Tesoro Alaska Company LLC

Kenai Refinery
54741 Energy Way
Kenai, AK 99611
Tel: 907-776-8191

February 26, 2025

Ms. Janice E. Palumbo
Environmental Compliance Specialist
Office of Solid Waste and Emergency Response
RCRA Permitting Unit
U.S. Environmental Protection Agency, Region 10
1200 Sixth Avenue
Seattle, WA 98101

Submitted via email
Palumbo.jan@epa.gov

RE: Submission of Quarterly Progress Report #25-1
Tesoro Alaska Company LLC
Kenai Refinery
EPA ID# AKD 048679682

Dear Ms. Palumbo:

Enclosed is Tesoro Alaska's Kenai Refinery Quarterly Progress Report (QPR) Number 25-1, prepared per the requirements of Tesoro Alaska Company's Resource Conservation and Recovery Act (RCRA) Post-Closure Permit, issued on November 1, 2017 by the U.S. Environmental Protection Agency. This report describes activities conducted November 2024 through January 2025.

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violation.

Please contact Maya Lehl of my staff (907) 776-4225 should you have questions or comments regarding the enclosed report.

Sincerely,

Bruce Jackman
General Manager, Kenai Refinery

Enclosure- Quarterly Progress Report Number 25-1

CC via email: Peter Campbell, peter.campbell@alaska.gov, ADEC Soldotna Office
Tong Li, tongligws@comcast.net, ASE

Quarterly Progress Report No. 25-1

November, December 2024, and January 2025

RCRA POST-CLOSURE PERMIT No. AKD 04867 9682

Tesoro Alaska Company, LLC

Kenai, Alaska

February 26, 2025

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List of Abbreviations and Acronyms

µg/L	micrograms per liter
AS	air sparge
CAPP	corrective action program plan
CAMP	corrective action modification plan per Permit condition III.D.1
cfm	cubic feet per meter
COC	contaminant(s) of concern (Permit table 2)
COPC	contaminant(s) of potential concern (Permit table 8)
EPA	Environmental Protection Agency
IP	indicator parameter(s) (Permit table 3)
LTF	Lower Tank Farm
Permit	Tesoro's Alaska refinery Part B Post-Closure Permit
PRM	Phillips Remedial Measure
psi	pounds per square inch
Q##-#	quarter (year-quarter)
QPR (##-#)	quarterly progress report (year-quarter)
UCA	upper confined aquifer
SI	surface impoundment
TCE	trichloroethene
Tesoro	Tesoro Alaska Company
VC	vinyl chloride
VE	vapor extraction

1.0 INTRODUCTION

Tesoro Alaska Company, LLC (Tesoro) is implementing the requirements outlined in the Region 10 Environmental Protection Agency (EPA) Post-Closure Permit No. AKD 04867 9682 (Permit) for Tesoro's refinery in Kenai, Alaska (Figure 1), effective November 1, 2017. Information regarding the performance of the EPA-approved groundwater corrective action program plan (CAPP) is provided herein and includes activities that were completed or in-progress during the November 2024 – January 2025 quarter (winter quarter).

In winter and summer quarters, Tesoro performs routine system monitoring, and sampling or gauging required by active corrective action modification plans (CAMPs). Winter and summer Quarterly Progress Reports (QPRs) are condensed to include only summaries of activities and systems data.

In spring and fall quarters, Tesoro performs comprehensive monitoring including gauging and sampling monitoring wells required by Permit Table 4 for indicator parameters (IPs), contaminants of concern (COCs), and/or contaminants of potential concern (COPCs), and additional wells required by active CAMPs. Spring and fall QPRs are more comprehensive and include data analysis, a summary of corrective action changes, potentiometric surface maps, semi-annual effectiveness demonstrations, systems data, and an Index of QPR Appendices.

Appendix A contains data validation laboratory data packages for analyses performed during the quarter.

2.0 CORRECTIVE ACTIONS SUMMARY

Permit-required corrective action system performance criteria were met this quarter, except A and B-aquifer air sparge criteria at the surface impoundment (SI) area (discussed below in Section 2.1). A brief summary of each corrective action area is presented in following sections. Figure 2 illustrates system location and area designations, and Figure 3 is a cross section that shows aquifer designation in relation to overall site features. The SI area is in the A-aquifer but is discussed separately because of the disconnected and unique plume conditions. Analytical results are summarized in Table 2 and the laboratory report is included in Appendix A.

2.1 SURFACE IMPOUNDMENT (SI) AREA

In accordance with the SI Area Supplemental Groundwater Pilot Study Remedial Action Plan (RAP) submitted September 19, 2022, Tesoro installed a pilot subsurface carbon barrier wall on October 8 through 17, 2022. PlumeStop™ combined with S-Micro Zero Valent Iron (S-MZVI), was injected along a 120 ft transect within the area of highest groundwater impacts to improve the capture and reduce migration of trichloroethene (TCE), vinyl chloride (VC), and benzene in groundwater. The plan also includes a pilot-scale shutdown of portions of the upgradient air sparge (AS) system captured by the new barrier. A comprehensive review of the installation activities is presented in the Q23-1 Report, Appendix C, SI Area Supplemental Groundwater Pilot Study Installation Activities.

Tesoro operated the SI AS system in accordance with Permit Table D-6. Table 3A presents SI AS system monitoring records required by Permit Table D-10. Flow in cubic feet per minute (cfm) and pressure in pounds per square foot (psi) were recorded weekly for each operating AS well. Following the installation of the liquid activated-carbon barrier wall in October 2022, the western section (SAS-2 through SAS-10) of the AS system was turned off for a pilot-scale shutdown. As a result of the planned pilot-scale shutdown, performance criteria, as designed for an operating system, were not met for the majority of the weeks. The system operating records are provided in Table 3A and the laboratory report is included in Appendix A.

Tesoro collected nine samples from monitoring wells SMW-05, SMW-09, SMW-21A, SMW-29, SMW-31, SMW-35, SMW-36, SMW-37, and IWS-6, in conjunction with the post-carbon wall installation monitoring. Discussion of the SI area status will be provided in the next comprehensive Quarterly Report.

Updated carbon barrier groundwater assessment monitoring and maintenance information is included in Q24-4 SI Area Supplemental Groundwater Assessment Monitoring Report, along with SI Field Parameter Summary (Q24-4 Report Table E-1), SI Analytical Summary (Q24-4 Report Table E-2), and TCE Concentration Plots (Q24-4 Report

Figure E-2) for sampling following the carbon wall injection are presented in the Q24-4 Report, Appendix E. Updated Supplemental RAP reporting will be discussed in the Q25-4 Report.

2.2 A-AQUIFER

The A-Aquifer groundwater extraction system was above the target of 60 gallons per minute (gpm) minimum for all 14 weeks. Table 4 presents the groundwater extraction system flow rates and volumes, recorded weekly as required by Permit Table D-10. Table 5 presents groundwater injection rates, recorded weekly. The Calgon treatment system operated continuously and effectively during the quarter. The Calgon effluent samples were non-detect for the listed constituents in Q25-1. Activated carbon from the lag Calgon vessel was replaced with new carbon and the lead vessel was changed over to become the new lag vessel on October 10, 2023.

Tesoro operated the Phillips Remedial Measure (PRM), Highway AS System and the Highway Vapor Extraction (VE) System during this quarter. All system data were collected in accordance with Permit Table D-6 and are provided in Tables 3B and 3C.

Tesoro collected four supplemental groundwater samples from four A-aquifer wells, E-097, E-072RR, E-179, and E-259, to monitor the southern portion of the benzene plume near E-072RR. A sample from E-010 was collected downgradient of the Lower Tank Farm (LTF) area as part of the LTF AS shut-down requirements. A sample from E-247A was collected downgradient of the swamp, and two supplemental monitoring well samples, E-250A and E-255, were collected downgradient of the Highway Air Sparge (HAS) Expansion to assess HAS system efficiency. Three additional samples, E-249A, E-249B, and E-249C, were collected to monitor the benzene plume downgradient of R-21R, following repairs and the restart of groundwater extraction at R-21R in August 2024. Discussion of the results will be provided in the next comprehensive Quarterly Report (Q25-2).

Two supplemental groundwater samples, E-137A and E-171 were collected to monitor and evaluate previous benzene concentration increases in the area around E-160 within the PRM. E-234A-R was sampled following the replacement of E-234A and will be sampled for eight consecutive quarters.

The beach seep area is checked four days a week, when the beach is accessible and free of ice during the ebbing tide to identify the presence or absence of petroleum sheen seeps. Continued updates will be included in the Kenai Refinery's Quarterly Progress Reports submitted to EPA. A rip-rap rock wall was installed at the toe of the beach seep bluff area in the fall of 2021 and enhanced in Spring 2022. Rock wall maintenance, along with the addition of new rocks were performed on the rip-rap rock wall during the week of April 10, 2023. Bluff erosion was minimal during Q24-4; however, additional material was added to the rip-rap rock wall in November 2024. The wall could be slowing bluff

erosion in the beach seep area, but significant erosion events continue to occur with approximately 5- to 10-feet or more of bank eroding every year since 2019. Since 2019 erosion events have not resulted in beach seep re-occurrences.

Following EPA approval of the work plan, Tesoro implemented a pilot study bio-sparge test to increase oxygen content of source soils and groundwater near the bluff area, and potentially enhancing natural source-zone depletion (NSZD) rates. The bio-sparge well installation was completed in August of 2022 and bio-sparging testing and start-up took place in February 2023. The bio-sparge well remains in operation.

2.3 B-AQUIFER

Tesoro operated the B-Aquifer groundwater extraction system in accordance with Permit Table D-6. Table 4 presents the groundwater extraction system monitoring records required by Permit Table D-10. Flow and volume were recorded weekly for each pumping well. Table 5 presents groundwater injection rates, recorded weekly. Performance criteria were met for all 14 weeks.

Four supplemental groundwater samples, E-137B, E-155, E-156, and E-160 were collected to monitor and evaluate previous benzene concentration increases around E-160 within the PRM. A supplemental groundwater sample was collected from E-162 to monitor the southern portion of the benzene plume near E-072RR, and a supplemental sample was collected from E-247B, downgradient of the swamp. E-234B-R was sampled following the replacement of E-234B and will be sampled for eight consecutive quarters.

The expansion of the HAS, called the West Highway Air Sparge (WAS), was started on May 3, 2022, and includes deep air sparging into the B-Aquifer. System data were collected in accordance with Permit Table D-6 and are provided in Tables 3C. Two B-Aquifer monitoring wells, E-250B and E-256, were sampled in the vicinity and downgradient of the WAS to assess system performance. Discussion of the results will be provided in the next comprehensive Quarterly Report (Q25-2).

2.4 UPPER CONFINED AQUIFER (UCA)

Industrial pumping rates for the UCA wells and total volume are presented in Table 6.

One supplemental well, E-147, was sampled in the UCA to evaluate the increasing benzene concentrations in this area. Discussion of the UCA status will be provided in the next comprehensive Quarterly Report (Q25-2).

3.0 ADMINISTRATIVE ACTIVITIES

Activity	Summary
None	None

Upcoming Activities	Summary
2025 Draft RCRA Post-Closure Permit	Submittal 2025

4.0 INDEX OF CAMPS

CAMP	Summary	Status
1999 Boardwalk Plume Lobe CAMP	Modify the corrective measures system to more effectively meet the performance standards for the boardwalk plume.	Closed
2000 B-Aquifer Interim Corrective Measures Plan	Installation of groundwater pumping and injection systems.	Closed
2001 B-Aquifer Corrective Measure and Monitoring Plan	Describes required water level monitoring, water quality monitoring, and treatment monitoring.	Included in Permit
2002 E-228 CAMP	Evaluation if E-228 was within capture zone, including source area evaluation, natural attenuation evaluation, and groundwater flow and capture zone evaluation.	Updated in 2013 and Subsequently Closed
2009 CAMP for UCA Well E-198	Evaluation of elevated benzene concentrations in E-198, including pressurization test and supplemental sampling.	Updated in 2013 and Subsequently Closed
2009 SI CAMP	Air sparge combined with natural attenuation as the corrective measure for the SI plume.	Included in Permit
2012 SI TCE CAMP	System maintenance and additional sampling of downgradient wells to evaluate the effectiveness of the actions.	Active
2013 B-Aquifer CAMP	Address dissolved-phase contamination that occurs in the B-aquifer and lower portion of the merged UCA.	Updated in 2015
2013 E-228 CAMP	Evaluation if E-228 was within capture zone, including source area evaluation, natural attenuation evaluation, and groundwater flow and capture zone evaluation.	Closed
2013 E-198 CAMP	Evaluation of elevated benzene concentrations in E-198, including pressurization test and supplemental sampling.	Closed

CAMP	Summary	Status
2014 PM Swamp CAMP	Additional surface water sampling, groundwater sampling, sediment sampling, and gauging.	Updated in 2014
2014 E-219 CAMP	Lower Tank Farm AS/SVE restart.	Updated in 2017
2014 PM Area Swamp CAMP Update	Expansion of air sparge system, installation of monitoring wells, additional groundwater, and surface water sampling, and additional gauging.	Active
2015 B-Aquifer CAMP	New recovery wells, well redevelopment, pipeline modifications, additional gauging and capture evaluation, and additional sampling.	Updated in 2017
2017 LFT CAMP	Lower Tank Farm AS/SVE restart and monitoring.	Closed
2017 B-Aquifer CAMP	New recovery wells, monitoring wells, pumping rates and monitoring.	Active

TABLES

TABLE 1. WATER LEVEL DATA – POTENTIOMETRIC SURFACE ELEVATIONS

PLACEHOLDER

TABLE 1. NOT REQUIRED IN WINTER AND SUMMER QUARTERS

TABLE 2. ANALYTICAL RESULTS - INDICATOR PARAMETERS
TESORO KENAI REFINERY
KENAI, AK

Well ID	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes, Total (µg/L)	Trichloro-ethene (µg/L)	Vinyl Chloride (µg/L)
E-010	11/14/24	**2,200**	ND(20)	27 J	**241 J**	--	--
E-072RR	11/13/24	**850**	ND(0.39)	**410**	**930 J**	--	--
E-097	11/13/24	ND(0.24)	ND(0.39)	ND(0.5)	ND(0.92)	--	--
E-137A	11/08/24	ND(0.24)	ND(0.39)	ND(0.5)	ND(0.92)	--	--
E-137B	11/08/24	ND(0.24)	ND(0.39)	ND(0.5)	ND(0.92)	--	--
E-147	11/12/24	**13**	ND(0.39)	ND(0.5)	ND(0.92)	--	--
E-155	11/08/24	ND(0.24)	ND(0.39)	ND(0.5)	ND(0.92)	--	--
E-156	11/08/24	**5.5**	ND(0.39)	ND(0.5)	15.39	--	--
E-160	11/08/24	**7.9**	ND(0.39)	ND(0.5)	41.39	--	--
E-162	11/13/24	**11**	ND(0.39)	ND(0.5)	ND(0.92)	--	--
E-171	11/13/24	**10**	ND(0.39)	3.5	32.39	--	--
E-179	11/13/24	**81**	ND(0.39)	ND(0.5)	12.39	--	--
E-234A-R	11/12/24	ND(0.24)	ND(0.39)	ND(0.5)	ND(0.92)	--	--
E-234B-R	11/12/24	**1,500**	ND(0.39)	ND(0.5)	ND(0.92)	--	--
E-247A	11/12/24	ND(0.24)	ND(0.39)	ND(0.5)	ND(0.92)	--	--
E-247B	11/12/24	**51**	ND(0.39)	ND(0.5)	ND(0.92)	--	--
E-249A	11/12/24	**1,600**	ND(0.39)	1.5 J+	ND(0.92)	--	--
E-249B	11/12/24	**100**	ND(0.39)	ND(0.5)	ND(0.92)	--	--
E-249C	11/12/24	1.1	ND(0.39)	ND(0.5)	ND(0.92)	--	--
E-250A	11/11/24	2.1	ND(0.39)	ND(0.5)	ND(0.92)	--	--
E-250B	11/11/24	**410**	ND(0.39)	ND(0.5)	ND(0.92)	--	--
E-255	11/11/24	**80**	ND(0.39)	ND(0.5)	ND(0.92)	--	--
E-256	11/13/24	**590**	ND(0.39)	ND(0.5)	ND(0.92)	--	--
E-259	11/11/24	ND(0.24)	ND(0.39)	ND(0.5)	ND(0.92)	--	--
IWS-6	11/14/24	0.38 J	ND(0.39)	ND(0.5)	ND(0.92)	**12**	--
MW-93	11/11/24	ND(0.24)	ND(0.39)	ND(0.5)	ND(0.92)	--	--
SMW-05	11/15/24	2.2	ND(0.39)	ND(0.5)	ND(0.92)	**4.1**	--
SMW-09	11/15/24	0.56 J	ND(0.39)	ND(0.5)	ND(0.92)	1	--
SMW-21A	11/15/24	ND(0.24)	ND(0.39)	ND(0.5)	ND(0.92)	ND(0.26)	--
SMW-29	11/14/24	1.2	ND(0.39)	ND(0.5)	ND(0.92)	1.9	--
SMW-31	11/15/24	ND(0.24)	ND(0.39)	ND(0.5)	ND(0.92)	ND(0.26)	--
SMW-35	11/15/24	2.1	ND(0.39)	ND(0.5)	ND(0.92)	**35**	--
SMW-36	11/14/24	1.1	ND(0.39)	ND(0.5)	ND(0.92)	**3.1**	--
SMW-37	11/14/24	0.61 J	ND(0.39)	ND(0.5)	ND(0.92)	**4.8**	--
	TGPS	**4.6**	**1,100**	**15**	**190**	**2.8**	**0.19**

Notes:
BOLD Results exceed TGPS
TGPS Target Groundwater Protection Standards, from Permit table 2
ND Analyte was not present in a concentration above detection level
J Estimated concentration
J+ Estimated concentration, possibly biased high
-- Not analyzed
µg/L microgram per liter
The method detection limit (MDL) was used as the reporting limit.

TABLE 3A. SI AIR SPARGE SYSTEM PERFORMANCE DATA

	SAS-1		SAS-2		SAS-3		SAS-4	
Week ending:	CFM	PSI	CFM	PSI	CFM	PSI	CFM	PSI
11/1/2024	0	0	0	0	0	0	0	0
11/8/2024	0	0	0	0	0	0	0	0
11/15/2024	0	0	0	0	0	0	0	0
11/22/2024	0	0	0	0	0	0	0	0
11/29/2024	0	0	0	0	0	0	0	0
12/6/2024	0	0	0	0	0	0	0	0
12/13/2024	0	0	0	0	0	0	0	0
12/20/2024	0	0	0	0	0	0	0	0
12/27/2024	0	0	0	0	0	0	0	0
1/3/2025	0	0	0	0	0	0	0	0
1/10/2025	0	0	0	0	0	0	0	0
1/17/2025	0	0	0	0	0	0	0	0
1/24/2025	0	0	0	0	0	0	0	0
1/31/2025	0	0	0	0	0	0	0	0

	SAS-5		SAS-6		SAS-7		SAS-8	
Week ending:	CFM	PSI	CFM	PSI	CFM	PSI	CFM	PSI
11/1/2024	0	0	0	0	0	0	0	0
11/8/2024	0	0	0	0	0	0	0	0
11/15/2024	0	0	0	0	0	0	0	0
11/22/2024	0	0	0	0	0	0	0	0
11/29/2024	0	0	0	0	0	0	0	0
12/6/2024	0	0	0	0	0	0	0	0
12/13/2024	0	0	0	0	0	0	0	0
12/20/2024	0	0	0	0	0	0	0	0
12/27/2024	0	0	0	0	0	0	0	0
1/3/2025	0	0	0	0	0	0	0	0
1/10/2025	0	0	0	0	0	0	0	0
1/17/2025	0	0	0	0	0	0	0	0
1/24/2025	0	0	0	0	0	0	0	0
1/31/2025	0	0	0	0	0	0	0	0

	SAS-9		SAS-10		SAS-11		SAS-12	
Week ending:	CFM	PSI	CFM	PSI	CFM	PSI	CFM	PSI
11/1/2024	0	0	0	0	5	5	6	3
11/8/2024	0	0	0	0	5	5.5	6	4
11/15/2024	0	0	0	0	5	5	6	3
11/22/2024	0	0	0	0	5	6	5	5
11/29/2024	0	0	0	0	6	5.5	5	4
12/6/2024	0	0	0	0	5	5.5	6	4
12/13/2024	0	0	0	0	5	5	6	3
12/20/2024	0	0	0	0	4	6	6	4
12/27/2024	0	0	0	0	6	6	6	4
1/3/2025	0	0	0	0	5	5	6	3
1/10/2025	0	0	0	0	6	6	6	4
1/17/2025	0	0	0	0	5	5	5	3.5
1/24/2025	0	0	0	0	**5**	**5**	4	2
1/31/2025	0	0	0	0	5	6	6	4

TABLE 3A. SI AIR SPARGE SYSTEM PERFORMANCE DATA
TESORO KENAI REFINERY
KENAI, AK

	SAS-13		SAS-14		SAS-15		SAS-16	
Week ending:	CFM	PSI	CFM	PSI	CFM	PSI	CFM	PSI
11/1/2024	6	5	6	7	7	0	2.5	6
11/8/2024	6	5	5	7	7	0	2.5	6
11/15/2024	6	5	5	7	7	0	2.5	6
11/22/2024	6	5	6	7	5	0	4	7
11/29/2024	6	5	6	7	7	0	2.5	6.5
12/6/2024	6	4.5	6	7	7	0	2.5	6.5
12/13/2024	6	4	4	7	7	0	2.5	6
12/20/2024	6	4	6	7	7	0	2.5	6
12/27/2024	6	4	6	7	7	0	0	6
1/3/2025	6	5	5	7	7	0	2.5	6
1/10/2025	6	5	6	6.5	6.5	0	0	6
1/17/2025	6	4.5	6	6.5	7	0	2.5	6
1/24/2025	6	4	**6**	**7**	7	0	2	5
1/31/2025	6.5	4	6	7	7	0	2.5	6.5

	SAS-17		SAS-18		SAS-19		SAS-20	
Week ending:	CFM	PSI	CFM	PSI	CFM	PSI	CFM	PSI
11/1/2024	2.5	1.5	2.5	6	2.5	6	5	0
11/8/2024	3	1	0	6.5	2.5	6.5	6	0
11/15/2024	5	1	3	7	2.5	7	6	1
11/22/2024	3	1	0	7	4	7	5	0
11/29/2024	3	2	2.5	6.5	2.5	6.5	5	0
12/6/2024	2.5	2	2.5	6.5	2.5	6	5	0
12/13/2024	2.5	1	0	6	3	7	6	1
12/20/2024	5	1	2.5	6	2.5	6.5	5	0
12/27/2024	2.5	2	2.5	7	2.5	6	6	0
1/3/2025	2.5	1	2.5	7	2.5	7	6	0
1/10/2025	3	2	0	7	7.5	6	6	0
1/17/2025	2.5	1.5	2.5	6	2.5	6	5	0
1/24/2025	**5**	**0**	0	7	0	5	**5**	**0**
1/31/2025	5	2	0	7	0	8	6	0

