EQUUS
Environmental, LLC

May 28, 2025

Michael Buchanan
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Eleventh Annual Groundwater Monitoring Report
State M Lease (AP-72)
Incident Number: NCS2215955789
Lea County, New Mexico

Mr. Buchanan

Equus Environmental, LLC (Equus), on behalf of our client Expand Energy Corporation, formerly Chesapeake Energy Corporation, is pleased to submit to the New Mexico Oil Conservation Division (NMOCD) in electronic format the ***Eleventh Annual Groundwater Monitoring Report*** (Report) detailing the eleventh year of groundwater monitoring and remediation activities conducted at the State M Lease (AP-72) located in the SE-SW-SE of Section 18, Township 17 South, Range 36 East, Lea County, New Mexico. These activities were conducted in accordance with the Stage 2 Abatement Plan for the Site approved by the NMOCD on June 27, 2013.

If you have any questions or comments regarding this Report, please do not hesitate to contact me at (918) 289-1405.

Sincerely,
Equus Environmental, LLC

Matthew N. Mugavero, P.G.
Senior Hydrogeologist/Project Manager

Enclosure: Eleventh Annual Groundwater Monitoring Report

xc: Patrick McMahon - Heidel, Samberson, Newell, Cox & McMahon
Dana Drury - Chesapeake Energy

ELEVENTH ANNUAL GROUNDWATER MONITORING REPORT
EXPAND ENERGY CORPORATION
STATE M LEASE (AP-72)
LEA COUNTY, NEW MEXICO

Prepared for:

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ELEVENTH ANNUAL GROUNDWATER MONITORING REPORT
EXPAND ENERGY CORPORATION
STATE M LEASE (AP-72)
LEA COUNTY, NEW MEXICO
MAY 28, 2025

1.0 INTRODUCTION

Expand Energy Corporation (Expand), formerly Chesapeake Energy Corporation (Chesapeake), has retained Equus Environmental, LLC (Equus) to perform impacted groundwater monitoring and light non-aqueous phase liquid (LNAPL) hydrocarbon remediation at the former Chesapeake State M Lease site (Site) located in Lea County, New Mexico. The Site is located approximately 8 miles south-southwest of Lovington, New Mexico in the SE-SW-SE of Section 18, Township 17 South, Range 36 East, Lea County, New Mexico (coordinates 32.828061º latitude, -103.391012º longitude). The Site location and topographic features are shown on **Figure 1**. A production tank battery for oil and gas was formerly located at the Site. Chesapeake purchased the Site in 2004, but never operated the tank battery. Chesapeake began abandonment and environmental investigation activities at the Site in 2007.

Initial Site investigation activities were conducted in May 2007. These investigation activities consisted of conducting EM-31 and EM-34 ground conductivity surveys, the collection of soil samples from nine boreholes, and the installation and sampling of seven groundwater monitoring wells. Following the investigation in August 2007, Chesapeake submitted to the New Mexico Oil Conservation Division (NMOCD) a Stage 1 Abatement Plan for the Site. In May 2010, the NMOCD responded to Chesapeake that the agency was not adequately staffed to review the abatement plan in a timely manner and advised Chesapeake that they could proceed with abatement operations at risk. In July 2010, Chesapeake notified the NMOCD of their intent to proceed with the Stage 1 Abatement activities. On March 20, 2012, following implementation of these activities, Chesapeake submitted the Stage 1 Abatement Report for the Site.

On March 27, 2012, Chesapeake submitted to the NMOCD the ***Stage 2 Abatement Plan*** (Plan) for the Site. A copy of the Plan is provided in **Appendix A**. In this Plan, Chesapeake proposed the following abatement activities at the Site:

- Excavate and remove the near-surface soils at the Site containing concentrations of chloride exceeding 1,000 milligrams per kilogram (mg/kg),

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- Excavate and remove the near-surface soils at the Site containing concentrations of TPH exceeding 1,000 mg/kg,
- Install clay liners in areas where chloride and/or TPH concentrations exceed 1,000 mg/kg at depths greater than five feet below ground level (BGL),
- Install one additional groundwater monitoring well downgradient of the Site,
- Monitor the groundwater at the Site until the concentrations of chloride and benzene are below the New Mexico Water Quality Control Commission (WQCC) standards.

On March 7, 2013, NMOCD notified Chesapeake that the Plan was administratively complete and that Chesapeake should proceed with public notice of the Plan. On March 30, 2013, Chesapeake published a notice of the proposed activities in the Albuquerque Journal, the Hobbs-Daily News Sun and the Lovington Leader. In addition, written notification of the Plan submittal was sent to all surface owners of record within a 1-mile radius of the Site. On June 27, 2013 upon completion of the notification activities, the NMOCD approved the Plan for the Site. A copy of the NMOCD correspondence approving the Plan is included in **Appendix B**.

The soil remediation activities outlined in the Plan were conducted at the Site during the period January 15, 2014 through March 27, 2014. The soil remediation activities were summarized in the document titled ***Soil Remediation Summary Report***, submitted to the NMOCD on August 6, 2014.

This ***Eleventh Annual Groundwater Monitoring Report*** (Report) summarizes the groundwater monitoring activities conducted at the Site during the following quarterly sampling events:

- Forty-First Event - June 18, 2024,
- Forty-Second - September 6, 2024,
- Forty-Third Event - November 21, 2024,
- Forty-Fourth Event - March 20, 2025.

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2.0 REMEDIATION

2.1 SVE SYSTEM

As documented in the ***First Annual Groundwater Monitoring Report***, dated May 19, 2015, during the period May 12-14, 2014, a soil vapor extraction (SVE) remediation system (System) was installed and made operational at the Site. The System is comprised of 8 SVE wells connected through a manifold system constructed of two- and three-inch Schedule 80 PVC piping and plumbed to a 10-horsepower 3-phase SVE Regenerative Blower housed within the System Building. The location of the SVE wells and the System Building are shown on attached **Figure 2**. Within the System, soil vapor from the SVE wells is drawn through a moisture knock out/separator and a particulate filter prior to reaching the blower. An air-flow meter is installed downstream of the blower in the air-exhaust line and an air sample port is located on the air-exhaust line at a location upstream of its exit from the System Building.

System start-up was conducted on June 6, 2014. Routine checks of the System are conducted to record the blower run times, discharge rate and volatile organic compounds (VOC) concentration of the discharge-air stream. VOC concentrations are measured with a photo-ionization detector (PID) data in the field. These PID data are then entered into to a spreadsheet to calculate both the VOC discharge rate and approximate total pounds of VOCs removed by the System. The approximate total VOC discharges for each quarter are then summed to provide a cumulative VOC discharge total. These data are summarized in **Table 1**. Through March 20, 2025, the field PID data suggests that approximately 15,238.95 pounds of VOCs have been removed from the subsurface and discharged from the System.

In addition to the collection of field data, discharged-air samples are collected quarterly using laboratory provided Suma canisters and shipped under chain-of-custody control to Eurofins TestAmerica, Pittsburgh, Pennsylvania. Discharged-air samples are then analyzed for VOC compounds and total VOCs as hexane by Method TO-15. The discharged-air analytical data are used to compute a correlation factor for the field PID readings to more accurately calculate the total VOCs discharged.

During the forty-first quarter, discharge-air sample 20240618 M-1 was collected on June 18, 2024. On this date, the System had been running for a total of 84,522 hours, was operating at 484 CFM and had a field reading of 11.3 PPM from the discharge air stream. Laboratory analytical results for this discharge-air sample indicated a total VOC as Hexane concentration of 3,200 PPB V/V (3.2 PPM V/V).

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During the forty-second quarter, discharge-air sample 20240906 M-1 was collected on September 6, 2024. On this date, the System had been running for a total of 86,438 hours, was operating at 492 CFM and had a field reading of 30.0 PPM from the discharge air stream. Laboratory analytical results for this discharge-air sample indicated a total VOC as Hexane concentration of 2,800 PPB V/V (2.8 PPM V/V).

During the forty-third quarter, discharge-air sample 20241121 M-1 was collected on November 21, 2024. On this date, the System had been running for approximately 88,261 hours, was operating at 474 ACFM and had a field reading 12.4 PPM from the discharge air stream. Laboratory analytical results for this discharge-air sample indicated a total VOC as Hexane concentration of 1,900 PPB V/V (1.9 PPM V/V).

During the forty-fourth quarter, discharge-air sample 20250320 M-1 was collected on March 20, 2025. On this date, the System had been running for a total of 91,119 hours, was operating at 438 ACFM and had a field reading of 2.1 PPM from the discharge air stream. Laboratory analytical results for this discharge-air sample indicated a total VOC as Hexane concentration of 3,000 PPB V/V (3.0 PPM V/V).

A summary of the laboratory analytical results for the discharged-air samples is presented in **Table 2**, and complete copies of the laboratory analytical reports and chain-of-custody documentation are provided in **Appendix C**.

Field PID instrument readings are typically lower than laboratory analysis for total VOCs. To compensate for the low field PID readings, a correlation factor is calculated based upon the ratio of the laboratory analytical value versus the field PID value. The correlation factor is then used to multiply the field PID readings and calculate the total pounds of VOCs discharged from the System. To accurately reflect the total pounds of VOCs discharged from the System during a given period, **Table 1** also includes the unique correlation factor calculated for each quarterly air-discharge sampling event. This unique correlation factor is then utilized to calculate the total pounds of VOCs discharged from the System for the period in which that particular air-discharge sample was collected. Utilizing the noted correlation factors, approximately 15,238.95 pounds (7.71 tons) of VOCs have been removed from the subsurface at the Site.

Figure 3 presents a graph of the VOC concentrations observed in the discharge air stream versus time. As can be seen on this figure, the levels of VOC observed in the air discharge stream have decreased dramatically since startup. These data indicate that the System is effective at

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removing hydrocarbon vapors from the subsurface. Removal of hydrocarbon vapors coupled with the influx of oxygen drawn into the impacted area by the System enhances biodegradation of the hydrocarbon impacts observed in this area.

2.2 MW-1R LNAPL RECOVERY

As documented in the ***First Annual Groundwater Monitoring Report***, dated May 19, 2015, to enhance LNAPL recovery in the MW-1R area, 2-inch diameter monitoring well MW-1 was plugged and replaced with 4-inch diameter monitoring well MW-1R. On June 5, 2014, a QED Environmental Genie LNAPL recovery pump was placed and made operational in monitoring well MW-1R.

The observed LNAPL thicknesses in MW-1R during this reporting period ranged from 0.05-feet to 0.25-feet. The volume of LNAPL observed within monitoring well MW-1R is outside of the recovery range for the LNAPL recovery pump. To facilitate LNAPL recovery, Chesapeake began deploying hydrophobic LNAPL absorption socks within MW-1R on June 21, 2022. These socks are changed out as necessary.

During the operation of the Genie LNAPL recovery pump, approximately 15 drums (822.5 gallons) of LNAPL have been removed from the subsurface.

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3.0 QUARTERLY GROUNDWATER MONITORING

This Report describes the findings from four quarterly groundwater sampling events conducted at the Site from June 18, 2024 through March 20, 2025. The constituents of concern (COC) at the Site consists of chloride and benzene, toluene, ethylbenzene, and xylenes (BTEX). The laboratory analytical results for chloride and BTEX from these sampling events are screened against *the* ***New Mexico Administrative Code (NMAC) 20.6.2, Standards for Groundwater of 10,000 mg/L TDS Concentration or Less***, as issued by the WQCC. The applicable cleanup standards presented in ***NMAC 20.6.2*** consist of the following: chloride (250 mg/L), benzene (5 µg/L), toluene (1,000 µg/L), ethylbenzene (700 µg/L), and total xylenes (620 µg/L), herein referenced to as the Limit(s). According to the remediation goals set in the Plan, each Site monitoring well is required to exhibit eight consecutive monitoring events where chloride is less than the Limit. In addition, the same applies for BTEX constituents in monitoring well MW-1R, only.

Monitoring well MW-4 is the only well that continues to exhibit concentrations of chloride that are greater than the Limit of 250 mg/L. The remaining groundwater monitoring wells at the Site have met the criteria for exhibiting eight consecutive monitoring events with chloride concentrations less than the Limit. Expand continues to collect groundwater samples for chloride analysis from monitoring well MW-4.

Monitoring well MW-1R met the remediation goals for BTEX constituents at the end of the 2023 monitoring period and therefore was not sampled during this 2024 reporting period. On June 11, 2024, the NMOCD approved the suspension of monitoring well MW-1R from the sampling program, stating that BTEX has been demonstrated to be below the WQCC human health standards for eight consecutive monitoring events. A copy of this correspondence is provided in **Appendix D**.

3.1 DEPTH-TO-GROUNDWATER MEASUREMENTS

Prior to collecting groundwater samples during each quarterly event, Equus gauged the 8 monitoring wells (MW-1R through MW-8) at the Site using an electronic interface probe to determine the depth-to-water (DTW) and LNAPL thickness within each well. The locations of these monitoring wells are shown on **Figure 2**. DTWs were measured from the surveyed top-of-casing (TOC) of each well and converted to elevations relative to mean sea level. These data are presented in **Table 3**. A potentiometric surface map was constructed utilizing groundwater elevation data from the March 20, 2025 monitoring event to illustrate the

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groundwater flow direction within the shallow groundwater system beneath the Site. This potentiometric surface map is presented on **Figure 4**. As can be seen on **Figure 4**, groundwater flow at the Site is, in general, from the northwest to the southeast.

3.2 GROUNDWATER SAMPLING METHODS

Upon completion of DTW measurement activities, Equus field personnel collected groundwater samples per the Plan. Groundwater samples were collected from monitoring wells MW-4 for chloride utilizing EPA approved low-flow purging/sampling methodologies. Field parameters consisting of pH, specific conductivity, temperature, and dissolved oxygen (DO) were measured during field activities utilizing a multi-parameter meter and air-tight flow-through cell. Upon stabilization of the field parameters, the groundwater sample was collected into laboratory prepared containers, labeled as to source and contents, placed on ice for preservation, placed under chain-of-custody control and shipped via overnight courier to the analytical laboratory (Eurofins, Edison, New Jersey). As per the Plan, groundwater samples collected from these monitoring wells were analyzed for chloride by EPA Method 300.0. A summary of the laboratory analytical results for chloride and BTEX analyses are presented in **Tables 4** and **5**, respectively. Complete copies of the laboratory analytical reports and chain-of-custody documentation are provided in **Appendix C**.

3.3 FORTY-FIRST QUARTERLY GROUNDWATER SAMPLING RESULTS

The forty-first groundwater sampling event was conducted at the Site on June 18, 2024. As can be seen in **Table 4**, the groundwater sample collected from monitoring well MW-4 exhibited a concentration of chloride (374 mg/L) that exceeds the Limit of 250 mg/L. During the forty-first quarterly groundwater sampling event, LNAPL was observed in monitoring well MW-1R at a thickness of 0.25 feet.

3.4 FORTY-SECOND QUARTERLY GROUNDWATER SAMPLING RESULTS

The forty-second quarterly groundwater sampling event was conducted at the Site from September 6, 2024. As can be seen in **Table 4**, the groundwater sample collected from monitoring well MW-4 exhibited a concentration of chloride (361 mg/L) that exceeds the Limit of 250 mg/L. During the forty-first quarterly groundwater sampling event, LNAPL was observed in monitoring well MW-1R at a thickness of 0.07 feet.

3.5 FORTY-THIRD QUARTERLY GROUNDWATER SAMPLING RESULTS

The forty-third quarterly groundwater sampling event was conducted at the Site on November 21, 2024. As can be seen in **Table 4**, the groundwater sample collected from monitoring well

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MW-4 exhibited a concentration of chloride (345 mg/L) that exceeds the Limit of 250 mg/L. During the forty-third quarterly groundwater sampling event, LNAPL was observed in monitoring well MW-1R at a thickness of 0.04 feet.

3.6 FORTY-FOURTH QUARTERLY GROUNDWATER SAMPLING RESULTS

The forty-fourth quarterly groundwater sampling event was conducted at the Site on March 20, 2025. As can be seen in **Table 4**, the groundwater sample collected from monitoring well MW-4 exhibited a chloride concentration (290 mg/L) that exceeds the Limit of 250 mg/L. During the forty-fourth quarterly groundwater sampling event, LNAPL was not observed in monitoring well MW-1R.

Figure 5 presents an isopleth map depicting chloride concentrations in groundwater at the Site. The data used to prepare this isopleth map includes the most recent chloride concentration detected in monitoring well MW-4 (March 20, 2025), and chloride concentrations from the last reported sampling date for each of the remaining Site monitoring wells. As can be seen in **Figure 5**, a relatively small areal extent of chloride impacted groundwater remains at concentrations greater than 250 mg/L Limit.

Figure 6 presents chloride concentration trend graphs for each of the monitoring wells sampled at the Site. The decreasing trends shown on these graphs indicate that the soil remediation activities conducted in the first quarter of 2014 have removed the continuing source of chloride causing impacts to the groundwater at the Site. Source removal has facilitated the physical natural attenuation mechanisms of dispersion and dilution on remnant chloride concentrations present in Site groundwater.

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4.0 CONCLUSIONS

Based upon the data presented herein, the following conclusions are presented:

- Groundwater beneath the Site is encountered at depths ranging from 47.75 to 49.25 feet from the surveyed top-of-casing of the Site monitoring wells.
- The direction of groundwater flow at the Site is, in general, from the northwest to the southeast.
- The SVE System is operating as designed and has removed approximately 15,238.95 pounds of VOCs since start-up on June 6, 2014.
- Monitoring well MW-4 is the only remaining well exhibiting concentrations of chloride greater than the Limit of 250 mg/L. During this latest reporting period, chloride concentrations in monitoring well MW-4 ranged from 290 mg/L to 374 mg/L.
- During the reporting period, LNAPL continues to be removed from monitoring well MW-1R with hydrophobic absorbent socks. Apparent LNAPL thicknesses measured in monitoring well MW-1R have been on a decreasing trend and ranged from 0.00-feet to 0.25-feet during this reporting period.
- Monitoring well MW-1R has exhibited BTEX concentrations less than the applicable cleanup Limits for eight straight quarterly monitoring events and has been removed from the sampling protocol.

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5.0 RECOMMENDATIONS

Based upon a review of the data presented within this report, the following recommendations have been developed:

- Operation of the LNAPL skimmer-pump within monitoring well MW-1R has been stopped as the apparent LNAPL thickness observed within this well is too thin to be recovered utilizing this technology. Hydrophobic absorption socks should continue to be placed in MW-1R to remove intermittent, thin films of LNAPL, when present. These socks should continue to be changed out during each quarterly event.

- The SVE system should continue to be operated for volatile organic vapor removal from the vadose zone.

- The collection of groundwater samples from monitoring well MW-1R has ceased, as dissolved-phase BTEX constituents have been reported to be below the New Mexico Water Quality Control Commission Limits of 5 µg/L, 1,000 µg/L, 700 µg/L, and 620 µg/L, respectively, for eight consecutive quarters.

- The groundwater within monitoring well MW-4 should continue to be monitored on a quarterly basis for chloride until eight consecutive quarterly sampling events result in chloride levels less than the New Mexico Water Quality Control Commission standards. The next groundwater monitoring event at the Site is scheduled to be conducted in June 2024.

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TABLES

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Table 1 : Summary of SVE System Field Readings
Expand Energy Corporation, State M Lease (AP-72)
Lea County, New Mexico

Date	Time	Run Time Reading	Operating Hours		Discharge Readings		VOC Discharge				Calculated Correlation Factor
			since last reading	Total	PPM	CFM	lbs/Hr	lbs since last Reading	Total lbs	Total Tons	
06/07/14	8:00	4131.73	19.73	20	596	519	2.281	44.99	44.99	0.02	
06/08/14	7:10	4154.69	22.96	43	398	483	1.416	32.50	77.50	0.04	
06/08/14	9:15	4156.94	2.25	45	5000	489	18.021	40.55	118.05	0.06	
06/12/14	12:40	4256.45	99.51	144	1817	120	1.607	159.92	277.96	0.14	
06/12/14	12:43	4259.65	3.20	148	1561	117	1.346	4.31	282.27	0.14	
06/13/14	7:15	4274.90	18.45	163	1804	122	1.622	29.93	307.89	0.15	
06/13/14	7:17	4276.27	1.37	164	3390	121	3.023	4.14	312.03	0.16	
06/13/14	7:18	4277.08	0.81	165	2301	120	2.035	1.65	313.68	0.16	
06/19/14	12:05	4422.02	144.94	310	1153	120	1.020	147.81	461.49	0.23	
06/19/14	13:30	4423.74	1.72	312	1117	107	0.881	1.52	463.00	0.23	
06/19/14	16:00	4426.00	2.26	314	1448	121	1.291	2.92	465.92	0.23	0.98
06/24/14	12:05	4543.27	117.27	431	*1440*	*120*	1.274	149.36	615.28	0.31	
06/26/14	12:40	4591.01	165.01	479	1970	127	1.844	304.28	919.56	0.46	
06/26/14	12:42	4593.20	2.19	481	1968	120	1.741	3.81	923.37	0.46	
07/03/14	9:35	4755.92	162.72	644	1650	126	1.532	249.34	1172.71	0.59	
07/03/14	9:37	4757.95	2.03	646	1318	126	1.224	2.48	1175.20	0.59	
07/09/14	11:40	4901.77	143.82	790	875	126	0.812	116.80	1292.00	0.65	
07/09/14	11:42	4903.69	1.92	792	795	124	0.727	1.40	1293.39	0.65	
07/17/14	12:33	5094.48	190.79	982	*790*	124	0.722	137.75	1431.15	0.72	
07/17/14	12:34	5095.13	0.65	983	*790*	127	0.739	0.48	1431.63	0.72	
07/17/14	12:36	5097.75	2.62	986	*790*	127	0.739	1.94	1433.56	0.72	
08/01/14	11:00	5452.10	354.35	1,340	1078	139	1.104	391.35	1824.91	0.91	
08/01/14	11:42	5454.03	1.93	1,342	938	150	1.037	2.00	1826.91	0.91	
08/01/14	11:44	5456.32	2.29	1,344	2314	14	0.239	0.55	1827.46	0.91	
10/10/14	13:00	7118.38	1662.06	3,006	130	51	0.049	81.70	1909.16	0.95	
10/10/14	13:02	7120.15	1.77	3,008	216	58	0.093	0.16	1909.32	0.95	1.86
10/31/14	13:00	7622.85	502.70	3,511	161	48	0.057	28.63	1937.95	0.97	
10/31/14	13:04	7624.49	1.64	3,512	78	54	0.031	0.05	1938.00	0.97	
12/11/14	13:50	8607.53	983.04	4,496	352	***131***	0.340	334.10	2272.11	1.14	
01/15/15	10:11	9441.32	833.79	5,329	47	131	0.045	37.60	2309.70	1.15	
01/15/15	10:12	9442.31	0.99	5,330	173	152	0.194	0.19	2309.89	1.15	
01/15/15	10:15	9445.26	2.95	5,333	388	136	0.389	1.15	2311.04	1.16	
01/29/15	11:50	9778.04	332.78	5,666	240	54	0.095	31.49	2342.53	1.17	
01/29/15	11:52	9780.13	2.09	5,668	239	50	0.088	0.18	2342.72	1.17	0.21
02/26/15	11:00	10448.98	668.85	6,337	72	137	0.073	48.63	2391.35	1.20	
02/26/15	11:02	10450.10	1.12	6,338	178	155	0.204	0.23	2391.57	1.20	
03/12/15	10:15	10780.66	330.56	6,669	483	***155***	0.552	182.40	2573.97	1.29	
04/28/15	8:30	11901.34	1120.68	7,789	126	114	0.106	118.86	2692.84	1.35	
04/28/15	8:36	11907.42	6.08	7,795	132	126	0.123	0.75	2693.58	1.35	
05/14/15	9:05	12285.12	377.70	8,173	96	55	0.039	14.68	2708.26	1.35	1.10
05/14/15	9:10	12290.05	4.93	8,178	105	58	0.045	0.22	2708.48	1.35	
05/28/15	11:30	12623.70	333.65	8,512	6	150	0.006	2.07	2710.55	1.36	
06/11/15	10:39	12650.70	27.00	8,539	318	172	0.403	10.88	2721.43	1.36	
07/02/15	11:00	13154.04	503.34	9,042	85	112	0.070	35.32	2756.75	1.38	0.76
09/03/15	8:00	14662.17	1508.13	10,550	249	104	0.191	287.85	3044.60	1.52	
12/10/15	13:00	17015.28	2353.11	12,903	162	95	0.113	266.92	3311.52	1.66	0.86

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Lea County, New Mexico

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			since last reading	Total	PPM	CFM	lbs/Hr	lbs since last Reading	Total lbs	Total Tons	
03/10/16	12:00	17899.58	884.30	13,788	209	105	0.162	143.03	3454.55	1.73	1.78
06/29/16	8:00	20558.59	2659.01	16,447	156	101	0.116	309.58	3764.13	1.88	3.77
07/27/16	12:30	21232.43	673.84	17,120	126	103	0.095	64.20	3828.33	1.91	
08/25/16	11:00	21927.96	695.53	17,816	115	270	0.229	159.45	3987.78	1.99	1.55
09/22/16	10:20	22596.81	668.85	18,485	169	220	0.274	183.07	4170.85	2.09	
12/08/16	9:30	24443.73	1846.92	20,332	109	220	0.177	327.03	4497.88	2.25	6.59
01/10/17	12:23	24758.20	314.47	20,646	173	233	0.297	93.37	4591.25	2.30	
01/25/17	10:56	25115.43	357.23	21,003	206	179	0.271	96.95	4688.20	2.34	3.06
02/22/17	10:35	25786.27	670.84	21,674	248	214	0.391	262.30	4950.50	2.48	
03/09/17	11:04	26146.82	360.55	22,035	321	209	0.495	178.51	5129.01	2.56	
04/05/17	11:55	26792.33	645.51	22,680	454	113	0.378	244.08	5373.09	2.69	
05/16/17	7:00	26967.77	175.44	22,856	61	198	0.089	15.69	5388.79	2.69	5.78
06/07/17	13:00	27495.83	528.06	23,384	54	221	0.087	46.02	5434.80	2.72	
09/07/17	11:36	29698.50	2202.67	25,587	62	200	0.091	201.31	5636.11	2.82	
09/22/17	11:30	30057.43	358.93	25,945	56	211	0.087	31.26	5667.37	2.83	
10/04/17	10:15	30344.40	286.97	26,232	57	198	0.083	23.87	5691.24	2.85	0.81
11/02/17	13:00	31042.78	698.38	26,931	58	185	0.079	55.23	5746.48	2.87	
12/01/17	12:30	31739.31	696.53	27,627	59	192	0.083	58.16	5804.63	2.90	
12/06/17	12:40	31859.62	120.31	27,748	6	270	0.011	1.36	5806.00	2.90	
12/18/17	15:00	32149.36	289.74	28,037	60	208	0.092	26.65	5832.65	2.92	
01/09/18	10:00	32672.25	522.89	28,560	52	189	0.072	37.88	5870.52	2.94	
01/26/18	10:15	33080.48	408.23	28,968	48	172	0.061	24.84	5895.36	2.95	
02/09/18	13:10	33416.85	336.37	29,305	32	220	0.052	17.45	5912.82	2.96	0.19
02/23/18	11:15	33753.60	336.75	29,642	34	186	0.047	15.70	5928.51	2.96	
03/07/18	10:55	34040.75	287.15	29,929	52	227	0.087	24.98	5953.50	2.98	
03/16/18	13:03	34251.67	210.92	30,140	48	195	0.069	14.55	5968.05	2.98	
04/13/18	9:15	34970.90	719.23	30,859	46	200	0.068	48.77	6016.82	3.01	
04/30/18	13:16	35332.87	361.97	31,221	46	200	0.068	24.54	6041.36	3.02	
05/15/18	13:34	35692.17	359.30	31,580	48	200	0.071	25.42	6066.78	3.03	
05/29/18	14:20	36028.04	335.87	31,916	48	200	0.071	23.77	6090.55	3.05	0.65
06/04/18	16:30	36169.50	141.46	32,058	71	200	0.105	14.81	6105.35	3.05	
06/20/18	14:30	36556.30	386.80	32,444	48	200	0.071	27.37	6132.72	3.07	
07/03/18	10:30	36865.13	308.83	32,753	56	520	0.215	66.28	6199.01	3.10	
07/19/18	10:40	37249.27	384.14	33,137	46	486	0.165	63.30	6262.30	3.13	
08/09/18	12:30	37754.97	505.70	33,643	58	386	0.165	83.45	6345.75	3.17	2.13
09/06/18					36						
09/19/18	12:00	38730.31	975.34	34,618	46	405	0.137	133.93	6479.67	3.24	
10/04/18	15:30	39093.45	363.14	34,981	73	425	0.227	82.47	6562.14	3.28	
10/18/18	13:00	39428.14	334.69	35,316	42	261	0.081	27.04	6589.19	3.29	
10/31/18	13:40	39716.90	288.76	35,605	52	317	0.121	35.08	6624.27	3.31	
11/16/18	8:00	39983.80	266.90	35,872	68	156	0.078	20.87	6645.14	3.32	1.19
11/16/18	9:54	39985.70	1.90	35,874	77	264	0.149	0.28	6645.42	3.32	
12/11/18	14:20	40585.95	600.25	36,474	90	150	0.099	59.53	6704.95	3.35	
12/27/18	13:40	40965.57	379.62	36,854	72	310	0.165	62.45	6767.40	3.38	

Released to Imaging: 6/17/2025 9:46:51 AM

Received by OCD: 6/4/2025 10:09:49 AM

Table 1 : Summary of SVE System Field Readings
Expand Energy Corporation, State M Lease (AP-72)
Lea County, New Mexico

Date	Time	Run Time Reading	Operating Hours		Discharge Readings		VOC Discharge				Calculated Correlation Factor
			since last reading	Total	PPM	CFM	lbs/Hr	lbs since last Reading	Total lbs	Total Tons	
01/24/19	14:58	41636.05	670.48	37,524	63	275	0.128	85.62	6853.01	3.43	
02/05/19	12:02	41919.95	283.90	37,808	48	251	0.088	25.08	6878.09	3.44	
02/21/19	12:00	42303.95	384.00	38,192	26	218	0.042	16.10	6894.20	3.45	
03/07/19	7:00	42632.85	328.90	38,521	80	208	0.122	40.29	6934.48	3.47	0.97
03/22/19	11:09	42986.51	353.66	38,875	47	177	0.062	21.78	6956.26	3.48	
04/03/19	15:00	43277.65	291.14	39,166	58	440	0.186	54.29	7010.55	3.51	
04/18/19	12:00	43634.32	356.67	39,522	105	450	0.348	124.21	7134.76	3.57	
05/17/19	13:30	44330.99	696.67	40,219	39	365	0.104	72.34	7207.11	3.60	
06/12/19	17:00	44952.75	621.76	40,841	6	170	0.008	4.67	7211.78	3.61	
06/25/19	11:00	45283.69	330.94	41,172	23	445	0.075	24.97	7236.75	3.62	
07/09/19	13:30	45573.87	290.18	41,462	27	360	0.072	20.79	7257.53	3.63	
07/22/19	14:00	45906.56	332.69	41,795	27	425	0.083	27.62	7285.15	3.64	0.87
08/05/19	11:30	46239.45	332.89	42,127	37	462	0.126	41.94	7327.09	3.66	
08/19/19	11:00	46575.01	335.56	42,463	23	533	0.090	30.32	7357.41	3.68	
09/03/19	15:15	46937.77	362.76	42,826	31	455	0.104	37.71	7395.12	3.70	
09/05/19	7:30	46980.41	42.64	42,868	79	227	0.133	5.65	7400.77	3.70	
09/16/19	11:30	47242.95	262.54	43,131	21	372	0.058	15.12	7415.89	3.71	
09/30/19	11:00	47576.43	333.48	43,464	24	355	0.063	20.94	7436.83	3.72	
10/16/19	12:00	47958.94	382.51	43,847	22	280	0.045	17.37	7454.20	3.73	
10/28/19	11:45	48246.61	287.67	44,135	16	326	0.038	11.06	7465.26	3.73	
11/11/19	11:00	48581.38	334.77	44,469	35	488	0.127	42.56	7507.82	3.75	
11/11/19	12:10	48582.46	1.08	44,470	27	188	0.037	0.04	7507.86	3.75	0.88
11/26/19	11:20	48916.78	334.32	44,805	16	284	0.033	10.95	7518.82	3.76	
11/26/19	11:50	48917.34	0.56	44,805	26	472	0.089	0.05	7518.87	3.76	
12/11/19	10:30	49294.17	376.83	45,182	30	214	0.047	17.79	7536.65	3.77	
12/22/19	11:00	49558.50	264.33	45,447	16	462	0.054	14.40	7551.05	3.78	
12/30/19	14:00	49631.20	72.70	45,519	30	462	0.102	7.43	7558.48	3.78	
01/12/20	13:00	49682.50	51.30	45,571	19	282	0.039	2.01	7560.49	3.78	
02/10/20	11:00	49806.20	123.70	45,694	19	145	0.021	2.55	7563.04	3.78	
03/05/20	12:40	50000.00	193.80	45,888	38	197	0.055	10.66	7573.71	3.79	0.69
03/09/20	12:10	50070.44	70.44	45,958	23	250	0.041	2.92	7576.62	3.79	
03/23/20	11:45	50083.25	12.81	45,971	25	323	0.060	0.76	7577.39	3.79	
04/06/20	10:30	50139.34	56.09	46,027	26	316	0.060	3.34	7580.73	3.79	
04/20/20	10:30	50225.20	85.86	46,113	19	408	0.056	4.84	7585.57	3.79	
05/05/20	11:00	50540.55	315.35	46,429	61	311	0.140	44.17	7629.74	3.81	1.06
05/18/20	12:30	50840.55	300.00	46,729	36	506	0.132	39.72	7669.46	3.83	
06/06/20	10:10	51279.56	439.01	47,168	47	340	0.118	51.71	7721.16	3.86	
06/20/20	13:20	51616.41	336.85	47,504	34	322	0.081	27.18	7748.35	3.87	
07/06/20	10:44	51998.22	381.81	47,886	0.5	425	0.002	0.60	7748.94	3.87	
07/19/20	11:10	52309.12	310.90	48,197	29	470	0.099	30.80	7779.75	3.89	0.51
08/09/20	17:30	52819.74	510.62	48,708	28	428	0.087	44.46	7824.20	3.91	
09/14/20	18:30	53480.00	660.26	49,368	25	421	0.076	50.19	7874.40	3.94	
09/24/20	13:20	53703.31	223.31	49,591	47	410	0.143	31.85	7906.25	3.95	
11/15/20	13:00	54664.23	960.92	50,552	38	418	0.116	111.61	8017.86	4.01	
12/11/20	8:27	55250.13	585.90	51,138	67	380	0.187	109.62	8127.48	4.06	1.36

Released to Imaging: 6/17/2025 9:46:51 AM

Received by OCD: 6/4/2025 10:09:49 AM

Table 1 : Summary of SVE System Field Readings
Expand Energy Corporation, State M Lease (AP-72)
Lea County, New Mexico

Date	Time	Run Time Reading	Operating Hours		Discharge Readings		VOC Discharge				Calculated Correlation Factor
			since last reading	Total	PPM	CFM	lbs/Hr	lbs since last Reading	Total lbs	Total Tons	
02/28/21	10:00	56876.10	1625.97	52,764	37	410	0.112	181.80	8309.28	4.15	0.36
03/02/21	14:05	56926.31	50.21	52,814	6.4	355	0.017	0.84	8310.12	4.16	
04/21/21	14:11	58101.61	1175.30	53,990	2.9	391	0.008	9.82	8319.94	4.16	0.07
05/13/21	13:42	58654.06	552.45	54,542	3.2	490	0.012	6.38	8326.32	4.16	
06/08/21	12:30	59275.70	621.64	55,164	31.0	460	0.105	65.34	8391.66	4.20	
09/09/21	12:50	60240.17	964.47	56,128	91.7	422	0.285	275.08	8666.74	4.33	1.53
09/24/21	12:30	60600.84	360.67	56,489	28.4	415	0.087	31.33	8698.07	4.35	
10/24/21	14:20	61323.92	723.08	57,212	23.7	312	0.055	39.41	8737.48	4.37	0.27
11/19/21	14:11	61946.79	622.87	57,835	26.1	402	0.077	48.17	8785.65	4.39	
12/07/21	12:30	62377.93	431.14	58,266	6.0	350	0.015	6.67	8792.32	4.40	
01/23/22	10:49	63503.18	1125.25	59,391	15.4	295	0.033	37.68	8830.00	4.42	1.38
02/16/22	11:30	64080.45	577.27	59,968	17.2	396	0.050	28.98	8858.98	4.43	
03/09/22	12:01	64561.31	480.86	60,449	16.7	383	0.047	22.67	8881.65	4.44	
03/27/22	9:05	65012.44	451.13	60,900	17.4	372	0.048	21.52	8903.17	4.45	
04/24/22	11:59	65684.16	671.72	61,572	14.1	317	0.033	22.13	8925.30	4.46	0.42
05/23/22	7:45	66388.40	704.24	62,276	17.1	205	0.026	18.20	8943.50	4.47	
06/21/22	12:15	67077.58	689.18	62,966	23.7	261	0.046	31.42	8974.92	4.49	
07/28/22	7:45	67970.01	892.43	63,858	16.5	217	0.026	23.55	8998.47	4.50	0.0002
08/28/22	9:11	68705.43	735.42	64,593	18.3	248	0.033	24.60	9023.07	4.51	
09/13/22	9:26	69088.00	382.57	64,976	60.0	233	0.103	39.42	9062.49	4.53	
09/15/22	8:23	69135.64	47.64	65,024	14.2	241	0.025	1.20	9063.69	4.53	0.51
10/29/22	11:02	70194.13	1058.49	66,082	19.2	240	0.034	35.95	9099.64	4.55	
11/27/22	11:11	70889.70	695.57	66,778	18.2	265	0.036	24.73	9124.37	4.56	
12/07/22	11:40	71129.09	239.39	67,017	17.2	224	0.028	6.80	9131.16	4.57	
01/29/23	11:00	72398.93	1509.23	68,287	16.5	255	0.031	46.80	9177.97	4.59	0.72
03/07/23	11:15	73288.13	889.20	69,176	23.7	250	0.044	38.83	9216.80	4.61	
04/22/23	11:24	74390.53	1102.40	70,279	12.4	488	0.045	49.17	9265.97	4.63	0.55
05/28/23	10:00	75276.92	886.39	71,165	12.3	453	0.041	36.40	9302.37	4.65	
06/13/23	15:05	75641.00	364.08	71,529	23.7	471	0.082	29.95	9332.32	4.67	
07/20/23	16:52	76531.81	890.81	72,420	14.8	489	0.053	47.52	9379.84	4.69	0.81
08/20/23	11:00	77271.00	739.19	73,159	14.8	425	0.046	34.27	9414.11	4.71	
09/06/23	12:30	77660.23	389.23	73,548	4.2	465	0.014	5.60	9419.71	4.71	
10/22/23	11:08	78783.33	1123.10	74,671	16.2	460	0.055	61.69	9481.40	4.74	0.81
11/12/23	10:15	79266.48	483.15	75,154	13.1	441	0.043	20.57	9501.97	4.75	
12/12/23	13:10	79989.39	722.91	75,877	4.7	462	0.016	11.57	9513.54	4.76	
01/13/24	11:00	80755.57	766.18	76,644	13.3	389	0.038	29.22	9542.76	4.77	0.68
02/17/24	10:00	81595.21	839.64	77,483	13.5	427	0.042	35.67	9578.43	4.79	
03/12/24	13:45	82172.95	577.74	78,061	6.2	408	0.019	10.77	9589.20	4.79	
04/27/24	9:00	83247.60	1074.65	79,136	10.5	485	0.038	40.34	9629.54	4.81	0.97
05/27/24	10:00	83992.91	745.31	79,881	9.4	508	0.035	26.23	9655.77	4.83	
06/18/24	14:00	84522.36	529.45	80,410	11.3	484	0.040	21.34	9677.11	4.84	
07/28/24	8:15	85473.92	951.56	81,362	9.4	494	0.034	32.57	9709.68	4.85	0.09
08/31/24	11:15	86293.03	819.11	82,181	9.3	485	0.033	27.23	9736.91	4.87	
09/06/24	11:00	86438.11	145.08	82,326	30.0	492	0.109	15.78	9752.69	4.88	
10/13/24	11:05	87324.86	886.75	83,213	8.7	421	0.027	23.94	9776.63	4.89	0.00
11/10/24	10:30	87997.33	672.47	83,885	6.7	480	0.024	15.94	9792.57	4.90	
11/21/24	12:10	88261.66	264.33	84,150	12.4	474	0.043	11.45	9804.02	4.90	
12/27/24	10:30	89125.09	863.43	85,013	10.5	395	0.031	26.39	9830.42	4.92	1.43
01/26/25	9:48	89844.55	719.46	85,733	9.9	434	0.032	22.78	9853.20	4.93	
02/10/25	8:18	90203.22	358.67	86,091	8.1	421	0.025	9.01	9862.22	4.93	
03/20/25	12:30	91119.22	916.00	87,007	2.1	438	0.007	6.21	9868.43	4.93	
								Corrected Total:	15,238.95	7.71	

Notes:

1. Color shading indicates air sampling period with a unique correlation factor.
2. During the June 24 & July 17, 2014 site visit the field readings were not recorded. The italicized values presented above for these dates are conservative estimated values based upon last known readings.

