**Tesoro Alaska Company LLC**

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

August 27, 2024

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 #24-3**
**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 24-3, 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 May through July 2024.

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 24-3

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

# Quarterly Progress Report No. 24-3

May, June, and July 2024

RCRA POST-CLOSURE PERMIT No. AKD 04867 9682

**Tesoro Alaska Company, LLC**

**Kenai, Alaska**

**August 27, 2024**

# Table of Contents

# List of Tables

# List of Figures

# List of Appendices

# List of Abbreviations and Acronyms

| | |
|---|---|
| µg/L | micrograms per liter |
| AS | air sparge |
| BTEX | benzene, toluene, ethylbenzene, and xylenes |
| 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) |
| CSM | conceptional site model |
| 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 |

# 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 May – July 2024 quarter (summer 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, and systems data.

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 Q23-1 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 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 ten samples from monitoring wells SMW-05, SMW-06, 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 Q24-2 SI Supplemental Groundwater Assessment Monitoring, along with SI Field Parameter Summary (Table E-1), SI Analytical Summary (Table E-2), and TCE Concentration Plots (Figure E-2) for sampling following the carbon wall injection are presented in Appendix E. Updated Supplemental RAP reporting will be discussed in the Q24-4 Report.

## 2.2 A-AQUIFER

The A-Aquifer groundwater extraction system was above the target 60 gallons per minute (gpm) for all 13 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. Activated carbon from one of the two Calgon vessels was replaced on October 10, 2023.

Tesoro operated the Phillips Remedial Measure (PRM), Highway AS System and the Highway Vapor Extraction system during this quarter. All system data were collected in accordance with Permit Table D-6 and are provided in Tables 3B, 3C, and 5.

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. E-010 was collected downgradient of the Lower Tank Farm (LTF) area as part of the LTF AS shut-down requirements. 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 during the shutdown of R-21R. Discussion of the results will be provided in the next comprehensive Quarterly Report (Q24-4).

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. E-190A was sampled to assess the effectiveness of the upgradient PRM AS system.

The beach seep area is checked daily during the ebbing tide, when the beach is accessible and free of ice, to identify the presence of petroleum sheen seeps and mitigate sheen migration. 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. Additional rocks are scheduled to be added to the rip-rap rock wall in fall of 2024. The wall appears to be slowing bluff erosion in the beach seep area, but erosion events continue to occur in other areas 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. Initial bio-sparge results were presented in Appendix G of Q23-4 Quarterly Report.

## 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 13 out of 13 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. Three 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 (Q24-4).

## 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.

# 3.0 ADMINISTRATIVE ACTIVITIES

| Activity | Summary |
|---|---|
| None | None |

| Upcoming Activities | Summary |
|---|---|
| 2024 Draft RCRA Post-Closure Permit | Submittal Fall 2024 |

# 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**
**QUARTER 24-3**

| 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 | 05/15/24 | **2000 J+** | ND(25) | **ND(25)** | **264 J+** | -- | -- |
| E-072RR | 05/14/24 | **766** | ND(25) | **295** | **658** | -- | -- |
| E-097 | 05/14/24 | ND(0.15) | ND(2.5) | ND(2.5) | ND(2.5) | -- | -- |
| E-137A | 05/13/24 | ND(0.15) | ND(2.5) | ND(2.5) | ND(2.5) | -- | -- |
| E-137B | 05/13/24 | ND(0.15) | ND(2.5) | ND(2.5) | ND(2.5) | -- | -- |
| E-147 | 05/15/24 | **7.71** | ND(2.5) | ND(2.5) | ND(2.5) | -- | -- |
| E-155 | 05/13/24 | ND(0.15) | ND(2.5) | ND(2.5) | ND(2.5) | -- | -- |
| E-156 | 05/13/24 | 3.98 | ND(2.5) | ND(2.5) | 17.6 | -- | -- |
| E-160 | 05/13/24 | **5.39** | ND(2.5) | ND(2.5) | 13.4 | -- | -- |
| E-162 | 05/14/24 | **44.7** | ND(2.5) | ND(2.5) | ND(2.5) | -- | -- |
| E-171 | 05/13/24 | **9.68** | ND(2.5) | ND(2.5) | 29.8 | -- | -- |
| E-179 | 05/14/24 | **65.5** | ND(2.5) | ND(2.5) | 8.16 | -- | -- |
| E-190A | 05/13/24 | ND(0.15) | ND(2.5) | ND(2.5) | ND(2.5) | -- | -- |
| E-234A-R | 05/14/24 | 5.92 | ND(2.5) | ND(2.5) | ND(2.5) | -- | -- |
| E-234B-R | 05/14/24 | **1280** | ND(2.5) | ND(2.5) | ND(2.5) | -- | -- |
| E-247A | 05/14/24 | **69.3** | ND(2.5) | ND(2.5) | ND(2.5) | -- | -- |
| E-247B | 05/14/24 | **44.8** | ND(2.5) | ND(2.5) | ND(2.5) | -- | -- |
| E-249A | 05/15/24 | **946 J+** | ND(2.5) | ND(2.5) | ND(2.5) | -- | -- |
| E-249B | 05/14/24 | **701** | ND(2.5) | ND(2.5) | ND(2.5) | -- | -- |
| E-249C | 05/14/24 | **14.6** | ND(2.5) | ND(2.5) | ND(2.5) | -- | -- |
| E-250A | 05/15/24 | 1.71 | ND(2.5) | ND(2.5) | ND(2.5) | -- | -- |
| E-250B | 05/15/24 | **334** | ND(12.5) | ND(12.5) | ND(12.5) | -- | -- |
| E-255 | 05/15/24 | **63.4** | ND(12.5) | ND(12.5) | ND(12.5) | -- | -- |
| E-256 | 05/15/24 | **1060** | ND(25) | **ND(25)** | ND(25) | -- | -- |
| E-259 | 05/14/24 | ND(0.15) | ND(2.5) | ND(2.5) | ND(2.5) | -- | -- |
| IWS-6 | 05/17/24 | 0.77 | ND(0.31) | ND(0.31) | ND(1) | **12.8** | ND(0.05) |
| SMW-05 | 05/17/24 | 2.56 | ND(0.31) | ND(0.31) | ND(1) | **3.41** | -- |
| SMW-06 | 05/17/24 | 0.76 | ND(0.31) | ND(0.31) | ND(1) | 1.05 | ND(0.05) |
| SMW-09 | 05/17/24 | 0.59 | ND(0.31) | ND(0.31) | ND(1) | 0.89 | **0.51** |
| SMW-21A | 05/17/24 | ND(0.12) | ND(0.31) | ND(0.31) | ND(1) | ND(0.15) | ND(0.05) |
| SMW-29 | 05/17/24 | 0.95 | ND(0.31) | ND(0.31) | ND(1) | 1.85 | ND(0.05) |
| SMW-31 | 05/17/24 | ND(0.12) | ND(0.31) | ND(0.31) | ND(1) | ND(0.15) | 0.17 |
| SMW-35 | 05/17/24 | 1.64 | ND(0.31) | ND(0.31) | ND(1) | **43.4** | **0.32** |
| SMW-36 | 05/21/24 | 0.99 | ND(0.31) | ND(0.31) | ND(1) | **3.77** | ND(0.05) |
| SMW-37 | 05/21/24 | 0.78 | ND(0.31) | ND(0.31) | ND(1) | **7.47** | **0.25** |
| | **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 low/high
-- Not analyzed
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 |
| 5/3/2024 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5/10/2024 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5/17/2024 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5/24/2024 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5/31/2024 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6/7/2024 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6/14/2024 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6/21/2024 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6/28/2024 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7/5/2024 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7/12/2024 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7/19/2024 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7/26/2024 | 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 |
| 5/3/2024 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5/10/2024 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5/17/2024 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5/24/2024 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5/31/2024 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6/7/2024 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6/14/2024 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6/21/2024 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6/28/2024 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7/5/2024 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7/12/2024 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7/19/2024 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7/26/2024 | 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 |
| 5/3/2024 | 0 | 0 | 0 | 0 | 5 | 9 | 7 | 6 |
| 5/10/2024 | 0 | 0 | 0 | 0 | 5 | 8 | 2.5 | 9 |
| 5/17/2024 | 0 | 0 | 0 | 0 | 5 | 8 | 5 | 7 |
| 5/24/2024 | 0 | 0 | 0 | 0 | 5 | 8 | 5 | 7 |
| 5/31/2024 | 0 | 0 | 0 | 0 | 5 | 7 | 6 | 7 |
| 6/7/2024 | 0 | 0 | 0 | 0 | 4 | 7.5 | 5 | 7 |
| 6/14/2024 | 0 | 0 | 0 | 0 | 4 | 8 | 5 | 6 |
| 6/21/2024 | 0 | 0 | 0 | 0 | 5 | 8 | 5 | 6.5 |
| 6/28/2024 | 0 | 0 | 0 | 0 | 5 | 8 | 6 | 7 |
| 7/5/2024 | 0 | 0 | 0 | 0 | 5 | 8 | 5 | 7 |
| 7/12/2024 | 0 | 0 | 0 | 0 | 5 | 8 | 6 | 6.5 |
| 7/19/2024 | 0 | 0 | 0 | 0 | 5 | 8 | 6 | 6 |
| 7/26/2024 | 0 | 0 | 0 | 0 | **5** | **7** | 4 | 6 |

**TABLE 3A. SI AIR SPARGE SYSTEM PERFORMANCE DATA**

| | SAS-13 | | SAS-14 | | SAS-15 | | SAS-16 | |
|---|---|---|---|---|---|---|---|---|
| Week ending: | CFM | PSI | CFM | PSI | CFM | PSI | CFM | PSI |
| 5/3/2024 | 6 | 8 | 6 | 12 | 7 | 3 | 2.5 | 9 |
| 5/10/2024 | 5 | 9 | 2.5 | 9 | 2.5 | 10 | 6 | 11 |
| 5/17/2024 | 6 | 8 | 5 | 10 | 7 | 3 | 2.5 | 9 |
| 5/24/2024 | 6 | 8.5 | 5 | 10 | 7 | 3 | 2.5 | 9.5 |
| 5/31/2024 | 6 | 8 | 5 | 10 | 7 | 3 | 2.5 | 9.5 |
| 6/7/2024 | 6 | 8 | 6 | 10 | 7 | 3 | 2.5 | 9 |
| 6/14/2024 | 6 | 7.5 | 5 | 10 | 7 | 2 | 2.5 | 8.5 |
| 6/21/2024 | 6 | 7.5 | 6 | 10.5 | 7 | 1 | 2.5 | 8 |
| 6/28/2024 | 6 | 8.5 | 5 | 10 | 7 | 3 | 2.5 | 9.5 |
| 7/5/2024 | 5 | 8 | 5 | 10 | 6 | 1.5 | 2.5 | 9 |
| 7/12/2024 | 6 | 8 | 6 | 10 | 7 | 1 | 2.5 | 9 |
| 7/19/2024 | 5 | 8 | 6 | 10 | 7 | 2 | 2.5 | 8 |
| 7/26/2024 | 6 | 7 | **5** | **9** | 7 | 1 | 2.5 | 8 |

| | SAS-17 | | SAS-18 | | SAS-19 | | SAS-20 | |
|---|---|---|---|---|---|---|---|---|
| Week ending: | CFM | PSI | CFM | PSI | CFM | PSI | CFM | PSI |
| 5/3/2024 | 3 | 6 | 2.5 | 10 | 2.5 | 10 | 6 | 0 |
| 5/10/2024 | 2.5 | 9 | 5 | 7 | 2.5 | 6 | 2.5 | 6.5 |
| 5/17/2024 | 2.5 | 4 | 2.5 | 9 | 2.5 | 10 | 5 | 0 |
| 5/24/2024 | 2.5 | 5 | 2.5 | 9 | 2.5 | 10 | 5 | 0 |
| 5/31/2024 | 3 | 4.5 | 2.5 | 8 | 2.5 | 10 | 6 | 0 |
| 6/7/2024 | 2.5 | 4.5 | 2.5 | 9 | 2.5 | 9.5 | 6 | 0 |
| 6/14/2024 | 2.5 | 5 | 2.5 | 9 | 2.5 | 9 | 5 | 0 |
| 6/21/2024 | 3 | 5 | 2.5 | 9 | 2.5 | 9 | 6 | 0 |
| 6/28/2024 | 2.5 | 4.5 | 2.5 | 9 | 2.5 | 10 | 6 | 0 |
| 7/5/2024 | 2.5 | 5 | 2.5 | 9 | 3 | 10 | 6 | 0 |
| 7/12/2024 | 3 | 4 | 2.5 | 9 | 2.5 | 9.5 | 6 | 0 |
| 7/19/2024 | 4 | 4 | 2.5 | 8.5 | 2.5 | 9 | 6 | 0 |
| 7/26/2024 | **3** | **6** | 2.5 | 8 | 2.5 | 9 | **6** | **0** |

| | SAS-21 | | SAS-22 | | TOTAL CFM | | | Minimum |
|---|---|---|---|---|---|---|---|---|
| Week ending: | CFM | PSI | CFM | PSI | BANK 1 | BANK 2 | BANK 3 | Total |
| 5/3/2024 | 2.5 | 10 | 3 | 7 | **14** | **20** | **19** | 35 |
| 5/10/2024 | 7 | 3 | 6 | 6 | **20** | **13** | **17** | 35 |
| 5/17/2024 | 7 | 6 | 5 | 6 | **16** | **18** | **22** | 35 |
| 5/24/2024 | 5 | 7 | 6 | 7 | **17** | **18** | **20** | 35 |
| 5/31/2024 | 8 | 7 | 2.5 | 7 | **14** | **19** | **24** | 35 |
| 6/7/2024 | 7 | 7 | 6 | 5.5 | **17** | **19** | **22** | 35 |
| 6/14/2024 | 6 | 7 | 2.5 | 5.5 | **14** | **17** | **21** | 35 |
| 6/21/2024 | 7 | 7.5 | 5 | 6.5 | **16** | **20** | **22** | 35 |
| 6/28/2024 | 8 | 6 | 5 | 6.5 | **16** | **19** | **24** | 35 |
| 7/5/2024 | 8 | 7 | 8 | 6 | **19** | **19** | **22** | 35 |
| 7/12/2024 | 7 | 6 | 4 | 6 | **15** | **20** | **23** | 35 |
| 7/19/2024 | 7 | 7 | 6 | 6 | **16** | **21** | **23** | 35 |
| 7/26/2024 | 6 | 6 | 6 | 5 | **17** | **19** | **20** | 35 |

