	8/28/2021 12:49:00 PM
Bromomethane	ND	3.0		µg/L	1	8/28/2021 12:49:00 PM
2-Butanone	ND	10		µg/L	1	8/28/2021 12:49:00 PM
Carbon disulfide	ND	10		µg/L	1	8/28/2021 12:49:00 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	8/28/2021 12:49:00 PM
Chlorobenzene	ND	1.0		µg/L	1	8/28/2021 12:49:00 PM
Chloroethane	ND	2.0		µg/L	1	8/28/2021 12:49:00 PM
Chloroform	ND	1.0		µg/L	1	8/28/2021 12:49:00 PM
Chloromethane	ND	3.0		µg/L	1	8/28/2021 12:49:00 PM
2-Chlorotoluene	ND	1.0		µg/L	1	8/28/2021 12:49:00 PM
4-Chlorotoluene	ND	1.0		µg/L	1	8/28/2021 12:49:00 PM
cis-1,2-DCE	ND	1.0		µg/L	1	8/28/2021 12:49:00 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/28/2021 12:49:00 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/28/2021 12:49:00 PM
Dibromochloromethane	ND	1.0		µg/L	1	8/28/2021 12:49:00 PM
Dibromomethane	ND	1.0		µg/L	1	8/28/2021 12:49:00 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/28/2021 12:49:00 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/28/2021 12:49:00 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/28/2021 12:49:00 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/28/2021 12:49:00 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	8/28/2021 12:49:00 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	8/28/2021 12:49:00 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	8/28/2021 12:49:00 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	8/28/2021 12:49:00 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	8/28/2021 12:49:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2108C74**
Date Reported: **9/1/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: SIMCOE **Client Sample ID:** MW #3
Project: MUDGE B 12R **Collection Date:** 8/20/2021 1:03:00 PM
Lab ID: 2108C74-002 **Matrix:** AQUEOUS **Received Date:** 8/24/2021 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**
1,1-Dichloropropene	ND	1.0		µg/L	1	8/28/2021 12:49:00 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	8/28/2021 12:49:00 PM
2-Hexanone	ND	10		µg/L	1	8/28/2021 12:49:00 PM
Isopropylbenzene	ND	1.0		µg/L	1	8/28/2021 12:49:00 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	8/28/2021 12:49:00 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	8/28/2021 12:49:00 PM
Methylene Chloride	ND	3.0		µg/L	1	8/28/2021 12:49:00 PM
n-Butylbenzene	ND	3.0		µg/L	1	8/28/2021 12:49:00 PM
n-Propylbenzene	ND	1.0		µg/L	1	8/28/2021 12:49:00 PM
sec-Butylbenzene	ND	1.0		µg/L	1	8/28/2021 12:49:00 PM
Styrene	ND	1.0		µg/L	1	8/28/2021 12:49:00 PM
tert-Butylbenzene	ND	1.0		µg/L	1	8/28/2021 12:49:00 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/28/2021 12:49:00 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/28/2021 12:49:00 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	8/28/2021 12:49:00 PM
trans-1,2-DCE	ND	1.0		µg/L	1	8/28/2021 12:49:00 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/28/2021 12:49:00 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/28/2021 12:49:00 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/28/2021 12:49:00 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/28/2021 12:49:00 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/28/2021 12:49:00 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/28/2021 12:49:00 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	8/28/2021 12:49:00 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/28/2021 12:49:00 PM
Vinyl chloride	ND	1.0		µg/L	1	8/28/2021 12:49:00 PM
Xylenes, Total	ND	1.5		µg/L	1	8/28/2021 12:49:00 PM
Surr: 1,2-Dichloroethane-d4	84.0	70-130		%Rec	1	8/28/2021 12:49:00 PM
Surr: 4-Bromofluorobenzene	99.6	70-130		%Rec	1	8/28/2021 12:49:00 PM
Surr: Dibromofluoromethane	84.0	70-130		%Rec	1	8/28/2021 12:49:00 PM
Surr: Toluene-d8	96.0	70-130		%Rec	1	8/28/2021 12:49:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2108C74**
01-Sep-21