Released to Imaging: 6/17/2025 9:46:51 AM

Received by OCD: 6/4/2025 10:09:49 AM

Table 2 : Summary of Laboratory Analytical Results for Discharge Air Samples
Expand Energy Corporation, State M Lease (AP-72)
Lea County, New Mexico

Parameters	Sample ID:	SVE	Canister #34000823 Serial C8528 2014-12-11	CANISTER #C8522	Canister #8408 2015-06-11 Air Sample	Canister #5451 Batch #320-14155 9-3-15	CANISTER #34000512 BATCH ID #320-15930	STATE M-1 LEASE	20160629 M SVE	20160922 M SVE	20161208 M SVE	20170309 M SVE	20170607M SVE	20170907 M SVE	20171206 -M-SVE	20180307-M-SVE
	Sample Date:	1-Aug-14	11-Dec-14	12-Mar-15	11-Jun-15	3-Sep-15	10-Dec-15	10-Mar-16	29-Jun-16	22-Sep-16	8-Dec-16	9-Mar-17	7-Jun-17	7-Sep-17	6-Dec-17	7-Mar-18
Volatile Organic Compounds (VOCs) by TO-15																
Acetone	ppb v/v	<2000	<615	<965	<860	<615	<370	<915	<280	<175	<106	<203	<76.0	<116	<20.0	**5.67**
Benzene	ppb v/v	**8,820**	**2,960**	**533**	**3,630**	**312**	**194**	**1,070**	**2,600**	**853**	**373**	**550**	**180**	**143**	**1.77**	**24.5**
Benzyl chloride	ppb v/v	<320	<98.4	<154	<138	<98.4	<59.2	<146	<44.8	<27.9	<16.9	<32.4	<12.2	<18.5	<3.20	<0.800
Bromodichloromethane	ppb v/v	<120	<36.9	<57.9	<51.6	<36.9	<22.2	<54.9	<16.8	103.5	<6.33	<12.2	<4.56	<6.93	<1.20	<0.300
Bromoform	ppb v/v	<160	<49.2	<77.2	<68.8	<49.2	<29.6	<73.2	<22.4	<14.0	<8.44	<16.2	<6.08	<9.24	<1.60	<0.400
Bromomethane	ppb v/v	<320	<98.4	<154	<138	<98.4	<59.2	<146	<44.8	<27.9	<16.9	<32.4	<12.2	<18.5	<3.20	<0.800
2-Butanone (MEK)	ppb v/v	<320	<98.4	<154	<138	<98.4	<59.2	<146	<44.8	<27.9	<16.9	<32.4	<12.2	**178**	<3.20	<0.800
Carbon disulfide	ppb v/v	**1,800**	**272**	<154	<138	<98.4	<59.2	<146	**177**	<27.9	<16.9	<32.4	<12.2	<18.5	<3.20	<0.800
Carbon tetrachloride	ppb v/v	<320	<98.4	<154	<138	<98.4	<59.2	<146	<44.8	<27.9	<16.9	<32.4	<12.2	<18.5	<3.20	<0.800
Chlorobenzene	ppb v/v	<120	<36.9	<57.9	<51.6	<36.9	<22.2	<54.9	<16.8	<10.5	<6.33	<12.2	<4.56	<6.93	<1.20	<0.300
Dibromochloromethane	ppb v/v	<160	<49.2	<77.2	<68.8	<49.2	<29.6	<73.2	<22.4	<14.0	<8.44	<16.2	<6.08	<9.24	<1.60	<0.400
Chloroethane	ppb v/v	<320	<98.4	<154	<138	<98.4	<59.2	<146	<44.8	<27.9	<16.9	<32.4	<12.2	<18.5	<3.20	<0.800
Chloroform	ppb v/v	<120	<36.9	<57.9	<51.6	<36.9	<22.2	<54.9	<16.8	<10.5	<6.33	<12.2	<4.56	<6.93	<1.20	<0.300
Chloromethane	ppb v/v	<320	<98.4	<154	<138	<98.4	<59.2	<146	<44.8	<27.9	<16.9	<32.4	<12.2	<18.5	<3.20	<0.800
1,2-Dibromoethane	ppb v/v	<320	<98.4	<154	<138	<98.4	<59.2	<146	<44.8	<27.9	<16.9	<32.4	<12.2	<18.5	<3.20	<0.800
1,2-Dichlorobenzene	ppb v/v	<160	<49.2	<77.2	<68.8	<49.2	<29.6	<73.2	<22.4	<14.0	<8.44	<16.2	<6.08	<9.24	<1.60	<0.400
1,3-Dichlorobenzene	ppb v/v	<160	<49.2	<77.2	<68.8	<49.2	<29.6	<73.2	<22.4	<14.0	<8.44	<16.2	<6.08	<9.24	<1.60	<0.400
1,4-Dichlorobenzene	ppb v/v	<160	<49.2	<77.2	<68.8	<49.2	<29.6	<73.2	<22.4	<14.0	<8.44	<16.2	<6.08	<9.24	<1.60	<0.400
Dichlorodifluoromethane	ppb v/v	**1,980**	<49.2	<77.2	<68.8	<49.2	<29.6	<73.2	<22.4	<14.0	<8.44	<16.2	<6.08	<9.24	<1.60	<0.400
1,1-Dichloroethane	ppb v/v	<120	<36.9	<57.9	<51.6	<36.9	<22.2	<54.9	<16.8	<10.5	<6.33	<12.2	<4.56	<6.93	<1.20	<0.300
1,2-Dichloroethane	ppb v/v	<320	<98.4	<154	<138	<98.4	<59.2	<146	<44.8	<27.9	<16.9	<32.4	<12.2	<18.5	<3.20	**0.881**
1,1-Dichloroethene	ppb v/v	<320	<98.4	<154	<138	<98.4	<59.2	<146	<44.8	<27.9	<16.9	<32.4	<12.2	<18.5	<3.20	<0.800
cis-1,2-Dichloroethene	ppb v/v	<160	<49.2	**84.5**	<68.8	<49.2	<29.6	<73.2	<22.4	<14.0	<8.44	<16.2	<6.08	<9.24	<1.60	<0.400
trans-1,2-Dichloroethene	ppb v/v	<160	<49.2	<77.2	<68.8	<49.2	<29.6	<73.2	<22.4	<14.0	<8.44	<16.2	<6.08	<9.24	<1.60	<0.400
1,2-Dichloropropane	ppb v/v	<160	<49.2	<77.2	<68.8	<49.2	<29.6	<73.2	<22.4	<14.0	<8.44	<16.2	<6.08	<9.24	<1.60	<0.400
cis-1,3-Dichloropropene	ppb v/v	<160	<49.2	<77.2	<68.8	<49.2	<29.6	<73.2	<22.4	<14.0	<8.44	<16.2	<6.08	<9.24	<1.60	<0.400
trans-1,3-Dichloropropene	ppb v/v	<160	<49.2	<77.2	<68.8	<49.2	<29.6	<73.2	<22.4	<14.0	<8.44	<16.2	<6.08	<9.24	<1.60	<0.400
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ppb v/v	<160	<49.2	<77.2	<68.8	<49.2	<29.6	<73.2	<22.4	<14.0	<8.44	<16.2	<6.08	<9.24	<1.60	<0.400
Ethylbenzene	ppb v/v	**13,500**	**3,830**	**799**	**2,890**	**731**	**723**	**446**	**2,530**	**1,390**	**531**	**908**	**229**	**219**	**4.75**	**25.4**
4-Ethyltoluene	ppb v/v	**974**	**533**	**164**	**299**	**256**	**186**	<73.2	**660**	**497**	**135**	**263**	**58.5**	**45.1**	**2.38**	**3.74**
Hexachlorobutadiene	ppb v/v	<800	<246	<386	<344	<246	<148	<366	<112	<69.8	<42.2	<81.0	<30.4	<46.2	<8.00	<2.00
2-Hexanone	ppb v/v	<160	<49.2	<77.2	<68.8	<49.2	<29.6	<73.2	<22.4	<14.0	<8.44	<16.2	<6.08	<9.24	<1.60	<0.400
Methylene Chloride	ppb v/v	<160	<49.2	<77.2	<68.8	<49.2	<29.6	<73.2	<22.4	<14.0	<8.44	<16.2	<6.08	<9.24	<1.60	**0.540**
4-Methyl-2-pentanone	ppb v/v	<160	<49.2	<77.2	<68.8	<49.2	<29.6	<73.2	<22.4	<14.0	<8.44	<16.2	<6.08	<9.24	<1.60	<0.400
Styrene	ppb v/v	<160	<49.2	<77.2	<68.8	<49.2	<29.6	<73.2	<22.4	<14.0	<8.44	<16.2	<6.08	<9.24	<1.60	<0.400
1,1,2,2-Tetrachloroethane	ppb v/v	<160	<49.2	<77.2	<68.8	<49.2	<29.6	<73.2	**41.1**	<14.0	<8.44	**20.0**	<6.08	<9.24	<1.60	<0.400
Tetrachloroethene	ppb v/v	<160	**71.9**	<77.2	<68.8	<49.2	<29.6	**92.9**	<22.4	<14.0	<8.44	<16.2	<6.08	<9.24	<1.60	<0.400
Toluene	ppb v/v	**4,020**	**1,040**	**228**	**1,480**	<49.2	<29.6	**120**	**975**	**380**	**164**	**193**	**68.4**	**49.2**	<1.60	**6.92**
1,2,4-Trichlorobenzene	ppb v/v	<800	<246	<386	<344	<246	<148	<366	<112	<69.8	<42.2	<81.0	<30.4	<46.2	<8.00	<2.00
1,1,1-Trichloroethane	ppb v/v	<120	<36.9	<57.9	<51.6	<36.9	<22.2	<54.9	<16.8	<10.5	<6.33	<12.2	<4.56	<6.93	<1.20	<0.300
1,1,2-Trichloroethane	ppb v/v	<160	<49.2	<77.2	<68.8	<49.2	<29.6	<73.2	<22.4	<14.0	<8.44	<16.2	<6.08	<9.24	<1.60	<0.400
Trichloroethene	ppb v/v	<160	<49.2	<77.2	<68.8	<49.2	<29.6	<73.2	<22.4	<14.0	<8.44	<16.2	<6.08	<9.24	<1.60	<0.400
Trichlorofluoromethane	ppb v/v	<160	<49.2	<77.2	<68.8	<49.2	<29.6	<73.2	<22.4	<14.0	<8.44	<16.2	<6.08	<9.24	<1.60	<0.400

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Table 2 : Summary of Laboratory Analytical Results for Discharge Air Samples
Expand Energy Corporation, State M Lease (AP-72)
Lea County, New Mexico

Parameters	Sample ID:	SVE	Canister #34000823 Serial C8528 2014-12-11	CANISTER #C8522	Canister #8408 2015-06-11 Air Sample	Canister #5451 Batch #320-14155 9-3-15	CANISTER #34000512 BATCH ID #320-15930	STATE M-1 LEASE	20160629 M SVE	20160922 M SVE	20161208 M SVE	20170309 M SVE	20170607M SVE	20170907 M SVE	20171206 -M-SVE	20180307-M-SVE
	Sample Date:	1-Aug-14	11-Dec-14	12-Mar-15	11-Jun-15	3-Sep-15	10-Dec-15	10-Mar-16	29-Jun-16	22-Sep-16	8-Dec-16	9-Mar-17	7-Jun-17	7-Sep-17	6-Dec-17	7-Mar-18
VOCs by TO-15, continued																
1,1,2-Trichloro-1,2,2-trifluoroethane	ppb v/v	<160	<49.2	<77.2	<68.8	<49.2	<29.6	<73.2	<22.4	<14.0	<8.44	<16.2	<6.08	<9.24	<1.60	<0.400
1,2,4-Trimethylbenzene	ppb v/v	**2,020**	**648**	**299**	**774**	<98.4	**355**	<146	**968**	**740**	**228**	**411**	**85.9**	**50.3**	**7.35**	**9.05**
1,3,5-Trimethylbenzene	ppb v/v	**821**	**385**	**172**	**353**	**73.0**	**247**	<73.2	**727**	**541**	**192**	**397**	**53.6**	**45.5**	**6.18**	**5.81**
Vinyl acetate	ppb v/v	<320	<98.4	<154	<138	<98.4	<59.2	<146	<44.8	<27.9	<16.9	<32.4	<12.2	<18.5	<3.20	<0.800
Vinyl chloride	ppb v/v	<160	<49.2	<77.2	<68.8	<49.2	<29.6	<73.2	<22.8	<14.0	<8.44	<16.2	<6.08	<9.24	<1.60	<0.400
m,p-Xylene	ppb v/v	**12,700**	**4,680**	**1,110**	**3,920**	**1,140**	**1,380**	**609**	**5,050**	**2,550**	**870**	**1,510**	**322**	**330**	**10.3**	**48.7**
o-Xylene	ppb v/v	**4,520**	**1,190**	**286**	**1,120**	**164**	**194**	**107**	**720**	**419**	**177**	**337**	**98.4**	**96.4**	**2.54**	**15.6**
Total VOC as Hexane (C6-C12)	ppb v/v	**1,060,000**	**655,000**	**99,400**	**351,000**	**190,000**	**140,000**	**371,000**	**590,000**	**262,000**	**117,000**	**167,000**	**54,500**	**40,900**	**4,630**	**9,930**

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Table 2 : Summary of Laboratory Analytical Results for Discharge Air Samples
Expand Energy Corporation, State M Lease (AP-72)
Lea County, New Mexico

Parameters	Sample ID:	20180604-M-SVE	20180906-M-SVE	2018121-M-SVE	20190307 M SVE	20190905 M SVE	20200122 M1-SVE	20200305 M SVE	20200606-M-SVE	20200924M1SVE	20201211 M-1	20210302 M-1	20210608 M-1	20210908 M-1	20211207M-1	20220308 M-1
	Sample Date:	4-Jun-18	6-Sep-18	11-Dec-18	7-Mar-19	5-Sep-19	22-Jan-20	5-Mar-20	6-Jun-20	24-Sep-20	11-Dec-20	2-Mar-21	8-Jun-21	9-Sep-21	7-Dec-21	8-Mar-22
Volatile Organic Compounds (VOCs) by TO-15																
Acetone	ppb v/v	<78.0	<124	<178	<22.3	<84	<17	<78	<34	<29	<110	<7.8	**16**	**92**	**8.6**	**30**
Benzene	ppb v/v	**87.9**	**112**	**137**	**40.1**	**140**	**3.7**	**42**	**48**	**18**	**80**	<0.78	<0.71	**71**	<0.75	<1.6
Benzyl chloride	ppb v/v	<12.5	<19.8	<28.4	<3.56	<8.4	<1.7	<7.8	<8.4	<2.9	<11	<0.78	<0.71	<0.80	<0.75	<1.6
Bromodichloromethane	ppb v/v	<4.68	<7.43	<10.7	<1.34	<8.4	<1.7	<7.8	<8.4	<2.9	<11	<0.78	<0.71	<0.80	<0.75	<1.6
Bromoform	ppb v/v	<6.24	<9.91	<14.2	<1.78	<8.4	<1.7	<7.8	<8.4	<2.9	<11	<0.78	<0.71	<0.80	<0.75	<1.6
Bromomethane	ppb v/v	<12.5	<19.8	<28.4	<3.56	<84	<17	<78	<34	<29	<110	<7.8	<7.1	<8.0	<7.5	<16
2-Butanone (MEK)	ppb v/v	<12.5	<19.8	<28.4	**5.97**	<34	<6.7	<31	<34	<11	<43	<3.1	<2.8	**11**	<3.0	<6.2
Carbon disulfide	ppb v/v	<12.5	<19.8	<28.4	<3.56	<34	<6.7	<31	<34	<11	<43	<3.1	<2.8	**11**	<3.0	<6.2
Carbon tetrachloride	ppb v/v	<12.5	<19.8	<28.4	<3.56	<8.4	<1.7	<7.8	<8.4	<2.9	<11	<0.78	<0.71	<0.80	<0.75	<1.6
Chlorobenzene	ppb v/v	<4.68	<7.43	<10.7	<1.34	<8.4	<1.7	<7.8	<8.4	<2.9	<11	<0.78	<0.71	<0.80	<0.75	<1.6
Dibromochloromethane	ppb v/v	<6.24	<9.91	<14.2	<1.78	<8.4	<1.7	<7.8	<8.4	<2.9	<11	<0.78	<0.71	<0.80	<0.75	<1.6
Chloroethane	ppb v/v	<12.5	<19.8	<28.4	<3.56	<34	<6.7	<31	<34	<11	<43	<3.1	<2.8	<3.2	<3.0	<6.2
Chloroform	ppb v/v	<4.68	<7.43	<10.7	<1.34	<8.4	<1.7	<7.8	<8.4	<2.9	<11	<0.78	<0.71	<0.80	<0.75	<1.6
Chloromethane	ppb v/v	<12.5	<19.8	<28.4	<3.56	<84	<17	<78	<34	<29	<110	<7.8	<7.1	<8.0	<7.5	<16
1,2-Dibromoethane	ppb v/v	<12.5	<19.8	<28.4	<3.56	<8.4	<1.7	<7.8	<8.4	<2.9	<11	<0.78	<0.71	<0.80	<0.75	<1.6
1,2-Dichlorobenzene	ppb v/v	<6.24	<9.91	<14.2	<1.78	<8.4	<1.7	<7.8	<8.4	<2.9	<11	<0.78	<0.71	<0.80	<0.75	<1.6
1,3-Dichlorobenzene	ppb v/v	<6.24	<9.91	<14.2	<1.78	<8.4	<1.7	<7.8	<8.4	<2.9	<11	<0.78	<0.71	<0.80	<0.75	<1.6
1,4-Dichlorobenzene	ppb v/v	<6.24	<9.91	<14.2	<1.78	<8.4	<1.7	<7.8	<8.4	<2.9	<11	<0.78	<0.71	<0.80	<0.75	<1.6
Dichlorodifluoromethane	ppb v/v	<6.24	<9.91	<14.2	<1.78	<8.4	<1.7	<7.8	<8.4	<2.9	<11	<0.78	<0.71	<0.80	<0.75	<1.6
1,1-Dichloroethane	ppb v/v	<4.68	<7.43	<10.7	<1.34	<8.4	<1.7	<7.8	<8.4	<2.9	<11	<0.78	<0.71	<0.80	<0.75	<1.6
1,2-Dichloroethane	ppb v/v	<12.5	<19.8	<28.4	<3.56	<8.4	<1.7	<7.8	<8.4	<2.9	<11	<0.78	<0.71	<0.80	<0.75	<1.6
1,1-Dichloroethene	ppb v/v	<12.5	<19.8	<28.4	<3.56	<8.4	<1.7	<7.8	<8.4	<2.9	<11	<0.78	<0.71	<0.80	<0.75	<1.6
cis-1,2-Dichloroethene	ppb v/v	<6.24	<9.91	<14.2	<1.78	<8.4	<1.7	<7.8	<8.4	<2.9	<11	<0.78	<0.71	<0.80	<0.75	<1.6
trans-1,2-Dichloroethene	ppb v/v	<6.24	<9.91	<14.2	<1.78	<8.4	<1.7	<7.8	<8.4	<2.9	<11	<0.78	<0.71	<0.80	<0.75	<1.6
1,2-Dichloropropane	ppb v/v	<6.24	<9.91	<14.2	<1.78	<8.4	<1.7	<7.8	<8.4	<2.9	<11	<0.78	<0.71	<0.80	<0.75	<1.6
cis-1,3-Dichloropropene	ppb v/v	<6.24	<9.91	<14.2	<1.78	<8.4	<1.7	<7.8	<8.4	<2.9	<11	<0.78	<0.71	<0.80	<0.75	<1.6
trans-1,3-Dichloropropene	ppb v/v	<6.24	<9.91	<14.2	<1.78	<8.4	<1.7	<7.8	<8.4	<2.9	<11	<0.78	<0.71	<0.80	<0.75	<1.6
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ppb v/v	<6.24	<9.91	<14.2	<1.78	<8.4	<1.7	<7.8	<8.4	<2.9	<11	<0.78	<0.71	<0.80	<0.75	<1.6
Ethylbenzene	ppb v/v	**250**	**334**	**363**	**284**	**270**	**33**	**120**	**150**	**56**	**180**	<0.78	<0.71	**88**	<0.75	**5.2**
4-Ethyltoluene	ppb v/v	**42.7**	**89.2**	**76.7**	**167**	**180**	**25**	**100**	**130**	**64**	**170**	**0.82**	<0.71	**140**	<0.75	**27**
Hexachlorobutadiene	ppb v/v	<31.2	<49.5	<71.0	<8.90	<34	<6.7	<31	<34	<11	<43	<3.1	<2.8	<3.2	<3.0	<6.2
2-Hexanone	ppb v/v	<4.68	<9.91	<14.2	<1.78	<34	<6.7	<31	<34	<11	<43	<3.1	<2.8	<3.2	<3.0	<6.2
Methylene Chloride	ppb v/v	<6.24	<9.91	<14.2	<1.78	<84	<17	<78	<34	<29	<110	<7.8	<7.1	<8.0	<7.5	<16
4-Methyl-2-pentanone	ppb v/v	<6.24	<9.91	<14.2	<1.78	<8.4	<1.7	<7.8	<8.4	<2.9	<11	<0.78	<0.71	<0.80	<0.75	<1.6
Styrene	ppb v/v	<6.24	<9.91	<14.2	<1.78	<8.4	<1.7	<7.8	<8.4	<2.9	<11	<0.78	<0.71	<0.80	<0.75	<1.6
1,1,2,2-Tetrachloroethane	ppb v/v	<6.24	<9.91	<14.2	<1.78	<8.4	<1.7	<7.8	<8.4	<2.9	<11	<0.78	<0.71	<0.80	<0.75	<1.6
Tetrachloroethene	ppb v/v	<6.24	<9.91	<14.2	<1.78	<8.4	<1.7	<7.8	<8.4	<2.9	<11	<0.78	<0.71	<0.80	<0.75	<1.6
Toluene	ppb v/v	**34.4**	**44.3**	**41.0**	**38.8**	**30**	**3.1**	<7.8	**11**	**3.1**	<11	<0.78	<0.71	<0.80	<0.75	<1.6
1,2,4-Trichlorobenzene	ppb v/v	<31.2	<49.5	<71.0	<8.90	<34	<6.7	<31	<34	<11	<43	<3.1	<2.8	<3.2	<3.0	<6.2
1,1,1-Trichloroethane	ppb v/v	<4.68	<7.43	<10.7	<1.34	<8.4	<1.7	<7.8	<8.4	<2.9	<11	<0.78	<0.71	<0.80	<0.75	<1.6
1,1,2-Trichloroethane	ppb v/v	<6.24	<9.91	<14.2	<1.78	<8.4	<1.7	<7.8	<8.4	<2.9	<11	<0.78	<0.71	<0.80	<0.75	<1.6
Trichloroethene	ppb v/v	<6.24	<9.91	<14.2	<1.78	<8.4	<1.7	**20**	<8.4	<2.9	<11	<0.78	<0.71	<0.80	<0.75	<1.6
Trichlorofluoromethane	ppb v/v	<6.24	<9.91	<14.2	<1.78	<8.4	<1.7	<7.8	<8.4	<2.9	<11	<0.78	<0.71	<0.80	<0.75	<1.6

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Table 2 : Summary of Laboratory Analytical Results for Discharge Air Samples
Expand Energy Corporation, State M Lease (AP-72)
Lea County, New Mexico

Parameters	Sample ID:	20180604-M-SVE	20180906-M-SVE	2018121-M-SVE	20190307 M SVE	20190905 M SVE	20200122 M1-SVE	20200305 M SVE	20200606-M-SVE	20200924M1SVE	20201211 M-1	20210302 M-1	20210608 M-1	20210908 M-1	20211207M-1	20220308 M-1
	Sample Date:	4-Jun-18	6-Sep-18	11-Dec-18	7-Mar-19	5-Sep-19	22-Jan-20	5-Mar-20	6-Jun-20	24-Sep-20	11-Dec-20	2-Mar-21	8-Jun-21	9-Sep-21	7-Dec-21	8-Mar-22
VOCs by TO-15, continued																
1,1,2-Trichloro-1,2,2-trifluoroethane	ppb v/v	<6.24	<9.91	<14.2	<1.78	<8.4	<1.7	<7.8	<8.4	<2.9	<11	<0.78	<0.71	<0.80	<0.75	<1.6
1,2,4-Trimethylbenzene	ppb v/v	**71.3**	**134**	**124**	**83.0**	**75**	**10**	**59**	**60**	**38**	**79**	<0.78	<0.71	**100**	**0.80**	**9.7**
1,3,5-Trimethylbenzene	ppb v/v	**46.2**	**88.6**	**102**	**67.0**	**69**	**9.1**	**43**	**50**	**31**	**77**	**1.0**	**1.3**	**110**	**1.3**	**14**
Vinyl acetate	ppb v/v	<12.5	<19.8	<28.4	<3.56	<8.4	<6.7	<31	<34	<11	<43	<3.1	<2.8	<3.2	<3.0	<6.2
Vinyl chloride	ppb v/v	<6.24	<9.91	<14.2	<1.78	<8.4	<1.7	<7.8	<8.4	<2.9	<11	<0.78	<0.71	<0.80	<0.75	<1.6
m,p-Xylene	ppb v/v	**376**	**501**	**544**	**442**	**440**	**66**	**210**	**280**	**110**	**380**	<0.78	<0.71	**260**	<0.75	**20**
o-Xylene	ppb v/v	**107**	**133**	**158**	**137**	**120**	**55**	**50**	**63**	**25**	**83**	<0.78	<0.71	**55**	<0.75	**4.0**
Total VOC as Hexane (C6-C12)	ppb v/v	**46,500**	**76,600**	**107,000**	**77,900**	**69,000**	**14,000**	**26,000**	**50,000**	**24,000**	**91,000**	**2,300**	**2,100**	**140,000**	**1,600**	**24,000**

Released to Imaging: 6/17/2025 9:46:51 AM

Received by OCD: 6/4/2025 10:09:49 AM

Table 2 : Summary of Laboratory Analytical Results for Discharge Air Samples
Expand Energy Corporation, State M Lease (AP-72)
Lea County, New Mexico

Parameters	Sample ID:	20220621 M-1	202209_ _M-1	20221207 M-1	20230307 M-1	20230613M-1	20230906M-1	20231212 M-1	20240312M-1	20240618M-1	20240906 M-1	20241122M-1	20250320M-1
	Sample Date:	21-Jun-22	13-Sep-22	7-Dec-22	7-Mar-23	13-Jun-23	6-Sep-23	12-Dec-23	12-Mar-24	18-Jun-24	6-Sep-24	22-Nov-24	20-Mar-25
Volatile Organic Compounds (VOCs) by TO-15													
Acetone	ppb v/v	<74	<7.1	<7.0	<32	**16**	**9.3**	**9.9**	**10**	<13	<10	<9.4	<8.4
Benzene	ppb v/v	<7.4	<0.71	**1.1**	<3.2	<1.6	<0.85	**1.8**	<0.76	<1.3	<1.0	<0.94	**1.2**
Benzyl chloride	ppb v/v	<7.4	<0.71	<0.70	<3.2	<1.6	<0.85	<0.80	<0.76	<1.3	<1.0	<0.94	<0.84
Bromodichloromethane	ppb v/v	<7.4	<0.71	<0.70	<3.2	<1.6	<0.85	<0.80	<0.76	<1.3	<1.0	<0.94	<0.84
Bromoform	ppb v/v	<7.4	<0.71	<0.70	<3.2	<1.6	<0.85	<0.80	<0.76	<1.3	<1.0	<0.94	<0.84
Bromomethane	ppb v/v	<74	<7.1	<7.0	<32	<16	<8.5	<8.0	<7.6	<13	<10	<9.4	<8.4
2-Butanone (MEK)	ppb v/v	<29	<2.8	<2.8	<13	<6.5	<3.4	<3.2	<3.0	<5.3	<4.2	<3.8	<3.4
Carbon disulfide	ppb v/v	<29	<2.8	<2.8	<13	<6.5	<3.4	<3.2	<3.0	<5.3	<4.2	<3.8	<3.4
Carbon tetrachloride	ppb v/v	<7.4	<0.71	<0.70	<3.2	<1.6	<0.85	<0.80	<0.76	<1.3	<1.0	<0.94	<0.84
Chlorobenzene	ppb v/v	<7.4	0.71	<0.70	<3.2	<1.6	<0.85	<0.80	<0.76	<1.3	<1.0	<0.94	<0.84
Dibromochloromethane	ppb v/v	<7.4	<0.71	<0.70	<3.2	<1.6	<0.85	<0.80	<0.76	<1.3	<1.0	<0.94	<0.84
Chloroethane	ppb v/v	<29	<2.8	<2.8	<13	<6.5	<3.4	<3.2	<3.0	<5.3	<4.2	<3.8	<3.4
Chloroform	ppb v/v	<7.4	<0.71	<0.70	<3.2	<1.6	<0.85	<0.80	<0.76	<1.3	<1.0	<0.94	<0.84
Chloromethane	ppb v/v	<74	<7.1	<7.0	<32	<16	<8.5	<8.0	<7.6	<13	<10	<9.4	<8.4
1,2-Dibromoethane	ppb v/v	<7.4	<0.71	<0.70	<3.2	<1.6	<0.85	<0.80	<0.76	<1.3	<1.0	<0.94	<0.84
1,2-Dichlorobenzene	ppb v/v	<7.4	<0.71	<0.70	<3.2	<1.6	<0.85	<0.80	<0.76	<1.3	<1.0	<0.94	<0.84
1,3-Dichlorobenzene	ppb v/v	<7.4	<0.71	<0.70	<3.2	<1.6	<0.85	<0.80	<0.76	<1.3	<1.0	<0.94	<0.84
1,4-Dichlorobenzene	ppb v/v	<7.4	<0.71	<0.70	<3.2	<1.6	<0.85	<0.80	<0.76	<1.3	<1.0	<0.94	<0.84
Dichlorodifluoromethane	ppb v/v	<7.4	<0.71	<0.70	<3.2	<1.6	<0.85	<0.80	<0.76	<1.3	<1.0	<0.94	<0.84
1,1-Dichloroethane	ppb v/v	<7.4	<0.71	<0.70	<3.2	<1.6	<0.85	<0.80	<0.76	<1.3	<1.0	<0.94	<0.84
1,2-Dichloroethane	ppb v/v	<7.4	<0.71	<0.70	<3.2	<1.6	<0.85	<0.80	<0.76	<1.3	<1.0	<0.94	<0.84
1,1-Dichloroethene	ppb v/v	<7.4	<0.71	<0.70	<3.2	<1.6	<0.85	<0.80	<0.76	<1.3	<1.0	<0.94	<0.84
cis-1,2-Dichloroethene	ppb v/v	<7.4	<0.71	<0.70	<3.2	<1.6	<0.85	<0.80	<0.76	<1.3	<1.0	<0.94	<0.84
trans-1,2-Dichloroethene	ppb v/v	<7.4	<0.71	<0.70	<3.2	<1.6	<0.85	<0.80	<0.76	<1.3	<1.0	<0.94	<0.84
1,2-Dichloropropane	ppb v/v	<7.4	<0.71	<0.70	<3.2	<1.6	<0.85	<0.80	<0.76	<1.3	<1.0	<0.94	<0.84
cis-1,3-Dichloropropene	ppb v/v	<7.4	<0.71	<0.70	<3.2	<1.6	<0.85	<0.80	<0.76	<1.3	<1.0	<0.94	<0.84
trans-1,3-Dichloropropene	ppb v/v	<7.4	<0.71	<0.70	<3.2	<1.6	<0.85	<0.80	<0.76	<1.3	<1.0	<0.94	<0.84
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ppb v/v	<7.4	<0.71	<0.70	<3.2	<1.6	<0.85	<0.80	<0.76	<1.3	<1.0	<0.94	<0.84
Ethylbenzene	ppb v/v	<7.4	<0.71	<0.70	<3.2	<1.6	<0.85	**0.82**	<0.76	<1.3	<1.0	<0.94	<0.84
4-Ethyltoluene	ppb v/v	**31**	<0.71	**7.9**	**18**	**10**	**3.7**	**1.9**	**2.0**	**2.0**	**1.7**	<0.94	**1.1**
Hexachlorobutadiene	ppb v/v	<29	<2.8	<2.8	<13	<6.5	<3.4	<3.2	<3.0	<5.3	<4.2	<3.8	<3.4
2-Hexanone	ppb v/v	<29	<2.8	<2.8	<13	<6.5	<3.4	<3.2	<3.0	<5.3	<4.2	<3.8	<3.4
Methylene Chloride	ppb v/v	<74	<7.1	<7.0	<32	<16	<8.5	<8.0	<7.6	<13	<10	<9.4	<8.4
4-Methyl-2-pentanone	ppb v/v	<7.4	<0.71	<0.70	<3.2	<1.6	<0.85	<0.80	<0.76	<1.3	<1.0	<0.94	<0.84
Styrene	ppb v/v	<7.4	<0.71	<0.70	<3.2	<1.6	<0.85	<0.80	<0.76	<1.3	<1.0	<0.94	<0.84
1,1,2,2-Tetrachloroethane	ppb v/v	<7.4	<0.71	<0.70	<3.2	<1.6	<0.85	<0.80	<0.76	<1.3	<1.0	<0.94	<0.84
Tetrachloroethene	ppb v/v	<7.4	<0.71	<0.70	<3.2	<1.6	<0.85	<0.80	<0.76	<1.3	<1.0	<0.94	<0.84
Toluene	ppb v/v	<7.4	<0.71	**0.94**	<6.5	<3.2	<1.7	**2.6**	<1.5	<2.7	<2.1	<1.9	<1.7
1,2,4-Trichlorobenzene	ppb v/v	<29	<2.8	<2.8	<13	<6.5	<3.4	<3.2	<3.0	<5.3	<4.2	<3.8	<3.4
1,1,1-Trichloroethane	ppb v/v	<7.4	<0.71	<0.70	<3.2	<1.6	<0.85	<0.80	<0.76	<1.3	<1.0	<0.94	<0.84
1,1,2-Trichloroethane	ppb v/v	<7.4	<0.71	<0.70	<3.2	<1.6	<0.85	<0.80	<0.76	<1.3	<1.0	<0.94	<0.84
Trichloroethene	ppb v/v	<7.4	<0.71	<0.70	<3.2	<1.6	<0.85	<0.80	<0.76	<1.3	<1.0	<0.94	<0.84
Trichlorofluoromethane	ppb v/v	<7.4	<0.71	<0.70	<3.2	<1.6	<0.85	<0.80	<0.76	<1.3	<1.0	<0.94	<0.84

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Table 2 : Summary of Laboratory Analytical Results for Discharge Air Samples
Expand Energy Corporation, State M Lease (AP-72)
Lea County, New Mexico

Parameters	Sample ID:	20220621 M-1	202209_ _M-1	20221207 M-1	20230307 M-1	20230613M-1	20230906M-1	20231212 M-1	20240312M-1	20240618M-1	20240906 M-1	20241122M-1	20250320M-1
	Sample Date:	21-Jun-22	13-Sep-22	7-Dec-22	7-Mar-23	13-Jun-23	6-Sep-23	12-Dec-23	12-Mar-24	18-Jun-24	6-Sep-24	22-Nov-24	20-Mar-25
VOCs by TO-15, continued													
1,1,2-Trichloro-1,2,2-trifluoroethane	ppb v/v	<7.4	<0.71	<0.70	<3.2	<1.6	<0.85	<0.80	<0.76	<1.3	<1.0	<0.94	<0.84
1,2,4-Trimethylbenzene	ppb v/v	**19**	<0.71	**6.1**	**11**	**6.2**	**2.6**	**1.1**	**1.2**	<1.3	**1.1**	<0.94	<0.84
1,3,5-Trimethylbenzene	ppb v/v	**16**	<0.71	**6.5**	**17**	**9.3**	**4.3**	**1.6**	**2.0**	**2.0**	**1.6**	<0.94	**1.3**
Vinyl acetate	ppb v/v	<29	<2.8	<2.8	<13	<6.5	<3.4	<3.2	<3.0	<5.3	<4.2	<3.8	<3.4
Vinyl chloride	ppb v/v	<7.4	<2.8	<0.70	<3.2	<1.6	<0.85	<0.80	<0.76	<1.3	<1.0	<0.94	<0.84
m,p-Xylene	ppb v/v	**7.9**	<0.71	**2.1**	**5.8**	**3.6**	**1.2** J	**2.0**	<1.5	<2.7	<2.1	<1.9	**3.4**
o-Xylene	ppb v/v	<7.4	<0.71	<0.70	<3.2	<1.6	<0.85	<0.80	<0.76	<1.3	<1.0	<0.94	<0.84
Total VOC as Hexane (C6-C12)	ppb v/v	**10,000**	**14**	**8,800**	**17,000**	**13,000**	**3,400**	**3,800**	**4,200**	**3,200**	**2,800**	**1,900**	**3,000**

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Table 3 : Summary of Liquid Level Measurements
Expand Energy Corporation, State M Lease (AP-72)
Lea County, New Mexico

Monitoring Well	Top of Casing Elevation (AMSL-Feet)	Depth to Liquid Measurement Date	Depth to LNAPL (Feet-TOC)	Depth to Groundwater (Feet-TOC)	LNAPL Thickness (Feet)	Groundwater Elevation (AMSL-Feet)
MW-1R	3888.97	06/03/14	44.57	49.89	5.32	3839.08
	3888.97	09/22/14	44.87	48.91	4.04	3840.06
	3888.97	12/10/14	45.80	46.30	0.50	3842.67
	3888.97	03/11/15	45.12	46.83	1.71	3842.14
	3888.97	06/10/15	45.54	46.31	0.77	3842.66
	3888.97	09/02/15	45.81	47.37	1.56	3841.60
	3888.97	12/09/15	45.22	49.07	3.85	3839.90
	3888.97	03/09/16	45.30	47.18	1.88	3841.79
	3888.97	06/28/16	45.75	47.02	1.27	3841.95
	3888.97	09/21/16	46.10	46.38	0.28	3842.59
	3888.97	12/07/16	46.13	46.88	0.75	3842.09
	3888.97	03/08/17	46.14	46.57	0.43	3842.40
	3888.97	06/06/17	45.82	48.86	3.04	3840.11
	3888.97	09/08/17	46.30	46.63	0.33	3842.34
	3888.97	12/04/17	46.36	46.77	0.41	3842.20
	3888.97	03/05/18	46.47	46.81	0.34	3842.16
	3888.97	06/05/18	46.56	46.93	0.37	3842.04
	3888.97	09/05/18	46.31	48.81	2.50	3840.16
	3888.97	12/11/18	46.34	49.11	2.77	3839.86
	3888.97	03/06/19	46.48	49.20	2.72	3839.77
	3888.97	06/04/19	46.58	48.84	2.26	3840.13
	3888.97	09/04/19	47.88	48.67	0.79	3840.30
	3888.97	12/06/19	47.13	47.43	0.30	3841.54
	3888.97	03/05/20	47.11	47.68	0.57	3841.29
	3888.97	06/06/20	47.21	47.45	0.24	3841.52
	3888.97	09/24/20	47.44	47.60	0.16	3841.37
	3888.97	12/10/20	47.51	47.69	0.18	3841.28
	3888.97	03/02/21	47.48	47.58	0.10	3841.39
	3888.97	06/08/21	47.52	48.30	0.78	3840.67
	3888.97	09/08/21	47.73	48.00	0.27	3840.97
	3888.97	12/07/21	47.87	48.03	0.16	3840.94
	3888.97	03/08/22	47.84	47.98	0.14	3840.99
	3888.97	06/21/22	48.06	48.11	0.05	3840.86
	3888.97	09/13/22	48.23	48.53	0.30	3840.44
	3888.97	12/07/22	48.38	48.52	0.14	3840.45
	3888.97	03/07/23	48.44	48.52	0.08	3840.45
	3888.97	06/13/23	---	48.45	0.00	3840.52
	3888.97	09/06/23	---	48.66	0.00	3840.31
	3888.97	12/12/23	48.98	48.99	0.01	3839.98
	3888.97	03/12/24	49.18	49.23	0.05	3839.74
	3888.97	06/18/24	49.73	49.98	0.25	3838.99
	3888.97	09/06/24	49.80	49.87	0.07	3839.10
	3888.97	11/21/24	49.56	49.60	0.04	3839.37
	3888.97	03/20/25	---	49.51	---	3839.46

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Table 3 : Summary of Liquid Level Measurements
Expand Energy Corporation, State M Lease (AP-72)
Lea County, New Mexico