Notes:
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**

| | PAS-7 | | PAS-8 | | PAS-9 | | PAS-10 | |
|---|---|---|---|---|---|---|---|---|
| Week ending: | CFM | PSI | CFM | PSI | CFM | PSI | CFM | PSI |
| 5/3/2024 | 9.6 | 12 | 4.9 | 14 | 0.0 | 17 | 3.2 | 4 |
| 5/10/2024 | 8.7 | 15 | 4.5 | 12 | 0.0 | 17 | 7.1 | 6 |
| 5/17/2024 | 10.7 | 15 | 3.2 | 12 | 0.0 | 17 | 7.1 | 6 |
| 5/24/2024 | 11.8 | 15 | 5.2 | 10.5 | 0.0 | 16 | 6.8 | 5 |
| 5/31/2024 | 9.4 | 15 | 0.0 | 12 | 0.0 | 18 | 6.5 | 5 |
| 6/7/2024 | 8.0 | 15 | 4.3 | 11 | 0.0 | 17 | 7.1 | 6 |
| 6/14/2024 | 7.1 | 15 | 4.3 | 11 | 0.0 | 16.5 | 6.4 | 6 |
| 6/21/2024 | 8.0 | 15 | 4.5 | 12 | 0.0 | 17 | 7.1 | 6 |
| 6/28/2024 | 8.7 | 15 | 3.7 | 8 | 0.0 | 16.5 | 6.5 | 5 |
| 7/5/2024 | 8.7 | 15 | 3.4 | 7 | 0.0 | 17 | 6.8 | 6 |
| 7/12/2024 | 9.4 | 15 | 4.7 | 13 | 0.0 | 18 | 7.7 | 7 |
| 7/19/2024 | 9.4 | 15 | 5.3 | 11 | 0.0 | 17 | 7.3 | 7 |
| 7/26/2024 | 10.7 | 15 | 2.1 | 2 | 0.0 | 18 | 7.3 | 7 |

| | PAS-11 | | PAS-12 | | PAS-13 | | PAS-16 | |
|---|---|---|---|---|---|---|---|---|
| Week ending: | CFM | PSI | CFM | PSI | CFM | PSI | CFM | PSI |
| 5/3/2024 | 5.5 | 18 | 3.6 | 7.5 | 0.0 | 0 | 7.1 | 15 |
| 5/10/2024 | 5.4 | 17 | 3.2 | 6 | 0.0 | 0.5 | 7.1 | 15 |
| 5/17/2024 | 3.9 | 18 | 3.2 | 4 | 0.0 | 0 | 7.1 | 15 |
| 5/24/2024 | 5.5 | 17.5 | 3.6 | 5 | 0.0 | 0.5 | 6.1 | 14.5 |
| 5/31/2024 | 4.7 | 13 | 4.5 | 8 | 0.0 | 1 | 5.6 | 15 |
| 6/7/2024 | 3.8 | 17 | 3.7 | 5.5 | 0.0 | 0 | 5.0 | 15 |
| 6/14/2024 | 3.8 | 17 | 3.1 | 5.5 | 0.0 | 0 | 5.0 | 15 |
| 6/21/2024 | 3.9 | 18 | 3.7 | 5.5 | 0.0 | 0 | 5.0 | 15 |
| 6/28/2024 | 3.9 | 17.5 | 3.7 | 5.5 | 0.0 | 0 | 6.2 | 15 |
| 7/5/2024 | 3.8 | 17 | 2.8 | 4.5 | 0.0 | 0 | 5.0 | 15 |
| 7/12/2024 | 4.0 | 19 | 4.8 | 9 | 0.0 | 0 | 6.2 | 15 |
| 7/19/2024 | 4.0 | 19 | 3.2 | 4 | 0.0 | 0 | 6.2 | 15 |
| 7/26/2024 | 4.0 | 19 | 3.9 | 6 | 0.0 | 0 | 7.1 | 15 |

| | PAS-17 | | PAS-18 | | PAS-19 | | PAS-21 | |
|---|---|---|---|---|---|---|---|---|
| Week ending: | CFM | PSI | CFM | PSI | CFM | PSI | CFM | PSI |
| 5/3/2024 | 3.6 | 15 | 6.8 | 11 | 0.0 | 15 | 2.8 | 1 |
| 5/10/2024 | 0.0 | 15 | 6.8 | 11 | 0.0 | 15 | 0.0 | 0 |
| 5/17/2024 | 3.6 | 15 | 6.8 | 11 | 0.0 | 15 | 0.0 | 0 |
| 5/24/2024 | 0.0 | 15 | 6.4 | 12 | 0.0 | 15 | 0.0 | 0 |
| 5/31/2024 | 2.5 | 15 | 6.2 | 11.5 | 0.0 | 15 | 0.0 | 0 |
| 6/7/2024 | 0.0 | 15 | 6.8 | 11 | 0.0 | 15 | 0.0 | 0 |
| 6/14/2024 | 3.6 | 15 | 6.2 | 11.5 | 0.0 | 15 | 0.0 | 0 |
| 6/21/2024 | 0.0 | 15 | 7.0 | 11.4 | 0.0 | 15 | 2.8 | 1 |
| 6/28/2024 | 3.6 | 15 | 6.7 | 10.5 | 0.0 | 15 | 0.0 | 0 |
| 7/5/2024 | 0.0 | 15 | 6.1 | 11 | 0.0 | 15 | 2.8 | 1 |
| 7/12/2024 | 0.0 | 15 | 7.7 | 11.5 | 0.0 | 15 | 0.0 | 0 |
| 7/19/2024 | 0.0 | 15 | 7.5 | 11 | 0.0 | 15 | 2.9 | 1 |
| 7/26/2024 | 3.6 | 15 | 7.3 | 10.5 | 0.0 | 15 | 0.0 | 0 |

**TABLE 3B. PRM AIR SPARGE SYSTEM PERFORMANCE DATA**

| | PAS-22 | | PAS-23 | | PAS-24 | | PAS-25 | |
|---|---|---|---|---|---|---|---|---|
| Week ending: | CFM | PSI | CFM | PSI | CFM | PSI | CFM | PSI |
| 5/3/2024 | 5.5 | 9 | 2.1 | 10 | 0.0 | 19 | 3.6 | 15 |
| 5/10/2024 | 5.5 | 7 | 2.1 | 5 | 0.0 | 18 | 3.6 | 15 |
| 5/17/2024 | 5.5 | 7 | 2.6 | 8 | 0.0 | 18 | 3.6 | 15 |
| 5/24/2024 | 5.5 | 9 | 1.6 | 6 | 0.0 | 17.5 | 3.6 | 15 |
| 5/31/2024 | 6.2 | 9 | 2.6 | 8 | 0.0 | 18 | 3.6 | 15 |
| 6/7/2024 | 5.5 | 7 | 0.0 | 5 | 0.0 | 18 | 3.6 | 15 |
| 6/14/2024 | 5.2 | 8 | 2.1 | 10 | 0.0 | 18 | 3.6 | 15 |
| 6/21/2024 | 4.9 | 7 | 0.0 | 6 | 0.0 | 18 | 3.6 | 15 |
| 6/28/2024 | 5.5 | 9 | 0.0 | 7 | 0.0 | 17 | 0.0 | 15 |
| 7/5/2024 | 4.9 | 7 | 0.0 | 9 | 0.0 | 18 | 3.6 | 15 |
| 7/12/2024 | 5.5 | 7 | 2.6 | 8 | 0.0 | 20 | 3.6 | 15 |
| 7/19/2024 | 6.2 | 9 | 3.1 | 11 | 0.0 | 19 | 3.6 | 15 |
| 7/26/2024 | 6.2 | 9 | 2.2 | 11 | 0.0 | 19 | 3.6 | 15 |
| | | | | | | 18 | | |

| | PAS-26 | | PAS-27 | | PAS-28 | | PAS-29 | |
|---|---|---|---|---|---|---|---|---|
| Week ending: | CFM | PSI | CFM | PSI | CFM | PSI | CFM | PSI |
| 5/3/2024 | 0.0 | 15 | 7.6 | 17 | 0.0 | 17 | 6.2 | 15 |
| 5/10/2024 | 3.6 | 15 | 6.4 | 16 | 5.2 | 16 | 6.2 | 15 |
| 5/17/2024 | 0.0 | 15 | 6.4 | 16 | 6.4 | 16 | 5.0 | 15 |
| 5/24/2024 | 0.0 | 15 | 6.4 | 16 | 2.7 | 17 | 6.2 | 15 |
| 5/31/2024 | 3.6 | 15 | 6.4 | 16 | 5.2 | 16 | 6.2 | 15 |
| 6/7/2024 | 0.0 | 15 | 9.7 | 16 | 5.4 | 17 | 8.7 | 15 |
| 6/14/2024 | 0.0 | 15 | 5.0 | 15 | 5.0 | 15 | 6.2 | 15 |
| 6/21/2024 | 0.0 | 15 | 5.2 | 16 | 5.2 | 16 | 5.0 | 15 |
| 6/28/2024 | 0.0 | 15 | 5.2 | 16 | 3.7 | 16.5 | 5.0 | 15 |
| 7/5/2024 | 0.0 | 15 | 5.2 | 16 | 3.7 | 16 | 5.0 | 15 |
| 7/12/2024 | 0.0 | 15 | 6.8 | 18 | 0.0 | 18 | 5.0 | 15 |
| 7/19/2024 | 0.0 | 15 | 5.5 | 18 | 3.9 | 18 | 5.0 | 15 |
| 7/26/2024 | 0.0 | 15 | 6.4 | 16 | 3.4 | 14 | 6.2 | 15 |

| | PAS-30 | | PAS-31 | | PAS-32 | | PAS-33 | |
|---|---|---|---|---|---|---|---|---|
| Week ending: | CFM | PSI | CFM | PSI | CFM | PSI | CFM | PSI |
| 5/3/2024 | 4.0 | 19 | 0.0 | 15 | 0.0 | 20 | 0.0 | 0 |
| 5/10/2024 | 7.8 | 18 | 0.0 | 15 | 0.0 | 19 | 0.0 | 0 |
| 5/17/2024 | 4.0 | 18.5 | 0.0 | 15 | 0.0 | 19 | 0.0 | 0 |
| 5/24/2024 | 3.9 | 18 | 0.0 | 15 | 0.0 | 19 | 0.0 | 0 |
| 5/31/2024 | 3.8 | 17 | 0.0 | 15 | 0.0 | 18 | 0.0 | 0 |
| 6/7/2024 | 5.5 | 18 | 0.0 | 15 | 0.0 | 18.5 | 0.0 | 0 |
| 6/14/2024 | 3.9 | 17.5 | 0.0 | 15 | 0.0 | 18.5 | 0.0 | 0 |
| 6/21/2024 | 6.6 | 17 | 0.0 | 15 | 0.0 | 18 | 0.0 | 0 |
| 6/28/2024 | 7.7 | 17.5 | 0.0 | 15 | 0.0 | 19 | 0.0 | 0 |
| 7/5/2024 | 8.5 | 17 | 0.0 | 15 | 0.0 | 18 | 0.0 | 0 |
| 7/12/2024 | 9.6 | 18 | 0.0 | 15 | 0.0 | 20 | 0.0 | 1 |
| 7/19/2024 | 10.1 | 20 | 0.0 | 15 | 0.0 | 20 | 0.0 | 0 |
| 7/26/2024 | 9.0 | 19 | 0.0 | 15 | 0.0 | 20 | 0.0 | 0 |

**TABLE 3B. PRM AIR SPARGE SYSTEM PERFORMANCE DATA**

| | PAS-34 | | PAS-35 | | PAS-36 | | PAS-37 | |
|---|---|---|---|---|---|---|---|---|
| Week ending: | CFM | PSI | CFM | PSI | CFM | PSI | CFM | PSI |
| 5/3/2024 | 0.0 | 0 | 6.0 | 14 | 6.5 | 10 | 8.1 | 13 |
| 5/10/2024 | 0.0 | 0 | 5.5 | 12 | 5.5 | 7 | 7.5 | 11 |
| 5/17/2024 | 0.0 | 0 | 4.9 | 14 | 5.5 | 9 | 7.8 | 12 |
| 5/24/2024 | 0.0 | 0 | 5.0 | 15 | 5.2 | 8 | 7.8 | 12 |
| 5/31/2024 | 0.0 | 0 | 7.4 | 13 | 5.8 | 8 | 7.5 | 11 |
| 6/7/2024 | 0.0 | 0 | 4.7 | 13 | 6.2 | 9 | 7.5 | 11 |
| 6/14/2024 | 0.0 | 0 | 4.7 | 13 | 5.2 | 8 | 7.0 | 11.5 |
| 6/21/2024 | 0.0 | 0 | 5.8 | 13 | 5.8 | 10 | 8.1 | 13 |
| 6/28/2024 | 0.0 | 0 | 5.3 | 13 | 5.7 | 9.5 | 7.1 | 12 |
| 7/5/2024 | 0.0 | 0 | 5.5 | 12 | 5.8 | 10 | 7.8 | 12 |
| 7/12/2024 | 0.0 | 0 | 6.0 | 14 | 6.8 | 11 | 8.8 | 13 |
| 7/19/2024 | 0.0 | 0 | 5.5 | 12 | 6.2 | 9 | 8.8 | 13 |
| 7/26/2024 | 0.0 | 0 | 6.2 | 15 | 6.2 | 9 | 8.8 | 13 |

| | PAS-38 | | PAS-39 | | Total |
|---|---|---|---|---|---|
| Week ending: | CFM | PSI | CFM | PSI | CFM |
| 5/3/2024 | 5.3 | 11 | 7.1 | 10 | 109.0 |
| 5/10/2024 | 5.0 | 10 | 7.1 | 10 | 113.8 |
| 5/17/2024 | 5.8 | 10 | 7.7 | 10 | 110.8 |
| 5/24/2024 | 5.0 | 10 | 7.1 | 10 | 105.4 |
| 5/31/2024 | 5.8 | 10 | 7.1 | 10 | 110.8 |
| 6/7/2024 | 5.8 | 10 | 7.1 | 10 | 108.6 |
| 6/14/2024 | 5.0 | 10 | 7.1 | 10 | 99.6 |
| 6/21/2024 | 5.0 | 10 | 7.1 | 10 | 104.4 |
| 6/28/2024 | 5.2 | 10.5 | 7.5 | 11 | 100.9 |
| 7/5/2024 | 5.0 | 10 | 6.5 | 10 | 101.0 |
| 7/12/2024 | 5.3 | 11 | 8.4 | 12 | 112.8 |
| 7/19/2024 | 5.3 | 11 | 8.1 | 11 | 117.1 |
| 7/26/2024 | 5.3 | 11 | 8.1 | 11 | 117.4 |

Notes:

CFM - cubic feet per minute

PSI - pounds per square inch

## TABLE 3C. HIGHWAY AIR SPARGE SYSTEM PERFORMANCE DATA

| | HAS-01 | | HAS-02 | | HAS-03 | | HAS-04 | |
|---|---|---|---|---|---|---|---|---|
| Week ending: | CFM | PSI | CFM | PSI | CFM | PSI | CFM | PSI |
| 5/3/2024 | 0.0 | 0 | 0.0 | 0 | 0.0 | 30 | 10.8 | 18 |
| 5/10/2024 | 0.0 | 0 | 0.0 | 0 | 2.0 | 30 | 10.8 | 18 |
| 5/17/2024 | 0.0 | 0 | 0.0 | 0 | 0.0 | 30 | 10.8 | 18 |
| 5/24/2024 | 0.0 | 0 | 0.0 | 0 | 0.0 | 30 | 10.6 | 17 |
| 5/31/2024 | 0.0 | 0 | 0.0 | 0 | 0.0 | 30 | 9.2 | 17 |
| 6/7/2024 | 0.0 | 0 | 0.0 | 0 | 0.0 | 30 | 9.9 | 17 |
| 6/14/2024 | 0.0 | 0 | 0.0 | 0 | 0.0 | 30 | 8.4 | 17 |
| 6/21/2024 | 0.0 | 0 | 0.0 | 0 | 0.0 | 30 | 10.8 | 18 |
| 6/28/2024 | 0.0 | 0 | 0.0 | 0 | 0.0 | 30 | 9.9 | 17 |
| 7/5/2024 | 0.0 | 0 | 0.0 | 0 | 0.0 | 30 | 10.8 | 18 |
| 7/12/2024 | 0.0 | 0 | 0.0 | 0 | 0.0 | 30 | 9.0 | 16 |
| 7/19/2024 | 0.0 | 0 | 0.0 | 0 | 0.0 | 30 | 9.2 | 17 |
| 7/26/2024 | 0.0 | 0 | 0.0 | 0 | 5.5 | 30 | 8.3 | 16 |