Client: SIMCOE
Project: MUDGE B 12R

Sample ID: **100ng 8260 lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R80854** RunNo: **80854**
Prep Date: Analysis Date: **8/27/2021** SeqNo: **2853387** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	8.2		10.00		81.8	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	7.9		10.00		79.3	70	130			
Surr: Toluene-d8	9.8		10.00		98.1	70	130			

Sample ID: **mb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R80854** RunNo: **80854**
Prep Date: Analysis Date: **8/27/2021** SeqNo: **2853388** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	8.3		10.00		82.8	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		99.8	70	130			
Surr: Dibromofluoromethane	8.1		10.00		81.2	70	130			
Surr: Toluene-d8	9.9		10.00		99.0	70	130			

Sample ID: **100ng 8260 lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R80878** RunNo: **80878**
Prep Date: Analysis Date: **8/28/2021** SeqNo: **2854004** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	98.2	70	130			
Toluene	21	1.0	20.00	0	104	70	130			
Chlorobenzene	20	1.0	20.00	0	99.6	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	91.3	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	90.4	70	130			
Surr: 1,2-Dichloroethane-d4	8.3		10.00		83.1	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	8.2		10.00		81.9	70	130			
Surr: Toluene-d8	10		10.00		99.6	70	130			

Sample ID: **mb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R80878** RunNo: **80878**
Prep Date: Analysis Date: **8/28/2021** SeqNo: **2854005** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2108C74**
01-Sep-21

Client: SIMCOE
Project: MUDGE B 12R

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R80878**	RunNo: **80878**
Prep Date:	Analysis Date: **8/28/2021**	SeqNo: **2854005** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2108C74**
01-Sep-21

Client: SIMCOE
Project: MUDGE B 12R

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R80878**	RunNo: **80878**
Prep Date:	Analysis Date: **8/28/2021**	SeqNo: **2854005** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.4		10.00		83.8	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.0	70	130			
Surr: Dibromofluoromethane	8.4		10.00		83.9	70	130			
Surr: Toluene-d8	9.8		10.00		97.8	70	130			

Sample ID: **100ng lcs2**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **B80878**	RunNo: **80878**
Prep Date:	Analysis Date: **8/28/2021**	SeqNo: **2855673** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	8.3		10.00		83.3	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		100	70	130			
Surr: Dibromofluoromethane	8.3		10.00		83.1	70	130			
Surr: Toluene-d8	9.7		10.00		97.2	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2108C74**
01-Sep-21

Client: SIMCOE
Project: MUDGE B 12R

Sample ID: **mb2** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R80878** RunNo: **80878**
Prep Date: Analysis Date: **8/29/2021** SeqNo: **2855674** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2108C74**
01-Sep-21

Client: SIMCOE
Project: MUDGE B 12R

Sample ID: **mb2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R80878**	RunNo: **80878**
Prep Date:	Analysis Date: **8/29/2021**	SeqNo: **2855674** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.6		10.00		85.6	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		98.5	70	130			
Surr: Dibromofluoromethane	8.3		10.00		83.2	70	130			
Surr: Toluene-d8	9.7		10.00		97.4	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

Sample Log-In Check List

Client Name: SIMCOE Work Order Number: 2108C74 RcptNo: 1

Received By: Cheyenne Cason 8/24/2021 7:00:00 AM

Completed By: Sean Livingston 8/24/2021 11:32:06 AM

Reviewed By: KPA 8/24/21

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☑	No ☐	NA ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: (<2 or >12 unless noted)

Adjusted?