	SAS-21		SAS-22		TOTAL CFM			Minimum
Week ending:	CFM	PSI	CFM	PSI	BANK 1	BANK 2	BANK 3	Total
11/1/2024	2.5	5.5	3	3.5	**14**	**19**	**18**	35
11/8/2024	2.5	5.5	3	3.5	**14**	**19**	**16**	35
11/15/2024	2.5	5	3	9	**14**	**21**	**19**	35
11/22/2024	4	6	5	5	**19**	**19**	**14**	35
11/29/2024	3	5.5	3	4.5	**14**	**20**	**18**	35
12/6/2024	2.5	6	2.5	4.5	**14**	**19**	**18**	35
12/13/2024	2.5	5	2.5	4	**14**	**18**	**16**	35
12/20/2024	2.5	5.5	2.5	4	**14**	**20**	**18**	35
12/27/2024	2.5	6	2.5	4	**11**	**21**	**18**	35
1/3/2025	2.5	6	2.5	4	**14**	**19**	**18**	35
1/10/2025	2.5	6	0	4	**14**	**21**	**15**	35
1/17/2025	3	5	2.5	3.5	**14**	**19**	**18**	35
1/24/2025	5	5	1	3	**9**	**21**	**16**	35
1/31/2025	2.5	6	0	4.5	**9**	**22**	**16**	35

Notes:
SI - surface impoundment
CFM - cubic feet per minute
PSI - pounds per square inch
Minimum total rate per permit Table D-6
Bold - Below Minimum Total
- System Readings Not Collected
- Pilot Shutdown Wells

TABLE 3B. PRM AIR SPARGE SYSTEM PERFORMANCE DATA
TESORO KENAI REFINERY
KENAI, AK

	PAS-7		PAS-8		PAS-9		PAS-10	
Week ending:	CFM	PSI	CFM	PSI	CFM	PSI	CFM	PSI
11/1/2024	13.8	15	3.1	11	0.0	16	6.8	6
11/8/2024	11.3	15	4.5	12	0.0	18	7.3	7
11/15/2024	11.0	13	3.2	6	0.0	17	7.3	7
11/22/2024	8.5	9.5	3.7	5.5	0.0	19	7.3	7
11/29/2024	9.2	9	4.9	14	0.0	17	6.5	5
12/6/2024	10.1	10	5.9	13.5	0.0	15	6.5	5
12/13/2024	10.1	12	3.4	14	0.0	17	7.3	7
12/20/2024	9.8	12.5	4.8	13.5	0.0	17	6.4	6
12/27/2024	10.1	15	0.0	14	0.0	17	6.4	7
1/3/2025	10.1	12	4.7	13	0.0	18	6.4	6
1/10/2025	10.0	13	4.5	12	0.0	14	5.8	5
1/17/2025	9.4	15	4.9	14	0.0	17	5.5	7
1/24/2025	7.1	15	5.9	13.5	0.0	17	7.3	7
1/31/2025	10.7	15	5.0	15	0.0	17	7.1	10

	PAS-11		PAS-12		PAS-13		PAS-16	
Week ending:	CFM	PSI	CFM	PSI	CFM	PSI	CFM	PSI
11/1/2024	4.1	20	3.2	4	0.0	0	8.7	15
11/8/2024	4.1	20	3.6	5	0.0	0	6.2	15
11/15/2024	4.0	19	3.4	3.5	0.0	0	7.1	15
11/22/2024	7.1	20	3.2	3	0.0	0	7.0	14.5
11/29/2024	4.0	19	3.4	3.5	0.0	0.5	8.0	15
12/6/2024	5.5	18	3.6	5	0.0	0	3.6	15
12/13/2024	4.0	19	7.5	6	0.0	0	7.1	15
12/20/2024	4.0	19	12.4	12	0.0	0	0.0	2
12/27/2024	5.7	19	9.8	9.5	0.0	0	6.2	15
1/3/2025	3.9	18	9.2	9	0.0	0	6.2	15
1/10/2025	5.2	16	10.2	9.5	0.0	0	6.2	15
1/17/2025	4.0	18.5	9.4	9.5	0.0	0	5.0	15
1/24/2025	5.8	20	4.2	10.5	0.0	0	6.2	15
1/31/2025	4.9	19	8.2	10	0.0	0	5.0	15

	PAS-17		PAS-18		PAS-19		PAS-21	
Week ending:	CFM	PSI	CFM	PSI	CFM	PSI	CFM	PSI
11/1/2024	0.0	15	7.3	9	0.0	15	2.9	1
11/8/2024	0.0	15	8.0	12.5	0.0	15	0.0	0
11/15/2024	2.5	15	8.1	11	0.0	15	0.0	0
11/22/2024	0.0	16	7.3	12.5	0.0	14.5	4.1	2
11/29/2024	0.0	15	7.9	10.5	0.0	14.5	0.0	0
12/6/2024	0.0	15	7.1	12	0.0	15	0.0	0
12/13/2024	0.0	15	7.1	10	0.0	15	0.0	0
12/20/2024	0.0	0	0.0	0	0.0	15	0.0	0
12/27/2024	1.1	15	7.5	11	0.0	15	0.0	0
1/3/2025	0.0	15	7.3	10.5	0.0	15	0.0	0
1/10/2025	3.6	15	7.1	10	0.0	15	0.0	0
1/17/2025	0.0	15	7.0	11.5	0.0	15	0.0	0
1/24/2025	0.0	15	8.6	12.5	0.0	15	0.0	0
1/31/2025	0.0	15	8.0	12.5	0.0	15	0.0	0

TABLE 3B. PRM AIR SPARGE SYSTEM PERFORMANCE DATA
TESORO KENAI REFINERY
KENAI, AK

	PAS-22		PAS-23		PAS-24		PAS-25	
Week ending:	CFM	PSI	CFM	PSI	CFM	PSI	CFM	PSI
11/1/2024	5.8	8	1.8	8	0.0	19	3.6	15
11/8/2024	6.2	9	1.6	6	0.0	18	2.5	15
11/15/2024	6.0	7	1.7	7	0.0	20	3.6	15
11/22/2024	6.5	10	5.3	11	0.0	20	3.7	16
11/29/2024	5.5	7	2.1	10	0.0	19	5.0	15
12/6/2024	5.5	9	2.1	10	0.0	17	3.6	15
12/13/2024	5.8	8	2.3	13	0.0	20	3.6	15
12/20/2024	0.0	0	1.6	6	0.0	18	3.6	15
12/27/2024	6.2	9	2.4	14	0.0	20	3.6	15
1/3/2025	5.5	7	2.2	11	0.0	19	3.6	15
1/10/2025	5.5	7	2.3	12	0.0	16	3.6	15
1/17/2025	6.2	9	1.8	8	0.0	18.5	3.6	15
1/24/2025	5.8	8	2.8	9	0.0	19	3.6	15
1/31/2025	5.9	9	9.7	11	0.0	18	3.6	15

	PAS-26		PAS-27		PAS-28		PAS-29	
Week ending:	CFM	PSI	CFM	PSI	CFM	PSI	CFM	PSI
11/1/2024	2.5	15	1.8	4	0.0	7	3.6	15
11/8/2024	0.0	15	5.4	17	0.0	7	5.0	15
11/15/2024	0.0	15	2.1	5	0.0	7	4.4	15
11/22/2024	0.0	16	3.6	5	0.0	11	3.7	16
11/29/2024	3.6	15	2.9	5	0.0	10	5.0	15
12/6/2024	0.0	15	0.0	0	0.0	10	6.2	15
12/13/2024	0.0	15	6.6	17	0.0	12	5.0	15
12/20/2024	0.0	15	0.0	0	0.0	7	5.0	15
12/27/2024	0.0	15	2.6	4	0.0	15	5.0	15
1/3/2025	0.0	15	2.6	4	0.0	12	5.0	15
1/10/2025	0.0	15	1.6	2	0.0	14	4.4	15
1/17/2025	0.0	15	6.5	16.5	0.0	7	5.0	15
1/24/2025	0.0	15	0.0	0	0.0	12	7.1	15
1/31/2025	0.0	15	0.0	0	0.0	12	5.0	15

	PAS-30		PAS-31		PAS-32		PAS-33	
Week ending:	CFM	PSI	CFM	PSI	CFM	PSI	CFM	PSI
11/1/2024	9.8	19	0.0	15	0.0	21	0.0	0
11/8/2024	12.0	18	0.0	15	0.0	22	0.0	0
11/15/2024	10.6	19	0.0	15	0.0	22	0.0	0
11/22/2024	10.6	19	0.0	0	0.0	23	0.0	0
11/29/2024	0.0	21	0.0	15	0.0	20.5	0.0	0
12/6/2024	0.0	22	0.0	15	0.0	20	0.0	0
12/13/2024	9.6	18	0.0	15	0.0	21	0.0	0
12/20/2024	5.8	20	0.0	15	0.0	20	0.0	0
12/27/2024	11.1	18	0.0	15	0.0	20	0.0	0
1/3/2025	9.0	19	0.0	15	0.0	20	0.0	0
1/10/2025	7.1	20	0.0	15	0.0	20	0.0	0
1/17/2025	10.2	17.5	0.0	15	0.0	20	0.0	0
1/24/2025	7.1	20	0.0	15	0.0	21.5	0.0	0
1/31/2025	3.1	22	0.0	15	0.0	22	0.0	0

TABLE 3B. PRM AIR SPARGE SYSTEM PERFORMANCE DATA
TESORO KENAI REFINERY
KENAI, AK

	PAS-34		PAS-35		PAS-36		PAS-37	
Week ending:	CFM	PSI	CFM	PSI	CFM	PSI	CFM	PSI
11/1/2024	0.0	0	7.8	14.5	6.8	11	7.6	17
11/8/2024	0.0	0	6.4	16	7.8	12	9.1	14
11/15/2024	0.0	0	6.0	14	7.8	12	8.7	15
11/22/2024	0.0	14	6.2	15	7.4	13	8.0	15
11/29/2024	0.0	5	5.0	15	7.6	13.5	5.2	10.5
12/6/2024	0.0	3.5	5.4	13.5	6.5	10	8.0	12.5
12/13/2024	0.0	0	6.0	14	7.1	10	8.0	19
12/20/2024	0.0	0	5.0	15	6.8	11	8.8	14
12/27/2024	0.0	0	6.0	14	7.5	11	9.1	14
1/3/2025	0.0	0	5.0	15	6.7	10.5	4.1	20
1/10/2025	0.0	0	5.0	15	6.5	10	7.7	14
1/17/2025	0.0	1.5	5.2	14.5	6.8	11	8.4	14
1/24/2025	0.0	3.5	6.1	14.5	7.9	10.5	7.1	20
1/31/2025	0.0	0	5.8	16	7.4	13	9.4	13

	PAS-38		PAS-39		Total
Week ending:	CFM	PSI	CFM	PSI	CFM
11/1/2024	5.8	20	8.7	15	115.8
11/8/2024	5.7	19	9.0	12	115.7
11/15/2024	6.4	12	8.8	13	112.7
11/22/2024	6.6	13	8.8	13	118.7
11/29/2024	5.2	10.5	7.5	11	98.4
12/6/2024	6.1	11	7.7	10	93.3
12/13/2024	5.7	19	8.6	11	115.0
12/20/2024	5.4	17	7.7	10	87.1
12/27/2024	6.1	11	7.8	12	114.2
1/3/2025	6.1	11	7.8	12	105.3
1/10/2025	6.1	11	7.7	14	110.1
1/17/2025	6.1	11	8.1	11	113.2
1/24/2025	5.7	19	7.6	17	106.0
1/31/2025	6.1	11	8.6	11	113.7

Notes:

PRM - Phillips Remedial Measure

CFM - cubic feet per minute

PSI - pounds per square inch

TABLE 3C. HIGHWAY AIR SPARGE SYSTEM PERFORMANCE DATA
TESORO KENAI REFINERY
KENAI, AK

	HAS-01		HAS-02		HAS-03		HAS-04	
Week ending:	CFM	PSI	CFM	PSI	CFM	PSI	CFM	PSI
11/1/2024	0.0	0	0.0	0	0.0	30	9.9	17
11/8/2024	0.0	0	0.0	0	0.0	30	9.9	17
11/15/2024	0.0	0	0.0	0	0.0	30	10.8	18
11/22/2024	0.0	0	0.0	0	0.0	0	10.8	18
11/29/2024	0.0	0	0.0	0	0.0	30	9.2	17
12/6/2024	0.0	0	0.0	0	0.0	30	10.6	17
12/13/2024	0.0	0	0.0	0	0.0	30	10.9	19
12/20/2024	0.0	0	0.0	0	0.0	30	10.1	18
12/27/2024	0.0	0	0.0	0	0.0	30	10.8	18
1/3/2025	0.0	0	0.0	0	0.0	30	10.2	19
1/10/2025	0.0	0	0.0	0	0.0	30	8.5	18
1/17/2025	0.0	0	0.0	0	0.0	30	10.1	18
1/24/2025	0.0	0	0.0	0	0.0	0	10.7	17.5
1/31/2025	0.0	0	0.0	0	0.0	30	10.1	18

	HAS-05		HAS-06		HAS-07		HAS-08	
Week ending:	CFM	PSI	CFM	PSI	CFM	PSI	CFM	PSI
11/1/2024	5.6	20	0.0	21	5.5	19	7.1	23
11/8/2024	0.0	20	0.0	21	5.6	20	5.9	24
11/15/2024	2.7	2	0.0	22	3.9	19	4.1	23
11/22/2024	0.0	20	0.0	22	5.7	22	9.2	23
11/29/2024	0.0	20	0.0	20.5	5.6	21	6.9	21.5
12/6/2024	5.6	20	0.0	21	0.0	20	8.1	22.5
12/13/2024	3.9	20	0.0	21	6.9	21	5.7	22
12/20/2024	0.0	20	0.0	21	5.7	22	8.1	22
12/27/2024	3.9	20	0.0	23	3.9	20	6.4	24
1/3/2025	5.6	20	0.0	22	1.2	19	8.2	23
1/10/2025	0.0	22	0.0	21	7.7	19	9.0	22
1/17/2025	5.6	20	0.0	22	5.6	20	7.1	23
1/24/2025	3.9	20	0.0	21.5	4.0	21	5.7	22
1/31/2025	3.9	20	0.0	22	4.2	25	8.2	23

	HAS-09		HAS-10		HAS-11		HAS-12	
Week ending:	CFM	PSI	CFM	PSI	CFM	PSI	CFM	PSI
11/1/2024	8.5	18	5.8	23	0.0	20.5	9.0	21.5
11/8/2024	8.5	18	5.7	22	4.0	22	8.0	21
11/15/2024	8.4	17	5.6	21	0.0	21	8.0	21
11/22/2024	9.8	21	5.7	22	0.0	23	12.6	21
11/29/2024	7.9	20.5	0.0	21	0.0	23	14.2	20
12/6/2024	8.5	18	4.1	23	0.0	22.5	9.8	21.5
12/13/2024	8.8	20	0.0	21	0.0	23	11.3	21
12/20/2024	8.1	22	5.6	21	0.0	24	13.6	20
12/27/2024	9.5	19	4.0	22	0.0	22	9.0	22
1/3/2025	8.5	18	0.0	21	0.0	22	8.0	21
1/10/2025	12.1	18	0.0	21	0.0	23	9.8	21
1/17/2025	7.9	20	0.0	22	0.0	22.5	8.0	21.5
1/24/2025	9.6	20	5.7	22	0.0	23	7.9	20.5
1/31/2025	16.0	14	5.7	22	0.0	24	15.4	21

TABLE 3C. HIGHWAY AIR SPARGE SYSTEM PERFORMANCE DATA
TESORO KENAI REFINERY
KENAI, AK

	HAS-13		HAS-14		HAS-15		HAS-16	
Week ending:	CFM	PSI	CFM	PSI	CFM	PSI	CFM	PSI
11/1/2024	5.6	20	10.1	18	10.0	30	9.8	21
11/8/2024	6.8	20	9.5	19	10.9	30	9.9	22
11/15/2024	6.7	19	9.5	19	10.0	30	9.0	22
11/22/2024	8.0	21	10.8	18	6.3	0	5.7	22
11/29/2024	6.9	20.5	9.3	18	10.0	30	4.0	21
12/6/2024	0.0	20	10.8	18	10.0	30	4.0	21
12/13/2024	7.9	20	9.5	19	10.0	30	10.5	21
12/20/2024	9.9	22	10.1	18	10.0	30	8.0	21
12/27/2024	12.4	20	10.4	20	10.0	30	5.8	23
1/3/2025	10.4	20	9.6	20	10.0	30	9.9	22
1/10/2025	12.1	22	9.5	19	10.0	30	5.7	22
1/17/2025	10.7	22	9.5	19	10.0	30	10.5	21
1/24/2025	11.4	22	10.8	18	5.7	0	0.0	21
1/31/2025	0.0	24	10.1	18		30	5.6	21

	HAS-17		HAS-18		HAS-19		HAS-20	
Week ending:	CFM	PSI	CFM	PSI	CFM	PSI	CFM	PSI
11/1/2024	12.6	30	9.0	16	0.0	17.5	8.1	22
11/8/2024	0.0	30	9.0	16	0.0	19	7.9	20
11/15/2024	0.0	30	9.0	16	0.0	19	8.0	21
11/22/2024	0.0	0	9.8	16	0.0	21	12.9	23
11/29/2024	0.0	30	8.9	15	0.0	21	6.6	18
12/6/2024	0.0	30	9.0	16	0.0	19	7.9	20
12/13/2024	0.0	30	9.0	16	0.0	21	8.2	19
12/20/2024	0.0	30	9.0	16	0.0	22	6.8	20
12/27/2024	0.0	30	9.5	19	0.0	19	9.0	22
1/3/2025	0.0	30	9.5	19	0.0	19	8.0	21
1/10/2025	0.0	30	9.0	16	0.0	21	8.7	19
1/17/2025	0.0	30	9.0	16	0.0	20	8.1	22
1/24/2025	0.0	0	9.8	16	0.0	21.5	8.7	19
1/31/2025	0.0	30	9.2	17	0.0	24	8.0	21

	HAS-21		HAS-22		HAS-23		HAS-24		Total
Week ending:	CFM	PSI	CFM	PSI	CFM	PSI	CFM	PSI	CFM
11/1/2024	11.9	17	11.3	26	6.1	6	11.3	21	156.9
11/8/2024	14.6	25	10.7	22	7.4	10	12.4	20	146.6
11/15/2024	12.9	23	10.2	24	7.6	11	12.4	20	138.7
11/22/2024	16.7	22	11.6	23	7.7	12	13.6	20	156.7
11/29/2024	15.4	21	10.4	20	7.7	12	11.4	18	134.4
12/6/2024	15.0	19	9.3	24	7.9	8.5	12.4	20	132.9
12/13/2024	2.8	20	8.9	21	7.7	12	12.2	19	134.3
12/20/2024	14.9	21	9.9	22	7.8	13	10.9	19	148.5
12/27/2024	13.6	20	10.3	25	7.3	9	12.1	22	148.0
1/3/2025	12.4	20	8.3	24	6.5	9	12.6	21	138.8
1/10/2025	8.9	21	8.9	21	7.7	12	10.9	19	138.5
1/17/2025	13.2	18	8.5	26	7.1	8	11.4	22	142.2
1/24/2025	14.9	21	11.3	21	8.4	12	12.1	18	140.6
1/31/2025	17.6	20	12.3	23	9.8	16	12.7	20	148.7

TABLE 3C. HIGHWAY AIR SPARGE SYSTEM PERFORMANCE DATA
TESORO KENAI REFINERY
KENAI, AK

	WAS-1		WAS-2R		WAS-3R		WAS-4	
Week ending:	CFM	PSI	CFM	PSI	CFM	PSI	CFM	PSI
11/1/2024	11	32	0	44	0	31	0	0
11/8/2024	12	31	12	38	0	32	0	0
11/15/2024	11.0	31	11.0	29	0.0	31	0.0	0
11/22/2024	11.0	34	11.0	30	0.0	30	0.0	0
11/29/2024	11.5	30	11.0	27	0.0	30	0.0	0
12/6/2024	12.0	30	11.0	27	0.0	30	0.0	0
12/13/2024	12.0	31	12.0	29	0.0	30	0.0	0
12/20/2024	13.0	31	12.0	30	0.0	30	0.0	0
12/27/2024	12.5	32	14.5	31	0.0	31	0.0	0
1/3/2025	11.0	30	13.0	29	0.0	29	0.0	0
1/10/2025	11.0	30	14.0	30	0.0	30	0.0	0
1/17/2025	12.5	32	14.5	31	0.0	31	0.0	0
1/24/2025	12.0	30	0.0	44	14.0	33	0.0	0
1/31/2025	11.5	31	15	35	13.5	35	0	0

	WAS-5		WAS-6		WAS-7		WAS-8	
Week ending:	CFM	PSI	CFM	PSI	CFM	PSI	CFM	PSI
11/1/2024	0	33	0	42	11	29	8	36
11/8/2024	0	35	0	42	11	29	7.5	40
11/15/2024	0.0	31	0.0	41	10.5	29	11.0	39
11/22/2024	0.0	34	0.0	44	9.0	33	11.0	38
11/29/2024	0.0	34	0.0	44	11.0	28	11.5	37
12/6/2024	0.0	33	0.0	41	11.0	28	12.0	38
12/13/2024	0.0	32	0.0	45	12.0	29	8.0	38
12/20/2024	0.0	35	0.0	45	11.0	29	7.0	40
12/27/2024	0.0	35	0.0	45	12.0	29	11.0	42
1/3/2025	0.0	33	0.0	40	10.5	29	11.0	38
1/10/2025	0.0	32	0.0	40	10.5	29	10.0	38
1/17/2025	0.0	35	0.0	43	11.5	29	11.0	38
1/24/2025	15.0	29	12.0	41	10.5	29	11.0	40
1/31/2025	14.5	31	11	40	10	30	7	39

	WAS-9		WAS-10		WAS-11		WAS-12		Total
Week ending:	CFM	PSI	CFM	PSI	CFM	PSI	CFM	PSI	CFM
11/1/2024	4	36	7	37	6.5	37	2.5	37	50.0
11/8/2024	6	36	6	38	9.5	36	3.5	38	67.5
11/15/2024	4.0	38	10.0	39	9.0	38	3.0	39	69.5
11/22/2024	6.0	38	11.0	37	7.0	42	0.0	40	66.0
11/29/2024	6.5	36	12.0	38	9.0	37	2.0	43	74.5
12/6/2024	6.0	38	12.0	39	9.0	39	4.0	41	77.0
12/13/2024	6.5	35	8.0	42	10.0	37	5.0	40	73.5
12/20/2024	6.0	8	5.0	42	9.5	37	5.0	40	68.5
12/27/2024	6.5	35	10.0	44	8.0	37	4.0	39	78.5
1/3/2025	5.5	40	7.0	36	5.5	39	9.0	39	72.5
1/10/2025	5.0	40	7.0	39	6.0	39	4.0	40	67.5
1/17/2025	6.0	35	11.0	39	9.0	37	4.0	40	79.5
1/24/2025	7.0	35	10.0	43	10.0	36	4.0	45	105.5
1/31/2025	5.5	38	7	39	8	39	3	43	106.0