| | HAS-05 | | HAS-06 | | HAS-07 | | HAS-08 | |
|---|---|---|---|---|---|---|---|---|
| Week ending: | CFM | PSI | CFM | PSI | CFM | PSI | CFM | PSI |
| 5/3/2024 | 5.6 | 21 | 0.0 | 24 | 5.6 | 21 | 5.9 | 24 |
| 5/10/2024 | 5.6 | 21 | 0.0 | 23 | 5.6 | 20 | 5.9 | 24 |
| 5/17/2024 | 5.6 | 20.5 | 0.0 | 22.5 | 5.6 | 20.5 | 5.8 | 23 |
| 5/24/2024 | 6.9 | 21 | 0.0 | 22.5 | 5.6 | 20 | 5.8 | 23 |
| 5/31/2024 | 4.1 | 23 | 0.0 | 22 | 7.2 | 24 | 7.0 | 22 |
| 6/7/2024 | 5.6 | 20 | 0.0 | 22 | 3.9 | 20 | 5.8 | 22.5 |
| 6/14/2024 | 5.8 | 23 | 0.0 | 21 | 4.1 | 23 | 5.7 | 21.5 |
| 6/21/2024 | 5.6 | 21 | 0.0 | 23 | 3.9 | 20 | 5.0 | 23.5 |
| 6/28/2024 | 5.6 | 20.5 | 0.0 | 22 | 3.9 | 20 | 5.8 | 23 |
| 7/5/2024 | 5.6 | 21 | 0.0 | 22 | 4.0 | 21 | 5.8 | 23 |
| 7/12/2024 | 5.6 | 21 | 0.0 | 21 | 8.1 | 22 | 5.6 | 21 |
| 7/19/2024 | 5.7 | 22 | 0.0 | 22 | 7.1 | 23 | 5.7 | 22 |
| 7/26/2024 | 4.1 | 23 | 0.0 | 22 | 5.8 | 23 | 5.7 | 22 |

| | HAS-09 | | HAS-10 | | HAS-11 | | HAS-12 | |
|---|---|---|---|---|---|---|---|---|
| Week ending: | CFM | PSI | CFM | PSI | CFM | PSI | CFM | PSI |
| 5/3/2024 | 10.1 | 18 | 9.9 | 22 | 5.8 | 23 | 0.0 | 23 |
| 5/10/2024 | 10.8 | 18 | 11.4 | 22 | 4.0 | 22 | 0.0 | 22 |
| 5/17/2024 | 10.2 | 18.5 | 9.8 | 21 | 4.1 | 23 | 0.0 | 22 |
| 5/24/2024 | 10.8 | 18 | 9.9 | 22 | 4.1 | 23 | 0.0 | 22 |
| 5/31/2024 | 9.9 | 22 | 9.8 | 21 | 0.0 | 26 | 0.0 | 21 |
| 6/7/2024 | 10.1 | 18 | 9.9 | 22 | 5.8 | 22.5 | 0.0 | 22 |
| 6/14/2024 | 9.8 | 21.5 | 9.6 | 20 | 0.0 | 25 | 0.0 | 21 |
| 6/21/2024 | 10.8 | 18 | 9.9 | 22 | 0.0 | 22.5 | 0.0 | 23 |
| 6/28/2024 | 10.1 | 18 | 9.9 | 22 | 0.0 | 22.5 | 0.0 | 22 |
| 7/5/2024 | 10.1 | 18 | 9.9 | 22 | 0.0 | 23 | 0.0 | 22 |
| 7/12/2024 | 9.8 | 21 | 9.8 | 21 | 0.0 | 24 | 0.0 | 19 |
| 7/19/2024 | 8.1 | 22 | 9.8 | 21 | 0.0 | 25 | 0.0 | 22 |
| 7/26/2024 | 9.2 | 23 | 9.8 | 21 | 0.0 | 25 | 14.9 | 21 |

## TABLE 3C. HIGHWAY AIR SPARGE SYSTEM PERFORMANCE DATA

| | HAS-13 | | HAS-14 | | HAS-15 | | HAS-16 | |
|---|---|---|---|---|---|---|---|---|
| Week ending: | CFM | PSI | CFM | PSI | CFM | PSI | CFM | PSI |
| 5/3/2024 | 7.9 | 20 | 11.1 | 20 | 17.8 | 30 | 8.1 | 22 |
| 5/10/2024 | 6.8 | 20 | 11.1 | 20 | 17.8 | 30 | 8.2 | 23 |
| 5/17/2024 | 6.8 | 20 | 10.9 | 19 | 16.7 | 30 | 11.3 | 21 |
| 5/24/2024 | 6.8 | 20 | 10.1 | 18 | 17.3 | 30 | 11.3 | 21 |
| 5/31/2024 | 8.9 | 21 | 9.3 | 18 | 17.8 | 30 | 9.8 | 21 |
| 6/7/2024 | 5.6 | 20 | 10.8 | 18 | 12.6 | 30 | 9.8 | 21 |
| 6/14/2024 | 8.1 | 22 | 10.1 | 18 | 10.9 | 30 | 7.9 | 20 |
| 6/21/2024 | 7.9 | 20 | 10.0 | 20 | 14.1 | 30 | 9.9 | 22 |
| 6/28/2024 | 6.8 | 20 | 10.9 | 19 | 13.4 | 30 | 10.5 | 21 |
| 7/5/2024 | 7.9 | 20 | 10.8 | 18 | 14.1 | 30 | 9.9 | 22 |
| 7/12/2024 | 7.9 | 20 | 9.2 | 17 | 14.8 | 30 | 8.0 | 21 |
| 7/19/2024 | 8.8 | 20 | 10.8 | 18 | 16.1 | 30 | 9.8 | 21 |
| 7/26/2024 | 8.9 | 21 | 10.2 | 19 | 16.1 | 30 | 7.9 | 20 |

| | HAS-17 | | HAS-18 | | HAS-19 | | HAS-20 | |
|---|---|---|---|---|---|---|---|---|
| Week ending: | CFM | PSI | CFM | PSI | CFM | PSI | CFM | PSI |
| 5/3/2024 | 10.9 | 30 | 9.0 | 16 | 12.6 | 21 | 7.7 | 19 |
| 5/10/2024 | 8.9 | 30 | 9.0 | 16 | 9.8 | 21 | 8.9 | 21 |
| 5/17/2024 | 8.9 | 30 | 9.0 | 16 | 9.8 | 21 | 7.9 | 20 |
| 5/24/2024 | 6.3 | 30 | 8.3 | 16 | 9.8 | 21 | 8.0 | 21 |
| 5/31/2024 | 0.0 | 30 | 8.7 | 19 | 11.6 | 23 | 7.7 | 19 |
| 6/7/2024 | 12.6 | 30 | 8.2 | 15.5 | 11.1 | 20 | 6.9 | 21 |
| 6/14/2024 | 0.0 | 30 | 8.1 | 15 | 11.6 | 23 | 5.4 | 18 |
| 6/21/2024 | 8.9 | 30 | 8.3 | 16 | 12.5 | 20.5 | 8.0 | 21 |
| 6/28/2024 | 7.7 | 30 | 8.3 | 16 | 12.4 | 20 | 8.0 | 21 |
| 7/5/2024 | 6.3 | 30 | 8.3 | 16 | 12.8 | 22 | 8.8 | 20 |
| 7/12/2024 | 6.3 | 30 | 7.4 | 16 | 12.8 | 22 | 5.5 | 19 |
| 7/19/2024 | 0.0 | 30 | 7.3 | 15 | 12.8 | 22 | 5.6 | 20 |
| 7/26/2024 | 0.0 | 30 | 8.1 | 15 | 12.6 | 21 | 6.7 | 19 |

| | HAS-21 | | HAS-22 | | HAS-23 | | HAS-24 | | Total |
|---|---|---|---|---|---|---|---|---|---|
| Week ending: | CFM | PSI | CFM | PSI | CFM | PSI | CFM | PSI | CFM |
| 5/3/2024 | 8.2 | 23 | 8.4 | 25 | 8.7 | 14 | 10.4 | 20 | 174.6 |
| 5/10/2024 | 7.9 | 20 | 8.2 | 23 | 7.4 | 10 | 9.8 | 21 | 169.8 |
| 5/17/2024 | 8.0 | 21 | 8.2 | 23 | 7.0 | 12.5 | 9.6 | 20 | 165.8 |
| 5/24/2024 | 8.9 | 21 | 8.3 | 24 | 7.7 | 12 | 11.1 | 20 | 167.3 |
| 5/31/2024 | 10.7 | 22 | 10.5 | 21 | 8.1 | 15 | 10.2 | 19 | 160.5 |
| 6/7/2024 | 8.5 | 18 | 8.4 | 25 | 6.4 | 8 | 9.6 | 20 | 161.3 |
| 6/14/2024 | 10.7 | 22 | 9.6 | 20 | 8.0 | 14 | 9.2 | 17 | 142.9 |
| 6/21/2024 | 9.5 | 19 | 8.2 | 23 | 7.0 | 10 | 10.4 | 20 | 160.7 |
| 6/28/2024 | 9.3 | 17.5 | 10.2 | 24 | 6.3 | 7.5 | 10.9 | 19 | 159.9 |
| 7/5/2024 | 9.8 | 21 | 11.4 | 22 | 8.0 | 14 | 9.5 | 19 | 163.6 |
| 7/12/2024 | 11.4 | 22 | 9.8 | 21 | 7.7 | 12 | 9.5 | 19 | 158.0 |
| 7/19/2024 | 11.1 | 20 | 11.4 | 22 | 6.8 | 11 | 10.2 | 19 | 156.1 |
| 7/26/2024 | 11.4 | 20 | 9.2 | 17 | 8.1 | 15 | 10.2 | 19 | 172.6 |

## TABLE 3C. HIGHWAY AIR SPARGE SYSTEM PERFORMANCE DATA

| | WAS-1 | | WAS-2 | | WAS-3 | | WAS-4 | |
|---|---|---|---|---|---|---|---|---|
| Week ending: | CFM | PSI | CFM | PSI | CFM | PSI | CFM | PSI |
| 5/3/2024 | 15.5 | 36 | 16 | 32 | 15.5 | 29 | 16 | 29 |
| 5/10/2024 | 16 | 29 | 16 | 35 | 16 | 36 | 16 | 31 |
| 5/17/2024 | 15.5 | 37 | 15.5 | 35 | 16.0 | 28 | 0.0 | 30 |
| 5/24/2024 | 15.5 | 36 | 16.0 | 34 | 16.0 | 27 | 0.0 | 30 |
| 5/31/2024 | 16.0 | 38 | 16.0 | 34 | 16.0 | 28 | 0.0 | 25 |
| 6/7/2024 | 10.0 | 30 | 10.5 | 28 | 11.0 | 24 | 0.0 | 0 |
| 6/14/2024 | 12.5 | 31 | 12.5 | 29 | 12.0 | 24 | 0.0 | 0 |
| 6/21/2024 | 13.0 | 31 | 13.0 | 29 | 12.0 | 24 | 14.5 | 29 |
| 6/28/2024 | 11.5 | 30 | 10.5 | 28 | 10.0 | 24 | 12.0 | 26 |
| 7/5/2024 | 10.5 | 30 | 10.0 | 28 | 10.0 | 23 | 11.5 | 27 |
| 7/12/2024 | 11.5 | 31 | 11.0 | 28 | 10.5 | 24 | 12.5 | 28 |
| 7/19/2024 | 11.0 | 30 | 10.5 | 28 | 10.0 | 24 | 12.0 | 27 |
| 7/26/2024 | 11.0 | 30 | 11.0 | 28 | 0.0 | 31 | 12.0 | 28 |

| | WAS-5 | | WAS-6 | | WAS-7 | | WAS-8 | |
|---|---|---|---|---|---|---|---|---|
| Week ending: | CFM | PSI | CFM | PSI | CFM | PSI | CFM | PSI |
| 5/3/2024 | 16 | 29 | 16 | 29 | 16 | 31 | 16 | 42 |
| 5/10/2024 | 16 | 30 | 16 | 29 | 16 | 31 | 17.5 | 41 |
| 5/17/2024 | 16.5 | 31 | 17.0 | 29 | 17.0 | 31 | 18.0 | 42 |
| 5/24/2024 | 16.5 | 30 | 16.5 | 29 | 16.5 | 30 | 17.5 | 41 |
| 5/31/2024 | 17.0 | 30 | 17.0 | 29 | 17.0 | 30 | 17.0 | 42 |
| 6/7/2024 | 10.5 | 26 | 11.5 | 26 | 11.0 | 28 | 11.5 | 27 |
| 6/14/2024 | 12.5 | 27 | 12.5 | 27 | 11.5 | 28 | 11.0 | 39 |
| 6/21/2024 | 13.0 | 28 | 13.0 | 29 | 13.0 | 29 | 9.0 | 39 |
| 6/28/2024 | 10.5 | 26 | 10.5 | 26 | 10.5 | 27 | 6.5 | 36 |
| 7/5/2024 | 10.5 | 20 | 10.0 | 27 | 10.5 | 28 | 6.5 | 36 |
| 7/12/2024 | 11.0 | 27 | 11.5 | 28 | 11.0 | 29 | 8.0 | 36 |
| 7/19/2024 | 11.0 | 26 | 10.5 | 28 | 10.5 | 29 | 7.0 | 36 |
| 7/26/2024 | 10.5 | 27 | 9.0 | 29 | 10.5 | 29 | 8.0 | 36 |

| | WAS-9 | | WAS-10 | | WAS-11 | | WAS-12 | | Total |
|---|---|---|---|---|---|---|---|---|---|
| Week ending: | CFM | PSI | CFM | PSI | CFM | PSI | CFM | PSI | CFM |
| 5/3/2024 | 7.5 | 40 | 16 | 44 | 16.5 | 44 | 5 | 40 | 172.0 |
| 5/10/2024 | 8 | 39 | 17 | 42 | 18 | 42 | 7 | 40 | 179.5 |
| 5/17/2024 | 9.0 | 39 | 17.0 | 44 | 18.0 | 43 | 5.5 | 40 | 165.0 |
| 5/24/2024 | 8.5 | 38 | 12.0 | 45 | 15.5 | 44 | 5.5 | 40 | 156.0 |
| 5/31/2024 | 8.5 | 38 | 18.0 | 44 | 18.0 | 43 | 5.0 | 40 | 165.5 |
| 6/7/2024 | 4.0 | 39 | 11.0 | 36 | 7.0 | 38 | 3.0 | 38 | 101.0 |
| 6/14/2024 | 6.5 | 36 | 8.0 | 39 | 9.5 | 37 | 3.0 | 38 | 111.5 |
| 6/21/2024 | 4.0 | 35 | 9.0 | 39 | 8.0 | 37 | 4.0 | 40 | 125.5 |
| 6/28/2024 | 4.0 | 38 | 8.5 | 37 | 7.0 | 37 | 2.5 | 38 | 104.0 |
| 7/5/2024 | 2.0 | 37 | 7.0 | 36 | 6.0 | 36 | 0.0 | 37 | 94.5 |
| 7/12/2024 | 5.5 | 35 | 7.0 | 37 | 9.0 | 36 | 3.0 | 36 | 111.5 |
| 7/19/2024 | 5.5 | 37 | 7.0 | 36 | 7.5 | 36 | 4.0 | 36 | 106.5 |
| 7/26/2024 | 4.0 | 37 | 8.0 | 36 | 5.0 | 37 | 3.0 | 37 | 92.0 |

