REVIEWED
By Mike Buchanan at 2:55 pm, Sep 13, 2024

MORNINGSTAR PARTNERS

Review of the 2023 Buckeye Groundwater Q1 & Q2 Quarterly Reporting
Abatement report: content satisfactory
1. Continue O&M of the SVE system on-site.
2. Conduct air sampling for COCs as prescribed and scheduled. Submit for analysis of BTEX, TPH, O2 and CO2.
3. Submit either the next annual report or quarterly progress report as scheduled for December 2024 or March 1, 2025.

August 8, 2024

EMNRD-Oil Conservation Division
Attn: Michael Buchanan
Environmental Specialist Advisor
1220 South St. Francis Drive
Santa Fe, NM 87505

RE: Buckeye Groundwater nAUTOFGP000135 Q1 & Q2 2024
Groundwater Abatement Plan Application ID: 196869
Buckeye Compressor Station - Lea County, New Mexico

Mr. Buchanan,

SVE operations began on October 25, 2023, with the first quarter of January 25, 2024. The first quarterly report covering this time period and was submitted on March 22, 2024 and was reflected as approved on 4. The remainder of January through the end of April 2024 would constitut quarter or Q1 of 2024. Q2 of 2024 constitutes May of 2024 through July of

The April 26, 2024 application approval (Application ID: 322063) lowing conditions:

1. *Because the down-hole pumps are not operating as intended after being installed in the MW-9 and EW-1, these may be suspended and removed from service.*

    - This system has been removed from service.

2. *Continue to run SVE system and conduct O&M as scheduled and EW-1 may be added to the site recovery system.*

    - The SVE system has been in continuous use and upon expansion, EW-1 data will be included with future reporting.

3. *Conduct air sampling on a quarterly basis per EPA method 8015B*

    - Quarterly sampling has been completed. However, as noted below in the SVE System summary, the Q1 2024 samples were lost or destroyed. Q2 2024 data is supplied in this report.

4. *Submit the next SVE quarterly report by August 1, 2024.*

    - Pending Lab results delayed Q1 reporting. Upon discovery that Q1 lab samples were lost or destroyed, reporting for both Q1 and Q2 were initiated to include updated laboratory sample analysis.

Please find summary of required reporting activities, and or associated discrepancies associated with the conditional approval and approved remediation efforts.:

LNAPL Recovery Systems

As noted in the pilot report submitted on March 22, 2024 MorningStar requested that discontinuation of the LNAPL recovery system be made at their digression. With approval for this discontinuation provided in the April 26, 2024 email (**Condition 1**), this system has never been restarted and will not be returned to service.

Soil Vapor Extraction System

The approved Soil Vapor Extraction (SVE) system began operations on October 25th, at 8:45am and has been in continuous service. Quarterly (Q1) sample collection was completed on April 24th, 2024. The extracted samples were transported to Pace Analytical with shipment verification but the chain of custody was missing upon receipt and analysis was not completed. Upon inquiry with the laboratory, the samples were initially reported to being held and available for analysis. Subsequent notification was made later that the samples were destroyed and results would not be available. All laboratory correspondence and shipping verification can be made available upon request.

Q2-2024 (May-July) quarterly sample collection was completed on July 17th, 2024. The extracted samples were transported to Pace Analytical under chain of custody with associated analysis and records provided within this report.

Handheld analyzer data collection was initiated for each (VEP) beginning on October 25th and has continue to be collected at the required intervals prescribed by the minimum recordkeeping timeline within the approved Abatement Plan. All analytical data and records are provided in **Appendix B** of this report. The following records have been supplied for review with a compliance summary provided below.:

1. *Morningstar's SVE system must be designed to have a minimum of 90% operational runtime, 24/7 start to finish.*

- The SVE **Q1 2024** runtime has met the 90% online requirement with the 8:15am on January 26, 2024 through 8:00 am on April 30, 2024 recordkeeping. Total period hours were 2286, with a 2278 hour run record creating a **99.65%** runtime rate.

- The SVE **Q2 2024** runtime has met the 90% online requirement with the 8:00am on April 30, 2024 through 8:00 am on July 31, 2024 recordkeeping. Total period hours were 2208, with a 2181 hour run record creating a **98.77%** runtime rate.

2. *On-site analog or digital runtime counter must be installed and viewable to OCD personnel. Any alternative method must be explained and pre-approved by OCD.*

- A runtime meter is installed in the SVE unit control panel and logs have been provided. In addition to the control panel runtime meter, MorningStar installed an alert beacon to indicated any blower motor downtime to alert plant staff remotely in the event of any shutdowns.

3. *The following field data measurement parameters will be required and reported (prior to reaching vacuum pump);*
    a. *Total Extracted Flow Rate via a Flow Meter;*
    b. *Flow Rates from each vapor extraction point/well (VEP);*
    c. *Volatile Organic Compound (VOC) Concentrations for each VEP and/or VEP cluster being implemented via Handheld Gas Analyzer (e.g.– Photo Ionization Detector (PID);*
    d. *Record vacuum pressure at each VEP and/or VEP cluster being implemented;*
    e. *Oxygen (O_2) and carbon di-oxide (CO_2) levels via hand-held analyzers from each VEP and/or VEP cluster being implemented, prior to reaching vacuum pump and at discharge orifice or vent stack.*

- All required data has been logged during each sampling event and provided within this report.

4. *The following minimum timeline will be required for the above data recordings:*
    a. *Daily for the first week;*
    b. *Weekly for the next three (3) months;*
    c. *Monthly thereafter for the first calendar year;*
    d. *Then contingent upon the recorded data output.*

- Monthly Data collection has not been interrupted and collection procedures have been established. All Data collection records are provided within the attachments of this report.

5. *Any water condensation will be categorized as oil field waste and must be disposed of accordingly. System modifications to address increased water collection and disposal must be pre-approved by OCD.*

- Only free product condensate has been recovered to date. Since initial reporting each monthly log has reflected no additional accumulation. Warmer temperatures are suspected to have reduced the condensing free product accumulation.

6. *Extracted vapor sampling (prior to reaching vacuum pump) for laboratory testing will be required as follows:*
    a. *Approximately 15-30 minutes and approximately 8-10 hours after startup (or at the end of the same day if initial sample collected in early morning), one full round of sampling for constituents noted in b, c, & d below;*
    b. *BTEX per US EPA Method 8021B or 8260B;*
    c. *TPH per US EPA Method 8015M;*
    d. *O_2 and CO_2.*

NOTE: *BTEX, TPH, O_2, and CO_2 will be analyzed Via* ***EPA Method TO-15*** *and* ***ASTM 1946D****. The change was approved by Nelson Velez on August 14, 2023.*

- All required sampling has met but as previously described, the Q1-2024 samples were lost prior to analysis. Q2-2024 sampling methodology requirements and has been completed by an accredited laboratory and findings have been provided within this report.

7. *The following timeline will be required for the above laboratory sampling elements:*
    a. *Weekly - next three (3) weeks (first month);*
    b. *Bi-weekly (twice a month) – next two (2) months (first quarter);*
    c. *Bi-monthly (every other month) - next nine (9) months (first year);*
    d. *Quarterly – year #2 until diminishing returns has been consistently documented.*

- System and each VEP were sampled on April 20, 2024 and July 17, 2024. While the Q1 samples were lost, the Q2 data was analyzed and has been supplied within this report.

8. *MorningStar must submit to OCD quarterly reports for the first 2 years of operation, then bi-annual thereafter, detailing the following:*
    a. *Summary of remediation activity;*
    b. *Chart of O_2 & CO_2 levels over time;*
    c. *SVE runtime;*
    d. *SVE mass removal;*
    e. *Product recovery, if applicable;*
    f. *Laboratory air sample analysis, if applicable.*

- This report serves at the second and third of the quarterly reports for the initial 2-year period.
    a. *Summary data has been included;*

*b. O_2 & CO_2 Charts have been supplied in **Appendix A;***
*c. SVE runtime logs are supplied in **Appendix A;***
*d. SVE mass removal calculations have been supplied in **Appendix A;***
*e. The product recovery log table is supplied in **Appendix A;***
*f. Laboratory air samples are provided in **Appendix A;***

9. *MorningStar must notify OCD of its initial system startup which is required within 90 days of this approval. If this cannot be achieved, MorningStar must verify the delay within its request for a time extension.*

- All previous correspondence has been provided with continued authorization supplied from EMNRD on April 26th, 2024.

10. *MorningStar must submit to OCD a closure plan prior to initiating confirmation sampling for final remediation termination.*

- A closure plan will be submitted upon project completion for approval.

If you have any questions or require further assistance, please contact Dan Guillotte (817) 996-4493 or email dguillotte@txopartners.com or Alan Kane at (281) 639-9590 or email: alanjkane@comcast.net, or Russell Hamm at (918) 693-4833 or email: rhammenviro@gmail.com.

Respectfully,

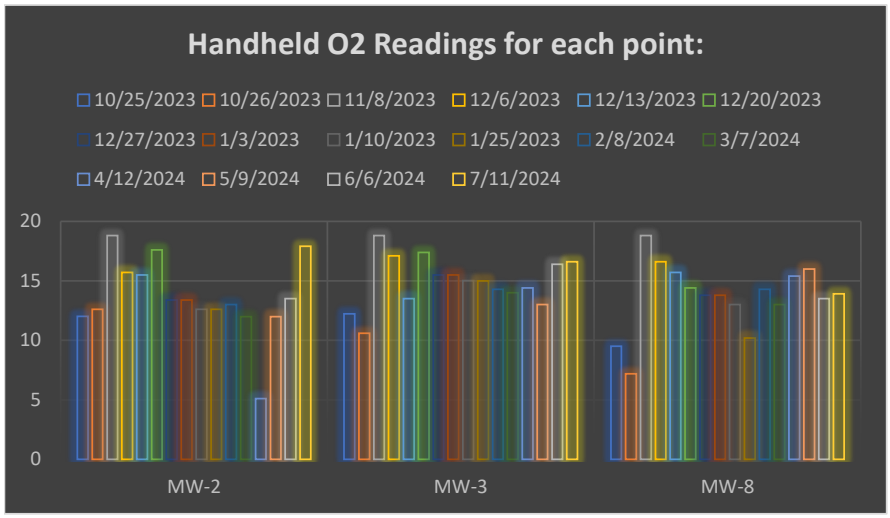
Dan Guillotte
Manager Environmental Health and Safety