TABLE 3C. HIGHWAY AIR SPARGE SYSTEM PERFORMANCE DATA
TESORO KENAI REFINERY
KENAI, AK

	SVE-1	SVE-2	SVE-3	SVE-4	SVE-5	SVE-6	SVE-7	SVE-8
Week ending:	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM
11/1/2024	0.0	0.0	**24.0**	**22.0**	**34.0**	**20.0**	40.0	**30.0**
11/8/2024	0.0	0.0	26.0	22.0	36.0	24.0	44.0	28.0
11/15/2024	0.0	0.0	27.0	22.0	30.0	24.0	42.0	32.0
11/22/2024	0.0	0.0	25.0	20.0	35.0	25.0	38.0	30.0
11/29/2024	0.0	0.0	24.0	20.0	32.0	22.0	36.0	34.0
12/6/2024	0.0	0.0	24.0	20.0	30.0	20.0	42.0	30.0
12/13/2024	0.0	0.0	24.0	22.0	28.0	22.0	38.0	34.0
12/20/2024	0.0	0.0	25.0	21.0	31.0	22.0	36.0	34.0
12/27/2024	0.0	0.0	24.0	22.0	30.0	22.0	38.0	38.0
1/3/2025	0.0	0.0	26.0	22.0	28.0	29.0	38.0	38.0
1/10/2025	0.0	0.0	22.0	18.0	32.0	20.0	38.0	36.0
1/17/2025	0.0	0.0	26.0	22.0	32.0	28.0	38.0	32.0
1/24/2025	0.0	0.0	**26.0**	**20.0**	**30.0**	**20.0**	38.0	**31.0**
1/31/2025	0.0	0.0	28.0	26.0	12.0	5.0	28.0	18.0

Notes:
CFM - cubic feet per minute
PSI - pounds per square inch

TABLE 4. RECOVERY WELL PUMPING RATE
TESORO KENAI REFINERY
KENAI, AK

A-AQUIFER

Week ending:	R-21R GPM	R-40 GPM	R-41 GPM	COMBINED TOTAL GPM	COMBINED MINIMUM GPM
11/1/2024	39.1	44.3	39.9	123.3	60
11/8/2024	39	46	38	123	60
11/15/2024	40	44	37.5	121.5	60
11/22/2024	34	36	25	95	60
11/29/2024	33.4	36.3	25.7	95.4	60
12/6/2024	33.4	38.3	26.1	97.8	60
12/13/2024	31.5	36	28	95.5	60
12/20/2024	31.5	36	27	94.5	60
12/27/2024	31	35	26	92	60
1/3/2025	31	36	31	98	60
1/10/2025	31	35	24	90	60
1/17/2025	30.4	31.8	16.4	78.6	60
1/24/2025	29	31	20	80	60
1/31/2025	30	33	10	73	60

B-AQUIFER

Week ending:	R-50 GPM	R-51 GPM	R-52 GPM	R-54 GPM	R-55 GPM	R-56 GPM	COMBINED TOTAL GPM	COMBINED MINIMUM GPM
11/1/2024	0	0	0	0	41.9	18.1	60	60
11/8/2024	0	0	0	0	41	22	63	60
11/15/2024	0	0	0	0	41	20	61	60
11/22/2024	0	0	0	41	39	12.5	92.5	60
11/29/2024	0	0	0	41.3	38.5	12.3	92.1	60
12/6/2024	0	0	0	41	38.4	12.4	91.8	60
12/13/2024	0	0	0	40	34	11	85	60
12/20/2024	0	0	0	40	34	10	84	60
12/27/2024	0	0	0	40	33	11	84	60
1/3/2025	0	0	0	40	33	11	84	60
1/10/2025	0	0	0	40	33	10	83	60
1/17/2025	0	0	0	39.8	32.6	10.1	82.5	60
1/24/2025	0	0	0	39	38	10	87	60
1/31/2025	0	0	0	40	39	9	88	60

TABLE 4. RECOVERY WELL PUMPING RATE
TESORO KENAI REFINERY
KENAI, AK

CALGON

Week ending:	GPM	GPD	MAX GPD
11/1/2024	*-	*-	1000000
11/8/2024	215	309600	1000000
11/15/2024	218	313920	1000000
11/22/2024	231	332640	1000000
11/29/2024	231.8	333792	1000000
12/6/2024	228.2	328608	1000000
12/13/2024	228	328320	1000000
12/20/2024	230	331200	1000000
12/27/2024	220	316800	1000000
1/3/2025	224	322560	1000000
1/10/2025	225	324000	1000000
1/17/2025	218	314208	1000000
1/24/2025	220	316368	1000000
1/31/2025	219	315360	1000000

Notes:

gpm - gallons per minute

gpd - gallons per day

* System operational but unable to collect readings due to inclement weather

TABLE 5. GROUNDWATER INJECTION RATES
TESORO KENAI REFINERY
KENAI, AK

B-INJECTION

Week ending:	I-6 GPM	I-7 GPM	I-8 GPM	I-9 GPM	COMBINED TOTAL GPM	COMBINED MINIMUM GPM
11/1/2024	14.4	16.5	17.7	0	48.6	30
11/8/2024	16	17	18	24	75	30
11/15/2024	15	17	16	18	66	30
11/22/2024	16	18	15	18	67	30
11/29/2024	15.8	17.5	16.3	17.4	67	30
12/6/2024	14.5	15.7	16.6	18	64.8	30
12/13/2024	16.4	17	16	15.6	65	30
12/20/2024	16	16	15	18	65	30
12/27/2024	17	17	15	18	67	30
1/3/2025	16	16	16	18	66	30
1/10/2025	16	16	15	18	65	30
1/17/2025	16.4	16.8	15.8	18.6	67.6	30
1/24/2025	17	17	16	18	68.4	30
1/31/2025	16	16	15	17	64	30

A-INJECTION

Week ending:	IR-29R GPM	IR-30R GPM	IR-31 GPM	IR-32 GPM	COMBINED TOTAL GPM	COMBINED MINIMUM GPM
11/1/2024	*-	*-	*-	*-	*-	60
11/8/2024	42	101	47	25	215	60
11/15/2024	42	101	48	27	218	60
11/22/2024	43	100	51	45	239	60
11/29/2024	43.5	111.8	50.2	26.3	231.8	60
12/6/2024	42.6	111.9	50.3	23.4	228.2	60
12/13/2024	45	103	52	28	228	60
12/20/2024	44	103	52	31	230	60
12/27/2024	44	99	51	26	220	60
1/3/2025	45	102	51.6	25	223.6	60
1/10/2025	44	100	51	30	225	60
1/17/2025	42.2	96.4	49.1	31	218.7	60
1/24/2025	44	92	51	33	220	60
1/31/2025	45	93	53	28	219	60

Note:
gpm- gallons per minute
* System operational but unable to collect readings due to inclement weather

TABLE 6. UCA INDUSTRIAL PUMPING
TESORO KENAI REFINERY
KENAI, AK

	WELL TW-2B		WELL TW-1		WELL TW-7	
Date	Total GAL	GPD	Total GAL	GPD	GAL	GPD
11/1/2024	56,979,837	512,036	70,534,400	328,886	147,957,000	46,273
11/8/2024	58,118,486	162,664	70,913,500	54,157	148,028,209	10,173
11/15/2024	60,701,789	369,043	71,769,000	122,214	148,310,268	40,294
11/22/2024	63,977,580	467,970	73,991,200	317,457	148,639,000	46,962
11/29/2024	65,261,244	183,381	74,749,700	108,357	148,797,000	22,571
12/6/2024	67,831,916	367,239	76,035,800	183,729	149,072,000	39,286
12/13/2024	71,071,889	462,853	77,516,100	211,471	149,214,632	20,376
12/20/2024	72,834,143	251,751	78,500,900	140,686	149,234,029	2,771
12/27/2024	77,545,456	673,045	81,604,300	443,343	149,274,025	5,714
1/3/2025	78,395,345	121,413	82,363,850	108,507	149,274,025	0
1/10/2025	79,659,233	180,555	83,123,400	108,507	149,274,025	0
1/17/2025	82,030,744	338,787	84,201,200	153,971	149,274,025	0
1/24/2025	84,325,351	327,801	85,500,200	185,571	149,310,000	5,139
1/31/2025	2,505,390	4,744,625	87,480,400	282,886	149,351,454	5,922

Notes:
gal- gallons
gpd- gallons per day

FIGURES

NOTES:

PM - PHILLIPS MARATHON
PRM - PHILLIPS REMEDIAL MEASURE
SI - SURFACE IMPOUNDMENTS

N

0 2,000 Feet

Trihydro CORPORATION

1252 Commerce Drive
Laramie, WY 82070
www.trihydro.com
(P) 307/745.7474 (F) 307/745.7729

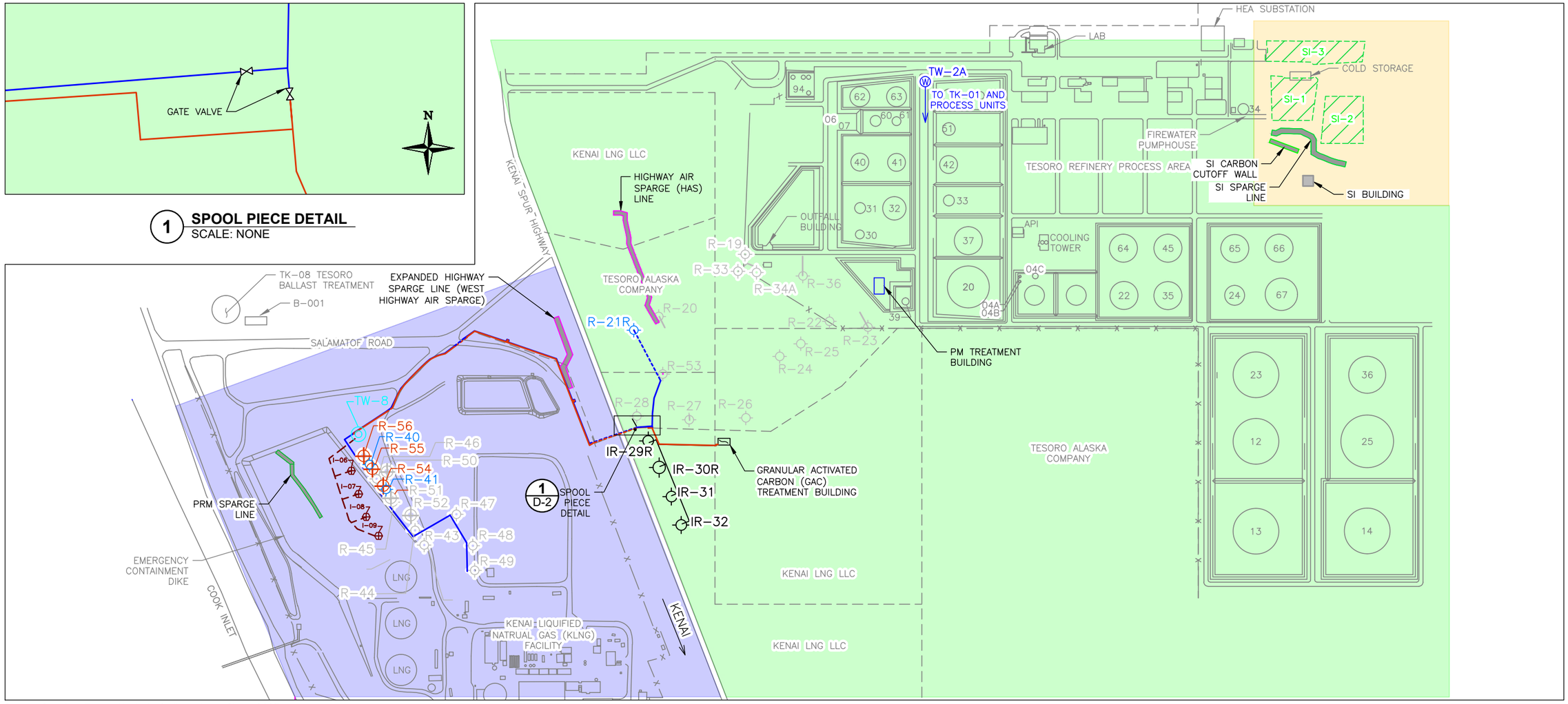
FIGURE 1

SITE LOCATION MAP

TESORO KENAI REFINERY
KENAI, ALASKA

Drawn By: DH	Checked By: BF	Scale: 1" = 2,000'	Date: 2/4/2025	File: Fig1_Kenai_Site_Location.mxd

1 SPOOL PIECE DETAIL
SCALE: NONE



Source Drawing From: Kent & Sullivan Inc., Circa 2007

EXPLANATION

- TW-8 — PRODUCTION WELL AND DESIGNATION FOR PRM AND B-AQUIFER INJECTION SYSTEM
- I-09 — B-AQUIFER INJECTION WELL AND DESIGNATION
- IR-32 — INJECTION WELL AND DESIGNATION
- R-41 — A-AQUIFER RECOVERY WELL AND DESIGNATION
- R-52 — B-AQUIFER RECOVERY WELL AND DESIGNATION
- R-50 — OFFLINE AQUIFER RECOVERY WELL AND DESIGNATION

- PRM AIR SPARGE LINE
- HIGHWAY AIR SPARGE LINE
- SI AIR SPARGE LINE
- RECOVERY WELL PIPELINE NO. 1 (DASHED WHERE SEGMENTS ARE UNDERGROUND)
- RECOVERY WELL PIPELINE NO. 2 (DASHED WHERE SEGMENTS ARE UNDERGROUND)
- B-AQUIFER INJECTION WELL PIPELINE
- GAC TREATED WATER PIPELINE

- SI CLOSED SURFACE IMPOUNDMENT
- PRM AREA
- PM AREA
- SI AREA

AS	AIR SPARGE	PRM	PHILLIPS REMEDIAL MEASURE
GAC	GRANULAR ACTIVATED CARBON	PM	PHILLIPS MARATHON
HEA	HOMER ELECTRIC ASSOCIATION	SI	SURFACE IMPOUNDMENT
LNG	LIQUID NATURAL GAS	VE	VAPOR EXTRACTION
NO.	NUMBER		

N

0 500'

FIGURE 2

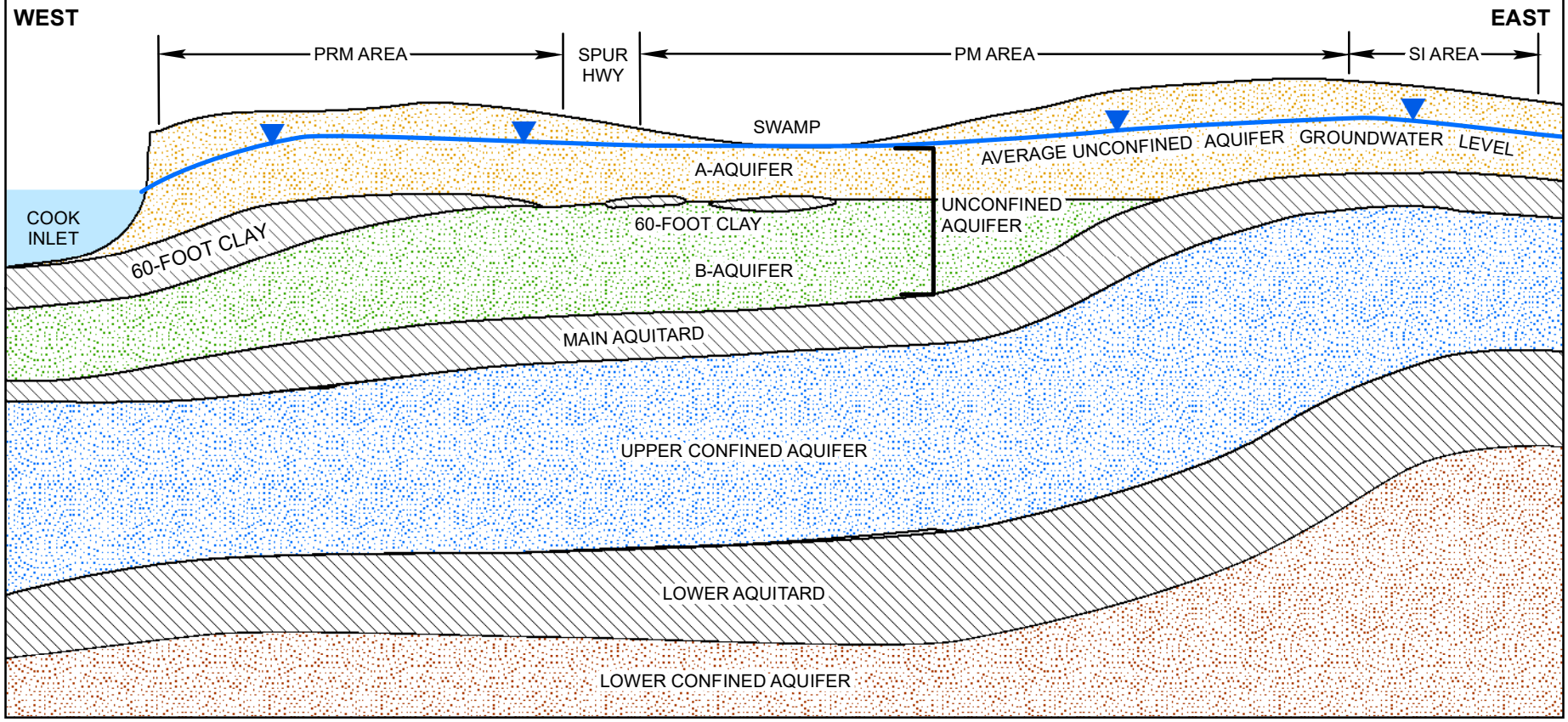
AREA DESIGNATIONS AND CORRECTIVE MEASURES SYSTEM

KENAI TESORO REFINERY
KENAI, ALASKA

Trihydro CORPORATION
1252 Commerce Drive
Laramie, Wyoming 82070
www.trihydro.com
(P) 307/745.7474 (F) 307/745.7729

Drawn By: JM	Checked By: BF	Scale: NONE	Date: 2/17/2025	File: KR_CORRECTIVEMEASURESYS_202308

C:\USERS\BJONES\ONEDRIVE - TRIHYDRO\KR_CORRECTIVEMEASURESYS_202308



NOT TO SCALE

NOTES:

PM - PHILLIPS MARATHON
PRM - PHILLIPS REMEDIAL MEASURE
SI - SURFACE IMPOUNDMENTS

Trihydro CORPORATION
1252 Commerce Drive
Laramie, WY 82070
www.trihydro.com
(P) 307/745.7474 (F) 307/745.7729

FIGURE 3

DIAGRAMMATIC CROSS SECTION ILLUSTRATING AQUIFER IDENTIFICATION

TESORO KENAI REFINERY KENAI, ALASKA

Drawn By: DH	Checked By: BF	Scale: Not to Scale	Date: 2/4/25	File: Fig3_XSecAquifers.mxd

M:\ST\OVT\TESORO\GIS\PROJECTS\TESORO KENAI\MAPPING\QUARTERLY\REPORTS\2025\02 Q25-1\F\G3_XSECAQUIFERS.MXD

APPENDIX A

DATA VALIDATIONS AND LABORATORY REPORTS

A-1. ADEC DATA QUALITY CHECKLISTS AND DATA QUALITY SUMMARIES

A-2. LABORATORY REPORTS

APPENDIX A-1

ADEC DATA QUALITY CHECKLISTS AND DATA QUALITY SUMMARIES

ADEC Contaminated Sites Program Laboratory Data Review Checklist

Completed By:	Kyle Power	**CS Site Name:**	Tesoro Alaska Refinery (Marathon)	**Lab Name:**	Eurofins Seattle
Title:	Environmental Chemist	**ADEC File No.:**	232.38.057	**Lab Report No.:**	580-145769-1
Consulting Firm:	Trihydro Corp.	**Hazard ID No.:**		**Lab Report Date:**	11/22/2024

Note: *Any N/A or No box checked must have an explanation in the comments box.*

1. **Laboratory**

   a. Did an ADEC Contaminated Sites Laboratory Approval Program (CS-LAP) approved laboratory receive and perform all of the submitted sample analyses?
   Yes ☒ No ☐ N/A ☐
   Comments: Eurofins Seattle.

   b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses CS-LAP approved?
   Yes ☐ No ☐ N/A ☒
   Comments: Samples were not transferred to another laboratory.

2. **Chain of Custody (CoC)**

   a. Is the CoC information completed, signed, and dated (including released/received by)?
   Yes ☒ No ☐ N/A ☐
   Comments: Click or tap here to enter text.

   b. Were the correct analyses requested?
   Yes ☒ No ☐ N/A ☐
   Analyses requested: Method 8260D.
   Comments: Click or tap here to enter text.

3. **Laboratory Sample Receipt Documentation**

   a. Is the sample/cooler temperature documented and within range at receipt (0° to 6° C)?
   Yes ☒ No ☐ N/A ☐
   Cooler temperature(s): 1.2°C
   Sample temperature(s): Click or tap here to enter text.

Comments: Click or tap here to enter text.

b. Is the sample preservation acceptable – acidified waters, methanol preserved soil (GRO, BTEX, VOCs, etc.)?
Yes ☐ No ☒ N/A ☐
Comments: For Method 8260D, the method requirement for no headspace was not met for sample Tripblank-1. The method-specific holding time for Method 8260D was reduced to 7 days to analysis for sample Tripblank-1. The holding time was not met for this reduced holding time and the results were qualified as R to indicate rejected data.

c. Is the sample condition documented – broken, leaking, zero headspace (VOA vials); canister vacuum/pressure checked and no open valves, etc.?
Yes ☒ No ☐ N/A ☐
Comments: Click or tap here to enter text.

d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, canister not holding a vacuum, etc.?
Yes ☒ No ☐ N/A ☐
Comments: No discrepancies

e. Is the data quality or usability affected?
Yes ☒ No ☐ N/A ☐
Comments: See description above.

4. Case Narrative

a. Is the case narrative present and understandable?
Yes ☒ No ☐ N/A ☐
Comments: Click or tap here to enter text.

b. Are there discrepancies, errors, or QC failures identified by the lab?
Yes ☒ No ☐ N/A ☐
Comments: See descriptions below.

c. Were all the corrective actions documented?
Yes ☒ No ☐ N/A ☐
Comments: Click or tap here to enter text.

d. What is the effect on data quality/usability according to the case narrative?
Comments: See descriptions below.

5. Sample Results

a. Are the correct analyses performed/reported as requested on CoC?
Yes ☒ No ☐ N/A ☐
Comments: Click or tap here to enter text.

b. Are all applicable holding times met?
Yes ☐ No ☒ N/A ☐
Comments: For Method 8260D, the method requirement for no headspace was not met for sample Tripblank-1. The method-specific holding time for Method 8260D was reduced to 7 days to analysis for sample Tripblank-1. The holding time was not met for this reduced holding time and the results were qualified as R to indicate rejected data.

c. Are all soils reported on a dry weight basis?
Yes ☐ No ☐ N/A ☒
Comments: Click or tap here to enter text.

d. Are the reported limits of quantitation (LoQ) or limits of detections (LOD), or reporting limits (RL) less than the Cleanup Level or the action level for the project?
Yes ☒ No ☐ N/A ☐
Comments: Click or tap here to enter text.

e. Is the data quality or usability affected?
Yes ☒ No ☐ N/A ☐
Comments: See description above.