Checked by: SPA 8.24.21

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.8	Good				
2	1.1	Good				
3	1.0	Good				

Chain-of-Custody Record

Client: SIMCOE LLC / COTTONWOOD CONSULTING

Mailing Address: 1199 Main St., Suite # 101
Durango, Colo. 81301

Phone #: (505) 330-9179

email or Fax#: steven.moskal@ikavenergy.com

QA/QC Package:
☑ Standard ☐ Level 4 (Full Validation)

Accreditation:
☐ NELAP ☐ Other _____
☐ EDD (Type) _____

Turn-Around Time:
☑ Standard ☐ Rush _____

Project Name:
MUDGE B # 12R

Project #:

Project Manager:
Steve Moskal - SIMCOE LLC

Sampler: **Emma Millar - Cottonwood**
On Ice: ☒ Yes ☐ No
Sample Temperature: See Remark

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 2109C74	BTEX + MTBE + TMB's (8021B)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	Cation / Anion Balance	Total Dissolved Solids		Grab sample	5 pt. composite sample	Air Bubbles (Y or N)
8/20/21	1320	WATER	MW # 2	40 ml VOA - 2	HCl & Cool	001										√				√		
8/20/21	1303	WATER	MW # 3	40 ml VOA - 2	HCl & Cool	002										√				√		

Analysis Request

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/20/21	1430			8/20/21	1430
8/23/21	1430			8/23/21	1430
8/23/21	1827			8/24/21	0700

Remarks: **BILL DIRECTLY TO IKAV ENERGY INC.**

CONTACT: **Steve Moskal** **PO to be provided**

1.8 - 0 = 1.8 1.1 - 0 = 1.1
1.0 - 0 = 1.0

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

December 17, 2021

Julie Best
SIMCOE
1100 Main St.
Durango, CO 81301
TEL: (505) 330-9179
FAX:

RE: Mudge B 12R OrderNo.: 2112613

Dear Julie Best:

Hall Environmental Analysis Laboratory received 2 sample(s) on 12/9/2021 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2112613**
Date Reported: **12/17/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: SIMCOE **Client Sample ID:** MW #2
Project: Mudge B 12R **Collection Date:** 12/8/2021 1:40:00 PM
Lab ID: 2112613-001 **Matrix:** AQUEOUS **Received Date:** 12/9/2021 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **JR**
Benzene	1.7	1.0		µg/L	1	12/14/2021 1:02:54 AM
Toluene	ND	1.0		µg/L	1	12/14/2021 1:02:54 AM
Ethylbenzene	ND	1.0		µg/L	1	12/14/2021 1:02:54 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/14/2021 1:02:54 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/14/2021 1:02:54 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/14/2021 1:02:54 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/14/2021 1:02:54 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/14/2021 1:02:54 AM
Naphthalene	ND	2.0		µg/L	1	12/14/2021 1:02:54 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	12/14/2021 1:02:54 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	12/14/2021 1:02:54 AM
Acetone	ND	10		µg/L	1	12/14/2021 1:02:54 AM
Bromobenzene	ND	1.0		µg/L	1	12/14/2021 1:02:54 AM
Bromodichloromethane	ND	1.0		µg/L	1	12/14/2021 1:02:54 AM
Bromoform	ND	1.0		µg/L	1	12/14/2021 1:02:54 AM
Bromomethane	ND	3.0		µg/L	1	12/14/2021 1:02:54 AM
2-Butanone	ND	10		µg/L	1	12/14/2021 1:02:54 AM
Carbon disulfide	ND	10		µg/L	1	12/14/2021 1:02:54 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	12/14/2021 1:02:54 AM
Chlorobenzene	ND	1.0		µg/L	1	12/14/2021 1:02:54 AM
Chloroethane	ND	2.0		µg/L	1	12/14/2021 1:02:54 AM
Chloroform	ND	1.0		µg/L	1	12/14/2021 1:02:54 AM
Chloromethane	ND	3.0		µg/L	1	12/14/2021 1:02:54 AM
2-Chlorotoluene	ND	1.0		µg/L	1	12/14/2021 1:02:54 AM
4-Chlorotoluene	ND	1.0		µg/L	1	12/14/2021 1:02:54 AM
cis-1,2-DCE	ND	1.0		µg/L	1	12/14/2021 1:02:54 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/14/2021 1:02:54 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/14/2021 1:02:54 AM
Dibromochloromethane	ND	1.0		µg/L	1	12/14/2021 1:02:54 AM
Dibromomethane	ND	1.0		µg/L	1	12/14/2021 1:02:54 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/14/2021 1:02:54 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/14/2021 1:02:54 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/14/2021 1:02:54 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/14/2021 1:02:54 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	12/14/2021 1:02:54 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	12/14/2021 1:02:54 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	12/14/2021 1:02:54 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	12/14/2021 1:02:54 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	12/14/2021 1:02:54 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2112613**
Date Reported: **12/17/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: SIMCOE **Client Sample ID:** MW #2
Project: Mudge B 12R **Collection Date:** 12/8/2021 1:40:00 PM
Lab ID: 2112613-001 **Matrix:** AQUEOUS **Received Date:** 12/9/2021 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **JR**
1,1-Dichloropropene	ND	1.0		µg/L	1	12/14/2021 1:02:54 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	12/14/2021 1:02:54 AM
2-Hexanone	ND	10		µg/L	1	12/14/2021 1:02:54 AM
Isopropylbenzene	ND	1.0		µg/L	1	12/14/2021 1:02:54 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	12/14/2021 1:02:54 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	12/14/2021 1:02:54 AM
Methylene Chloride	ND	3.0		µg/L	1	12/14/2021 1:02:54 AM
n-Butylbenzene	ND	3.0		µg/L	1	12/14/2021 1:02:54 AM
n-Propylbenzene	ND	1.0		µg/L	1	12/14/2021 1:02:54 AM
sec-Butylbenzene	ND	1.0		µg/L	1	12/14/2021 1:02:54 AM
Styrene	ND	1.0		µg/L	1	12/14/2021 1:02:54 AM
tert-Butylbenzene	ND	1.0		µg/L	1	12/14/2021 1:02:54 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/14/2021 1:02:54 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/14/2021 1:02:54 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/14/2021 1:02:54 AM
trans-1,2-DCE	ND	1.0		µg/L	1	12/14/2021 1:02:54 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/14/2021 1:02:54 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/14/2021 1:02:54 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/14/2021 1:02:54 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/14/2021 1:02:54 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/14/2021 1:02:54 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/14/2021 1:02:54 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	12/14/2021 1:02:54 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/14/2021 1:02:54 AM
Vinyl chloride	ND	1.0		µg/L	1	12/14/2021 1:02:54 AM
Xylenes, Total	ND	1.5		µg/L	1	12/14/2021 1:02:54 AM
Surr: 1,2-Dichloroethane-d4	113	70-130		%Rec	1	12/14/2021 1:02:54 AM
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	12/14/2021 1:02:54 AM
Surr: Dibromofluoromethane	109	70-130		%Rec	1	12/14/2021 1:02:54 AM
Surr: Toluene-d8	97.7	70-130		%Rec	1	12/14/2021 1:02:54 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report