Monitoring Well	Top of Casing Elevation (AMSL-Feet)	Depth to Liquid Measurement Date	Depth to LNAPL (Feet-TOC)	Depth to Groundwater (Feet-TOC)	LNAPL Thickness (Feet)	Groundwater Elevation (AMSL-Feet)
MW-2	3890.51	06/03/14	---	47.23	---	3843.28
	3890.51	09/22/14	---	46.37	---	3844.14
	3890.51	12/10/14	---	45.91	---	3844.60
	3890.51	03/11/15	---	46.03	---	3844.48
	3890.51	06/10/15	---	46.38	---	3844.13
	3890.51	09/02/15	---	46.44	---	3844.07
	3890.51	12/09/15	---	46.51	---	3844.00
	3890.51	03/09/16	---	46.61	---	3843.90
	3890.51	06/28/16	---	46.70	---	3843.81
	3890.51	09/21/16	---	46.80	---	3843.71
	3890.51	12/07/16	---	46.82	---	3843.69
	3890.51	03/08/17	---	46.88	---	3843.63
	3890.51	06/06/17	---	46.98	---	3843.53
	3890.51	09/08/17	---	47.06	---	3843.45
	3890.51	12/04/17	---	47.11	---	3843.40
	3890.51	03/05/18	---	47.22	---	3843.29
	3890.51	06/05/18	---	47.31	---	3843.20
	3890.51	09/05/18	---	47.36	---	3843.15
	3890.51	12/11/18	---	47.46	---	3843.05
	3890.51	03/06/19	---	47.51	---	3843.00
	3890.51	06/04/19	---	47.61	---	3842.90
	3890.51	09/04/19	---	47.76	---	3842.75
	3890.51	12/06/19	---	47.81	---	3842.70
	3890.51	03/05/20	---	47.91	---	3842.60
	3890.51	06/06/20	---	49.98	---	3840.53
	3890.51	09/24/20	---	48.14	---	3842.37
	3890.51	12/10/20	---	48.21	---	3842.30
	3890.51	03/02/21	---	48.25	---	3842.26
	3890.51	06/08/21	---	48.31	---	3842.20
	3890.51	09/08/21	---	48.41	---	3842.10
	3890.51	12/07/21	---	48.51	---	3842.00
	3890.51	03/08/22	---	48.58	---	3841.93
	3890.51	06/21/22	---	48.72	---	3841.79
	3890.51	09/13/22	---	48.82	---	3841.69
	3890.51	12/07/22	---	48.90	---	3841.61
	3890.51	03/07/23	---	49.00	---	3841.51
	3890.51	06/13/23	---	49.18	---	3841.33
	3890.51	09/06/23	---	49.23	---	3841.28
	3890.51	12/12/23	---	49.53	---	3840.98
	3890.51	03/12/24	---	49.74	---	3840.77
	3890.51	06/18/24	---	50.18	---	3840.33
	3890.51	09/06/24	---	50.01	---	3840.50
	3890.51	11/21/24	---	50.10	---	3840.41
	3890.51	03/20/25	---	50.12	---	3840.39

Table 3 : Summary of Liquid Level Measurements
Expand Energy Corporation, State M Lease (AP-72)
Lea County, New Mexico

Monitoring Well	Top of Casing Elevation (AMSL-Feet)	Depth to Liquid Measurement Date	Depth to LNAPL (Feet-TOC)	Depth to Groundwater (Feet-TOC)	LNAPL Thickness (Feet)	Groundwater Elevation (AMSL-Feet)
MW-3	3889.34	06/03/14	---	46.35	---	3842.99
	3889.34	09/22/14	---	46.49	---	3842.85
	3889.34	12/10/14	---	46.08	---	3843.26
	3889.34	03/11/15	---	46.28	---	3843.06
	3889.34	06/10/15	---	46.51	---	3842.83
	3889.34	09/02/15	---	46.60	---	3842.74
	3889.34	12/09/15	---	46.68	---	3842.66
	3889.34	03/09/16	---	46.72	---	3842.62
	3889.34	06/28/16	---	46.85	---	3842.49
	3889.34	09/21/16	---	46.96	---	3842.38
	3889.34	12/07/16	---	47.02	---	3842.32
	3889.34	03/08/17	---	47.11	---	3842.23
	3889.34	06/06/17	---	47.13	---	3842.21
	3889.34	09/08/17	---	47.23	---	3842.11
	3889.34	12/04/17	---	47.28	---	3842.06
	3889.34	03/05/18	---	47.44	---	3841.90
	3889.34	06/05/18	---	47.48	---	3841.86
	3889.34	09/05/18	---	47.55	---	3841.79
	3889.34	12/11/18	---	47.60	---	3841.74
	3889.34	03/06/19	---	47.68	---	3841.66
	3889.34	06/04/19	---	47.80	---	3841.54
	3889.34	09/04/19	---	47.95	---	3841.39
	3889.34	12/06/19	---	48.00	---	3841.34
	3889.34	03/05/20	---	48.03	---	3841.31
	3889.34	06/06/20	---	48.16	---	3841.18
	3889.34	09/24/20	---	48.34	---	3841.00
	3889.34	12/10/20	---	48.42	---	3840.92
	3889.34	03/02/21	---	48.42	---	3840.92
	3889.34	06/08/21	---	48.50	---	3840.84
	3889.34	09/08/21	---	48.60	---	3840.74
	3889.34	12/07/21	---	48.71	---	3840.63
	3889.34	03/08/22	---	48.74	---	3840.60
	3889.34	06/21/22	---	48.89	---	3840.45
	3889.34	09/13/22	---	49.02	---	3840.32
	3889.34	12/07/22	---	49.10	---	3840.24
	3889.34	03/07/23	---	49.22	---	3840.12
	3889.34	06/13/23	---	49.27	---	3840.07
	3889.34	09/06/23	---	49.45	---	3839.89
	3889.34	12/12/23	---	49.77	---	3839.57
	3889.34	03/12/24	---	50.00	---	3839.34
	3889.34	06/18/24	---	50.42	---	3838.92
	3889.34	09/06/24	---	50.20	---	3839.14
	3889.34	11/21/24	---	50.31	---	3839.03
	3889.34	03/20/25	---	50.36	---	3838.98

Table 3 : Summary of Liquid Level Measurements
Expand Energy Corporation, State M Lease (AP-72)
Lea County, New Mexico

Monitoring Well	Top of Casing Elevation (AMSL-Feet)	Depth to Liquid Measurement Date	Depth to LNAPL (Feet-TOC)	Depth to Groundwater (Feet-TOC)	LNAPL Thickness (Feet)	Groundwater Elevation (AMSL-Feet)
MW-4	3888.90	06/03/14	---	46.38	---	3842.52
	3888.90	09/22/14	---	46.50	---	3842.40
	3888.90	12/10/14	---	46.14	---	3842.76
	3888.90	03/11/15	---	46.35	---	3842.55
	3888.90	06/10/15	---	46.49	---	3842.41
	3888.90	09/02/15	---	46.57	---	3842.33
	3888.90	12/09/15	---	46.68	---	3842.22
	3888.90	03/09/16	---	46.75	---	3842.15
	3888.90	06/28/16	---	46.87	---	3842.03
	3888.90	09/21/16	---	46.94	---	3841.96
	3888.90	12/07/16	---	47.03	---	3841.87
	3888.90	03/08/17	---	47.08	---	3841.82
	3888.90	06/06/17	---	47.15	---	3841.75
	3888.90	09/08/17	---	47.24	---	3841.66
	3888.90	12/04/17	---	47.29	---	3841.61
	3888.90	03/05/18	---	47.38	---	3841.52
	3888.90	06/05/18	---	47.50	---	3841.40
	3888.90	09/05/18	---	47.53	---	3841.37
	3888.90	12/11/18	---	47.62	---	3841.28
	3888.90	03/06/19	---	47.72	---	3841.18
	3888.90	06/04/19	---	47.80	---	3841.10
	3888.90	09/04/19	---	47.98	---	3840.92
	3888.90	12/06/19	---	48.00	---	3840.90
	3888.90	03/05/20	---	48.07	---	3840.83
	3888.90	06/06/20	---	48.20	---	3840.70
	3888.90	09/24/20	---	48.32	---	3840.58
	3888.90	12/10/20	---	48.39	---	3840.51
	3888.90	03/02/21	---	48.44	---	3840.46
	3888.90	06/08/21	---	48.55	---	3840.35
	3888.90	09/08/21	---	48.60	---	3840.30
	3888.90	12/07/21	---	48.72	---	3840.18
	3888.90	03/08/22	---	48.80	---	3840.10
	3888.90	06/21/22	---	48.92	---	3839.98
	3888.90	09/13/22	---	49.02	---	3839.88
	3888.90	12/07/22	---	49.06	---	3839.84
	3888.90	03/07/23	---	49.17	---	3839.73
	3888.90	06/13/23	---	49.27	---	3839.63
	3888.90	09/06/23	---	49.43	---	3839.47
	3888.90	12/12/23	---	50.02	---	3838.88
	3888.90	03/12/24	---	50.09	---	3838.81
	3888.90	06/18/24	---	50.54	---	3838.36
	3888.90	09/06/24	---	50.30	---	3838.60
	3888.90	11/21/24	---	50.41	---	3838.49
	3888.90	03/20/25	---	50.44	---	3838.46

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Table 3 : Summary of Liquid Level Measurements
Expand Energy Corporation, State M Lease (AP-72)
Lea County, New Mexico

Monitoring Well	Top of Casing Elevation (AMSL-Feet)	Depth to Liquid Measurement Date	Depth to LNAPL (Feet-TOC)	Depth to Groundwater (Feet-TOC)	LNAPL Thickness (Feet)	Groundwater Elevation (AMSL-Feet)
MW-5	3890.41	06/03/14	---	46.56	---	3843.85
	3890.41	09/22/14	---	46.70	---	3843.71
	3890.41	12/10/14	---	46.29	---	3844.12
	3890.41	03/11/15	---	46.44	---	3843.97
	3890.41	06/10/15	---	46.69	---	3843.72
	3890.41	09/02/15	---	46.79	---	3843.62
	3890.41	12/09/15	---	46.85	---	3843.56
	3890.41	03/09/16	---	46.90	---	3843.51
	3890.41	06/28/16	---	47.08	---	3843.33
	3890.41	09/21/16	---	47.13	---	3843.28
	3890.41	12/07/16	---	47.14	---	3843.27
	3890.41	03/08/17	---	47.23	---	3843.18
	3890.41	06/06/17	---	47.32	---	3843.09
	3890.41	09/08/17	---	47.40	---	3843.01
	3890.41	12/04/17	---	47.27	---	3843.14
	3890.41	03/05/18	---	47.54	---	3842.87
	3890.41	06/05/18	---	47.66	---	3842.75
	3890.41	09/05/18	---	47.72	---	3842.69
	3890.41	12/11/18	---	47.80	---	3842.61
	3890.41	03/06/19	---	47.85	---	3842.56
	3890.41	06/04/19	---	47.98	---	3842.43
	3890.41	09/04/19	---	48.15	---	3842.26
	3890.41	12/06/19	---	48.17	---	3842.24
	3890.41	03/05/20	---	48.23	---	3842.18
	3890.41	06/06/20	---	48.33	---	3842.08
	3890.41	09/24/20	---	48.51	---	3841.90
	3890.41	12/10/20	---	48.60	---	3841.81
	3890.41	03/02/21	---	48.60	---	3841.81
	3890.41	06/08/21	---	48.66	---	3841.75
	3890.41	09/08/21	---	48.76	---	3841.65
	3890.41	12/07/21	---	48.90	---	3841.51
	3890.41	03/08/22	---	48.90	---	3841.51
	3890.41	06/21/22	---	49.09	---	3841.32
	3890.41	09/13/22	---	49.19	---	3841.22
	3890.41	12/07/22	---	49.28	---	3841.13
	3890.41	03/07/23	---	49.38	---	3841.03
	3890.41	06/13/23	---	49.43	---	3840.98
	3890.41	09/06/23	---	49.64	---	3840.77
	3890.41	12/12/23	---	49.84	---	3840.57
	3890.41	03/12/24	---	50.12	---	3840.29
	3890.41	06/18/24	---	50.52	---	3839.89
	3890.41	09/06/24	---	50.39	---	3840.02
	3890.41	11/21/24	---	50.42	---	3839.99
	3890.41	03/20/25	---	50.49	---	3839.92

Table 3 : Summary of Liquid Level Measurements
Expand Energy Corporation, State M Lease (AP-72)
Lea County, New Mexico

Monitoring Well	Top of Casing Elevation (AMSL-Feet)	Depth to Liquid Measurement Date	Depth to LNAPL (Feet-TOC)	Depth to Groundwater (Feet-TOC)	LNAPL Thickness (Feet)	Groundwater Elevation (AMSL-Feet)
MW-6	3888.25	06/03/14	---	46.25	---	3842.00
	3888.25	09/22/14	---	46.39	---	3841.86
	3888.25	12/10/14	---	46.09	---	3842.16
	3888.25	03/11/15	---	46.23	---	3842.02
	3888.25	06/10/15	---	46.32	---	3841.93
	3888.25	09/02/15	---	46.48	---	3841.77
	3888.25	12/09/15	---	46.57	---	3841.68
	3888.25	03/09/16	---	46.62	---	3841.63
	3888.25	06/28/16	---	46.74	---	3841.51
	3888.25	09/21/16	---	46.81	---	3841.44
	3888.25	12/07/16	---	46.90	---	3841.35
	3888.25	03/08/17	---	46.93	---	3841.32
	3888.25	06/06/17	---	47.08	---	3841.17
	3888.25	09/08/17	---	47.12	---	3841.13
	3888.25	12/04/17	---	47.21	---	3841.04
	3888.25	03/05/18	---	47.30	---	3840.95
	3888.25	06/05/18	---	47.36	---	3840.89
	3888.25	09/05/18	---	47.43	---	3840.82
	3888.25	12/11/18	---	47.52	---	3840.73
	3888.25	03/06/19	---	47.60	---	3840.65
	3888.25	06/04/19	---	47.71	---	3840.54
	3888.25	09/04/19	---	47.81	---	3840.44
	3888.25	12/06/19	---	47.90	---	3840.35
	3888.25	03/05/20	---	47.98	---	3840.27
	3888.25	06/06/20	---	48.08	---	3840.17
	3888.25	09/24/20	---	48.23	---	3840.02
	3888.25	12/10/20	---	48.28	---	3839.97
	3888.25	03/02/21	---	48.33	---	3839.92
	3888.25	06/08/21	---	48.48	---	3839.77
	3888.25	09/08/21	---	48.50	---	3839.75
	3888.25	12/07/21	---	48.60	---	3839.65
	3888.25	03/08/22	---	48.67	---	3839.58
	3888.25	06/21/22	---	48.82	---	3839.43
	3888.25	09/13/22	---	48.91	---	3839.34
	3888.25	12/07/22	---	49.01	---	3839.24
	3888.25	03/07/23	---	49.06	---	3839.19
	3888.25	06/13/23	---	49.17	---	3839.08
	3888.25	09/06/23	---	49.30	---	3838.95
	3888.25	12/12/23	---	50.21	---	3838.04
	3888.25	03/12/24	---	50.07	---	3838.18
	3888.25	06/18/24	---	50.62	---	3837.63
	3888.25	09/06/24	---	50.23	---	3838.02
	3888.25	11/21/24	---	50.42	---	3837.83
	3888.25	03/20/25	---	50.51	---	3837.74

Table 3 : Summary of Liquid Level Measurements
Expand Energy Corporation, State M Lease (AP-72)
Lea County, New Mexico

Monitoring Well	Top of Casing Elevation (AMSL-Feet)	Depth to Liquid Measurement Date	Depth to LNAPL (Feet-TOC)	Depth to Groundwater (Feet-TOC)	LNAPL Thickness (Feet)	Groundwater Elevation (AMSL-Feet)
MW-7	3889.23	06/03/14	---	45.94	---	3843.29
	3889.23	09/22/14	---	46.08	---	3843.15
	3889.23	12/10/14	---	45.70	---	3843.53
	3889.23	03/11/15	---	45.36	---	3843.87
	3889.23	06/10/15	---	46.08	---	3843.15
	3889.23	09/02/15	---	46.14	---	3843.09
	3889.23	12/09/15	---	46.24	---	3842.99
	3889.23	03/09/16	---	46.30	---	3842.93
	3889.23	06/28/16	---	46.42	---	3842.81
	3889.23	09/21/16	---	46.52	---	3842.71
	3889.23	12/07/16	---	46.59	---	3842.64
	3889.23	03/08/17	---	46.65	---	3842.58
	3889.23	06/06/17	---	46.73	---	3842.50
	3889.23	09/08/17	---	46.80	---	3842.43
	3889.23	12/04/17	---	46.88	---	3842.35
	3889.23	03/05/18	---	46.96	---	3842.27
	3889.23	06/05/18	---	47.04	---	3842.19
	3889.23	09/05/18	---	47.11	---	3842.12
	3889.23	12/11/18	---	47.20	---	3842.03
	3889.23	03/06/19	---	47.27	---	3841.96
	3889.23	06/04/19	---	47.37	---	3841.86
	3889.23	09/04/19	---	47.50	---	3841.73
	3889.23	12/06/19	---	47.58	---	3841.65
	3889.23	03/05/20	---	47.66	---	3841.57
	3889.23	06/06/20	---	47.72	---	3841.51
	3889.23	09/24/20	---	47.90	---	3841.33
	3889.23	12/10/20	---	47.96	---	3841.27
	3889.23	03/02/21	---	48.02	---	3841.21
	3889.23	06/08/21	---	48.06	---	3841.17
	3889.23	09/08/21	---	48.14	---	3841.09
	3889.23	12/07/21	---	48.26	---	3840.97
	3889.23	03/08/22	---	48.33	---	3840.90
	3889.23	06/21/22	---	48.44	---	3840.79
	3889.23	09/13/22	---	48.58	---	3840.65
	3889.23	12/07/22	---	48.70	---	3840.53
	3889.23	03/07/23	---	48.75	---	3840.48
	3889.23	06/13/23	---	48.83	---	3840.40
	3889.23	09/06/23	---	48.97	---	3840.26
	3889.23	12/12/23	---	49.55	---	3839.68
	3889.23	03/12/24	---	49.64	---	3839.59
	3889.23	06/18/24	---	50.11	---	3839.12
	3889.23	09/06/24	---	49.80	---	3839.43
	3889.23	11/21/24	---	49.96	---	3839.27
	3889.23	03/20/25	---	49.98	---	3839.25

Table 3 : Summary of Liquid Level Measurements
Expand Energy Corporation, State M Lease (AP-72)
Lea County, New Mexico

Monitoring Well	Top of Casing Elevation (AMSL-Feet)	Depth to Liquid Measurement Date	Depth to LNAPL (Feet-TOC)	Depth to Groundwater (Feet-TOC)	LNAPL Thickness (Feet)	Groundwater Elevation (AMSL-Feet)
MW-8	3887.06	06/03/14	---	44.94	---	3842.12
	3887.06	09/22/14	---	45.11	---	3841.95
	3887.06	12/10/14	---	44.79	---	3842.27
	3887.06	03/11/15	---	44.94	---	3842.12
	3887.06	06/10/15	---	45.22	---	3841.84
	3887.06	09/02/15	---	45.21	---	3841.85
	3887.06	12/09/15	---	45.29	---	3841.77
	3887.06	03/09/16	---	45.35	---	3841.71
	3887.06	06/28/16	---	45.56	---	3841.50
	3887.06	09/21/16	---	45.67	---	3841.39
	3887.06	12/07/16	---	45.64	---	3841.42
	3887.06	03/08/17	---	45.68	---	3841.38
	3887.06	06/06/17	---	45.78	---	3841.28
	3887.06	09/08/17	---	45.82	---	3841.24
	3887.06	12/04/17	---	45.91	---	3841.15
	3887.06	03/05/18	---	46.03	---	3841.03
	3887.06	06/05/18	---	46.12	---	3840.94
	3887.06	09/05/18	---	46.16	---	3840.90
	3887.06	12/11/18	---	46.26	---	3840.80
	3887.06	03/06/19	---	46.33	---	3840.73
	3887.06	06/04/19	---	46.42	---	3840.64
	3887.06	09/04/19	---	46.53	---	3840.53
	3887.06	12/06/19	---	46.62	---	3840.44
	3887.06	03/05/20	---	46.71	---	3840.35
	3887.06	06/06/20	---	46.79	---	3840.27
	3887.06	09/24/20	---	46.95	---	3840.11
	3887.06	12/10/20	---	47.02	---	3840.04
	3887.06	03/02/21	---	47.06	---	3840.00
	3887.06	06/08/21	---	47.21	---	3839.85
	3887.06	09/08/21	---	47.25	---	3839.81
	3887.06	12/07/21	---	47.36	---	3839.70
	3887.06	03/08/22	---	47.41	---	3839.65
	3887.06	06/21/22	---	47.55	---	3839.51
	3887.06	09/13/22	---	47.66	---	3839.40
	3887.06	12/07/22	---	47.75	---	3839.31
	3887.06	03/07/23	---	47.82	---	3839.24
	3887.06	06/13/23	---	47.92	---	3839.14
	3887.06	09/06/23	---	48.11	---	3838.95
	3887.06	12/12/23	---	48.75	---	3838.31
	3887.06	03/12/24	---	48.80	---	3838.26
	3887.06	06/18/24	---	49.25	---	3837.81
	3887.06	09/06/24	---	48.93	---	3838.13
	3887.06	11/21/24	---	49.07	---	3837.99
	3887.06	03/20/25	---	49.11	---	3837.95

Notes:

1. TOC : Measured from top of casing.
2. LNAPL : Light non-aqueous phase liquid.
3. --- : Denotes not measured.
4. AMSL : Denotes above mean sea level (AMSL).

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Table 4 : Summary of Laboratory Analytical Results for Chloride in Groundwater Samples
Expand Energy Corporation, State M Lease (AP-72)
Lea County, New Mexico

	Chloride (mg/L)										
	June 2014	Sept. 2014	Dec. 2014	March 2015	June 2015	Sept. 2015	Dec. 2015	March 2016	June 2016	Sept. 2016	Dec. 2016
MW-1R	---	51.4	116	39.0	24.6	21.6	23.5	34.8	24.9	28.5	44.8
MW-2	17.7	17.4	18.3	16.6	16.8	16.6	15.4 *	13.5	18.9	17.6	18.2
MW-3	59.7	59.7	58.9	57.0	57.1	56.3	50.5 *	49.3	51.5	52.0	55.1
MW-4	**586**	**534**	**535**	**543**	**556**	**567**	**546 ***	**525**	**527**	**569**	**605**
MW-5	28.6	27.3	27.9	26.1	26.2	25.8	22.4 *	22.4	26.1	26.2	27.8
MW-6	**282**	**263**	**268**	**261**	**253**	**277**	197 *	150	128	128	125
MW-7	42.7	29.6	36.0	39.7	36.2	35.2	28.8 *	27.7	36.0	38.2	39.6
MW-8	**409**	**442**	**463**	**485**	**558**	**327**	**499**	**504**	**539**	**490**	**768**

Notes:

1. mg/L : milligrams per liter.
2. < : Analyte not detected at the laboratory reporting limit (RL).
3. All analyses performed by TestAmerica Laboratories in Nashville, Tennessee.
4. Cells shaded in blue indicate results that are above the laboratory RL.
5. Cells with text bolded indicate results that exceed the New Mexico Administrative Code (NMAC) 20.6.2.3103, Standards for Groundwater: 10,000 mg/L total dissolved solids (TDS) and 250.0 mg/L chloride.
6. --- : Analysis not performed.
7. * : Analysis performed outside of holding time.
8. December 2016 results for MW-1R and MW-8 were confirmed by laboratory reanalysis.
9. Sample MW-1R was collected in December 2017 under sample ID MW-R1 as shown on the COC and in the field book.
10. Beginning with the September 2019 sampling event, Eurofins (Edison, NJ) became the Project Laboratory.

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Table 4 : Summary of Laboratory Analytical Results for Chloride in Groundwater Samples
Expand Energy Corporation, State M Lease (AP-72)
Lea County, New Mexico

	Chloride (mg/L)										
	June 2017	Sept. 2017	Dec. 2017	March 2018	June 2018	Sept. 2018	Dec. 2018	March 2019	June 2019	Sept. 2019	Dec. 2019
MW-1R	28.6	29.3	29.0	33.7	---	---	---	---	---	---	---
MW-2	15.9	15.2	16.2	16.6	---	---	---	---	---	---	---
MW-3	53.7	49.5	58.1	64.3	---	---	---	---	---	---	---
MW-4	**493**	**465**	**492**	**484**	**413**	**387**	**373**	**617**	**392**	**404**	**421**
MW-5	24.7	20.4	25.4	25.9	---	---	---	---	---	---	---
MW-6	86.3	79.3	71.8	64.7	---	---	---	---	---	---	---
MW-7	23.8	24.0	27.7	31.6	---	---	---	---	---	---	---
MW-8	**531**	**573**	**570**	**587**	**539**	**398**	**474**	**308**	**283**	223	198

Notes:

1. mg/L : milligrams per liter.
2. < : Analyte not detected at the laboratory reporting limit (RL).
3. All analyses performed by TestAmerica Laboratories in Nashville, Tennessee.
4. Cells shaded in blue indicate results that are above the laboratory RL.
5. Cells with text bolded indicate results that exceed the New Mexico Administrative Code (NMAC) 20.6.2.3103, Standards for Groundwater: 10,000 mg/L total dissolved solids (TDS) and 250.0 mg/L chloride.
6. --- : Analysis not performed.
7. * : Analysis performed outside of holding time.
8. December 2016 results for MW-1R and MW-8 were confirmed by laboratory reanalysis.
9. Sample MW-1R was collected in December 2017 under sample ID MW-R1 as shown on the COC and in the field book.
10. Beginning with the September 2019 sampling event, Eurofins (Edison, NJ) became the Project Laboratory.

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Table 4 : Summary of Laboratory Analytical Results for Chloride in Groundwater Samples
Expand Energy Corporation, State M Lease (AP-72)
Lea County, New Mexico

	Chloride (mg/L)										
	March 2020	June 2020	Sept. 2020	Dec. 2020	March 2021	June 2021	Sept. 2021	Dec. 2021	March 2022	June 2022	Sept. 2022
MW-1R	---	---	---	---	---	---	---	---	---	---	---
MW-2	---	---	---	---	---	---	---	---	---	---	---
MW-3	---	---	---	---	---	---	---	---	---	---	---
MW-4	**443**	**429**	**430**	**475**	**437**	**528**	**438**	**404**	**387**	**414**	**412**
MW-5	---	---	---	---	---	---	---	---	---	---	---
MW-6	---	---	---	---	---	---	---	---	---	---	---
MW-7	---	---	---	---	---	---	---	---	---	---	---
MW-8	118	97.4	88.8	73.5	63.9	92.5	65.4	56.2	29.6	---	---

Notes:

1. mg/L : milligrams per liter.
2. < : Analyte not detected at the laboratory reporting limit (RL).
3. All analyses performed by TestAmerica Laboratories in Nashville, Tennessee.
4. Cells shaded in blue indicate results that are above the laboratory RL.
5. Cells with text bolded indicate results that exceed the New Mexico Administrative Code (NMAC) 20.6.2.3103, Standards for Groundwater: 10,000 mg/L total dissolved solids (TDS) and 250.0 mg/L chloride.
6. --- : Analysis not performed.
7. * : Analysis performed outside of holding time.
8. December 2016 results for MW-1R and MW-8 were confirmed by laboratory reanalysis.
9. Sample MW-1R was collected in December 2017 under sample ID MW-R1 as shown on the COC and in the field book.
10. Beginning with the September 2019 sampling event, Eurofins (Edison, NJ) became the Project Laboratory.

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Table 4 : Summary of Laboratory Analytical Results for Chloride in Groundwater Samples
Expand Energy Corporation, State M Lease (AP-72)
Lea County, New Mexico

	Chloride (mg/L)									
	Dec. 2022	March 2023	June 2023	Sept. 2023	Dec. 2023	March 2024	June 2024	Sept. 2024	Nov. 2024	March 2025
MW-1R	---	---	---	---	---	---	---	---	---	---
MW-2	---	---	---	---	---	---	---	---	---	---
MW-3	---	---	---	---	---	---	---	---	---	---
MW-4	**398**	**376**	**356**	**402**	**362**	**339**	**374**	**361**	**345**	**290**
MW-5	---	---	---	---	---	---	---	---	---	---
MW-6	---	---	---	---	---	---	---	---	---	---
MW-7	---	---	---	---	---	---	---	---	---	---
MW-8	---	---	---	---	---	---	---	---	---	---

Notes:

1. mg/L : milligrams per liter.
2. < : Analyte not detected at the laboratory reporting limit (RL).
3. All analyses performed by TestAmerica Laboratories in Nashville, Tennessee.
4. Cells shaded in blue indicate results that are above the laboratory RL.
5. Cells with text bolded indicate results that exceed the New Mexico Administrative Code (NMAC) 20.6.2.3103, Standards for Groundwater: 10,000 mg/L total dissolved solids (TDS) and 250.0 mg/L chloride.
6. --- : Analysis not performed.
7. * : Analysis performed outside of holding time.
8. December 2016 results for MW-1R and MW-8 were confirmed by laboratory reanalysis.
9. Sample MW-1R was collected in December 2017 under sample ID MW-R1 as shown on the COC and in the field book.
10. Beginning with the September 2019 sampling event, Eurofins (Edison, NJ) became the Project Laboratory.

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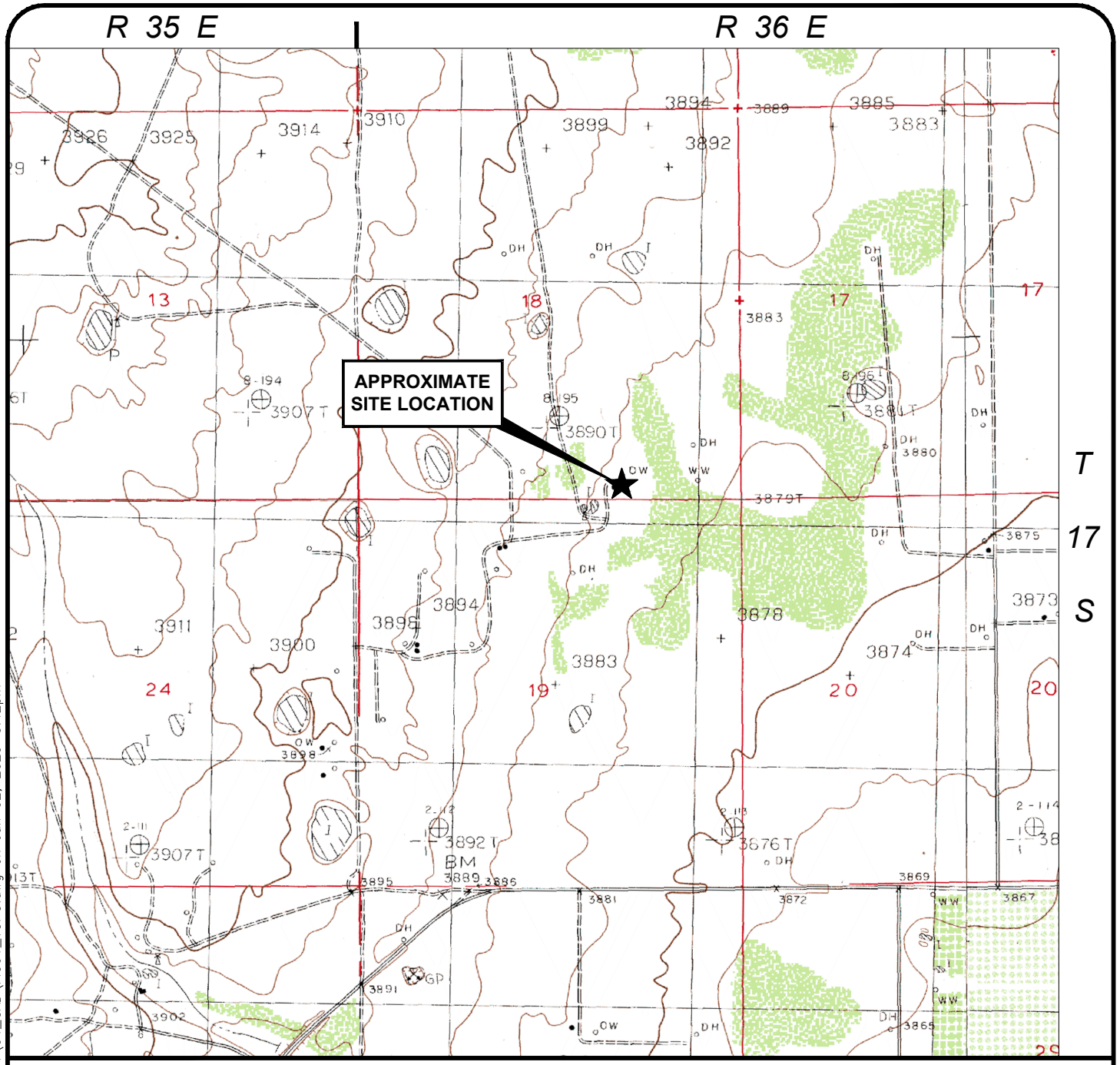
Table 5 : Summary of Laboratory Analytical Results for Groundwater Samples
Chesapeake Energy Corporation, State M Lease
Lea County, New Mexico

Parameters	*Cleanup Levels*	Sample Date:	MW-1R 21-Jun-22	MW-1R 13-Sep-22	MW-1R 7-Dec-22	MW-1R 7-Mar-23
Volatile Organic Compounds (VOCs)		***Units***				
Benzene	5	µg/L	3.71	3.80	2.55	1.59
Toluene	1000	µg/L	0.902	0.955	<0.500	<0.500
Ethylbenzene	700	µg/L	215	211	75.4	23.0
Xylenes, Total	620	µg/L	261	235	76.0	18.2

Notes:

1. µg/L : micrograms per liter.
2. All analyses performed by Eurofins (formerly TestAmerica Laboratories).
3. < : Analyte not detected at the laboratory Reporting Limit (RL).
4. Cells shaded in blue indicate results that are above the laboratory Reporting Limit (RL).
5. Cleanup Criteria obtained from New Mexico Administrative Code (NMAC) 20.6.2.3103, Standards for Groundwater of 10,000 milligrams per liter (mg/L) Concentration or Less: benzene (5 µg/L), toluene (1000 mg/L), ethylbenzene (700 mg/L), and xylenes (620 mg/L).

FIGURES



SOURCE: U.S.G.S. 7.5 MINUTE TOPOGRAPHIC QUADRANGLES
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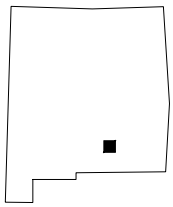
LOVINGTON SE, NEW MEXICO - PROVISIONAL EDITION 1985

NEW MEXICO



SCALE
0 1/2 1 MILE

CLIENT EXPAND ENERGY CORPORATION, LLC OKLAHOMA CITY, OKLAHOMA	FIGURE TITLE **SITE LOCATION AND TOPOGRAPHIC FEATURES**
LOCATION STATE M LEASE (AP-72) SEC. 18, T17S, R36E, LEA COUNTY, NEW MEXICO	DOCUMENT TITLE ELEVENTH ANNUAL GROUNDWATER MONITORING REPORT

Equus Environmental, LLC
1923 South 44th West Avenue
Tulsa, Oklahoma 74107-3450
918.921.5331
www.EQUUSENV.com

		DESIGNED BY	MM
DATE	5/21/2025	APPROVED BY	MM
SCALE	AS SHOWN	DRAWN BY	SK
PROJECT NUMBER		FIGURE NUMBER	
CHKSTATM:24001		1	

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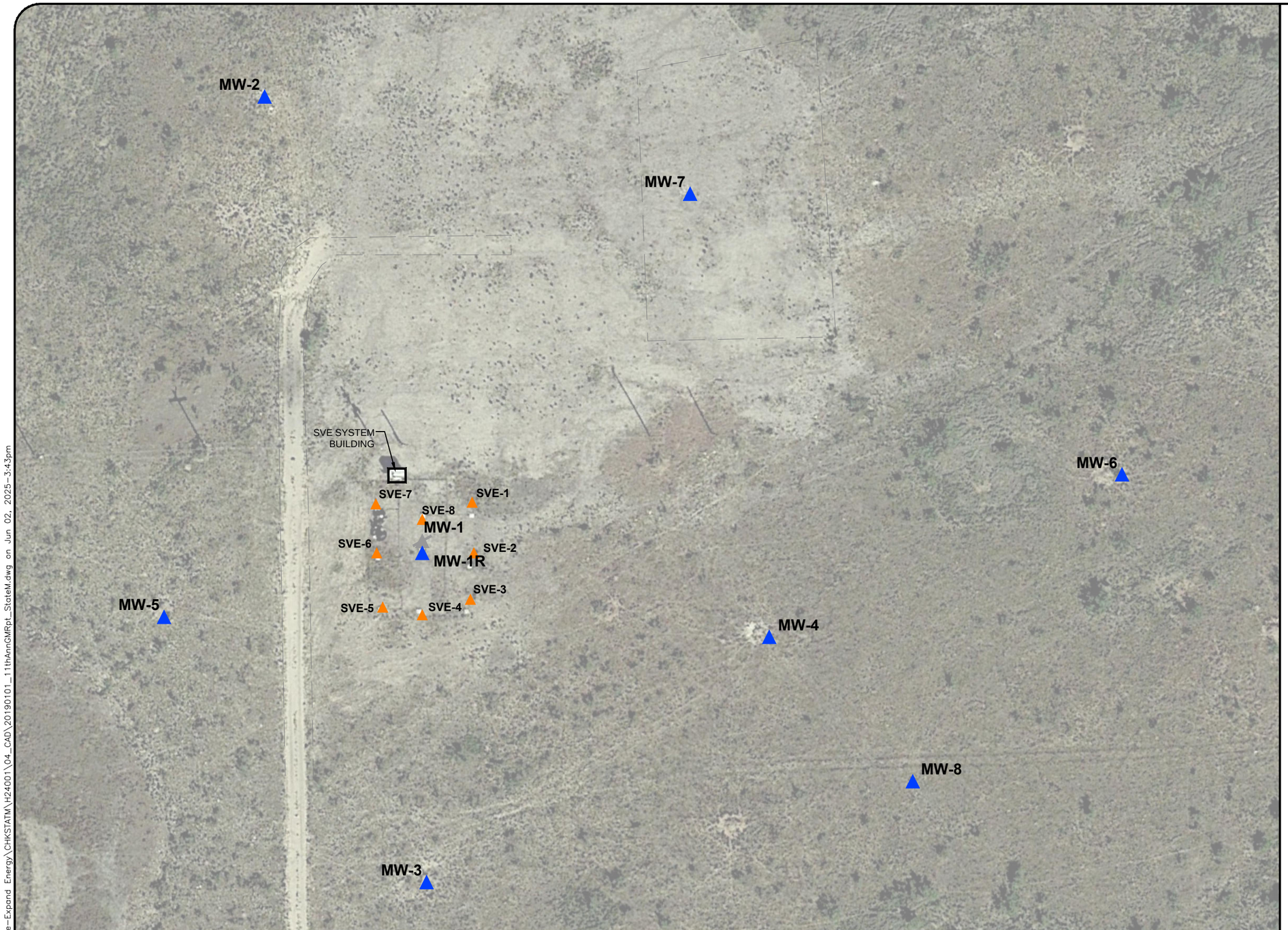

LEGEND

- MW-5 — LOCATION OF MONITORING WELL
- MW-1 — LOCATION OF PLUGGED AND ABANDONED MONITORING WELL
- SVE-1 — LOCATION OF SVE SYSTEM WELL

30 0 30 60
SCALE FEET

SOURCE: AERIAL PHOTOGRAPH DATED FEBRUARY 1, 2017, GOOGLE EARTH PRO SCREEN CAPTURE

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EQUUS Environmental, LLC
1923 South 44th West Avenue
Tulsa, Oklahoma 74107-3450
918.921.5331
www.EQUUSENV.com

DOCUMENT TITLE: ELEVENTH ANNUAL GROUNDWATER MONITORING REPORT

FIGURE TITLE: **SITE BASE MAP**

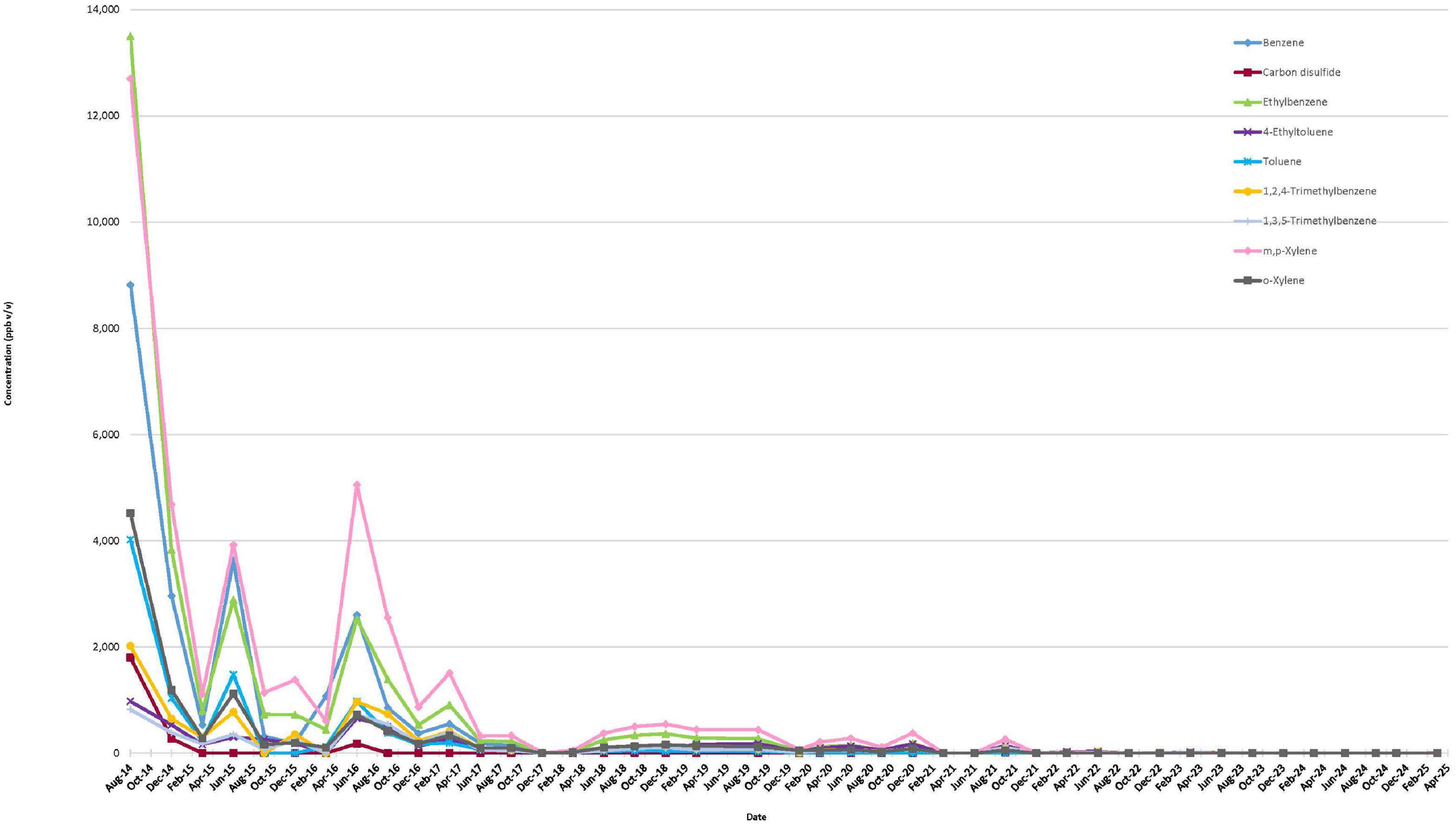
CLIENT: EXPAND ENERGY CORPORATION, OKLAHOMA CITY, OKLAHOMA

LOCATION: STATE M LEASE (AP-72), SEC. 18, T17S, R36E, LEA COUNTY, NEW MEXICO

DESIGNED BY	MM		
APPROVED BY	MM	SCALE	1"=60'
DRAWN BY	SK	DATE	5/21/2025

PROJECT NUMBER	FIGURE NUMBER
CHKSTATM:24001	2

Total Discharge VOC Concentration



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EQUUS Environmental, LLC
1923 South 44th West Avenue
Tulsa, Oklahoma 74107-3450
918.921.5331
www.EQUUSENV.com