6. QC Samples

a. Method Blank

i. Was one method blank reported per matrix, analysis, and 20 samples?
Yes ☒ No ☐ N/A ☐
Comments: Click or tap here to enter text.

ii. Are all method blank results less than LOQ (or RL)?
Yes ☒ No ☐
Comments: Click or tap here to enter text.

iii. If above LoQ or RL, what samples are affected?
Comments: None

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?
Yes ☐ No ☐ N/A ☒

Comments: Click or tap here to enter text.

v. Data quality or usability affected?
Yes ☐ No ☒ N/A ☐
Comments: Click or tap here to enter text.

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

i. Organics – Are one LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)
Yes ☒ No ☐ N/A ☐
Comments: Click or tap here to enter text.

ii. Metals/Inorganics – Are one LCS and one sample duplicate reported per matrix, analysis and 20 samples?
Yes ☐ No ☐ N/A ☒
Comments: Click or tap here to enter text.

iii. Accuracy – Are all percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)
Yes ☒ No ☐ N/A ☐
Comments: Click or tap here to enter text.

iv. Precision – Are all relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? Was the RPD reported from LCS/LCSD, and or sample/sample duplicate? (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)
Yes ☒ No ☐ N/A ☐
Comments: Click or tap here to enter text.

v. If %R or RPD is outside of acceptable limits, what samples are affected?
Comments: Click or tap here to enter text.

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?
Yes ☐ No ☐ N/A ☒
Comments: Click or tap here to enter text.

vii. Is the data quality or usability affected?
Yes ☐ No ☐ N/A ☒
Comments: Click or tap here to enter text.

c. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

i. Organics – Are one MS/MSD reported per matrix, analysis and 20 samples?
Yes ☐ No ☒ N/A ☐
Comments: Matrix spikes were not reported for Method 8260D.

ii. Metals/Inorganics – Are one MS/MSD reported per matrix, analysis and 20 samples?
Yes ☐ No ☐ N/A ☒
Comments: Click or tap here to enter text.

iii. Accuracy – Are all percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable?
Yes ☐ No ☐ N/A ☒
Comments: Click or tap here to enter text.

iv. Precision – Are all relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? RPD reported from MS/MSD, and or sample/sample duplicate.
Yes ☐ No ☐ N/A ☒
Comments: Click or tap here to enter text.

v. If %R or RPD is outside of acceptable limits, what samples are affected?
Comments: None

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?
Yes ☐ No ☐ N/A ☒
Comments: Click or tap here to enter text.

vii. Is the data quality or usability affected?
Yes ☐ No ☐ N/A ☒
Comments: Click or tap here to enter text.

d. Surrogates – Organics Only or Isotope Dilution Analytes (IDA) – Isotope Dilution Methods Only

i. Are surrogate/IDA recoveries reported for organic analyses – field, QC, and laboratory samples?
Yes ☒ No ☐ N/A ☐
Comments: Click or tap here to enter text.

ii. Accuracy – Are all percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK

Petroleum methods 50-150 %R for field samples and 60-120 %R for QC samples; all other analyses see the laboratory report pages)
Yes ☐ No ☒ N/A ☐
Comments: Method 8260D: The surrogate dibromofluoromethane for samples E-234B-R and E-249A failed outside the limits of recovery. The detected associated analyte, ethylbenzene, was qualified in sample E-249A as J+ due to a potential high bias. Qualification was not required for sample E-234B-R as the associated analyte results were non-detect.

iii. Do the sample results with failed surrogate/IDA recoveries have data flags? If so, are the data flags clearly defined?
Yes ☒ No ☐ N/A ☐
Comments: Click or tap here to enter text.

iv. Is the data quality or usability affected?
Yes ☒ No ☐ N/A ☐
Comments: See description above.

e. Trip Blanks

i. Is one trip blank reported per matrix, analysis, and for each cooler containing volatile samples? Yes ☒ No ☐ N/A ☐
Comments: Click or tap here to enter text.

ii. Are all results less than LoQ or RL?
Yes ☒ No ☐ N/A ☐
Comments: Click or tap here to enter text.

iii. If above LoQ or RL, what samples are affected?
Comments: Click or tap here to enter text.

iv. Is the data quality or usability affected?
Yes ☐ No ☒ N/A ☐
Comments: Click or tap here to enter text.

f. Field Duplicate

i. Are one field duplicate submitted per matrix, analysis, and 10 project samples?
Yes ☒ No ☐ N/A ☐
Comments: Dup-3 was collected as a duplicate of E-255.

ii. Was the duplicate submitted blind to lab?
Yes ☒ No ☐ N/A ☐
Comments: Click or tap here to enter text.

iii. Precision – All relative percent differences (RPD) less than specified project objectives? (Recommended: 30% water or air, 50% soil)

$$RPD\ (\%) = \left| \frac{R_1 - R_2}{\left(\frac{R_1 + R_2}{2}\right)} \right| X\ 100$$

Where R_1 = Sample Concentration

R_2 = Field Duplicate Concentration

Yes ☒ No ☐ N/A ☐
Comments: Click or tap here to enter text.

iv. Is the data quality or usability affected? (Explain)
Yes ☐ No ☐ N/A ☒
Comments:

g. Decontamination or Equipment Blanks

i. Were decontamination or equipment blanks collected?
Yes ☒ No ☐ N/A ☐
Comments: Click or tap here to enter text.

ii. Are all results less than LoQ or RL?
Yes ☒ No ☐ N/A ☐
Comments: Click or tap here to enter text.

iii. If above LoQ or RL, specify what samples are affected.
Comments: Click or tap here to enter text.

iv. Are data quality or usability affected?
Yes ☐ No ☒ N/A ☐
Comments: Click or tap here to enter text.

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

a. Are they defined and appropriate?
Yes ☒ No ☐ N/A ☐
Comments: Results were qualified as J to indicate estimated concentrations if they were greater than the method detection limit but less than the reporting limit.

ADEC Contaminated Sites Program Laboratory Data Review Checklist

Completed By:	Kyle Power	**CS Site Name:**	Tesoro Alaska Refinery (Marathon)	**Lab Name:**	Eurofins Seattle
Title:	Environmental Chemist	**ADEC File No.:**	232.38.057	**Lab Report No.:**	580-145914-1
Consulting Firm:	Trihydro Corp.	**Hazard ID No.:**		**Lab Report Date:**	11/25/2024

Note: *Any N/A or No box checked must have an explanation in the comments box.*

1. **Laboratory**

   a. Did an ADEC Contaminated Sites Laboratory Approval Program (CS-LAP) approved laboratory receive and perform all of the submitted sample analyses?
   Yes ☒ No ☐ N/A ☐
   Comments: Eurofins Seattle.

   b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses CS-LAP approved?
   Yes ☐ No ☐ N/A ☒
   Comments: Samples were not transferred to another laboratory.

2. **Chain of Custody (CoC)**

   a. Is the CoC information completed, signed, and dated (including released/received by)?
   Yes ☒ No ☐ N/A ☐
   Comments: Click or tap here to enter text.

   b. Were the correct analyses requested?
   Yes ☒ No ☐ N/A ☐
   Analyses requested: Method 8260D.
   Comments: Click or tap here to enter text.

3. **Laboratory Sample Receipt Documentation**

   a. Is the sample/cooler temperature documented and within range at receipt (0° to 6° C)?
   Yes ☒ No ☐ N/A ☐
   Cooler temperature(s): 3.7°C
   Sample temperature(s): Click or tap here to enter text.

Comments: Click or tap here to enter text.

b. Is the sample preservation acceptable – acidified waters, methanol preserved soil (GRO, BTEX, VOCs, etc.)?
Yes ☒ No ☐ N/A ☐
Comments: Click or tap here to enter text.

c. Is the sample condition documented – broken, leaking, zero headspace (VOA vials); canister vacuum/pressure checked and no open valves, etc.?
Yes ☒ No ☐ N/A ☐
Comments: Click or tap here to enter text.

d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, canister not holding a vacuum, etc.?
Yes ☒ No ☐ N/A ☐
Comments: No discrepancies

e. Is the data quality or usability affected?
Yes ☐ No ☒ N/A ☐
Comments: No discrepancies

4. Case Narrative

a. Is the case narrative present and understandable?
Yes ☒ No ☐ N/A ☐
Comments: Click or tap here to enter text.

b. Are there discrepancies, errors, or QC failures identified by the lab?
Yes ☒ No ☐ N/A ☐
Comments: See descriptions below.

c. Were all the corrective actions documented?
Yes ☒ No ☐ N/A ☐
Comments: Click or tap here to enter text.

d. What is the effect on data quality/usability according to the case narrative?
Comments: See descriptions below.

5. Sample Results

a. Are the correct analyses performed/reported as requested on CoC?
Yes ☒ No ☐ N/A ☐
Comments: Click or tap here to enter text.

b. Are all applicable holding times met?
Yes ☒ No ☐ N/A ☐
Comments: Click or tap here to enter text.

c. Are all soils reported on a dry weight basis?
Yes ☐ No ☐ N/A ☒
Comments: Click or tap here to enter text.

d. Are the reported limits of quantitation (LoQ) or limits of detections (LOD), or reporting limits (RL) less than the Cleanup Level or the action level for the project?
Yes ☒ No ☐ N/A ☐
Comments: Click or tap here to enter text.

e. Is the data quality or usability affected?
Yes ☐ No ☒ N/A ☐
Comments: No discrepancies

6. QC Samples

a. Method Blank

i. Was one method blank reported per matrix, analysis, and 20 samples?
Yes ☒ No ☐ N/A ☐
Comments: Click or tap here to enter text.

ii. Are all method blank results less than LOQ (or RL)?
Yes ☒ No ☐
Comments: Click or tap here to enter text.

iii. If above LoQ or RL, what samples are affected?
Comments: None

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?
Yes ☐ No ☐ N/A ☒
Comments: Click or tap here to enter text.

v. Data quality or usability affected?
Yes ☐ No ☒ N/A ☐
Comments: Click or tap here to enter text.

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

i. Organics – Are one LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)
Yes ☒ No ☐ N/A ☐
Comments: Click or tap here to enter text.

ii. Metals/Inorganics – Are one LCS and one sample duplicate reported per matrix, analysis and 20 samples?
Yes ☐ No ☐ N/A ☒
Comments: Click or tap here to enter text.

iii. Accuracy – Are all percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)
Yes ☐ No ☒ N/A ☐
Comments: The LCS and LCSD recoveries for m,p-xylene from analysis batch 478466 were outside limits. Qualification was not required as the LCS and LCSD recoveries were biased high, and the associated samples were non-detections for m,p-xylene.

iv. Precision – Are all relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? Was the RPD reported from LCS/LCSD, and or sample/sample duplicate? (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)
Yes ☒ No ☐ N/A ☐
Comments: Click or tap here to enter text.

v. If %R or RPD is outside of acceptable limits, what samples are affected?
Comments: Click or tap here to enter text.

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?
Yes ☐ No ☐ N/A ☒
Comments: See description above.

vii. Is the data quality or usability affected?
Yes ☐ No ☒ N/A ☐
Comments: See description above.

c. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

i. Organics – Are one MS/MSD reported per matrix, analysis and 20 samples?
Yes ☐ No ☒ N/A ☐
Comments: Matrix spikes were not reported for Method 8260D.

ii. Metals/Inorganics – Are one MS/MSD reported per matrix, analysis and 20 samples?
Yes ☐ No ☐ N/A ☒
Comments: Click or tap here to enter text.

iii. Accuracy – Are all percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable?
Yes ☐ No ☐ N/A ☒
Comments: Click or tap here to enter text.

iv. Precision – Are all relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? RPD reported from MS/MSD, and or sample/sample duplicate.
Yes ☐ No ☐ N/A ☒
Comments: Click or tap here to enter text.

v. If %R or RPD is outside of acceptable limits, what samples are affected?
Comments: None

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?
Yes ☐ No ☐ N/A ☒
Comments: Click or tap here to enter text.

vii. Is the data quality or usability affected?
Yes ☐ No ☐ N/A ☒
Comments: Click or tap here to enter text.

d. Surrogates – Organics Only or Isotope Dilution Analytes (IDA) – Isotope Dilution Methods Only

i. Are surrogate/IDA recoveries reported for organic analyses – field, QC, and laboratory samples?
Yes ☒ No ☐ N/A ☐
Comments: Click or tap here to enter text.

ii. Accuracy – Are all percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK

Petroleum methods 50-150 %R for field samples and 60-120 %R for QC samples; all other analyses see the laboratory report pages)
Yes ☐ No ☒ N/A ☐
Comments: Method 8260D: The surrogate dibromofluoromethane for sample E-256 failed outside the limits of recovery. Qualification was not required for sample E-256 as the associated analyte results were non-detect.

iii. Do the sample results with failed surrogate/IDA recoveries have data flags? If so, are the data flags clearly defined?
Yes ☒ No ☐ N/A ☐
Comments: Click or tap here to enter text.

iv. Is the data quality or usability affected?
Yes ☐ No ☒ N/A ☐
Comments: See description above.

e. Trip Blanks

i. Is one trip blank reported per matrix, analysis, and for each cooler containing volatile samples? Yes ☒ No ☐ N/A ☐
Comments: Click or tap here to enter text.

ii. Are all results less than LoQ or RL?
Yes ☒ No ☐ N/A ☐
Comments: Click or tap here to enter text.

iii. If above LoQ or RL, what samples are affected?
Comments: Click or tap here to enter text.

iv. Is the data quality or usability affected?
Yes ☐ No ☒ N/A ☐
Comments: Click or tap here to enter text.

f. Field Duplicate

i. Are one field duplicate submitted per matrix, analysis, and 10 project samples?
Yes ☒ No ☐ N/A ☐
Comments: Dup-3 was collected as a duplicate of E-255.

ii. Was the duplicate submitted blind to lab?
Yes ☒ No ☐ N/A ☐
Comments: Click or tap here to enter text.

iii. Precision – All relative percent differences (RPD) less than specified project objectives? (Recommended: 30% water or air, 50% soil)

$$RPD\ (\%) = \left| \frac{R_1 - R_2}{\left(\frac{R_1 + R_2}{2}\right)} \right| X\ 100$$

Where R_1 = Sample Concentration

R_2 = Field Duplicate Concentration

Yes ☐ No ☒ N/A ☐
Comments: The field duplicate RPD for m,p-xylene (41.4%) and ethylbenzene (36.0%) from duplicate pair E-072RR/DUP-1 were outside limits. The m,p-xylene results for the duplicate pair were qualified as J to indicate estimated concentrations due to poor precision. Qualification was not required for ethylbenzene as the absolute difference requirement per the data validation reference was met.

iv. Is the data quality or usability affected? (Explain)
Yes ☒ No ☐ N/A ☐
Comments: See description above.

g. Decontamination or Equipment Blanks

i. Were decontamination or equipment blanks collected?
Yes ☒ No ☐ N/A ☐
Comments: Click or tap here to enter text.

ii. Are all results less than LoQ or RL?
Yes ☒ No ☐ N/A ☐
Comments: Click or tap here to enter text.

iii. If above LoQ or RL, specify what samples are affected.
Comments: Click or tap here to enter text.

iv. Are data quality or usability affected?
Yes ☐ No ☒ N/A ☐
Comments: Click or tap here to enter text.

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

a. Are they defined and appropriate?
Yes ☒ No ☐ N/A ☐
Comments: Results were qualified as J to indicate estimated concentrations if they were greater than the method detection limit but less than the reporting limit.

QUALITY CONTROL SUMMARY- 580-145769-1

Trihydro completed a data validation of the analytical results in accordance with the following references.

- Data for organic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Organic Superfund Methods Data Review, document number EPA-540-R-20-005, November 2020
- Review of field duplicates was conducted according to the USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020
- Trihydro Data Validation Variance Documentation, March 2024

Results of the QA/QC review for data are summarized below and are presented in the ADEC Laboratory Data Review Checklist. The sample results are reported under Eurofins Seattle project number 580-145769-1. On November 08-12, 2024, eighteen groundwater samples, one field duplicate sample, one equipment blank sample, and one trip blank sample were submitted in one batch to the laboratory. Dup-3 was collected as a duplicate of E-255. The samples were received at the lab in good condition, preserved and at temperatures of 1.2°C.

For Method 8260D, the method requirement for no headspace was not met for sample Tripblank-1. The method-specific holding time for Method 8260D was reduced to 7 days to analysis for sample Tripblank-1. The holding time was not met for this reduced holding time and the results were qualified as R to indicate rejected data.

Sample results were reviewed to determine overall precision of sampling and analysis as well as matrix homogeneity for all analytes. All percent recoveries (%R) from laboratory control sample/duplicate (LCS/LCSD) were within range.

Method 8260D: The surrogate dibromofluoromethane for samples E-234B-R and E-249A failed outside the limits of recovery. The detected associated analyte, ethylbenzene, was qualified in sample E-249A as J+ due to a potential high bias. Qualification was not required for sample E-234B-R as the associated analyte results were non-detect.

All duplicated sample RPDs were less than the recommended limit (30% for water matrices). The following summary highlights the data evaluation findings for this sampling event:

- Five data points were rejected due to reduced holding time exceedence; however, these data points were from a trip blank sample and are not considered in the completeness objective calculation.
- The completeness objectives (greater than 85 percent complete) for this project are met with 100% completeness.

- The precision and accuracy of the laboratory data, as measured by laboratory quality control indicators, demonstrate that the data are usable as qualified for the purposes of this project.
- The precision measurements for result comparisons between primary and duplicate field samples are acceptable for the purpose of this project and are marked with applicable qualifiers.

QUALITY CONTROL SUMMARY- 580-145914-1

Trihydro completed a data validation of the analytical results in accordance with the following references.

- Data for organic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Organic Superfund Methods Data Review, document number EPA-540-R-20-005, November 2020
- Review of field duplicates was conducted according to the USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020
- Trihydro Data Validation Variance Documentation, March 2024

Results of the QA/QC review for data are summarized below and are presented in the ADEC Laboratory Data Review Checklist. The sample results are reported under Eurofins Seattle project number 580-145914-1. On November 18, 2024, sixteen groundwater samples, three field duplicate samples, one equipment blank sample, and two trip blank samples were submitted in one batch to the laboratory. DUP-1 was collected as a duplicate of E-072RR, DUP-2 was collected as a duplicate of E-010, and DUP-4 was collected as a duplicate of IWS-6. The samples were received at the lab in good condition, preserved and at temperatures of 3.7°C.

Sample results were reviewed to determine overall precision of sampling and analysis as well as matrix homogeneity for all analytes. All percent recoveries (%R) from laboratory control sample/duplicate (LCS/LCSD) were within range, except for m,p-xylene from analysis batch 478466. Qualification was not required as the LCS and LCSD recoveries were biased high and the associated samples did not detect m,p-xylene.

Method 8260D: The surrogate dibromofluoromethane for sample E-256 failed outside the limits of recovery. Qualification was not required for sample E-256 as the associated analyte results were non-detect.

All duplicated sample RPDs were less than the recommended limit (30% for water matrices), except for m,p-xylene (41.4%) and ethylbenzene (36.0%) from duplicate pair E-072RR/DUP-1. The m,p-xylene results for the duplicate pair were qualified as J to indicate estimated concentrations due to poor precision. Qualification was not required for ethylbenzene as the absolute difference requirement per the data validation reference was met.

The following summary highlights the data evaluation findings for this sampling event:

- Data points were not rejected.
- The completeness objectives (greater than 85 percent complete) for this project are met with 100% completeness.

- The precision and accuracy of the laboratory data, as measured by laboratory quality control indicators, demonstrate that the data are usable as qualified for the purposes of this project.
- The precision measurements for result comparisons between primary and duplicate field samples are acceptable for the purpose of this project and are marked with applicable qualifiers.

APPENDIX A-2

LABORATORY REPORT

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Jeremy Yancey
Marathon Petroleum Company LP
54741 Energy Way
Kenai, Alaska 99611

Generated 11/22/2024 1:43:38 PM

JOB DESCRIPTION

Marathon Petroleum Company

JOB NUMBER

580-145769-1

Eurofins Seattle
5755 8th Street East
Tacoma WA 98424

See page two for job notes and contact information.

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 Northwest, LLC Project Manager.

Authorization

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Authorized for release by
Lance Morris, Project Manager
Lance.Morris@et.eurofinsus.com
(253)922-2310

Table of Contents

Job ID: 580-145769-1 — Eurofins Seattle

Job Narrative
580-145769-1

Receipt
The samples were received on 11/13/2024 2:34 PM. 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 was 1.2º C.

Receipt Exceptions

One VOA vial for this sample was received broken at the laboratory. No volume was left in the vial: Tripblank-1 (580-145769-21)

GC/MS VOA
Method 8260D: Surrogate recovery for the following samples was outside the upper control limit: E-234B-R (580-145769-15). This sample did not contain any target analytes; therefore, re-analysis was not performed.

Method 8260D: Surrogate recovery for the following sample was outside control limits: E-249A (580-145769-19). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8260D: The method requirement for no headspace was not met. The following volatile sample was analyzed with headspace in the sample container(s): Tripblank-1 (580-145769-21).

Method 8260D: The following samples were diluted to bring the concentration of target analytes within the calibration range: E-250B (580-145769-11), E-234B-R (580-145769-15) and E-249B (580-145769-18). Elevated reporting limits (RLs) are provided.

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

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1+	Surrogate recovery exceeds control limits, high biased.