Lab Order **2112613**
Date Reported: **12/17/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: SIMCOE **Client Sample ID:** MW #3
Project: Mudge B 12R **Collection Date:** 12/8/2021 1:28:00 PM
Lab ID: 2112613-002 **Matrix:** AQUEOUS **Received Date:** 12/9/2021 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **JR**
Benzene	1.2	1.0		µg/L	1	12/14/2021 1:31:15 AM
Toluene	ND	1.0		µg/L	1	12/14/2021 1:31:15 AM
Ethylbenzene	ND	1.0		µg/L	1	12/14/2021 1:31:15 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/14/2021 1:31:15 AM
1,2,4-Trimethylbenzene	14	1.0		µg/L	1	12/14/2021 1:31:15 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/14/2021 1:31:15 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/14/2021 1:31:15 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/14/2021 1:31:15 AM
Naphthalene	ND	2.0		µg/L	1	12/14/2021 1:31:15 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	12/14/2021 1:31:15 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	12/14/2021 1:31:15 AM
Acetone	ND	10		µg/L	1	12/14/2021 1:31:15 AM
Bromobenzene	ND	1.0		µg/L	1	12/14/2021 1:31:15 AM
Bromodichloromethane	ND	1.0		µg/L	1	12/14/2021 1:31:15 AM
Bromoform	ND	1.0		µg/L	1	12/14/2021 1:31:15 AM
Bromomethane	ND	3.0		µg/L	1	12/14/2021 1:31:15 AM
2-Butanone	ND	10		µg/L	1	12/14/2021 1:31:15 AM
Carbon disulfide	ND	10		µg/L	1	12/14/2021 1:31:15 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	12/14/2021 1:31:15 AM
Chlorobenzene	ND	1.0		µg/L	1	12/14/2021 1:31:15 AM
Chloroethane	ND	2.0		µg/L	1	12/14/2021 1:31:15 AM
Chloroform	ND	1.0		µg/L	1	12/14/2021 1:31:15 AM
Chloromethane	ND	3.0		µg/L	1	12/14/2021 1:31:15 AM
2-Chlorotoluene	ND	1.0		µg/L	1	12/14/2021 1:31:15 AM
4-Chlorotoluene	ND	1.0		µg/L	1	12/14/2021 1:31:15 AM
cis-1,2-DCE	ND	1.0		µg/L	1	12/14/2021 1:31:15 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/14/2021 1:31:15 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/14/2021 1:31:15 AM
Dibromochloromethane	ND	1.0		µg/L	1	12/14/2021 1:31:15 AM
Dibromomethane	ND	1.0		µg/L	1	12/14/2021 1:31:15 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/14/2021 1:31:15 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/14/2021 1:31:15 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/14/2021 1:31:15 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/14/2021 1:31:15 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	12/14/2021 1:31:15 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	12/14/2021 1:31:15 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	12/14/2021 1:31:15 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	12/14/2021 1:31:15 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	12/14/2021 1:31:15 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report
Lab Order **2112613**
Date Reported: **12/17/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: SIMCOE **Client Sample ID:** MW #3
Project: Mudge B 12R **Collection Date:** 12/8/2021 1:28:00 PM
Lab ID: 2112613-002 **Matrix:** AQUEOUS **Received Date:** 12/9/2021 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **JR**
1,1-Dichloropropene	ND	1.0		µg/L	1	12/14/2021 1:31:15 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	12/14/2021 1:31:15 AM
2-Hexanone	ND	10		µg/L	1	12/14/2021 1:31:15 AM
Isopropylbenzene	ND	1.0		µg/L	1	12/14/2021 1:31:15 AM
4-Isopropyltoluene	1.5	1.0		µg/L	1	12/14/2021 1:31:15 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	12/14/2021 1:31:15 AM
Methylene Chloride	ND	3.0		µg/L	1	12/14/2021 1:31:15 AM
n-Butylbenzene	ND	3.0		µg/L	1	12/14/2021 1:31:15 AM
n-Propylbenzene	ND	1.0		µg/L	1	12/14/2021 1:31:15 AM
sec-Butylbenzene	ND	1.0		µg/L	1	12/14/2021 1:31:15 AM
Styrene	ND	1.0		µg/L	1	12/14/2021 1:31:15 AM
tert-Butylbenzene	ND	1.0		µg/L	1	12/14/2021 1:31:15 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/14/2021 1:31:15 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/14/2021 1:31:15 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/14/2021 1:31:15 AM
trans-1,2-DCE	ND	1.0		µg/L	1	12/14/2021 1:31:15 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/14/2021 1:31:15 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/14/2021 1:31:15 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/14/2021 1:31:15 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/14/2021 1:31:15 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/14/2021 1:31:15 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/14/2021 1:31:15 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	12/14/2021 1:31:15 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/14/2021 1:31:15 AM
Vinyl chloride	ND	1.0		µg/L	1	12/14/2021 1:31:15 AM
Xylenes, Total	ND	1.5		µg/L	1	12/14/2021 1:31:15 AM
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	12/14/2021 1:31:15 AM
Surr: 4-Bromofluorobenzene	87.3	70-130		%Rec	1	12/14/2021 1:31:15 AM
Surr: Dibromofluoromethane	104	70-130		%Rec	1	12/14/2021 1:31:15 AM
Surr: Toluene-d8	98.9	70-130		%Rec	1	12/14/2021 1:31:15 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2112613**
17-Dec-21