DOCUMENT TITLE: ELEVENTH ANNUAL GROUNDWATER MONITORING REPORT

FIGURE TITLE: **SVE SYSTEM VOC DISCHARGE CONCENTRATIONS VERSUS TIME**

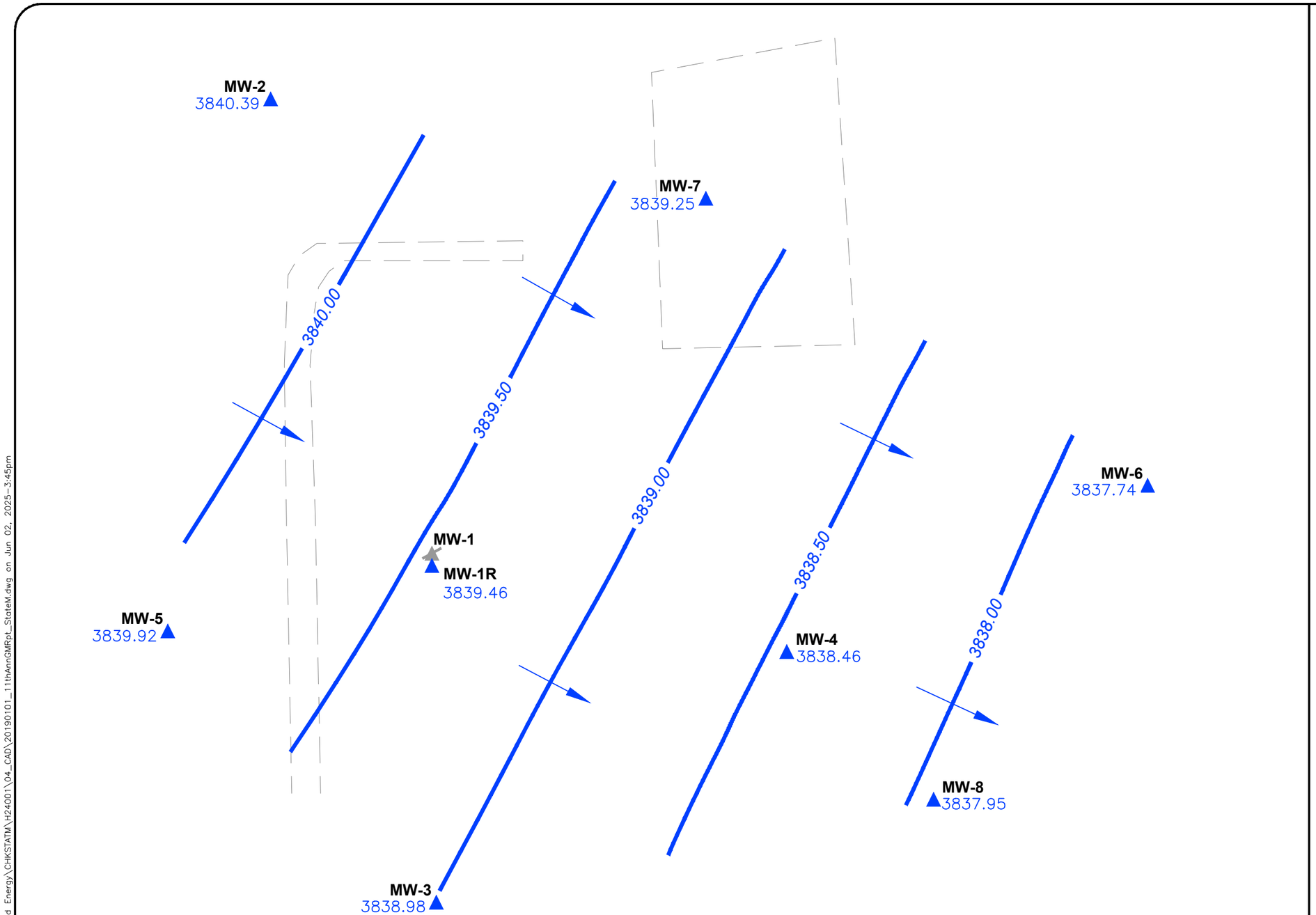
CLIENT: EXPAND ENERGY CORPORATION
OKLAHOMA CITY, OKLAHOMA

LOCATION: STATE M LEASE (AP-72)
SEC. 18, T17S, R36E, LEA COUNTY, NEW MEXICO

DESIGNED BY	CA		
APPROVED BY	MM	SCALE	NTS
DRAWN BY	JC	DATE	5/21/2025

PROJECT NUMBER: CHKSTATM:24001

FIGURE NUMBER: 3



LEGEND

- MW-5 3839.25 — LOCATION OF MONITORING WELL AND GROUNDWATER ELEVATION 3/20/2025, FEET AMSL
- MW-1 — LOCATION OF PLUGGED AND ABANDONED MONITORING WELL
- 3838.00 — GROUNDWATER POTENTIOMETRIC SURFACE

30 0 30 60
SCALE FEET

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EQUUS Environmental, LLC
1923 South 44th West Avenue
Tulsa, Oklahoma 74107-3450
918.921.5331
www.EQUUSENV.com

DOCUMENT TITLE: ELEVENTH ANNUAL GROUNDWATER MONITORING REPORT

FIGURE TITLE: **GROUNDWATER POTENTIOMETRIC SURFACE, MARCH 20, 2025**

CLIENT: EXPAND ENERGY CORPORATION
OKLAHOMA CITY, OKLAHOMA

LOCATION: STATE M LEASE (AP-72)
SEC. 18, T17S, R36E, LEA COUNTY, NEW MEXICO

DESIGNED BY	MM		
APPROVED BY	MM	SCALE	1"= 60'
DRAWN BY	SK	DATE	5/21/2025

PROJECT NUMBER	FIGURE NUMBER
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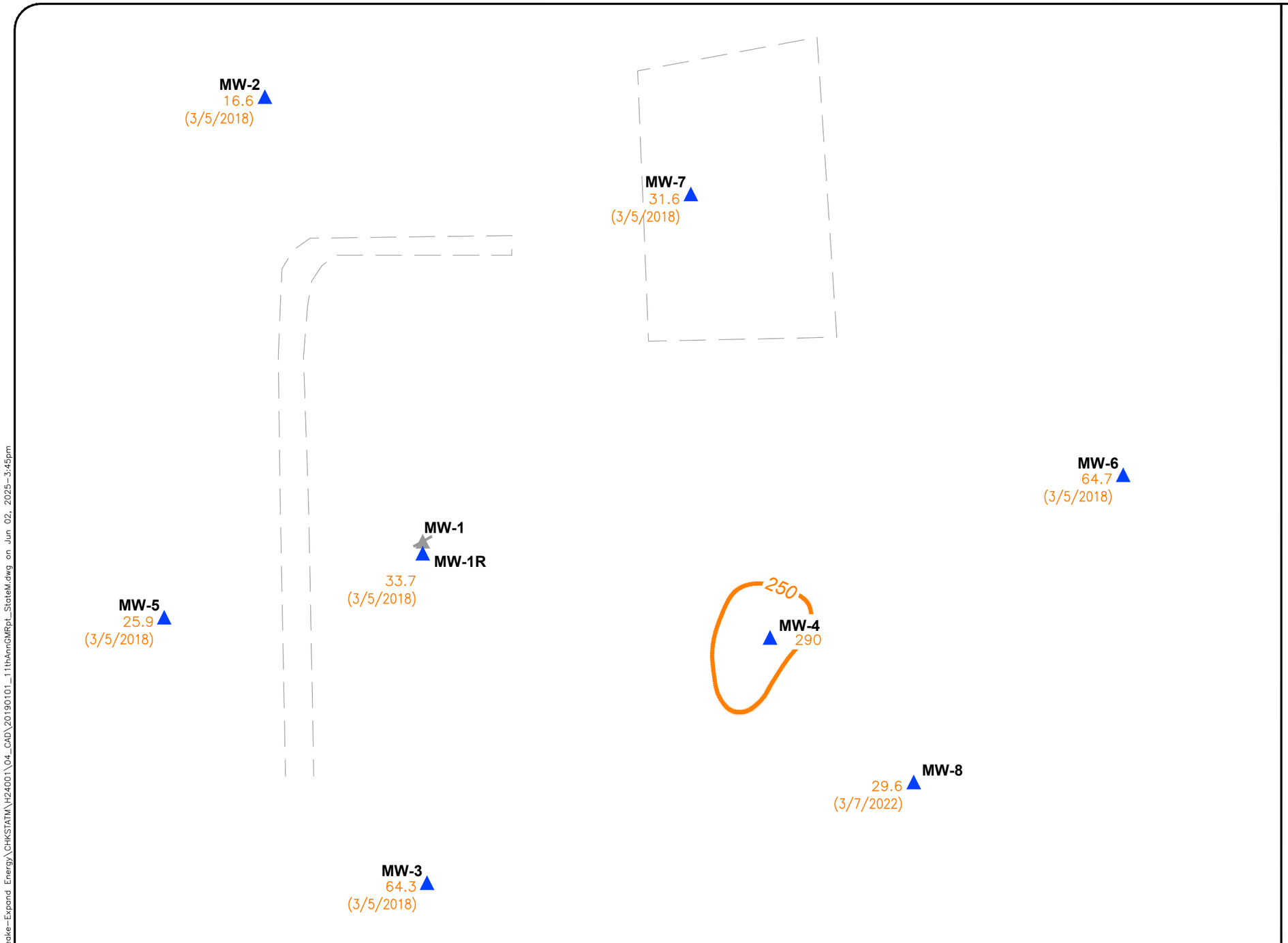

LEGEND

- MW-4 — LOCATION OF MONITORING WELL AND CONCENTRATION OF CHLORIDE IN GROUNDWATER 3/20/2025, mg/L
- MW-1 — LOCATION OF PLUGGED AND ABANDONED MONITORING WELL
- 250 — CONTOUR LINE SHOWING EQUAL CONCENTRATIONS OF CHLORIDE IN GROUNDWATER, mg/L. (DASHED WHERE INFERRED)

30 0 30 60
SCALE FEET

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Tulsa, Oklahoma 74107-3450
918.921.5331
www.EQUUSENV.com

DOCUMENT TITLE: ELEVENTH ANNUAL GROUNDWATER MONITORING REPORT

FIGURE TITLE: **ISOPLETH OF CHLORIDE CONCENTRATIONS IN GROUNDWATER, MARCH 20, 2025**

CLIENT: EXPAND ENERGY CORPORATION
OKLAHOMA CITY, OKLAHOMA

LOCATION: STATE M LEASE (AP-72)
SEC. 18, T17S, R36E, LEA COUNTY, NEW MEXICO

DESIGNED BY	MM		
APPROVED BY	MM	SCALE	1"= 60'
DRAWN BY	SK	DATE	5/21/2025

PROJECT NUMBER	FIGURE NUMBER
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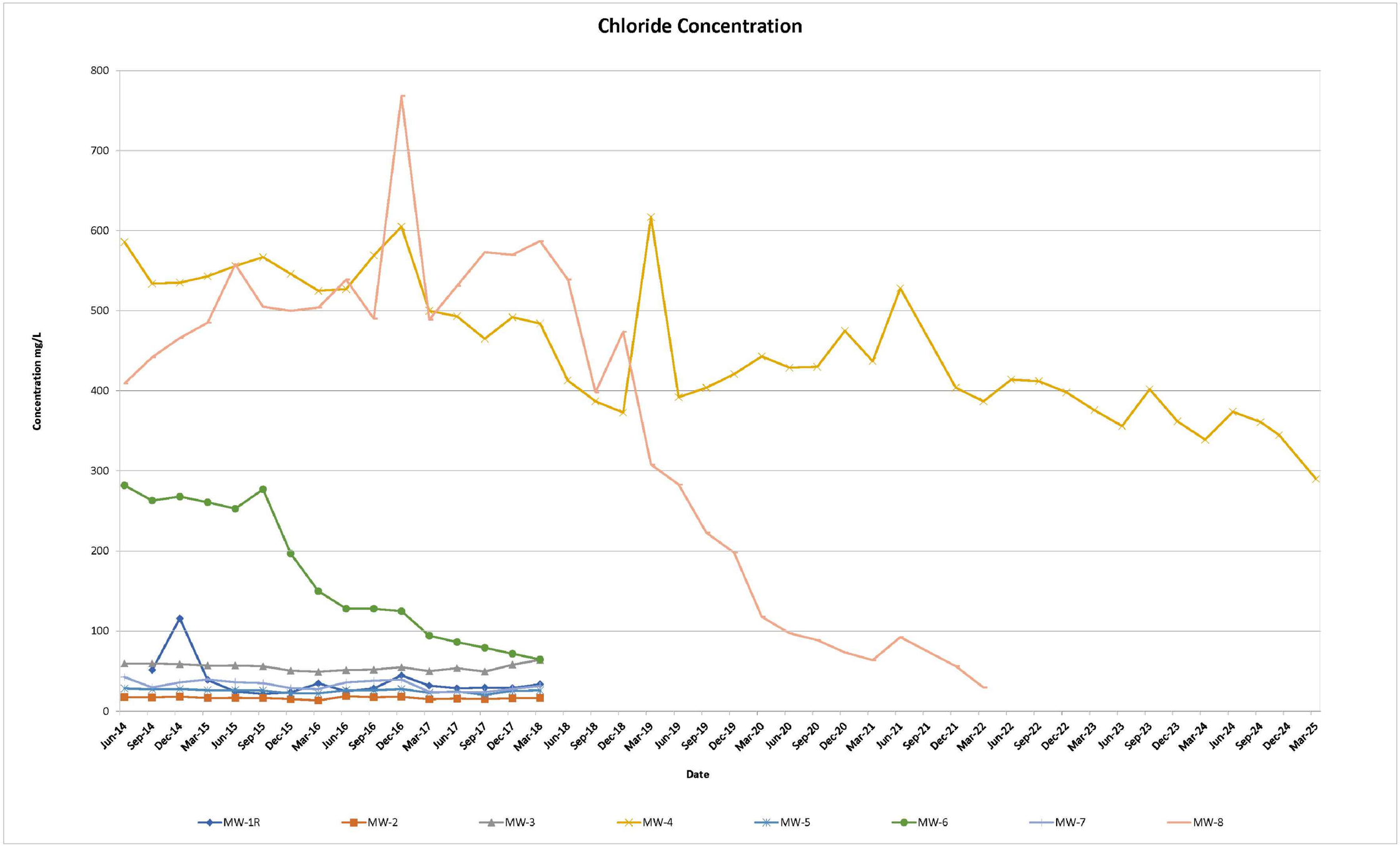

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EQUUS Environmental, LLC

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Tulsa, Oklahoma 74107-3450
918.921.5331
www.EQUUSENV.com

DOCUMENT TITLE
ELEVENTH ANNUAL GROUNDWATER MONITORING REPORT

FIGURE TITLE
CHLORIDE CONCENTRATION TREND GRAPH

CLIENT EXPAND ENERGY CORPORATION
OKLAHOMA CITY, OKLAHOMA

LOCATION STATE M LEASE (AP-72)
SEC. 18, T17S, R36E, LEA COUNTY, NEW MEXICO

DESIGNED BY	CA		
APPROVED BY	MM	SCALE	NTS
DRAWN BY	JC	DATE	5/21/2025

PROJECT NUMBER	FIGURE NUMBER
CHKSTATM:24001	6

APPENDICES

APPENDIX A

STAGE 2 ABATEMENT PLAN

ARCADIS
Infrastructure · Water · Environment · Buildings

ARCADIS U.S., Inc.
1004 North Big Spring Street
Suite 300
Midland
Texas 79701
Tel 432 687 5400
Fax 432 687 5401
www.arcadis-us.com

ENVIRONMENT

Mr. Glenn Von Gonten
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Subject:
State M-1 AP-072
Stage 2 Abatement Plan

Date:
March 27, 2012

Dear Mr. Von Gonten:

On behalf of Chesapeake Energy Corporation, ARCCADIS U.S. Inc. respectfully submits the enclosed Stage 2 Abatement plan for the State M-1 site (AP-072). A Stage 1 Abatement Plan Report was submitted on March 20, 2012. Your review and approval of this Abatement Plan will be appreciated. The landowner, Darr Angell, is anxious for us to complete soil remediation at this site.

If you have any questions please do not hesitate to contact Bradley Blevins at (575) 391-1462 or via e-mail at bblevins@chkenergy or me at (432) 687-5400, e-mail address shall@aracdis-us.com.

Contact:
Sharon Hall

Phone:
432 687-5400

Email:
shall@aracdis-us.com

Our ref:
MT001088

ARCADIS U.S., Inc.
TX Engineering License # F-533

Sincerely,

ARCADIS U.S., Inc.

Sharon E. Hall

Sharon E. Hall
Associate Vice President

Copies:
Bradley Blevins- Chesapeake, Hobbs

Imagine the result

g:\aproject\chesapeake\m-1 stage 2 plan\transmitall letter.doc

ARCADIS
Infrastructure · Water · Environment · Buildings

Imagine the result

Chesapeake Energy Corporation

State M-1 AP-072
Stage 2 Abatement
Plan Proposal

Hobbs, New Mexico

March 27, 2012

ARCADIS

Sharon Hall
Associate Vice President

State M-1 AP-072

Stage 2 Abatement
Plan Proposal

Prepared for:
Chesapeake Energy
Corporation
Hobbs, New Mexico

Prepared by:
ARCADIS U.S., Inc.
1004 North Big Spring Street
Suite 300
Midland
Texas 79701
Tel 432 687 5400
Fax 432 687 5401

Our Ref.:
MT001088.0001.00001

Date:
March 27, 2012

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Table of Contents

Figures

Appendices

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1. INTRODUCTION

The subject site is a former tank battery site located east of Buckeye, New Mexico. The site was purchased by Chesapeake Energy Corporation (Chesapeake) in April 2004. Chesapeake did not operate the tank battery or the associated well field and began the process of facility abandonment in 2007.

Seven monitor wells and nine soil borings have been drilled at the site. Elevated chloride concentrations and limited hydrocarbon compounds were detected in soil samples collected from soil borings and monitoring wells. Elevated chlorides were detected in the down gradient monitor wells and light non-aqueous phase liquid (LNAPL) occurs in monitoring well MW-1. LNAPL recovery activities have been piloted at the site and will commence again upon completion of surface reclamation activities.

2. SUMMARY OF STAGE 1 ABATEMENT ACTIVITIES

Initial site investigation activities were conducted in May of 2007 following abandonment of the tank battery. Stage 1 Abatement activities were conducted during the period of May 2007 through September 2011. Stage 1 Abatement activities included drilling and soil sampling of nine boreholes, drilling and sampling of seven monitor wells, EM 31 and EM 34 surveys, conversion of one monitoring well into a recovery well and recovery of phase-separated hydrocarbons from the recovery well.

New Mexico Oil Conservation Division (NMOCD) was notified of impacts to groundwater at the site via e-mail on May 30, 2007. NMOCD notified Chesapeake in a letter dated June 19, 2007 that a Stage 1 Abatement Plan was required for the site in accordance with Rule 19.

The Stage 1 Abatement Plan was submitted to NMOCD on August 22, 2007. The plan summarized site activities taken to date. The plan proposed the drilling and sampling of a minimum of three additional soil borings and installation and sampling of nine groundwater monitoring wells.

BBC contacted NMOCD via email on April 24, 2010 to inquire about the status of the Stage 1 Abatement Plan approval and Chesapeake's desire to conduct the proposed Stage 1 Abatement Plan activities. On May 27, 2010, NMOCD responded via email that the State was not staffed to review the Abatement Plans (APs) in a timely manner. On June 23, 2010, BBC contacted NMOCD via email to request a waiver of the Public Notice requirement and inform NMOCD that Chesapeake and the landowner were

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anxious to move forward with the proposed AP activities. NMOCD replied via email on June 23, 2010 stating they were still understaffed to review the AP and could not waive the Public Notice requirement. They advised BBC that Chesapeake could proceed "at risk." On July 12, 2010 BBC informed NMOCD by registered letter that Chesapeake was planning to start the Stage 1 Assessment on or about August 23, 2010. They further informed NMOCD they would be submitting the required Public Notices, a copy of which was attached to the letter. NMOCD did not respond to the registered letter.

The public notices were published in the Hobbs News-Sun and Lovington Leader on July 22, 2010 and the Albuquerque Journal on July 24, 2010. No comments were received from the public or NMOCD during the 30-day comment period and Chesapeake proceeded with the proposed Stage 1 Abatement Plan activities on August 26, 2010. Copies of correspondence and Public Notice are included in Appendix A.

A detailed description of site activities and results can be found in the report submitted to NMOCD dated March 20, 2012 entitled State M-1 AP-072, Stage 1 Abatement Report (Site Assessment Investigation). Analytical results for soil and groundwater sampling are summarized on Figure 1.

3. STAGE 2 ABATEMENT PLAN PROPOSAL

After review of various remedial options, we propose the following Stage 2 Abatement Plan. The plan addresses soil and groundwater remediation.

3.1 Soil Remediation

The selected remedial option will be the excavation of near-surface soils and installation of clay liners. The anticipated extent and depth of excavation is based on assessment activities (laboratory analysis and visual observation) and is shown in Figure 2. Near surface soils (to a depth of 5 feet below ground surface) with chloride concentrations in excess of 1,000 milligrams per kilogram (mg/kg) and a Total Petroleum Hydrocarbons (TPH) concentration in excess of 1,000 mg/kg will be excavated and disposed. Excavated soils will be disposed at Lea Land Landfill.

Areas where chloride or TPH concentrations are expected to exceed 1,000 mg/kg at depths greater than 5 feet below ground surface soils will be excavated to a depth of 5

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feet below ground surface. Soils will be screened in the field for chlorides using chloride field test kits and for TPH using a photoionization. Critical samples (samples used to delineate the excavations) will be submitted for laboratory analysis of chlorides and/or TPH. Following excavation, a 12-inch compacted clay layer that meets or exceeds a permeability of equal to or less than 1×10^{-8} centimeters per second will be installed in the excavations. The lined excavations will be backfilled with four feet of locally obtained native soil. All of the excavated areas will be re-seeded with native vegetation. Areas that are supporting vegetation will not be disturbed.

Use of the USEPA Multi-Med model demonstrates that the clay liners will mitigate the leaching of chlorides to groundwater. The model predicts that after 7000 years of infiltration through the liner the maximum concentration of chlorides in groundwater will be 221.8 milligrams per liter (mg/L). The Multi-Med inputs and outputs are included in Appendix A.

3.2 Groundwater Remediation and Monitoring

One additional groundwater monitoring well will be installed downgradient of the site. The monitoring well will be designated MW-8.

Groundwater samples will be collected from all of the monitoring wells and analyzed for chlorides using USEPA method 9056 for each of four quarters. Based on sample results for one year (four quarters), sampling frequency will be reviewed and may be revised.

Sampling will be discontinued when eight quarters of sample results indicate chloride concentrations are below New Mexico Water Quality Control Commission, Title 20, Chapter 6, Part 2 standards. Sample results will be submitted to the NMOCD annually on June 15.

Following removal of LNAPL from MW-1, groundwater samples will be collected from MW-1 and analyzed for benzene, toluene ethylbenzene and xylenes (BTEX) using USEPA method 8260B for each of four quarters. Based on sample results for one year (four quarters), sampling frequency will be reviewed and may be revised.

Sampling of MW-1 for BTEX will be discontinued when eight quarters of sample results indicate BTEX concentrations are below New Mexico Water Quality Control Commission, Title 20, Chapter 6, Part 2 standards. Sample results will be submitted to

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the NMOCD annually on June 15. Proposed groundwater remediation is presented in Sections 3.2.1 and 3.2.2.

3.2.1 Chlorides

Chloride concentrations in groundwater exceed New Mexico Water Quality Control Commission standards in two wells (MW-1 411mg/L and MW-4 472mg/L).

Removal of near-surface soils that are a potential source of chlorides and BTEX in groundwater and lining of excavations with chloride and TPH concentrations in excess of 1,000 mg/kg will mitigate leaching of chlorides to groundwater. Considering the relatively low concentrations of chlorides in groundwater and the fact that soil removal and clay liner infiltration barrier installation will be conducted at this site, we propose monitoring the site for a period of two years before considering pumping of groundwater at this site. With the proposed source removal and mitigation and the severe drought conditions being experienced in this area, we believe it prudent to evaluate if chloride mass removal by pumping is warranted at this site.

3.2.2 Hydrocarbons

A pilot LNAPL recovery test will take place over a three week period and will be used to develop long-term recovery procedures. LNAPL will be recovered from MW-1 and disposed in a NMOCD approved facility. Additionally, two soil vent borings equipped with wind turbines will be installed in the area near MW-1.

4. PUBLIC NOTIFICATION

Written notification of submittal of the Stage 2 Abatement Plan Proposal and site activities will be sent to all surface owners of record within a one-mile radius of the site. NMOCD will be supplied with a list of parties to be notified. Publication of notice of activities will be published in a state-wide circulated newspaper, the Albuquerque Journal, and two county newspapers, the Hobbs-Daily News Sun and the Lovington Leader.

5. REMEDIATION WORK SCHEDULE

Soil remediation activities are expected to be completed in 15 working days (Monday through Friday). Groundwater remediation activities will be ongoing. An estimated completion date for groundwater remediation is not available.

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6. REFERENCES

Groundwater Handbook; United States Environmental Protection Agency, Office of Research and Development, Center for Environmental Research Information; 1992

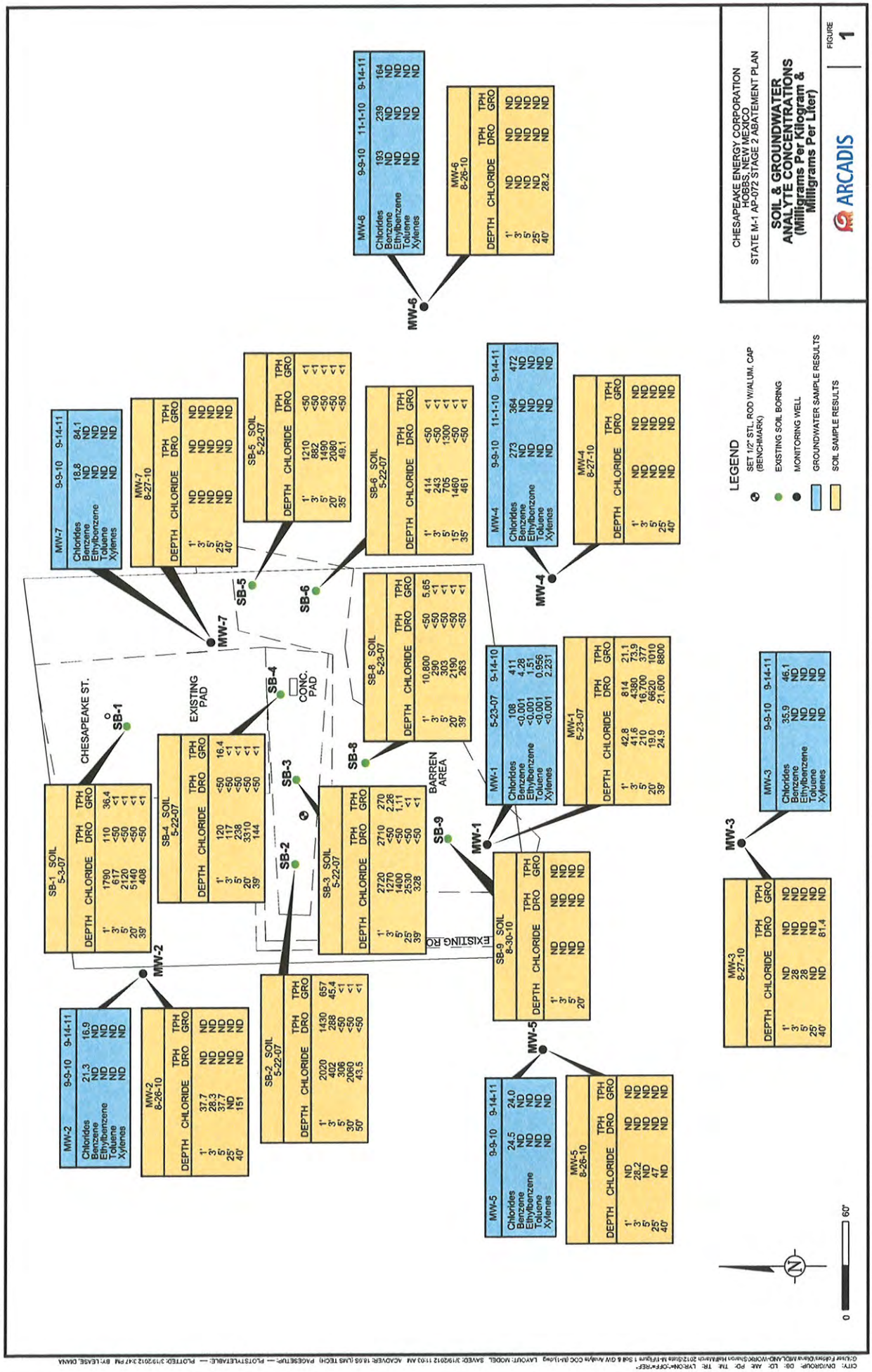
New Mexico Water Quality Control Commission, Title 20 Chapter 6, Part 2, Subpart I

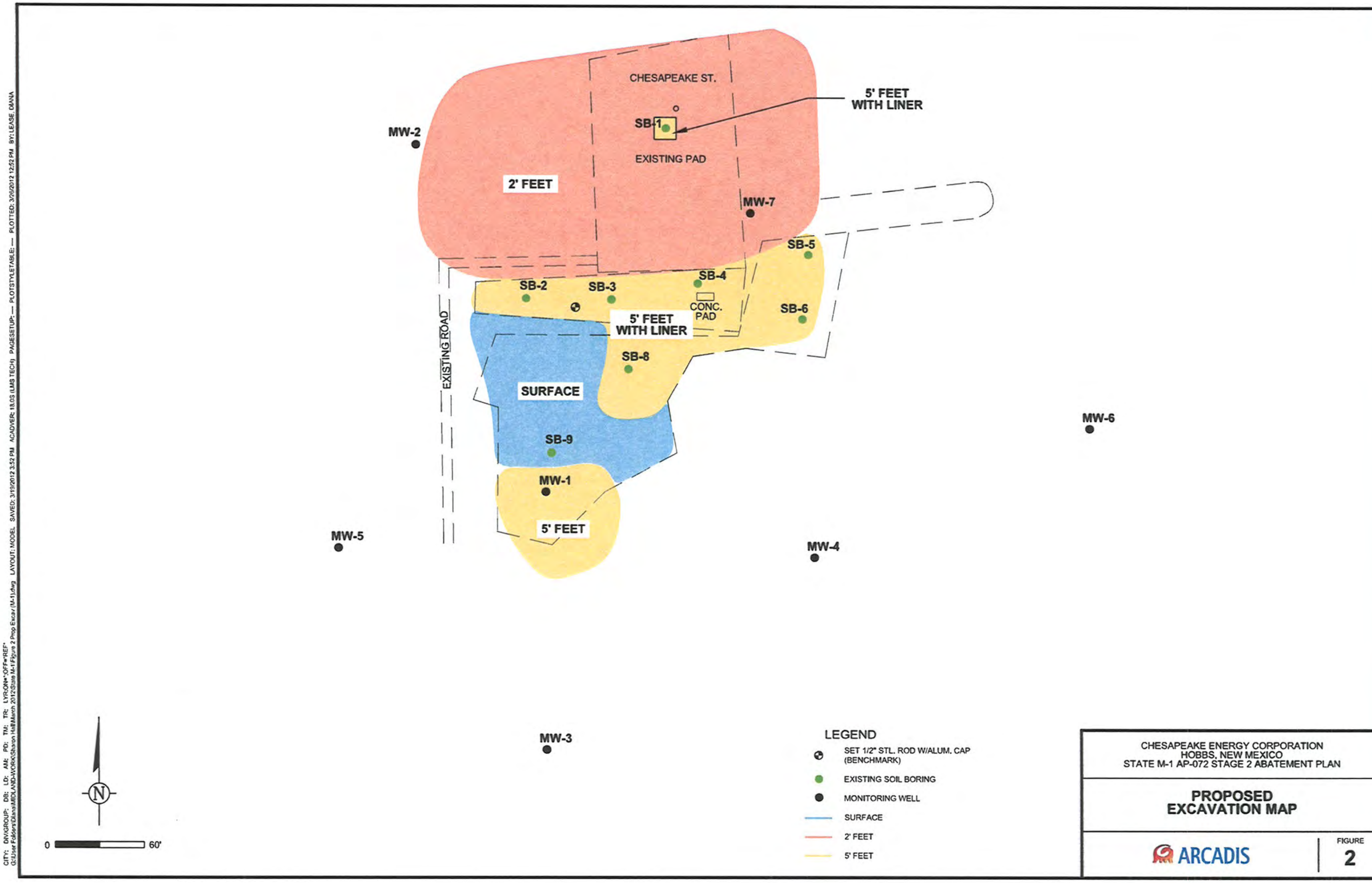
State M-1 AP-072 Stage 1 Abatement Report (Site Assessment Investigation); ARCADIS; March 2012

State M-1Salt Water Disposal Tank Battery, Stage 1 Abatement Plan (Ap-072), BBC International; August 2007

New Mexico Water Quality Control Commission, Title 20 Chapter 6, Part 2, Subpart I

Released to Imaging: 6/17/2025 9:46:51 AM


CHESAPEAKE ENERGY CORPORATION
HOBBS, NEW MEXICO
STATE M-1 AP-072 STAGE 2 ABATEMENT PLAN
SOIL & GROUNDWATER ANALYTE CONCENTRATIONS (Milligrams Per Kilogram & Milligrams Per Liter)
FIGURE 1
ARCADIS
LEGEND
SET 1/2" STL. ROD W/ALUM. CAP (BENCHMARK)
EXISTING SOIL BORING
MONITORING WELL
GROUNDWATER SAMPLE RESULTS
SOIL SAMPLE RESULTS
CHESAPEAKE ST.
EXISTING PAD
CONC. PAD
BARREN AREA
EXISTING ROAD
SB-1
SB-2
SB-3
SB-4
SB-5
SB-6
SB-8
SB-9
MW-1
MW-2
MW-3
MW-4
MW-5
MW-6
MW-7
SB-1 SOIL 5-3-07
SB-2 SOIL 5-22-07
SB-3 SOIL 5-22-07
SB-4 SOIL 5-22-07
SB-5 SOIL 5-22-07
SB-6 SOIL 5-22-07
SB-8 SOIL 5-23-07
SB-9 SOIL 8-30-10
MW-1 5-23-07
MW-2 8-26-10
MW-3 8-27-10
MW-4 8-27-10
MW-5 8-26-10
MW-6 8-26-10
MW-7 8-27-10
0
60'
N


CHESAPEAKE ST.
5' FEET WITH LINER
SB-1
EXISTING PAD
MW-2
2' FEET
MW-7
SB-5
SB-4
SB-2
SB-3
CONC. PAD
5' FEET WITH LINER
SB-6
EXISTING ROAD
SB-8
SURFACE
SB-9
MW-1
5' FEET
MW-6
MW-5
MW-4
MW-3
N
0
60'
LEGEND
SET 1/2" STL. ROD W/ALUM. CAP (BENCHMARK)
EXISTING SOIL BORING
MONITORING WELL
SURFACE
2' FEET
5' FEET
CHESAPEAKE ENERGY CORPORATION
HOBBS, NEW MEXICO
STATE M-1 AP-072 STAGE 2 ABATEMENT PLAN
PROPOSED EXCAVATION MAP
ARCADIS
FIGURE
2

ARCADIS

Appendix A

Multi-Med Model Inputs and Outputs

Chesapeake State M-1
Chesapeake Energy Corporation
Buckeye, Lea County, New Mexico
Multimed Model Input and Output (With Liner)

MODEL INPUT AND OUTPUT						MODEL RANGE	
INPUT PARAMETERS						Minimum	Maximum
Unsaturated Zone Flow Parameters							
Depth of Unsaturated Zone	m	45	feet	13.7	m	0.000000001	None
Hydraulic Conductivity	cm/hr	2	ft/day	2.54	cm/hr	0.00000000001	10,000
Unsaturated Zone Porosity	fraction	0.05	fraction	0.05	fraction	0.000000001	0.99
Residual Water Content	fraction	0.01	fraction	0.010	fraction	0.000000001	1
Unsaturated Zone Transport Parameters							
Thickness of Layer	m	45	feet	13.7	m	0.000000001	None
Percent of Organic Matter	%	2.6	%	2.6	%	0	100
Bulk Density	g/cm^3	1.35	g/cm^3	1.35	g/cm^3	0.01	5
Biological Decay Coefficient	1/yr	0	1/yr	0	1/yr	0	None
Aquifer Parameters							
Aquifer Porosity	fraction	0.25	fraction	0.25	fraction	0.000000001	0.99
Bulk Density	g/cm^3	1.35	g/cm^3	1.35	g/cm^3	0.01	5
Aquifer Thickness	m	50	ft	15.24	m	0.000000001	100,000
Hydraulic Conductivity	m/yr	2	ft/day	223	m/yr	0.0000001	100,000,000
Hydraulic Gradient	m/m	0.007	m/m	0.007	m/m	0.00000001	None
Organic Carbon Content	fraction	0.00315	fraction	0.00315	fraction	0.000001	1
Temperature of Aquifer	°C	14.4	°C	14.4	°C	0.00000001	None
pH		6.2		6.2		0.3	14
x-distance Radial Distance from Site to Receptor	m	1	m	1	m	1	None
Source Parameters							
Infiltration Rate from the Facility	m/yr	0.124	in/yr	0.00315	m/yr	0.0000000001	10,000,000,000
Area of Waste Disposal Unit	m^2	46,800	ft^2	4348	m^2	0.01	None
Length Scale of Facility	m	240	feet	73.2	m	0.000000001	10,000,000,000
Width Scale of Facility	m	195	feet	59.4	m	0.000000001	10,000,000,000
Recharge Rate into the Plume	m/yr	16.71	in/yr	0.4244	m/yr	0	10,000,000,000
Duration of Pulse	yr	8,000	yr	8000	yr	0.000000001	None
Initial Concentration at Landfill	mg/L	6,000	mg/L	6,000	mg/L	0	None
Additional Parameters							
Method				Gaussian		Gaussian	Patch
Name of Chemical Specified				Chloride			

MODEL OUTPUT			
Final Concentration at Landfill	mg/L	221.8	mg/L

MODEL OUTPUT				
Concentration at Landfill	0.0 mg/L	Time	1 yr
	0.0 mg/L		10 yr
	0.0 mg/L		20 yr
	18.9 mg/L		50 yr
	36.6 mg/L		70 yr
	45.4 mg/L		80 yr
	61.8 mg/L		100 yr
	123.4 mg/L		200 yr
	154.1 mg/L		300 yr
	166.3 mg/L		400 yr
	178.5 mg/L		500 yr
	190.7 mg/L		600 yr
	204.8 mg/L		800 yr
	211.1 mg/L		1,000 yr
	220.4 mg/L		2,000 yr
	221.6 mg/L		3,000 yr
	221.8 mg/L		4,000 yr
	221.8 mg/L		5,000 yr
	221.8 mg/L		6,000 yr
	221.8 mg/L		7,000 yr

Chesapeake State M-1
Chesapeake Energy Corporation
Buckeye, Lea County, New Mexico

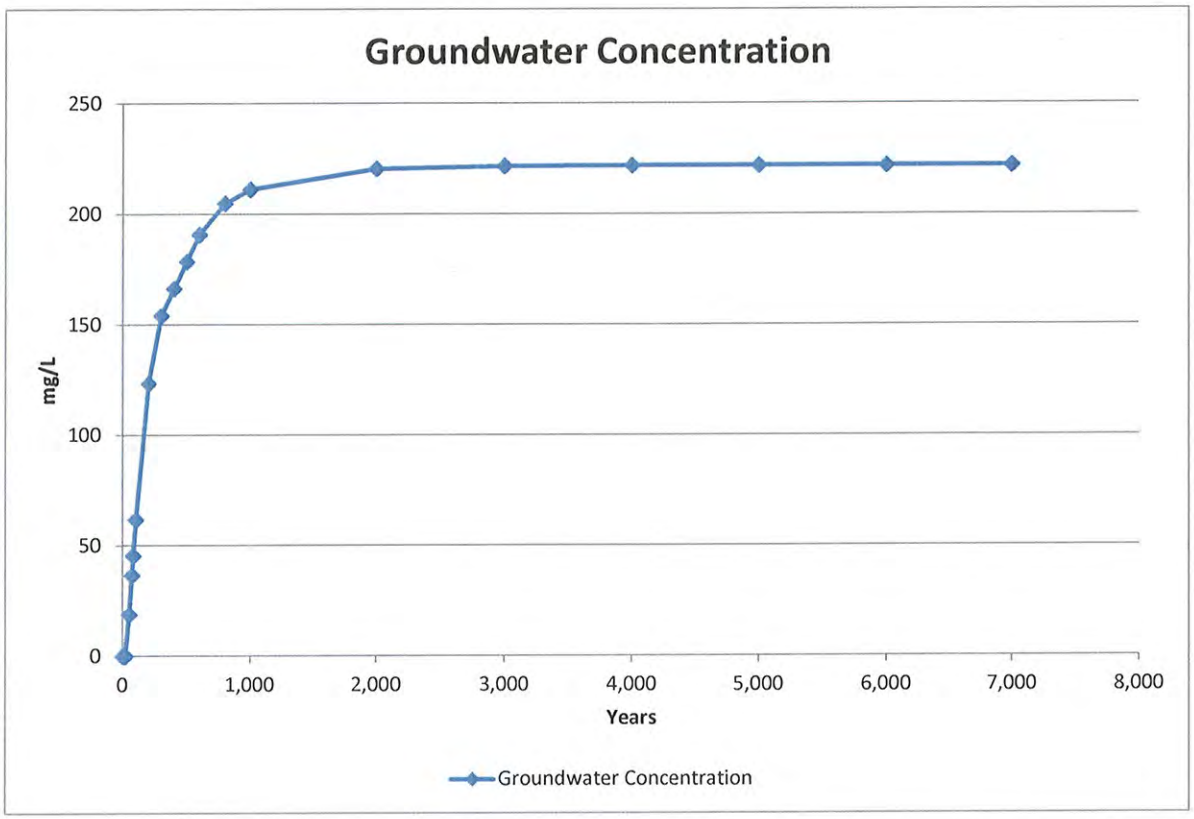


TABLE 6-3. TOTAL POROSITY OF VARIOUS MATERIALS

Material	No. of Analyses	Range	Arithmetic Mean
Igneous Rocks			
Weathered granite	8	0.34-0.57	0.45
Weathered gabbro	4	0.42-0.45	0.43
Basalt	94	0.03-0.35	0.17
Sedimentary Materials			
Sandstone	65	0.14-0.49	0.34
Siltstone	7	0.21-0.41	0.35
Sand (fine)	243	0.26-0.53	0.43
Sand (coarse)	26	0.31-0.46	0.39
Gravel (fine)	38	0.25-0.38	0.34
Gravel (coarse)	15	0.24-0.36	0.28
Silt	281	0.34-0.61	0.46
Clay	74	0.34-0.57	0.42
Limestone	74	0.07-0.56	0.3
Metamorphic Rocks			
Schist	18	0.04-0.49	0.38

Sources: From Mercer et al. (1982),
McWhorter and Sunada (1977),
Original reference Morris and Johnson, (1967).