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

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145769-1

Client Sample ID: E-156
Date Collected: 11/08/24 11:50
Date Received: 11/13/24 14:34

Lab Sample ID: 580-145769-1
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**5.5**		1.0	0.24	ug/L			11/16/24 06:00	1
Toluene	ND		1.0	0.39	ug/L			11/16/24 06:00	1
Ethylbenzene	ND		1.0	0.50	ug/L			11/16/24 06:00	1
m-Xylene & p-Xylene	**15**		2.0	0.53	ug/L			11/16/24 06:00	1
o-Xylene	ND		1.0	0.39	ug/L			11/16/24 06:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*99*		*80 - 120*		*11/16/24 06:00*	*1*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*		*11/16/24 06:00*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 120*		*11/16/24 06:00*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*80 - 120*		*11/16/24 06:00*	*1*

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145769-1

Client Sample ID: E-155
Date Collected: 11/08/24 13:15
Date Received: 11/13/24 14:34

Lab Sample ID: 580-145769-2
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.24	ug/L			11/16/24 06:23	1
Toluene	ND		1.0	0.39	ug/L			11/16/24 06:23	1
Ethylbenzene	ND		1.0	0.50	ug/L			11/16/24 06:23	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			11/16/24 06:23	1
o-Xylene	ND		1.0	0.39	ug/L			11/16/24 06:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*97*		*80 - 120*		*11/16/24 06:23*	*1*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*		*11/16/24 06:23*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 120*		*11/16/24 06:23*	*1*
1,2-Dichloroethane-d4 (Surr)	*99*		*80 - 120*		*11/16/24 06:23*	*1*

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145769-1

Client Sample ID: E-137A
Date Collected: 11/08/24 13:50
Date Received: 11/13/24 14:34

Lab Sample ID: 580-145769-3
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.24	ug/L			11/16/24 06:46	1
Toluene	ND		1.0	0.39	ug/L			11/16/24 06:46	1
Ethylbenzene	ND		1.0	0.50	ug/L			11/16/24 06:46	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			11/16/24 06:46	1
o-Xylene	ND		1.0	0.39	ug/L			11/16/24 06:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*80 - 120*		*11/16/24 06:46*	*1*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*		*11/16/24 06:46*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 120*		*11/16/24 06:46*	*1*
1,2-Dichloroethane-d4 (Surr)	*99*		*80 - 120*		*11/16/24 06:46*	*1*

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145769-1

Client Sample ID: E-137B
Date Collected: 11/08/24 14:22
Date Received: 11/13/24 14:34

Lab Sample ID: 580-145769-4
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.24	ug/L			11/16/24 07:10	1
Toluene	ND		1.0	0.39	ug/L			11/16/24 07:10	1
Ethylbenzene	ND		1.0	0.50	ug/L			11/16/24 07:10	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			11/16/24 07:10	1
o-Xylene	ND		1.0	0.39	ug/L			11/16/24 07:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*80 - 120*		*11/16/24 07:10*	*1*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*		*11/16/24 07:10*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 120*		*11/16/24 07:10*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*80 - 120*		*11/16/24 07:10*	*1*

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145769-1

Client Sample ID: E-160

Date Collected: 11/08/24 14:57
Date Received: 11/13/24 14:34

Lab Sample ID: 580-145769-5

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**7.9**		1.0	0.24	ug/L			11/16/24 07:33	1
Toluene	ND		1.0	0.39	ug/L			11/16/24 07:33	1
Ethylbenzene	ND		1.0	0.50	ug/L			11/16/24 07:33	1
m-Xylene & p-Xylene	**41**		2.0	0.53	ug/L			11/16/24 07:33	1
o-Xylene	ND		1.0	0.39	ug/L			11/16/24 07:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*80 - 120*		*11/16/24 07:33*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*11/16/24 07:33*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 120*		*11/16/24 07:33*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*80 - 120*		*11/16/24 07:33*	*1*

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145769-1

Client Sample ID: E-259

Date Collected: 11/11/24 11:05
Date Received: 11/13/24 14:34

Lab Sample ID: 580-145769-6

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.24	ug/L			11/16/24 05:50	1
Toluene	ND		1.0	0.39	ug/L			11/16/24 05:50	1
Ethylbenzene	ND		1.0	0.50	ug/L			11/16/24 05:50	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			11/16/24 05:50	1
o-Xylene	ND		1.0	0.39	ug/L			11/16/24 05:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*96*		*80 - 120*		*11/16/24 05:50*	*1*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*		*11/16/24 05:50*	*1*
Dibromofluoromethane (Surr)	*107*		*80 - 120*		*11/16/24 05:50*	*1*
1,2-Dichloroethane-d4 (Surr)	*112*		*80 - 120*		*11/16/24 05:50*	*1*

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145769-1

Client Sample ID: MW-93

Date Collected: 11/11/24 12:18
Date Received: 11/13/24 14:34

Lab Sample ID: 580-145769-7

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.24	ug/L			11/19/24 01:35	1
Toluene	ND		1.0	0.39	ug/L			11/19/24 01:35	1
Ethylbenzene	ND		1.0	0.50	ug/L			11/19/24 01:35	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			11/19/24 01:35	1
o-Xylene	ND		1.0	0.39	ug/L			11/19/24 01:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*96*		*80 - 120*		*11/19/24 01:35*	*1*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*		*11/19/24 01:35*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*		*11/19/24 01:35*	*1*
1,2-Dichloroethane-d4 (Surr)	*97*		*80 - 120*		*11/19/24 01:35*	*1*

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145769-1

Client Sample ID: E-255

Date Collected: 11/11/24 13:46
Date Received: 11/13/24 14:34

Lab Sample ID: 580-145769-8

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**80**		1.0	0.24	ug/L			11/16/24 06:36	1
Toluene	ND		1.0	0.39	ug/L			11/16/24 06:36	1
Ethylbenzene	ND		1.0	0.50	ug/L			11/16/24 06:36	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			11/16/24 06:36	1
o-Xylene	ND		1.0	0.39	ug/L			11/16/24 06:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*95*		*80 - 120*		*11/16/24 06:36*	*1*
4-Bromofluorobenzene (Surr)	*109*		*80 - 120*		*11/16/24 06:36*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 120*		*11/16/24 06:36*	*1*
1,2-Dichloroethane-d4 (Surr)	*107*		*80 - 120*		*11/16/24 06:36*	*1*

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145769-1

Client Sample ID: E-250A

Date Collected: 11/11/24 14:32
Date Received: 11/13/24 14:34

Lab Sample ID: 580-145769-9

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND		1.0	0.39	ug/L			11/16/24 09:42	1
Ethylbenzene	ND		1.0	0.50	ug/L			11/16/24 09:42	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			11/16/24 09:42	1
o-Xylene	ND		1.0	0.39	ug/L			11/16/24 09:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*95*		*80 - 120*		*11/16/24 09:42*	*1*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*		*11/16/24 09:42*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*		*11/16/24 09:42*	*1*
1,2-Dichloroethane-d4 (Surr)	*106*		*80 - 120*		*11/16/24 09:42*	*1*

Method: SW846 8260D - Volatile Organic Compounds by GC/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**2.1**		1.0	0.24	ug/L			11/19/24 03:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*96*		*80 - 120*		*11/19/24 03:30*	*1*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*		*11/19/24 03:30*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*		*11/19/24 03:30*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*80 - 120*		*11/19/24 03:30*	*1*

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145769-1

Client Sample ID: EB-01
Date Collected: 11/11/24 14:45
Date Received: 11/13/24 14:34

Lab Sample ID: 580-145769-10
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.24	ug/L			11/16/24 07:00	1
Toluene	ND		1.0	0.39	ug/L			11/16/24 07:00	1
Ethylbenzene	ND		1.0	0.50	ug/L			11/16/24 07:00	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			11/16/24 07:00	1
o-Xylene	ND		1.0	0.39	ug/L			11/16/24 07:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*96*		*80 - 120*		*11/16/24 07:00*	*1*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*		*11/16/24 07:00*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*		*11/16/24 07:00*	*1*
1,2-Dichloroethane-d4 (Surr)	*106*		*80 - 120*		*11/16/24 07:00*	*1*

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145769-1

Client Sample ID: E-250B

Date Collected: 11/11/24 15:10
Date Received: 11/13/24 14:34

Lab Sample ID: 580-145769-11

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND		1.0	0.39	ug/L			11/16/24 05:03	1
Ethylbenzene	ND		1.0	0.50	ug/L			11/16/24 05:03	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			11/16/24 05:03	1
o-Xylene	ND		1.0	0.39	ug/L			11/16/24 05:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*95*		*80 - 120*		*11/16/24 05:03*	*1*
4-Bromofluorobenzene (Surr)	*108*		*80 - 120*		*11/16/24 05:03*	*1*
Dibromofluoromethane (Surr)	*114*		*80 - 120*		*11/16/24 05:03*	*1*
1,2-Dichloroethane-d4 (Surr)	*112*		*80 - 120*		*11/16/24 05:03*	*1*

Method: SW846 8260D - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**410**		10	2.4	ug/L			11/19/24 05:49	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*94*		*80 - 120*		*11/19/24 05:49*	*10*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*		*11/19/24 05:49*	*10*
Dibromofluoromethane (Surr)	*98*		*80 - 120*		*11/19/24 05:49*	*10*
1,2-Dichloroethane-d4 (Surr)	*98*		*80 - 120*		*11/19/24 05:49*	*10*

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145769-1

Client Sample ID: E-247A
Date Collected: 11/12/24 10:30
Date Received: 11/13/24 14:34

Lab Sample ID: 580-145769-12
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.24	ug/L			11/16/24 10:05	1
Toluene	ND		1.0	0.39	ug/L			11/16/24 10:05	1
Ethylbenzene	ND		1.0	0.50	ug/L			11/16/24 10:05	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			11/16/24 10:05	1
o-Xylene	ND		1.0	0.39	ug/L			11/16/24 10:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*95*		*80 - 120*		*11/16/24 10:05*	*1*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*		*11/16/24 10:05*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 120*		*11/16/24 10:05*	*1*
1,2-Dichloroethane-d4 (Surr)	*108*		*80 - 120*		*11/16/24 10:05*	*1*

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145769-1

Client Sample ID: E-247B
Date Collected: 11/12/24 11:02
Date Received: 11/13/24 14:34

Lab Sample ID: 580-145769-13
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**51**		1.0	0.24	ug/L			11/16/24 08:09	1
Toluene	ND		1.0	0.39	ug/L			11/16/24 08:09	1
Ethylbenzene	ND		1.0	0.50	ug/L			11/16/24 08:09	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			11/16/24 08:09	1
o-Xylene	ND		1.0	0.39	ug/L			11/16/24 08:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*94*		*80 - 120*		*11/16/24 08:09*	*1*
4-Bromofluorobenzene (Surr)	*107*		*80 - 120*		*11/16/24 08:09*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*		*11/16/24 08:09*	*1*
1,2-Dichloroethane-d4 (Surr)	*105*		*80 - 120*		*11/16/24 08:09*	*1*

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145769-1

Client Sample ID: E-234A-R
Date Collected: 11/12/24 11:53
Date Received: 11/13/24 14:34

Lab Sample ID: 580-145769-14
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.24	ug/L			11/16/24 07:46	1
Toluene	ND		1.0	0.39	ug/L			11/16/24 07:46	1
Ethylbenzene	ND		1.0	0.50	ug/L			11/16/24 07:46	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			11/16/24 07:46	1
o-Xylene	ND		1.0	0.39	ug/L			11/16/24 07:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*95*		*80 - 120*		*11/16/24 07:46*	*1*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*		*11/16/24 07:46*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*		*11/16/24 07:46*	*1*
1,2-Dichloroethane-d4 (Surr)	*105*		*80 - 120*		*11/16/24 07:46*	*1*

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145769-1

Client Sample ID: E-234B-R

Date Collected: 11/12/24 12:25
Date Received: 11/13/24 14:34

Lab Sample ID: 580-145769-15

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND		1.0	0.39	ug/L			11/16/24 10:29	1
Ethylbenzene	ND		1.0	0.50	ug/L			11/16/24 10:29	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			11/16/24 10:29	1
o-Xylene	ND		1.0	0.39	ug/L			11/16/24 10:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*92*		*80 - 120*		*11/16/24 10:29*	*1*
4-Bromofluorobenzene (Surr)	*107*		*80 - 120*		*11/16/24 10:29*	*1*
Dibromofluoromethane (Surr)	*128*	*S1+*	*80 - 120*		*11/16/24 10:29*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*80 - 120*		*11/16/24 10:29*	*1*

Method: SW846 8260D - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**1500**		100	24	ug/L			11/19/24 06:59	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*96*		*80 - 120*		*11/19/24 06:59*	*100*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*		*11/19/24 06:59*	*100*
Dibromofluoromethane (Surr)	*100*		*80 - 120*		*11/19/24 06:59*	*100*
1,2-Dichloroethane-d4 (Surr)	*97*		*80 - 120*		*11/19/24 06:59*	*100*

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145769-1

Client Sample ID: E-147
Date Collected: 11/12/24 13:40
Date Received: 11/13/24 14:34

Lab Sample ID: 580-145769-16
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**13**		1.0	0.24	ug/L			11/16/24 08:32	1
Toluene	ND		1.0	0.39	ug/L			11/16/24 08:32	1
Ethylbenzene	ND		1.0	0.50	ug/L			11/16/24 08:32	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			11/16/24 08:32	1
o-Xylene	ND		1.0	0.39	ug/L			11/16/24 08:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*94*		*80 - 120*		*11/16/24 08:32*	*1*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*		*11/16/24 08:32*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*		*11/16/24 08:32*	*1*
1,2-Dichloroethane-d4 (Surr)	*107*		*80 - 120*		*11/16/24 08:32*	*1*

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145769-1

Client Sample ID: E-249C

Date Collected: 11/12/24 14:29
Date Received: 11/13/24 14:34

Lab Sample ID: 580-145769-17

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND		1.0	0.39	ug/L			11/16/24 10:52	1
Ethylbenzene	ND		1.0	0.50	ug/L			11/16/24 10:52	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			11/16/24 10:52	1
o-Xylene	ND		1.0	0.39	ug/L			11/16/24 10:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*94*		*80 - 120*		*11/16/24 10:52*	*1*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*		*11/16/24 10:52*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*		*11/16/24 10:52*	*1*
1,2-Dichloroethane-d4 (Surr)	*109*		*80 - 120*		*11/16/24 10:52*	*1*

Method: SW846 8260D - Volatile Organic Compounds by GC/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**1.1**		1.0	0.24	ug/L			11/19/24 01:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*95*		*80 - 120*		*11/19/24 01:58*	*1*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*		*11/19/24 01:58*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*		*11/19/24 01:58*	*1*
1,2-Dichloroethane-d4 (Surr)	*99*		*80 - 120*		*11/19/24 01:58*	*1*

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145769-1

Client Sample ID: E-249B

Date Collected: 11/12/24 14:57
Date Received: 11/13/24 14:34

Lab Sample ID: 580-145769-18

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND		1.0	0.39	ug/L			11/16/24 09:19	1
Ethylbenzene	ND		1.0	0.50	ug/L			11/16/24 09:19	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			11/16/24 09:19	1
o-Xylene	ND		1.0	0.39	ug/L			11/16/24 09:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*94*		*80 - 120*		*11/16/24 09:19*	*1*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*		*11/16/24 09:19*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*		*11/16/24 09:19*	*1*
1,2-Dichloroethane-d4 (Surr)	*107*		*80 - 120*		*11/16/24 09:19*	*1*

Method: SW846 8260D - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**100**		10	2.4	ug/L			11/19/24 06:12	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*97*		*80 - 120*		*11/19/24 06:12*	*10*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*		*11/19/24 06:12*	*10*
Dibromofluoromethane (Surr)	*100*		*80 - 120*		*11/19/24 06:12*	*10*
1,2-Dichloroethane-d4 (Surr)	*99*		*80 - 120*		*11/19/24 06:12*	*10*

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145769-1

Client Sample ID: E-249A

Date Collected: 11/12/24 15:25
Date Received: 11/13/24 14:34

Lab Sample ID: 580-145769-19

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND		1.0	0.39	ug/L			11/16/24 08:56	1
Ethylbenzene	**1.5**		1.0	0.50	ug/L			11/16/24 08:56	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			11/16/24 08:56	1
o-Xylene	ND		1.0	0.39	ug/L			11/16/24 08:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*92*		*80 - 120*		*11/16/24 08:56*	*1*
4-Bromofluorobenzene (Surr)	*112*		*80 - 120*		*11/16/24 08:56*	*1*
Dibromofluoromethane (Surr)	*129*	*S1+*	*80 - 120*		*11/16/24 08:56*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*80 - 120*		*11/16/24 08:56*	*1*

Method: SW846 8260D - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**1600**		100	24	ug/L			11/19/24 22:07	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*95*		*80 - 120*		*11/19/24 22:07*	*100*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*		*11/19/24 22:07*	*100*
Dibromofluoromethane (Surr)	*99*		*80 - 120*		*11/19/24 22:07*	*100*
1,2-Dichloroethane-d4 (Surr)	*99*		*80 - 120*		*11/19/24 22:07*	*100*

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145769-1

Client Sample ID: Dup-3
Date Collected: 11/11/24 08:00
Date Received: 11/13/24 14:34

Lab Sample ID: 580-145769-20
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**81**		1.0	0.24	ug/L			11/16/24 07:23	1
Toluene	ND		1.0	0.39	ug/L			11/16/24 07:23	1
Ethylbenzene	**0.52**	**J**	1.0	0.50	ug/L			11/16/24 07:23	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			11/16/24 07:23	1
o-Xylene	ND		1.0	0.39	ug/L			11/16/24 07:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*96*		*80 - 120*		*11/16/24 07:23*	*1*
4-Bromofluorobenzene (Surr)	*111*		*80 - 120*		*11/16/24 07:23*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 120*		*11/16/24 07:23*	*1*
1,2-Dichloroethane-d4 (Surr)	*105*		*80 - 120*		*11/16/24 07:23*	*1*

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145769-1

Client Sample ID: Tripblank-1

Date Collected: 11/08/24 07:00
Date Received: 11/13/24 14:34

Lab Sample ID: 580-145769-21

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.24	ug/L			11/18/24 13:58	1
Toluene	ND		1.0	0.39	ug/L			11/18/24 13:58	1
Ethylbenzene	ND		1.0	0.50	ug/L			11/18/24 13:58	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			11/18/24 13:58	1
o-Xylene	ND		1.0	0.39	ug/L			11/18/24 13:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*93*		*80 - 120*		*11/18/24 13:58*	*1*
4-Bromofluorobenzene (Surr)	*108*		*80 - 120*		*11/18/24 13:58*	*1*
Dibromofluoromethane (Surr)	*114*		*80 - 120*		*11/18/24 13:58*	*1*
1,2-Dichloroethane-d4 (Surr)	*120*		*80 - 120*		*11/18/24 13:58*	*1*

Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 580-478100/7
Matrix: Water
Analysis Batch: 478100

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.24	ug/L			11/16/24 03:54	1
Toluene	ND		1.0	0.39	ug/L			11/16/24 03:54	1
Ethylbenzene	ND		1.0	0.50	ug/L			11/16/24 03:54	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			11/16/24 03:54	1
o-Xylene	ND		1.0	0.39	ug/L			11/16/24 03:54	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*95*		*80 - 120*		*11/16/24 03:54*	*1*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*		*11/16/24 03:54*	*1*
Dibromofluoromethane (Surr)	*108*		*80 - 120*		*11/16/24 03:54*	*1*
1,2-Dichloroethane-d4 (Surr)	*111*		*80 - 120*		*11/16/24 03:54*	*1*

Lab Sample ID: LCS 580-478100/4
Matrix: Water
Analysis Batch: 478100

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			5.00	5.04		ug/L		101	80 - 122		
Toluene			5.00	4.77		ug/L		95	80 - 120		
Ethylbenzene			5.00	5.25		ug/L		105	80 - 120		
m-Xylene & p-Xylene			5.00	5.14		ug/L		103	80 - 120		
o-Xylene			5.00	5.23		ug/L		105	80 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*97*		*80 - 120*
4-Bromofluorobenzene (Surr)	*110*		*80 - 120*
Dibromofluoromethane (Surr)	*106*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*107*		*80 - 120*

Lab Sample ID: LCSD 580-478100/5
Matrix: Water
Analysis Batch: 478100

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
Benzene			5.00	4.97		ug/L		99	80 - 122	1	14
Toluene			5.00	4.51		ug/L		90	80 - 120	6	13
Ethylbenzene			5.00	4.84		ug/L		97	80 - 120	8	14
m-Xylene & p-Xylene			5.00	4.93		ug/L		99	80 - 120	4	14
o-Xylene			5.00	4.95		ug/L		99	80 - 120	5	16

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*96*		*80 - 120*
4-Bromofluorobenzene (Surr)	*109*		*80 - 120*
Dibromofluoromethane (Surr)	*105*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*109*		*80 - 120*

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 580-478111/11
Matrix: Water
Analysis Batch: 478111

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.24	ug/L			11/16/24 02:09	1
Toluene	ND		1.0	0.39	ug/L			11/16/24 02:09	1
Ethylbenzene	ND		1.0	0.50	ug/L			11/16/24 02:09	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			11/16/24 02:09	1
o-Xylene	ND		1.0	0.39	ug/L			11/16/24 02:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*80 - 120*		*11/16/24 02:09*	*1*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*		*11/16/24 02:09*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 120*		*11/16/24 02:09*	*1*
1,2-Dichloroethane-d4 (Surr)	*99*		*80 - 120*		*11/16/24 02:09*	*1*

Lab Sample ID: LCS 580-478111/6
Matrix: Water
Analysis Batch: 478111

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			5.00	5.03		ug/L		101	80 - 122		
Toluene			5.00	4.88		ug/L		98	80 - 120		
Ethylbenzene			5.00	5.07		ug/L		101	80 - 120		
m-Xylene & p-Xylene			5.00	5.37		ug/L		107	80 - 120		
o-Xylene			5.00	5.27		ug/L		105	80 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*99*		*80 - 120*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*
Dibromofluoromethane (Surr)	*99*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*99*		*80 - 120*

Lab Sample ID: LCSD 580-478111/7
Matrix: Water
Analysis Batch: 478111

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
Benzene			5.00	4.96		ug/L		99	80 - 122	1	14
Toluene			5.00	4.84		ug/L		97	80 - 120	1	13
Ethylbenzene			5.00	5.02		ug/L		100	80 - 120	1	14
m-Xylene & p-Xylene			5.00	5.24		ug/L		105	80 - 120	2	14
o-Xylene			5.00	5.13		ug/L		103	80 - 120	3	16

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*100*		*80 - 120*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*
Dibromofluoromethane (Surr)	*99*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*99*		*80 - 120*

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 580-478140/7
Matrix: Water
Analysis Batch: 478140

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.24	ug/L			11/18/24 11:47	1
Toluene	ND		1.0	0.39	ug/L			11/18/24 11:47	1
Ethylbenzene	ND		1.0	0.50	ug/L			11/18/24 11:47	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			11/18/24 11:47	1
o-Xylene	ND		1.0	0.39	ug/L			11/18/24 11:47	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*94*		*80 - 120*		*11/18/24 11:47*	*1*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*		*11/18/24 11:47*	*1*
Dibromofluoromethane (Surr)	*111*		*80 - 120*		*11/18/24 11:47*	*1*
1,2-Dichloroethane-d4 (Surr)	*117*		*80 - 120*		*11/18/24 11:47*	*1*

Lab Sample ID: LCS 580-478140/4
Matrix: Water
Analysis Batch: 478140

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			5.00	4.91		ug/L		98	80 - 122		
Toluene			5.00	4.61		ug/L		92	80 - 120		
Ethylbenzene			5.00	4.90		ug/L		98	80 - 120		
m-Xylene & p-Xylene			5.00	4.97		ug/L		99	80 - 120		
o-Xylene			5.00	4.96		ug/L		99	80 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*97*		*80 - 120*
4-Bromofluorobenzene (Surr)	*111*		*80 - 120*
Dibromofluoromethane (Surr)	*110*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*113*		*80 - 120*

Lab Sample ID: LCSD 580-478140/5
Matrix: Water
Analysis Batch: 478140

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
Benzene			5.00	4.84		ug/L		97	80 - 122	1	14
Toluene			5.00	4.56		ug/L		91	80 - 120	1	13
Ethylbenzene			5.00	4.97		ug/L		99	80 - 120	1	14
m-Xylene & p-Xylene			5.00	5.12		ug/L		102	80 - 120	3	14
o-Xylene			5.00	5.10		ug/L		102	80 - 120	3	16

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*97*		*80 - 120*
4-Bromofluorobenzene (Surr)	*111*		*80 - 120*
Dibromofluoromethane (Surr)	*110*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*111*		*80 - 120*