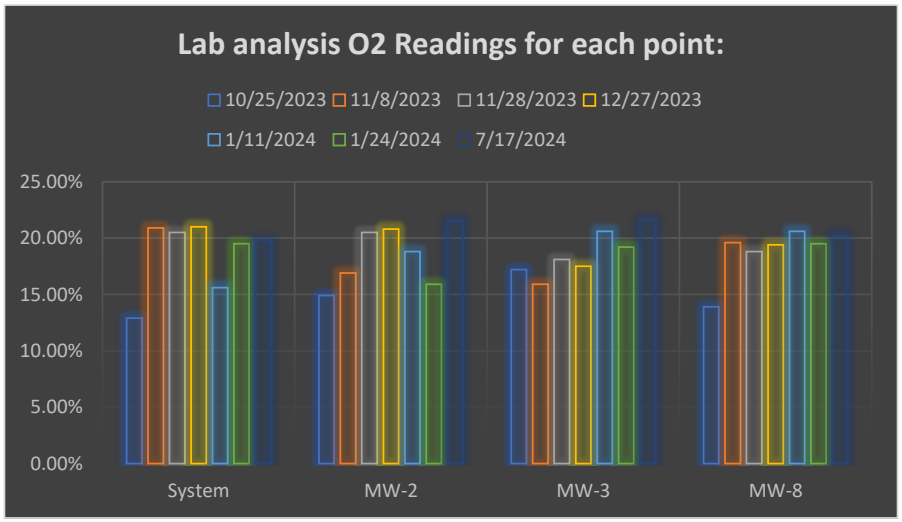
cc: Kane Environmental Engineering, Inc.
File

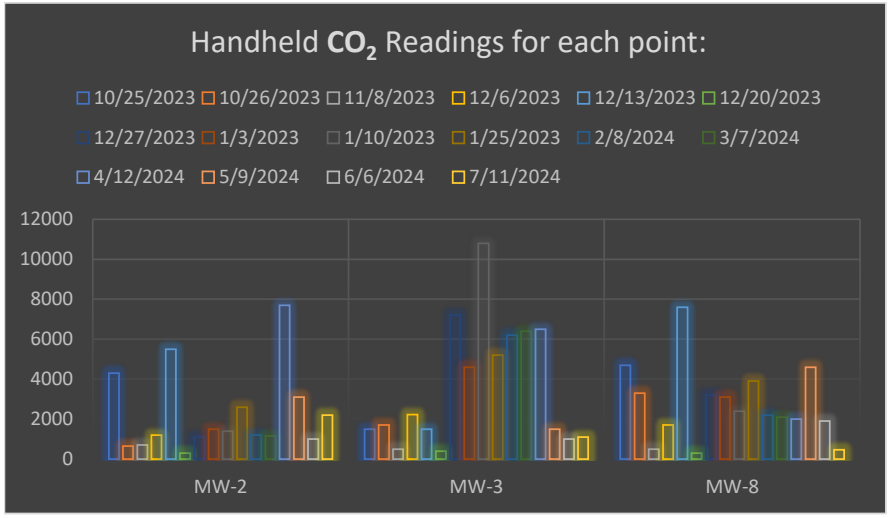
Appendix A -Soil Vapor Extraction (SVE) Systems

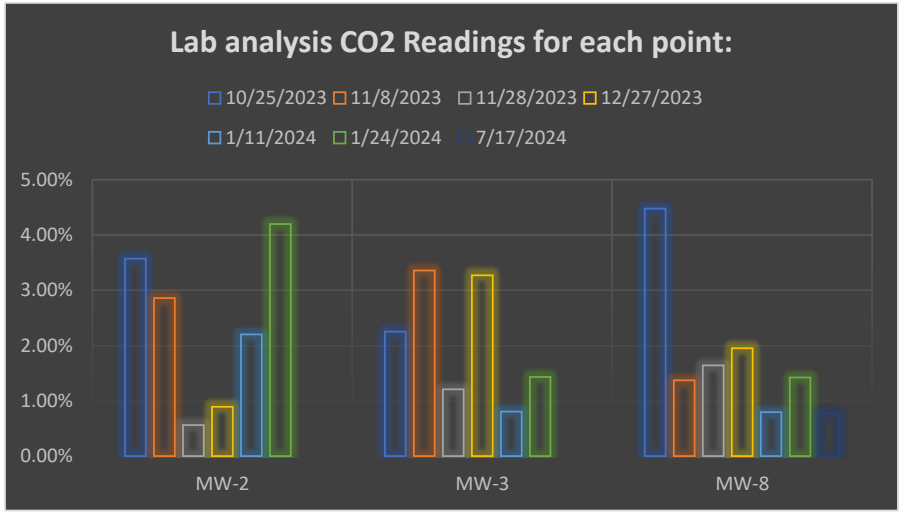
Quarterly Report Required SVE System Data

b. Chart of O_2 & CO_2 levels over time


Handheld O2 Readings for each point:
10/25/2023
10/26/2023
11/8/2023
12/6/2023
12/13/2023
12/20/2023
12/27/2023
1/3/2023
1/10/2023
1/25/2023
2/8/2024
3/7/2024
4/12/2024
5/9/2024
6/6/2024
7/11/2024
20
15
10
5
0
MW-2
MW-3
MW-8


Lab analysis O2 Readings for each point:
10/25/2023
11/8/2023
11/28/2023
12/27/2023
1/11/2024
1/24/2024
7/17/2024
25.00%
20.00%
15.00%
10.00%
5.00%
0.00%
System
MW-2
MW-3
MW-8


Handheld CO2 Readings for each point:
10/25/2023
10/26/2023
11/8/2023
12/6/2023
12/13/2023
12/20/2023
12/27/2023
1/3/2023
1/10/2023
1/25/2023
2/8/2024
3/7/2024
4/12/2024
5/9/2024
6/6/2024
7/11/2024
12000
10000
8000
6000
4000
2000
0
MW-2
MW-3
MW-8


Lab analysis CO2 Readings for each point:
10/25/2023
11/8/2023
11/28/2023
12/27/2023
1/11/2024
1/24/2024
7/17/2024
5.00%
4.00%
3.00%
2.00%
1.00%
0.00%
MW-2
MW-3
MW-8

c. SVE Runtime

MorningStar Partners Soil Vapor Extraction System-Targa Compressor Station Application ID: 196869		
SVE System Start Date	Time	Meter Reading
1/26/2024	8:15	2110
1/27/2024	8:00	2134
1/28/2024	8:10	2158
1/29/2024	8:15	2182
1/30/2024	8:00	2206
2/1/2024	8:00	2254
2/2/2024	8:00	2278
2/3/2024	8:00	2302
2/4/2024	8:00	2326
2/5/2024	8:00	2349
2/6/2024	9:00	2374
2/7/2024	8:00	2398
2/8/2024	8:00	2422.4
2/9/2024	10:00	2447.4
2/10/2024	13:15	2475.6
2/11/2024	14:30	2500
2/12/2024	8:30	2518.6
2/13/2024	8:00	2547
2/15/2024	8:00	2590
2/16/2024	7:30	2614
2/17/2024	8:00	2638
2/18/2024	8:00	2661
2/19/2024	7:30	2685
2/20/2024	8:00	2710
2/29/2024	8:00	2926
3/1/2024	8:00	2950
3/2/2024	8:00	2974
3/3/2024	8:00	2998
3/4/2024	8:00	3022
3/5/2024	8:00	3046
3/6/2024	8:00	3070
3/7/2024	8:00	3094
3/8/2024	8:00	3118
3/9/2024	8:45	3142
3/10/2024	11:15	3169
3/11/2024	8:00	3187
3/12/2024	8:00	3213
3/13/2024	8:00	3236
3/14/2024	8:00	3259
3/15/2024	8:00	3283
3/16/2024	8:00	3307
3/17/2024	8:00	3331
3/18/2024	8:00	3355
3/19/2024	8:00	3379
3/20/2024	8:00	3405
3/21/2024	8:00	3429

3/22/2024	8:00	3450
3/23/2024	8:00	3480
3/24/2024	8:00	3501
3/25/2024	8:00	3525
3/26/2024	8:30	3548
3/28/2024	12:00	3596
3/29/2024	2:00	3626
4/3/2024	7:00	3715
4/4/2024	8:00	3740
4/5/2024	8:00	3764
4/6/2024	8:00	3812
4/7/2024	8:00	3836
4/8/2024	8:00	3860
4/9/2024	8:00	3884
4/10/2024	8:00	3908
4/11/2024	8:00	3932
4/12/2024	8:00	3956
4/13/2024	8:00	3980
4/14/2024	8:00	4004
4/15/2024	8:00	4028
4/16/2024	8:00	4052
4/17/2024	8:00	4076
4/18/2024	8	4100
4/19/2024	8:00	4121
4/20/2024	8:00	4132
4/21/2024		4174
4/22/2024		4196
4/23/2024		
4/24/2023		4244
4/25/2024		4268
4/26/2024		4292
4/27/2024		4316
4/28/2024		4340
4/29/2024		4364
4/30/2024		4388

MorningStar Partners Soil Vapor Extraction System-Targa Compressor Station Application ID: 196869		
SVE System Start Date	Time	Meter Reading
4/30/2024		4388
5/1/2024		
5/2/2024	8:00	4436
5/3/2024	8:00	4460
5/4/2024	7:00	4483
5/5/2024	8:00	4507
5/6/2024	8:00	4532
5/7/2024	8:00	4555
5/8/2024	8:30	4580
5/9/2024	8:00	4604
5/10/2024	8:00	4628
5/11/2024	8:00	4652
5/12/2024	8:00	4676
5/13/2024	8:00	4700
5/14/2024	8:00	4723
5/15/2024	8:00	4747
5/16/2024	8:00	4771
5/17/2024	8:00	4795
5/18/2024	8:00	4819
5/19/2024	8:00	4843
5/20/2024	8:00	4867
5/21/2024	7:30	4891
5/22/2024	8:00	4916
5/23/2024	8:00	4940
5/24/2024	8:00	4964
5/25/2024	8:00	4988
5/26/2024	8:00	5012
5/27/2024	8:00	5036
5/28/2024	8:00	5060
5/29/2024	8:00	5084
5/30/2024	8:00	5108
5/31/2024	8:00	5132
6/1/2024		5155.8
6/2/2024	9:30	5181.6
6/3/2024	11:30	5207.6
6/4/2024	8:15	5228
6/5/2024	8:00	5252
6/6/2024	8:00	5300
6/7/2024	8:00	5324
6/8/2024	8:00	5348
6/9/2024	8:00	5372
6/10/2024	8:00	5396
6/11/2024	8:00	5420
6/12/2024	8:00	5444
6/13/2024	8:00	5454
6/14/2024	8:00	5469
6/15/2024	8:00	5491
6/16/2024	8:00	5515
6/17/2024	8:00	5539