Texture	Bulk Density g/cm^3	Average Wilting Point	Plant Available Water Inches/Ft
Sandy loam	1.6	0.057	1.66
Silt Loam	1.45	0.119	2
Loam	1.5	0.097	2.4
Sandy clay loam	1.45	0.137	1.66
Clay loam	1.45	0.157	1.9

TABLE 6-8. MEAN BULK DENSITY (g/cm3) FOR FIVE SOIL TEXTURAL CLASSIFICATIONSa,b

Soil Texture	Mean Value	Range Reported
Silt Loams	1.32	0.86 - 1.67
Clay and Clay Loams	1.3	0.94 - 1.54
Sandy Loams	1.49	1.25 - 1.76
Gravelly Silt Loams	1.22	1.02 - 1.58
Loams	1.42	1.16 - 1.58
All Soils	1.35	0.86 - 1.76

a Baes, C.F., III and R.D. Sharp. 1983. A Proposal for Estimation of Soil Leaching Constants for Use in Assessment Models. J. Environ. Qual. 12(1):17-28 (Original reference).

b From Dean et al. (1989)

TABLE 6-2. DESCRIPTIVE STATISTICS FOR SATURATED HYDRAULIC CONDUCTIVITY (cm hr-1)

Soil Type	Hydraulic Conductivity (Ks)* x	s	CV	n		
Clay**	0.2	0.42	210.3	114	cm/hr	17.52
Clay Loam	0.26	0.7	267.2	345	cm/hr	22.776
Loam	1.04	1.82	174.6	735	cm/hr	91.104
Loamy Sand	14.59	11.36	77.9	315	cm/hr	1278.084
Silt	0.25	0.33	129.9	88	cm/hr	21.9
Silt Loam	0.45	1.23	275.1	1093	cm/hr	39.42
Silty Clay	0.02	0.11	453.3	126	cm/hr	1.752
Silty Clay Loam	0.07	0.19	288.7	592	cm/hr	6.132
Sand	29.7	15.6	52.4	246	cm/hr	2601.72
Sandy Clay	0.12	0.28	234.1	46	cm/hr	10.512
Sandy Clay Loam	1.31	2.74	208.6	214	cm/hr	114.756
Sandy Loam	4.42	5.63	127	1183	cm/hr	387.192

* n = Sample size, = Mean, s = Standard deviation, CV = Coefficient of variation (percent)

** Agricultural soil, less than 60 percent clay

Sources: From Dean et al. (1989),
Original reference Carsel and Parrish (1988).

Saturated water content is the maximum volumetric amount of water in the soil when all pores are filled with water. Very often it is assumed that saturated water content equals the porosity n . However, in many cases qS is smaller than n due to the fact that small amounts of air will be trapped in very small pores. Residual water content can be defined as the asymptote of the pF-curve when h gets very high negative values. Usually qR is very small - on the order of 0.001--0.02 for coarse soils but gets as high values as 0.15..0.25 for heavy clay soils. Air entry point ha is

Soil texture. Fine-textured soils can hold much more organic matter than sandy soils for two reasons. First, clay particles form electrochemical bonds that hold organic compounds. Second, decomposition occurs faster in well-aerated sandy soils. A sandy loam rarely holds more than 2% organic matter.

The recharge rate in this model is the net amount of water that percolates directly into the aquifer system outside of the land disposal facility. The recharge is assumed to have no contamination and hence dilutes the groundwater contaminant plume. The recharge rate into the plume can be calculated in a variety of ways. One possibility is to use a model, such as HELP (Hydrologic Evaluation of Landfill Performance) (Schroeder et al., 1984), without any engineering controls (leachate collection system or a liner) to simulate the water balance for natural conditions.

The infiltration rate is the net amount of leachate that percolates into the aquifer system from a land disposal facility. Because of the use of engineering controls and the presence of non-native porous materials in the landfill facility, the infiltration rate will typically be different than the recharge rate. However, it can be estimated by similar

Most soils contain 2-10 percent organic matter. *The Importance of Soil Organic Matter: Key to Drought-Resistant Soil and Sustained Food Production. http://www.fao.org*

APPENDIX B

NMOCD APPROVAL OF STAGE 2 ABATEMENT PLAN

From: Chase Acker
To: Bruce McKenzie
Subject: FW: Stage 2 Abatement Plan Approval: AP-72 Former State M-1 Tank Battery located in Unit Letter O of Section 18 in Township 17 South, Range 36 East, NMPM in Lea County, NM
Date: Monday, April 14, 2014 1:56:01 PM

From: Griswold, Jim, EMNRD [mailto:Jim.Griswold@state.nm.us]
Sent: Thursday, June 27, 2013 5:14 PM
To: Larry Wooten
Cc: Hall, Sharon; Chase Acker
Subject: Stage 2 Abatement Plan Approval: AP-72 Former State M-1 Tank Battery located in Unit Letter O of Section 18 in Township 17 South, Range 36 East, NMPM in Lea County, NM

Mr. Wooten,

The Oil Conservation Division (OCD) has reviewed the Stage 2 Abatement Plan for the above-referenced site submitted on your behalf by Arcadis and dated 3/27/12. That plan has substantially met the requirements of 19.15.30 NMAC and is hereby approved. Please proceed with field activities.

Be advised this approval does not relieve Chesapeake of responsibility should the situation continue to pose a threat to groundwater, surface water, human health, or the environment. Furthermore, this approval does not relieve your responsibility for compliance with any federal, state, or local laws and/or regulations. Please retain a copy of this email for your files, as no hardcopy will be sent. If you have any questions, please feel free to contact me at any time.

Jim Griswold
Senior Hydrologist
EMNRD/Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
505.476.3465
email: jim.griswold@state.nm.us

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APPENDIX C

LABORATORY ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY DOCUMENTATION

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ANALYTICAL REPORT

PREPARED FOR

Attn: Chase Acker
Chesapeake Energy Corporation
PO BOX 548806
Oklahoma City, Oklahoma 73154

Generated 7/3/2024 11:21:23 AM

JOB DESCRIPTION

CHK STATE M
Property ID: 891077

JOB NUMBER

180-176226-1

Eurofins Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh PA 15238

See page two for job notes and contact information.

Released to Imaging: 6/17/2025 9:46:51 AM

my EOL

Eurofins Pittsburgh

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

PA Lab ID: 02-00416

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Pittsburgh Project Manager.

Authorization

Generated
7/3/2024 11:21:23 AM

Authorized for release by
Ken Hayes, Project Manager II
Ken.Hayes@et.eurofinsus.com
(615)301-5035

Client: Chesapeake Energy Corporation
Project/Site: CHK STATE M

Laboratory Job ID: 180-176226-1
SDG: Property ID: 891077

Table of Contents

Case Narrative

Client: Chesapeake Energy Corporation Job ID: 180-176226-1
Project: CHK STATE M

Job ID: 180-176226-1 Eurofins Pittsburgh

Job Narrative
180-176226-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The sample was received on 6/27/2024 11:24 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice.

Subcontract Work
Method TO 15: This method was subcontracted to Eurofins Air Toxics, Inc. The subcontract laboratory certification is different from that of the facility issuing the final report. The subcontract report is appended in its entirety.

Definitions/Glossary

Client: Chesapeake Energy Corporation
Project/Site: CHK STATE M

Job ID: 180-176226-1
SDG: Property ID: 891077

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Sample Summary

Client: Chesapeake Energy Corporation
Project/Site: CHK STATE M

Job ID: 180-176226-1
SDG: Property ID: 891077

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-176226-1	20240618M-1	Air	06/18/24 10:17	06/27/24 11:24

Method Summary

Client: Chesapeake Energy Corporation
Project/Site: CHK STATE M

Job ID: 180-176226-1
SDG: Property ID: 891077

Method	Method Description	Protocol	Laboratory
TO-15	TO-15	EPA	Eurofins

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

Eurofins = Eurofins Air Toxics, 180 Blue Ravine Road, Suite B, Folsom, CA 95630

eurofins | Air Toxics

7/3/2024
Mr. Ken Hayes
Eurofins Environment Testing
301 Alpha Dr.

Pittsburgh PA 15238

Project Name: State-M
Project #:
Workorder #: 2406615

Dear Mr. Ken Hayes

The following report includes the data for the above referenced project for sample(s) received on 6/20/2024 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Brian Whittaker at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Brian Whittaker

Project Manager

eurofins | Air Toxics

WORK ORDER #: 2406615

Work Order Summary

CLIENT:	Mr. Ken Hayes Eurofins Environment Testing 301 Alpha Dr. Pittsburgh, PA 15238	**BILL TO:**	Mr. Ken Hayes Eurofins Environment Testing 301 Alpha Dr. Pittsburgh, PA 15238
PHONE:		**P.O. #**	180-176226-1
FAX:		**PROJECT #**	State-M
DATE RECEIVED:	06/20/2024	**CONTACT:**	Brian Whittaker
DATE COMPLETED:	07/03/2024		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	20240618M-1	TO-15	17.3 "Hg	1.9 psi
02A	Lab Blank	TO-15	NA	NA
03A	CCV	TO-15	NA	NA
04A	LCS	TO-15	NA	NA
04AA	LCSD	TO-15	NA	NA

CERTIFIED BY: Heidi Hayes DATE: 07/03/24

Technical Director

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP – 209222, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP – T104704434-22-18, UT NELAP – CA009332022-14, VA NELAP - 12240, WA ELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program) CA300005-017
Eurofins Environment Testing Northern California, LLC certifies that the test results contained in this report meet all requirements of the 2016 TNI Standard.

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, LLC.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000

eurofins | Air Toxics

LABORATORY NARRATIVE
EPA Method TO-15
Eurofins Environment Testing
Workorder# 2406615

One 6 Liter Summa Canister sample was received on June 20, 2024. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

Receiving Notes

The Chain of Custody was missing method information. The laboratory proceeded with the analysis as per the original contract or verbal agreement.

The Chain of Custody (COC) was not relinquished properly. A signature, date and time were not provided by the field sampler.

Sample 20240618M-1 was received with significant vacuum remaining in the canister. The residual canister vacuum resulted in elevated reporting limits.

Analytical Notes

A single point calibration for TVOC (Total Volatile Organic Compounds) referenced to Hexane was performed for each daily analytical batch. Recovery is reported as 100% in the associated results for each CCV.

TVOC (Total Volatile Organic Compounds) referenced to Hexane includes area counts for peaks that elute from Hexane minus 0.08 minutes to Naphthalene plus 0.08 minutes and quantitating the area based on the response factor of Hexane.

All Quality Control Limit exceedances and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page.

The presence of a closely eluting non-target peak in sample 20240618M-1 is interfering with the quantitation mass ion for 4-Ethyltoluene. The reported 4-Ethyltoluene concentration is flagged with a "CN" flag to indicate a high bias due to matrix contribution.

Definition of Data Qualifying Flags

Ten qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

M - Reported value may be biased due to apparent matrix interferences.

CN - See Case Narrative.

File extensions may have been used on the data analysis sheets and indicates as follows:
a-File was requantified
b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: 20240618M-1

Lab ID#: 2406615-01A

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
4-Ethyltoluene	0.0013	0.0020 CN	6.6	10 CN
1,3,5-Trimethylbenzene	0.0013	0.0020	6.6	9.7
TVOC Ref. to Hexane	0.027	3.2	94	11000

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Client Sample ID: 20240618M-1

Lab ID#: 2406615-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91070113**	**Date of Collection:**	**6/18/24 10:17:00 AM**
Dil. Factor:	**2.67**	**Date of Analysis:**	**7/1/24 04:33 PM**

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Acetone	0.013	Not Detected	32	Not Detected
Benzene	0.0013	Not Detected	4.3	Not Detected
alpha-Chlorotoluene	0.0013	Not Detected	6.9	Not Detected
Bromodichloromethane	0.0013	Not Detected	8.9	Not Detected
Bromoform	0.0013	Not Detected	14	Not Detected
Bromomethane	0.013	Not Detected	52	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.0053	Not Detected	16	Not Detected
Carbon Disulfide	0.0053	Not Detected	17	Not Detected
Carbon Tetrachloride	0.0013	Not Detected	8.4	Not Detected
Chlorobenzene	0.0013	Not Detected	6.1	Not Detected
Dibromochloromethane	0.0013	Not Detected	11	Not Detected
Chloroethane	0.0053	Not Detected	14	Not Detected
Chloroform	0.0013	Not Detected	6.5	Not Detected
Chloromethane	0.013	Not Detected	28	Not Detected
1,2-Dibromoethane (EDB)	0.0013	Not Detected	10	Not Detected
1,2-Dichlorobenzene	0.0013	Not Detected	8.0	Not Detected
1,3-Dichlorobenzene	0.0013	Not Detected	8.0	Not Detected
1,4-Dichlorobenzene	0.0013	Not Detected	8.0	Not Detected
1,1-Dichloroethane	0.0013	Not Detected	5.4	Not Detected
Freon 12	0.0013	Not Detected	6.6	Not Detected
1,2-Dichloroethane	0.0013	Not Detected	5.4	Not Detected
1,1-Dichloroethene	0.0013	Not Detected	5.3	Not Detected
cis-1,2-Dichloroethene	0.0013	Not Detected	5.3	Not Detected
trans-1,2-Dichloroethene	0.0013	Not Detected	5.3	Not Detected
1,2-Dichloropropane	0.0013	Not Detected	6.2	Not Detected
cis-1,3-Dichloropropene	0.0013	Not Detected	6.0	Not Detected
trans-1,3-Dichloropropene	0.0013	Not Detected	6.0	Not Detected
Freon 114	0.0013	Not Detected	9.3	Not Detected
Ethyl Benzene	0.0013	Not Detected	5.8	Not Detected
4-Ethyltoluene	0.0013	0.0020 CN	6.6	10 CN
Hexachlorobutadiene	0.0053	Not Detected	57	Not Detected
2-Hexanone	0.0053	Not Detected	22	Not Detected
Methylene Chloride	0.013	Not Detected	46	Not Detected
4-Methyl-2-pentanone	0.0013	Not Detected	5.5	Not Detected
Styrene	0.0013	Not Detected	5.7	Not Detected
1,1,2,2-Tetrachloroethane	0.0013	Not Detected	9.2	Not Detected
Tetrachloroethene	0.0013	Not Detected	9.0	Not Detected
Toluene	0.0027	Not Detected	10	Not Detected
1,2,4-Trichlorobenzene	0.0053	Not Detected	40	Not Detected
1,1,1-Trichloroethane	0.0013	Not Detected	7.3	Not Detected
1,1,2-Trichloroethane	0.0013	Not Detected	7.3	Not Detected
Trichloroethene	0.0013	Not Detected	7.2	Not Detected

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Client Sample ID: 20240618M-1

Lab ID#: 2406615-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91070113**	**Date of Collection: 6/18/24 10:17:00 AM**	
Dil. Factor:	**2.67**	**Date of Analysis: 7/1/24 04:33 PM**	

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.0013	Not Detected	7.5	Not Detected
Freon 113	0.0013	Not Detected	10	Not Detected
1,2,4-Trimethylbenzene	0.0013	Not Detected	6.6	Not Detected
1,3,5-Trimethylbenzene	0.0013	0.0020	6.6	9.7
Vinyl Acetate	0.0053	Not Detected	19	Not Detected
Vinyl Chloride	0.0013	Not Detected	3.4	Not Detected
m,p-Xylene	0.0027	Not Detected	12	Not Detected
o-Xylene	0.0013	Not Detected	5.8	Not Detected
TVOC Ref. to Hexane	0.027	3.2	94	11000

CN =See Case Narrative explanation

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130
1,2-Dichloroethane-d4	101	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: Lab Blank

Lab ID#: 2406615-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91070106c**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/1/24 11:04 AM**	

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Acetone	0.0050	Not Detected	12	Not Detected
Benzene	0.00050	Not Detected	1.6	Not Detected
alpha-Chlorotoluene	0.00050	Not Detected	2.6	Not Detected
Bromodichloromethane	0.00050	Not Detected	3.4	Not Detected
Bromoform	0.00050	Not Detected	5.2	Not Detected
Bromomethane	0.0050	Not Detected	19	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.0020	Not Detected	5.9	Not Detected
Carbon Disulfide	0.0020	Not Detected	6.2	Not Detected
Carbon Tetrachloride	0.00050	Not Detected	3.1	Not Detected
Chlorobenzene	0.00050	Not Detected	2.3	Not Detected
Dibromochloromethane	0.00050	Not Detected	4.2	Not Detected
Chloroethane	0.0020	Not Detected	5.3	Not Detected
Chloroform	0.00050	Not Detected	2.4	Not Detected
Chloromethane	0.0050	Not Detected	10	Not Detected
1,2-Dibromoethane (EDB)	0.00050	Not Detected	3.8	Not Detected
1,2-Dichlorobenzene	0.00050	Not Detected	3.0	Not Detected
1,3-Dichlorobenzene	0.00050	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.00050	Not Detected	3.0	Not Detected
1,1-Dichloroethane	0.00050	Not Detected	2.0	Not Detected
Freon 12	0.00050	Not Detected	2.5	Not Detected
1,2-Dichloroethane	0.00050	Not Detected	2.0	Not Detected
1,1-Dichloroethene	0.00050	Not Detected	2.0	Not Detected
cis-1,2-Dichloroethene	0.00050	Not Detected	2.0	Not Detected
trans-1,2-Dichloroethene	0.00050	Not Detected	2.0	Not Detected
1,2-Dichloropropane	0.00050	Not Detected	2.3	Not Detected
cis-1,3-Dichloropropene	0.00050	Not Detected	2.3	Not Detected
trans-1,3-Dichloropropene	0.00050	Not Detected	2.3	Not Detected
Freon 114	0.00050	Not Detected	3.5	Not Detected
Ethyl Benzene	0.00050	Not Detected	2.2	Not Detected
4-Ethyltoluene	0.00050	Not Detected	2.4	Not Detected
Hexachlorobutadiene	0.0020	Not Detected	21	Not Detected
2-Hexanone	0.0020	Not Detected	8.2	Not Detected
Methylene Chloride	0.0050	Not Detected	17	Not Detected
4-Methyl-2-pentanone	0.00050	Not Detected	2.0	Not Detected
Styrene	0.00050	Not Detected	2.1	Not Detected
1,1,2,2-Tetrachloroethane	0.00050	Not Detected	3.4	Not Detected
Tetrachloroethene	0.00050	Not Detected	3.4	Not Detected
Toluene	0.0010	Not Detected	3.8	Not Detected
1,2,4-Trichlorobenzene	0.0020	Not Detected	15	Not Detected
1,1,1-Trichloroethane	0.00050	Not Detected	2.7	Not Detected
1,1,2-Trichloroethane	0.00050	Not Detected	2.7	Not Detected
Trichloroethene	0.00050	Not Detected	2.7	Not Detected

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Client Sample ID: Lab Blank

Lab ID#: 2406615-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91070106c**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/1/24 11:04 AM**	

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.00050	Not Detected	2.8	Not Detected
Freon 113	0.00050	Not Detected	3.8	Not Detected
1,2,4-Trimethylbenzene	0.00050	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.00050	Not Detected	2.4	Not Detected
Vinyl Acetate	0.0020	Not Detected	7.0	Not Detected
Vinyl Chloride	0.00050	Not Detected	1.3	Not Detected
m,p-Xylene	0.0010	Not Detected	4.3	Not Detected
o-Xylene	0.00050	Not Detected	2.2	Not Detected
TVOC Ref. to Hexane	0.010	Not Detected	35	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	102	70-130
4-Bromofluorobenzene	95	70-130

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Client Sample ID: CCV
Lab ID#: 2406615-03A
EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91070103**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/1/24 09:51 AM**	

Compound	%Recovery
Acetone	92
Benzene	96
alpha-Chlorotoluene	100
Bromodichloromethane	96
Bromoform	100
Bromomethane	96
2-Butanone (Methyl Ethyl Ketone)	92
Carbon Disulfide	92
Carbon Tetrachloride	94
Chlorobenzene	98
Dibromochloromethane	99
Chloroethane	96
Chloroform	90
Chloromethane	108
1,2-Dibromoethane (EDB)	98
1,2-Dichlorobenzene	100
1,3-Dichlorobenzene	101
1,4-Dichlorobenzene	100
1,1-Dichloroethane	92
Freon 12	101
1,2-Dichloroethane	89
1,1-Dichloroethene	93
cis-1,2-Dichloroethene	92
trans-1,2-Dichloroethene	93
1,2-Dichloropropane	92
cis-1,3-Dichloropropene	93
trans-1,3-Dichloropropene	97
Freon 114	101
Ethyl Benzene	106
4-Ethyltoluene	110
Hexachlorobutadiene	101
2-Hexanone	100
Methylene Chloride	90
4-Methyl-2-pentanone	97
Styrene	111
1,1,2,2-Tetrachloroethane	98
Tetrachloroethene	102
Toluene	97
1,2,4-Trichlorobenzene	112
1,1,1-Trichloroethane	93
1,1,2-Trichloroethane	98
Trichloroethene	92

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Client Sample ID: CCV

Lab ID#: 2406615-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91070103**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/1/24 09:51 AM**	

Compound	%Recovery
Freon 11	98
Freon 113	102
1,2,4-Trimethylbenzene	109
1,3,5-Trimethylbenzene	106
Vinyl Acetate	94
Vinyl Chloride	104
m,p-Xylene	110
o-Xylene	105
TVOC Ref. to Hexane	100

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	92	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: LCS

Lab ID#: 2406615-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91070104**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/1/24 10:14 AM**	

Compound	%Recovery	Method Limits
Acetone	95	70-130
Benzene	96	70-130
alpha-Chlorotoluene	101	70-130
Bromodichloromethane	93	70-130
Bromoform	96	70-130
Bromomethane	97	70-130
2-Butanone (Methyl Ethyl Ketone)	94	70-130
Carbon Disulfide	96	70-130
Carbon Tetrachloride	94	70-130
Chlorobenzene	99	70-130
Dibromochloromethane	96	70-130
Chloroethane	95	70-130
Chloroform	90	70-130
Chloromethane	105	70-130
1,2-Dibromoethane (EDB)	99	70-130
1,2-Dichlorobenzene	101	70-130
1,3-Dichlorobenzene	101	70-130
1,4-Dichlorobenzene	103	70-130
1,1-Dichloroethane	92	70-130
Freon 12	96	70-130
1,2-Dichloroethane	91	70-130
1,1-Dichloroethene	91	70-130
cis-1,2-Dichloroethene	92	70-130
trans-1,2-Dichloroethene	92	70-130
1,2-Dichloropropane	93	70-130
cis-1,3-Dichloropropene	96	70-130
trans-1,3-Dichloropropene	98	70-130
Freon 114	97	70-130
Ethyl Benzene	107	70-130
4-Ethyltoluene	108	70-130
Hexachlorobutadiene	105	70-130
2-Hexanone	106	70-130
Methylene Chloride	90	70-130
4-Methyl-2-pentanone	101	70-130
Styrene	110	70-130
1,1,2,2-Tetrachloroethane	100	70-130
Tetrachloroethene	102	70-130
Toluene	96	70-130
1,2,4-Trichlorobenzene	120	70-130
1,1,1-Trichloroethane	94	70-130
1,1,2-Trichloroethane	98	70-130
Trichloroethene	93	70-130

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Client Sample ID: LCS

Lab ID#: 2406615-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91070104**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/1/24 10:14 AM**	

Compound	%Recovery	Method Limits
Freon 11	96	70-130
Freon 113	96	70-130
1,2,4-Trimethylbenzene	110	70-130
1,3,5-Trimethylbenzene	106	70-130
Vinyl Acetate	151 Q	70-130
Vinyl Chloride	101	70-130
m,p-Xylene	108	70-130
o-Xylene	105	70-130
TVOC Ref. to Hexane	Not Spiked	

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	93	70-130
4-Bromofluorobenzene	104	70-130

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Client Sample ID: LCSD

Lab ID#: 2406615-04AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91070105**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/1/24 10:38 AM**	

Compound	%Recovery	Method Limits
Acetone	94	70-130
Benzene	96	70-130
alpha-Chlorotoluene	104	70-130
Bromodichloromethane	94	70-130
Bromoform	99	70-130
Bromomethane	96	70-130
2-Butanone (Methyl Ethyl Ketone)	95	70-130
Carbon Disulfide	94	70-130
Carbon Tetrachloride	92	70-130
Chlorobenzene	100	70-130
Dibromochloromethane	98	70-130
Chloroethane	98	70-130
Chloroform	89	70-130
Chloromethane	104	70-130
1,2-Dibromoethane (EDB)	101	70-130
1,2-Dichlorobenzene	102	70-130
1,3-Dichlorobenzene	104	70-130
1,4-Dichlorobenzene	105	70-130
1,1-Dichloroethane	92	70-130
Freon 12	96	70-130
1,2-Dichloroethane	91	70-130
1,1-Dichloroethene	90	70-130
cis-1,2-Dichloroethene	93	70-130
trans-1,2-Dichloroethene	92	70-130
1,2-Dichloropropane	92	70-130
cis-1,3-Dichloropropene	95	70-130
trans-1,3-Dichloropropene	99	70-130
Freon 114	96	70-130
Ethyl Benzene	112	70-130
4-Ethyltoluene	112	70-130
Hexachlorobutadiene	107	70-130
2-Hexanone	109	70-130
Methylene Chloride	89	70-130
4-Methyl-2-pentanone	102	70-130
Styrene	113	70-130
1,1,2,2-Tetrachloroethane	100	70-130
Tetrachloroethene	103	70-130
Toluene	96	70-130
1,2,4-Trichlorobenzene	123	70-130
1,1,1-Trichloroethane	93	70-130
1,1,2-Trichloroethane	99	70-130
Trichloroethene	92	70-130

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Client Sample ID: LCSD

Lab ID#: 2406615-04AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91070105**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/1/24 10:38 AM**	

Compound	%Recovery	Method Limits
Freon 11	94	70-130
Freon 113	96	70-130
1,2,4-Trimethylbenzene	113	70-130
1,3,5-Trimethylbenzene	107	70-130
Vinyl Acetate	150 Q	70-130
Vinyl Chloride	100	70-130
m,p-Xylene	110	70-130
o-Xylene	108	70-130
TVOC Ref. to Hexane	Not Spiked	

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	92	70-130
4-Bromofluorobenzene	105	70-130

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Method : TO-15 (Sp)-Eurofins TA (CEC, OK)

CAS Number	Compound	Rpt. Limit (ppbv)
67-64-1	Acetone	5.0
71-43-2	Benzene	0.50
100-44-7	alpha-Chlorotoluene	0.50
75-27-4	Bromodichloromethane	0.50
75-25-2	Bromoform	0.50
74-83-9	Bromomethane	5.0
78-93-3	2-Butanone (Methyl Ethyl Ketone)	2.0
75-15-0	Carbon Disulfide	2.0
56-23-5	Carbon Tetrachloride	0.50
108-90-7	Chlorobenzene	0.50
124-48-1	Dibromochloromethane	0.50
75-00-3	Chloroethane	2.0
67-66-3	Chloroform	0.50
74-87-3	Chloromethane	5.0
106-93-4	1,2-Dibromoethane (EDB)	0.50
95-50-1	1,2-Dichlorobenzene	0.50
541-73-1	1,3-Dichlorobenzene	0.50
106-46-7	1,4-Dichlorobenzene	0.50
75-34-3	1,1-Dichloroethane	0.50
75-71-8	Freon 12	0.50
107-06-2	1,2-Dichloroethane	0.50
75-35-4	1,1-Dichloroethene	0.50
156-59-2	cis-1,2-Dichloroethene	0.50
156-60-5	trans-1,2-Dichloroethene	0.50
78-87-5	1,2-Dichloropropane	0.50
10061-01-5	cis-1,3-Dichloropropene	0.50
10061-02-6	trans-1,3-Dichloropropene	0.50
76-14-2	Freon 114	0.50
100-41-4	Ethyl Benzene	0.50
622-96-8	4-Ethyltoluene	0.50
87-68-3	Hexachlorobutadiene	2.0
591-78-6	2-Hexanone	2.0
75-09-2	Methylene Chloride	5.0
108-10-1	4-Methyl-2-pentanone	0.50
100-42-5	Styrene	0.50
79-34-5	1,1,2,2-Tetrachloroethane	0.50
127-18-4	Tetrachloroethene	0.50
108-88-3	Toluene	1.0
120-82-1	1,2,4-Trichlorobenzene	2.0
71-55-6	1,1,1-Trichloroethane	0.50
79-00-5	1,1,2-Trichloroethane	0.50
79-01-6	Trichloroethene	0.50
75-69-4	Freon 11	0.50
76-13-1	Freon 113	0.50

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Method : TO-15 (Sp)-Eurofins TA (CEC, OK)

CAS Number	Compound	Rpt. Limit (ppbv)
95-63-6	1,2,4-Trimethylbenzene	0.50
108-67-8	1,3,5-Trimethylbenzene	0.50
108-05-4	Vinyl Acetate	2.0
75-01-4	Vinyl Chloride	0.50
108-38-3	m,p-Xylene	1.0
95-47-6	o-Xylene	0.50
9999-9999-500	**TVOC Ref. to Hexane**	**10**

	Surrogate	Method Limits
2037-26-5	Toluene-d8	70-130
17060-07-0	1,2-Dichloroethane-d4	70-130
460-00-4	4-Bromofluorobenzene	70-130

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Eurofins Air Toxics Sample Receipt Confirmation Cover Page

Thank you for choosing Eurofins Air Toxics (EATL). We have received your samples and have listed any Sample Receipt Descrepancies below.

In order to expedite analysis and reporting, please review the attached information for accuracy.

For corrections call: **Air Toxics, Ltd. at 916-985-1000**

EATL will proceed with the analysis as specified on the Chain of Custody (COC) and Sample Receipt Summary page.

Please note : The Sample Receipt Confirmation, including the total workorder charge, is subject to change upon secondary review. Our aim is to provide a confirmation to you in a timely manner. Sample Receipt Discrepancies, if any, may not include discrepancies regarding sample receipt pressure(s). Additionally, the COC will be provided with the final report.

In accordance with your company's contract, this account is required to have a PO that is fully executed by both parties which also covers the cost of the workorder before any data can be released. Please ensure that you have given all appropriate information to our Project Manager so that there will be no delay in reporting of the data you are requesting.

The following discrepancies have been observed:

The Chain of Custody (COC) was missing method information. EATL will proceed with the analysis as per the original contract or verbal agreement unless otherwise notified.

The Chain of Custody (COC) was not completed properly. Please note for future reference that the COC must be signed and dated with time included in order to properly relinquish or receive samples.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

(916) 985-1000 .FAX (916) 985-1020
Hours 6:30 A.M to 5:30 P.M. PST

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SAMPLE RECEIPT SUMMARY

WORKORDER 2406615

Client

Mr. Ken Hayes
Eurofins Environment Testing
301 Alpha Dr.
Pittsburgh, PA 15238

Phone

Fax

Date Promised: 07/03/24
Date Completed:
Date Received: 6/20/24
PO#:
Project#: State-M

Sales Rep: TA

Total $: $ 155.00
Logged By: LN

Fraction	Sample #	Analysis	Collected	Amount$
01A	20240618M-1	TO-15	6/18/2024	$120.00
Misc. Charges	6 Liter Summa Canister (1) @ $30.00 each., Shipment 162342			$30.00
	Fitting w/ Pink Ferrule (1) @ $5.00 each.			$5.00

Note: Samples received after 3 P.M. PST are considered to be received on the following work day.
Atlas Project Name/Profile#: EQUUS/23738

BILL TO: Mr. Ken Hayes
Eurofins Environment Testing
301 Alpha Dr.
Pittsburgh, PA 15238

Analysis Code: TO-14A

TERMS:

Reporting Method: TO-15 (Sp)-Eurofins TA (CEC, OK)

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Analysis Request / Canister Chain of Custody

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Eurofins Environment Testing Northern California, LLC
180 Blue Ravine Rd. Suite B, Folsom, CA 95630
Phone (800) 985-5955; Fax (916) 351-8279

Workorder #: 2406615

Instructions

If no TAT is marked, EATL will proceed with Standard TAT

page ____ of ____

Client: Chesapeake
Site Name: STATE M
Project Manager: Matt Mugavero
Sampler: Terry Fisher

Project Name: STATE-M
Project #: 20240618 M-1
PO#:

Turnaround Time (Specify Below)

Standard ____ Rush ____ (Surcharges will apply, per availability)

Samples received after 3PM PST are considered to be received on the following workday.

Requested Date (mm/dd/yy):
OR Number of Days:

Lab ID	Field Sample Identification (Location)	Canister Barcode #	Flow Controller Barcode #	Start Sampling Information		Stop Sampling Information		Requested Analyses				Canister Vacuum/Pressure			
				Date	Time	Date	Time					Initial (in "Hg)	Final (in "Hg)	Lab Use Only: Receipt (in "Hg)	Lab Use Only: Final (in psi) Gas: N2 / He
01A	20240618 M-1	660430	2221	6-18-24	1013	6-18-24	1017					8	4		

Special Instructions/Notes:

Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
			Pat Carlotta EATL	6/20/24	0955
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time

Lab Use Only

Shipper Name: FEDEX | Custody Seals Intact? Yes No None | Condition:

Sample Transportation Notice: Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, of shipping of samples. D.O.T Hotline (800) 467-4922

Received by OCD: 6/4/2025 10:09:49 AM
Released to Imaging: 6/17/2025 9:46:51 AM

7/3/2024

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Method : TO-15 (Sp)-Eurofins TA (CEC, OK)

CAS Number	Compound	Rpt. Limit (ppbv)
67-64-1	Acetone	5.0
71-43-2	Benzene	0.50
100-44-7	alpha-Chlorotoluene	0.50
75-27-4	Bromodichloromethane	0.50
75-25-2	Bromoform	0.50
74-83-9	Bromomethane	5.0
78-93-3	2-Butanone (Methyl Ethyl Ketone)	2.0
75-15-0	Carbon Disulfide	2.0
56-23-5	Carbon Tetrachloride	0.50
108-90-7	Chlorobenzene	0.50
124-48-1	Dibromochloromethane	0.50
75-00-3	Chloroethane	2.0
67-66-3	Chloroform	0.50
74-87-3	Chloromethane	5.0
106-93-4	1,2-Dibromoethane (EDB)	0.50
95-50-1	1,2-Dichlorobenzene	0.50
541-73-1	1,3-Dichlorobenzene	0.50
106-46-7	1,4-Dichlorobenzene	0.50
75-34-3	1,1-Dichloroethane	0.50
75-71-8	Freon 12	0.50
107-06-2	1,2-Dichloroethane	0.50
75-35-4	1,1-Dichloroethene	0.50
156-59-2	cis-1,2-Dichloroethene	0.50
156-60-5	trans-1,2-Dichloroethene	0.50
78-87-5	1,2-Dichloropropane	0.50
10061-01-5	cis-1,3-Dichloropropene	0.50
10061-02-6	trans-1,3-Dichloropropene	0.50
76-14-2	Freon 114	0.50
100-41-4	Ethyl Benzene	0.50
622-96-8	4-Ethyltoluene	0.50
87-68-3	Hexachlorobutadiene	2.0
591-78-6	2-Hexanone	2.0
75-09-2	Methylene Chloride	5.0
108-10-1	4-Methyl-2-pentanone	0.50
100-42-5	Styrene	0.50
79-34-5	1,1,2,2-Tetrachloroethane	0.50
127-18-4	Tetrachloroethene	0.50
108-88-3	Toluene	1.0
120-82-1	1,2,4-Trichlorobenzene	2.0
71-55-6	1,1,1-Trichloroethane	0.50

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Method : TO-15 (Sp)-Eurofins TA (CEC, OK)

CAS Number	Compound	Rpt. Limit (ppbv)
79-00-5	1,1,2-Trichloroethane	0.50
79-01-6	Trichloroethene	0.50
75-69-4	Freon 11	0.50
76-13-1	Freon 113	0.50
95-63-6	1,2,4-Trimethylbenzene	0.50
108-67-8	1,3,5-Trimethylbenzene	0.50
108-05-4	Vinyl Acetate	2.0
75-01-4	Vinyl Chloride	0.50
108-38-3	m,p-Xylene	1.0
95-47-6	o-Xylene	0.50
9999-9999-500	TVOC Ref. to Hexane	10

CAS Number	Surrogate	Method Limits
2037-26-5	Toluene-d8	70-130
17060-07-0	1,2-Dichloroethane-d4	70-130
460-00-4	4-Bromofluorobenzene	70-130

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Analysis Request / Canister Chain of Custody

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Eurofins Environment Testing Northern California, LLC
180 Blue Ravine Rd. Suite B, Folsom, CA 95630
Phone (800) 985-5955; Fax (916) 351-8279

Workorder #: 2406615

Instructions

If no TAT is marked, EATL will proceed with Standard TAT

page ____ of ____

Client: Chesapeake
Site Name: STATE M
Project Manager: Matt Mugavero
Sampler: Terry Fisher

Project Name: STATE-M
Project #: 20240618 M-1
PO#:

Turnaround Time (Specify Below)

Standard ____ Rush ____ (Surcharges will apply, per availability)

Samples received after 3PM PST are considered to be received on the following workday.