## TABLE 3C. HIGHWAY AIR SPARGE SYSTEM PERFORMANCE DATA

| | 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 |
| 5/3/2024 | 0.00 | 0.00 | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** |
| 5/10/2024 | 0.00 | 0.00 | 24.00 | 20.00 | 26.00 | 22.00 | 27.00 | 23.00 |
| 5/17/2024 | 0.00 | 0.00 | 24.00 | 18.00 | 26.00 | 22.00 | 22.00 | 16.00 |
| 5/24/2024 | 0.00 | 0.00 | 26.00 | 16.00 | 26.00 | 26.00 | 22.00 | 18.00 |
| 5/31/2024 | 0.00 | 0.00 | 24.00 | 18.00 | 28.00 | 24.00 | 26.00 | 16.00 |
| 6/7/2024 | 0.00 | 0.00 | 24.00 | 12.00 | 28.00 | 22.00 | 22.00 | 16.00 |
| 6/14/2024 | 0.00 | 0.00 | 24.00 | 10.00 | 28.00 | 22.00 | 24.00 | 30.00 |
| 6/21/2024 | 0.00 | 0.00 | 24.00 | 18.00 | 28.00 | 22.00 | 26.00 | 24.00 |
| 6/28/2024 | 0.00 | 0.00 | 26.00 | 12.00 | 28.00 | 22.00 | 24.00 | 24.00 |
| 7/5/2024 | 0.00 | 0.00 | 24.00 | 18.00 | 30.00 | 22.00 | 32.00 | 28.00 |
| 7/12/2024 | 0.00 | 0.00 | 24.00 | 10.00 | 30.00 | 23.00 | 24.00 | 24.00 |
| 7/19/2024 | 0.00 | 0.00 | 26.00 | 12.00 | 34.00 | 24.00 | 26.00 | 24.00 |
| 7/26/2024 | 0.00 | 0.00 | **24.00** | **12.00** | **34.00** | **24.00** | **26.00** | **24.00** |

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

## TABLE 4. RECOVERY WELL PUMPING RATE

### A-AQUIFER

| Week ending: | R-21R GPM | R-40 GPM | R-41 GPM | COMBINED TOTAL GPM | MIN GPM |
|---|---|---|---|---|---|
| 5/3/2024 | 0 | 46 | 34 | 80 | 60 |
| 5/10/2024 | 0 | 48.2 | 35 | 83.2 | 60 |
| 5/17/2024 | 0 | 50.4 | 31.3 | 81.7 | 60 |
| 5/24/2024 | 0 | 50.4 | 31.4 | 81.8 | 60 |
| 5/31/2024 | 0 | 50 | 32 | 82 | 60 |
| 6/7/2024 | 0 | 49.2 | 31.1 | 80.3 | 60 |
| 6/14/2024 | 0 | 48.5 | 31.6 | 80.1 | 60 |
| 6/21/2024 | 0 | 48 | 31 | 79 | 60 |
| 6/28/2024 | 0 | 47.5 | 30.8 | 78.3 | 60 |
| 7/5/2024 | 0 | 48 | 30 | 78 | 60 |
| 7/12/2024 | 0 | 48 | 31 | 79 | 60 |
| 7/19/2024 | 0 | 47 | 30 | 77 | 60 |
| 7/26/2024 | 0 | 47 | 31 | 78 | 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 | MIN GPM |
|---|---|---|---|---|---|---|---|---|
| 5/3/2024 | 0 | 0 | 0 | 36.2 | 38 | 16 | 90.2 | 60 |
| 5/10/2024 | 0 | 0 | 0 | 36 | 38 | 15.3 | 89.3 | 60 |
| 5/17/2024 | 0 | 0 | 0 | 36.3 | 38.3 | 14.4 | 89 | 60 |
| 5/24/2024 | 0 | 0 | 0 | 36.5 | 38.5 | 14.4 | 89.4 | 60 |
| 5/31/2024 | 0 | 0 | 0 | 36 | 38 | 14 | 88 | 60 |
| 6/7/2024 | 0 | 0 | 0 | 36 | 38.4 | 14.2 | 88.6 | 60 |
| 6/14/2024 | 0 | 0 | 0 | 35.8 | 38.5 | 13.4 | 87.7 | 60 |
| 6/21/2024 | 0 | 0 | 0 | 36 | 38 | 13 | 87 | 60 |
| 6/28/2024 | 0 | 0 | 0 | 36.5 | 38.2 | 13 | 87.7 | 60 |
| 7/5/2024 | 0 | 0 | 0 | 36 | 39 | 13.5 | 88.5 | 60 |
| 7/12/2024 | 0 | 0 | 0 | 36 | 39 | 13 | 88 | 60 |
| 7/19/2024 | 0 | 0 | 0 | 36 | 39 | 13 | 88 | 60 |
| 7/26/2024 | 0 | 0 | 0 | 36 | 39 | 13 | 88 | 60 |

## TABLE 4. RECOVERY WELL PUMPING RATE

### CALGON

| Week ending: | GPM | GPD | MAX GPD |
|---|---|---|---|
| 5/3/2024 | 204 | 293760 | 1000000 |
| 5/10/2024 | 204 | 293760 | 1000000 |
| 5/17/2024 | 202.3 | 291312 | 1000000 |
| 5/24/2024 | 201.1 | 289584 | 1000000 |
| 5/31/2024 | 203 | 292320 | 1000000 |
| 6/7/2024 | 203.3 | 292752 | 1000000 |
| 6/14/2024 | 199.2 | 286848 | 1000000 |
| 6/21/2024 | 205 | 295200 | 1000000 |
| 6/28/2024 | 201.5 | 290160 | 1000000 |
| 7/5/2024 | 200 | 288000 | 1000000 |
| 7/12/2024 | 200 | 288000 | 1000000 |
| 7/19/2024 | 196 | 282240 | 1000000 |
| 7/26/2024 | 199 | 286560 | 1000000 |

Notes:

gpm - gallons per minute

gpd - gallons per day

## TABLE 5. GROUNDWATER INJECTION RATES

### B-INJECTION

| Week ending: | I-6 GPM | I-7 GPM | I-8 GPM | I-9 GPM | COMBINED TOTAL GPM | MIN GPM |
|---|---|---|---|---|---|---|
| 5/3/2024 | 11 | 10.5 | 20 | 20 | 61.5 | 30 |
| 5/10/2024 | 11 | 10 | 20 | 20 | 61 | 30 |
| 5/17/2024 | 11.5 | 8.1 | 19.1 | 14.7 | 53.4 | 30 |
| 5/24/2024 | 11.5 | 7.7 | 19.6 | 19.8 | 58.6 | 30 |
| 5/31/2024 | 12.5 | 9.5 | 20 | 18 | 60 | 30 |
| 6/7/2024 | 11.2 | 9.6 | 19.4 | 17.4 | 57.6 | 30 |
| 6/14/2024 | 11.4 | 9.9 | 19.7 | 18.8 | 59.8 | 30 |
| 6/21/2024 | 11 | 9 | 20 | 19 | 59 | 30 |
| 6/28/2024 | 10.6 | 9.1 | 0 | 20.6 | 40.3 | 30 |
| 7/5/2024 | 12 | 10 | 17 | 20 | 59 | 30 |
| 7/12/2024 | 12 | 10 | 18 | 19 | 59 | 30 |
| 7/19/2024 | 10 | 11 | 19 | 20 | 60 | 30 |
| 7/26/2024 | 7 | 11 | 18 | 18 | 54 | 30 |

### A-INJECTION

| Week ending: | IR-29R GPM | IR-30R GPM | IR-31 GPM | IR-32 GPM | COMBINED TOTAL GPM | MIN GPM |
|---|---|---|---|---|---|---|
| 5/3/2024 | 43 | 81 | 45 | 35 | 204 | 60 |
| 5/10/2024 | 42.8 | 81 | 45 | 35 | 203.8 | 60 |
| 5/17/2024 | 42.4 | 80.4 | 43.6 | 35.9 | 202.3 | 60 |
| 5/24/2024 | 42.2 | 80.1 | 43.8 | 35 | 201.1 | 60 |
| 5/31/2024 | 43 | 80.6 | 45 | 34 | 202.6 | 60 |
| 6/7/2024 | 42.6 | 79.4 | 44.1 | 37.2 | 203.3 | 60 |
| 6/14/2024 | 42.1 | 79.5 | 44.5 | 33.1 | 199.2 | 60 |
| 6/21/2024 | 42 | 80 | 44 | 39 | 205 | 60 |
| 6/28/2024 | 41.8 | 79.8 | 43.2 | 36.7 | 201.5 | 60 |
| 7/5/2024 | 41 | 79 | 43 | 37 | 200 | 60 |
| 7/12/2024 | 42 | 78 | 43 | 37 | 200 | 60 |
| 7/19/2024 | 42 | 78 | 42 | 34 | 196 | 60 |
| 7/26/2024 | 42 | 79 | 43 | 37 | 199 | 60 |

Note:
gpm- gallons per minute
* System shutdown for installation of replacement injection wells

## TABLE 6. UCA INDUSTRIAL PUMPING

| | WELL TW-2B | | WELL TW-1 | | WELL TW-7 | |
|---|---|---|---|---|---|---|
| Date | Total GAL | GPD | Total GAL | GPD | GAL | GPD |
| 5/3/2024 | 76528611 | 572,415 | 22717300 | 3214851 | 145285000 | 0 |
| 5/10/2024 | 78438696 | 272,869 | 23719000 | 143100 | 145285000 | 0 |
| 5/17/2024 | 82311143 | 553,207 | 25262300 | 220471 | 145321000 | 5143 |
| 5/24/2024 | 83926353 | 230,744 | 26194900 | 133229 | 145321000 | 0 |
| 5/31/2024 | 1661639 | 3,957,874 | 28261000 | 295157 | 145355635 | 4948 |
| 6/7/2024 | 4001517 | 334,268 | 29747700 | 212386 | 145373000 | 2481 |
| 6/14/2024 | 7200081 | 456,938 | 31422500 | 239257 | 145465000 | 13143 |
| 6/21/2024 | 10555757 | 479,382 | 34036600 | 373443 | 145465021 | 3 |
| 6/28/2024 | 12280660 | 246,415 | 36209500 | 310414 | 145483000 | 2568 |
| 7/5/2024 | 14691312 | 344,379 | 39183300 | 424829 | 145483101 | 14 |
| 7/12/2024 | 16202840 | 215,933 | 40952900 | 252800 | 145483101 | 0 |
| 7/19/2024 | 19115819 | 416,140 | 42466200 | 216186 | 145483100 | 0 |
| 7/26/2024 | 21496829 | 340,144 | 44368170 | 271710 | 145998497 | 73628 |

Notes:
gal- gallons
gpd- gallons per day
NM- Not Measured

**FIGURES**


N

0 2,000'

SOURCE: USGS 7.5' QUAD SHEET
KENAI (C-4) NW, AK
PROVISIONAL EDITION 1986

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

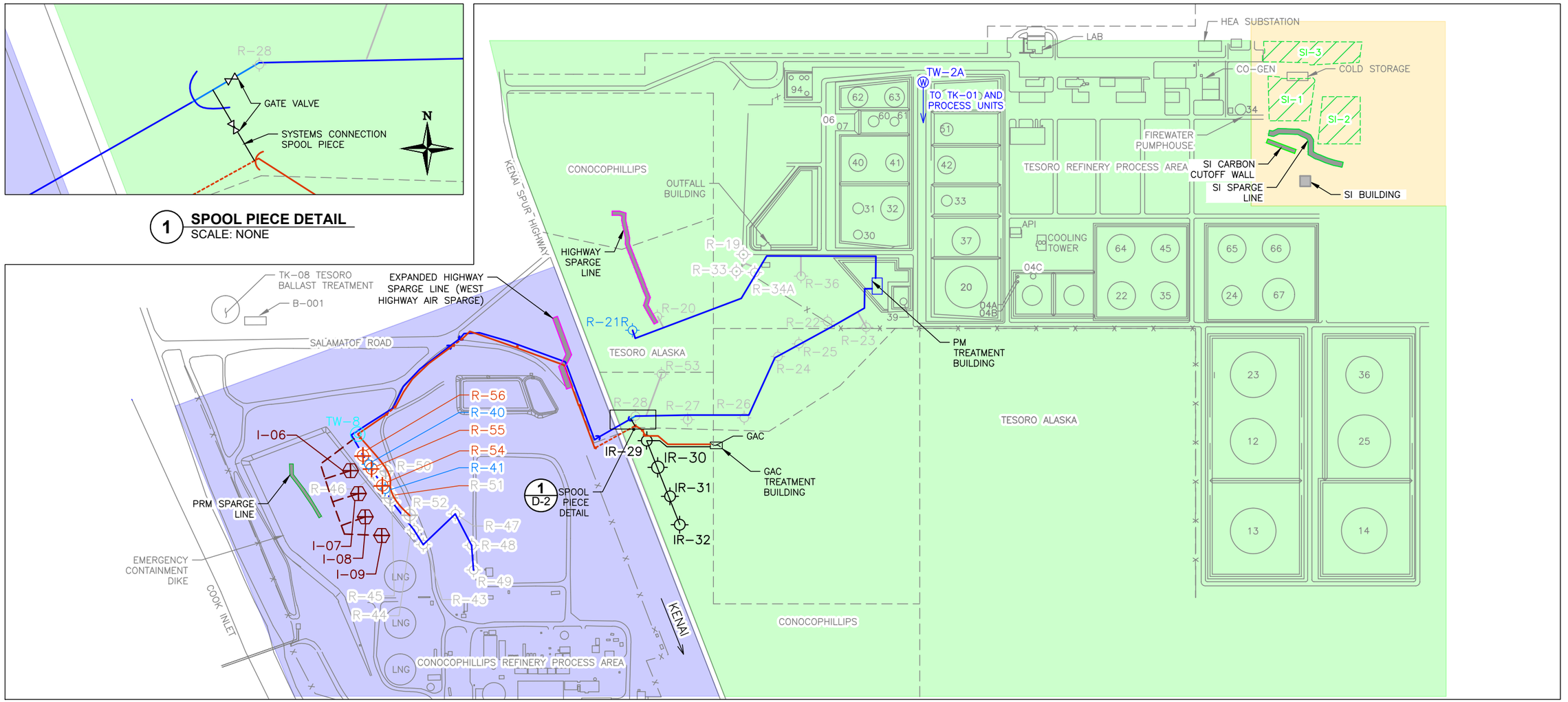
**FIGURE 1**

**SITE LOCATION MAP**

**QUARTERLY PROGRESS REPORT**
**TESORO KENAI REFINERY**
**KENAI, ALASKA**

| Drawn By: DH | Checked By: SP | Scale: 1" = 2,000' | Date: 11/21/16 | 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**

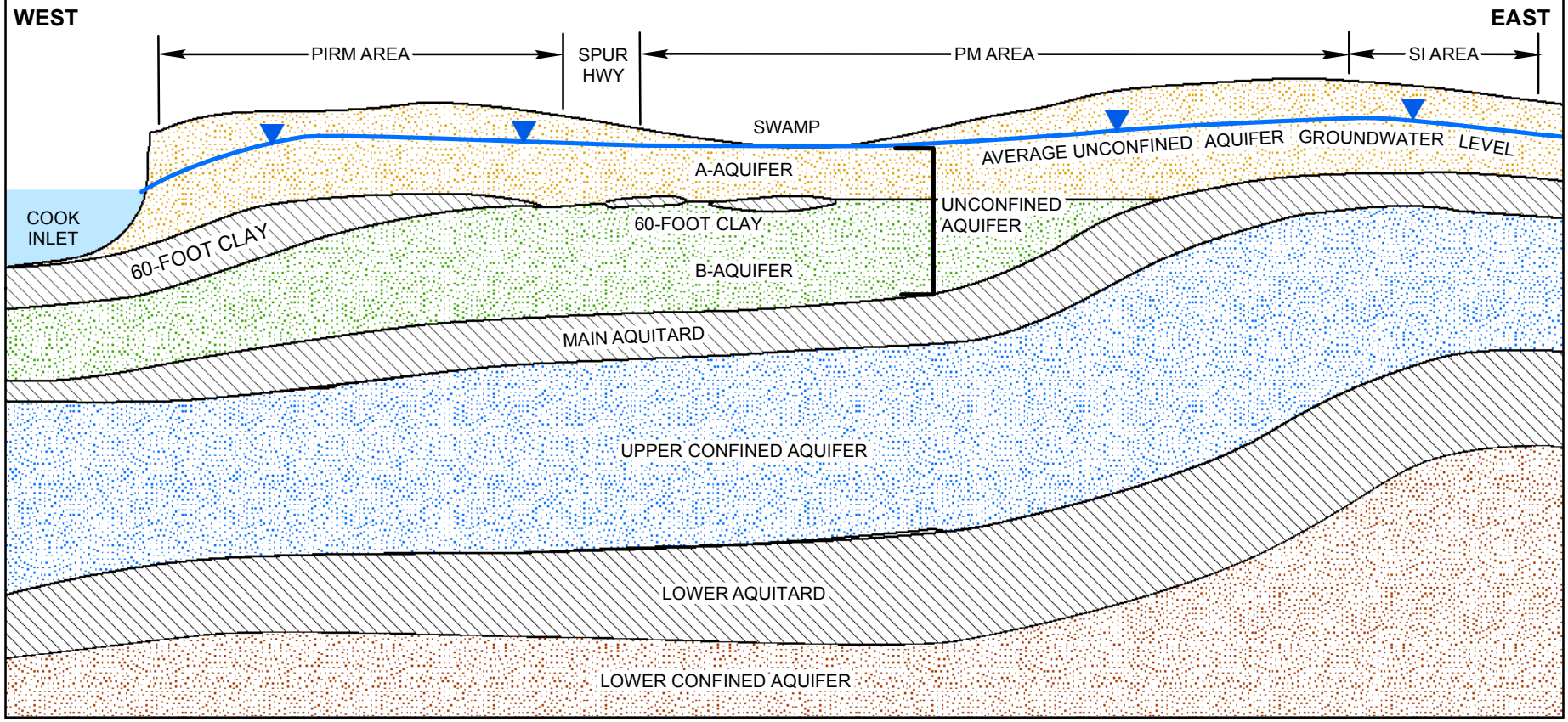
**AREA DESIGNATIONS AND CORRECTIVE MEASURES SYSTEM**

**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: JLP | Checked By: SP | Scale: NONE | Date: 8/24/2023 | File: KR_CORRECTIVEMEASURESYS_202308 |
|---|---|---|---|---|