6/18/2024	8:00	5563
6/19/2024	8:00	5582
6/20/2024	8:00	5606
6/21/2024	8:00	5630
6/22/2024	8:00	5654
6/23/2024	8:00	5678
6/24/2024	8:00	5702
6/25/2024	8:00	5726
6/26/2024	8:00	5750
6/27/2024	8:00	5780
6/28/2024	8:00	5804
6/29/2024	8:00	5828
6/30/2024	8:00	5852
7/1/2024	8:00	5875
7/2/2024	8:00	5899
7/3/2024	8:00	5923
7/4/2024	8:00	5947
7/5/2024	8:00	5971
7/6/2024	8:00	5995
7/7/2024	8:00	6019
7/8/2024	8:00	6043
7/9/2024	8:00	6066
7/10/2024	8:00	6090
7/11/2024	7:00	6113
7/12/2024	7:00	6137
7/18/2024	7:00	6283
7/19/2024	7:00	6307
7/20/2024	7:00	6331
7/21/2024	7:00	6355
7/22/2024	7:00	6379
7/23/2024	7:00	6403
7/24/2024	7:00	6427
7/25/2024	8:00	6450
7/26/2024	8:00	6474
7/27/2024	7:30	6497
7/28/2024	8:00	6521
7/29/2024	8:00	6545
7/30/2024	8:00	6569
7/31/2024	8:00	6593

d. SVE mass removal

Buckeye SVE System

Input Data:	Lbs/day Initial	Lbs/day 11/8/23	Lbs/day 11/28/23	Lbs/day 12/28/23	Lbs/day 1/11/24	Lbs/day 1/25/24	Lbs/day 7/17/24
TPH	125.09	3.64	103.250	43.58	23.82	119.15	0.00
Benzene	1.14	0.05	3.48	1.83	3.11	5.31	0.09
Toluene	0.49	0.21	3.27	1.74	3.05	3.22	0.16
Ethylbenzene	0.22	0.07	0.34	0.51	0.59	0.54	0.04
Xylenes	0.44	0.28	0.22	0.55	0.46	0.44	0.06

Assumptions

Mass removal is calculated based on the duration of time between sampling events.
Example Calculation (benzene) from start till the next sampling event. Duration seven days.

(7 days) (1.14 lbs/day)= 7.98 lbs

Mass Removal	Duration (days)	Total Uncontrolled (lbs)	Total Uncontrolled (Tons)	Flare (Tons)
	14			
	7			
	13			
	30			
	14			
	13			
	175			
TPH		6308.82	3.154	0.0631
Benzene		229.02	0.115	0.0023
Toluene		187.60	0.094	0.0019
Ethylbenzene		39.22	0.020	0.0004
Xylene		39.64	0.020	0.0004
			3.40	

Buckeye SVE System

Input Data:	Velocity (m/s)		ft/second	Flowrate ft^3/minute
Full SVE Stream	7.41		24.3110	29.232
Pipe Diameter	2.0	1.917	Inch ID	
Crossectional Area of Piping	0.02004		ft^2	
Flowrate Q=(A)(V)				

Example Calculation **Benzene lbs per day**

(Flowrate ft^3/min)(60 min/hr)(267 ft^3/1,000,000 ft^3)(78.10 lb/mol)(mol/373ft^3)(24 hr/day)

Analytical Results	%	PPM	Uncontrolled (lb/day)	Uncontrolled (Tons)	Flare (Tons)
Oxygen	19.80				
Carbon Dioxide	ND				
TPH		ND	ND	ND	ND
Benzene		10.0	0.09	0.02	0.0003
Toluene		15.5	0.16	0.03	0.0006
Ethylbenzene		3.6	0.04	0.01	0.0002
Xylene		4.9	0.06	0.01	0.0002

e. Product recovery log

MorningStar Partners Soil Vapor Extraction System-Targa Compressor Station Application ID: 196869			
SVE System Scrubbed Liquid Quantity	Hydrocabon/Water	Data and Time	Liquid Placement (LNAPL TANK)
30 gallons	Water	11/28/2023 13:30	Accumulated in Tote
170 Gallons	Water/Oil	1/4/2024	Accumulated in Tote
0	Water/Oil	2/8/2024	Accumulated in Tote
0	Water/Oil	3/7/2024	Accumulated in Tote
0	Water/Oil	4/12/2024	Accumulated in Tote
0	Water/Oil	5/9/2024	Accumulated in Tote
0	Water/Oil	6/6/2024	Accumulated in Tote
0	Water/Oil	7/11/2024	Accumulated in Tote

f. Laboratory air sample analysis

Pace Analytical®

ANALYTICAL REPORT

July 24, 2024

Kane Environmental Engineering, Inc.

Sample Delivery Group:	L1757738
Samples Received:	07/18/2024
Project Number:	22-215
Description:	

Report To: Russell Hamm
2351 East State Hwy 21
Lincoln, TX 78948

Entire Report Reviewed By:

Justin Carr
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 mydata.pacelabs.com

TABLE OF CONTENTS

FULL SVE SYSTEM L1757738-01 Air

Collected by: Chris A. | Collected date/time: 07/17/24 12:45 | Received date/time: 07/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2326498	20	07/19/24 19:38	07/19/24 19:38	DAH	Mt. Juliet, TN
Volatile Organic Compounds (MS) by Method TO-15	WG2326881	500	07/20/24 11:48	07/20/24 11:48	GH	Mt. Juliet, TN
Organic Compounds (GC) by Method D1946	WG2325764	1	07/18/24 16:26	07/18/24 16:26	KHM	Mt. Juliet, TN

MW-3 L1757738-02 Air

Collected by: Chris A. | Collected date/time: 07/17/24 12:45 | Received date/time: 07/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2326498	100	07/19/24 21:14	07/19/24 21:14	DAH	Mt. Juliet, TN
Volatile Organic Compounds (MS) by Method TO-15	WG2326881	5000	07/20/24 12:20	07/20/24 12:20	GH	Mt. Juliet, TN
Organic Compounds (GC) by Method D1946	WG2325764	1	07/18/24 16:29	07/18/24 16:29	KHM	Mt. Juliet, TN

MW-2 L1757738-03 Air

Collected by: Chris A. | Collected date/time: 07/17/24 12:45 | Received date/time: 07/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2325576	10	07/18/24 17:16	07/18/24 17:16	DAH	Mt. Juliet, TN
Volatile Organic Compounds (MS) by Method TO-15	WG2326498	2000	07/19/24 18:03	07/19/24 18:03	DAH	Mt. Juliet, TN
Organic Compounds (GC) by Method D1946	WG2325764	1	07/18/24 16:40	07/18/24 16:40	KHM	Mt. Juliet, TN

MW-8 L1757738-04 Air

Collected by: Chris A. | Collected date/time: 07/17/24 12:45 | Received date/time: 07/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2325576	100	07/18/24 17:46	07/18/24 17:46	DAH	Mt. Juliet, TN
Volatile Organic Compounds (MS) by Method TO-15	WG2326498	5000	07/19/24 18:54	07/19/24 18:54	DAH	Mt. Juliet, TN
Volatile Organic Compounds (MS) by Method TO-15	WG2326881	20000	07/20/24 12:48	07/20/24 12:48	GH	Mt. Juliet, TN
Organic Compounds (GC) by Method D1946	WG2325764	1	07/18/24 16:43	07/18/24 16:43	KHM	Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Justin Carr
Project Manager

Sample Delivery Group (SDG) Narrative

Sample received in tedlar bag.

Lab Sample ID	Project Sample ID	Method
L1757738-01	FULL SVE SYSTEM	TO-15
L1757738-02	MW-3	TO-15
L1757738-03	MW-2	TO-15
L1757738-04	MW-8	TO-15

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	25.0	59.4	29.6	70.3		20	WG2326498
Allyl chloride	107-05-1	76.53	4.00	12.5	ND	ND		20	WG2326498
Benzene	71-43-2	78.10	100	319	10000	31900		500	WG2326881
Benzyl Chloride	100-44-7	127	4.00	20.8	ND	ND		20	WG2326498
Bromodichloromethane	75-27-4	164	4.00	26.8	ND	ND		20	WG2326498
Bromoform	75-25-2	253	12.0	124	ND	ND		20	WG2326498
Bromomethane	74-83-9	94.90	4.00	15.5	ND	ND		20	WG2326498
1,3-Butadiene	106-99-0	54.10	40.0	88.5	ND	ND		20	WG2326498
Carbon disulfide	75-15-0	76.10	8.00	24.9	ND	ND		20	WG2326498
Carbon tetrachloride	56-23-5	154	4.00	25.2	ND	ND		20	WG2326498
Chlorobenzene	108-90-7	113	4.00	18.5	ND	ND		20	WG2326498
Chloroethane	75-00-3	64.50	4.00	10.6	ND	ND		20	WG2326498
Chloroform	67-66-3	119	4.00	19.5	ND	ND		20	WG2326498
Chloromethane	74-87-3	50.50	4.00	8.26	ND	ND		20	WG2326498
2-Chlorotoluene	95-49-8	126	4.00	20.6	ND	ND		20	WG2326498
Cyclohexane	110-82-7	84.20	100	344	13800	47500		500	WG2326881
Dibromochloromethane	124-48-1	208	4.00	34.0	ND	ND		20	WG2326498
1,2-Dibromoethane	106-93-4	188	4.00	30.8	ND	ND		20	WG2326498
1,2-Dichlorobenzene	95-50-1	147	4.00	24.0	ND	ND		20	WG2326498
1,3-Dichlorobenzene	541-73-1	147	4.00	24.0	ND	ND		20	WG2326498
1,4-Dichlorobenzene	106-46-7	147	4.00	24.0	ND	ND		20	WG2326498
1,2-Dichloroethane	107-06-2	99	4.00	16.2	ND	ND		20	WG2326498
1,1-Dichloroethane	75-34-3	98	4.00	16.0	ND	ND		20	WG2326498
1,1-Dichloroethene	75-35-4	96.90	4.00	15.9	ND	ND		20	WG2326498
cis-1,2-Dichloroethene	156-59-2	96.90	4.00	15.9	ND	ND		20	WG2326498
trans-1,2-Dichloroethene	156-60-5	96.90	4.00	15.9	ND	ND		20	WG2326498
1,2-Dichloropropane	78-87-5	113	4.00	18.5	ND	ND		20	WG2326498
cis-1,3-Dichloropropene	10061-01-5	111	4.00	18.2	ND	ND		20	WG2326498
trans-1,3-Dichloropropene	10061-02-6	111	4.00	18.2	ND	ND		20	WG2326498
1,4-Dioxane	123-91-1	88.10	12.6	45.4	ND	ND		20	WG2326498
Ethanol	64-17-5	46.10	50.0	94.3	56.9	107	B	20	WG2326498
Ethylbenzene	100-41-4	106	100	434	3600	15600		500	WG2326881
4-Ethyltoluene	622-96-8	120	4.00	19.6	534	2620		20	WG2326498
Trichlorofluoromethane	75-69-4	137.40	4.00	22.5	ND	ND		20	WG2326498
Dichlorodifluoromethane	75-71-8	120.92	4.00	19.8	ND	ND		20	WG2326498
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	4.00	30.7	ND	ND		20	WG2326498
1,2-Dichlorotetrafluoroethane	76-14-2	171	4.00	28.0	ND	ND		20	WG2326498
Heptane	142-82-5	100	100	409	7900	32300		500	WG2326881
Hexachloro-1,3-butadiene	87-68-3	261	12.6	135	ND	ND		20	WG2326498
n-Hexane	110-54-3	86.20	315	1110	8260	29100		500	WG2326881
Isopropylbenzene	98-82-8	120.20	4.00	19.7	350	1720		20	WG2326498
Methylene Chloride	75-09-2	84.90	4.00	13.9	ND	ND		20	WG2326498
Methyl Butyl Ketone	591-78-6	100	25.0	102	ND	ND		20	WG2326498
2-Butanone (MEK)	78-93-3	72.10	25.0	73.7	ND	ND		20	WG2326498
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	25.0	102	ND	ND		20	WG2326498
Methyl methacrylate	80-62-6	100.12	4.00	16.4	ND	ND		20	WG2326498
MTBE	1634-04-4	88.10	4.00	14.4	ND	ND		20	WG2326498
Naphthalene	91-20-3	128	12.6	66.0	ND	ND		20	WG2326498
2-Propanol	67-63-0	60.10	25.0	61.5	ND	ND		20	WG2326498
Propene	115-07-1	42.10	25.0	43.0	ND	ND		20	WG2326498
Styrene	100-42-5	104	8.00	34.0	ND	ND		20	WG2326498
1,1,2,2-Tetrachloroethane	79-34-5	168	4.00	27.5	ND	ND		20	WG2326498
Tetrachloroethylene	127-18-4	166	4.00	27.2	ND	ND		20	WG2326498
Tetrahydrofuran	109-99-9	72.10	4.00	11.8	ND	ND		20	WG2326498
Toluene	108-88-3	92.10	250	942	15500	58400		500	WG2326881
1,2,4-Trichlorobenzene	120-82-1	181	12.6	93.3	ND	ND		20	WG2326498