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 580-478223/10
Matrix: Water
Analysis Batch: 478223

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.24	ug/L			11/19/24 01:12	1
Toluene	ND		1.0	0.39	ug/L			11/19/24 01:12	1
Ethylbenzene	ND		1.0	0.50	ug/L			11/19/24 01:12	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			11/19/24 01:12	1
o-Xylene	ND		1.0	0.39	ug/L			11/19/24 01:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*96*		*80 - 120*		*11/19/24 01:12*	*1*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*		*11/19/24 01:12*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*		*11/19/24 01:12*	*1*
1,2-Dichloroethane-d4 (Surr)	*97*		*80 - 120*		*11/19/24 01:12*	*1*

Lab Sample ID: LCS 580-478223/5
Matrix: Water
Analysis Batch: 478223

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			5.00	4.43		ug/L		89	80 - 122		
Toluene			5.00	4.21		ug/L		84	80 - 120		
Ethylbenzene			5.00	4.30		ug/L		86	80 - 120		
m-Xylene & p-Xylene			5.00	4.63		ug/L		93	80 - 120		
o-Xylene			5.00	4.55		ug/L		91	80 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*97*		*80 - 120*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*
Dibromofluoromethane (Surr)	*102*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*100*		*80 - 120*

Lab Sample ID: LCSD 580-478223/6
Matrix: Water
Analysis Batch: 478223

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
Benzene			5.00	4.58		ug/L		92	80 - 122	3	14
Toluene			5.00	4.33		ug/L		87	80 - 120	3	13
Ethylbenzene			5.00	4.50		ug/L		90	80 - 120	5	14
m-Xylene & p-Xylene			5.00	4.71		ug/L		94	80 - 120	2	14
o-Xylene			5.00	4.72		ug/L		94	80 - 120	4	16

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*98*		*80 - 120*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*
Dibromofluoromethane (Surr)	*101*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*99*		*80 - 120*

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 580-478268/11
Matrix: Water
Analysis Batch: 478268

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.24	ug/L			11/19/24 14:42	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*97*		*80 - 120*		*11/19/24 14:42*	*1*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*		*11/19/24 14:42*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 120*		*11/19/24 14:42*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*80 - 120*		*11/19/24 14:42*	*1*

Lab Sample ID: LCS 580-478268/6
Matrix: Water
Analysis Batch: 478268

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			5.00	4.88		ug/L		98	80 - 122		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*97*		*80 - 120*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*
Dibromofluoromethane (Surr)	*100*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*98*		*80 - 120*

Lab Sample ID: LCSD 580-478268/7
Matrix: Water
Analysis Batch: 478268

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
Benzene			5.00	4.73		ug/L		95	80 - 122	3	14

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*98*		*80 - 120*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*
Dibromofluoromethane (Surr)	*101*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*100*		*80 - 120*

Lab Chronicle

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145769-1

Client Sample ID: E-156
Date Collected: 11/08/24 11:50
Date Received: 11/13/24 14:34

Lab Sample ID: 580-145769-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	478111	AA	EET SEA	11/16/24 06:00

Client Sample ID: E-155
Date Collected: 11/08/24 13:15
Date Received: 11/13/24 14:34

Lab Sample ID: 580-145769-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	478111	AA	EET SEA	11/16/24 06:23

Client Sample ID: E-137A
Date Collected: 11/08/24 13:50
Date Received: 11/13/24 14:34

Lab Sample ID: 580-145769-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	478111	AA	EET SEA	11/16/24 06:46

Client Sample ID: E-137B
Date Collected: 11/08/24 14:22
Date Received: 11/13/24 14:34

Lab Sample ID: 580-145769-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	478111	AA	EET SEA	11/16/24 07:10

Client Sample ID: E-160
Date Collected: 11/08/24 14:57
Date Received: 11/13/24 14:34

Lab Sample ID: 580-145769-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	478111	AA	EET SEA	11/16/24 07:33

Client Sample ID: E-259
Date Collected: 11/11/24 11:05
Date Received: 11/13/24 14:34

Lab Sample ID: 580-145769-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	478100	JBT	EET SEA	11/16/24 05:50

Client Sample ID: MW-93
Date Collected: 11/11/24 12:18
Date Received: 11/13/24 14:34

Lab Sample ID: 580-145769-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	478223	JBT	EET SEA	11/19/24 01:35

Client Sample ID: E-255
Lab Sample ID: 580-145769-8
Date Collected: 11/11/24 13:46
Matrix: Water
Date Received: 11/13/24 14:34

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	478100	JBT	EET SEA	11/16/24 06:36

Client Sample ID: E-250A
Lab Sample ID: 580-145769-9
Date Collected: 11/11/24 14:32
Matrix: Water
Date Received: 11/13/24 14:34

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D	RA	1	478223	JBT	EET SEA	11/19/24 03:30
Total/NA	Analysis	8260D		1	478100	JBT	EET SEA	11/16/24 09:42

Client Sample ID: EB-01
Lab Sample ID: 580-145769-10
Date Collected: 11/11/24 14:45
Matrix: Water
Date Received: 11/13/24 14:34

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	478100	JBT	EET SEA	11/16/24 07:00

Client Sample ID: E-250B
Lab Sample ID: 580-145769-11
Date Collected: 11/11/24 15:10
Matrix: Water
Date Received: 11/13/24 14:34

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D	DL	10	478223	JBT	EET SEA	11/19/24 05:49
Total/NA	Analysis	8260D		1	478100	JBT	EET SEA	11/16/24 05:03

Client Sample ID: E-247A
Lab Sample ID: 580-145769-12
Date Collected: 11/12/24 10:30
Matrix: Water
Date Received: 11/13/24 14:34

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	478100	JBT	EET SEA	11/16/24 10:05

Client Sample ID: E-247B
Lab Sample ID: 580-145769-13
Date Collected: 11/12/24 11:02
Matrix: Water
Date Received: 11/13/24 14:34

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	478100	JBT	EET SEA	11/16/24 08:09

Client Sample ID: E-234A-R
Lab Sample ID: 580-145769-14
Date Collected: 11/12/24 11:53
Matrix: Water
Date Received: 11/13/24 14:34

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	478100	JBT	EET SEA	11/16/24 07:46

Lab Chronicle

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145769-1

Client Sample ID: E-234B-R
Date Collected: 11/12/24 12:25
Date Received: 11/13/24 14:34

Lab Sample ID: 580-145769-15
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D	DL	100	478223	JBT	EET SEA	11/19/24 06:59
Total/NA	Analysis	8260D		1	478100	JBT	EET SEA	11/16/24 10:29

Client Sample ID: E-147
Date Collected: 11/12/24 13:40
Date Received: 11/13/24 14:34

Lab Sample ID: 580-145769-16
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	478100	JBT	EET SEA	11/16/24 08:32

Client Sample ID: E-249C
Date Collected: 11/12/24 14:29
Date Received: 11/13/24 14:34

Lab Sample ID: 580-145769-17
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D	RA	1	478223	JBT	EET SEA	11/19/24 01:58
Total/NA	Analysis	8260D		1	478100	JBT	EET SEA	11/16/24 10:52

Client Sample ID: E-249B
Date Collected: 11/12/24 14:57
Date Received: 11/13/24 14:34

Lab Sample ID: 580-145769-18
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D	DL	10	478223	JBT	EET SEA	11/19/24 06:12
Total/NA	Analysis	8260D		1	478100	JBT	EET SEA	11/16/24 09:19

Client Sample ID: E-249A
Date Collected: 11/12/24 15:25
Date Received: 11/13/24 14:34

Lab Sample ID: 580-145769-19
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D	DL	100	478268	JBT	EET SEA	11/19/24 22:07
Total/NA	Analysis	8260D		1	478100	JBT	EET SEA	11/16/24 08:56

Client Sample ID: Dup-3
Date Collected: 11/11/24 08:00
Date Received: 11/13/24 14:34

Lab Sample ID: 580-145769-20
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	478100	JBT	EET SEA	11/16/24 07:23

Lab Chronicle

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145769-1

Client Sample ID: Tripblank-1

Date Collected: 11/08/24 07:00
Date Received: 11/13/24 14:34

Lab Sample ID: 580-145769-21

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	478140	K1K	EET SEA	11/18/24 13:58

Laboratory References:

EET SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: Marathon Petroleum Company LP
Job ID: 580-145769-1
Project/Site: Marathon Petroleum Company

Laboratory: Eurofins Seattle

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-004	02-19-25

Sample Summary

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145769-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-145769-1	E-156	Water	11/08/24 11:50	11/13/24 14:34
580-145769-2	E-155	Water	11/08/24 13:15	11/13/24 14:34
580-145769-3	E-137A	Water	11/08/24 13:50	11/13/24 14:34
580-145769-4	E-137B	Water	11/08/24 14:22	11/13/24 14:34
580-145769-5	E-160	Water	11/08/24 14:57	11/13/24 14:34
580-145769-6	E-259	Water	11/11/24 11:05	11/13/24 14:34
580-145769-7	MW-93	Water	11/11/24 12:18	11/13/24 14:34
580-145769-8	E-255	Water	11/11/24 13:46	11/13/24 14:34
580-145769-9	E-250A	Water	11/11/24 14:32	11/13/24 14:34
580-145769-10	EB-01	Water	11/11/24 14:45	11/13/24 14:34
580-145769-11	E-250B	Water	11/11/24 15:10	11/13/24 14:34
580-145769-12	E-247A	Water	11/12/24 10:30	11/13/24 14:34
580-145769-13	E-247B	Water	11/12/24 11:02	11/13/24 14:34
580-145769-14	E-234A-R	Water	11/12/24 11:53	11/13/24 14:34
580-145769-15	E-234B-R	Water	11/12/24 12:25	11/13/24 14:34
580-145769-16	E-147	Water	11/12/24 13:40	11/13/24 14:34
580-145769-17	E-249C	Water	11/12/24 14:29	11/13/24 14:34
580-145769-18	E-249B	Water	11/12/24 14:57	11/13/24 14:34
580-145769-19	E-249A	Water	11/12/24 15:25	11/13/24 14:34
580-145769-20	Dup-3	Water	11/11/24 08:00	11/13/24 14:34
580-145769-21	Tripblank-1	Water	11/08/24 07:00	11/13/24 14:34

Eurofins Environmental Testing Northwest, LLC
3707 Woodland Drive Suite 3
Anchorage, AK 99517-2596
Phone: 907-563-9200

Chain of Custody Record

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Client Information	Sampler: Tanner	Lab PM:	Carrier Tracking No(s):	COC No: 580-64705-19897.1
Client Contact: Brianna Force - Trihydro	Phone:	E-Mail:	State of Origin:	Page: Page 1 of 2
Company: Marathon Petroleum Company LP	PWSID:			Job #:
Address: 54741 Energy Way	Due Date Requested:			
City: Kenai	TAT Requested (days):			
State, Zip: AK, 99611	Compliance Project: Δ Yes Δ No			
Phone: 573-239-2434	PO #: 4900385998			
Email: bforce@trihydro.com	WO #:			
Project Name: Quarterly Sampling - Q25-1	Project #: 58021196			
Site: Kenai Refinery	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

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 - BTEX	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
E-156	11/8/2024	1150	G	W			3	3	
E-155	11/8/2024	1315	G	W			3	3	
E-137A	11/8/2024	1350	G	W			3	3	
E-137B	11/8/2024	1422	G	W			3	3	
E-160	11/8/2024	1457	G	W			3	3	
E-259	11/11/2024	1105	G	W			3	3	
MW-93	11/11/2024	1218	G	W			3	3	
E-255	11/11/2024	1346	G	W			3	3	
E-250A	11/11/2024	1432	G	W			3	3	
EB-01	11/11/2024	1445	G	W			3	3	
E-250B	11/11/2024	1510	G	W			3	3	

580-145769 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
☐ 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:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
[signature]	11-13-24 0950		James Mcalpine	11/13/24 1434	EET
Clarence Duncan [signature] III	11/13/24 15:51	EETN	Jacob Pike	11-14-24 10:44	

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: A3 0.9/1.4

Ver: 01/16/2019

4K±R3 1,2/0,8/lg blue/LG/blue/bub

Eurofins Environmental Testing Northwest, LLC
3707 Woodland Drive Suite 3
Anchorage, AK 99517-2596
Phone: 907-563-9200

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: Tanner	Lab PM:	Carrier Tracking No(s):	COC No: 580-64705-19897.1
Client Contact: Brianna Force - Trihydro	Phone:	E-Mail:	State of Origin:	Page: Page 2 of 2
Company: Marathon Petroleum Company LP	PWSID:			Job #:
Address: 54741 Energy Way	Due Date Requested:			
City: Kenai	TAT Requested (days):			
State, Zip: AK, 99611	Compliance Project: Δ Yes Δ No			
Phone: 573-239-2434	PO #: 4900385998			
Email: bforce@trihydro.com	WO #:			
Project Name: Quarterly Sampling - Q25-1	Project #: 58021196			
Site: Kenai Refinery	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

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 - BTEX	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
E-247A	11/12/2024	1030	G	W			3	3	
E-247B	11/12/2024	1102	G	W			3	3	
E-234A-R	11/12/2024	1153	G	W			3	3	
E-234B-R	11/12/2024	1225	G	W			3	3	
E-147	11/12/2024	1340	G	W			3	3	
E-249C	11/12/2024	1429	G	W			3	3	
E-249B	11/12/2024	1457	G	W			3	3	
E-249A	11/12/2024	1525	G	W			3	3	
Dup-3	11/11/2024	800	G	W			3	3	
Tripblank-1	11/8/2024	700					2	2	

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:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	11-13-24 0950		James McAlpine	11/13/24 1434	EET
Relinquished by: Clarence Duncan [signature] Duncan III	Date/Time: 11/13/24 1551	Company EETN	Received by: Jacob Pike	Date/Time: 11-14-24 10:44	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: A3 0.9/1.4

Ver: 01/16/2019

AIRBILL 14753454

I hereby declare that the goods contained herein do not contain dangerous goods.

Signed..... Date .....

Grant Aviation
6420 Kulis Dr. Anchorage, AK 99502
Phone: 1 (888) 359-4726
Freephone: 1 (888) 359-4726
Email: res@flygrant.com
Web: http://www.flygrant.com/

FREIGHT DETAILS

FROM/TO: Kenai -> Anchorage International

Flight Departs: Nov 13 24 11:55 AM
Accepted: Wed, Nov 13 24 10:47:00 AM

Receiver: Eurins Environment Testing NW
907-952-2645

Sender: Trihydro Corporation - Kenndra Bazal
Ph 307-745-7474 Commerce Street
Laramie

Description & Comment	Quan.	Wgt.	Handle Fee	Hazmat Fee	Total
Standard Freight	1	27	-	-	$28.24
				Total Tax:	$1.76
				Total Payments made:	$30.00
				Total Unpaid:	**$0.00**

Received in good condition by: .....

CUSTOMER COPY

AIRBILL 14753454

I hereby declare that the goods contained herein do not contain dangerous goods.

Signed..... Date .....

Grant Aviation
6420 Kulis Dr. Anchorage, AK 99502
Phone: 1 (888) 359-4726
Freephone: 1 (888) 359-4726
Email: res@flygrant.com
Web: http://www.flygrant.com/

FREIGHT DETAILS

FROM/TO: Kenai -> Anchorage International

Flight Departs: Nov 13 24 11:55 AM
Accepted: Wed, Nov 13 24 10:47:00 AM

Receiver: Eurins Environment Testing NW
907-952-2645

Sender: Trihydro Corporation - Kenndra Bazal
Ph 307-745-7474 Commerce Street
Laramie

Description & Comment	Quan.	Wgt.	Handle Fee	Hazmat Fee	Total
Standard Freight	1	27	-	-	$28.24
TAX: Federal Excise Tax					$1.76
				Total Payments made:	$30.00
				Total Unpaid:	**$0.00**

TERMS AND CONDITIONS

Consignemnt Note Text

Self-Service Pick Up

Alaska AIR CARGO

Air Waybill Number	Total pieces	Total weight	Product
027-34561855	1	34.0 lbs	GOLDSTREAK

Shipper

EUROFINS ENVIRONMENT
TESTING NORTHWEST
2000 WEST INTERNATIONAL
AIRPORT ROAD
ANCHORAGE, AK-99502

Consignee

EUROFINS ENVIRONMENT
TESTING NORTHWEST
2000 WEST INTERNATIONAL
AIRPORT ROAD
ANCHORAGE, AK-99502

Pieces	Weight	Description	Origin/Destination	Status
1	34.0 lbs	SAMPLES	ANC - SEA	Ready

The undersigned acknowledges the receipt of above mentioned consignment is complete and in good condition.

Picked up by	Date	Time
Ricky Reyes	**11/14/2024**	**10:44 AM**

Picking up from our GoldStreak lockers?
Proceed to the lockers and scan this code.

Book your next shipment at alaskacargo.com.

Login Sample Receipt Checklist

Client: Marathon Petroleum Company LP

Job Number: 580-145769-1

Login Number: 145769
List Number: 1
Creator: Mcalpine, James 1

List Source: Eurofins Seattle

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	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Jeremy Yancey
Marathon Petroleum Company LP
54741 Energy Way
Kenai, Alaska 99611

Generated 11/25/2024 12:42:03 PM

JOB DESCRIPTION

Marathon Petroleum Company

JOB NUMBER

580-145914-1

Eurofins Seattle
5755 8th Street East
Tacoma WA 98424

See page two for job notes and contact information.

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 Northwest, LLC Project Manager.

Authorization

Generated
11/25/2024 12:42:03 PM

Authorized for release by
Lance Morris, Project Manager
Lance.Morris@et.eurofinsus.com
(253)922-2310

Table of Contents

Job ID: 580-145914-1 — Eurofins Seattle

Job Narrative
580-145914-1

Receipt
The samples were received on 11/18/2024 1:36 PM. 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 was 3.7º C.

GC/MS VOA
Method 8260D: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 580-478466 recovered outside control limits for the following analytes: m-Xylene & p-Xylene. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8260D: The following sample was diluted to bring the concentration of target analytes within the calibration range: E-072RR (580-145914-4). Elevated reporting limits (RLs) are provided.

Method 8260D: Surrogate Dibromofluoromethane (Surrogate) recovery for the following sample was outside the upper control limit: E-256 (580-145914-6). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Method 8260D: The following samples were diluted to bring the concentration of target analytes within the calibration range: (580-145854-C-7), (580-145854-D-7 MS) and (580-145854-D-7 MSD). Elevated reporting limits (RLs) are provided.

Method 8260D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 580-478766 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8260D: The following sample was diluted to bring the concentration of target analytes within the calibration range: E-256 (580-145914-6). Elevated reporting limits (RLs) are provided.

Method 8260D: The following samples were diluted to bring the concentration of target analytes within the calibration range: E-010 (580-145914-7), DUP-1 (580-145914-18) and DUP-2 (580-145914-19). Elevated reporting limits (RLs) are provided.

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

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145914-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1+	Surrogate recovery exceeds control limits, high biased.

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

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145914-1

Client Sample ID: E-179

Date Collected: 11/13/24 11:00
Date Received: 11/18/24 13:36

Lab Sample ID: 580-145914-1

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**81**		1.0	0.24	ug/L			11/21/24 08:42	1
Toluene	ND		1.0	0.39	ug/L			11/21/24 08:42	1
Ethylbenzene	ND		1.0	0.50	ug/L			11/21/24 08:42	1
o-Xylene	ND		1.0	0.39	ug/L			11/21/24 08:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*95*		*80 - 120*		*11/21/24 08:42*	*1*
4-Bromofluorobenzene (Surr)	*107*		*80 - 120*		*11/21/24 08:42*	*1*
Dibromofluoromethane (Surr)	*107*		*80 - 120*		*11/21/24 08:42*	*1*
1,2-Dichloroethane-d4 (Surr)	*109*		*80 - 120*		*11/21/24 08:42*	*1*

Method: SW846 8260D - Volatile Organic Compounds by GC/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	**12**		2.0	0.53	ug/L			11/22/24 20:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*99*		*80 - 120*		*11/22/24 20:03*	*1*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*		*11/22/24 20:03*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*		*11/22/24 20:03*	*1*
1,2-Dichloroethane-d4 (Surr)	*110*		*80 - 120*		*11/22/24 20:03*	*1*

Client Sample Results

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145914-1

Client Sample ID: E-162

Date Collected: 11/13/24 11:50
Date Received: 11/18/24 13:36

Lab Sample ID: 580-145914-2

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**11**		1.0	0.24	ug/L			11/21/24 09:05	1
Toluene	ND		1.0	0.39	ug/L			11/21/24 09:05	1
Ethylbenzene	ND		1.0	0.50	ug/L			11/21/24 09:05	1
m-Xylene & p-Xylene	ND	*+	2.0	0.53	ug/L			11/21/24 09:05	1
o-Xylene	ND		1.0	0.39	ug/L			11/21/24 09:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*95*		*80 - 120*		*11/21/24 09:05*	*1*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*		*11/21/24 09:05*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*		*11/21/24 09:05*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*80 - 120*		*11/21/24 09:05*	*1*

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145914-1

Client Sample ID: E-097
Date Collected: 11/13/24 12:43
Date Received: 11/18/24 13:36

Lab Sample ID: 580-145914-3
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.24	ug/L			11/21/24 09:28	1
Toluene	ND		1.0	0.39	ug/L			11/21/24 09:28	1
Ethylbenzene	ND		1.0	0.50	ug/L			11/21/24 09:28	1
m-Xylene & p-Xylene	ND	*+	2.0	0.53	ug/L			11/21/24 09:28	1
o-Xylene	ND		1.0	0.39	ug/L			11/21/24 09:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*94*		*80 - 120*		*11/21/24 09:28*	*1*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*		*11/21/24 09:28*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*		*11/21/24 09:28*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*80 - 120*		*11/21/24 09:28*	*1*

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145914-1

Client Sample ID: E-072RR

Date Collected: 11/13/24 13:40
Date Received: 11/18/24 13:36

Lab Sample ID: 580-145914-4

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND		1.0	0.39	ug/L			11/21/24 09:51	1
o-Xylene	**10**		1.0	0.39	ug/L			11/21/24 09:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*96*		*80 - 120*		*11/21/24 09:51*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*11/21/24 09:51*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 120*		*11/21/24 09:51*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*80 - 120*		*11/21/24 09:51*	*1*

Method: SW846 8260D - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**850**		100	24	ug/L			11/22/24 22:45	100
Ethylbenzene	**410**		100	50	ug/L			11/22/24 22:45	100
m-Xylene & p-Xylene	**920**		200	53	ug/L			11/22/24 22:45	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*80 - 120*		*11/22/24 22:45*	*100*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*11/22/24 22:45*	*100*
Dibromofluoromethane (Surr)	*100*		*80 - 120*		*11/22/24 22:45*	*100*
1,2-Dichloroethane-d4 (Surr)	*103*		*80 - 120*		*11/22/24 22:45*	*100*