\\TRIHYDRO.COM\CLIENTS\STOV\TESORO\CADD\KENAIREFINERY\ROPA_PERMIT\PERMIT\AS-SUBMITTED_201707\TESORO_KENAI_PERMIT\KR_CORRECTIVEMEASURESYS_202308




**NOTE:**

NOT TO SCALE

**FIGURE 3**

**DIAGRAMMATIC CROSS SECTION ILLUSTRATING AQUIFER IDENTIFICATION**

**TESORO KENAI REFINERY KENAI, ALASKA**

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

| Drawn By: DH | Checked By: SP | Scale: Not to Scale | Date: 2/16/18 | File: Fig3_XSecAquifers.mxd |
|---|---|---|---|---|

M:\ST\OVT\TESORO\GIS\PROJECTS\TESORO KENAI\MAPPING\QUARTERLY\REPORTS\2018\02_Q18-1\FIGS_XSECAQUIFERS.MXD

# APPENDIX A

# DATA VALIDATIONS AND LABORATORY REPORTS

## A-1. DATA VALIDATIONS

## A-2. LABORATORY REPORTS

# APPENDIX A-1

# DATA VALIDATIONS

# QUALITY CONTROL SUMMARY- 1242285

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 SGS North America project number 1242285. From May 13-21, 2024, thirty-one groundwater samples, five field duplicate samples, two equipment blanks, and one trip blank sample were submitted in one batch to the laboratory. Dup-1 was collected as a duplicate of E-010, Dup-2 was collected as a duplicate of E-247B, Dup-3 was collected as a duplicate of E-256, Dup-4 was collected as a duplicate of SMW-35, and Dup-5 was collected as a duplicate of SMW-05. The samples were received at the lab in good condition, preserved and at temperatures of 3.1°C and 5.4°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.

Method 2320B: The method blank from analytical batch WTI6441 detected alkalinity at 2.79 mg/L. Qualification was not required as alkalinity was detected in the associated samples greater than 10 times the blank concentration.

Method 8021B: The surrogate 1,4-difluorobenzene for samples E-010, E-234B-R, E-249A, and E-249B failed outside the limits of recovery. The detected associated analytes were qualified as J+ due to a potential high bias.

Method 200.8: The matrix spike percent recoveries for calcium in analytical batches MMS12314 and MMS12319, and for manganese in analytical batch MMS12319 were less than data validation QC limits of 75-125%. The associated results were detections and qualified as J- due to potential low bias.

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

- No data are 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 useable 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.

# ADEC Contaminated Sites Program Laboratory Data Review Checklist

| | | | | | |
|---|---|---|---|---|---|
| **Completed By:** | Kyle Power | **CS Site Name:** | Tesoro Alaska Refinery (Marathon) | **Lab Name:** | SGS North American |
| **Title:** | Environmental Chemist | **ADEC File No.:** | 232.38.057 | **Lab Report No.:** | 1242285 |
| **Consulting Firm:** | Trihydro Corp. | **Hazard ID No.:** | | **Lab Report Date:** | 06/26/2024 |

***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: SGS, Anchorage, AK

   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: Click or tap here to enter text.

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: Methods 2320B, 8021B, 2340B, 300.0, 200.8, 4500NO3-F, 5310B, 624.1, and 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): 3.1°C and 5.4°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:

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: Sample condition discrepancies were not documented.

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

**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: Only aqueous samples in this data set.

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: Click or tap here to enter text.

**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: The method blank from analytical batch WTI6441 detected alkalinity at 2.79 mg/L. Qualification was not required as alkalinity was detected in the associated samples greater than 10 times the blank concentration.

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: See below.

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: Click or tap here to enter text.

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: The matrix spike percent recoveries for calcium in analytical batches MMS12314 and MMS12319, and for manganese in analytical batch MMS12319 were less than data validation QC limits of 75-125%. The detected results were qualified as J-.

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: Dup-4, IWS-6, SMW-06, SMW-09, SMW-21A, SMW-29, SMW-31, SMW-35, SMW-36, and SMW-37. Only total and dissolved calcium were qualified for these samples.

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: See description above.

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: The surrogate 1,4-difluorobenzene for samples E-010, E-234B-R, E-249A, and E-249B failed outside the limits of recovery. The detected associated analytes were qualified as J+ due to a potential high bias. Samples E-010 and E-249A were applied these data qualifiers.

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: NA

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-1 was collected as a duplicate of E-010, Dup-2 was collected as a duplicate of E-247B, Dup-3 was collected as a duplicate of E-256, Dup-4 was collected as a duplicate of SMW-35, and Dup-5 was collected as a duplicate of SMW-05.

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

Is the data quality or usability affected? (Explain)

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: Click or tap here to enter text.

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: NA

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: Click or tap here to enter text.

# APPENDIX A-2

# LABORATORY REPORT

**Laboratory Report of Analysis**

To: Tesoro Alaska Petroleum-Kenai
312 Tyee Street
Soldotna, AK 99669
(907)262-2315

Report Number: **1242285**

Client Project: **Marathon 24-3 TESAL-023-0004**

Dear Maya Lehl,

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

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

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

Sincerely,
SGS North America Inc.

_____

Jeremy Greth Date
Project Manager
Jeremy.Greth@sgs.com



SGS North America Inc. 200 West Potter Drive, Anchorage, AK 99518
t 907.562.2343 f 907.561.5301 www.us.sgs.com

## Case Narrative

SGS Client: **Tesoro Alaska Petroleum-Kenai**
SGS Project: **1242285**
Project Name/Site: **Marathon 24-3 TESAL-023-0004**
Project Contact: **Maya Lehl**

Refer to sample receipt form for information on sample condition.

**E-010 (1242285004) PS**

8021B - Surrogate recovery for 1,4-difluorobenzene does not meet QC criteria due to matrix interference.

**E-234B-R (1242285018) PS**

8021B - Surrogate recovery for 1,4-difluorobenzene does not meet QC criteria due to matrix interference.

**E-247A (1242285019) PS**

8021B - Surrogate recovery for 1,4-difluorobenzene does not meet QC criteria due to matrix interference.

**E-249A (1242285021) PS**

8021B - Surrogate recovery for 1,4-difluorobenzene does not meet QC criteria due to matrix interference.
8021B - Benzene is reported above the calibration's upper limit. Benzene concentration was verified outside of hold-time and results confirm.

**E-249B (1242285022) PS**

8021B - Surrogate recovery for 1,4-difluorobenzene does not meet QC criteria due to matrix interference.

**E-255 (1242285026) PS**

8021B - The LOQs for toluene, ethylbenzene, p & m-xylene and o-xylene are elevated due to sample dilution. Sample was analyzed at a lower dilution outside of hold-time, associated analyte concentrations were below LOQ.

**Trip Blank (1242285043) TB**

8260D - Sample was analyzed past hold time due to laboratory error.

**1242302001MS (1765049) MS**

4500NO3-F - Nitrate/Nitrite - MS recovery for Total Nitrate/Nitrite is outside of QC criteria. Refer to LCS for accuracy requirements.

**1242302001MSD (1765050) MSD**

4500NO3-F - Nitrate/Nitrite - MSD recovery for Total Nitrate/Nitrite is outside of QC criteria. Refer to LCS for accuracy requirements.

**1242285031MS (1765682) MS**

200.8 - Metals MS recovery for Calcium does not meet QC criteria. Sample concentration is 4 times greater than the spike level.

**1242285032MS (1765683) MS**

200.8 - Metals MS recovery for Manganese does not meet QC criteria. Sample concentration is 4 times greater than the spike level.

A revised report was issued to switch sample ID E-266 to E-256 and SW-31 to SMW-31.

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



SGS North America Inc.
200 West Potter Drive, Anchorage, AK 99518
**t** 907.562.2343 **f** 907.561.5301 www.us.sgs.com

## Report of Manual Integrations

| Laboratory ID | Client Sample ID | Analytical Batch | Analyte | Reason |
|---|---|---|---|---|
| **SW8021B** | | | | |
| 1242285012 | E-160 | VFC16814 | o-Xylene | BLC |
| 1242285014 | E-171 | VFC16814 | Xylenes (total) | SP |

Manual Integration Reason Code Descriptions

| Code | Description |
|---|---|
| O | Original Chromatogram |
| M | Modified Chromatogram |
| SS | Skimmed surrogate |
| BLG | Closed baseline gap |
| RP | Reassign peak name |
| PIR | Pattern integration required |
| IT | Included tail |
| SP | Split peak |
| RSP | Removed split peak |
| FPS | Forced peak start/stop |
| BLC | Baseline correction |
| PNF | Peak not found by software |

All DRO/RRO analysis are integrated per SOP.

Print Date: 06/26/2024 4:16:43PM

## Laboratory Qualifiers

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

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

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 (DW Chemistry & Microbiology) (Provisionally Certified as of 06/13/2024 for TTHMs 524.2) & 17-021 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020B, 7470A, 7471B, 8015C, 8021B, 8082A, 8260D, 8270E, 8270E-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). SGS is only certified for the analytes listed on our Drinking Water Certification (DW methods: 200.8, 2130B, 2320B, 2510B, 300.0, 4500-CN-C,E, 4500-H-B, 4500-NO3-F, 4500-P-E and 524.2) and only those analytes will be reported to the State of Alaska for compliance. Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, other regulatory authorities.

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

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

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



SGS North America Inc.
200 West Potter Drive, Anchorage, AK 99518
**t** 907.562.2343 **f** 907.561.5301 www.us.sgs.com

## Sample Summary

| Client Sample ID | Lab Sample ID | Collected | Received | Matrix |
|---|---|---|---|---|
| Dup-1 | 1242285001 | 05/15/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |
| Dup-2 | 1242285002 | 05/15/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |
| Dup-3 | 1242285003 | 05/15/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |
| E-010 | 1242285004 | 05/15/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |
| E-072RR | 1242285005 | 05/14/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |
| E-097 | 1242285006 | 05/14/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |
| E-137A | 1242285007 | 05/13/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |
| E-137B | 1242285008 | 05/13/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |
| E-147 | 1242285009 | 05/15/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |
| E-155 | 1242285010 | 05/13/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |
| E-156 | 1242285011 | 05/13/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |
| E-160 | 1242285012 | 05/13/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |
| E-162 | 1242285013 | 05/14/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |
| E-171 | 1242285014 | 05/13/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |
| E-179 | 1242285015 | 05/14/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |
| E-190A | 1242285016 | 05/13/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |
| E-234A-R | 1242285017 | 05/14/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |
| E-234B-R | 1242285018 | 05/14/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |
| E-247A | 1242285019 | 05/14/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |
| E-247B | 1242285020 | 05/14/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |
| E-249A | 1242285021 | 05/15/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |
| E-249B | 1242285022 | 05/14/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |
| E-249C | 1242285023 | 05/14/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |
| E-250A | 1242285024 | 05/15/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |
| E-250B | 1242285025 | 05/15/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |
| E-255 | 1242285026 | 05/15/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |
| E-256 | 1242285027 | 05/15/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |
| E-259 | 1242285028 | 05/14/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |
| Dup-5 | 1242285029 | 05/17/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |
| SMW-05 | 1242285030 | 05/17/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |
| Dup-4 | 1242285031 | 05/17/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |
| IWS-6 | 1242285032 | 05/17/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |
| SMW-06 | 1242285033 | 05/17/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |
| SMW-09 | 1242285034 | 05/17/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |
| SMW-21A | 1242285035 | 05/17/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |
| SMW-29 | 1242285036 | 05/17/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |
| SMW-31 | 1242285037 | 05/17/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |
| SMW-35 | 1242285038 | 05/17/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |
| SMW-36 | 1242285039 | 05/21/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |



SGS North America Inc.
200 West Potter Drive, Anchorage, AK 99518
**t** 907.562.2343 **f** 907.561.5301 www.us.sgs.com

## Sample Summary

| Client Sample ID | Lab Sample ID | Collected | Received | Matrix |
|---|---|---|---|---|
| SMW-37 | 1242285040 | 05/21/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |
| EB 01 | 1242285041 | 05/14/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |
| EB 02 | 1242285042 | 05/17/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |
| Trip Blank | 1242285043 | 05/13/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |
| Dup-4 | 1242285044 | 05/17/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |
| IWS-6 | 1242285045 | 05/17/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |
| SMW-06 | 1242285046 | 05/17/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |
| SMW-09 | 1242285047 | 05/17/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |
| SMW-21A | 1242285048 | 05/17/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |
| SMW-29 | 1242285049 | 05/17/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |
| SMW-31 | 1242285050 | 05/17/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |
| SMW-35 | 1242285051 | 05/17/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |
| SMW-36 | 1242285052 | 05/21/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |
| SMW-37 | 1242285053 | 05/21/2024 | 05/22/2024 | Water (Surface, Eff., Ground) |

| Method | Method Description |
|---|---|
| SM21 2320B | Alkalinity as CaCO3 QC |
| SW8021B | BTEX 8021 |
| SM21 2340B | Hardness as CaCO3 by ICP-MS |
| EPA 300.0 | Ion Chromatographic Analysis (W) |
| EP200.8 | Metals in Drinking Water by ICP-MS DISSO |
| EP200.8 | Metals in Water by 200.8 ICP-MS |
| SM21 4500NO3-F | Nitrate/Nitrite Flow injection Pres. |
| SM 5310B | Total Organic Carbon |
| EPA 624.1 | Volatile Organic Compounds GC/MS (W)Cust |
| SW8260D | Volatile Organic Compounds(W)Custom List |



SGS North America Inc.
200 West Potter Drive, Anchorage, AK 99518
**t** 907.562.2343 **f** 907.561.5301 www.us.sgs.com

## Detectable Results Summary

Client Sample ID: **Dup-1**
Lab Sample ID: 1242285001
**Volatile Fuels**

| Parameter | Result | Units |
|---|---|---|
| Benzene | 1890 | ug/L |
| P & M -Xylene | 246 | ug/L |
| Xylenes (total) | 264 | ug/L |