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	4.00	21.8	ND	ND		20	WG2326498
1,1,2-Trichloroethane	79-00-5	133	4.00	21.8	ND	ND		20	WG2326498
Trichloroethylene	79-01-6	131	4.00	21.4	ND	ND		20	WG2326498
1,2,4-Trimethylbenzene	95-63-6	120	4.00	19.6	201	987		20	WG2326498
1,3,5-Trimethylbenzene	108-67-8	120	4.00	19.6	97.6	479		20	WG2326498
2,2,4-Trimethylpentane	540-84-1	114.22	4.00	18.7	ND	ND		20	WG2326498
Vinyl chloride	75-01-4	62.50	4.00	10.2	ND	ND		20	WG2326498
Vinyl Bromide	593-60-2	106.95	4.00	17.5	ND	ND	J3 J4	20	WG2326498
Vinyl acetate	108-05-4	86.10	12.6	44.4	ND	ND		20	WG2326498
Xylenes, Total	1330-20-7	106.16	300	1300	4910	21300		500	WG2326881
m&p-Xylene	179601-23-1	106	8.00	34.7	3610	15700		20	WG2326498
o-Xylene	95-47-6	106	4.00	17.3	1300	5640		20	WG2326498
TPH (GC/MS) Low Fraction	8006-61-9	101	100000	413000	ND	ND		500	WG2326881
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*105*				WG2326498
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*96.5*				WG2326881

Organic Compounds (GC) by Method D1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Oxygen	7782-44-7	32	5.00	19.8		1	WG2325764
Carbon Monoxide	630-08-0	28	2.00	ND		1	WG2325764
Carbon Dioxide	124-38-9	44.01	0.500	ND		1	WG2325764
Methane	74-82-8	16	0.400	ND		1	WG2325764

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	125	297	800	1900		100	WG2326498
Allyl chloride	107-05-1	76.53	20.0	62.6	ND	ND		100	WG2326498
Benzene	71-43-2	78.10	1000	3190	73200	234000		5000	WG2326881
Benzyl Chloride	100-44-7	127	20.0	104	ND	ND		100	WG2326498
Bromodichloromethane	75-27-4	164	20.0	134	ND	ND		100	WG2326498
Bromoform	75-25-2	253	60.0	621	ND	ND		100	WG2326498
Bromomethane	74-83-9	94.90	20.0	77.6	ND	ND		100	WG2326498
1,3-Butadiene	106-99-0	54.10	200	443	ND	ND		100	WG2326498
Carbon disulfide	75-15-0	76.10	40.0	124	ND	ND		100	WG2326498
Carbon tetrachloride	56-23-5	154	20.0	126	ND	ND		100	WG2326498
Chlorobenzene	108-90-7	113	20.0	92.4	ND	ND		100	WG2326498
Chloroethane	75-00-3	64.50	20.0	52.8	ND	ND		100	WG2326498
Chloroform	67-66-3	119	20.0	97.3	ND	ND		100	WG2326498
Chloromethane	74-87-3	50.50	20.0	41.3	ND	ND		100	WG2326498
2-Chlorotoluene	95-49-8	126	20.0	103	ND	ND		100	WG2326498
Cyclohexane	110-82-7	84.20	1000	3440	156000	537000		5000	WG2326881
Dibromochloromethane	124-48-1	208	20.0	170	ND	ND		100	WG2326498
1,2-Dibromoethane	106-93-4	188	20.0	154	ND	ND		100	WG2326498
1,2-Dichlorobenzene	95-50-1	147	20.0	120	ND	ND		100	WG2326498
1,3-Dichlorobenzene	541-73-1	147	20.0	120	ND	ND		100	WG2326498
1,4-Dichlorobenzene	106-46-7	147	20.0	120	ND	ND		100	WG2326498
1,2-Dichloroethane	107-06-2	99	20.0	81.0	ND	ND		100	WG2326498
1,1-Dichloroethane	75-34-3	98	20.0	80.2	ND	ND		100	WG2326498
1,1-Dichloroethene	75-35-4	96.90	20.0	79.3	ND	ND		100	WG2326498
cis-1,2-Dichloroethene	156-59-2	96.90	20.0	79.3	236	935		100	WG2326498
trans-1,2-Dichloroethene	156-60-5	96.90	20.0	79.3	ND	ND		100	WG2326498
1,2-Dichloropropane	78-87-5	113	20.0	92.4	ND	ND		100	WG2326498
cis-1,3-Dichloropropene	10061-01-5	111	20.0	90.8	ND	ND		100	WG2326498
trans-1,3-Dichloropropene	10061-02-6	111	20.0	90.8	ND	ND		100	WG2326498
1,4-Dioxane	123-91-1	88.10	63.0	227	ND	ND		100	WG2326498
Ethanol	64-17-5	46.10	250	471	797	1500		100	WG2326498
Ethylbenzene	100-41-4	106	20.0	86.7	6790	29400		100	WG2326498
4-Ethyltoluene	622-96-8	120	20.0	98.2	627	3080		100	WG2326498
Trichlorofluoromethane	75-69-4	137.40	20.0	112	ND	ND		100	WG2326498
Dichlorodifluoromethane	75-71-8	120.92	20.0	98.9	ND	ND		100	WG2326498
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	20.0	153	ND	ND		100	WG2326498
1,2-Dichlorotetrafluoroethane	76-14-2	171	20.0	140	ND	ND		100	WG2326498
Heptane	142-82-5	100	1000	4090	78400	321000		5000	WG2326881
Hexachloro-1,3-butadiene	87-68-3	261	63.0	673	ND	ND		100	WG2326498
n-Hexane	110-54-3	86.20	3150	11100	127000	448000		5000	WG2326881
Isopropylbenzene	98-82-8	120.20	20.0	98.3	452	2220		100	WG2326498
Methylene Chloride	75-09-2	84.90	20.0	69.4	ND	ND		100	WG2326498
Methyl Butyl Ketone	591-78-6	100	125	511	ND	ND		100	WG2326498
2-Butanone (MEK)	78-93-3	72.10	125	369	ND	ND		100	WG2326498
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	125	512	ND	ND		100	WG2326498
Methyl methacrylate	80-62-6	100.12	20.0	81.9	ND	ND		100	WG2326498
MTBE	1634-04-4	88.10	20.0	72.1	ND	ND		100	WG2326498
Naphthalene	91-20-3	128	63.0	330	ND	ND		100	WG2326498
2-Propanol	67-63-0	60.10	125	307	453	1110		100	WG2326498
Propene	115-07-1	42.10	125	215	ND	ND		100	WG2326498
Styrene	100-42-5	104	40.0	170	ND	ND		100	WG2326498
1,1,2,2-Tetrachloroethane	79-34-5	168	20.0	137	ND	ND		100	WG2326498
Tetrachloroethylene	127-18-4	166	20.0	136	ND	ND		100	WG2326498
Tetrahydrofuran	109-99-9	72.10	20.0	59.0	ND	ND		100	WG2326498
Toluene	108-88-3	92.10	2500	9420	111000	418000		5000	WG2326881
1,2,4-Trichlorobenzene	120-82-1	181	63.0	466	ND	ND		100	WG2326498

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	20.0	109	ND	ND		100	WG2326498
1,1,2-Trichloroethane	79-00-5	133	20.0	109	ND	ND		100	WG2326498
Trichloroethylene	79-01-6	131	20.0	107	ND	ND		100	WG2326498
1,2,4-Trimethylbenzene	95-63-6	120	20.0	98.2	248	1220		100	WG2326498
1,3,5-Trimethylbenzene	108-67-8	120	20.0	98.2	123	604		100	WG2326498
2,2,4-Trimethylpentane	540-84-1	114.22	20.0	93.4	ND	ND		100	WG2326498
Vinyl chloride	75-01-4	62.50	20.0	51.1	ND	ND		100	WG2326498
Vinyl Bromide	593-60-2	106.95	20.0	87.5	ND	ND	J3 J4	100	WG2326498
Vinyl acetate	108-05-4	86.10	63.0	222	ND	ND		100	WG2326498
Xylenes, Total	1330-20-7	106.16	60.0	261	6750	29300		100	WG2326498
m&p-Xylene	179601-23-1	106	40.0	173	5130	22200		100	WG2326498
o-Xylene	95-47-6	106	20.0	86.7	1620	7020		100	WG2326498
TPH (GC/MS) Low Fraction	8006-61-9	101	1000000	4130000	ND	ND		5000	WG2326881
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*101*				WG2326498
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*96.9*				WG2326881