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145914-1

Client Sample ID: E-171

Date Collected: 11/13/24 14:30
Date Received: 11/18/24 13:36

Lab Sample ID: 580-145914-5

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**10**		1.0	0.24	ug/L			11/24/24 09:48	1
Toluene	ND		1.0	0.39	ug/L			11/24/24 09:48	1
Ethylbenzene	**3.5**		1.0	0.50	ug/L			11/24/24 09:48	1
m-Xylene & p-Xylene	**32**		2.0	0.53	ug/L			11/24/24 09:48	1
o-Xylene	ND		1.0	0.39	ug/L			11/24/24 09:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*80 - 120*		*11/24/24 09:48*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*11/24/24 09:48*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 120*		*11/24/24 09:48*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*80 - 120*		*11/24/24 09:48*	*1*

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145914-1

Client Sample ID: E-256

Date Collected: 11/13/24 15:16
Date Received: 11/18/24 13:36

Lab Sample ID: 580-145914-6

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND		1.0	0.39	ug/L			11/22/24 17:43	1
Ethylbenzene	ND		1.0	0.50	ug/L			11/22/24 17:43	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			11/22/24 17:43	1
o-Xylene	ND		1.0	0.39	ug/L			11/22/24 17:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*96*		*80 - 120*		*11/22/24 17:43*	*1*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*		*11/22/24 17:43*	*1*
Dibromofluoromethane (Surr)	*125*	*S1+*	*80 - 120*		*11/22/24 17:43*	*1*
1,2-Dichloroethane-d4 (Surr)	*99*		*80 - 120*		*11/22/24 17:43*	*1*

Method: SW846 8260D - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**590**		50	12	ug/L			11/23/24 09:13	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*97*		*80 - 120*		*11/23/24 09:13*	*50*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*		*11/23/24 09:13*	*50*
Dibromofluoromethane (Surr)	*97*		*80 - 120*		*11/23/24 09:13*	*50*
1,2-Dichloroethane-d4 (Surr)	*98*		*80 - 120*		*11/23/24 09:13*	*50*

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145914-1

Client Sample ID: E-010

Date Collected: 11/14/24 11:02
Date Received: 11/18/24 13:36

Lab Sample ID: 580-145914-7

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**2200**		50	12	ug/L			11/23/24 23:05	50
Toluene	ND		50	20	ug/L			11/23/24 23:05	50
Ethylbenzene	**27**	**J**	50	25	ug/L			11/23/24 23:05	50
m-Xylene & p-Xylene	**220**		100	27	ug/L			11/23/24 23:05	50
o-Xylene	**21**	**J**	50	20	ug/L			11/23/24 23:05	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*96*		*80 - 120*		*11/23/24 23:05*	*50*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*		*11/23/24 23:05*	*50*
Dibromofluoromethane (Surr)	*111*		*80 - 120*		*11/23/24 23:05*	*50*
1,2-Dichloroethane-d4 (Surr)	*119*		*80 - 120*		*11/23/24 23:05*	*50*

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145914-1

Client Sample ID: SMW-36

Date Collected: 11/14/24 12:00
Date Received: 11/18/24 13:36

Lab Sample ID: 580-145914-8

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND		1.0	0.39	ug/L			11/22/24 18:06	1
Ethylbenzene	ND		1.0	0.50	ug/L			11/22/24 18:06	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			11/22/24 18:06	1
o-Xylene	ND		1.0	0.39	ug/L			11/22/24 18:06	1
Trichloroethene	**3.1**		1.0	0.26	ug/L			11/22/24 18:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*80 - 120*		*11/22/24 18:06*	*1*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*		*11/22/24 18:06*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*		*11/22/24 18:06*	*1*
1,2-Dichloroethane-d4 (Surr)	*108*		*80 - 120*		*11/22/24 18:06*	*1*

Method: SW846 8260D - Volatile Organic Compounds by GC/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**1.1**		1.0	0.24	ug/L			11/23/24 05:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*99*		*80 - 120*		*11/23/24 05:21*	*1*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*		*11/23/24 05:21*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*		*11/23/24 05:21*	*1*
1,2-Dichloroethane-d4 (Surr)	*110*		*80 - 120*		*11/23/24 05:21*	*1*

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145914-1

Client Sample ID: SMW-37

Date Collected: 11/14/24 13:00
Date Received: 11/18/24 13:36

Lab Sample ID: 580-145914-9

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND		1.0	0.39	ug/L			11/22/24 18:30	1
Ethylbenzene	ND		1.0	0.50	ug/L			11/22/24 18:30	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			11/22/24 18:30	1
o-Xylene	ND		1.0	0.39	ug/L			11/22/24 18:30	1
Trichloroethene	**4.8**		1.0	0.26	ug/L			11/22/24 18:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*99*		*80 - 120*		*11/22/24 18:30*	*1*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*		*11/22/24 18:30*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*		*11/22/24 18:30*	*1*
1,2-Dichloroethane-d4 (Surr)	*109*		*80 - 120*		*11/22/24 18:30*	*1*

Method: SW846 8260D - Volatile Organic Compounds by GC/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.61**	**J**	1.0	0.24	ug/L			11/23/24 05:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*97*		*80 - 120*		*11/23/24 05:44*	*1*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*		*11/23/24 05:44*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*		*11/23/24 05:44*	*1*
1,2-Dichloroethane-d4 (Surr)	*110*		*80 - 120*		*11/23/24 05:44*	*1*

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145914-1

Client Sample ID: SMW-29
Date Collected: 11/14/24 14:00
Date Received: 11/18/24 13:36

Lab Sample ID: 580-145914-10
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**1.2**		1.0	0.24	ug/L			11/22/24 18:53	1
Toluene	ND		1.0	0.39	ug/L			11/22/24 18:53	1
Ethylbenzene	ND		1.0	0.50	ug/L			11/22/24 18:53	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			11/22/24 18:53	1
o-Xylene	ND		1.0	0.39	ug/L			11/22/24 18:53	1
Trichloroethene	**1.9**		1.0	0.26	ug/L			11/22/24 18:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*80 - 120*		*11/22/24 18:53*	*1*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*		*11/22/24 18:53*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*		*11/22/24 18:53*	*1*
1,2-Dichloroethane-d4 (Surr)	*109*		*80 - 120*		*11/22/24 18:53*	*1*

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145914-1

Client Sample ID: EB-02

Date Collected: 11/14/24 14:10
Date Received: 11/18/24 13:36

Lab Sample ID: 580-145914-11

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.24	ug/L			11/22/24 17:20	1
Toluene	ND		1.0	0.39	ug/L			11/22/24 17:20	1
Ethylbenzene	ND		1.0	0.50	ug/L			11/22/24 17:20	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			11/22/24 17:20	1
o-Xylene	ND		1.0	0.39	ug/L			11/22/24 17:20	1
Trichloroethene	ND		1.0	0.26	ug/L			11/22/24 17:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*80 - 120*		*11/22/24 17:20*	*1*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*		*11/22/24 17:20*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*		*11/22/24 17:20*	*1*
1,2-Dichloroethane-d4 (Surr)	*109*		*80 - 120*		*11/22/24 17:20*	*1*

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145914-1

Client Sample ID: IWS-6

Date Collected: 11/14/24 14:45
Date Received: 11/18/24 13:36

Lab Sample ID: 580-145914-12

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND		1.0	0.39	ug/L			11/22/24 21:12	1
Ethylbenzene	ND		1.0	0.50	ug/L			11/22/24 21:12	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			11/22/24 21:12	1
o-Xylene	ND		1.0	0.39	ug/L			11/22/24 21:12	1
Trichloroethene	**12**		1.0	0.26	ug/L			11/22/24 21:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*80 - 120*		*11/22/24 21:12*	*1*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*		*11/22/24 21:12*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 120*		*11/22/24 21:12*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*80 - 120*		*11/22/24 21:12*	*1*

Method: SW846 8260D - Volatile Organic Compounds by GC/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.38**	**J**	1.0	0.24	ug/L			11/24/24 05:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*96*		*80 - 120*		*11/24/24 05:57*	*1*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*		*11/24/24 05:57*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*		*11/24/24 05:57*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*80 - 120*		*11/24/24 05:57*	*1*

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145914-1

Client Sample ID: SMW-05
Date Collected: 11/15/24 11:12
Date Received: 11/18/24 13:36

Lab Sample ID: 580-145914-13
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**2.2**		1.0	0.24	ug/L			11/22/24 19:16	1
Toluene	ND		1.0	0.39	ug/L			11/22/24 19:16	1
Ethylbenzene	ND		1.0	0.50	ug/L			11/22/24 19:16	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			11/22/24 19:16	1
o-Xylene	ND		1.0	0.39	ug/L			11/22/24 19:16	1
Trichloroethene	**4.1**		1.0	0.26	ug/L			11/22/24 19:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*80 - 120*		*11/22/24 19:16*	*1*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*		*11/22/24 19:16*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*		*11/22/24 19:16*	*1*
1,2-Dichloroethane-d4 (Surr)	*109*		*80 - 120*		*11/22/24 19:16*	*1*

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145914-1

Client Sample ID: SMW-09
Date Collected: 11/15/24 12:02
Date Received: 11/18/24 13:36

Lab Sample ID: 580-145914-14
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.56**	**J**	1.0	0.24	ug/L			11/22/24 19:39	1
Toluene	ND		1.0	0.39	ug/L			11/22/24 19:39	1
Ethylbenzene	ND		1.0	0.50	ug/L			11/22/24 19:39	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			11/22/24 19:39	1
o-Xylene	ND		1.0	0.39	ug/L			11/22/24 19:39	1
Trichloroethene	**1.0**		1.0	0.26	ug/L			11/22/24 19:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*99*		*80 - 120*		*11/22/24 19:39*	*1*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*		*11/22/24 19:39*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*		*11/22/24 19:39*	*1*
1,2-Dichloroethane-d4 (Surr)	*110*		*80 - 120*		*11/22/24 19:39*	*1*

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145914-1

Client Sample ID: SMW-31
Date Collected: 11/15/24 13:12
Date Received: 11/18/24 13:36

Lab Sample ID: 580-145914-15
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.24	ug/L			11/23/24 01:07	1
Toluene	ND		1.0	0.39	ug/L			11/23/24 01:07	1
Ethylbenzene	ND		1.0	0.50	ug/L			11/23/24 01:07	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			11/23/24 01:07	1
o-Xylene	ND		1.0	0.39	ug/L			11/23/24 01:07	1
Trichloroethene	ND		1.0	0.26	ug/L			11/23/24 01:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*80 - 120*		*11/23/24 01:07*	*1*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*		*11/23/24 01:07*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*		*11/23/24 01:07*	*1*
1,2-Dichloroethane-d4 (Surr)	*106*		*80 - 120*		*11/23/24 01:07*	*1*

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145914-1

Client Sample ID: SMW-35

Date Collected: 11/15/24 13:43
Date Received: 11/18/24 13:36

Lab Sample ID: 580-145914-16

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**2.1**		1.0	0.24	ug/L			11/24/24 06:20	1
Toluene	ND		1.0	0.39	ug/L			11/24/24 06:20	1
Ethylbenzene	ND		1.0	0.50	ug/L			11/24/24 06:20	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			11/24/24 06:20	1
o-Xylene	ND		1.0	0.39	ug/L			11/24/24 06:20	1
Trichloroethene	**35**		1.0	0.26	ug/L			11/24/24 06:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*96*		*80 - 120*		*11/24/24 06:20*	*1*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*		*11/24/24 06:20*	*1*
Dibromofluoromethane (Surr)	*108*		*80 - 120*		*11/24/24 06:20*	*1*
1,2-Dichloroethane-d4 (Surr)	*106*		*80 - 120*		*11/24/24 06:20*	*1*

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145914-1

Client Sample ID: SMW-21A
Date Collected: 11/15/24 14:35
Date Received: 11/18/24 13:36

Lab Sample ID: 580-145914-17
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.24	ug/L			11/23/24 00:46	1
Toluene	ND		1.0	0.39	ug/L			11/23/24 00:46	1
Ethylbenzene	ND		1.0	0.50	ug/L			11/23/24 00:46	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			11/23/24 00:46	1
o-Xylene	ND		1.0	0.39	ug/L			11/23/24 00:46	1
Trichloroethene	ND		1.0	0.26	ug/L			11/23/24 00:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*102*		*80 - 120*		*11/23/24 00:46*	*1*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*		*11/23/24 00:46*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*		*11/23/24 00:46*	*1*
1,2-Dichloroethane-d4 (Surr)	*110*		*80 - 120*		*11/23/24 00:46*	*1*

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145914-1

Client Sample ID: DUP-1

Date Collected: 11/13/24 08:00
Date Received: 11/18/24 13:36

Lab Sample ID: 580-145914-18

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND		1.0	0.39	ug/L			11/22/24 20:26	1
o-Xylene	**13**		1.0	0.39	ug/L			11/22/24 20:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*97*		*80 - 120*		*11/22/24 20:26*	*1*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*		*11/22/24 20:26*	*1*
Dibromofluoromethane (Surr)	*109*		*80 - 120*		*11/22/24 20:26*	*1*
1,2-Dichloroethane-d4 (Surr)	*89*		*80 - 120*		*11/22/24 20:26*	*1*

Method: SW846 8260D - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**1000**		50	12	ug/L			11/23/24 23:28	50
Ethylbenzene	**590**		50	25	ug/L			11/23/24 23:28	50
m-Xylene & p-Xylene	**1400**		100	27	ug/L			11/23/24 23:28	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*97*		*80 - 120*		*11/23/24 23:28*	*50*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*		*11/23/24 23:28*	*50*
Dibromofluoromethane (Surr)	*109*		*80 - 120*		*11/23/24 23:28*	*50*
1,2-Dichloroethane-d4 (Surr)	*116*		*80 - 120*		*11/23/24 23:28*	*50*

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145914-1

Client Sample ID: DUP-2

Date Collected: 11/14/24 08:00
Date Received: 11/18/24 13:36

Lab Sample ID: 580-145914-19

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	2300		50	12	ug/L			11/23/24 22:42	50
Toluene	24	J	50	20	ug/L			11/23/24 22:42	50
Ethylbenzene	31	J	50	25	ug/L			11/23/24 22:42	50
m-Xylene & p-Xylene	250		100	27	ug/L			11/23/24 22:42	50
o-Xylene	25	J	50	20	ug/L			11/23/24 22:42	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*80 - 120*		*11/23/24 22:42*	*50*
4-Bromofluorobenzene (Surr)	*109*		*80 - 120*		*11/23/24 22:42*	*50*
Dibromofluoromethane (Surr)	*111*		*80 - 120*		*11/23/24 22:42*	*50*
1,2-Dichloroethane-d4 (Surr)	*119*		*80 - 120*		*11/23/24 22:42*	*50*

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145914-1

Client Sample ID: DUP-4

Date Collected: 11/14/24 08:30
Date Received: 11/18/24 13:36

Lab Sample ID: 580-145914-20

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.37**	**J**	1.0	0.24	ug/L			11/23/24 18:26	1
Toluene	ND		1.0	0.39	ug/L			11/23/24 18:26	1
Ethylbenzene	ND		1.0	0.50	ug/L			11/23/24 18:26	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			11/23/24 18:26	1
o-Xylene	ND		1.0	0.39	ug/L			11/23/24 18:26	1
Trichloroethene	**12**		1.0	0.26	ug/L			11/23/24 18:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*97*		*80 - 120*		*11/23/24 18:26*	*1*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*		*11/23/24 18:26*	*1*
Dibromofluoromethane (Surr)	*109*		*80 - 120*		*11/23/24 18:26*	*1*
1,2-Dichloroethane-d4 (Surr)	*114*		*80 - 120*		*11/23/24 18:26*	*1*

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145914-1

Client Sample ID: Trip Blank 1

Date Collected: 11/13/24 08:00
Date Received: 11/18/24 13:36

Lab Sample ID: 580-145914-21

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.24	ug/L			11/22/24 16:10	1
Toluene	ND		1.0	0.39	ug/L			11/22/24 16:10	1
Ethylbenzene	ND		1.0	0.50	ug/L			11/22/24 16:10	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			11/22/24 16:10	1
o-Xylene	ND		1.0	0.39	ug/L			11/22/24 16:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*80 - 120*		*11/22/24 16:10*	*1*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*		*11/22/24 16:10*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*		*11/22/24 16:10*	*1*
1,2-Dichloroethane-d4 (Surr)	*108*		*80 - 120*		*11/22/24 16:10*	*1*

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145914-1

Client Sample ID: Trip Blank 2

Date Collected: 11/14/24 08:00
Date Received: 11/18/24 13:36

Lab Sample ID: 580-145914-22

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.24	ug/L			11/23/24 03:15	1
Toluene	ND		1.0	0.39	ug/L			11/23/24 03:15	1
Ethylbenzene	ND		1.0	0.50	ug/L			11/23/24 03:15	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			11/23/24 03:15	1
o-Xylene	ND		1.0	0.39	ug/L			11/23/24 03:15	1
Trichloroethene	ND		1.0	0.26	ug/L			11/23/24 03:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*80 - 120*		*11/23/24 03:15*	*1*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*		*11/23/24 03:15*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*		*11/23/24 03:15*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*80 - 120*		*11/23/24 03:15*	*1*

Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 580-478466/10
Matrix: Water
Analysis Batch: 478466

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.24	ug/L			11/21/24 04:27	1
Toluene	ND		1.0	0.39	ug/L			11/21/24 04:27	1
Ethylbenzene	ND		1.0	0.50	ug/L			11/21/24 04:27	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			11/21/24 04:27	1
o-Xylene	ND		1.0	0.39	ug/L			11/21/24 04:27	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*95*		*80 - 120*		*11/21/24 04:27*	*1*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*		*11/21/24 04:27*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*		*11/21/24 04:27*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*80 - 120*		*11/21/24 04:27*	*1*

Lab Sample ID: LCS 580-478466/5
Matrix: Water
Analysis Batch: 478466

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			5.00	4.75		ug/L		95	80 - 122		
Toluene			5.00	5.62		ug/L		112	80 - 120		
Ethylbenzene			5.00	4.98		ug/L		100	80 - 120		
m-Xylene & p-Xylene			5.00	6.07	*+	ug/L		121	80 - 120		
o-Xylene			5.00	5.44		ug/L		109	80 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*97*		*80 - 120*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*
Dibromofluoromethane (Surr)	*101*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*100*		*80 - 120*

Lab Sample ID: LCSD 580-478466/6
Matrix: Water
Analysis Batch: 478466

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
Benzene			5.00	4.84		ug/L		97	80 - 122	2	14
Toluene			5.00	5.69		ug/L		114	80 - 120	1	13
Ethylbenzene			5.00	5.08		ug/L		102	80 - 120	2	14
m-Xylene & p-Xylene			5.00	6.07	*+	ug/L		121	80 - 120	0	14
o-Xylene			5.00	5.44		ug/L		109	80 - 120	0	16

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*97*		*80 - 120*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*
Dibromofluoromethane (Surr)	*101*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*101*		*80 - 120*

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 580-478699/7
Matrix: Water
Analysis Batch: 478699

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.24	ug/L			11/22/24 14:14	1
Toluene	ND		1.0	0.39	ug/L			11/22/24 14:14	1
Ethylbenzene	ND		1.0	0.50	ug/L			11/22/24 14:14	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			11/22/24 14:14	1
o-Xylene	ND		1.0	0.39	ug/L			11/22/24 14:14	1
Trichloroethene	ND		1.0	0.26	ug/L			11/22/24 14:14	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*80 - 120*		*11/22/24 14:14*	*1*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*		*11/22/24 14:14*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*		*11/22/24 14:14*	*1*
1,2-Dichloroethane-d4 (Surr)	*107*		*80 - 120*		*11/22/24 14:14*	*1*

Lab Sample ID: LCS 580-478699/4
Matrix: Water
Analysis Batch: 478699

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			5.00	4.66		ug/L		93	80 - 122		
Toluene			5.00	4.61		ug/L		92	80 - 120		
Ethylbenzene			5.00	5.02		ug/L		100	80 - 120		
m-Xylene & p-Xylene			5.00	4.82		ug/L		96	80 - 120		
o-Xylene			5.00	5.08		ug/L		102	80 - 120		
Trichloroethene			5.00	4.74		ug/L		95	80 - 125		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*100*		*80 - 120*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*
Dibromofluoromethane (Surr)	*101*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*104*		*80 - 120*

Lab Sample ID: LCSD 580-478699/5
Matrix: Water
Analysis Batch: 478699

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
Benzene			5.00	4.65		ug/L		93	80 - 122	0	14
Toluene			5.00	4.63		ug/L		93	80 - 120	0	13
Ethylbenzene			5.00	5.02		ug/L		100	80 - 120	0	14
m-Xylene & p-Xylene			5.00	4.98		ug/L		100	80 - 120	3	14
o-Xylene			5.00	5.00		ug/L		100	80 - 120	2	16
Trichloroethene			5.00	4.75		ug/L		95	80 - 125	0	13

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*100*		*80 - 120*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*
Dibromofluoromethane (Surr)	*101*		*80 - 120*

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-478699/5
Matrix: Water
Analysis Batch: 478699

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

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	102		80 - 120

Lab Sample ID: MB 580-478755/7
Matrix: Water
Analysis Batch: 478755

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.24	ug/L			11/23/24 02:29	1
Toluene	ND		1.0	0.39	ug/L			11/23/24 02:29	1
Ethylbenzene	ND		1.0	0.50	ug/L			11/23/24 02:29	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			11/23/24 02:29	1
o-Xylene	ND		1.0	0.39	ug/L			11/23/24 02:29	1
Trichloroethene	ND		1.0	0.26	ug/L			11/23/24 02:29	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		80 - 120		11/23/24 02:29	1
4-Bromofluorobenzene (Surr)	102		80 - 120		11/23/24 02:29	1
Dibromofluoromethane (Surr)	104		80 - 120		11/23/24 02:29	1
1,2-Dichloroethane-d4 (Surr)	103		80 - 120		11/23/24 02:29	1

Lab Sample ID: LCS 580-478755/4
Matrix: Water
Analysis Batch: 478755

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			5.00	4.68		ug/L		94	80 - 122		
Toluene			5.00	4.44		ug/L		89	80 - 120		
Ethylbenzene			5.00	4.69		ug/L		94	80 - 120		
m-Xylene & p-Xylene			5.00	4.71		ug/L		94	80 - 120		
o-Xylene			5.00	4.90		ug/L		98	80 - 120		
Trichloroethene			5.00	4.79		ug/L		96	80 - 125		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	99		80 - 120
4-Bromofluorobenzene (Surr)	102		80 - 120
Dibromofluoromethane (Surr)	104		80 - 120
1,2-Dichloroethane-d4 (Surr)	104		80 - 120

Lab Sample ID: LCSD 580-478755/5
Matrix: Water
Analysis Batch: 478755

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
Benzene			5.00	4.61		ug/L		92	80 - 122	2	14
Toluene			5.00	4.42		ug/L		88	80 - 120	1	13
Ethylbenzene			5.00	4.61		ug/L		92	80 - 120	2	14
m-Xylene & p-Xylene			5.00	4.53		ug/L		91	80 - 120	4	14
o-Xylene			5.00	4.77		ug/L		95	80 - 120	3	16

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-478755/5
Matrix: Water
Analysis Batch: 478755

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
Trichloroethene			5.00	4.74		ug/L		95	80 - 125	1	13

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*100*		*80 - 120*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*
Dibromofluoromethane (Surr)	*101*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*103*		*80 - 120*