Client Sample ID: **Dup-2**
Lab Sample ID: 1242285002
**Volatile Fuels**

| Parameter | Result | Units |
|---|---|---|
| Benzene | 42.5 | ug/L |

Client Sample ID: **Dup-3**
Lab Sample ID: 1242285003
**Volatile Fuels**

| Parameter | Result | Units |
|---|---|---|
| Benzene | 1090 | ug/L |

Client Sample ID: **E-010**
Lab Sample ID: 1242285004
**Volatile Fuels**

| Parameter | Result | Units |
|---|---|---|
| Benzene | 2000 | ug/L |
| P & M -Xylene | 246 | ug/L |
| Xylenes (total) | 264 | ug/L |

Client Sample ID: **E-072RR**
Lab Sample ID: 1242285005
**Volatile Fuels**

| Parameter | Result | Units |
|---|---|---|
| Benzene | 766 | ug/L |
| Ethylbenzene | 295 | ug/L |
| P & M -Xylene | 652 | ug/L |
| Xylenes (total) | 658 | ug/L |

Client Sample ID: **E-147**
Lab Sample ID: 1242285009
**Volatile Fuels**

| Parameter | Result | Units |
|---|---|---|
| Benzene | 7.71 | ug/L |

Client Sample ID: **E-156**
Lab Sample ID: 1242285011
**Volatile Fuels**

| Parameter | Result | Units |
|---|---|---|
| Benzene | 3.98 | ug/L |
| P & M -Xylene | 17.3 | ug/L |
| Xylenes (total) | 17.6 | ug/L |

Client Sample ID: **E-160**
Lab Sample ID: 1242285012
**Volatile Fuels**

| Parameter | Result | Units |
|---|---|---|
| Benzene | 5.39 | ug/L |
| P & M -Xylene | 12.7 | ug/L |
| Xylenes (total) | 13.4 | ug/L |

Client Sample ID: **E-162**
Lab Sample ID: 1242285013
**Volatile Fuels**

| Parameter | Result | Units |
|---|---|---|
| Benzene | 44.7 | ug/L |



SGS North America Inc.
200 West Potter Drive, Anchorage, AK 99518
**t** 907.562.2343 **f** 907.561.5301 www.us.sgs.com

## Detectable Results Summary

Client Sample ID: **E-171**
Lab Sample ID: 1242285014
**Volatile Fuels**

| Parameter | Result | Units |
|---|---|---|
| Benzene | 9.68 | ug/L |
| P & M -Xylene | 29.5 | ug/L |
| Xylenes (total) | 29.8 | ug/L |

Client Sample ID: **E-179**
Lab Sample ID: 1242285015
**Volatile Fuels**

| Parameter | Result | Units |
|---|---|---|
| Benzene | 65.5 | ug/L |
| P & M -Xylene | 8.16 | ug/L |
| Xylenes (total) | 8.16 | ug/L |

Client Sample ID: **E-234A-R**
Lab Sample ID: 1242285017
**Volatile Fuels**

| Parameter | Result | Units |
|---|---|---|
| Benzene | 5.92 | ug/L |

Client Sample ID: **E-234B-R**
Lab Sample ID: 1242285018
**Volatile Fuels**

| Parameter | Result | Units |
|---|---|---|
| Benzene | 1280 | ug/L |

Client Sample ID: **E-247A**
Lab Sample ID: 1242285019
**Volatile Fuels**

| Parameter | Result | Units |
|---|---|---|
| Benzene | 69.3 | ug/L |

Client Sample ID: **E-247B**
Lab Sample ID: 1242285020
**Volatile Fuels**

| Parameter | Result | Units |
|---|---|---|
| Benzene | 44.8 | ug/L |

Client Sample ID: **E-249A**
Lab Sample ID: 1242285021
**Volatile Fuels**

| Parameter | Result | Units |
|---|---|---|
| Benzene | 946 | ug/L |

Client Sample ID: **E-249B**
Lab Sample ID: 1242285022
**Volatile Fuels**

| Parameter | Result | Units |
|---|---|---|
| Benzene | 701 | ug/L |

Client Sample ID: **E-249C**
Lab Sample ID: 1242285023
**Volatile Fuels**

| Parameter | Result | Units |
|---|---|---|
| Benzene | 14.6 | ug/L |

Client Sample ID: **E-250A**
Lab Sample ID: 1242285024
**Volatile Fuels**

| Parameter | Result | Units |
|---|---|---|
| Benzene | 1.71 | ug/L |

Client Sample ID: **E-250B**
Lab Sample ID: 1242285025
**Volatile Fuels**

| Parameter | Result | Units |
|---|---|---|
| Benzene | 334 | ug/L |

Client Sample ID: **E-255**
Lab Sample ID: 1242285026
**Volatile Fuels**

| Parameter | Result | Units |
|---|---|---|
| Benzene | 63.4 | ug/L |



SGS North America Inc.
200 West Potter Drive, Anchorage, AK 99518
**t** 907.562.2343 **f** 907.561.5301 www.us.sgs.com

## Detectable Results Summary

Client Sample ID: **E-256**
Lab Sample ID: 1242285027

**Volatile Fuels**

| Parameter | Result | Units |
|---|---|---|
| Benzene | 1060 | ug/L |

Client Sample ID: **Dup-5**
Lab Sample ID: 1242285029

**Volatile GC/MS**

| Parameter | Result | Units |
|---|---|---|
| Benzene | 2.60 | ug/L |
| Trichloroethene | 3.55 | ug/L |

Client Sample ID: **SMW-05**
Lab Sample ID: 1242285030

**Volatile GC/MS**

| Parameter | Result | Units |
|---|---|---|
| Benzene | 2.56 | ug/L |
| Trichloroethene | 3.41 | ug/L |

Client Sample ID: **Dup-4**
Lab Sample ID: 1242285031

**Metals by ICP/MS**

**Waters Department**

| Parameter | Result | Units |
|---|---|---|
| Calcium | 120000 | ug/L |
| Hardness as CaCO3 | 460 | mg/L |
| Iron | 28100 | ug/L |
| Magnesium | 38900 | ug/L |
| Manganese | 3270 | ug/L |
| Alkalinity | 125 | mg/L |
| Sulfate | 380 | mg/L |

Client Sample ID: **IWS-6**
Lab Sample ID: 1242285032

**Metals by ICP/MS**

**Waters Department**

| Parameter | Result | Units |
|---|---|---|
| Calcium | 219000 | ug/L |
| Hardness as CaCO3 | 831 | mg/L |
| Iron | 44800 | ug/L |
| Magnesium | 69200 | ug/L |
| Manganese | 4940 | ug/L |
| Alkalinity | 143 | mg/L |
| Sulfate | 710 | mg/L |
| Total Organic Carbon Average | 5.46 | mg/L |

Client Sample ID: **SMW-06**
Lab Sample ID: 1242285033

**Metals by ICP/MS**

**Waters Department**

| Parameter | Result | Units |
|---|---|---|
| Calcium | 177000 | ug/L |
| Hardness as CaCO3 | 698 | mg/L |
| Iron | 1040 | ug/L |
| Magnesium | 62200 | ug/L |
| Manganese | 763 | ug/L |
| Alkalinity | 177 | mg/L |
| Sulfate | 533 | mg/L |
| Total Nitrate/Nitrite-N | 0.442 | mg/L |
| Total Organic Carbon Average | 8.30 | mg/L |



SGS North America Inc.
200 West Potter Drive, Anchorage, AK 99518
**t** 907.562.2343 **f** 907.561.5301 www.us.sgs.com

## Detectable Results Summary

Client Sample ID: **SMW-09**
Lab Sample ID: 1242285034

| | Parameter | Result | Units |
|---|---|---|---|
| **Metals by ICP/MS** | Calcium | 77000 | ug/L |
| | Hardness as CaCO3 | 282 | mg/L |
| | Iron | 34600 | ug/L |
| | Magnesium | 21800 | ug/L |
| | Manganese | 3010 | ug/L |
| **Waters Department** | Alkalinity | 103 | mg/L |
| | Sulfate | 218 | mg/L |
| | Total Organic Carbon Average | 4.67 | mg/L |

Client Sample ID: **SMW-21A**
Lab Sample ID: 1242285035

| | Parameter | Result | Units |
|---|---|---|---|
| **Metals by ICP/MS** | Calcium | 50200 | ug/L |
| | Hardness as CaCO3 | 226 | mg/L |
| | Iron | 7210 | ug/L |
| | Magnesium | 24400 | ug/L |
| | Manganese | 92.3 | ug/L |
| **Waters Department** | Alkalinity | 131 | mg/L |
| | Sulfate | 93.8 | mg/L |
| | Total Organic Carbon Average | 3.28 | mg/L |

Client Sample ID: **SMW-29**
Lab Sample ID: 1242285036

| | Parameter | Result | Units |
|---|---|---|---|
| **Metals by ICP/MS** | Calcium | 26700 | ug/L |
| | Hardness as CaCO3 | 132 | mg/L |
| | Iron | 19800 | ug/L |
| | Magnesium | 15900 | ug/L |
| | Manganese | 1520 | ug/L |
| **Waters Department** | Alkalinity | 108 | mg/L |
| | Sulfate | 40.9 | mg/L |

Client Sample ID: **SMW-31**
Lab Sample ID: 1242285037

| | Parameter | Result | Units |
|---|---|---|---|
| **Metals by ICP/MS** | Calcium | 96000 | ug/L |
| | Hardness as CaCO3 | 367 | mg/L |
| | Iron | 62200 | ug/L |
| | Magnesium | 30900 | ug/L |
| | Manganese | 2570 | ug/L |
| **Waters Department** | Alkalinity | 111 | mg/L |
| | Sulfate | 279 | mg/L |
| | Total Nitrate/Nitrite-N | 0.273 | mg/L |
| | Total Organic Carbon Average | 3.94 | mg/L |



SGS North America Inc.
200 West Potter Drive, Anchorage, AK 99518
**t** 907.562.2343 **f** 907.561.5301 www.us.sgs.com

## Detectable Results Summary

Client Sample ID: **SMW-35**
Lab Sample ID: 1242285038

| | Parameter | Result | Units |
|---|---|---|---|
| **Metals by ICP/MS** | Calcium | 118000 | ug/L |
| | Hardness as CaCO3 | 449 | mg/L |
| | Iron | 29400 | ug/L |
| | Magnesium | 37500 | ug/L |
| | Manganese | 3260 | ug/L |
| **Waters Department** | Alkalinity | 125 | mg/L |
| | Sulfate | 354 | mg/L |

Client Sample ID: **SMW-36**
Lab Sample ID: 1242285039

| | Parameter | Result | Units |
|---|---|---|---|
| **Metals by ICP/MS** | Calcium | 37200 | ug/L |
| | Hardness as CaCO3 | 152 | mg/L |
| | Iron | 20400 | ug/L |
| | Magnesium | 14300 | ug/L |
| | Manganese | 1510 | ug/L |
| **Waters Department** | Alkalinity | 145 | mg/L |
| | Sulfate | 20.2 | mg/L |
| | Total Organic Carbon Average | 3.58 | mg/L |

Client Sample ID: **SMW-37**
Lab Sample ID: 1242285040

| | Parameter | Result | Units |
|---|---|---|---|
| **Metals by ICP/MS** | Calcium | 59900 | ug/L |
| | Hardness as CaCO3 | 242 | mg/L |
| | Iron | 42900 | ug/L |
| | Magnesium | 22400 | ug/L |
| | Manganese | 2240 | ug/L |
| **Waters Department** | Alkalinity | 111 | mg/L |
| | Sulfate | 182 | mg/L |

Client Sample ID: **Dup-4**
Lab Sample ID: 1242285044

| | Parameter | Result | Units |
|---|---|---|---|
| **Dissolved Metals by ICP/MS** | Calcium | 114000 | ug/L |
| | Iron | 28200 | ug/L |
| | Magnesium | 36200 | ug/L |
| | Manganese | 3240 | ug/L |

Client Sample ID: **IWS-6**
Lab Sample ID: 1242285045

| | Parameter | Result | Units |
|---|---|---|---|
| **Dissolved Metals by ICP/MS** | Calcium | 193000 | ug/L |
| | Iron | 43300 | ug/L |
| | Magnesium | 63400 | ug/L |
| | Manganese | 4790 | ug/L |



SGS North America Inc.
200 West Potter Drive, Anchorage, AK 99518
**t** 907.562.2343 **f** 907.561.5301 www.us.sgs.com

## Detectable Results Summary

Client Sample ID: **SMW-06**
Lab Sample ID: 1242285046
**Dissolved Metals by ICP/MS**

| Parameter | Result | Units |
|---|---|---|
| Calcium | 176000 | ug/L |
| Magnesium | 62100 | ug/L |
| Manganese | 692 | ug/L |

Client Sample ID: **SMW-09**
Lab Sample ID: 1242285047
**Dissolved Metals by ICP/MS**

| Parameter | Result | Units |
|---|---|---|
| Calcium | 77400 | ug/L |
| Iron | 33600 | ug/L |
| Magnesium | 22000 | ug/L |
| Manganese | 2950 | ug/L |

Client Sample ID: **SMW-21A**
Lab Sample ID: 1242285048
**Dissolved Metals by ICP/MS**

| Parameter | Result | Units |
|---|---|---|
| Calcium | 48500 | ug/L |
| Iron | 2070 | ug/L |
| Magnesium | 23700 | ug/L |
| Manganese | 73.4 | ug/L |

Client Sample ID: **SMW-29**
Lab Sample ID: 1242285049
**Dissolved Metals by ICP/MS**

| Parameter | Result | Units |
|---|---|---|
| Calcium | 27000 | ug/L |
| Iron | 18800 | ug/L |
| Magnesium | 15800 | ug/L |
| Manganese | 1560 | ug/L |

Client Sample ID: **SMW-31**
Lab Sample ID: 1242285050
**Dissolved Metals by ICP/MS**

| Parameter | Result | Units |
|---|---|---|
| Calcium | 91900 | ug/L |
| Iron | 23000 | ug/L |
| Magnesium | 28500 | ug/L |
| Manganese | 2550 | ug/L |

Client Sample ID: **SMW-35**
Lab Sample ID: 1242285051
**Dissolved Metals by ICP/MS**

| Parameter | Result | Units |
|---|---|---|
| Calcium | 118000 | ug/L |
| Iron | 28200 | ug/L |
| Magnesium | 36400 | ug/L |
| Manganese | 3170 | ug/L |

Client Sample ID: **SMW-36**
Lab Sample ID: 1242285052
**Dissolved Metals by ICP/MS**

| Parameter | Result | Units |
|---|---|---|
| Calcium | 37900 | ug/L |
| Iron | 19600 | ug/L |
| Magnesium | 14200 | ug/L |
| Manganese | 1510 | ug/L |



SGS North America Inc.
200 West Potter Drive, Anchorage, AK 99518
**t** 907.562.2343 **f** 907.561.5301 www.us.sgs.com

## Detectable Results Summary

Client Sample ID: **SMW-37**
Lab Sample ID: 1242285053

**Dissolved Metals by ICP/MS**

| Parameter | Result | Units |
|---|---|---|
| Calcium | 59100 | ug/L |
| Iron | 41800 | ug/L |
| Magnesium | 21100 | ug/L |
| Manganese | 2170 | ug/L |



SGS North America Inc.
200 West Potter Drive, Anchorage, AK 99518
**t** 907.562.2343 **f** 907.561.5301 www.us.sgs.com

## Results of **Dup-1**

Client Sample ID: **Dup-1**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285001
Lab Project ID: 1242285