Organic Compounds (GC) by Method D1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Oxygen	7782-44-7	32	5.00	21.6		1	WG2325764
Carbon Monoxide	630-08-0	28	2.00	ND		1	WG2325764
Carbon Dioxide	124-38-9	44.01	0.500	ND		1	WG2325764
Methane	74-82-8	16	0.400	ND		1	WG2325764

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	12.5	29.7	ND	ND		10	WG2325576
Allyl chloride	107-05-1	76.53	2.00	6.26	ND	ND		10	WG2325576
Benzene	71-43-2	78.10	400	1280	27500	87800		2000	WG2326498
Benzyl Chloride	100-44-7	127	2.00	10.4	ND	ND		10	WG2325576
Bromodichloromethane	75-27-4	164	2.00	13.4	ND	ND		10	WG2325576
Bromoform	75-25-2	253	6.00	62.1	ND	ND		10	WG2325576
Bromomethane	74-83-9	94.90	2.00	7.76	ND	ND		10	WG2325576
1,3-Butadiene	106-99-0	54.10	20.0	44.3	ND	ND		10	WG2325576
Carbon disulfide	75-15-0	76.10	4.00	12.4	ND	ND		10	WG2325576
Carbon tetrachloride	56-23-5	154	2.00	12.6	ND	ND		10	WG2325576
Chlorobenzene	108-90-7	113	2.00	9.24	ND	ND		10	WG2325576
Chloroethane	75-00-3	64.50	2.00	5.28	ND	ND		10	WG2325576
Chloroform	67-66-3	119	2.00	9.73	ND	ND		10	WG2325576
Chloromethane	74-87-3	50.50	2.00	4.13	ND	ND		10	WG2325576
2-Chlorotoluene	95-49-8	126	2.00	10.3	ND	ND		10	WG2325576
Cyclohexane	110-82-7	84.20	400	1380	58000	200000		2000	WG2326498
Dibromochloromethane	124-48-1	208	2.00	17.0	ND	ND		10	WG2325576
1,2-Dibromoethane	106-93-4	188	2.00	15.4	ND	ND		10	WG2325576
1,2-Dichlorobenzene	95-50-1	147	2.00	12.0	ND	ND		10	WG2325576
1,3-Dichlorobenzene	541-73-1	147	2.00	12.0	ND	ND		10	WG2325576
1,4-Dichlorobenzene	106-46-7	147	2.00	12.0	ND	ND		10	WG2325576
1,2-Dichloroethane	107-06-2	99	2.00	8.10	ND	ND		10	WG2325576
1,1-Dichloroethane	75-34-3	98	2.00	8.02	ND	ND		10	WG2325576
1,1-Dichloroethene	75-35-4	96.90	2.00	7.93	ND	ND		10	WG2325576
cis-1,2-Dichloroethene	156-59-2	96.90	2.00	7.93	ND	ND		10	WG2325576
trans-1,2-Dichloroethene	156-60-5	96.90	2.00	7.93	ND	ND		10	WG2325576
1,2-Dichloropropane	78-87-5	113	2.00	9.24	ND	ND		10	WG2325576
cis-1,3-Dichloropropene	10061-01-5	111	2.00	9.08	ND	ND		10	WG2325576
trans-1,3-Dichloropropene	10061-02-6	111	2.00	9.08	ND	ND		10	WG2325576
1,4-Dioxane	123-91-1	88.10	6.30	22.7	ND	ND		10	WG2325576
Ethanol	64-17-5	46.10	25.0	47.1	42.7	80.5		10	WG2325576
Ethylbenzene	100-41-4	106	400	1730	4740	20500		2000	WG2326498
4-Ethyltoluene	622-96-8	120	2.00	9.82	93.3	458		10	WG2325576
Trichlorofluoromethane	75-69-4	137.40	2.00	11.2	ND	ND		10	WG2325576
Dichlorodifluoromethane	75-71-8	120.92	2.00	9.89	ND	ND		10	WG2325576
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	2.00	15.3	ND	ND		10	WG2325576
1,2-Dichlorotetrafluoroethane	76-14-2	171	2.00	14.0	ND	ND		10	WG2325576
Heptane	142-82-5	100	400	1640	32800	134000		2000	WG2326498
Hexachloro-1,3-butadiene	87-68-3	261	6.30	67.3	ND	ND		10	WG2325576
n-Hexane	110-54-3	86.20	1260	4440	41300	146000		2000	WG2326498
Isopropylbenzene	98-82-8	120.20	2.00	9.83	288	1420		10	WG2325576
Methylene Chloride	75-09-2	84.90	2.00	6.94	ND	ND		10	WG2325576
Methyl Butyl Ketone	591-78-6	100	12.5	51.1	ND	ND		10	WG2325576
2-Butanone (MEK)	78-93-3	72.10	12.5	36.9	ND	ND		10	WG2325576
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	12.5	51.2	ND	ND		10	WG2325576
Methyl methacrylate	80-62-6	100.12	2.00	8.19	ND	ND		10	WG2325576
MTBE	1634-04-4	88.10	2.00	7.21	ND	ND		10	WG2325576
Naphthalene	91-20-3	128	6.30	33.0	ND	ND		10	WG2325576
2-Propanol	67-63-0	60.10	12.5	30.7	ND	ND		10	WG2325576
Propene	115-07-1	42.10	12.5	21.5	ND	ND		10	WG2325576
Styrene	100-42-5	104	4.00	17.0	ND	ND		10	WG2325576
1,1,2,2-Tetrachloroethane	79-34-5	168	2.00	13.7	ND	ND		10	WG2325576
Tetrachloroethylene	127-18-4	166	2.00	13.6	ND	ND		10	WG2325576
Tetrahydrofuran	109-99-9	72.10	2.00	5.90	ND	ND		10	WG2325576
Toluene	108-88-3	92.10	1000	3770	25400	95700		2000	WG2326498
1,2,4-Trichlorobenzene	120-82-1	181	6.30	46.6	ND	ND		10	WG2325576

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	2.00	10.9	ND	ND		10	WG2325576
1,1,2-Trichloroethane	79-00-5	133	2.00	10.9	ND	ND		10	WG2325576
Trichloroethylene	79-01-6	131	2.00	10.7	ND	ND		10	WG2325576
1,2,4-Trimethylbenzene	95-63-6	120	2.00	9.82	122	599		10	WG2325576
1,3,5-Trimethylbenzene	108-67-8	120	2.00	9.82	62.3	306		10	WG2325576
2,2,4-Trimethylpentane	540-84-1	114.22	2.00	9.34	ND	ND		10	WG2325576
Vinyl chloride	75-01-4	62.50	2.00	5.11	ND	ND		10	WG2325576
Vinyl Bromide	593-60-2	106.95	2.00	8.75	ND	ND		10	WG2325576
Vinyl acetate	108-05-4	86.10	6.30	22.2	ND	ND		10	WG2325576
Xylenes, Total	1330-20-7	106.16	1200	5210	4410	19100		2000	WG2326498
m&p-Xylene	179601-23-1	106	800	3470	3400	14700		2000	WG2326498
o-Xylene	95-47-6	106	400	1730	1010	4380		2000	WG2326498
TPH (GC/MS) Low Fraction	8006-61-9	101	400000	1650000	415000	1710000		2000	WG2326498
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*125*				WG2325576
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*98.2*				WG2326498

Organic Compounds (GC) by Method D1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Oxygen	7782-44-7	32	5.00	21.5		1	WG2325764
Carbon Monoxide	630-08-0	28	2.00	ND		1	WG2325764
Carbon Dioxide	124-38-9	44.01	0.500	ND		1	WG2325764
Methane	74-82-8	16	0.400	ND		1	WG2325764

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	125	297	ND	ND		100	WG2325576
Allyl chloride	107-05-1	76.53	20.0	62.6	ND	ND		100	WG2325576
Benzene	71-43-2	78.10	1000	3190	217000	693000		5000	WG2326498
Benzyl Chloride	100-44-7	127	20.0	104	ND	ND		100	WG2325576
Bromodichloromethane	75-27-4	164	20.0	134	ND	ND		100	WG2325576
Bromoform	75-25-2	253	60.0	621	ND	ND		100	WG2325576
Bromomethane	74-83-9	94.90	20.0	77.6	ND	ND		100	WG2325576
1,3-Butadiene	106-99-0	54.10	200	443	ND	ND		100	WG2325576
Carbon disulfide	75-15-0	76.10	40.0	124	76.2	237		100	WG2325576
Carbon tetrachloride	56-23-5	154	20.0	126	ND	ND		100	WG2325576
Chlorobenzene	108-90-7	113	20.0	92.4	ND	ND		100	WG2325576
Chloroethane	75-00-3	64.50	20.0	52.8	ND	ND		100	WG2325576
Chloroform	67-66-3	119	20.0	97.3	ND	ND		100	WG2325576
Chloromethane	74-87-3	50.50	20.0	41.3	ND	ND		100	WG2325576
2-Chlorotoluene	95-49-8	126	20.0	103	ND	ND		100	WG2325576
Cyclohexane	110-82-7	84.20	4000	13800	632000	2180000		20000	WG2326881
Dibromochloromethane	124-48-1	208	20.0	170	ND	ND		100	WG2325576
1,2-Dibromoethane	106-93-4	188	20.0	154	ND	ND		100	WG2325576
1,2-Dichlorobenzene	95-50-1	147	20.0	120	ND	ND		100	WG2325576
1,3-Dichlorobenzene	541-73-1	147	20.0	120	ND	ND		100	WG2325576
1,4-Dichlorobenzene	106-46-7	147	20.0	120	ND	ND		100	WG2325576
1,2-Dichloroethane	107-06-2	99	20.0	81.0	ND	ND		100	WG2325576
1,1-Dichloroethane	75-34-3	98	20.0	80.2	ND	ND		100	WG2325576
1,1-Dichloroethene	75-35-4	96.90	20.0	79.3	ND	ND		100	WG2325576
cis-1,2-Dichloroethene	156-59-2	96.90	20.0	79.3	ND	ND		100	WG2325576
trans-1,2-Dichloroethene	156-60-5	96.90	20.0	79.3	ND	ND		100	WG2325576
1,2-Dichloropropane	78-87-5	113	20.0	92.4	ND	ND		100	WG2325576
cis-1,3-Dichloropropene	10061-01-5	111	20.0	90.8	ND	ND		100	WG2325576
trans-1,3-Dichloropropene	10061-02-6	111	20.0	90.8	ND	ND		100	WG2325576
1,4-Dioxane	123-91-1	88.10	63.0	227	ND	ND		100	WG2325576
Ethanol	64-17-5	46.10	250	471	1480	2790		100	WG2325576
Ethylbenzene	100-41-4	106	1000	4340	110000	477000		5000	WG2326498
4-Ethyltoluene	622-96-8	120	20.0	98.2	358	1760		100	WG2325576
Trichlorofluoromethane	75-69-4	137.40	20.0	112	ND	ND		100	WG2325576
Dichlorodifluoromethane	75-71-8	120.92	20.0	98.9	ND	ND		100	WG2325576
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	20.0	153	ND	ND		100	WG2325576
1,2-Dichlorotetrafluoroethane	76-14-2	171	20.0	140	ND	ND		100	WG2325576
Heptane	142-82-5	100	1000	4090	369000	1510000		5000	WG2326498
Hexachloro-1,3-butadiene	87-68-3	261	63.0	673	ND	ND		100	WG2325576
n-Hexane	110-54-3	86.20	3150	11100	300000	1060000		5000	WG2326498
Isopropylbenzene	98-82-8	120.20	20.0	98.3	752	3700		100	WG2325576
Methylene Chloride	75-09-2	84.90	20.0	69.4	40.6	141		100	WG2325576
Methyl Butyl Ketone	591-78-6	100	125	511	ND	ND		100	WG2325576
2-Butanone (MEK)	78-93-3	72.10	125	369	ND	ND		100	WG2325576
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	125	512	ND	ND		100	WG2325576
Methyl methacrylate	80-62-6	100.12	20.0	81.9	ND	ND		100	WG2325576
MTBE	1634-04-4	88.10	20.0	72.1	ND	ND		100	WG2325576
Naphthalene	91-20-3	128	63.0	330	ND	ND		100	WG2325576
2-Propanol	67-63-0	60.10	125	307	362	890		100	WG2325576
Propene	115-07-1	42.10	125	215	ND	ND		100	WG2325576
Styrene	100-42-5	104	40.0	170	ND	ND		100	WG2325576
1,1,2,2-Tetrachloroethane	79-34-5	168	20.0	137	ND	ND		100	WG2325576
Tetrachloroethylene	127-18-4	166	20.0	136	ND	ND		100	WG2325576
Tetrahydrofuran	109-99-9	72.10	20.0	59.0	ND	ND		100	WG2325576
Toluene	108-88-3	92.10	2500	9420	374000	1410000		5000	WG2326498
1,2,4-Trichlorobenzene	120-82-1	181	63.0	466	ND	ND		100	WG2325576