Requested Date (mm/dd/yy):
OR Number of Days:

Lab ID	Field Sample Identification (Location)	Canister Barcode #	Flow Controller Barcode #	Start Sampling Information		Stop Sampling Information		Requested Analyses				Canister Vacuum/Pressure			
				Date	Time	Date	Time					Initial (in "Hg)	Final (in "Hg)	Lab Use Only: Receipt (in "Hg)	Lab Use Only: Final (in psi) Gas: N2 / He
01A	20240618 M-1	660430	2221	6-18-24	1013	6-18-24	1017					8	4		

Special Instructions/Notes:

Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
			Pat Carlotta EATL	6/20/24	0955
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time

Lab Use Only

Shipper Name: FEDEX | Custody Seals Intact? Yes No None | Condition:

Sample Transportation Notice: Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, of shipping of samples. D.O.T Hotline (800) 467-4922

Received by OCD: 6/4/2025 10:09:49 AM
Released to Imaging: 6/17/2025 9:46:51 AM
7/3/2024
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Login Sample Receipt Checklist

Client: Chesapeake Energy Corporation

Job Number: 180-176226-1
SDG Number: Property ID: 891077

Login Number: 176226
List Number: 1
Creator: Hayes, Ken

List Source: Eurofins Pittsburgh

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.		
The cooler's custody seal, if present, is intact.		
Sample custody seals, if present, are intact.		
The cooler or samples do not appear to have been compromised or tampered with.		
Samples were received on ice.		
Cooler Temperature is acceptable.		
Cooler Temperature is recorded.		
COC is present.		
COC is filled out in ink and legible.		
COC is filled out with all pertinent information.		
Is the Field Sampler's name present on COC?		
There are no discrepancies between the containers received and the COC.		
Samples are received within Holding Time (excluding tests with immediate HTs)		
Sample containers have legible labels.		
Containers are not broken or leaking.		
Sample collection date/times are provided.		
Appropriate sample containers are used.		
Sample bottles are completely filled.		
Sample Preservation Verified.		
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs		
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").		
Multiphasic samples are not present.		
Samples do not require splitting or compositing.		
Residual Chlorine Checked.		

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ANALYTICAL REPORT

PREPARED FOR

Attn: Chase Acker
Chesapeake Energy Corporation
PO BOX 548806
Oklahoma City, Oklahoma 73154

Generated 9/24/2024 5:15:39 PM

JOB DESCRIPTION

CHK STATE M
Property ID: 891077

JOB NUMBER

180-179880-1

Eurofins Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh PA 15238

See page two for job notes and contact information.

Released to Imaging: 6/17/2025 9:46:51 AM

my EOL

Eurofins Pittsburgh

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

PA Lab ID: 02-00416

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Pittsburgh Project Manager.

Authorization

Generated
9/24/2024 5:15:39 PM

Authorized for release by
Ken Hayes, Project Manager II
Ken.Hayes@et.eurofinsus.com
(615)301-5035

Client: Chesapeake Energy Corporation
Project/Site: CHK STATE M

Laboratory Job ID: 180-179880-1
SDG: Property ID: 891077

Table of Contents

Case Narrative

Client: Chesapeake Energy Corporation Job ID: 180-179880-1
Project: CHK STATE M

Job ID: 180-179880-1 Eurofins Pittsburgh

Job Narrative
180-179880-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The sample was received on 9/17/2024 2:43 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice.

Subcontract Work
Method TO 15: This method was subcontracted to Eurofins Air Toxics, Inc. The subcontract laboratory certification is different from that of the facility issuing the final report. The subcontract report is appended in its entirety.

Definitions/Glossary

Client: Chesapeake Energy Corporation
Project/Site: CHK STATE M

Job ID: 180-179880-1
SDG: Property ID: 891077

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Sample Summary

Client: Chesapeake Energy Corporation
Project/Site: CHK STATE M

Job ID: 180-179880-1
SDG: Property ID: 891077

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-179880-1	20240906M-1	Air	09/06/24 11:40	09/17/24 14:43

Method Summary

Client: Chesapeake Energy Corporation
Project/Site: CHK STATE M

Job ID: 180-179880-1
SDG: Property ID: 891077

Method	Method Description	Protocol	Laboratory
TO-15	TO-15	EPA	Eurofins

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

Eurofins = Eurofins Air Toxics, 180 Blue Ravine Road, Suite B, Folsom, CA 95630

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9/24/2024
Mr. Ken Hayes
Eurofins Environment Testing
301 Alpha Dr.

Pittsburgh PA 15238

Project Name: CHKSTATM
Project #: CHKSTATM
Workorder #: 2409263

Dear Mr. Ken Hayes

The following report includes the data for the above referenced project for sample(s) received on 9/10/2024 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Brian Whittaker at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Brian Whittaker

Project Manager

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WORK ORDER #: 2409263

Work Order Summary

CLIENT:	Mr. Ken Hayes Eurofins Environment Testing 301 Alpha Dr. Pittsburgh, PA 15238	**BILL TO:**	Mr. Ken Hayes Eurofins Environment Testing 301 Alpha Dr. Pittsburgh, PA 15238
PHONE:		**P.O. #**	180-179880-1
FAX:		**PROJECT #**	CHKSTATM CHKSTATM
DATE RECEIVED:	09/10/2024	**CONTACT:**	Brian Whittaker
DATE COMPLETED:	09/24/2024		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	20240906M-1	TO-15	13.7 "Hg	1.9 psi
02A	Lab Blank	TO-15	NA	NA
03A	CCV	TO-15	NA	NA
04A	LCS	TO-15	NA	NA
04AA	LCSD	TO-15	NA	NA

CERTIFIED BY: Heidi Hayes DATE: 09/24/24

Technical Director

Cert. No.: AZ Licensure-AZ0775, FL NELAP-E87680, LA NELAP–02089, MN NELAP-2703122, NH NELAP–209223-B, NJ NELAP-CA016, NY NELAP-11291, TX NELAP-T104704434, UT NELAP-CA009332023-16, VA NELAP-12695, WA NELAP-C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program) CA300005-20
Eurofins Environment Testing Northern California, LLC certifies that the test results contained in this report meet all requirements of the 2016 TNI Standard.

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, LLC.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000

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LABORATORY NARRATIVE
EPA Method TO-15
Eurofins Environment Testing
Workorder# 2409263

One 6 Liter Summa Canister sample was received on September 10, 2024. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

A single point calibration for TVOC (Total Volatile Organic Compounds) referenced to Hexane was performed for each daily analytical batch. Recovery is reported as 100% in the associated results for each CCV.

TVOC (Total Volatile Organic Compounds) referenced to Hexane includes area counts for peaks that elute from Hexane minus 0.08 minutes to Naphthalene plus 0.08 minutes and quantitating the area based on the response factor of Hexane.

The presence of a closely eluting non-target peak in sample 20240906M-1 is interfering with the quantitation mass ion for 4-Ethyltoluene. The reported 4-Ethyltoluene concentration is flagged with a "CN" flag to indicate a high bias due to matrix contribution.

Definition of Data Qualifying Flags

Ten qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

M - Reported value may be biased due to apparent matrix interferences.

CN - See Case Narrative.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: 20240906M-1

Lab ID#: 2409263-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
4-Ethyltoluene	1.0	1.7 CN	5.1	8.5 CN
1,2,4-Trimethylbenzene	1.0	1.1	5.1	5.3
1,3,5-Trimethylbenzene	1.0	1.6	5.1	8.0
TVOC Ref. to Hexane	21	2800	73	9900

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Client Sample ID: 20240906M-1

Lab ID#: 2409263-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3092022**	**Date of Collection:**	**9/6/24 11:40:00 AM**
Dil. Factor:	**2.08**	**Date of Analysis:**	**9/21/24 12:34 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Acetone	10	Not Detected	25	Not Detected
Benzene	1.0	Not Detected	3.3	Not Detected
alpha-Chlorotoluene	1.0	Not Detected	5.4	Not Detected
Bromodichloromethane	1.0	Not Detected	7.0	Not Detected
Bromoform	1.0	Not Detected	11	Not Detected
Bromomethane	10	Not Detected	40	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.2	Not Detected	12	Not Detected
Carbon Disulfide	4.2	Not Detected	13	Not Detected
Carbon Tetrachloride	1.0	Not Detected	6.5	Not Detected
Chlorobenzene	1.0	Not Detected	4.8	Not Detected
Dibromochloromethane	1.0	Not Detected	8.8	Not Detected
Chloroethane	4.2	Not Detected	11	Not Detected
Chloroform	1.0	Not Detected	5.1	Not Detected
Chloromethane	10	Not Detected	21	Not Detected
1,2-Dibromoethane (EDB)	1.0	Not Detected	8.0	Not Detected
1,2-Dichlorobenzene	1.0	Not Detected	6.2	Not Detected
1,3-Dichlorobenzene	1.0	Not Detected	6.2	Not Detected
1,4-Dichlorobenzene	1.0	Not Detected	6.2	Not Detected
1,1-Dichloroethane	1.0	Not Detected	4.2	Not Detected
Freon 12	1.0	Not Detected	5.1	Not Detected
1,2-Dichloroethane	1.0	Not Detected	4.2	Not Detected
1,1-Dichloroethene	1.0	Not Detected	4.1	Not Detected
cis-1,2-Dichloroethene	1.0	Not Detected	4.1	Not Detected
trans-1,2-Dichloroethene	1.0	Not Detected	4.1	Not Detected
1,2-Dichloropropane	1.0	Not Detected	4.8	Not Detected
cis-1,3-Dichloropropene	1.0	Not Detected	4.7	Not Detected
trans-1,3-Dichloropropene	1.0	Not Detected	4.7	Not Detected
Freon 114	1.0	Not Detected	7.3	Not Detected
Ethyl Benzene	1.0	Not Detected	4.5	Not Detected
4-Ethyltoluene	1.0	1.7 CN	5.1	8.5 CN
Hexachlorobutadiene	4.2	Not Detected	44	Not Detected
2-Hexanone	4.2	Not Detected	17	Not Detected
Methylene Chloride	10	Not Detected	36	Not Detected
4-Methyl-2-pentanone	1.0	Not Detected	4.3	Not Detected
Styrene	1.0	Not Detected	4.4	Not Detected
1,1,2,2-Tetrachloroethane	1.0	Not Detected	7.1	Not Detected
Tetrachloroethene	1.0	Not Detected	7.0	Not Detected
Toluene	2.1	Not Detected	7.8	Not Detected
1,2,4-Trichlorobenzene	4.2	Not Detected	31	Not Detected
1,1,1-Trichloroethane	1.0	Not Detected	5.7	Not Detected
1,1,2-Trichloroethane	1.0	Not Detected	5.7	Not Detected
Trichloroethene	1.0	Not Detected	5.6	Not Detected

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Client Sample ID: 20240906M-1

Lab ID#: 2409263-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3092022**	**Date of Collection: 9/6/24 11:40:00 AM**	
Dil. Factor:	**2.08**	**Date of Analysis: 9/21/24 12:34 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	1.0	Not Detected	5.8	Not Detected
Freon 113	1.0	Not Detected	8.0	Not Detected
1,2,4-Trimethylbenzene	1.0	1.1	5.1	5.3
1,3,5-Trimethylbenzene	1.0	1.6	5.1	8.0
Vinyl Acetate	4.2	Not Detected	15	Not Detected
Vinyl Chloride	1.0	Not Detected	2.6	Not Detected
m,p-Xylene	2.1	Not Detected	9.0	Not Detected
o-Xylene	1.0	Not Detected	4.5	Not Detected
TVOC Ref. to Hexane	21	2800	73	9900

CN =See Case Narrative explanation

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	104	70-130
4-Bromofluorobenzene	104	70-130

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Client Sample ID: Lab Blank

Lab ID#: 2409263-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3092006a**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/20/24 12:01 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Acetone	5.0	Not Detected	12	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Bromomethane	5.0	Not Detected	19	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected	5.9	Not Detected
Carbon Disulfide	2.0	Not Detected	6.2	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
Chloromethane	5.0	Not Detected	10	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Freon 12	0.50	Not Detected	2.5	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
Toluene	1.0	Not Detected	3.8	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected

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Client Sample ID: Lab Blank

Lab ID#: 2409263-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3092006a**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/20/24 12:01 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.50	Not Detected	2.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
Vinyl Acetate	2.0	Not Detected	7.0	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
m,p-Xylene	1.0	Not Detected	4.3	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
TVOC Ref. to Hexane	10	Not Detected	35	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	104	70-130
4-Bromofluorobenzene	102	70-130

eurofins | Air Toxics

Client Sample ID: CCV
Lab ID#: 2409263-03A
EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3092003**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/20/24 10:38 AM**	

Compound	%Recovery
Acetone	88
Benzene	92
alpha-Chlorotoluene	104
Bromodichloromethane	101
Bromoform	109
Bromomethane	107
2-Butanone (Methyl Ethyl Ketone)	92
Carbon Disulfide	90
Carbon Tetrachloride	108
Chlorobenzene	100
Dibromochloromethane	108
Chloroethane	89
Chloroform	100
Chloromethane	89
1,2-Dibromoethane (EDB)	103
1,2-Dichlorobenzene	102
1,3-Dichlorobenzene	104
1,4-Dichlorobenzene	104
1,1-Dichloroethane	92
Freon 12	105
1,2-Dichloroethane	105
1,1-Dichloroethene	91
cis-1,2-Dichloroethene	91
trans-1,2-Dichloroethene	90
1,2-Dichloropropane	88
cis-1,3-Dichloropropene	97
trans-1,3-Dichloropropene	103
Freon 114	100
Ethyl Benzene	98
4-Ethyltoluene	101
Hexachlorobutadiene	109
2-Hexanone	87
Methylene Chloride	86
4-Methyl-2-pentanone	92
Styrene	99
1,1,2,2-Tetrachloroethane	94
Tetrachloroethene	104
Toluene	99
1,2,4-Trichlorobenzene	103
1,1,1-Trichloroethane	106
1,1,2-Trichloroethane	97
Trichloroethene	103

eurofins | Air Toxics

Client Sample ID: CCV

Lab ID#: 2409263-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3092003**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/20/24 10:38 AM**	

Compound	%Recovery
Freon 11	106
Freon 113	96
1,2,4-Trimethylbenzene	101
1,3,5-Trimethylbenzene	101
Vinyl Acetate	91
Vinyl Chloride	90
m,p-Xylene	98
o-Xylene	99
TVOC Ref. to Hexane	100

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	106	70-130
4-Bromofluorobenzene	107	70-130

eurofins | Air Toxics

Client Sample ID: LCS

Lab ID#: 2409263-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3092004**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/20/24 11:05 AM**	

Compound	%Recovery	Method Limits
Acetone	84	70-130
Benzene	86	70-130
alpha-Chlorotoluene	92	70-130
Bromodichloromethane	91	70-130
Bromoform	96	70-130
Bromomethane	101	70-130
2-Butanone (Methyl Ethyl Ketone)	83	70-130
Carbon Disulfide	84	70-130
Carbon Tetrachloride	104	70-130
Chlorobenzene	89	70-130
Dibromochloromethane	98	70-130
Chloroethane	90	70-130
Chloroform	89	70-130
Chloromethane	87	70-130
1,2-Dibromoethane (EDB)	92	70-130
1,2-Dichlorobenzene	92	70-130
1,3-Dichlorobenzene	95	70-130
1,4-Dichlorobenzene	91	70-130
1,1-Dichloroethane	85	70-130
Freon 12	98	70-130
1,2-Dichloroethane	97	70-130
1,1-Dichloroethene	84	70-130
cis-1,2-Dichloroethene	86	70-130
trans-1,2-Dichloroethene	83	70-130
1,2-Dichloropropane	81	70-130
cis-1,3-Dichloropropene	90	70-130
trans-1,3-Dichloropropene	96	70-130
Freon 114	96	70-130
Ethyl Benzene	90	70-130
4-Ethyltoluene	92	70-130
Hexachlorobutadiene	120	70-130
2-Hexanone	79	70-130
Methylene Chloride	79	70-130
4-Methyl-2-pentanone	80	70-130
Styrene	90	70-130
1,1,2,2-Tetrachloroethane	86	70-130
Tetrachloroethene	93	70-130
Toluene	87	70-130
1,2,4-Trichlorobenzene	110	70-130
1,1,1-Trichloroethane	100	70-130
1,1,2-Trichloroethane	90	70-130
Trichloroethene	90	70-130

eurofins | Air Toxics

Client Sample ID: LCS

Lab ID#: 2409263-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3092004**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/20/24 11:05 AM**	

Compound	%Recovery	Method Limits
Freon 11	100	70-130
Freon 113	89	70-130
1,2,4-Trimethylbenzene	94	70-130
1,3,5-Trimethylbenzene	93	70-130
Vinyl Acetate	93	70-130
Vinyl Chloride	88	70-130
m,p-Xylene	89	70-130
o-Xylene	91	70-130
TVOC Ref. to Hexane	Not Spiked	

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	103	70-130
4-Bromofluorobenzene	107	70-130

eurofins | Air Toxics

Client Sample ID: LCSD

Lab ID#: 2409263-04AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3092005**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/20/24 11:32 AM**	

Compound	%Recovery	Method Limits
Acetone	84	70-130
Benzene	86	70-130
alpha-Chlorotoluene	93	70-130
Bromodichloromethane	94	70-130
Bromoform	98	70-130
Bromomethane	110	70-130
2-Butanone (Methyl Ethyl Ketone)	80	70-130
Carbon Disulfide	88	70-130
Carbon Tetrachloride	105	70-130
Chlorobenzene	93	70-130
Dibromochloromethane	98	70-130
Chloroethane	92	70-130
Chloroform	91	70-130
Chloromethane	92	70-130
1,2-Dibromoethane (EDB)	96	70-130
1,2-Dichlorobenzene	93	70-130
1,3-Dichlorobenzene	95	70-130
1,4-Dichlorobenzene	94	70-130
1,1-Dichloroethane	87	70-130
Freon 12	100	70-130
1,2-Dichloroethane	100	70-130
1,1-Dichloroethene	82	70-130
cis-1,2-Dichloroethene	89	70-130
trans-1,2-Dichloroethene	89	70-130
1,2-Dichloropropane	79	70-130
cis-1,3-Dichloropropene	89	70-130
trans-1,3-Dichloropropene	96	70-130
Freon 114	96	70-130
Ethyl Benzene	92	70-130
4-Ethyltoluene	95	70-130
Hexachlorobutadiene	119	70-130
2-Hexanone	79	70-130
Methylene Chloride	80	70-130
4-Methyl-2-pentanone	80	70-130
Styrene	92	70-130
1,1,2,2-Tetrachloroethane	87	70-130
Tetrachloroethene	95	70-130
Toluene	87	70-130
1,2,4-Trichlorobenzene	116	70-130
1,1,1-Trichloroethane	101	70-130
1,1,2-Trichloroethane	91	70-130
Trichloroethene	92	70-130

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Client Sample ID: LCSD

Lab ID#: 2409263-04AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3092005**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/20/24 11:32 AM**	

Compound	%Recovery	Method Limits
Freon 11	102	70-130
Freon 113	91	70-130
1,2,4-Trimethylbenzene	94	70-130
1,3,5-Trimethylbenzene	93	70-130
Vinyl Acetate	95	70-130
Vinyl Chloride	90	70-130
m,p-Xylene	88	70-130
o-Xylene	89	70-130
TVOC Ref. to Hexane	Not Spiked	

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	104	70-130
4-Bromofluorobenzene	105	70-130

eurofins | Air Toxics

Method : TO-15 (Sp)-Eurofins TA (CEC, OK)

CAS Number	Compound	Rpt. Limit (ppbv)
67-64-1	Acetone	5.0
71-43-2	Benzene	0.50
100-44-7	alpha-Chlorotoluene	0.50
75-27-4	Bromodichloromethane	0.50
75-25-2	Bromoform	0.50
74-83-9	Bromomethane	5.0
78-93-3	2-Butanone (Methyl Ethyl Ketone)	2.0
75-15-0	Carbon Disulfide	2.0
56-23-5	Carbon Tetrachloride	0.50
108-90-7	Chlorobenzene	0.50
124-48-1	Dibromochloromethane	0.50
75-00-3	Chloroethane	2.0
67-66-3	Chloroform	0.50
74-87-3	Chloromethane	5.0
106-93-4	1,2-Dibromoethane (EDB)	0.50
95-50-1	1,2-Dichlorobenzene	0.50
541-73-1	1,3-Dichlorobenzene	0.50
106-46-7	1,4-Dichlorobenzene	0.50
75-34-3	1,1-Dichloroethane	0.50
75-71-8	Freon 12	0.50
107-06-2	1,2-Dichloroethane	0.50
75-35-4	1,1-Dichloroethene	0.50
156-59-2	cis-1,2-Dichloroethene	0.50
156-60-5	trans-1,2-Dichloroethene	0.50
78-87-5	1,2-Dichloropropane	0.50
10061-01-5	cis-1,3-Dichloropropene	0.50
10061-02-6	trans-1,3-Dichloropropene	0.50
76-14-2	Freon 114	0.50
100-41-4	Ethyl Benzene	0.50
622-96-8	4-Ethyltoluene	0.50
87-68-3	Hexachlorobutadiene	2.0
591-78-6	2-Hexanone	2.0
75-09-2	Methylene Chloride	5.0
108-10-1	4-Methyl-2-pentanone	0.50
100-42-5	Styrene	0.50
79-34-5	1,1,2,2-Tetrachloroethane	0.50
127-18-4	Tetrachloroethene	0.50
108-88-3	Toluene	1.0
120-82-1	1,2,4-Trichlorobenzene	2.0
71-55-6	1,1,1-Trichloroethane	0.50
79-00-5	1,1,2-Trichloroethane	0.50
79-01-6	Trichloroethene	0.50
75-69-4	Freon 11	0.50
76-13-1	Freon 113	0.50

eurofins | Air Toxics

Method : TO-15 (Sp)-Eurofins TA (CEC, OK)

CAS Number	Compound	Rpt. Limit (ppbv)
95-63-6	1,2,4-Trimethylbenzene	0.50
108-67-8	1,3,5-Trimethylbenzene	0.50
108-05-4	Vinyl Acetate	2.0
75-01-4	Vinyl Chloride	0.50
108-38-3	m,p-Xylene	1.0
95-47-6	o-Xylene	0.50
9999-9999-500	**TVOC Ref. to Hexane**	**10**

	Surrogate	Method Limits
2037-26-5	Toluene-d8	70-130
17060-07-0	1,2-Dichloroethane-d4	70-130
460-00-4	4-Bromofluorobenzene	70-130

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CHAIN OF CUSTODY RECORD

2409263

No. 2015

COC 1 of 1

EQUUS Environmental, LLC

(918) 921-5331

PROJECT NUMBER: CHKSTATM

PROJECT NAME: CHKSTATE M

SHIPPED TO: AIR TOXICS

PROJECT MANAGER: MATT MUGAVERO

TAT: STANDARD

SAMPLER'S PRINTED NAME: Terry Fisher

SAMPLERS SIGNATURE:

PO# —

WO# —

* C6 - C12

	Date	Time	Sample ID	Sample Matrix	# of Sample Containers	TO-15	TVPH as HEXANE*	REMARKS
			202406 M-4 ~~rec~~	AIR	1	X	X	TAG rec
01A	9/6/24	1140	20240906 M-1	AIR	1	X	X	TAG # Cal# 77420 Ser# N4981

TOTAL NUMBER OF CONTAINERS: 1

RELINQUISHED BY: — DATE 9-6-24 TIME 1600

RECEIVED BY: Amin D. GAR DATE 9/10/24 TIME 1001

RELINQUISHED BY: — DATE — TIME —

RECEIVED BY: — DATE — TIME —

Custody Seal Intact? Yes No None Temp °C NA

METHOD OF SHIPMENT: FedEx

Carrier: FedEx

AIRBILL NUMBER: Fedex 7428 3887 9820

RECEIVED IN LABORATORY BY: — DATE — TIME —

Send PDF, EDD, and INVOICE (if applicable) to: QAQC@EquusEnv.com

LABORATORY CONTACT: KEN 615-501-5035

LABORATORY ADDRESS: 180 BLUE RAVINE RD STE B FOLSOM, CA 95630

White: Receiving Lab Yellow: Equus Environmental Project File Pink: Equus QA/QC

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9/24/2024

Received by OCD: 6/4/2025 10:09:49 AM

Released to Imaging: 6/17/2025 9:46:51 AM

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CHAIN OF CUSTODY RECORD

2409263

No. 2015

EQUUS Environmental, LLC (918) 921-5331

PROJECT NUMBER: CHKSTATM

PROJECT NAME: CHKSTATE M

COC 1 of 1

SHIPPED TO: AIR TOXICS

PROJECT MANAGER: MATT MUGAVERO

TAT: STANDARD

SAMPLER'S PRINTED NAME: Terry Fisher

SAMPLERS SIGNATURE:

PO# —

WO# —

Date	Time	Sample ID	Sample Matrix	# of Sample Containers	TO-15	TVOCs HEXANE*
		202406 M-1 rec ~~M-1 rec~~	AIR	1	X	X
9/6/24	1140	20240906 M-1	AIR	1	X	X

* C6 - C12

REMARKS

TAG rec

TAG #

Cal # 77420

Ser # N4981

TOTAL NUMBER OF CONTAINERS → 1

RELINQUISHED BY: — DATE 9-6-24 TIME 1500

RECEIVED BY: — DATE 9/10/24 TIME 1001

RELINQUISHED BY: — DATE — TIME —

RECEIVED BY: — DATE — TIME —

METHOD OF SHIPMENT: FedEx

AIRBILL NUMBER: Fedex 7428 3887 9820

Custody Seal Intact? Yes No None Temp °C NA

Carrier: FedEx

RECEIVED IN LABORATORY BY: — DATE — TIME —

Send PDF, EDD, and INVOICE (if applicable) to: QAQC@EquusEnv.com

LABORATORY CONTACT: KEN 615-501-5035

LABORATORY ADDRESS: 180 BLUE RAVINE RD STE B FOLSOM, CA 95630

White: Receiving Lab Yellow: Equus Environmental Project File Pink: Equus QA/QC

Received by OCD: 6/4/2025 10:09:49 AM

Released to Imaging: 6/17/2025 9:46:51 AM

9/24/2024

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eurofins | Air Toxics

Method : TO-15 (Sp)-Eurofins TA (CEC, OK)

CAS Number	Compound	Rpt. Limit (ppbv)
67-64-1	Acetone	5.0
71-43-2	Benzene	0.50
100-44-7	alpha-Chlorotoluene	0.50
75-27-4	Bromodichloromethane	0.50
75-25-2	Bromoform	0.50
74-83-9	Bromomethane	5.0
78-93-3	2-Butanone (Methyl Ethyl Ketone)	2.0
75-15-0	Carbon Disulfide	2.0
56-23-5	Carbon Tetrachloride	0.50
108-90-7	Chlorobenzene	0.50
124-48-1	Dibromochloromethane	0.50
75-00-3	Chloroethane	2.0
67-66-3	Chloroform	0.50
74-87-3	Chloromethane	5.0
106-93-4	1,2-Dibromoethane (EDB)	0.50
95-50-1	1,2-Dichlorobenzene	0.50
541-73-1	1,3-Dichlorobenzene	0.50
106-46-7	1,4-Dichlorobenzene	0.50
75-34-3	1,1-Dichloroethane	0.50
75-71-8	Freon 12	0.50
107-06-2	1,2-Dichloroethane	0.50
75-35-4	1,1-Dichloroethene	0.50
156-59-2	cis-1,2-Dichloroethene	0.50
156-60-5	trans-1,2-Dichloroethene	0.50
78-87-5	1,2-Dichloropropane	0.50
10061-01-5	cis-1,3-Dichloropropene	0.50
10061-02-6	trans-1,3-Dichloropropene	0.50
76-14-2	Freon 114	0.50
100-41-4	Ethyl Benzene	0.50
622-96-8	4-Ethyltoluene	0.50
87-68-3	Hexachlorobutadiene	2.0
591-78-6	2-Hexanone	2.0
75-09-2	Methylene Chloride	5.0
108-10-1	4-Methyl-2-pentanone	0.50
100-42-5	Styrene	0.50
79-34-5	1,1,2,2-Tetrachloroethane	0.50
127-18-4	Tetrachloroethene	0.50
108-88-3	Toluene	1.0
120-82-1	1,2,4-Trichlorobenzene	2.0
71-55-6	1,1,1-Trichloroethane	0.50

eurofins | Air Toxics

Method : TO-15 (Sp)-Eurofins TA (CEC, OK)

CAS Number	Compound	Rpt. Limit (ppbv)
79-00-5	1,1,2-Trichloroethane	0.50
79-01-6	Trichloroethene	0.50
75-69-4	Freon 11	0.50
76-13-1	Freon 113	0.50
95-63-6	1,2,4-Trimethylbenzene	0.50
108-67-8	1,3,5-Trimethylbenzene	0.50
108-05-4	Vinyl Acetate	2.0
75-01-4	Vinyl Chloride	0.50
108-38-3	m,p-Xylene	1.0
95-47-6	o-Xylene	0.50
9999-9999-500	TVOC Ref. to Hexane	10

CAS Number	Surrogate	Method Limits
2037-26-5	Toluene-d8	70-130
17060-07-0	1,2-Dichloroethane-d4	70-130
460-00-4	4-Bromofluorobenzene	70-130

Login Sample Receipt Checklist

Client: Chesapeake Energy Corporation

Job Number: 180-179880-1
SDG Number: Property ID: 891077

Login Number: 179880
List Number: 1
Creator: Hayes, Ken

List Source: Eurofins Pittsburgh

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.		
The cooler's custody seal, if present, is intact.		
Sample custody seals, if present, are intact.		
The cooler or samples do not appear to have been compromised or tampered with.		
Samples were received on ice.		
Cooler Temperature is acceptable.		
Cooler Temperature is recorded.		
COC is present.		
COC is filled out in ink and legible.		
COC is filled out with all pertinent information.		
Is the Field Sampler's name present on COC?		
There are no discrepancies between the containers received and the COC.		
Samples are received within Holding Time (excluding tests with immediate HTs)		
Sample containers have legible labels.		
Containers are not broken or leaking.		
Sample collection date/times are provided.		
Appropriate sample containers are used.		
Sample bottles are completely filled.		
Sample Preservation Verified.		
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs		
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").		
Multiphasic samples are not present.		
Samples do not require splitting or compositing.		
Residual Chlorine Checked.		

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Dana Drury
Chesapeake Energy Corporation
PO BOX 548806
Oklahoma City, Oklahoma 73154

Generated 12/12/2024 5:43:33 PM

JOB DESCRIPTION

Equus - Chesapeake
Property ID: 891077

JOB NUMBER

180-183776-1

Eurofins Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh PA 15238

See page two for job notes and contact information.

Released to Imaging: 6/17/2025 9:46:51 AM

my EOL

Eurofins Pittsburgh

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

PA Lab ID: 02-00416

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Pittsburgh Project Manager.

Authorization

Generated
12/12/2024 5:43:33 PM

Authorized for release by
Ken Hayes, Project Manager II
Ken.Hayes@et.eurofinsus.com
(615)301-5035

Client: Chesapeake Energy Corporation
Project/Site: Equus - Chesapeake

Laboratory Job ID: 180-183776-1
SDG: Property ID: 891077

Table of Contents

Case Narrative

Client: Chesapeake Energy Corporation Job ID: 180-183776-1
Project: Equus - Chesapeake

Job ID: 180-183776-1 Eurofins Pittsburgh

Job Narrative
180-183776-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The sample was received on 12/6/2024 10:11 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice.

Subcontract Work
Method TO 15: This method was subcontracted to Eurofins Air Toxics, Inc. The subcontract laboratory certification is different from that of the facility issuing the final report. The subcontract report is appended in its entirety.

Definitions/Glossary

Client: Chesapeake Energy Corporation
Project/Site: Equus - Chesapeake

Job ID: 180-183776-1
SDG: Property ID: 891077

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Sample Summary

Client: Chesapeake Energy Corporation
Project/Site: Equus - Chesapeake

Job ID: 180-183776-1
SDG: Property ID: 891077

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-183776-1	20241122M-1	Air	11/22/24 12:25	12/06/24 10:11

Method Summary

Client: Chesapeake Energy Corporation
Project/Site: Equus - Chesapeake

Job ID: 180-183776-1
SDG: Property ID: 891077

Method	Method Description	Protocol	Laboratory
TO-15	TO-15	EPA	Eurofins

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

Eurofins = Eurofins Air Toxics, 180 Blue Ravine Road, Suite B, Folsom, CA 95630

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12/12/2024
Mr. Ken Hayes
Eurofins Environment Testing
301 Alpha Dr.

Pittsburgh PA 15238

Project Name: CHKSTATE M
Project #: CHKSTATM
Workorder #: 2411743

Dear Mr. Ken Hayes

The following report includes the data for the above referenced project for sample(s) received on 11/27/2024 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Brian Whittaker at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Brian Whittaker

Project Manager

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WORK ORDER #: 2411743

Work Order Summary

CLIENT:	Mr. Ken Hayes Eurofins Environment Testing 301 Alpha Dr. Pittsburgh, PA 15238	**BILL TO:**	Mr. Ken Hayes Eurofins Environment Testing 301 Alpha Dr. Pittsburgh, PA 15238
PHONE:		**P.O. #**	CHKSTATM
FAX:		**PROJECT #**	CHKSTATM CHKSTATE M
DATE RECEIVED:	11/27/2024	**CONTACT:**	Brian Whittaker
DATE COMPLETED:	12/12/2024		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	20241122M-1	TO-15	12.0 "Hg	2 psi
02A	Lab Blank	TO-15	NA	NA
03A	CCV	TO-15	NA	NA
04A	LCS	TO-15	NA	NA
04AA	LCSD	TO-15	NA	NA

CERTIFIED BY: Heidi Hayes DATE: 12/12/24

Technical Director

Cert. No.: AZ Licensure-AZ0775, FL NELAP-E87680, LA NELAP–02089, MN NELAP-2703122, NH NELAP–209223-B, NJ NELAP-CA016, NY NELAP-11291, TX NELAP-T104704434, UT NELAP-CA009332023-16, VA NELAP-12695, WA NELAP-C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program) CA300005-20
Eurofins Environment Testing Northern California, LLC certifies that the test results contained in this report meet all requirements of the 2016 TNI Standard.

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, LLC.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000

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LABORATORY NARRATIVE
EPA Method TO-15
Eurofins Environment Testing
Workorder# 2411743

One 6 Liter Summa Canister sample was received on November 27, 2024. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

A single point calibration for TVOC (Total Volatile Organic Compounds) referenced to Hexane was performed for each daily analytical batch. Recovery is reported as 100% in the associated results for each CCV.

TVOC (Total Volatile Organic Compounds) referenced to Hexane includes area counts for peaks that elute from Hexane minus 0.08 minutes to Naphthalene plus 0.08 minutes and quantitating the area based on the response factor of Hexane.

Definition of Data Qualifying Flags

Ten qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

M - Reported value may be biased due to apparent matrix interferences.

CN - See Case Narrative.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: 20241122M-1

Lab ID#: 2411743-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TVOC Ref. to Hexane	19	1900	67	6700

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Client Sample ID: 20241122M-1

Lab ID#: 2411743-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91121112**	**Date of Collection:**	**11/22/24 12:25:00 P**
Dil. Factor:	**1.89**	**Date of Analysis:**	**12/11/24 05:22 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Acetone	9.4	Not Detected	22	Not Detected
Benzene	0.94	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.94	Not Detected	4.9	Not Detected
Bromodichloromethane	0.94	Not Detected	6.3	Not Detected
Bromoform	0.94	Not Detected	9.8	Not Detected
Bromomethane	9.4	Not Detected	37	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.8	Not Detected	11	Not Detected
Carbon Disulfide	3.8	Not Detected	12	Not Detected
Carbon Tetrachloride	0.94	Not Detected	5.9	Not Detected
Chlorobenzene	0.94	Not Detected	4.4	Not Detected
Dibromochloromethane	0.94	Not Detected	8.0	Not Detected
Chloroethane	3.8	Not Detected	10	Not Detected
Chloroform	0.94	Not Detected	4.6	Not Detected
Chloromethane	9.4	Not Detected	20	Not Detected
1,2-Dibromoethane (EDB)	0.94	Not Detected	7.3	Not Detected
1,2-Dichlorobenzene	0.94	Not Detected	5.7	Not Detected
1,3-Dichlorobenzene	0.94	Not Detected	5.7	Not Detected
1,4-Dichlorobenzene	0.94	Not Detected	5.7	Not Detected
1,1-Dichloroethane	0.94	Not Detected	3.8	Not Detected
Freon 12	0.94	Not Detected	4.7	Not Detected
1,2-Dichloroethane	0.94	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.94	Not Detected	3.7	Not Detected
cis-1,2-Dichloroethene	0.94	Not Detected	3.7	Not Detected
trans-1,2-Dichloroethene	0.94	Not Detected	3.7	Not Detected
1,2-Dichloropropane	0.94	Not Detected	4.4	Not Detected
cis-1,3-Dichloropropene	0.94	Not Detected	4.3	Not Detected
trans-1,3-Dichloropropene	0.94	Not Detected	4.3	Not Detected
Freon 114	0.94	Not Detected	6.6	Not Detected
Ethyl Benzene	0.94	Not Detected	4.1	Not Detected
4-Ethyltoluene	0.94	Not Detected	4.6	Not Detected
Hexachlorobutadiene	3.8	Not Detected	40	Not Detected
2-Hexanone	3.8	Not Detected	15	Not Detected
Methylene Chloride	9.4	Not Detected	33	Not Detected
4-Methyl-2-pentanone	0.94	Not Detected	3.9	Not Detected
Styrene	0.94	Not Detected	4.0	Not Detected
1,1,2,2-Tetrachloroethane	0.94	Not Detected	6.5	Not Detected
Tetrachloroethene	0.94	Not Detected	6.4	Not Detected
Toluene	1.9	Not Detected	7.1	Not Detected
1,2,4-Trichlorobenzene	3.8	Not Detected	28	Not Detected
1,1,1-Trichloroethane	0.94	Not Detected	5.2	Not Detected
1,1,2-Trichloroethane	0.94	Not Detected	5.2	Not Detected
Trichloroethene	0.94	Not Detected	5.1	Not Detected

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Client Sample ID: 20241122M-1

Lab ID#: 2411743-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91121112**	**Date of Collection:**	**11/22/24 12:25:00 P**
Dil. Factor:	**1.89**	**Date of Analysis:**	**12/11/24 05:22 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.94	Not Detected	5.3	Not Detected
Freon 113	0.94	Not Detected	7.2	Not Detected
1,2,4-Trimethylbenzene	0.94	Not Detected	4.6	Not Detected
1,3,5-Trimethylbenzene	0.94	Not Detected	4.6	Not Detected
Vinyl Acetate	3.8	Not Detected	13	Not Detected
Vinyl Chloride	0.94	Not Detected	2.4	Not Detected
m,p-Xylene	1.9	Not Detected	8.2	Not Detected
o-Xylene	0.94	Not Detected	4.1	Not Detected
TVOC Ref. to Hexane	19	1900	67	6700

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	85	70-130
1,2-Dichloroethane-d4	88	70-130
4-Bromofluorobenzene	86	70-130

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Client Sample ID: Lab Blank

Lab ID#: 2411743-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91121106c**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 12/11/24 11:31 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Acetone	5.0	Not Detected	12	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Bromomethane	5.0	Not Detected	19	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected	5.9	Not Detected
Carbon Disulfide	2.0	Not Detected	6.2	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
Chloromethane	5.0	Not Detected	10	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Freon 12	0.50	Not Detected	2.5	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
Toluene	1.0	Not Detected	3.8	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected

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Client Sample ID: Lab Blank

Lab ID#: 2411743-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91121106c**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 12/11/24 11:31 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.50	Not Detected	2.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
Vinyl Acetate	2.0	Not Detected	7.0	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
m,p-Xylene	1.0	Not Detected	4.3	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
TVOC Ref. to Hexane	10	Not Detected	35	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	88	70-130
1,2-Dichloroethane-d4	88	70-130
4-Bromofluorobenzene	88	70-130

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Client Sample ID: CCV
Lab ID#: 2411743-03A
EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91121103**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 12/11/24 10:10 AM**	

Compound	%Recovery
Acetone	89
Benzene	91
alpha-Chlorotoluene	92
Bromodichloromethane	89
Bromoform	92
Bromomethane	100
2-Butanone (Methyl Ethyl Ketone)	92
Carbon Disulfide	84
Carbon Tetrachloride	89
Chlorobenzene	94
Dibromochloromethane	96
Chloroethane	96
Chloroform	88
Chloromethane	91
1,2-Dibromoethane (EDB)	91
1,2-Dichlorobenzene	99
1,3-Dichlorobenzene	100
1,4-Dichlorobenzene	104
1,1-Dichloroethane	85
Freon 12	93
1,2-Dichloroethane	83
1,1-Dichloroethene	99
cis-1,2-Dichloroethene	100
trans-1,2-Dichloroethene	96
1,2-Dichloropropane	86
cis-1,3-Dichloropropene	93
trans-1,3-Dichloropropene	93
Freon 114	92
Ethyl Benzene	101
4-Ethyltoluene	106
Hexachlorobutadiene	100
2-Hexanone	103
Methylene Chloride	84
4-Methyl-2-pentanone	105
Styrene	103
1,1,2,2-Tetrachloroethane	88
Tetrachloroethene	100
Toluene	86
1,2,4-Trichlorobenzene	102
1,1,1-Trichloroethane	88
1,1,2-Trichloroethane	88
Trichloroethene	89