Collection Date: 05/15/24 08:30
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Volatile Fuels**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Benzene | 1890 | | 12.0 | 3.00 | ug/L | 20 | | 05/28/24 22:41 |
| Ethylbenzene | 100 | U | 100 | 50.0 | ug/L | 20 | | 05/28/24 22:41 |
| o-Xylene | 100 | U | 100 | 50.0 | ug/L | 20 | | 05/28/24 22:41 |
| P & M -Xylene | 246 | | 100 | 50.0 | ug/L | 20 | | 05/28/24 22:41 |
| Toluene | 100 | U | 100 | 50.0 | ug/L | 20 | | 05/28/24 22:41 |
| Xylenes (total) | 264 | | 100 | 50.0 | ug/L | 20 | | 05/28/24 22:41 |
| **Surrogates** | | | | | | | | |
| 1,4-Difluorobenzene (surr) | 107 | | 77-115 | | % | 20 | | 05/28/24 22:41 |

## Batch Information

Analytical Batch: VFC16816
Analytical Method: SW8021B
Analyst: T.L
Analytical Date/Time: 05/28/24 22:41
Container ID: 1242285001-B

Prep Batch: VXX41205
Prep Method: SW5030B
Prep Date/Time: 05/28/24 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL



SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
**t** 907.562.2343 **f** 907.561.5301 www.us.sgs.com

## Results of **Dup-2**

Client Sample ID: **Dup-2**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285002
Lab Project ID: 1242285

Collection Date: 05/15/24 08:00
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Volatile Fuels**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Benzene | 42.5 | | 0.600 | 0.150 | ug/L | 1 | | 05/28/24 19:32 |
| Ethylbenzene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/28/24 19:32 |
| o-Xylene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/28/24 19:32 |
| P & M -Xylene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/28/24 19:32 |
| Toluene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/28/24 19:32 |
| Xylenes (total) | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/28/24 19:32 |
| **Surrogates** | | | | | | | | |
| 1,4-Difluorobenzene (surr) | 97.2 | | 77-115 | | % | 1 | | 05/28/24 19:32 |

## Batch Information

Analytical Batch: VFC16816
Analytical Method: SW8021B
Analyst: T.L
Analytical Date/Time: 05/28/24 19:32
Container ID: 1242285002-B

Prep Batch: VXX41205
Prep Method: SW5030B
Prep Date/Time: 05/28/24 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL



SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
**t** 907.562.2343 **f** 907.561.5301 www.us.sgs.com

## Results of **Dup-3**

Client Sample ID: **Dup-3**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285003
Lab Project ID: 1242285

Collection Date: 05/15/24 08:00
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Volatile Fuels**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Benzene | 1090 | | 6.00 | 1.50 | ug/L | 10 | | 05/28/24 21:44 |
| Ethylbenzene | 50.0 | U | 50.0 | 25.0 | ug/L | 10 | | 05/28/24 21:44 |
| o-Xylene | 50.0 | U | 50.0 | 25.0 | ug/L | 10 | | 05/28/24 21:44 |
| P & M -Xylene | 50.0 | U | 50.0 | 25.0 | ug/L | 10 | | 05/28/24 21:44 |
| Toluene | 50.0 | U | 50.0 | 25.0 | ug/L | 10 | | 05/28/24 21:44 |
| Xylenes (total) | 50.0 | U | 50.0 | 25.0 | ug/L | 10 | | 05/28/24 21:44 |
| **Surrogates** | | | | | | | | |
| 1,4-Difluorobenzene (surr) | 102 | | 77-115 | | % | 10 | | 05/28/24 21:44 |

## Batch Information

Analytical Batch: VFC16816
Analytical Method: SW8021B
Analyst: T.L
Analytical Date/Time: 05/28/24 21:44
Container ID: 1242285003-B

Prep Batch: VXX41205
Prep Method: SW5030B
Prep Date/Time: 05/28/24 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/26/2024 4:16:50PM

## Results of **E-010**

Client Sample ID: **E-010**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285004
Lab Project ID: 1242285

Collection Date: 05/15/24 15:15
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Volatile Fuels**

| Parameter | Result | Qual | | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | 2000 | | | 6.00 | 1.50 | ug/L | 10 | | 05/28/24 21:26 |
| Ethylbenzene | 50.0 | U | | 50.0 | 25.0 | ug/L | 10 | | 05/28/24 21:26 |
| o-Xylene | 50.0 | U | | 50.0 | 25.0 | ug/L | 10 | | 05/28/24 21:26 |
| P & M -Xylene | 246 | | | 50.0 | 25.0 | ug/L | 10 | | 05/28/24 21:26 |
| Toluene | 50.0 | U | | 50.0 | 25.0 | ug/L | 10 | | 05/28/24 21:26 |
| Xylenes (total) | 264 | | | 50.0 | 25.0 | ug/L | 10 | | 05/28/24 21:26 |
| **Surrogates** | | | | | | | | | |
| 1,4-Difluorobenzene (surr) | 122 | | * | 77-115 | | % | 10 | | 05/28/24 21:26 |

## Batch Information

Analytical Batch: VFC16816
Analytical Method: SW8021B
Analyst: T.L
Analytical Date/Time: 05/28/24 21:26
Container ID: 1242285004-B

Prep Batch: VXX41205
Prep Method: SW5030B
Prep Date/Time: 05/28/24 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/26/2024 4:16:50PM

## Results of **E-072RR**

Client Sample ID: **E-072RR**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285005
Lab Project ID: 1242285

Collection Date: 05/14/24 12:30
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Volatile Fuels**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Benzene | 766 | | 6.00 | 1.50 | ug/L | 10 | | 05/24/24 18:06 |
| Ethylbenzene | 295 | | 50.0 | 25.0 | ug/L | 10 | | 05/24/24 18:06 |
| o-Xylene | 50.0 | U | 50.0 | 25.0 | ug/L | 10 | | 05/24/24 18:06 |
| P & M -Xylene | 652 | | 50.0 | 25.0 | ug/L | 10 | | 05/24/24 18:06 |
| Toluene | 50.0 | U | 50.0 | 25.0 | ug/L | 10 | | 05/24/24 18:06 |
| Xylenes (total) | 658 | | 50.0 | 25.0 | ug/L | 10 | | 05/24/24 18:06 |
| **Surrogates** | | | | | | | | |
| 1,4-Difluorobenzene (surr) | 94.1 | | 77-115 | | % | 10 | | 05/24/24 18:06 |

## Batch Information

Analytical Batch: VFC16815
Analytical Method: SW8021B
Analyst: T.L
Analytical Date/Time: 05/24/24 18:06
Container ID: 1242285005-B

Prep Batch: VXX41204
Prep Method: SW5030B
Prep Date/Time: 05/24/24 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL



SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
**t** 907.562.2343 **f** 907.561.5301 www.us.sgs.com

## Results of **E-097**

Client Sample ID: **E-097**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285006
Lab Project ID: 1242285

Collection Date: 05/14/24 11:40
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Volatile Fuels**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Benzene | 0.600 | U | 0.600 | 0.150 | ug/L | 1 | | 05/23/24 23:04 |
| Ethylbenzene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/23/24 23:04 |
| o-Xylene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/23/24 23:04 |
| P & M -Xylene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/23/24 23:04 |
| Toluene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/23/24 23:04 |
| Xylenes (total) | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/23/24 23:04 |
| **Surrogates** | | | | | | | | |
| 1,4-Difluorobenzene (surr) | 94 | | 77-115 | | % | 1 | | 05/23/24 23:04 |

## Batch Information

Analytical Batch: VFC16814
Analytical Method: SW8021B
Analyst: T.L
Analytical Date/Time: 05/23/24 23:04
Container ID: 1242285006-A

Prep Batch: VXX41187
Prep Method: SW5030B
Prep Date/Time: 05/23/24 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/26/2024 4:16:50PM

## Results of **E-137A**

Client Sample ID: **E-137A**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285007
Lab Project ID: 1242285

Collection Date: 05/13/24 13:55
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Volatile Fuels**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Benzene | 0.600 | U | 0.600 | 0.150 | ug/L | 1 | | 05/24/24 03:09 |
| Ethylbenzene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 03:09 |
| o-Xylene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 03:09 |
| P & M -Xylene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 03:09 |
| Toluene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 03:09 |
| Xylenes (total) | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 03:09 |
| **Surrogates** | | | | | | | | |
| 1,4-Difluorobenzene (surr) | 93.6 | | 77-115 | | % | 1 | | 05/24/24 03:09 |

## Batch Information

Analytical Batch: VFC16814
Analytical Method: SW8021B
Analyst: T.L
Analytical Date/Time: 05/24/24 03:09
Container ID: 1242285007-A

Prep Batch: VXX41188
Prep Method: SW5030B
Prep Date/Time: 05/23/24 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/26/2024 4:16:50PM

## Results of **E-137B**

Client Sample ID: **E-137B**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285008
Lab Project ID: 1242285

Collection Date: 05/13/24 14:20
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Volatile Fuels**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Benzene | 0.600 | U | 0.600 | 0.150 | ug/L | 1 | | 05/23/24 22:26 |
| Ethylbenzene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/23/24 22:26 |
| o-Xylene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/23/24 22:26 |
| P & M -Xylene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/23/24 22:26 |
| Toluene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/23/24 22:26 |
| Xylenes (total) | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/23/24 22:26 |
| **Surrogates** | | | | | | | | |
| 1,4-Difluorobenzene (surr) | 93.8 | | 77-115 | | % | 1 | | 05/23/24 22:26 |

## Batch Information

Analytical Batch: VFC16814
Analytical Method: SW8021B
Analyst: T.L
Analytical Date/Time: 05/23/24 22:26
Container ID: 1242285008-A

Prep Batch: VXX41187
Prep Method: SW5030B
Prep Date/Time: 05/23/24 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/26/2024 4:16:50PM

## Results of **E-147**

Client Sample ID: **E-147**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285009
Lab Project ID: 1242285

Collection Date: 05/15/24 10:50
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Volatile Fuels**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Benzene | 7.71 | | 0.600 | 0.150 | ug/L | 1 | | 05/28/24 19:51 |
| Ethylbenzene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/28/24 19:51 |
| o-Xylene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/28/24 19:51 |
| P & M -Xylene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/28/24 19:51 |
| Toluene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/28/24 19:51 |
| Xylenes (total) | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/28/24 19:51 |
| **Surrogates** | | | | | | | | |
| 1,4-Difluorobenzene (surr) | 93.3 | | 77-115 | | % | 1 | | 05/28/24 19:51 |

## Batch Information

Analytical Batch: VFC16816
Analytical Method: SW8021B
Analyst: T.L
Analytical Date/Time: 05/28/24 19:51
Container ID: 1242285009-B

Prep Batch: VXX41205
Prep Method: SW5030B
Prep Date/Time: 05/28/24 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL



SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
**t** 907.562.2343 **f** 907.561.5301 www.us.sgs.com

## Results of **E-155**

Client Sample ID: **E-155**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285010
Lab Project ID: 1242285

Collection Date: 05/13/24 13:20
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Volatile Fuels**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Benzene | 0.600 | U | 0.600 | 0.150 | ug/L | 1 | | 05/24/24 03:28 |
| Ethylbenzene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 03:28 |
| o-Xylene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 03:28 |
| P & M -Xylene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 03:28 |
| Toluene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 03:28 |
| Xylenes (total) | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 03:28 |
| **Surrogates** | | | | | | | | |
| 1,4-Difluorobenzene (surr) | 92.8 | | 77-115 | | % | 1 | | 05/24/24 03:28 |

## Batch Information

Analytical Batch: VFC16814
Analytical Method: SW8021B
Analyst: T.L
Analytical Date/Time: 05/24/24 03:28
Container ID: 1242285010-A

Prep Batch: VXX41188
Prep Method: SW5030B
Prep Date/Time: 05/23/24 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/26/2024 4:16:50PM

## Results of **E-156**

Client Sample ID: **E-156**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285011
Lab Project ID: 1242285

Collection Date: 05/13/24 12:25
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Volatile Fuels**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Benzene | 3.98 | | 0.600 | 0.150 | ug/L | 1 | | 05/24/24 04:24 |
| Ethylbenzene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 04:24 |
| o-Xylene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 04:24 |
| P & M -Xylene | 17.3 | | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 04:24 |
| Toluene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 04:24 |
| Xylenes (total) | 17.6 | | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 04:24 |
| **Surrogates** | | | | | | | | |
| 1,4-Difluorobenzene (surr) | 97.1 | | 77-115 | | % | 1 | | 05/24/24 04:24 |

## Batch Information

Analytical Batch: VFC16814
Analytical Method: SW8021B
Analyst: T.L
Analytical Date/Time: 05/24/24 04:24
Container ID: 1242285011-A

Prep Batch: VXX41188
Prep Method: SW5030B
Prep Date/Time: 05/23/24 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/26/2024 4:16:50PM

## Results of **E-160**

Client Sample ID: **E-160**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285012
Lab Project ID: 1242285

Collection Date: 05/13/24 14:55
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Volatile Fuels**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Benzene | 5.39 | | 0.600 | 0.150 | ug/L | 1 | | 05/24/24 04:43 |
| Ethylbenzene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 04:43 |
| o-Xylene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 04:43 |
| P & M -Xylene | 12.7 | | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 04:43 |
| Toluene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 04:43 |
| Xylenes (total) | 13.4 | | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 04:43 |
| **Surrogates** | | | | | | | | |
| 1,4-Difluorobenzene (surr) | 101 | | 77-115 | | % | 1 | | 05/24/24 04:43 |

## Batch Information

Analytical Batch: VFC16814
Analytical Method: SW8021B
Analyst: T.L
Analytical Date/Time: 05/24/24 04:43
Container ID: 1242285012-A

Prep Batch: VXX41188
Prep Method: SW5030B
Prep Date/Time: 05/23/24 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL



SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
**t** 907.562.2343 **f** 907.561.5301 www.us.sgs.com

## Results of **E-162**

Client Sample ID: **E-162**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285013
Lab Project ID: 1242285

Collection Date: 05/14/24 11:00
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Volatile Fuels**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Benzene | 44.7 | | 0.600 | 0.150 | ug/L | 1 | | 05/23/24 23:23 |
| Ethylbenzene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/23/24 23:23 |
| o-Xylene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/23/24 23:23 |
| P & M -Xylene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/23/24 23:23 |
| Toluene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/23/24 23:23 |
| Xylenes (total) | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/23/24 23:23 |
| **Surrogates** | | | | | | | | |
| 1,4-Difluorobenzene (surr) | 89.4 | | 77-115 | | % | 1 | | 05/23/24 23:23 |

## Batch Information

Analytical Batch: VFC16814
Analytical Method: SW8021B
Analyst: T.L
Analytical Date/Time: 05/23/24 23:23
Container ID: 1242285013-A

Prep Batch: VXX41187
Prep Method: SW5030B
Prep Date/Time: 05/23/24 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL



SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
**t** 907.562.2343 **f** 907.561.5301 www.us.sgs.com

## Results of **E-171**

Client Sample ID: **E-171**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285014
Lab Project ID: 1242285

Collection Date: 05/13/24 15:30
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Volatile Fuels**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Benzene | 9.68 | | 0.600 | 0.150 | ug/L | 1 | | 05/24/24 05:02 |
| Ethylbenzene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 05:02 |
| o-Xylene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 05:02 |
| P & M -Xylene | 29.5 | | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 05:02 |
| Toluene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 05:02 |
| Xylenes (total) | 29.8 | | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 05:02 |
| **Surrogates** | | | | | | | | |
| 1,4-Difluorobenzene (surr) | 113 | | 77-115 | | % | 1 | | 05/24/24 05:02 |

## Batch Information

Analytical Batch: VFC16814
Analytical Method: SW8021B
Analyst: T.L
Analytical Date/Time: 05/24/24 05:02
Container ID: 1242285014-A

Prep Batch: VXX41188
Prep Method: SW5030B
Prep Date/Time: 05/23/24 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/26/2024 4:16:50PM

## Results of **E-179**

Client Sample ID: **E-179**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285015
Lab Project ID: 1242285