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	20.0	109	ND	ND		100	WG2325576
1,1,2-Trichloroethane	79-00-5	133	20.0	109	ND	ND		100	WG2325576
Trichloroethylene	79-01-6	131	20.0	107	ND	ND		100	WG2325576
1,2,4-Trimethylbenzene	95-63-6	120	20.0	98.2	574	2820		100	WG2325576
1,3,5-Trimethylbenzene	108-67-8	120	20.0	98.2	258	1270		100	WG2325576
2,2,4-Trimethylpentane	540-84-1	114.22	20.0	93.4	ND	ND		100	WG2325576
Vinyl chloride	75-01-4	62.50	20.0	51.1	ND	ND		100	WG2325576
Vinyl Bromide	593-60-2	106.95	20.0	87.5	ND	ND		100	WG2325576
Vinyl acetate	108-05-4	86.10	63.0	222	ND	ND		100	WG2325576
Xylenes, Total	1330-20-7	106.16	3000	13000	13500	58600		5000	WG2326498
m&p-Xylene	179601-23-1	106	40.0	173	10100	43800		100	WG2325576
o-Xylene	95-47-6	106	20.0	86.7	3430	14900		100	WG2325576
TPH (GC/MS) Low Fraction	8006-61-9	101	1000000	4130000	5800000	24000000		5000	WG2326498
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*104*				WG2325576
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*99.1*				WG2326498
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*94.8*				WG2326881

Organic Compounds (GC) by Method D1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Oxygen	7782-44-7	32	5.00	20.2		1	WG2325764
Carbon Monoxide	630-08-0	28	2.00	ND		1	WG2325764
Carbon Dioxide	124-38-9	44.01	0.500	0.776		1	WG2325764
Methane	74-82-8	16	0.400	ND		1	WG2325764

Method Blank (MB)

(MB) R4095973-2 07/18/24 09:41

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Acetone	U		0.584	1.25
Allyl chloride	U		0.114	0.200
Benzyl Chloride	U		0.0598	0.200
Bromodichloromethane	U		0.0702	0.200
Bromoform	U		0.0732	0.600
Bromomethane	U		0.0982	0.200
1,3-Butadiene	U		0.104	2.00
Carbon disulfide	U		0.102	0.400
Carbon tetrachloride	U		0.0732	0.200
Chlorobenzene	U		0.0832	0.200
Chloroethane	U		0.0996	0.200
Chloroform	U		0.0717	0.200
Chloromethane	U		0.103	0.200
2-Chlorotoluene	U		0.0828	0.200
Dibromochloromethane	U		0.0727	0.200
1,2-Dibromoethane	U		0.0721	0.200
1,2-Dichlorobenzene	U		0.128	0.200
1,3-Dichlorobenzene	U		0.182	0.200
1,4-Dichlorobenzene	U		0.0557	0.200
1,2-Dichloroethane	U		0.0700	0.200
1,1-Dichloroethane	U		0.0723	0.200
1,1-Dichloroethene	U		0.0762	0.200
cis-1,2-Dichloroethene	U		0.0784	0.200
trans-1,2-Dichloroethene	U		0.0673	0.200
1,2-Dichloropropane	U		0.0760	0.200
cis-1,3-Dichloropropene	U		0.0689	0.200
trans-1,3-Dichloropropene	U		0.0728	0.200
1,4-Dioxane	U		0.0833	0.630
Ethanol	U		0.265	2.50
4-Ethyltoluene	U		0.0783	0.200
Trichlorofluoromethane	U		0.0819	0.200
Dichlorodifluoromethane	U		0.137	0.200
1,1,2-Trichlorotrifluoroethane	U		0.0793	0.200
1,2-Dichlorotetrafluoroethane	U		0.0890	0.200
Hexachloro-1,3-butadiene	U		0.105	0.630
Isopropylbenzene	U		0.0777	0.200
Methylene Chloride	U		0.0979	0.200
Methyl Butyl Ketone	U		0.133	1.25
2-Butanone (MEK)	U		0.0814	1.25
4-Methyl-2-pentanone (MIBK)	U		0.0765	1.25

Method Blank (MB)

(MB) R4095973-2 07/18/24 09:41

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Methyl methacrylate	U		0.0876	0.200
MTBE	U		0.0647	0.200
Naphthalene	U		0.350	0.630
2-Propanol	U		0.264	1.25
Propene	U		0.0932	1.25
Styrene	U		0.0788	0.400
1,1,2,2-Tetrachloroethane	U		0.0743	0.200
Tetrachloroethylene	U		0.0814	0.200
Tetrahydrofuran	U		0.0734	0.200
1,2,4-Trichlorobenzene	U		0.148	0.630
1,1,1-Trichloroethane	U		0.0736	0.200
1,1,2-Trichloroethane	U		0.0775	0.200
Trichloroethylene	U		0.0680	0.200
1,2,4-Trimethylbenzene	U		0.0764	0.200
1,3,5-Trimethylbenzene	U		0.0779	0.200
2,2,4-Trimethylpentane	U		0.133	0.200
Vinyl chloride	U		0.0949	0.200
Vinyl Bromide	U		0.0852	0.200
Vinyl acetate	U		0.116	0.630
m&p-Xylene	U		0.135	0.400
o-Xylene	U		0.0828	0.200
(S) 1,4-Bromofluorobenzene	*94.3*			*60.0-140*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4095973-1 07/18/24 09:11 • (LCSD) R4095973-3 07/18/24 12:44

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	3.75	3.81	3.85	102	103	70.0-130			1.04	25
Allyl chloride	3.75	3.44	3.50	91.7	93.3	70.0-130			1.73	25
Benzyl Chloride	3.75	3.96	4.01	106	107	70.0-152			1.25	25
Bromodichloromethane	3.75	3.79	3.85	101	103	70.0-130			1.57	25
Bromoform	3.75	3.84	3.71	102	98.9	70.0-130			3.44	25
Bromomethane	3.75	3.67	3.60	97.9	96.0	70.0-130			1.93	25
1,3-Butadiene	3.75	3.58	3.69	95.5	98.4	70.0-130			3.03	25
Carbon disulfide	7.50	7.17	7.08	95.6	94.4	70.0-130			1.26	25
Carbon tetrachloride	3.75	3.65	3.68	97.3	98.1	70.0-130			0.819	25
Chlorobenzene	3.75	3.71	3.74	98.9	99.7	70.0-130			0.805	25
Chloroethane	3.75	3.84	3.68	102	98.1	70.0-130			4.26	25

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4095973-1 07/18/24 09:11 • (LCSD) R4095973-3 07/18/24 12:44