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Client Sample ID: CCV

Lab ID#: 2411743-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91121103**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 12/11/24 10:10 AM**	

Compound	%Recovery
Freon 11	91
Freon 113	101
1,2,4-Trimethylbenzene	106
1,3,5-Trimethylbenzene	104
Vinyl Acetate	94
Vinyl Chloride	102
m,p-Xylene	101
o-Xylene	105
TVOC Ref. to Hexane	100

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	87	70-130
1,2-Dichloroethane-d4	82	70-130
4-Bromofluorobenzene	88	70-130

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Client Sample ID: LCS

Lab ID#: 2411743-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91121104**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 12/11/24 10:36 AM**	

Compound	%Recovery	Method Limits
Acetone	84	70-130
Benzene	92	70-130
alpha-Chlorotoluene	93	70-130
Bromodichloromethane	86	70-130
Bromoform	91	70-130
Bromomethane	97	70-130
2-Butanone (Methyl Ethyl Ketone)	90	70-130
Carbon Disulfide	81	70-130
Carbon Tetrachloride	89	70-130
Chlorobenzene	93	70-130
Dibromochloromethane	95	70-130
Chloroethane	92	70-130
Chloroform	85	70-130
Chloromethane	92	70-130
1,2-Dibromoethane (EDB)	89	70-130
1,2-Dichlorobenzene	99	70-130
1,3-Dichlorobenzene	103	70-130
1,4-Dichlorobenzene	106	70-130
1,1-Dichloroethane	82	70-130
Freon 12	88	70-130
1,2-Dichloroethane	84	70-130
1,1-Dichloroethene	93	70-130
cis-1,2-Dichloroethene	97	70-130
trans-1,2-Dichloroethene	92	70-130
1,2-Dichloropropane	85	70-130
cis-1,3-Dichloropropene	95	70-130
trans-1,3-Dichloropropene	93	70-130
Freon 114	88	70-130
Ethyl Benzene	103	70-130
4-Ethyltoluene	104	70-130
Hexachlorobutadiene	118	70-130
2-Hexanone	100	70-130
Methylene Chloride	80	70-130
4-Methyl-2-pentanone	101	70-130
Styrene	105	70-130
1,1,2,2-Tetrachloroethane	89	70-130
Tetrachloroethene	99	70-130
Toluene	87	70-130
1,2,4-Trichlorobenzene	117	70-130
1,1,1-Trichloroethane	88	70-130
1,1,2-Trichloroethane	88	70-130
Trichloroethene	88	70-130

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Client Sample ID: LCS

Lab ID#: 2411743-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91121104**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 12/11/24 10:36 AM**	

Compound	%Recovery	Method Limits
Freon 11	89	70-130
Freon 113	95	70-130
1,2,4-Trimethylbenzene	108	70-130
1,3,5-Trimethylbenzene	105	70-130
Vinyl Acetate	108	70-130
Vinyl Chloride	98	70-130
m,p-Xylene	100	70-130
o-Xylene	106	70-130
TVOC Ref. to Hexane	Not Spiked	

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	88	70-130
1,2-Dichloroethane-d4	81	70-130
4-Bromofluorobenzene	87	70-130

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Client Sample ID: LCSD

Lab ID#: 2411743-04AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91121105**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 12/11/24 11:02 AM**	

Compound	%Recovery	Method Limits
Acetone	85	70-130
Benzene	94	70-130
alpha-Chlorotoluene	94	70-130
Bromodichloromethane	89	70-130
Bromoform	92	70-130
Bromomethane	99	70-130
2-Butanone (Methyl Ethyl Ketone)	92	70-130
Carbon Disulfide	81	70-130
Carbon Tetrachloride	90	70-130
Chlorobenzene	95	70-130
Dibromochloromethane	96	70-130
Chloroethane	91	70-130
Chloroform	86	70-130
Chloromethane	94	70-130
1,2-Dibromoethane (EDB)	91	70-130
1,2-Dichlorobenzene	101	70-130
1,3-Dichlorobenzene	102	70-130
1,4-Dichlorobenzene	107	70-130
1,1-Dichloroethane	83	70-130
Freon 12	91	70-130
1,2-Dichloroethane	83	70-130
1,1-Dichloroethene	94	70-130
cis-1,2-Dichloroethene	98	70-130
trans-1,2-Dichloroethene	94	70-130
1,2-Dichloropropane	87	70-130
cis-1,3-Dichloropropene	96	70-130
trans-1,3-Dichloropropene	96	70-130
Freon 114	88	70-130
Ethyl Benzene	105	70-130
4-Ethyltoluene	107	70-130
Hexachlorobutadiene	119	70-130
2-Hexanone	100	70-130
Methylene Chloride	81	70-130
4-Methyl-2-pentanone	102	70-130
Styrene	105	70-130
1,1,2,2-Tetrachloroethane	90	70-130
Tetrachloroethene	102	70-130
Toluene	88	70-130
1,2,4-Trichlorobenzene	120	70-130
1,1,1-Trichloroethane	89	70-130
1,1,2-Trichloroethane	90	70-130
Trichloroethene	88	70-130

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Client Sample ID: LCSD

Lab ID#: 2411743-04AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91121105**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 12/11/24 11:02 AM**	

Compound	%Recovery	Method Limits
Freon 11	90	70-130
Freon 113	96	70-130
1,2,4-Trimethylbenzene	110	70-130
1,3,5-Trimethylbenzene	106	70-130
Vinyl Acetate	111	70-130
Vinyl Chloride	98	70-130
m,p-Xylene	103	70-130
o-Xylene	107	70-130
TVOC Ref. to Hexane	Not Spiked	

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	89	70-130
1,2-Dichloroethane-d4	83	70-130
4-Bromofluorobenzene	87	70-130

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Method : TO-15 (Sp)-Eurofins TA (CEC, OK)

CAS Number	Compound	Rpt. Limit (ppbv)
67-64-1	Acetone	5.0
71-43-2	Benzene	0.50
100-44-7	alpha-Chlorotoluene	0.50
75-27-4	Bromodichloromethane	0.50
75-25-2	Bromoform	0.50
74-83-9	Bromomethane	5.0
78-93-3	2-Butanone (Methyl Ethyl Ketone)	2.0
75-15-0	Carbon Disulfide	2.0
56-23-5	Carbon Tetrachloride	0.50
108-90-7	Chlorobenzene	0.50
124-48-1	Dibromochloromethane	0.50
75-00-3	Chloroethane	2.0
67-66-3	Chloroform	0.50
74-87-3	Chloromethane	5.0
106-93-4	1,2-Dibromoethane (EDB)	0.50
95-50-1	1,2-Dichlorobenzene	0.50
541-73-1	1,3-Dichlorobenzene	0.50
106-46-7	1,4-Dichlorobenzene	0.50
75-34-3	1,1-Dichloroethane	0.50
75-71-8	Freon 12	0.50
107-06-2	1,2-Dichloroethane	0.50
75-35-4	1,1-Dichloroethene	0.50
156-59-2	cis-1,2-Dichloroethene	0.50
156-60-5	trans-1,2-Dichloroethene	0.50
78-87-5	1,2-Dichloropropane	0.50
10061-01-5	cis-1,3-Dichloropropene	0.50
10061-02-6	trans-1,3-Dichloropropene	0.50
76-14-2	Freon 114	0.50
100-41-4	Ethyl Benzene	0.50
622-96-8	4-Ethyltoluene	0.50
87-68-3	Hexachlorobutadiene	2.0
591-78-6	2-Hexanone	2.0
75-09-2	Methylene Chloride	5.0
108-10-1	4-Methyl-2-pentanone	0.50
100-42-5	Styrene	0.50
79-34-5	1,1,2,2-Tetrachloroethane	0.50
127-18-4	Tetrachloroethene	0.50
108-88-3	Toluene	1.0
120-82-1	1,2,4-Trichlorobenzene	2.0
71-55-6	1,1,1-Trichloroethane	0.50
79-00-5	1,1,2-Trichloroethane	0.50
79-01-6	Trichloroethene	0.50
75-69-4	Freon 11	0.50
76-13-1	Freon 113	0.50

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Method : TO-15 (Sp)-Eurofins TA (CEC, OK)

CAS Number	Compound	Rpt. Limit (ppbv)
95-63-6	1,2,4-Trimethylbenzene	0.50
108-67-8	1,3,5-Trimethylbenzene	0.50
108-05-4	Vinyl Acetate	2.0
75-01-4	Vinyl Chloride	0.50
108-38-3	m,p-Xylene	1.0
95-47-6	o-Xylene	0.50
9999-9999-500	**TVOC Ref. to Hexane**	**10**

	Surrogate	Method Limits
2037-26-5	Toluene-d8	70-130
17060-07-0	1,2-Dichloroethane-d4	70-130
460-00-4	4-Bromofluorobenzene	70-130

1 2 3 4 5 6 7 8 9

CHAIN OF CUSTODY RECORD 2411743 No. 2800

EQUUS Environmental LLC (918) 921-5331

PROJECT NUMBER: CHKSTATM
PROJECT NAME: CHKSTATE M
COC 1 of 1
SHIPPED TO: AIR TOXICS
PROJECT MANAGER: MATT MUCARERO
TAT:

SAMPLER'S PRINTED NAME: Eric Farrar
SAMPLERS SIGNATURE:

PO# WO#

* C6 - C12

	Date	Time	Sample ID	Sample Matrix	# of Sample Containers	TO-15	TOTAL VOCs as HEXANE *	REMARKS
01A	11-22-2024	12:25	20241122M-1	air	1	X	X	TAG #:

INITIAL °C: ___ CF: ___ FINAL °C: ___
PROBE: ___ TIME STORED: ___ DO 11/27/24
CUSTODY SEAL? YES NO NONE
CARRIER: Fedex

TOTAL NUMBER OF CONTAINERS: 1

RELINQUISHED BY: DATE 11-25-24 TIME 10:00
RELINQUISHED BY: DATE TIME
METHOD OF SHIPMENT: FEDEX
RECEIVED IN LABORATORY BY: DATE TIME
LABORATORY CONTACT: 301 KEN 615-904-5035

RECEIVED BY: ECHC DATE 11/27/24 TIME 10:10
RECEIVED BY: DATE TIME
AIRBILL NUMBER: 7428 3892 8811
Send PDF, EDD, and INVOICE (if applicable) to: QAQC@EquusEnv.com
LABORATORY ADDRESS: 180 BLUE RAVINE RD. STE B FOLSOM, CA 95630

White: Receiving Lab Yellow: Equus Environmental Project File Pink: Equus QA/QC

Received by OCD: 6/4/2025 10:09:49 AM

Released to Imaging: 6/17/2025 9:46:51 AM

Login Sample Receipt Checklist

Client: Chesapeake Energy Corporation

Job Number: 180-183776-1
SDG Number: Property ID: 891077

Login Number: 183776
List Number: 1
Creator: Hayes, Ken

List Source: Eurofins Pittsburgh

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.		
The cooler's custody seal, if present, is intact.		
Sample custody seals, if present, are intact.		
The cooler or samples do not appear to have been compromised or tampered with.		
Samples were received on ice.		
Cooler Temperature is acceptable.		
Cooler Temperature is recorded.		
COC is present.		
COC is filled out in ink and legible.		
COC is filled out with all pertinent information.		
Is the Field Sampler's name present on COC?		
There are no discrepancies between the containers received and the COC.		
Samples are received within Holding Time (excluding tests with immediate HTs)		
Sample containers have legible labels.		
Containers are not broken or leaking.		
Sample collection date/times are provided.		
Appropriate sample containers are used.		
Sample bottles are completely filled.		
Sample Preservation Verified.		
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs		
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").		
Multiphasic samples are not present.		
Samples do not require splitting or compositing.		
Residual Chlorine Checked.		

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ANALYTICAL REPORT

PREPARED FOR

Attn: Dana Drury
Chesapeake Energy Corporation
PO BOX 548806
Oklahoma City, Oklahoma 73154

Generated 4/3/2025 5:28:13 PM

JOB DESCRIPTION

Equus - Chesapeake
Property ID: 891077

JOB NUMBER

180-188321-1

Eurofins Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh PA 15238

See page two for job notes and contact information.

Released to Imaging: 6/17/2025 9:46:51 AM

my EOL

Eurofins Pittsburgh

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

PA Lab ID: 02-00416

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Pittsburgh Project Manager.

Authorization

Generated
4/3/2025 5:28:13 PM

Authorized for release by
Ken Hayes, Project Manager II
Ken.Hayes@et.eurofinsus.com
(615)301-5035

Client: Chesapeake Energy Corporation
Project/Site: Equus - Chesapeake

Laboratory Job ID: 180-188321-1
SDG: Property ID: 891077

Table of Contents

Case Narrative

Client: Chesapeake Energy Corporation Job ID: 180-188321-1
Project: Equus - Chesapeake

Job ID: 180-188321-1 Eurofins Pittsburgh

Job Narrative
180-188321-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The sample was received on 3/27/2025 8:00 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice.

Subcontract Work
Method TO 15: This method was subcontracted to Eurofins Air Toxics, Inc. The subcontract laboratory certification is different from that of the facility issuing the final report. The subcontract report is appended in its entirety.

Definitions/Glossary

Client: Chesapeake Energy Corporation Job ID: 180-188321-1
Project/Site: Equus - Chesapeake SDG: Property ID: 891077

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Sample Summary

Client: Chesapeake Energy Corporation
Project/Site: Equus - Chesapeake

Job ID: 180-188321-1
SDG: Property ID: 891077

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-188321-1	20250320M-1	Air	03/20/25 12:20	03/27/25 08:00

Method Summary

Client: Chesapeake Energy Corporation
Project/Site: Equus - Chesapeake

Job ID: 180-188321-1
SDG: Property ID: 891077

Method	Method Description	Protocol	Laboratory
TO-15	TO-15	EPA	Eurofins

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

Eurofins = Eurofins Air Toxics, 180 Blue Ravine Road, Suite B, Folsom, CA 95630

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Analytical Report

4/3/2025
Mr. Ken Hayes
Eurofins Environment Testing
301 Alpha Dr.

Pittsburgh PA 15238

Project Name: CHK STATE M
Project #:
Workorder #: 2503633

Dear Mr. Ken Hayes

The following report includes the data for the above referenced project for sample(s) received on 3/21/2025 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Jade White at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Jade White

Project Manager

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WORK ORDER #: 2503633

Work Order Summary

CLIENT:	Mr. Ken Hayes Eurofins Environment Testing 301 Alpha Dr. Pittsburgh, PA 15238	**BILL TO:**	Mr. Ken Hayes Eurofins Environment Testing 301 Alpha Dr. Pittsburgh, PA 15238
PHONE:		**P.O. #**	180-188321-1
FAX:		**PROJECT #**	CHK STATE M
DATE RECEIVED:	03/21/2025	**CONTACT:**	Jade White
DATE COMPLETED:	04/03/2025		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	20250320M-1	TO-15	9.8 "Hg	1.9 psi
02A	Lab Blank	TO-15	NA	NA
03A	CCV	TO-15	NA	NA
04A	LCS	TO-15	NA	NA
04AA	LCSD	TO-15	NA	NA

CERTIFIED BY:  DATE: 04/03/25

Technical Director

Cert. No.: AZ Licensure-AZ0775, FL NELAP-E87680, LA NELAP–02089, MN NELAP-2836569, NH NELAP–209224-A, NJ NELAP-CA016, NY NELAP-11291, TX NELAP-T104704434, UT NELAP-CA009332023-16, VA NELAP-13180, WA NELAP-C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program) CA300005-21
Eurofins Environment Testing Northern California, LLC certifies that the test results contained in this report meet all requirements of the 2016 TNI Standard.

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, LLC.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000

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LABORATORY NARRATIVE
EPA Method TO-15
Eurofins Environment Testing
Workorder# 2503633

One 6 Liter Summa Canister sample was received on March 21, 2025. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

A single point calibration for TVOC (Total Volatile Organic Compounds) referenced to Hexane was performed for each daily analytical batch. Recovery is reported as 100% in the associated results for each CCV.

TVOC (Total Volatile Organic Compounds) referenced to Hexane includes area counts for peaks that elute from Hexane minus 0.08 minutes to Naphthalene plus 0.08 minutes and quantitating the area based on the response factor of Hexane.

The presence of a closely eluting non-target peak in sample 20250320M-1 is interfering with the quantitation mass ion for 4-Ethyltoluene. The reported 4-Ethyltoluene concentration is flagged with a "CN" flag to indicate a high bias due to matrix contribution.

Definition of Data Qualifying Flags

Ten qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

M - Reported value may be biased due to apparent matrix interferences.

CN - See Case Narrative.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: 20250320M-1

Lab ID#: 2503633-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.84	1.2	2.7	3.8
4-Ethyltoluene	0.84	1.1 CN	4.1	5.6 CN
1,3,5-Trimethylbenzene	0.84	1.3	4.1	6.5
m,p-Xylene	1.7	3.4	7.3	15
TVOC Ref. to Hexane	17	3000	59	10000

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Client Sample ID: 20250320M-1

Lab ID#: 2503633-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17033132**	**Date of Collection:**	**3/20/25 12:20:00 PM**
Dil. Factor:	**1.68**	**Date of Analysis:**	**4/1/25 04:31 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Acetone	8.4	Not Detected	20	Not Detected
Benzene	0.84	1.2	2.7	3.8
alpha-Chlorotoluene	0.84	Not Detected	4.3	Not Detected
Bromodichloromethane	0.84	Not Detected	5.6	Not Detected
Bromoform	0.84	Not Detected	8.7	Not Detected
Bromomethane	8.4	Not Detected	33	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.4	Not Detected	9.9	Not Detected
Carbon Disulfide	3.4	Not Detected	10	Not Detected
Carbon Tetrachloride	0.84	Not Detected	5.3	Not Detected
Chlorobenzene	0.84	Not Detected	3.9	Not Detected
Dibromochloromethane	0.84	Not Detected	7.2	Not Detected
Chloroethane	3.4	Not Detected	8.9	Not Detected
Chloroform	0.84	Not Detected	4.1	Not Detected
Chloromethane	8.4	Not Detected	17	Not Detected
1,2-Dibromoethane (EDB)	0.84	Not Detected	6.4	Not Detected
1,2-Dichlorobenzene	0.84	Not Detected	5.0	Not Detected
1,3-Dichlorobenzene	0.84	Not Detected	5.0	Not Detected
1,4-Dichlorobenzene	0.84	Not Detected	5.0	Not Detected
1,1-Dichloroethane	0.84	Not Detected	3.4	Not Detected
Freon 12	0.84	Not Detected	4.2	Not Detected
1,2-Dichloroethane	0.84	Not Detected	3.4	Not Detected
1,1-Dichloroethene	0.84	Not Detected	3.3	Not Detected
cis-1,2-Dichloroethene	0.84	Not Detected	3.3	Not Detected
trans-1,2-Dichloroethene	0.84	Not Detected	3.3	Not Detected
1,2-Dichloropropane	0.84	Not Detected	3.9	Not Detected
cis-1,3-Dichloropropene	0.84	Not Detected	3.8	Not Detected
trans-1,3-Dichloropropene	0.84	Not Detected	3.8	Not Detected
Freon 114	0.84	Not Detected	5.9	Not Detected
Ethyl Benzene	0.84	Not Detected	3.6	Not Detected
4-Ethyltoluene	0.84	1.1 CN	4.1	5.6 CN
Hexachlorobutadiene	3.4	Not Detected	36	Not Detected
2-Hexanone	3.4	Not Detected	14	Not Detected
Methylene Chloride	8.4	Not Detected	29	Not Detected
4-Methyl-2-pentanone	0.84	Not Detected	3.4	Not Detected
Styrene	0.84	Not Detected	3.6	Not Detected
1,1,2,2-Tetrachloroethane	0.84	Not Detected	5.8	Not Detected
Tetrachloroethene	0.84	Not Detected	5.7	Not Detected
Toluene	1.7	Not Detected	6.3	Not Detected
1,2,4-Trichlorobenzene	3.4	Not Detected	25	Not Detected
1,1,1-Trichloroethane	0.84	Not Detected	4.6	Not Detected
1,1,2-Trichloroethane	0.84	Not Detected	4.6	Not Detected
Trichloroethene	0.84	Not Detected	4.5	Not Detected

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Client Sample ID: 20250320M-1

Lab ID#: 2503633-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17033132**	**Date of Collection:**	**3/20/25 12:20:00 PM**
Dil. Factor:	**1.68**	**Date of Analysis:**	**4/1/25 04:31 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.84	Not Detected	4.7	Not Detected
Freon 113	0.84	Not Detected	6.4	Not Detected
1,2,4-Trimethylbenzene	0.84	Not Detected	4.1	Not Detected
1,3,5-Trimethylbenzene	0.84	1.3	4.1	6.5
Vinyl Acetate	3.4	Not Detected	12	Not Detected
Vinyl Chloride	0.84	Not Detected	2.1	Not Detected
m,p-Xylene	1.7	3.4	7.3	15
o-Xylene	0.84	Not Detected	3.6	Not Detected
TVOC Ref. to Hexane	17	3000	59	10000

CN =See Case Narrative explanation

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	107	70-130
1,2-Dichloroethane-d4	107	70-130
4-Bromofluorobenzene	90	70-130

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Client Sample ID: Lab Blank

Lab ID#: 2503633-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17033109e**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/31/25 03:14 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Acetone	5.0	Not Detected	12	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Bromomethane	5.0	Not Detected	19	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected	5.9	Not Detected
Carbon Disulfide	2.0	Not Detected	6.2	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
Chloromethane	5.0	Not Detected	10	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Freon 12	0.50	Not Detected	2.5	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
Toluene	1.0	Not Detected	3.8	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected

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Client Sample ID: Lab Blank

Lab ID#: 2503633-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17033109e**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/31/25 03:14 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.50	Not Detected	2.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
Vinyl Acetate	2.0	Not Detected	7.0	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
m,p-Xylene	1.0	Not Detected	4.3	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
TVOC Ref. to Hexane	10	Not Detected	35	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	104	70-130
1,2-Dichloroethane-d4	102	70-130
4-Bromofluorobenzene	90	70-130

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Client Sample ID: CCV

Lab ID#: 2503633-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17033106**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/31/25 01:51 PM**	

Compound	%Recovery
Acetone	98
Benzene	111
alpha-Chlorotoluene	102
Bromodichloromethane	107
Bromoform	94
Bromomethane	111
2-Butanone (Methyl Ethyl Ketone)	111
Carbon Disulfide	106
Carbon Tetrachloride	98
Chlorobenzene	100
Dibromochloromethane	97
Chloroethane	118
Chloroform	108
Chloromethane	123
1,2-Dibromoethane (EDB)	103
1,2-Dichlorobenzene	94
1,3-Dichlorobenzene	95
1,4-Dichlorobenzene	94
1,1-Dichloroethane	113
Freon 12	108
1,2-Dichloroethane	104
1,1-Dichloroethene	102
cis-1,2-Dichloroethene	103
trans-1,2-Dichloroethene	99
1,2-Dichloropropane	116
cis-1,3-Dichloropropene	107
trans-1,3-Dichloropropene	104
Freon 114	100
Ethyl Benzene	97
4-Ethyltoluene	97
Hexachlorobutadiene	88
2-Hexanone	115
Methylene Chloride	116
4-Methyl-2-pentanone	106
Styrene	101
1,1,2,2-Tetrachloroethane	111
Tetrachloroethene	93
Toluene	106
1,2,4-Trichlorobenzene	106
1,1,1-Trichloroethane	102
1,1,2-Trichloroethane	105
Trichloroethene	106

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Client Sample ID: CCV

Lab ID#: 2503633-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17033106**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/31/25 01:51 PM**	

Compound	%Recovery
Freon 11	102
Freon 113	98
1,2,4-Trimethylbenzene	94
1,3,5-Trimethylbenzene	91
Vinyl Acetate	98
Vinyl Chloride	114
m,p-Xylene	99
o-Xylene	98
TVOC Ref. to Hexane	100

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	104	70-130
1,2-Dichloroethane-d4	102	70-130
4-Bromofluorobenzene	94	70-130

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Client Sample ID: LCS

Lab ID#: 2503633-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17033107**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/31/25 02:18 PM**	

Compound	%Recovery	Method Limits
Acetone	95	70-130
Benzene	96	70-130
alpha-Chlorotoluene	100	70-130
Bromodichloromethane	106	70-130
Bromoform	94	70-130
Bromomethane	113	70-130
2-Butanone (Methyl Ethyl Ketone)	108	70-130
Carbon Disulfide	104	70-130
Carbon Tetrachloride	98	70-130
Chlorobenzene	101	70-130
Dibromochloromethane	98	70-130
Chloroethane	120	70-130
Chloroform	106	70-130
Chloromethane	120	70-130
1,2-Dibromoethane (EDB)	103	70-130
1,2-Dichlorobenzene	95	70-130
1,3-Dichlorobenzene	98	70-130
1,4-Dichlorobenzene	98	70-130
1,1-Dichloroethane	112	70-130
Freon 12	109	70-130
1,2-Dichloroethane	89	70-130
1,1-Dichloroethene	99	70-130
cis-1,2-Dichloroethene	102	70-130
trans-1,2-Dichloroethene	101	70-130
1,2-Dichloropropane	99	70-130
cis-1,3-Dichloropropene	95	70-130
trans-1,3-Dichloropropene	107	70-130
Freon 114	100	70-130
Ethyl Benzene	102	70-130
4-Ethyltoluene	96	70-130
Hexachlorobutadiene	94	70-130
2-Hexanone	122	70-130
Methylene Chloride	116	70-130
4-Methyl-2-pentanone	100	70-130
Styrene	102	70-130
1,1,2,2-Tetrachloroethane	111	70-130
Tetrachloroethene	94	70-130
Toluene	91	70-130
1,2,4-Trichlorobenzene	105	70-130
1,1,1-Trichloroethane	101	70-130
1,1,2-Trichloroethane	107	70-130
Trichloroethene	90	70-130

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Client Sample ID: LCS

Lab ID#: 2503633-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17033107**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/31/25 02:18 PM**	

Compound	%Recovery	Method Limits
Freon 11	103	70-130
Freon 113	97	70-130
1,2,4-Trimethylbenzene	96	70-130
1,3,5-Trimethylbenzene	95	70-130
Vinyl Acetate	115	70-130
Vinyl Chloride	115	70-130
m,p-Xylene	102	70-130
o-Xylene	99	70-130
TVOC Ref. to Hexane	Not Spiked	

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	89	70-130
1,2-Dichloroethane-d4	100	70-130
4-Bromofluorobenzene	92	70-130

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Client Sample ID: LCSD

Lab ID#: 2503633-04AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17033108**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/31/25 02:45 PM**	

Compound	%Recovery	Method Limits
Acetone	95	70-130
Benzene	112	70-130
alpha-Chlorotoluene	101	70-130
Bromodichloromethane	105	70-130
Bromoform	94	70-130
Bromomethane	113	70-130
2-Butanone (Methyl Ethyl Ketone)	111	70-130
Carbon Disulfide	104	70-130
Carbon Tetrachloride	96	70-130
Chlorobenzene	102	70-130
Dibromochloromethane	97	70-130
Chloroethane	121	70-130
Chloroform	102	70-130
Chloromethane	119	70-130
1,2-Dibromoethane (EDB)	104	70-130
1,2-Dichlorobenzene	95	70-130
1,3-Dichlorobenzene	97	70-130
1,4-Dichlorobenzene	97	70-130
1,1-Dichloroethane	109	70-130
Freon 12	112	70-130
1,2-Dichloroethane	103	70-130
1,1-Dichloroethene	98	70-130
cis-1,2-Dichloroethene	100	70-130
trans-1,2-Dichloroethene	98	70-130
1,2-Dichloropropane	115	70-130
cis-1,3-Dichloropropene	110	70-130
trans-1,3-Dichloropropene	107	70-130
Freon 114	99	70-130
Ethyl Benzene	101	70-130
4-Ethyltoluene	97	70-130
Hexachlorobutadiene	104	70-130
2-Hexanone	121	70-130
Methylene Chloride	113	70-130
4-Methyl-2-pentanone	116	70-130
Styrene	102	70-130
1,1,2,2-Tetrachloroethane	111	70-130
Tetrachloroethene	93	70-130
Toluene	105	70-130
1,2,4-Trichlorobenzene	118	70-130
1,1,1-Trichloroethane	101	70-130
1,1,2-Trichloroethane	106	70-130
Trichloroethene	106	70-130

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Client Sample ID: LCSD

Lab ID#: 2503633-04AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17033108**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/31/25 02:45 PM**	

Compound	%Recovery	Method Limits
Freon 11	103	70-130
Freon 113	95	70-130
1,2,4-Trimethylbenzene	98	70-130
1,3,5-Trimethylbenzene	94	70-130
Vinyl Acetate	113	70-130
Vinyl Chloride	111	70-130
m,p-Xylene	101	70-130
o-Xylene	99	70-130
TVOC Ref. to Hexane	Not Spiked	

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	104	70-130
1,2-Dichloroethane-d4	100	70-130
4-Bromofluorobenzene	94	70-130

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Method : TO-15 (Sp)-Eurofins TA (CEC, OK)

CAS Number	Compound	Rpt. Limit (ppbv)
67-64-1	Acetone	5.0
71-43-2	Benzene	0.50
100-44-7	alpha-Chlorotoluene	0.50
75-27-4	Bromodichloromethane	0.50
75-25-2	Bromoform	0.50
74-83-9	Bromomethane	5.0
78-93-3	2-Butanone (Methyl Ethyl Ketone)	2.0
75-15-0	Carbon Disulfide	2.0
56-23-5	Carbon Tetrachloride	0.50
108-90-7	Chlorobenzene	0.50
124-48-1	Dibromochloromethane	0.50
75-00-3	Chloroethane	2.0
67-66-3	Chloroform	0.50
74-87-3	Chloromethane	5.0
106-93-4	1,2-Dibromoethane (EDB)	0.50
95-50-1	1,2-Dichlorobenzene	0.50
541-73-1	1,3-Dichlorobenzene	0.50
106-46-7	1,4-Dichlorobenzene	0.50
75-34-3	1,1-Dichloroethane	0.50
75-71-8	Freon 12	0.50
107-06-2	1,2-Dichloroethane	0.50
75-35-4	1,1-Dichloroethene	0.50
156-59-2	cis-1,2-Dichloroethene	0.50
156-60-5	trans-1,2-Dichloroethene	0.50
78-87-5	1,2-Dichloropropane	0.50
10061-01-5	cis-1,3-Dichloropropene	0.50
10061-02-6	trans-1,3-Dichloropropene	0.50
76-14-2	Freon 114	0.50
100-41-4	Ethyl Benzene	0.50
622-96-8	4-Ethyltoluene	0.50
87-68-3	Hexachlorobutadiene	2.0
591-78-6	2-Hexanone	2.0
75-09-2	Methylene Chloride	5.0
108-10-1	4-Methyl-2-pentanone	0.50
100-42-5	Styrene	0.50
79-34-5	1,1,2,2-Tetrachloroethane	0.50
127-18-4	Tetrachloroethene	0.50
108-88-3	Toluene	1.0
120-82-1	1,2,4-Trichlorobenzene	2.0
71-55-6	1,1,1-Trichloroethane	0.50
79-00-5	1,1,2-Trichloroethane	0.50
79-01-6	Trichloroethene	0.50
75-69-4	Freon 11	0.50
76-13-1	Freon 113	0.50

eurofins | Air Toxics

Method : TO-15 (Sp)-Eurofins TA (CEC, OK)

CAS Number	Compound	Rpt. Limit (ppbv)
95-63-6	1,2,4-Trimethylbenzene	0.50
108-67-8	1,3,5-Trimethylbenzene	0.50
108-05-4	Vinyl Acetate	2.0
75-01-4	Vinyl Chloride	0.50
108-38-3	m,p-Xylene	1.0
95-47-6	o-Xylene	0.50
9999-9999-500	**TVOC Ref. to Hexane**	**10**

	Surrogate	Method Limits
2037-26-5	Toluene-d8	70-130
17060-07-0	1,2-Dichloroethane-d4	70-130
460-00-4	4-Bromofluorobenzene	70-130

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CHAIN OF CUSTODY RECORD

2503633 No. 2831

EQUUS Environmental, LLC (918) 921-5331

PROJECT NUMBER: CHKSTATM
PROJECT NAME: CHKSTATEM
COC 1 of 1
SHIPPED TO: AIR TOXICS
PROJECT MANAGER: MATT MUGAVERO
TAT: STANDARD

SAMPLER'S PRINTED NAME: Eric Farrar
SAMPLERS SIGNATURE:

PO# WO#

*C6-C12

	Date	Time	Sample ID	Sample Matrix	# of Sample Containers	TO-15	TOTAL VOCs as HEXANE *
01A	3-20-2025	12:20	20250320 M-1	air	1	X	X

REMARKS: TAG # N1676

TOTAL NUMBER OF CONTAINERS: 1

RELINQUISHED BY: DATE 3-20-2025 TIME 15:00
RELINQUISHED BY: DATE TIME
METHOD OF SHIPMENT: FEDEX
RECEIVED IN LABORATORY BY: DATE TIME
LABORATORY CONTACT: KEN 615-301-5035

RECEIVED BY: BTS FATL DATE 3/21/25 TIME 1007
RECEIVED BY: DATE TIME
AIRBILL NUMBER: 4264 5027 4302
Send PDF, EDD, and INVOICE (if applicable) to: QAQC@EquusEnv.com
LABORATORY ADDRESS: 180 BLUE RAVINE RD. STE B FOLSOM, CA 95630

INITIAL °C. CF: FINAL °C:
PROBE: TIME STORED: NA BTS Stock
CUSTODY SEAL? YES NO NONE
CARRIER: Fedex

White: Receiving Lab Yellow: Equus Environmental Project File Pink: Equus QA/QC

Received by OCD: 6/4/2025 10:09:49 AM
Released to Imaging: 6/17/2025 9:46:51 AM
4/3/2025

eurofins | Air Toxics

Eurofins Air Toxics Sample Receipt Confirmation Cover Page

Thank you for choosing Eurofins Air Toxics (EATL). We have received your samples and have listed any Sample Receipt Descrepancies below.

In order to expedite analysis and reporting, please review the attached information for accuracy.

For corrections call: **Air Toxics, Ltd. at 916-985-1000**

EATL will proceed with the analysis as specified on the Chain of Custody (COC) and Sample Receipt Summary page.

Please note : The Sample Receipt Confirmation, including the total workorder charge, is subject to change upon secondary review. Our aim is to provide a confirmation to you in a timely manner. Sample Receipt Discrepancies, if any, may not include discrepancies regarding sample receipt pressure(s). Additionally, the COC will be provided with the final report.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

(916) 985-1000 .FAX (916) 985-1020
Hours 6:30 A.M to 5:30 P.M. PST

eurofins | Air Toxics

SAMPLE RECEIPT SUMMARY

WORKORDER 2503633

Client

Mr. Ken Hayes
Eurofins Environment Testing
301 Alpha Dr.
Pittsburgh, PA 15238

Phone

Fax

Date Promised: 04/03/25
Date Completed:
Date Received: 3/21/25
PO#:
Project#: CHK STATE M

Sales Rep: TA

Total $: $ 155.00
Logged By: KCB

Fraction	Sample #	Analysis	Collected	Amount$
01A	20250320M-1	TO-15	3/20/2025	$120.00

Misc. Charges	6 Liter Summa Canister (1) @ $30.00 each., Shipment 168820	$30.00
	Fitting w/ Pink Ferrule (1) @ $5.00 each.	$5.00

Note: Samples received after 3 P.M. PST are considered to be received on the following work day.
Atlas Project Name/Profile#: CHK State M-1/23738

BILL TO: Mr. Ken Hayes
Eurofins Environment Testing
301 Alpha Dr.
Pittsburgh, PA 15238

Analysis Code: TO-14A

TERMS:

Reporting Method: TO-15 (Sp)-Eurofins TA (CEC, OK)

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

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CHAIN OF CUSTODY RECORD

2503633

No. 2831

EQUUS Environmental, LLC (918) 921-5331

PROJECT NUMBER:	CHKSTATM
PROJECT NAME:	CHKSTATEM
COC	1 of 1
SHIPPED TO:	AIR TOXICS
PROJECT MANAGER:	MATT MUGAVERO
TAT:	STANDARD
SAMPLER'S PRINTED NAME:	Eric Farrar
SAMPLERS SIGNATURE:	
PO#	
WO#	

	Date	Time	Sample ID	Sample Matrix	# of Sample Containers	TO-15	TOTAL VOCs as HEXANE *
01A	3-20-2025	12:20	20250320 M-1	air	1	X	X

*C6-C12

REMARKS

TAG # N1676

TOTAL NUMBER OF CONTAINERS: 1

RELINQUISHED BY: DATE 3-20-2025 TIME 15:00

RECEIVED BY: BTS FATL DATE 3/21/25 TIME 1007

RELINQUISHED BY: DATE TIME

RECEIVED BY: DATE TIME

METHOD OF SHIPMENT: FEDEX

AIRBILL NUMBER: 4264 5027 4302

RECEIVED IN LABORATORY BY: DATE TIME

Send PDF, EDD, and INVOICE (if applicable) to: QAQC@EquusEnv.com

LABORATORY CONTACT: KEN 615-301-5035

LABORATORY ADDRESS: 180 BLUE RAVINE RD. STE B FOLSOM, CA 95630

INITIAL °C. ___ CF. ___ FINAL °C. ___

PROBE: ___ TIME STORED: ___ BTS SLAB

CUSTODY SEAL? YES NO NONE

CARRIER: Fedex

White: Receiving Lab Yellow: Equus Environmental Project File Pink: Equus QA/QC

4/3/2025

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Received by OCD: 6/4/2025 10:09:49 AM

Released to Imaging: 6/17/2025 9:46:51 AM

eurofins | Air Toxics

Method : TO-15 (Sp)-Eurofins TA (CEC, OK)

CAS Number	Compound	Rpt. Limit (ppbv)
67-64-1	Acetone	5.0
71-43-2	Benzene	0.50
100-44-7	alpha-Chlorotoluene	0.50
75-27-4	Bromodichloromethane	0.50
75-25-2	Bromoform	0.50
74-83-9	Bromomethane	5.0
78-93-3	2-Butanone (Methyl Ethyl Ketone)	2.0
75-15-0	Carbon Disulfide	2.0
56-23-5	Carbon Tetrachloride	0.50
108-90-7	Chlorobenzene	0.50
124-48-1	Dibromochloromethane	0.50
75-00-3	Chloroethane	2.0
67-66-3	Chloroform	0.50
74-87-3	Chloromethane	5.0
106-93-4	1,2-Dibromoethane (EDB)	0.50
95-50-1	1,2-Dichlorobenzene	0.50
541-73-1	1,3-Dichlorobenzene	0.50
106-46-7	1,4-Dichlorobenzene	0.50
75-34-3	1,1-Dichloroethane	0.50
75-71-8	Freon 12	0.50
107-06-2	1,2-Dichloroethane	0.50
75-35-4	1,1-Dichloroethene	0.50
156-59-2	cis-1,2-Dichloroethene	0.50
156-60-5	trans-1,2-Dichloroethene	0.50
78-87-5	1,2-Dichloropropane	0.50
10061-01-5	cis-1,3-Dichloropropene	0.50
10061-02-6	trans-1,3-Dichloropropene	0.50
76-14-2	Freon 114	0.50
100-41-4	Ethyl Benzene	0.50
622-96-8	4-Ethyltoluene	0.50
87-68-3	Hexachlorobutadiene	2.0
591-78-6	2-Hexanone	2.0
75-09-2	Methylene Chloride	5.0
108-10-1	4-Methyl-2-pentanone	0.50
100-42-5	Styrene	0.50
79-34-5	1,1,2,2-Tetrachloroethane	0.50
127-18-4	Tetrachloroethene	0.50
108-88-3	Toluene	1.0
120-82-1	1,2,4-Trichlorobenzene	2.0
71-55-6	1,1,1-Trichloroethane	0.50

eurofins | Air Toxics

Method : TO-15 (Sp)-Eurofins TA (CEC, OK)

CAS Number	Compound	Rpt. Limit (ppbv)
79-00-5	1,1,2-Trichloroethane	0.50
79-01-6	Trichloroethene	0.50
75-69-4	Freon 11	0.50
76-13-1	Freon 113	0.50
95-63-6	1,2,4-Trimethylbenzene	0.50
108-67-8	1,3,5-Trimethylbenzene	0.50
108-05-4	Vinyl Acetate	2.0
75-01-4	Vinyl Chloride	0.50
108-38-3	m,p-Xylene	1.0
95-47-6	o-Xylene	0.50
9999-9999-500	TVOC Ref. to Hexane	10

CAS Number	Surrogate	Method Limits
2037-26-5	Toluene-d8	70-130
17060-07-0	1,2-Dichloroethane-d4	70-130
460-00-4	4-Bromofluorobenzene	70-130

Login Sample Receipt Checklist

Client: Chesapeake Energy Corporation

Job Number: 180-188321-1
SDG Number: Property ID: 891077

Login Number: 188321
List Number: 1
Creator: Hayes, Ken

List Source: Eurofins Pittsburgh

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	N/A	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	N/A	
Cooler Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	N/A	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	N/A	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Dana Drury
Chesapeake Energy Corporation
PO BOX 548806
Oklahoma City, Oklahoma 73154

Generated 6/27/2024 11:55:18 AM

JOB DESCRIPTION

CHK State M

JOB NUMBER

180-175999-1

Eurofins Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh PA 15238

See page two for job notes and contact information.