Lab Sample ID: MB 580-478766/10
Matrix: Water
Analysis Batch: 478766

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.24	ug/L			11/22/24 21:59	1
Toluene	ND		1.0	0.39	ug/L			11/22/24 21:59	1
Ethylbenzene	ND		1.0	0.50	ug/L			11/22/24 21:59	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			11/22/24 21:59	1
o-Xylene	ND		1.0	0.39	ug/L			11/22/24 21:59	1
Trichloroethene	ND		1.0	0.26	ug/L			11/22/24 21:59	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*99*		*80 - 120*		*11/22/24 21:59*	*1*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*		*11/22/24 21:59*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*		*11/22/24 21:59*	*1*
1,2-Dichloroethane-d4 (Surr)	*106*		*80 - 120*		*11/22/24 21:59*	*1*

Lab Sample ID: LCS 580-478766/5
Matrix: Water
Analysis Batch: 478766

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene			10.0	8.84		ug/L		88	80 - 122
Toluene			10.0	8.95		ug/L		89	80 - 120
Ethylbenzene			10.0	9.22		ug/L		92	80 - 120
m-Xylene & p-Xylene			10.0	9.37		ug/L		94	80 - 120
o-Xylene			10.0	9.45		ug/L		94	80 - 120
Trichloroethene			10.0	8.86		ug/L		89	80 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*100*		*80 - 120*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*
Dibromofluoromethane (Surr)	*101*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*101*		*80 - 120*

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-478766/6
Matrix: Water
Analysis Batch: 478766

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
Benzene			10.0	8.89		ug/L		89	80 - 122	1	14
Toluene			10.0	8.95		ug/L		90	80 - 120	0	13
Ethylbenzene			10.0	9.21		ug/L		92	80 - 120	0	14
m-Xylene & p-Xylene			10.0	9.06		ug/L		91	80 - 120	3	14
o-Xylene			10.0	9.41		ug/L		94	80 - 120	0	16
Trichloroethene			10.0	8.83		ug/L		88	80 - 125	0	13

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*99*		*80 - 120*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*
Dibromofluoromethane (Surr)	*101*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*102*		*80 - 120*

Lab Sample ID: MB 580-478773/7
Matrix: Water
Analysis Batch: 478773

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.24	ug/L			11/23/24 01:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*99*		*80 - 120*		*11/23/24 01:51*	*1*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*		*11/23/24 01:51*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*		*11/23/24 01:51*	*1*
1,2-Dichloroethane-d4 (Surr)	*107*		*80 - 120*		*11/23/24 01:51*	*1*

Lab Sample ID: LCS 580-478773/4
Matrix: Water
Analysis Batch: 478773

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			5.00	4.34		ug/L		87	80 - 122		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*100*		*80 - 120*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*
Dibromofluoromethane (Surr)	*102*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*103*		*80 - 120*

Lab Sample ID: LCSD 580-478773/5
Matrix: Water
Analysis Batch: 478773

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
Benzene			5.00	4.55		ug/L		91	80 - 122	5	14

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-478773/5
Matrix: Water
Analysis Batch: 478773

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

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Toluene-d8 (Surr)	100		80 - 120
4-Bromofluorobenzene (Surr)	103		80 - 120
Dibromofluoromethane (Surr)	101		80 - 120
1,2-Dichloroethane-d4 (Surr)	102		80 - 120

Lab Sample ID: MB 580-478782/7
Matrix: Water
Analysis Batch: 478782

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.24	ug/L			11/23/24 15:15	1
Toluene	ND		1.0	0.39	ug/L			11/23/24 15:15	1
Ethylbenzene	ND		1.0	0.50	ug/L			11/23/24 15:15	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			11/23/24 15:15	1
o-Xylene	ND		1.0	0.39	ug/L			11/23/24 15:15	1
Trichloroethene	ND		1.0	0.26	ug/L			11/23/24 15:15	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		80 - 120		11/23/24 15:15	1
4-Bromofluorobenzene (Surr)	103		80 - 120		11/23/24 15:15	1
Dibromofluoromethane (Surr)	107		80 - 120		11/23/24 15:15	1
1,2-Dichloroethane-d4 (Surr)	112		80 - 120		11/23/24 15:15	1

Lab Sample ID: LCS 580-478782/4
Matrix: Water
Analysis Batch: 478782

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	5.00	4.46		ug/L		89	80 - 122
Toluene	5.00	4.33		ug/L		87	80 - 120
Ethylbenzene	5.00	4.83		ug/L		97	80 - 120
m-Xylene & p-Xylene	5.00	4.76		ug/L		95	80 - 120
o-Xylene	5.00	4.82		ug/L		96	80 - 120
Trichloroethene	5.00	4.96		ug/L		99	80 - 125

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	97		80 - 120
4-Bromofluorobenzene (Surr)	107		80 - 120
Dibromofluoromethane (Surr)	105		80 - 120
1,2-Dichloroethane-d4 (Surr)	107		80 - 120

Lab Sample ID: LCSD 580-478782/5
Matrix: Water
Analysis Batch: 478782

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
Benzene	5.00	4.49		ug/L		90	80 - 122	1	14
Toluene	5.00	4.34		ug/L		87	80 - 120	0	13

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-478782/5
Matrix: Water
Analysis Batch: 478782

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
Ethylbenzene			5.00	4.93		ug/L		99	80 - 120	2	14
m-Xylene & p-Xylene			5.00	4.89		ug/L		98	80 - 120	3	14
o-Xylene			5.00	4.97		ug/L		99	80 - 120	3	16
Trichloroethene			5.00	4.83		ug/L		97	80 - 125	3	13

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*99*		*80 - 120*
4-Bromofluorobenzene (Surr)	*109*		*80 - 120*
Dibromofluoromethane (Surr)	*106*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*108*		*80 - 120*

Lab Sample ID: MB 580-478828/7
Matrix: Water
Analysis Batch: 478828

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.24	ug/L			11/24/24 04:01	1
Toluene	ND		1.0	0.39	ug/L			11/24/24 04:01	1
Ethylbenzene	ND		1.0	0.50	ug/L			11/24/24 04:01	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			11/24/24 04:01	1
o-Xylene	ND		1.0	0.39	ug/L			11/24/24 04:01	1
Trichloroethene	ND		1.0	0.26	ug/L			11/24/24 04:01	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*97*		*80 - 120*		*11/24/24 04:01*	*1*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*		*11/24/24 04:01*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 120*		*11/24/24 04:01*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*80 - 120*		*11/24/24 04:01*	*1*

Lab Sample ID: LCS 580-478828/4
Matrix: Water
Analysis Batch: 478828

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene			5.00	4.62		ug/L		92	80 - 122
Toluene			5.00	4.24		ug/L		85	80 - 120
Ethylbenzene			5.00	4.50		ug/L		90	80 - 120
m-Xylene & p-Xylene			5.00	4.52		ug/L		90	80 - 120
o-Xylene			5.00	4.76		ug/L		95	80 - 120
Trichloroethene			5.00	4.52		ug/L		90	80 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*98*		*80 - 120*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*
Dibromofluoromethane (Surr)	*106*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*104*		*80 - 120*

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-478828/5
Matrix: Water
Analysis Batch: 478828

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
Benzene			5.00	4.66		ug/L		93	80 - 122	1	14
Toluene			5.00	4.26		ug/L		85	80 - 120	0	13
Ethylbenzene			5.00	4.54		ug/L		91	80 - 120	1	14
m-Xylene & p-Xylene			5.00	4.51		ug/L		90	80 - 120	0	14
o-Xylene			5.00	4.64		ug/L		93	80 - 120	3	16
Trichloroethene			5.00	4.53		ug/L		91	80 - 125	0	13

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*98*		*80 - 120*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*
Dibromofluoromethane (Surr)	*106*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*105*		*80 - 120*

Lab Chronicle

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145914-1

Client Sample ID: E-179
Date Collected: 11/13/24 11:00
Date Received: 11/18/24 13:36

Lab Sample ID: 580-145914-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	478466	JBT	EET SEA	11/21/24 08:42
Total/NA	Analysis	8260D	RA	1	478699	JBT	EET SEA	11/22/24 20:03

Client Sample ID: E-162
Date Collected: 11/13/24 11:50
Date Received: 11/18/24 13:36

Lab Sample ID: 580-145914-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	478466	JBT	EET SEA	11/21/24 09:05

Client Sample ID: E-097
Date Collected: 11/13/24 12:43
Date Received: 11/18/24 13:36

Lab Sample ID: 580-145914-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	478466	JBT	EET SEA	11/21/24 09:28

Client Sample ID: E-072RR
Date Collected: 11/13/24 13:40
Date Received: 11/18/24 13:36

Lab Sample ID: 580-145914-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	478466	JBT	EET SEA	11/21/24 09:51
Total/NA	Analysis	8260D	DL	100	478699	JBT	EET SEA	11/22/24 22:45

Client Sample ID: E-171
Date Collected: 11/13/24 14:30
Date Received: 11/18/24 13:36

Lab Sample ID: 580-145914-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	478828	AA	EET SEA	11/24/24 09:48

Client Sample ID: E-256
Date Collected: 11/13/24 15:16
Date Received: 11/18/24 13:36

Lab Sample ID: 580-145914-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	478699	JBT	EET SEA	11/22/24 17:43
Total/NA	Analysis	8260D	DL	50	478773	AA	EET SEA	11/23/24 09:13

Client Sample ID: E-010
Date Collected: 11/14/24 11:02
Date Received: 11/18/24 13:36

Lab Sample ID: 580-145914-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		50	478782	AA	EET SEA	11/23/24 23:05

Lab Chronicle

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145914-1

Client Sample ID: SMW-36
Date Collected: 11/14/24 12:00
Date Received: 11/18/24 13:36

Lab Sample ID: 580-145914-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	478699	JBT	EET SEA	11/22/24 18:06
Total/NA	Analysis	8260D	RA	1	478773	AA	EET SEA	11/23/24 05:21

Client Sample ID: SMW-37
Date Collected: 11/14/24 13:00
Date Received: 11/18/24 13:36

Lab Sample ID: 580-145914-9
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	478699	JBT	EET SEA	11/22/24 18:30
Total/NA	Analysis	8260D	RA	1	478773	AA	EET SEA	11/23/24 05:44

Client Sample ID: SMW-29
Date Collected: 11/14/24 14:00
Date Received: 11/18/24 13:36

Lab Sample ID: 580-145914-10
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	478699	JBT	EET SEA	11/22/24 18:53

Client Sample ID: EB-02
Date Collected: 11/14/24 14:10
Date Received: 11/18/24 13:36

Lab Sample ID: 580-145914-11
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	478699	JBT	EET SEA	11/22/24 17:20

Client Sample ID: IWS-6
Date Collected: 11/14/24 14:45
Date Received: 11/18/24 13:36

Lab Sample ID: 580-145914-12
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D	RA	1	478828	AA	EET SEA	11/24/24 05:57
Total/NA	Analysis	8260D		1	478699	JBT	EET SEA	11/22/24 21:12

Client Sample ID: SMW-05
Date Collected: 11/15/24 11:12
Date Received: 11/18/24 13:36

Lab Sample ID: 580-145914-13
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	478699	JBT	EET SEA	11/22/24 19:16

Client Sample ID: SMW-09
Date Collected: 11/15/24 12:02
Date Received: 11/18/24 13:36

Lab Sample ID: 580-145914-14
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	478699	JBT	EET SEA	11/22/24 19:39

Lab Chronicle

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145914-1

Client Sample ID: SMW-31
Date Collected: 11/15/24 13:12
Date Received: 11/18/24 13:36

Lab Sample ID: 580-145914-15
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	478766	JBT	EET SEA	11/23/24 01:07

Client Sample ID: SMW-35
Date Collected: 11/15/24 13:43
Date Received: 11/18/24 13:36

Lab Sample ID: 580-145914-16
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	478828	AA	EET SEA	11/24/24 06:20

Client Sample ID: SMW-21A
Date Collected: 11/15/24 14:35
Date Received: 11/18/24 13:36

Lab Sample ID: 580-145914-17
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	478766	JBT	EET SEA	11/23/24 00:46

Client Sample ID: DUP-1
Date Collected: 11/13/24 08:00
Date Received: 11/18/24 13:36

Lab Sample ID: 580-145914-18
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	478699	JBT	EET SEA	11/22/24 20:26
Total/NA	Analysis	8260D	DL	50	478782	AA	EET SEA	11/23/24 23:28

Client Sample ID: DUP-2
Date Collected: 11/14/24 08:00
Date Received: 11/18/24 13:36

Lab Sample ID: 580-145914-19
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		50	478782	AA	EET SEA	11/23/24 22:42

Client Sample ID: DUP-4
Date Collected: 11/14/24 08:30
Date Received: 11/18/24 13:36

Lab Sample ID: 580-145914-20
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	478782	AA	EET SEA	11/23/24 18:26

Client Sample ID: Trip Blank 1
Date Collected: 11/13/24 08:00
Date Received: 11/18/24 13:36

Lab Sample ID: 580-145914-21
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	478699	JBT	EET SEA	11/22/24 16:10

Lab Chronicle

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145914-1

Client Sample ID: Trip Blank 2

Date Collected: 11/14/24 08:00
Date Received: 11/18/24 13:36

Lab Sample ID: 580-145914-22

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	478755	AA	EET SEA	11/23/24 03:15

Laboratory References:

EET SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: Marathon Petroleum Company LP
Job ID: 580-145914-1
Project/Site: Marathon Petroleum Company

Laboratory: Eurofins Seattle

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-004	02-19-25

Sample Summary

Client: Marathon Petroleum Company LP
Project/Site: Marathon Petroleum Company

Job ID: 580-145914-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-145914-1	E-179	Water	11/13/24 11:00	11/18/24 13:36
580-145914-2	E-162	Water	11/13/24 11:50	11/18/24 13:36
580-145914-3	E-097	Water	11/13/24 12:43	11/18/24 13:36
580-145914-4	E-072RR	Water	11/13/24 13:40	11/18/24 13:36
580-145914-5	E-171	Water	11/13/24 14:30	11/18/24 13:36
580-145914-6	E-256	Water	11/13/24 15:16	11/18/24 13:36
580-145914-7	E-010	Water	11/14/24 11:02	11/18/24 13:36
580-145914-8	SMW-36	Water	11/14/24 12:00	11/18/24 13:36
580-145914-9	SMW-37	Water	11/14/24 13:00	11/18/24 13:36
580-145914-10	SMW-29	Water	11/14/24 14:00	11/18/24 13:36
580-145914-11	EB-02	Water	11/14/24 14:10	11/18/24 13:36
580-145914-12	IWS-6	Water	11/14/24 14:45	11/18/24 13:36
580-145914-13	SMW-05	Water	11/15/24 11:12	11/18/24 13:36
580-145914-14	SMW-09	Water	11/15/24 12:02	11/18/24 13:36
580-145914-15	SMW-31	Water	11/15/24 13:12	11/18/24 13:36
580-145914-16	SMW-35	Water	11/15/24 13:43	11/18/24 13:36
580-145914-17	SMW-21A	Water	11/15/24 14:35	11/18/24 13:36
580-145914-18	DUP-1	Water	11/13/24 08:00	11/18/24 13:36
580-145914-19	DUP-2	Water	11/14/24 08:00	11/18/24 13:36
580-145914-20	DUP-4	Water	11/14/24 08:30	11/18/24 13:36
580-145914-21	Trip Blank 1	Water	11/13/24 08:00	11/18/24 13:36
580-145914-22	Trip Blank 2	Water	11/14/24 08:00	11/18/24 13:36

Eurofins Environmental Testing Northwest, LLC
3707 Woodland Drive Suite 3
Anchorage, AK 99517-2596
Phone: 907-563-9200

Chain of Custody Record

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Client Information	Sampler: Tanner	Lab PM:	Carrier Tracking No(s):	COC No: 580-64705-19897.1
Client Contact: Brianna Force - Trihydro	Phone:	E-Mail:	State of Origin:	Page: Page 1 of 2
Company: Marathon Petroleum Company LP	PWSID:			Job #:

Address: 54741 Energy Way	Due Date Requested:
City: Kenai	TAT Requested (days):
State, Zip: AK, 99611	Compliance Project: Δ Yes Δ No
Phone: 573-239-2434	PO #: 4900385998
Email: bforce@trihydro.com	WO #:
Project Name: Quarterly Sampling - Q25-1	Project #: 58021196
Site: Kenai Refinery	SSOW#:

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

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 - BTEX	8260D - (MOD) BTEX+TCE	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
E-179	11/13/2024	1100	G	W			3		3	
E-162	11/13/2024	1150	G	W			3		3	
E-097	11/13/2024	1243	G	W			3		3	
E-072RR	11/13/2024	1340	G	W			3		3	
E-171	11/13/2024	1430	G	W			3		3	
E-256	11/13/2024	1516	G	W			3		3	
E-010	11/14/2024	1102	G	W			3		3	
SMW-36	11/14/2024	1200	G	W				3	3	
SMW-37	11/14/2024	1300	G	W				3	3	
SMW-29	11/14/2024	1400	G	W				3	3	
EB-02	11/14/2024	1410	G	W				3	3	

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:

Relinquished by:	Date/Time: 11/14/24 1130	Company Trihydro	Received by:	Date/Time: 11/19/24 1336	Company
Relinquished by: Clarence Duncan III	Date/Time: 11/18/24 15:08	Company EETN	Received by:	Date/Time: 11/19/24 12:39	Company EETN
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: AK IR 3 3.7/3.6 /ng red/LC/ blue/ none

Ver: 01/16/2019

11/25/2024

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10 11

Eurofins Environmental Testing Northwest, LLC
3707 Woodland Drive Suite 3
Anchorage, AK 99517-2596
Phone: 907-563-9200

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: Tanner	Lab PM:	Carrier Tracking No(s):	COC No: 580-64705-19897.1
Client Contact: Brianna Force - Trihydro	Phone:	E-Mail:	State of Origin:	Page: Page 2 of 2
Company: Marathon Petroleum Company LP	PWSID:	Analysis Requested		Job #:
Address: 54741 Energy Way	Due Date Requested:			Preservation Codes:
City: Kenai	TAT Requested (days):			
State, Zip: AK, 99611	Compliance Project: Δ Yes Δ No			
Phone: 573-239-2434	PO #: 4900385998			
Email: bforce@trihydro.com	WO #:			
Project Name: Quarterly Sampling - Q25-1	Project #: 58021196			
Site: Kenai Refinery	SSOW#:			Other:

Preservation Codes:
A - HCL, M - Hexane
B - NaOH, N - None
C - Zn Acetate, O - AsNaO2
D - Nitric Acid, P - Na2O4S
E - NaHSO4, Q - Na2SO3
F - MeOH, R - Na2S2O3
G - Amchlor, S - H2SO4
H - Ascorbic Acid, T - TSP Dodecahydrate
I - Ice, U - Acetone
J - DI Water, V - MCAA
K - EDTA, W - pH 4-5
L - EDA, Z - other (specify)

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 - BTEX	8260D - (MOD) BTEX+TCE	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
IWS-6	11/14/2024	1445	G	W				3	3	
SMW-05	11/15/2024	1112	G	W				3	3	
SMW-09	11/15/2024	1202	G	W				3	3	
SMW-31	11/15/2024	1312	G	W				3	3	
SMW-35	11/15/2024	1343	G	W				3	3	
SMW-21A	11/15/2024	1435	G	W				3	3	
DUP-1	11/13/2024	800	G	W			3		3	
DUP-2	11/14/2024	800	G	W			3		3	
DUP-4	11/14/2024	830	G	W				3	3	
Trip Blank 1	11/13/2024	800	G	W			2		2	
Trip Blank 2	11/14/2024	800	G	W				2	2	

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:	
Relinquished by: Jon Paul	Date/Time: 11/14/24 @ 1130	Company: Trihydro	Received by: James Meculpine	Date/Time: 11/18/24 1336	Company
Relinquished by: Clarence Duncan Clarence Duncan III	Date/Time: 11/18/24 15:08	Company: EETN	Received by: [signature]	Date/Time: 11/19/24 12:39	Company: EETN
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: AKIR3 3.7/3.6/Lgred/LL/blue/none

Ver: 01/16/2019

Self-Service Pick Up

Alaska AIR CARGO

Air Waybill Number	Total pieces	Total weight	Product
027-35342786	1	34.0 lbs	GOLDSTREAK

Shipper	Consignee
EUROFINS ENVIRONMENT TESTING NORTHWEST 2000 WEST INTERNATIONAL AIRPORT ROAD ANCHORAGE, AK-99502	EUROFINS ENVIRONMENT TESTING NORTHWEST 2000 WEST INTERNATIONAL AIRPORT ROAD ANCHORAGE, AK-99502

Pieces	Weight	Description	Origin/Destination	Status
1	34.0 lbs	WATER SAMPLES 1	ANC - SEA	Ready

The undersigned acknowledges the receipt of above mentioned consignment is complete and in good condition.

Picked up by
Ricky Reyes

Date
11/19/2024

Time
12:39 PM

Picking up from our GoldStreak lockers?
Proceed to the lockers and scan this code.

Book your next shipment at alaskacargo.com.

Cooler ID No. 1 of 1 TAL Work Order _____

COOLER RECEIPT FORM

Project Quarterly Sampling - Q25-1

Cooler received on 11/19/24 and opened on 11/19/24 by Ricky Reyes

(signature)

Temperature upon receipt:

Cooler: Corr 4.5 °C, Uncorr 4.1 °C Therm ID: IR 14

Temp. Blank: Corr 2.6 °C, Uncorr 3.1 °C Therm ID: A3

1.	Were custody seals on outside of cooler and intact? a. If yes, how many and where: _____ b. Were signature and date correct?	YES NO
2.	Were custody papers taped to lid inside cooler?	(YES) NO
3.	Were custody papers properly filled out(ink, signed, etc)?	(YES) NO
4.	Did you sign custody papers in the appropriate place?	(YES) NO
5.	Did you attach shipper's packing slip to this form?	(YES) NO
6.	What kind of packing material was used? Bub bag	
7.	Was sufficient ice used?	(YES) NO
8.	Were all bottles sealed in separate plastic bags?	YES NO
9.	Did all bottles arrive in good condition (unbroken)?	YES NO
10.	Were all bottle labels complete (no., date, signed, pres, etc)?	YES NO
11.	Did all bottle labels and tags agree with custody papers?	YES NO
12.	Were correct bottles used for the test indicated?	YES NO
13.	If present, were voa vials checked for absence of airbubbles and noted if found?	YES NO
14.	Adequate volume of voa vials received per sample?	YES NO
15.	Was sufficient amount of sample sent in each bottle?	YES NO
16.	Were correct preservatives used?	YES NO
17.	Were extra labels added to pre-tared containers?	YES NO
18.	Corrective action taken, if necessary: a. Name of person contacted: _____ b. Date: _____	

2560515

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Custody Seal

DATE 11/18/24

SIGNATURE

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2560515

Marathon 11/19/24

Login Sample Receipt Checklist

Client: Marathon Petroleum Company LP

Job Number: 580-145914-1

Login Number: 145914
List Number: 1
Creator: Mcalpine, James 1

List Source: Eurofins Seattle

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	