Client: SIMCOE
Project: Mudge B 12R

Sample ID: **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R84495** RunNo: **84495**
Prep Date: Analysis Date: **12/13/2021** SeqNo: **2969399** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	98.3	70	130			
Toluene	20	1.0	20.00	0	102	70	130			
Chlorobenzene	21	1.0	20.00	0	105	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	97.1	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	94.6	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		106	70	130			
Surr: Dibromofluoromethane	9.9		10.00		98.6	70	130			
Surr: Toluene-d8	9.8		10.00		98.2	70	130			

Sample ID: **mb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R84495** RunNo: **84495**
Prep Date: Analysis Date: **12/13/2021** SeqNo: **2969421** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2112613**
17-Dec-21

Client: SIMCOE
Project: Mudge B 12R

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R84495**	RunNo: **84495**
Prep Date:	Analysis Date: **12/13/2021**	SeqNo: **2969421** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2112613**

17-Dec-21

Client: SIMCOE

Project: Mudge B 12R

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R84495**	RunNo: **84495**
Prep Date:	Analysis Date: **12/13/2021**	SeqNo: **2969421** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.9		10.00		98.9	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		107	70	130			
Surr: Dibromofluoromethane	9.9		10.00		98.9	70	130			
Surr: Toluene-d8	9.8		10.00		98.5	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

Sample Log-In Check List

Client Name: SIMCOE Work Order Number: 2112613 RcptNo: 1

Received By: **Tracy Casarrubias** 12/9/2021 7:25:00 AM

Completed By: **Tracy Casarrubias** 12/9/2021 10:16:10 AM

Reviewed By: KPC 12/10/21

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☑	No ☐	NA ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? _____

Checked by: JR 12/10/21

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.1	Good	Yes			

Chain-of-Custody Record

Client: Simcoe LLC

Mailing Address: 1199 Main Ave Suite 101
Durango, CO 81301

Phone #: 970-394-0131

email or Fax#: julie.best@ikavenergy.com

QA/QC Package:
■ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other_____
☐ EDD (Type) _____

Turn-Around Time:
■ Standard ☐ Rush_____

Project Name: Mudge B #12R

Project #:

Project Manager: Julie Best

Sampler: Emma Millar
On Ice: ☑ Yes ☐ No
# of Coolers: 1
Cooler Temp(including CF): 3.1 - 0 = 3.1

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2112613
12/8/21	1340	WATER	MW #2	40ml VOA x 2	HCl & cool	001
"	1328	WATER	MW # 3	40ml VOA x 2	HCl & cool	002

Analysis Request

BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	Cations/Anions	Fe, Cu, Mn, Zn					
							■									
							■									

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
12/8/21	1515					
12/8/21	1847			Courier	12/9/21	7:25

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

September 23, 2021

Julie Best
SIMCOE
1100 Main St.
Durango, CO 81301
TEL: (505) 330-9179
FAX:

RE: Mudge B 012R OrderNo.: 2109861

Dear Julie Best:

Hall Environmental Analysis Laboratory received 1 sample(s) on 9/16/2021 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2109861**
Date Reported: **9/23/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: SIMCOE **Client Sample ID:** SVE
Project: Mudge B 012R **Collection Date:** 9/15/2021 11:30:00 AM
Lab ID: 2109861-001 **Matrix:** AIR **Received Date:** 9/16/2021 8:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	6200	50		µg/L	10	9/21/2021 10:23:50 AM
Surr: BFB	681	37.3-213	S	%Rec	10	9/21/2021 10:23:50 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	1.2	0.10		µg/L	1	9/21/2021 9:36:39 AM
Toluene	7.0	0.10		µg/L	1	9/21/2021 9:36:39 AM
Ethylbenzene	4.3	0.10		µg/L	1	9/21/2021 9:36:39 AM
Xylenes, Total	28	2.0		µg/L	10	9/21/2021 10:23:50 AM
Surr: 4-Bromofluorobenzene	461	70-130	S	%Rec	1	9/21/2021 9:36:39 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2109861**
23-Sep-21

Client: SIMCOE
Project: Mudge B 012R

Sample ID: **2109861-001adup** SampType: **DUP** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **SVE** Batch ID: **B81432** RunNo: **81432**
Prep Date: Analysis Date: **9/21/2021** SeqNo: **2877297** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	5900	50						3.60	20	
Surr: BFB	130000		20000		666	37.3	213	0	0	S

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2109861**
23-Sep-21

Client: SIMCOE
Project: Mudge B 012R

Sample ID: **2109861-001adup** SampType: **DUP** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **SVE** Batch ID: **D81432** RunNo: **81432**
Prep Date: Analysis Date: **9/21/2021** SeqNo: **2877319** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.2	1.0						4.07	20	
Toluene	7.4	1.0						3.62	20	
Ethylbenzene	4.0	1.0						2.04	20	
Xylenes, Total	28	2.0						2.14	20	
Surr: 4-Bromofluorobenzene	20		20.00		97.7	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

Sample Log-In Check List

Client Name: **SIMCOE** Work Order Number: **2109861** RcptNo: **1**

Received By: **Sean Livingston** **9/16/2021 8:10:00 AM** Sean Livingston

Completed By: **Sean Livingston** **9/16/2021 2:00:39 PM** Sean Livingston

Reviewed By: JR 9/16/21

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☐ No ☐ NA ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: (<2 or >12 unless noted)
Adjusted?
Checked by: KPG 9/16/21

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	-0.3	Good				
2	3.7	Good				

Chain-of-Custody Record

Client: Simcoe LLC

Mailing Address: 1199 Main St. Suite 101
Durango, CO 81301

Phone #: 970-394-0131

email or Fax#: julie.best@ikavenergy.com

QA/QC Package:
■ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☐ EDD (Type)

Turn-Around Time:
■ Standard ☐ Rush

Project Name: Mudge B 012R

Project #:

Project Manager: Julie Best

Sampler: ~~Emma Millar~~ Kyle Siesser

On Ice: ☑ Yes ☐ No

# of Coolers: 2

Cooler Temp(including CF): -0.3+0=-0.3°C
3.7+0=3.7°C

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	BTEX 8021	TPH 8015
9/15/21	1130	Gas	SVE	1 Tedlar Bag	—	2109861 001											X	X

Analysis Request

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
9/15/21	1308	Kyle Siesser	Chris Walters		9/15/21	1308
9/15/21	1824	Chris Walters	Jose	courier	9/16/21	8:10

Remarks: Samples not frozen
See 9/16/21

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 74755

CONDITIONS

Operator: SIMCOE LLC 1199 Main Ave., Suite 101 Durango, CO 81301	OGRID: 329736
	Action Number: 74755
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
michael.buchanan	Review of the SIMCOE LLC Remediation Report: Content Satisfactory 1. Continue to conduct quarterly groundwater monitoring 2. Continue to operate the SVE system and submit reports regularly 3. Submit the 2023 Remediation Report by or before April 1, 2024.	9/7/2023