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chloroform	3.75	3.74	3.66	99.7	97.6	70.0-130			2.16	25
Chloromethane	3.75	3.82	3.78	102	101	70.0-130			1.05	25
2-Chlorotoluene	3.75	3.72	3.59	99.2	95.7	70.0-130			3.56	25
Dibromochloromethane	3.75	3.79	3.78	101	101	70.0-130			0.264	25
1,2-Dibromoethane	3.75	3.70	3.81	98.7	102	70.0-130			2.93	25
1,2-Dichlorobenzene	3.75	3.68	3.60	98.1	96.0	70.0-130			2.20	25
1,3-Dichlorobenzene	3.75	3.68	3.62	98.1	96.5	70.0-130			1.64	25
1,4-Dichlorobenzene	3.75	3.54	3.60	94.4	96.0	70.0-130			1.68	25
1,2-Dichloroethane	3.75	3.88	3.82	103	102	70.0-130			1.56	25
1,1-Dichloroethane	3.75	3.57	3.60	95.2	96.0	70.0-130			0.837	25
1,1-Dichloroethene	3.75	3.61	3.50	96.3	93.3	70.0-130			3.09	25
cis-1,2-Dichloroethene	3.75	3.74	3.73	99.7	99.5	70.0-130			0.268	25
trans-1,2-Dichloroethene	3.75	3.66	3.59	97.6	95.7	70.0-130			1.93	25
1,2-Dichloropropane	3.75	3.77	3.71	101	98.9	70.0-130			1.60	25
cis-1,3-Dichloropropene	3.75	4.03	3.85	107	103	70.0-130			4.57	25
trans-1,3-Dichloropropene	3.75	3.77	3.91	101	104	70.0-130			3.65	25
1,4-Dioxane	3.75	3.74	3.67	99.7	97.9	70.0-140			1.89	25
Ethanol	3.75	3.83	3.76	102	100	55.0-148			1.84	25
4-Ethyltoluene	3.75	3.75	3.61	100	96.3	70.0-130			3.80	25
Trichlorofluoromethane	3.75	3.47	3.51	92.5	93.6	70.0-130			1.15	25
Dichlorodifluoromethane	3.75	3.58	3.52	95.5	93.9	64.0-139			1.69	25
1,1,2-Trichlorotrifluoroethane	3.75	3.59	3.52	95.7	93.9	70.0-130			1.97	25
1,2-Dichlorotetrafluoroethane	3.75	3.64	3.68	97.1	98.1	70.0-130			1.09	25
Hexachloro-1,3-butadiene	3.75	3.35	3.34	89.3	89.1	70.0-151			0.299	25
Isopropylbenzene	3.75	3.65	3.58	97.3	95.5	70.0-130			1.94	25
Methylene Chloride	3.75	3.75	3.77	100	101	70.0-130			0.532	25
Methyl Butyl Ketone	3.75	3.92	4.03	105	107	70.0-149			2.77	25
2-Butanone (MEK)	3.75	3.97	3.74	106	99.7	70.0-130			5.97	25
4-Methyl-2-pentanone (MIBK)	3.75	3.77	3.89	101	104	70.0-139			3.13	25
Methyl methacrylate	3.75	3.77	3.91	101	104	70.0-130			3.65	25
MTBE	3.75	3.57	3.54	95.2	94.4	70.0-130			0.844	25
Naphthalene	3.75	3.75	3.63	100	96.8	70.0-159			3.25	25
2-Propanol	3.75	3.72	3.68	99.2	98.1	70.0-139			1.08	25
Propene	3.75	3.63	3.66	96.8	97.6	64.0-144			0.823	25
Styrene	7.50	7.49	7.42	99.9	98.9	70.0-130			0.939	25
1,1,2,2-Tetrachloroethane	3.75	3.80	3.78	101	101	70.0-130			0.528	25
Tetrachloroethylene	3.75	3.60	3.58	96.0	95.5	70.0-130			0.557	25
Tetrahydrofuran	3.75	3.71	3.95	98.9	105	70.0-137			6.27	25
1,2,4-Trichlorobenzene	3.75	3.59	3.59	95.7	95.7	70.0-160			0.000	25
1,1,1-Trichloroethane	3.75	3.67	3.67	97.9	97.9	70.0-130			0.000	25

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4095973-1 07/18/24 09:11 • (LCSD) R4095973-3 07/18/24 12:44

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
1,1,2-Trichloroethane	3.75	3.86	3.87	103	103	70.0-130			0.259	25
Trichloroethylene	3.75	3.68	3.68	98.1	98.1	70.0-130			0.000	25
1,2,4-Trimethylbenzene	3.75	3.67	3.56	97.9	94.9	70.0-130			3.04	25
1,3,5-Trimethylbenzene	3.75	3.64	3.59	97.1	95.7	70.0-130			1.38	25
2,2,4-Trimethylpentane	3.75	3.64	3.60	97.1	96.0	70.0-130			1.10	25
Vinyl chloride	3.75	3.60	3.60	96.0	96.0	70.0-130			0.000	25
Vinyl Bromide	3.75	3.43	3.65	91.5	97.3	70.0-130			6.21	25
Vinyl acetate	3.75	3.59	3.69	95.7	98.4	70.0-130			2.75	25
m&p-Xylene	7.50	7.37	7.20	98.3	96.0	70.0-130			2.33	25
o-Xylene	3.75	3.67	3.62	97.9	96.5	70.0-130			1.37	25
(S) 1,4-Bromofluorobenzene				*100*	*96.9*	*60.0-140*				

Method Blank (MB)

(MB) R4096291-3 07/19/24 13:02

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Acetone	U		0.584	1.25
Allyl chloride	U		0.114	0.200
Benzene	U		0.0715	0.200
Benzyl Chloride	U		0.0598	0.200
Bromodichloromethane	U		0.0702	0.200
Bromoform	U		0.0732	0.600
Bromomethane	U		0.0982	0.200
1,3-Butadiene	U		0.104	2.00
Carbon disulfide	0.105	J	0.102	0.400
Carbon tetrachloride	U		0.0732	0.200
Chlorobenzene	U		0.0832	0.200
Chloroethane	U		0.0996	0.200
Chloroform	U		0.0717	0.200
Chloromethane	U		0.103	0.200
2-Chlorotoluene	U		0.0828	0.200
Cyclohexane	U		0.0753	0.200
Dibromochloromethane	U		0.0727	0.200
1,2-Dibromoethane	U		0.0721	0.200
1,2-Dichlorobenzene	U		0.128	0.200
1,3-Dichlorobenzene	U		0.182	0.200
1,4-Dichlorobenzene	U		0.0557	0.200
1,2-Dichloroethane	U		0.0700	0.200
1,1-Dichloroethane	U		0.0723	0.200
1,1-Dichloroethene	U		0.0762	0.200
cis-1,2-Dichloroethene	U		0.0784	0.200
trans-1,2-Dichloroethene	U		0.0673	0.200
1,2-Dichloropropane	U		0.0760	0.200
cis-1,3-Dichloropropene	U		0.0689	0.200
trans-1,3-Dichloropropene	U		0.0728	0.200
1,4-Dioxane	U		0.0833	0.630
Ethanol	0.292	J	0.265	2.50
Ethylbenzene	U		0.0835	0.200
4-Ethyltoluene	U		0.0783	0.200
Trichlorofluoromethane	U		0.0819	0.200
Dichlorodifluoromethane	U		0.137	0.200
1,1,2-Trichlorotrifluoroethane	U		0.0793	0.200
1,2-Dichlorotetrafluoroethane	U		0.0890	0.200
Heptane	U		0.104	0.200
Hexachloro-1,3-butadiene	U		0.105	0.630
n-Hexane	U		0.206	0.630

Method Blank (MB)

(MB) R4096291-3 07/19/24 13:02

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Isopropylbenzene	U		0.0777	0.200
Methylene Chloride	U		0.0979	0.200
Methyl Butyl Ketone	U		0.133	1.25
2-Butanone (MEK)	U		0.0814	1.25
4-Methyl-2-pentanone (MIBK)	U		0.0765	1.25
Methyl methacrylate	U		0.0876	0.200
MTBE	U		0.0647	0.200
Naphthalene	U		0.350	0.630
2-Propanol	U		0.264	1.25
Propene	U		0.0932	1.25
Styrene	U		0.0788	0.400
1,1,2,2-Tetrachloroethane	U		0.0743	0.200
Tetrachloroethylene	U		0.0814	0.200
Tetrahydrofuran	U		0.0734	0.200
Toluene	0.0894	J	0.0870	0.500
1,2,4-Trichlorobenzene	U		0.148	0.630
1,1,1-Trichloroethane	U		0.0736	0.200
1,1,2-Trichloroethane	U		0.0775	0.200
Trichloroethylene	U		0.0680	0.200
1,2,4-Trimethylbenzene	U		0.0764	0.200
1,3,5-Trimethylbenzene	U		0.0779	0.200
2,2,4-Trimethylpentane	U		0.133	0.200
Vinyl chloride	U		0.0949	0.200
Vinyl Bromide	U		0.0852	0.200
Vinyl acetate	U		0.116	0.630
Xylenes, Total	U		0.135	0.600
m&p-Xylene	U		0.135	0.400
o-Xylene	U		0.0828	0.200
TPH (GC/MS) Low Fraction	U		39.7	200
(S) 1,4-Bromofluorobenzene	*99.0*			*60.0-140*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4096291-1 07/19/24 09:31 • (LCSD) R4096291-2 07/19/24 12:15

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	3.75	3.58	3.63	95.5	96.8	70.0-130			1.39	25
Allyl chloride	3.75	3.80	3.87	101	103	70.0-130			1.83	25
Benzene	3.75	3.81	3.83	102	102	70.0-130			0.524	25

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4096291-1 07/19/24 09:31 • (LCSD) R4096291-2 07/19/24 12:15

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzyl Chloride	3.75	3.69	3.74	98.4	99.7	70.0-152			1.35	25
Bromodichloromethane	3.75	3.75	3.76	100	100	70.0-130			0.266	25
Bromoform	3.75	3.60	3.59	96.0	95.7	70.0-130			0.278	25
Bromomethane	3.75	3.19	3.02	85.1	80.5	70.0-130			5.48	25
1,3-Butadiene	3.75	3.83	3.83	102	102	70.0-130			0.000	25
Carbon disulfide	7.50	7.57	7.60	101	101	70.0-130			0.396	25
Carbon tetrachloride	3.75	3.74	3.77	99.7	101	70.0-130			0.799	25
Chlorobenzene	3.75	3.84	3.83	102	102	70.0-130			0.261	25
Chloroethane	3.75	3.91	4.00	104	107	70.0-130			2.28	25
Chloroform	3.75	3.78	3.79	101	101	70.0-130			0.264	25
Chloromethane	3.75	4.01	3.83	107	102	70.0-130			4.59	25
2-Chlorotoluene	3.75	3.89	3.91	104	104	70.0-130			0.513	25
Cyclohexane	3.75	3.87	3.84	103	102	70.0-130			0.778	25
Dibromochloromethane	3.75	3.71	3.71	98.9	98.9	70.0-130			0.000	25
1,2-Dibromoethane	3.75	3.81	3.80	102	101	70.0-130			0.263	25
1,2-Dichlorobenzene	3.75	3.79	3.76	101	100	70.0-130			0.795	25
1,3-Dichlorobenzene	3.75	3.87	3.81	103	102	70.0-130			1.56	25
1,4-Dichlorobenzene	3.75	3.90	3.88	104	103	70.0-130			0.514	25
1,2-Dichloroethane	3.75	3.80	3.82	101	102	70.0-130			0.525	25
1,1-Dichloroethane	3.75	3.83	3.80	102	101	70.0-130			0.786	25
1,1-Dichloroethene	3.75	3.79	3.79	101	101	70.0-130			0.000	25
cis-1,2-Dichloroethene	3.75	3.86	3.83	103	102	70.0-130			0.780	25
trans-1,2-Dichloroethene	3.75	3.81	3.78	102	101	70.0-130			0.791	25
1,2-Dichloropropane	3.75	3.81	3.84	102	102	70.0-130			0.784	25
cis-1,3-Dichloropropene	3.75	3.87	3.84	103	102	70.0-130			0.778	25
trans-1,3-Dichloropropene	3.75	3.77	3.82	101	102	70.0-130			1.32	25
1,4-Dioxane	3.75	3.64	3.85	97.1	103	70.0-140			5.61	25
Ethanol	3.75	3.60	3.72	96.0	99.2	55.0-148			3.28	25
Ethylbenzene	3.75	3.79	3.87	101	103	70.0-130			2.09	25
4-Ethyltoluene	3.75	3.86	3.85	103	103	70.0-130			0.259	25
Trichlorofluoromethane	3.75	4.62	4.06	123	108	70.0-130			12.9	25
Dichlorodifluoromethane	3.75	3.66	3.33	97.6	88.8	64.0-139			9.44	25
1,1,2-Trichlorotrifluoroethane	3.75	3.81	3.85	102	103	70.0-130			1.04	25
1,2-Dichlorotetrafluoroethane	3.75	3.98	3.44	106	91.7	70.0-130			14.6	25
Heptane	3.75	3.85	3.94	103	105	70.0-130			2.31	25
Hexachloro-1,3-butadiene	3.75	3.85	3.84	103	102	70.0-151			0.260	25
n-Hexane	3.75	3.81	3.81	102	102	70.0-130			0.000	25
Isopropylbenzene	3.75	3.82	3.82	102	102	70.0-130			0.000	25
Methylene Chloride	3.75	3.76	3.81	100	102	70.0-130			1.32	25
Methyl Butyl Ketone	3.75	3.66	3.71	97.6	98.9	70.0-149			1.36	25