Released to Imaging: 6/17/2025 9:46:51 AM

my EOL

Eurofins Pittsburgh

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

PA Lab ID: 02-00416

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Pittsburgh Project Manager.

Authorization

Generated
6/27/2024 11:55:18 AM

Authorized for release by
Ken Hayes, Project Manager II
Ken.Hayes@et.eurofinsus.com
(615)301-5035

Client: Chesapeake Energy Corporation
Project/Site: CHK State M

Laboratory Job ID: 180-175999-1

Table of Contents

Case Narrative

Client: Chesapeake Energy Corporation Job ID: 180-175999-1
Project: CHK State M

Job ID: 180-175999-1 Eurofins Pittsburgh

Job Narrative
180-175999-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 6/19/2024 9:49 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice.

HPLC/IC
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Definitions/Glossary

Client: Chesapeake Energy Corporation Job ID: 180-175999-1
Project/Site: CHK State M

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Accreditation/Certification Summary

Client: Chesapeake Energy Corporation Job ID: 180-175999-1
Project/Site: CHK State M

Laboratory: Eurofins Edison

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Connecticut	State	PH-0818	09-30-24
DE Haz. Subst. Cleanup Act (HSCA)	State	N/A	01-02-25
Georgia	State	12028 (NJ)	06-30-24
Massachusetts	State	M-NJ312	06-30-24
New Jersey	NELAP	12028	06-30-24
New York	NELAP	11452	04-01-25
Pennsylvania	NELAP	68-00522	02-28-25
Rhode Island	State	LAO00376	12-31-24
USDA	US Federal Programs	525-24-149-77606	05-21-27

Sample Summary

Client: Chesapeake Energy Corporation
Project/Site: CHK State M

Job ID: 180-175999-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-175999-1	MW-4	Water	06/18/24 09:30	06/19/24 09:49
180-175999-2	Dup	Water	06/18/24 00:00	06/19/24 09:49
180-175999-3	Eq Blank	Water	06/18/24 07:00	06/19/24 09:49

Method Summary

Client: Chesapeake Energy Corporation
Project/Site: CHK State M

Job ID: 180-175999-1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	EPA	EET EDI

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

EET EDI = Eurofins Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

Lab Chronicle

Client: Chesapeake Energy Corporation Job ID: 180-175999-1
Project/Site: CHK State M

Client Sample ID: MW-4 Lab Sample ID: 180-175999-1
Date Collected: 06/18/24 09:30 **Matrix: Water**
Date Received: 06/19/24 09:49

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		10	10 mL	10 mL	982215	06/26/24 14:30	OXG	EET EDI
	Instrument ID: IC 1									

Client Sample ID: Dup Lab Sample ID: 180-175999-2
Date Collected: 06/18/24 00:00 **Matrix: Water**
Date Received: 06/19/24 09:49

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		10	10 mL	10 mL	982215	06/26/24 14:45	OXG	EET EDI
	Instrument ID: IC 1									

Client Sample ID: Eq Blank Lab Sample ID: 180-175999-3
Date Collected: 06/18/24 07:00 **Matrix: Water**
Date Received: 06/19/24 09:49

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	10 mL	10 mL	982215	06/26/24 15:00	OXG	EET EDI
	Instrument ID: IC 1									

Laboratory References:
EET EDI = Eurofins Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

Analyst References:
Lab: EET EDI
Batch Type: Analysis
OXG = Olivia Guerrero

Client Sample Results

Client: Chesapeake Energy Corporation Job ID: 180-175999-1
Project/Site: CHK State M

Client Sample ID: MW-4 Lab Sample ID: 180-175999-1
Date Collected: 06/18/24 09:30 **Matrix: Water**
Date Received: 06/19/24 09:49

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	374		10.0		mg/L			06/26/24 14:30	10

Client Sample ID: Dup Lab Sample ID: 180-175999-2
Date Collected: 06/18/24 00:00 **Matrix: Water**
Date Received: 06/19/24 09:49

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	368		10.0		mg/L			06/26/24 14:45	10

Client Sample ID: Eq Blank Lab Sample ID: 180-175999-3
Date Collected: 06/18/24 07:00 **Matrix: Water**
Date Received: 06/19/24 09:49

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	12.0		1.00		mg/L			06/26/24 15:00	1

QC Sample Results

Client: Chesapeake Energy Corporation
Project/Site: CHK State M

Job ID: 180-175999-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 460-982215/3
Matrix: Water
Analysis Batch: 982215

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.00		mg/L			06/26/24 03:12	1

Lab Sample ID: LCS 460-982215/5
Matrix: Water
Analysis Batch: 982215

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			3.20	2.925		mg/L		91	90 - 110		

Lab Sample ID: LCSD 460-982215/6
Matrix: Water
Analysis Batch: 982215

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			3.20	2.894		mg/L		90	90 - 110	1	15

QC Association Summary

Client: Chesapeake Energy Corporation
Project/Site: CHK State M

Job ID: 180-175999-1

HPLC/IC

Analysis Batch: 982215

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-175999-1	MW-4	Total/NA	Water	300.0	
180-175999-2	Dup	Total/NA	Water	300.0	
180-175999-3	Eq Blank	Total/NA	Water	300.0	
MB 460-982215/3	Method Blank	Total/NA	Water	300.0	
LCS 460-982215/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 460-982215/6	Lab Control Sample Dup	Total/NA	Water	300.0	

Released to Imaging: 6/17/2025 9:46:51 AM
Received by OCD: 6/4/2025 10:09:49 AM

Eurofins Edison
777 New Durham Road
Edison, NJ 08817
Phone 732-549-3900 Fax 732-549-3679

Chain of Custody Record

370472 HARRISBURG PA

eurofins

Client Information	Sampler: Terry Fisher	Lab PM: Hayes, Ken	Carrier Tracking No(s):	COC No: 180-100413-18137 1
Client Contact: Julie Czech	Phone:	E-Mail: Ken Hayes@et.eurofinsus.com	State of Origin:	Page: Page 1 of 1 6/12/24
Company: Equus Environmental LLC	PWSID:			Job #: 306
Address: 1923 South 44th West Avenue	Due Date Requested:			Preservation Codes: A - HCL N - None 180-175999
City: Tulsa	TAT Requested (days): Standard			
State, Zip: OK, 74107	Compliance Project: Δ Yes Δ No			
Phone: 405-935-6870(Tel)	PO #: Cost Center 9001036000			
Email: julie czech@equusenv.com	WO #:			
Project Name: CHK State M	Project #: 18028372			
Site: State M	SSOW#:			

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260D_LL - (MOD) BTEX	300_ORGFM_28D - (MOD) Chloride	Total Number of containers	Special Instructions/Note:
Preservation Code:							A	N		
MW-4	6-18-24	930	G	Water	N			X		
Dup	6-18-24	—	G	Water	N			X		
Eq Blank	6-18-24	700	G	Water	N			X		
Temp Blank	—	—	G	Water	N					
				Water						

180-175999 Chain of Custody

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested I, II, III, IV, Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: Fedex 6772 2905 1790

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Terry Fisher	6-18-24 1600	Equus	Braden Fedex	6/19/24 9:49	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time	Company
Relinquished by:	Date/Time	Company	Received by:	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

IR-90-5c | 1.2c

Ver 04 02/2024

Released to Imaging: 6/17/2025 9:46:51 AM
Received by OCD: 6/4/2025 10:09:49 AM

Eurofins TestAmerica Edison
Receipt Temperature and pH Log

Job Number: 180-175999

Number of Coolers: 1

IR Gun # 9

Cooler Temperatures

	RAW	CORRECTED		RAW	CORRECTED		RAW	CORRECTED
Cooler #1:	0.6 °C	1.2 °C	Cooler #4:	°C	°C	Cooler #7:	°C	°C
Cooler #2:	°C	°C	Cooler #5:	°C	°C	Cooler #8:	°C	°C
Cooler #3:	°C	°C	Cooler #6:	°C	°C	Cooler #9:	°C	°C

TALS Sample Number	Ammonia (pH<2)	COD (pH<2)	Nitrate Nitrite (pH<2)	Metals* (pH<2)	Hardness (pH<2)	Pest (pH 5-9)	EPH or QAM (pH<2)	Phenols (pH<2)	Sulfide (pH>9)	TKN (pH<2)	TOC (pH<2)	Total Cyanide (pH>12)	Total Phos (pH<2)	Other	Other

If pH adjustments are required record the information below:

Sample No(s). adjusted: _____

Preservative Name/Conc.: _____ Volume of Preservative used (ml): _____

Lot # of Preservative(s): _____ Expiration Date: _____

The appropriate Project Manager and Department Manager should be notified about the samples which were pH adjusted.

** Samples for Metal analysis which are out of compliance must be acidified at least 24 hours prior to analysis.*

Initials: BP Date: 6/19/24

Login Sample Receipt Checklist

Client: Chesapeake Energy Corporation Job Number: 180-175999-1

Login Number: 175999 **List Source: Eurofins Pittsburgh**
List Number: 1
Creator: Rivera, Kenneth

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.		
The cooler's custody seal, if present, is intact.		
Sample custody seals, if present, are intact.		
The cooler or samples do not appear to have been compromised or tampered with.		
Samples were received on ice.		
Cooler Temperature is acceptable.		
Cooler Temperature is recorded.		
COC is present.		
COC is filled out in ink and legible.		
COC is filled out with all pertinent information.		
Is the Field Sampler's name present on COC?		
There are no discrepancies between the containers received and the COC.		
Samples are received within Holding Time (excluding tests with immediate HTs)		
Sample containers have legible labels.		
Containers are not broken or leaking.		
Sample collection date/times are provided.		
Appropriate sample containers are used.		
Sample bottles are completely filled.		
Sample Preservation Verified.		
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs		
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").		
Multiphasic samples are not present.		
Samples do not require splitting or compositing.		
Residual Chlorine Checked.		

Login Sample Receipt Checklist

Client: Chesapeake Energy Corporation Job Number: 180-175999-1

Login Number: 175999
List Number: 2
Creator: Rivera, Kenneth

List Source: Eurofins Edison
List Creation: 06/22/24 10:32 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.2°C, IR #9
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Dana Drury
Chesapeake Energy Corporation
PO BOX 548806
Oklahoma City, Oklahoma 73154

Generated 12/4/2024 1:28:58 PM

JOB DESCRIPTION

CHK State M

JOB NUMBER

180-183252-1

Eurofins Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh PA 15238

See page two for job notes and contact information.

Released to Imaging: 6/17/2025 9:46:51 AM

my EOL

Eurofins Pittsburgh

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

PA Lab ID: 02-00416

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Pittsburgh Project Manager.

Authorization

Generated
12/4/2024 1:28:58 PM

Authorized for release by
Ken Hayes, Project Manager II
Ken.Hayes@et.eurofinsus.com
(615)301-5035

Client: Chesapeake Energy Corporation
Project/Site: CHK State M

Laboratory Job ID: 180-183252-1

Table of Contents

Case Narrative

Client: Chesapeake Energy Corporation Job ID: 180-183252-1
Project: CHK State M

Job ID: 180-183252-1 Eurofins Pittsburgh

Job Narrative
180-183252-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 11/22/2024 9:30 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.1°C.

HPLC/IC
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Definitions/Glossary

Client: Chesapeake Energy Corporation Job ID: 180-183252-1
Project/Site: CHK State M

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Accreditation/Certification Summary

Client: Chesapeake Energy Corporation Job ID: 180-183252-1
Project/Site: CHK State M

Laboratory: Eurofins Edison

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Connecticut	State	PH-0818	09-30-26
DE Haz. Subst. Cleanup Act (HSCA)	State	N/A	01-02-25
Georgia	State	12028 (NJ)	07-01-25
Massachusetts	State	M-NJ312	07-01-25
New Jersey	NELAP	12028	06-30-25
New York	NELAP	11452	04-01-25
Pennsylvania	NELAP	68-00522	02-28-25
Rhode Island	State	LAO00376	12-31-24
USDA	US Federal Programs	525-24-149-77606	05-21-27

Sample Summary

Client: Chesapeake Energy Corporation
Project/Site: CHK State M

Job ID: 180-183252-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-183252-1	MW-4	Water	11/21/24 11:15	11/22/24 09:30
180-183252-2	DUP	Water	11/21/24 11:15	11/22/24 09:30
180-183252-3	EQUIPMENT BLANK	Water	11/21/24 09:25	11/22/24 09:30

Method Summary

Client: Chesapeake Energy Corporation
Project/Site: CHK State M

Job ID: 180-183252-1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	EPA	EET EDI

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

EET EDI = Eurofins Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

Lab Chronicle

Client: Chesapeake Energy Corporation
Project/Site: CHK State M

Job ID: 180-183252-1

Client Sample ID: MW-4
Date Collected: 11/21/24 11:15
Date Received: 11/22/24 09:30

Lab Sample ID: 180-183252-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		5	10 mL	10 mL	1009765	12/01/24 13:47	OXG	EET EDI
	Instrument ID: IC 2									

Client Sample ID: DUP
Date Collected: 11/21/24 11:15
Date Received: 11/22/24 09:30

Lab Sample ID: 180-183252-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		5	10 mL	10 mL	1009765	12/01/24 14:02	OXG	EET EDI
	Instrument ID: IC 2									

Client Sample ID: EQUIPMENT BLANK
Date Collected: 11/21/24 09:25
Date Received: 11/22/24 09:30

Lab Sample ID: 180-183252-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	10 mL	10 mL	1009765	12/01/24 14:17	OXG	EET EDI
	Instrument ID: IC 2									

Laboratory References:
EET EDI = Eurofins Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

Analyst References:
Lab: EET EDI
Batch Type: Analysis
OXG = Olivia Guerrero

Client Sample Results

Client: Chesapeake Energy Corporation
Project/Site: CHK State M

Job ID: 180-183252-1

Client Sample ID: MW-4

Lab Sample ID: 180-183252-1
Matrix: Water
Date Collected: 11/21/24 11:15
Date Received: 11/22/24 09:30

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	345		5.00		mg/L			12/01/24 13:47	5

Client Sample ID: DUP

Lab Sample ID: 180-183252-2
Matrix: Water
Date Collected: 11/21/24 11:15
Date Received: 11/22/24 09:30

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	346		5.00		mg/L			12/01/24 14:02	5

Client Sample ID: EQUIPMENT BLANK

Lab Sample ID: 180-183252-3
Matrix: Water
Date Collected: 11/21/24 09:25
Date Received: 11/22/24 09:30

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.00		mg/L			12/01/24 14:17	1

QC Sample Results

Client: Chesapeake Energy Corporation
Project/Site: CHK State M

Job ID: 180-183252-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 460-1009765/3
Matrix: Water
Analysis Batch: 1009765

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.00		mg/L			12/01/24 08:12	1

Lab Sample ID: LCS 460-1009765/5
Matrix: Water
Analysis Batch: 1009765

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			3.20	3.011		mg/L		94	90 - 110		

Lab Sample ID: LCSD 460-1009765/6
Matrix: Water
Analysis Batch: 1009765

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			3.20	3.009		mg/L		94	90 - 110	0	15

QC Association Summary

Client: Chesapeake Energy Corporation
Project/Site: CHK State M

Job ID: 180-183252-1

HPLC/IC

Analysis Batch: 1009765

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-183252-1	MW-4	Total/NA	Water	300.0	
180-183252-2	DUP	Total/NA	Water	300.0	
180-183252-3	EQUIPMENT BLANK	Total/NA	Water	300.0	
MB 460-1009765/3	Method Blank	Total/NA	Water	300.0	
LCS 460-1009765/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 460-1009765/6	Lab Control Sample Dup	Total/NA	Water	300.0	

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CHAIN OF CUSTODY RECORD

No. 2801

EQUUS Environmental, LLC
(918) 921-5331

PROJECT NUMBER: CHKSTATM	PROJECT NAME: CHKSTATE M
SHIPPED TO: EDISON	PROJECT MANAGER: MATT MACAVERO
COC 1 of 1	TAT:
SAMPLER'S PRINTED NAME: Eric Farrar	PO# — WO#
SAMPLERS SIGNATURE:	

Date	Time	Sample ID	Sample Matrix	# of Sample Containers	CHLORIDE	TEMP	REMARKS
11-21-24	11:15	MW-4	water	1	x	x	
11-21-24	11:15	Dup	water	1	x	x	
11-21-24	9:25	equipment blank	water	1	x	x	
		trip blank	water	2	x	x	

180-183252 Chain of Custody

TOTAL NUMBER OF CONTAINERS → 5

RELINQUISHED BY:	DATE 11-21-24	RECEIVED BY: EPIPME	DATE 11-22-24
	TIME 13:30		TIME 0930
RELINQUISHED BY:	DATE	RECEIVED BY:	DATE
	TIME		TIME

METHOD OF SHIPMENT: FEDEX

AIRBILL NUMBER: 4059 5949 0627

RECEIVED IN LABORATORY BY: DATE / TIME

Send PDF, EDD, and INVOICE (if applicable) to: QAQC@EquusEnv.com

LABORATORY CONTACT: KEN 615-301-5035

LABORATORY ADDRESS: 777 NEW DURHAM RD. EDISON, NJ 08817

White: Receiving Lab Yellow: Equus Environmental Project File Pink: Equus QA/QC

Received by OCD: 6/4/2025 10:09:49 AM

Released to Imaging: 6/17/2025 9:46:51 AM

12/4/2024

ORIGIN ID:AGCA (918) 509-0352
ERIC FARRAR- GUEST
HAMPTON INN AND SUITES
5420 LOVINGTON HIGHWAY

HOBBS, NM 88242
UNITED STATES US

SHIP DATE: 19NOV24
ACTWGT: 25.00 LB MAN
CAD: 0522321/CAFE3855

Part # 159469-434 MTW EXP 05/25

TO SAMPLE RECEIVING DEPARTMENT
EUROFINS ENVIRO. TESTING PITT N.E.
301 ALPHA DRIVE

PITTSBURGH PA 15238
(412) 963-7530
REF: RETURN

RMA:

Uncorrected temp 1.9 °C
Thermometer ID 35
CF +0.1 Initials MR
PT-WI-SR-001 effective 11/8/18

FedEx
Express

E

J243024070401uv

RETURNS MON-SAT
PRIORITY OVERNIGHT

TRK# 0221 4059 5949 0627

FedEx
TRK# 0221 4059 5949 0627

FRI - 22 NOV 10:30A
PRIORITY OVERNIGHT

XN AGCA

15238
PA-US PIT

Part # 156297-435 RRDB EXP 04/25

#20265 11/21 58CJ8/39D3/C6C4

180-183252 Waybill

Released to Imaging: 6/17/2025 9:46:51 AM
Received by OCD: 6/4/2025 10:09:49 AM

Eurofins Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone: 412-963-7058 Fax: 412-963-2468

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Hayes, Ken	Carrier Tracking No(s): N/A	COC No: 180-528781 1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Ken.Hayes@et.eurofinsus.com	State of Origin: Pennsylvania	Page: Page 1 of 1
Company: Eurofins Environment Testing Northeast L		Accreditations Required (See note): N/A		Job #: 180-183252-1
Address: 777 New Durham Road,	Due Date Requested: 12/9/2024			
City: Edison	TAT Requested (days): N/A			
State, Zip: NJ, 08817				
Phone: 732-549-3900(Tel) 732-549-3679(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Equus - Chesapeake	Project #: 18028372			
Site: N/A	SSOW#: N/A			

Analysis Requested

Preservation Codes:

Other: N/A

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	300_ORGFM_28D/ (MOD) Chloride	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-4 (180-183252-1)	11/21/24	11 15 Eastern	G	Water			X	1	
DUP (180-183252-2)	11/21/24	11:05 Eastern	G	Water			X	1	
EQUIPMENT BLANK (180-183252-3)	11/21/24	09:25 Eastern	G	Water			X	1	

Note: Since laboratory accreditations are subject to change, Eurofins Pittsburgh places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Pittsburgh laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Pittsburgh attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Pittsburgh.

Possible Hazard Identification: Unconfirmed	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I II III, IV Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment: Fedex

Relinquished by:	Date/Time: 11-25-24 1700	Company: EUROFINS	Received by:	Date/Time: 11/26/24 1100	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks:

IR 9 2 5 - 2 7 2 1 - 2 3

Ver: 10/10/2024

Login Sample Receipt Checklist

Client: Chesapeake Energy Corporation Job Number: 180-183252-1

Login Number: 183252 **List Source: Eurofins Pittsburgh**
List Number: 1
Creator: Abernathy, Eric L

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Chesapeake Energy Corporation Job Number: 180-183252-1

Login Number: 183252
List Number: 2
Creator: Armbruster, Chris

List Source: Eurofins Edison
List Creation: 11/26/24 12:43 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.5/2.7, 2.1/2.3°C IR9
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Dana Drury
Chesapeake Energy Corporation
PO BOX 548806
Oklahoma City, Oklahoma 73154

Generated 4/4/2025 9:02:30 AM

JOB DESCRIPTION

Equus - Chesapeake

JOB NUMBER

180-188088-1

Eurofins Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh PA 15238

See page two for job notes and contact information.

Released to Imaging: 6/17/2025 9:46:51 AM

my EOL

Eurofins Pittsburgh

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

PA Lab ID: 02-00416

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Pittsburgh Project Manager.

Authorization

Generated
4/4/2025 9:02:30 AM

Authorized for release by
Ken Hayes, Project Manager II
Ken.Hayes@et.eurofinsus.com
(615)301-5035

Client: Chesapeake Energy Corporation
Project/Site: Equus - Chesapeake

Laboratory Job ID: 180-188088-1

Table of Contents

Case Narrative

Client: Chesapeake Energy Corporation Job ID: 180-188088-1
Project: Equus - Chesapeake

Job ID: 180-188088-1 Eurofins Pittsburgh

Job Narrative
180-188088-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 3/21/2025 9:15 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.7°C.

HPLC/IC
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Definitions/Glossary

Client: Chesapeake Energy Corporation Job ID: 180-188088-1
Project/Site: Equus - Chesapeake

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Accreditation/Certification Summary

Client: Chesapeake Energy Corporation Job ID: 180-188088-1
Project/Site: Equus - Chesapeake

Laboratory: Eurofins Edison

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Connecticut	State	PH-0818	09-30-26
DE Haz. Subst. Cleanup Act (HSCA)	State	N/A	01-03-26
Georgia	State	12028 (NJ)	07-01-25
Massachusetts	State	M-NJ312	07-01-25
New Jersey	NELAP	12028	06-30-25
New York	NELAP	11452	04-02-26
Pennsylvania	NELAP	68-00522	02-27-26
Rhode Island	State	LAO00376	12-23-25
USDA	US Federal Programs	525-24-149-77606	05-21-27

Sample Summary

Client: Chesapeake Energy Corporation
Project/Site: Equus - Chesapeake

Job ID: 180-188088-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-188088-1	MW-4	Water	03/20/25 11:35	03/21/25 09:15
180-188088-2	DUP	Water	03/20/25 11:40	03/21/25 09:15
180-188088-3	EQUIPMENT BLANK	Water	03/20/25 09:30	03/21/25 09:15

Method Summary

Client: Chesapeake Energy Corporation
Project/Site: Equus - Chesapeake

Job ID: 180-188088-1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	EPA	EET EDI

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

EET EDI = Eurofins Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

Lab Chronicle

Client: Chesapeake Energy Corporation
Project/Site: Equus - Chesapeake

Job ID: 180-188088-1

Client Sample ID: MW-4
Date Collected: 03/20/25 11:35
Date Received: 03/21/25 09:15

Lab Sample ID: 180-188088-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		10	10 mL	10 mL	1028138	03/27/25 17:40	OXG	EET EDI
	Instrument ID: IC 2									

Client Sample ID: DUP
Date Collected: 03/20/25 11:40
Date Received: 03/21/25 09:15

Lab Sample ID: 180-188088-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		10	10 mL	10 mL	1028138	03/27/25 17:55	OXG	EET EDI
	Instrument ID: IC 2									

Client Sample ID: EQUIPMENT BLANK
Date Collected: 03/20/25 09:30
Date Received: 03/21/25 09:15

Lab Sample ID: 180-188088-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	10 mL	10 mL	1029480	04/03/25 12:05	OXG	EET EDI
	Instrument ID: IC 1									

Laboratory References:
EET EDI = Eurofins Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

Analyst References:
Lab: EET EDI
Batch Type: Analysis
OXG = Olivia Guerrero

Client Sample Results

Client: Chesapeake Energy Corporation
Project/Site: Equus - Chesapeake

Job ID: 180-188088-1

Client Sample ID: MW-4
Lab Sample ID: 180-188088-1
Date Collected: 03/20/25 11:35
Matrix: Water
Date Received: 03/21/25 09:15

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**290**		10.0		mg/L			03/27/25 17:40	10

Client Sample ID: DUP
Lab Sample ID: 180-188088-2
Date Collected: 03/20/25 11:40
Matrix: Water
Date Received: 03/21/25 09:15

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**286**		10.0		mg/L			03/27/25 17:55	10

Client Sample ID: EQUIPMENT BLANK
Lab Sample ID: 180-188088-3
Date Collected: 03/20/25 09:30
Matrix: Water
Date Received: 03/21/25 09:15

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.00		mg/L			04/03/25 12:05	1

QC Sample Results

Client: Chesapeake Energy Corporation
Project/Site: Equus - Chesapeake

Job ID: 180-188088-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 460-1028138/15
Matrix: Water
Analysis Batch: 1028138

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.00		mg/L			03/27/25 12:39	1

Lab Sample ID: LCS 460-1028138/17
Matrix: Water
Analysis Batch: 1028138

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	3.20	2.902		mg/L		91	90 - 110

Lab Sample ID: LCSD 460-1028138/18
Matrix: Water
Analysis Batch: 1028138

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	3.20	2.895		mg/L		90	90 - 110	0	15

Lab Sample ID: MB 460-1029480/3
Matrix: Water
Analysis Batch: 1029480

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.00		mg/L			04/03/25 10:50	1

Lab Sample ID: LCS 460-1029480/5
Matrix: Water
Analysis Batch: 1029480

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	3.20	3.216		mg/L		101	90 - 110

Lab Sample ID: LCSD 460-1029480/6
Matrix: Water
Analysis Batch: 1029480

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	3.20	3.225		mg/L		101	90 - 110	0	15

QC Association Summary

Client: Chesapeake Energy Corporation Job ID: 180-188088-1
Project/Site: Equus - Chesapeake

HPLC/IC

Analysis Batch: 1028138

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-188088-1	MW-4	Total/NA	Water	300.0	
180-188088-2	DUP	Total/NA	Water	300.0	
MB 460-1028138/15	Method Blank	Total/NA	Water	300.0	
LCS 460-1028138/17	Lab Control Sample	Total/NA	Water	300.0	
LCSD 460-1028138/18	Lab Control Sample Dup	Total/NA	Water	300.0	

Analysis Batch: 1029480

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-188088-3	EQUIPMENT BLANK	Total/NA	Water	300.0	
MB 460-1029480/3	Method Blank	Total/NA	Water	300.0	
LCS 460-1029480/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 460-1029480/6	Lab Control Sample Dup	Total/NA	Water	300.0	

Released to Imaging: 6/17/2025 9:46:51 AM

Received by OCD: 6/4/2025 10:09:49 AM

CHAIN OF CUSTODY RECORD

No. 2830

EQUUS Environmental LLC
(918) 921-5331

PROJECT NUMBER: CHKSTATM	PROJECT NAME: CHK STATE M
SHIPPED TO: EDISON	PROJECT MANAGER: MATT MUGAVERO
COC 1 of 1	TAT: STANDARD

SAMPLER'S PRINTED NAME: Eric Farrar

SAMPLERS SIGNATURE:

PO#

WO#

Date	Time	Sample ID	Sample Matrix	# of Sample Containers	CHLORIDE	TEMP	REMARKS
3-20-2025	11:35	MW-4	water	2	X	X	
3-20-2025	11:40	Dup	water	2	X	X	
3-20-2025	9:30	Equipment Blank	water	1	X	X	
		Trip Blank	water	2	X	X	

180-188088 Chain of Custody

TOTAL NUMBER OF CONTAINERS → 7

RELINQUISHED BY:	DATE 3-20-2025	RECEIVED BY:	DATE 3/21/25
	TIME 15:00		TIME 0915
RELINQUISHED BY:	DATE	RECEIVED BY:	DATE
	TIME		TIME

METHOD OF SHIPMENT: FEDEX

AIRBILL NUMBER: 4359 6078 2689

RECEIVED IN LABORATORY BY:

DATE

TIME

Send PDF, EDD, and INVOICE (if applicable) to:
QAQC@EquusEnv.com

LABORATORY CONTACT:
KEN 615-301-5035

LABORATORY ADDRESS:
777 NEW DURHAM RD EDISON, NJ 08817

White Receiving Lab Yellow Equus Environmental Project File Pink Equus QA/QC

ORIGIN ID:AGCA (918) 509-0352
JULIE CZECH
EQUUS ENVIRONMENTAL LLC
1923 S. 44TH W AVE.

TULSA, OK 74104
UNITED STATES US

SHIP DATE: 24FEB25
ACTWGT: 10.00 LB MAN
CAD: 0522321/CAFE3855

TO SAMPLE RECEIVING DEPARTMENT
EUROFINS ENVIRO. TESTING PITT N.E.
301 ALPHA DRIVE

PITTSBURGH PA 15238
(412) 963-7630
REF: S180-100416

RMA:

Uncorrected temp 4.6 °C
Thermometer ID 26
CF -0.9 Initials
PT-WI-SR-001 effective 7/26/13

FedEx Express
E

TRK# 0221 4359 6078 2689

RETURNS MON-SAT
PRIORITY OVERNIGHT

FedEx
TRK# 0221 4359 6078 2689

FRI - 21 MAR 10:30A
PRIORITY OVERNIGHT

XN AGCA

15238
PA-US PIT

#5511054 03/20 58CJ3/5027/C6C4

180-188088 Waybill

Released to Imaging: 6/17/2025 9:46:51 AM
Received by OCD: 6/4/2025 10:09:49 AM

Eurofins Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone: 412-963-7058 Fax: 412-963-2468

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Hayes, Ken	Carrier Tracking No(s): N/A	COC No: 180-535291 1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Ken.Hayes@et.eurofinsus.com	State of Origin: Oklahoma	Page: Page 1 of 1
Company: Eurofins Environment Testing Northeast L		Accreditations Required (See note): N/A		Job #: 180-188088-1
Address: 777 New Durham Road,	Due Date Requested: 4/3/2025			
City: Edison	TAT Requested (days): N/A			
State, Zip: NJ, 08817				
Phone: 732-549-3900(Tel) 732-549-3679(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Equus Chesapeake	Project #: 18028372			
Site: N/A	SSOW#: N/A			

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	300_ORGFM_28D (MOD) Chloride	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-4 (180-188088-1)	3/20/25	11:35 Central	G	Water			X	2	
DUP (180-188088-2)	3/20/25	11:40 Central	G	Water			X	2	
EQUIPMENT BLANK (180-188088-3)	3/20/25	09:30 Central	G	Water			X	1	

Analysis Requested

Preservation Codes:

Other: N/A

Note: Since laboratory accreditations are subject to change, Eurofins Pittsburgh places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Pittsburgh laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Pittsburgh attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Pittsburgh.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I II III IV Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment: Fedex

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	3-24-25 1700			3/25/25 10:30	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks:

Ver: 10/10/2024

IR 90 8-1-2

Login Sample Receipt Checklist

Client: Chesapeake Energy Corporation Job Number: 180-188088-1

Login Number: 188088 **List Source: Eurofins Pittsburgh**
List Number: 1
Creator: Abernathy, Eric L

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Chesapeake Energy Corporation Job Number: 180-188088-1

Login Number: 188088 **List Source: Eurofins Edison**
List Number: 2 **List Creation: 03/25/25 12:53 PM**
Creator: Armbruster, Chris

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.8/1.2°C IR9
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Chesapeake Energy Corporation Job Number: 180-188088-1

Login Number: 188088
List Number: 3
Creator: Casallas, Angela C

List Source: Eurofins Edison
List Creation: 04/03/25 09:45 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Dana Drury
Chesapeake Energy Corporation
PO BOX 548806
Oklahoma City, Oklahoma 73154

Generated 9/16/2024 10:38:31 AM

JOB DESCRIPTION

CHK STATE M

JOB NUMBER

460-310953-1

Eurofins Edison
777 New Durham Road
Edison NJ 08817

See page two for job notes and contact information.

Released to Imaging: 6/17/2025 9:46:51 AM

Eurofins Edison

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northeast, LLC Project Manager.

Authorization

Generated
9/16/2024 10:38:31 AM

Authorized for release by
Ken Hayes, Project Manager II
Ken.Hayes@et.eurofinsus.com
(615)301-5035

Client: Chesapeake Energy Corporation
Project/Site: CHK STATE M

Laboratory Job ID: 460-310953-1

Table of Contents

Definitions/Glossary

Client: Chesapeake Energy Corporation Job ID: 460-310953-1
Project/Site: CHK STATE M

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Chesapeake Energy Corporation Job ID: 460-310953-1
Project: CHK STATE M

Job ID: 460-310953-1 Eurofins Edison

Job Narrative
460-310953-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 9/7/2024 11:30 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.8°C.

HPLC/IC
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Detection Summary

Client: Chesapeake Energy Corporation
Project/Site: CHK STATE M

Job ID: 460-310953-1

Client Sample ID: MW-4 — Lab Sample ID: 460-310953-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	361		10.0		mg/L	10		300.0	Total/NA

Client Sample ID: DUP — Lab Sample ID: 460-310953-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	358		10.0		mg/L	10		300.0	Total/NA

Client Sample ID: EQ Blank — Lab Sample ID: 460-310953-3

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Edison

Client Sample Results

Client: Chesapeake Energy Corporation Job ID: 460-310953-1
Project/Site: CHK STATE M

Client Sample ID: MW-4 Lab Sample ID: 460-310953-1

Date Collected: 09/06/24 10:25 **Matrix: Water**
Date Received: 09/07/24 11:30

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	361		10.0		mg/L			09/13/24 15:15	10

Client Sample ID: DUP Lab Sample ID: 460-310953-2

Date Collected: 09/06/24 00:00 **Matrix: Water**
Date Received: 09/07/24 11:30

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	358		10.0		mg/L			09/13/24 16:45	10

Client Sample ID: EQ Blank Lab Sample ID: 460-310953-3

Date Collected: 09/06/24 07:45 **Matrix: Water**
Date Received: 09/07/24 11:30

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.00		mg/L			09/13/24 17:00	1

QC Sample Results

Client: Chesapeake Energy Corporation
Project/Site: CHK STATE M

Job ID: 460-310953-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 460-995659/3
Matrix: Water
Analysis Batch: 995659

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.00		mg/L			09/13/24 09:47	1

Lab Sample ID: LCS 460-995659/5
Matrix: Water
Analysis Batch: 995659

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			3.20	3.060		mg/L		96	90 - 110		

Lab Sample ID: LCSD 460-995659/6
Matrix: Water
Analysis Batch: 995659

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			3.20	3.070		mg/L		96	90 - 110	0	15

QC Association Summary

Client: Chesapeake Energy Corporation
Project/Site: CHK STATE M

Job ID: 460-310953-1

HPLC/IC

Analysis Batch: 995659

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-310953-1	MW-4	Total/NA	Water	300.0	
460-310953-2	DUP	Total/NA	Water	300.0	
460-310953-3	EQ Blank	Total/NA	Water	300.0	
MB 460-995659/3	Method Blank	Total/NA	Water	300.0	
LCS 460-995659/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 460-995659/6	Lab Control Sample Dup	Total/NA	Water	300.0	

Lab Chronicle

Client: Chesapeake Energy Corporation
Project/Site: CHK STATE M

Job ID: 460-310953-1

Client Sample ID: MW-4
Date Collected: 09/06/24 10:25
Date Received: 09/07/24 11:30

Lab Sample ID: 460-310953-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		10	995659	OXG	EET EDI	09/13/24 15:15

Client Sample ID: DUP
Date Collected: 09/06/24 00:00
Date Received: 09/07/24 11:30

Lab Sample ID: 460-310953-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		10	995659	OXG	EET EDI	09/13/24 16:45

Client Sample ID: EQ Blank
Date Collected: 09/06/24 07:45
Date Received: 09/07/24 11:30

Lab Sample ID: 460-310953-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		1	995659	OXG	EET EDI	09/13/24 17:00

Laboratory References:

EET EDI = Eurofins Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

Accreditation/Certification Summary

Client: Chesapeake Energy Corporation Job ID: 460-310953-1
Project/Site: CHK STATE M

Laboratory: Eurofins Edison

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Connecticut	State	PH-0818	09-30-24
DE Haz. Subst. Cleanup Act (HSCA)	State	N/A	01-02-25
Georgia	State	12028 (NJ)	07-01-25
Massachusetts	State	M-NJ312	07-01-25
New Jersey	NELAP	12028	06-30-25
New York	NELAP	11452	04-01-25
Pennsylvania	NELAP	68-00522	02-28-25
Rhode Island	State	LAO00376	12-31-24
USDA	US Federal Programs	525-24-149-77606	05-21-27

Method Summary

Client: Chesapeake Energy Corporation
Project/Site: CHK STATE M

Job ID: 460-310953-1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	EPA	EET EDI

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

EET EDI = Eurofins Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

Sample Summary

Client: Chesapeake Energy Corporation
Project/Site: CHK STATE M

Job ID: 460-310953-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
460-310953-1	MW-4	Water	09/06/24 10:25	09/07/24 11:30
460-310953-2	DUP	Water	09/06/24 00:00	09/07/24 11:30
460-310953-3	EQ Blank	Water	09/06/24 07:45	09/07/24 11:30

Released to Imaging: 6/17/2025 9:46:51 AM
Received by OCD: 6/4/2025 10:09:49 AM

CHAIN OF CUSTODY RECORD

No. 2016

EQUUS Environmental LLC (918) 921-5331

PROJECT NUMBER: CHKSTATM
PROJECT NAME: CHK STATE M
COC 1 of 1
SHIPPED TO: EDISON
PROJECT MANAGER: MATT MULLAVERO
TAT: STANDARD
PO#
WO#
SAMPLER'S PRINTED NAME: Terry Fisher
SAMPLERS SIGNATURE

Date	Time	Sample ID	Sample Matrix	# of Sample Containers	BTEX 8/13/24 (MW)	CHLORIDE	TEMP
9/6/24	1025	MW-4	Water	1		X	X
9/6/24	—	Dup	water	1		X	X
9/6/24	745	EQ Blank	water	1		X	X
—	—	Temp	water	1			X

310953

REMARKS

460-310953 Chain of Custody

TOTAL NUMBER OF CONTAINERS: 4

RELINQUISHED BY: DATE 9-6-24 TIME 1500
RECEIVED BY: via Fedex DATE 9/7/24 TIME 1130
RELINQUISHED BY: DATE TIME
RECEIVED BY: DATE TIME

0.6/0.8 IR

METHOD OF SHIPMENT: FEDEX
AIRBILL NUMBER: FedEx 4059 5943 8600
RECEIVED IN LABORATORY BY: DATE TIME
Send PDF EDD, and INVOICE (if applicable) to: QAQC@EquusEnv.com
LABORATORY CONTACT: KEN 615-301-5035
LABORATORY ADDRESS: 777 NEW DURHAM RD EDISON, NJ 08817

White: Receiving Lab Yellow: Equus Environmental Project File Pink: Equus QA/QC

Released to Imaging: 6/17/2025 9:46:51 AM
Received by OCD: 6/4/2025 10:09:49 AM

Eurofins TestAmerica Edison
Receipt Temperature and pH Log

Job Number: 310953

Number of Coolers: 1 IR Gun # 9

Cooler Temperatures

	RAW	CORRECTED		RAW	CORRECTED		RAW	CORRECTED
Cooler #1:	0.4 °C	0.9 °C	Cooler #4:	°C	°C	Cooler #7:	°C	°C
Cooler #2:	°C	°C	Cooler #5:	°C	°C	Cooler #8:	°C	°C
Cooler #3:	°C	°C	Cooler #6:	°C	°C	Cooler #9:	°C	°C

TALS Sample Number	Ammonia (pH<2)	COD (pH<2)	Nitrate Nitrite (pH<2)	Metals* (pH<2)	Hardness (pH<2)	Pest (pH 5-9)	EPH or QAM (pH<2)	Phenols (pH<2)	Sulfide (pH>9)	TKN (pH<2)	TOC (pH<2)	Total Cyanide (pH>12)	Total Phos (pH<2)	Other	Other

If pH adjustments are required record the information below.

Sample No(s). adjusted. _____

Preservative Name/Conc. _____ Volume of Preservative used (ml). _____

Lot # of Preservative(s). _____ Expiration Date: _____

The appropriate Project Manager and Department Manager should be notified about the samples which were pH adjusted.

** Samples for Metal analysis which are out of compliance must be acidified at least 24 hours prior to analysis.*

EDS-WI-038, Rev 4.1
10/22/2019

Initials: [illegible] Date: 9/7/24

Login Sample Receipt Checklist

Client: Chesapeake Energy Corporation Job Number: 460-310953-1

Login Number: 310953 **List Source: Eurofins Edison**
List Number: 1
Creator: Nelson, Rose E

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

CONDITIONS

Action 470659

CONDITIONS

Operator: CHESAPEAKE OPERATING, INC. 6100 NORTH WESTERN AVE OKC, OK 73118	OGRID: 147179
	Action Number: 470659
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
amaxwell	Report approved. Provide a sampling notification via a C-141N, 48-hour sampling notification, prior to conducting monitoring and sampling at the next event.	6/17/2025