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4096291-1 07/19/24 09:31 • (LCSD) R4096291-2 07/19/24 12:15

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
2-Butanone (MEK)	3.75	3.77	3.74	101	99.7	70.0-130			0.799	25
4-Methyl-2-pentanone (MIBK)	3.75	3.66	3.77	97.6	101	70.0-139			2.96	25
Methyl methacrylate	3.75	3.72	3.75	99.2	100	70.0-130			0.803	25
MTBE	3.75	3.74	3.73	99.7	99.5	70.0-130			0.268	25
Naphthalene	3.75	3.92	4.03	105	107	70.0-159			2.77	25
2-Propanol	3.75	3.80	3.91	101	104	70.0-139			2.85	25
Propene	3.75	3.85	3.87	103	103	64.0-144			0.518	25
Styrene	7.50	7.75	7.89	103	105	70.0-130			1.79	25
1,1,2,2-Tetrachloroethane	3.75	3.84	3.84	102	102	70.0-130			0.000	25
Tetrachloroethylene	3.75	3.73	3.73	99.5	99.5	70.0-130			0.000	25
Tetrahydrofuran	3.75	3.69	3.75	98.4	100	70.0-137			1.61	25
Toluene	3.75	3.66	3.60	97.6	96.0	70.0-130			1.65	25
1,2,4-Trichlorobenzene	3.75	3.97	3.99	106	106	70.0-160			0.503	25
1,1,1-Trichloroethane	3.75	3.81	3.79	102	101	70.0-130			0.526	25
1,1,2-Trichloroethane	3.75	3.77	3.80	101	101	70.0-130			0.793	25
Trichloroethylene	3.75	3.83	3.84	102	102	70.0-130			0.261	25
1,2,4-Trimethylbenzene	3.75	3.83	3.81	102	102	70.0-130			0.524	25
1,3,5-Trimethylbenzene	3.75	3.83	3.84	102	102	70.0-130			0.261	25
2,2,4-Trimethylpentane	3.75	3.81	3.88	102	103	70.0-130			1.82	25
Vinyl chloride	3.75	3.73	3.78	99.5	101	70.0-130			1.33	25
Vinyl Bromide	3.75	5.24	4.07	140	109	70.0-130	J4	J3	25.1	25
Vinyl acetate	3.75	3.70	3.72	98.7	99.2	70.0-130			0.539	25
Xylenes, Total	11.3	11.4	11.4	101	101	70.0-130			0.000	25
m&p-Xylene	7.50	7.58	7.64	101	102	70.0-130			0.788	25
o-Xylene	3.75	3.80	3.79	101	101	70.0-130			0.264	25
TPH (GC/MS) Low Fraction	188	173	180	92.0	95.7	70.0-130			3.97	25
(S) 1,4-Bromofluorobenzene				*98.9*	*99.3*	*60.0-140*				

Method Blank (MB)

(MB) R4096994-3 07/20/24 09:49

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Benzene	U		0.0715	0.200
Cyclohexane	U		0.0753	0.200
Ethylbenzene	U		0.0835	0.200
Heptane	U		0.104	0.200
n-Hexane	U		0.206	0.630
Toluene	U		0.0870	0.500
Xylenes, Total	U		0.135	0.600
TPH (GC/MS) Low Fraction	U		39.7	200
(S) 1,4-Bromofluorobenzene	*89.4*			*60.0-140*

L1758307-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1758307-01 07/20/24 13:44 • (DUP) R4096994-4 07/20/24 14:15

Analyte	Original Result ppbv	DUP Result ppbv	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Benzene	1.40	1.64	1	15.8		25
Cyclohexane	0.349	0.420	1	18.5		25
Ethylbenzene	0.896	1.06	1	16.8		25
Heptane	1.34	1.53	1	13.2		25
n-Hexane	1.36	1.57	1	14.3		25
Toluene	4.63	5.40	1	15.4		25
Xylenes, Total	ND	3.82	1	200		25
TPH (GC/MS) Low Fraction	205	232	1	12.4		25
(S) 1,4-Bromofluorobenzene		*99.4*				*60.0-140*

L1758307-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1758307-02 07/20/24 14:43 • (DUP) R4096994-5 07/20/24 15:14

Analyte	Original Result ppbv	DUP Result ppbv	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Benzene	4.42	4.37	1	1.14		25
Cyclohexane	0.494	0.474	1	4.13		25
Ethylbenzene	1.23	1.22	1	0.816		25
Heptane	2.77	2.83	1	2.14		25
n-Hexane	4.13	4.09	1	0.973		25
Toluene	6.63	6.57	1	0.909		25
Xylenes, Total	ND	5.38	1	200		25
TPH (GC/MS) Low Fraction	246	245	1	0.407		25

L1758307-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1758307-02 07/20/24 14:43 • (DUP) R4096994-5 07/20/24 15:14

Analyte	Original Result ppbv	DUP Result ppbv	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
(S) 1,4-Bromofluorobenzene		*99.4*				*60.0-140*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4096994-1 07/20/24 08:46 • (LCSD) R4096994-2 07/20/24 09:21

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	3.75	3.74	4.21	99.7	112	70.0-130			11.8	25
Cyclohexane	3.75	3.31	3.77	88.3	101	70.0-130			13.0	25
Ethylbenzene	3.75	3.51	4.03	93.6	107	70.0-130			13.8	25
Heptane	3.75	3.60	4.00	96.0	107	70.0-130			10.5	25
n-Hexane	3.75	3.48	3.89	92.8	104	70.0-130			11.1	25
Toluene	3.75	3.55	3.96	94.7	106	70.0-130			10.9	25
Xylenes, Total	11.3	11.3	12.8	100	113	70.0-130			12.4	25
TPH (GC/MS) Low Fraction	188	159	174	84.6	92.6	70.0-130			9.01	25
(S) 1,4-Bromofluorobenzene				*101*	*100*	*60.0-140*				

Method Blank (MB)

(MB) R4095672-3 07/18/24 16:06

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Oxygen	U		2.46	5.00
Carbon Monoxide	U		0.142	2.00
Carbon Dioxide	U		0.151	0.500
Methane	U		0.0950	0.400

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4095672-1 07/18/24 15:58 • (LCSD) R4095672-2 07/18/24 16:02

Analyte	Spike Amount %	LCS Result %	LCSD Result %	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Oxygen	20.0	19.1	21.6	95.5	108	70.0-130			12.3	20
Carbon Monoxide	2.50	2.29	2.55	91.6	102	70.0-130			10.7	20
Carbon Dioxide	2.50	2.20	2.44	88.0	97.6	70.0-130			10.3	20
Methane	2.00	1.78	1.93	89.0	96.5	70.0-130			8.09	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Method Quantitation Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Sample Detection Limit.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
Kane Environmental Engineering, Inc.

2351 East State Hwy 21
Lincoln, TX 78948

Billing Information:
Accounts Payable
2351 East Hwy 21
Lincoln, TX 78948

Report To:
Russell Hamm

Email To:
alanjkane@comcast.net; rhammenviro@gmail.com

Project Description:

City/State Collected:

Please Circle: PT MT CT ET

Phone:
281-639-9590

Client Project #
22-215

Lab Project #
KANEBTX-HAMM

Collected by (print):
Chris Archuleta

Site/Facility ID #

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)
___ Same Day ___ Three Day
___ Next Day ___ Five Day
___ Two Day

Date Results Needed

Analysis

Chain of Custody Page ___ of ___

Pace
PEOPLE ADVANCING SCIENCE
MT JULIET, TN
12065 Lebanon Road Mt Juliet, TN 37122
Phone: 615-758-5858 Alt: 800-767-5859
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1757736

D012

Acctnum: **KANEBTX**
Template: **T236937**
Prelogin: **P1021671**
PM: **807 - Justin Carr**
PB:
Shipped Via: **FedEx Ground**

Sample ID	# of Samples	Flow Cont. #	Collection Date	Collection Time	Canister Pressure/Vacuum Initial	Canister Pressure/Vacuum Final	VOCs Tedlar	Rem./Contaminant	Sample # (lab only)
Full SVE System	2		7/17/24	12:45	CA		X		-01
MW-3	2		7/17/24	12:45	CA		X		-02
MW-2	2		7/17/24	12:45	CA		X		-03
MW-8	2		7/17/24	12:45	CA		X		-04
							X		
							X		
							X		
							X		
							X		
							X		

HAUB BOATS

Sample Receipt Checklist
COC Seal Present/Intact: Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
RA Screen <0.5 mR/hr: Y N
If Applicable
VOA Zero Headspace: Y N
Pres. Correct/Check: Y N

6426 8309 7454

Remarks:

Samples returned via: __ UPS X FedEx __ Courier __ _____

Tracking #

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Chris Archuleta	7/17/24	14:00	FedEx H0665		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 7.18.24	Time: 0900

Condition: (lab use only)

COC Seal Intact: ____Y ____N ____NA

NCF:

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 380724

CONDITIONS

Operator:	OGRID:
MorningStar Operating LLC 400 W 7th St Fort Worth, TX 76102	330132
	Action Number: 380724
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
michael.buchanan	Review of the 2023 Buckeye Groundwater Q1 & Q2 Quarterly Reporting Abatement report: content satisfactory 1. Continue O&M of the SVE system on-site. 2. Conduct air sampling for COCs as prescribed and scheduled. Submit for analysis of BTEX, TPH, O2 and CO2. 3. Submit either the next annual report or quarterly progress report as scheduled for December 2024 or March 1, 2025.	9/13/2024