Collection Date: 05/14/24 10:20
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Volatile Fuels**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Benzene | 65.5 | | 0.600 | 0.150 | ug/L | 1 | | 05/23/24 23:41 |
| Ethylbenzene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/23/24 23:41 |
| o-Xylene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/23/24 23:41 |
| P & M -Xylene | 8.16 | | 5.00 | 2.50 | ug/L | 1 | | 05/23/24 23:41 |
| Toluene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/23/24 23:41 |
| Xylenes (total) | 8.16 | | 5.00 | 2.50 | ug/L | 1 | | 05/23/24 23:41 |
| **Surrogates** | | | | | | | | |
| 1,4-Difluorobenzene (surr) | 97.2 | | 77-115 | | % | 1 | | 05/23/24 23:41 |

## Batch Information

Analytical Batch: VFC16814
Analytical Method: SW8021B
Analyst: T.L
Analytical Date/Time: 05/23/24 23:41
Container ID: 1242285015-A

Prep Batch: VXX41187
Prep Method: SW5030B
Prep Date/Time: 05/23/24 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/26/2024 4:16:50PM

## Results of **E-190A**

Client Sample ID: **E-190A**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285016
Lab Project ID: 1242285

Collection Date: 05/13/24 11:16
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Volatile Fuels**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Benzene | 0.600 | U | 0.600 | 0.150 | ug/L | 1 | | 05/24/24 05:21 |
| Ethylbenzene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 05:21 |
| o-Xylene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 05:21 |
| P & M -Xylene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 05:21 |
| Toluene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 05:21 |
| Xylenes (total) | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 05:21 |
| **Surrogates** | | | | | | | | |
| 1,4-Difluorobenzene (surr) | 94.5 | | 77-115 | | % | 1 | | 05/24/24 05:21 |

## Batch Information

Analytical Batch: VFC16814
Analytical Method: SW8021B
Analyst: T.L
Analytical Date/Time: 05/24/24 05:21
Container ID: 1242285016-A

Prep Batch: VXX41188
Prep Method: SW5030B
Prep Date/Time: 05/23/24 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/26/2024 4:16:50PM

## Results of **E-234A-R**

Client Sample ID: **E-234A-R**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285017
Lab Project ID: 1242285

Collection Date: 05/14/24 16:05
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Volatile Fuels**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Benzene | 5.92 | | 0.600 | 0.150 | ug/L | 1 | | 05/24/24 00:38 |
| Ethylbenzene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 00:38 |
| o-Xylene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 00:38 |
| P & M -Xylene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 00:38 |
| Toluene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 00:38 |
| Xylenes (total) | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 00:38 |
| **Surrogates** | | | | | | | | |
| 1,4-Difluorobenzene (surr) | 95.2 | | 77-115 | | % | 1 | | 05/24/24 00:38 |

## Batch Information

Analytical Batch: VFC16814
Analytical Method: SW8021B
Analyst: T.L
Analytical Date/Time: 05/24/24 00:38
Container ID: 1242285017-A

Prep Batch: VXX41188
Prep Method: SW5030B
Prep Date/Time: 05/23/24 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/26/2024 4:16:50PM

## Results of **E-234B-R**

Client Sample ID: **E-234B-R**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285018
Lab Project ID: 1242285

Collection Date: 05/14/24 16:30
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Volatile Fuels**

| Parameter | Result | Qual | | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | 1280 | | | 6.00 | 1.50 | ug/L | 10 | | 05/24/24 18:43 |
| Ethylbenzene | 5.00 | U | | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 00:57 |
| o-Xylene | 5.00 | U | | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 00:57 |
| P & M -Xylene | 5.00 | U | | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 00:57 |
| Toluene | 5.00 | U | | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 00:57 |
| Xylenes (total) | 5.00 | U | | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 00:57 |
| **Surrogates** | | | | | | | | | |
| 1,4-Difluorobenzene (surr) | 213 | | * | 77-115 | | % | 1 | | 05/24/24 00:57 |
| 1,4-Difluorobenzene (surr) | 105 | | | 77-115 | | % | 10 | | 05/24/24 18:43 |

## Batch Information

Analytical Batch: VFC16814
Analytical Method: SW8021B
Analyst: T.L
Analytical Date/Time: 05/24/24 00:57
Container ID: 1242285018-A

Prep Batch: VXX41188
Prep Method: SW5030B
Prep Date/Time: 05/23/24 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Analytical Batch: VFC16815
Analytical Method: SW8021B
Analyst: T.L
Analytical Date/Time: 05/24/24 18:43
Container ID: 1242285018-A

Prep Batch: VXX41204
Prep Method: SW5030B
Prep Date/Time: 05/24/24 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL



SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 f 907.561.5301 www.us.sgs.com

## Results of **E-247A**

Client Sample ID: **E-247A**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285019
Lab Project ID: 1242285

Collection Date: 05/14/24 13:40
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Volatile Fuels**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Benzene | 69.3 | | 0.600 | 0.150 | ug/L | 1 | | 05/24/24 19:40 |
| Ethylbenzene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 19:40 |
| o-Xylene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 19:40 |
| P & M -Xylene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 19:40 |
| Toluene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 19:40 |
| Xylenes (total) | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 19:40 |
| **Surrogates** | | | | | | | | |
| 1,4-Difluorobenzene (surr) | 101 | | 77-115 | | % | 1 | | 05/24/24 19:40 |

## Batch Information

Analytical Batch: VFC16815
Analytical Method: SW8021B
Analyst: T.L
Analytical Date/Time: 05/24/24 19:40
Container ID: 1242285019-A

Prep Batch: VXX41204
Prep Method: SW5030B
Prep Date/Time: 05/24/24 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/26/2024 4:16:50PM

## Results of **E-247B**

Client Sample ID: **E-247B**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285020
Lab Project ID: 1242285

Collection Date: 05/14/24 14:05
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Volatile Fuels**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Benzene | 44.8 | | 0.600 | 0.150 | ug/L | 1 | | 05/24/24 19:59 |
| Ethylbenzene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 19:59 |
| o-Xylene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 19:59 |
| P & M -Xylene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 19:59 |
| Toluene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 19:59 |
| Xylenes (total) | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 19:59 |
| **Surrogates** | | | | | | | | |
| 1,4-Difluorobenzene (surr) | 98.4 | | 77-115 | | % | 1 | | 05/24/24 19:59 |

## Batch Information

Analytical Batch: VFC16815
Analytical Method: SW8021B
Analyst: T.L
Analytical Date/Time: 05/24/24 19:59
Container ID: 1242285020-A

Prep Batch: VXX41204
Prep Method: SW5030B
Prep Date/Time: 05/24/24 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/26/2024 4:16:50PM

## Results of **E-249A**

Client Sample ID: **E-249A**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285021
Lab Project ID: 1242285

Collection Date: 05/15/24 11:20
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Volatile Fuels**

| Parameter | Result | Qual | | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | 946 | | | 0.600 | 0.150 | ug/L | 1 | | 05/24/24 22:31 |
| Ethylbenzene | 5.00 | U | | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 22:31 |
| o-Xylene | 5.00 | U | | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 22:31 |
| P & M -Xylene | 5.00 | U | | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 22:31 |
| Toluene | 5.00 | U | | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 22:31 |
| Xylenes (total) | 5.00 | U | | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 22:31 |
| **Surrogates** | | | | | | | | | |
| 1,4-Difluorobenzene (surr) | 192 | | * | 77-115 | | % | 1 | | 05/24/24 22:31 |

## Batch Information

Analytical Batch: VFC16815
Analytical Method: SW8021B
Analyst: T.L
Analytical Date/Time: 05/24/24 22:31
Container ID: 1242285021-A

Prep Batch: VXX41204
Prep Method: SW5030B
Prep Date/Time: 05/24/24 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/26/2024 4:16:50PM

## Results of **E-249B**

Client Sample ID: **E-249B**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285022
Lab Project ID: 1242285

Collection Date: 05/14/24 15:25
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Volatile Fuels**

| Parameter | Result | Qual | | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | 701 | | | 6.00 | 1.50 | ug/L | 10 | | 05/24/24 18:24 |
| Ethylbenzene | 5.00 | U | | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 02:31 |
| o-Xylene | 5.00 | U | | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 02:31 |
| P & M -Xylene | 5.00 | U | | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 02:31 |
| Toluene | 5.00 | U | | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 02:31 |
| Xylenes (total) | 5.00 | U | | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 02:31 |
| **Surrogates** | | | | | | | | | |
| 1,4-Difluorobenzene (surr) | 161 | | * | 77-115 | | % | 1 | | 05/24/24 02:31 |
| 1,4-Difluorobenzene (surr) | 101 | | | 77-115 | | % | 10 | | 05/24/24 18:24 |

## Batch Information

Analytical Batch: VFC16814
Analytical Method: SW8021B
Analyst: T.L
Analytical Date/Time: 05/24/24 02:31
Container ID: 1242285022-A

Prep Batch: VXX41188
Prep Method: SW5030B
Prep Date/Time: 05/23/24 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Analytical Batch: VFC16815
Analytical Method: SW8021B
Analyst: T.L
Analytical Date/Time: 05/24/24 18:24
Container ID: 1242285022-A

Prep Batch: VXX41204
Prep Method: SW5030B
Prep Date/Time: 05/24/24 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL



SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
**t** 907.562.2343 **f** 907.561.5301 www.us.sgs.com

## Results of **E-249C**

Client Sample ID: **E-249C**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285023
Lab Project ID: 1242285

Collection Date: 05/14/24 14:50
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Volatile Fuels**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Benzene | 14.6 | | 0.600 | 0.150 | ug/L | 1 | | 05/24/24 20:18 |
| Ethylbenzene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 20:18 |
| o-Xylene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 20:18 |
| P & M -Xylene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 20:18 |
| Toluene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 20:18 |
| Xylenes (total) | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 20:18 |
| **Surrogates** | | | | | | | | |
| 1,4-Difluorobenzene (surr) | 96.2 | | 77-115 | | % | 1 | | 05/24/24 20:18 |

## Batch Information

Analytical Batch: VFC16815
Analytical Method: SW8021B
Analyst: T.L
Analytical Date/Time: 05/24/24 20:18
Container ID: 1242285023-A

Prep Batch: VXX41204
Prep Method: SW5030B
Prep Date/Time: 05/24/24 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/26/2024 4:16:50PM

## Results of **E-250A**

Client Sample ID: **E-250A**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285024
Lab Project ID: 1242285

Collection Date: 05/15/24 13:25
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Volatile Fuels**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Benzene | 1.71 | | 0.600 | 0.150 | ug/L | 1 | | 05/24/24 23:27 |
| Ethylbenzene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 23:27 |
| o-Xylene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 23:27 |
| P & M -Xylene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 23:27 |
| Toluene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 23:27 |
| Xylenes (total) | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 23:27 |
| **Surrogates** | | | | | | | | |
| 1,4-Difluorobenzene (surr) | 94.5 | | 77-115 | | % | 1 | | 05/24/24 23:27 |

## Batch Information

Analytical Batch: VFC16815
Analytical Method: SW8021B
Analyst: T.L
Analytical Date/Time: 05/24/24 23:27
Container ID: 1242285024-A

Prep Batch: VXX41204
Prep Method: SW5030B
Prep Date/Time: 05/24/24 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/26/2024 4:16:50PM

## Results of **E-250B**

Client Sample ID: **E-250B**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285025
Lab Project ID: 1242285

Collection Date: 05/15/24 14:00
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Volatile Fuels**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Benzene | 334 | | 3.00 | 0.750 | ug/L | 5 | | 05/28/24 20:10 |
| Ethylbenzene | 25.0 | U | 25.0 | 12.5 | ug/L | 5 | | 05/28/24 20:10 |
| o-Xylene | 25.0 | U | 25.0 | 12.5 | ug/L | 5 | | 05/28/24 20:10 |
| P & M -Xylene | 25.0 | U | 25.0 | 12.5 | ug/L | 5 | | 05/28/24 20:10 |
| Toluene | 25.0 | U | 25.0 | 12.5 | ug/L | 5 | | 05/28/24 20:10 |
| Xylenes (total) | 25.0 | U | 25.0 | 12.5 | ug/L | 5 | | 05/28/24 20:10 |
| **Surrogates** | | | | | | | | |
| 1,4-Difluorobenzene (surr) | 98.3 | | 77-115 | | % | 5 | | 05/28/24 20:10 |

## Batch Information

Analytical Batch: VFC16816
Analytical Method: SW8021B
Analyst: T.L
Analytical Date/Time: 05/28/24 20:10
Container ID: 1242285025-B

Prep Batch: VXX41205
Prep Method: SW5030B
Prep Date/Time: 05/28/24 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL



SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
**t** 907.562.2343 **f** 907.561.5301 www.us.sgs.com

## Results of **E-255**

Client Sample ID: **E-255**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285026
Lab Project ID: 1242285

Collection Date: 05/15/24 12:20
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Volatile Fuels**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Benzene | 63.4 | | 3.00 | 0.750 | ug/L | 5 | | 05/28/24 20:29 |
| Ethylbenzene | 25.0 | U | 25.0 | 12.5 | ug/L | 5 | | 05/28/24 20:29 |
| o-Xylene | 25.0 | U | 25.0 | 12.5 | ug/L | 5 | | 05/28/24 20:29 |
| P & M -Xylene | 25.0 | U | 25.0 | 12.5 | ug/L | 5 | | 05/28/24 20:29 |
| Toluene | 25.0 | U | 25.0 | 12.5 | ug/L | 5 | | 05/28/24 20:29 |
| Xylenes (total) | 25.0 | U | 25.0 | 12.5 | ug/L | 5 | | 05/28/24 20:29 |
| **Surrogates** | | | | | | | | |
| 1,4-Difluorobenzene (surr) | 87.9 | | 77-115 | | % | 5 | | 05/28/24 20:29 |

## Batch Information

Analytical Batch: VFC16816
Analytical Method: SW8021B
Analyst: T.L
Analytical Date/Time: 05/28/24 20:29
Container ID: 1242285026-B

Prep Batch: VXX41205
Prep Method: SW5030B
Prep Date/Time: 05/28/24 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL



SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
**t** 907.562.2343 **f** 907.561.5301 www.us.sgs.com

## Results of **E-256**

Client Sample ID: **E-256**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285027
Lab Project ID: 1242285

Collection Date: 05/15/24 14:25
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Volatile Fuels**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Benzene | 1060 | | 6.00 | 1.50 | ug/L | 10 | | 05/28/24 22:03 |
| Ethylbenzene | 50.0 | U | 50.0 | 25.0 | ug/L | 10 | | 05/28/24 22:03 |
| o-Xylene | 50.0 | U | 50.0 | 25.0 | ug/L | 10 | | 05/28/24 22:03 |
| P & M -Xylene | 50.0 | U | 50.0 | 25.0 | ug/L | 10 | | 05/28/24 22:03 |
| Toluene | 50.0 | U | 50.0 | 25.0 | ug/L | 10 | | 05/28/24 22:03 |
| Xylenes (total) | 50.0 | U | 50.0 | 25.0 | ug/L | 10 | | 05/28/24 22:03 |
| **Surrogates** | | | | | | | | |
| 1,4-Difluorobenzene (surr) | 102 | | 77-115 | | % | 10 | | 05/28/24 22:03 |

## Batch Information

Analytical Batch: VFC16816
Analytical Method: SW8021B
Analyst: T.L
Analytical Date/Time: 05/28/24 22:03
Container ID: 1242285027-B

Prep Batch: VXX41205
Prep Method: SW5030B
Prep Date/Time: 05/28/24 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/26/2024 4:16:50PM

## Results of **E-259**

Client Sample ID: **E-259**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285028
Lab Project ID: 1242285

Collection Date: 05/14/24 09:45
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Volatile Fuels**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Benzene | 0.600 | U | 0.600 | 0.150 | ug/L | 1 | | 05/24/24 01:53 |
| Ethylbenzene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 01:53 |
| o-Xylene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 01:53 |
| P & M -Xylene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 01:53 |
| Toluene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 01:53 |
| Xylenes (total) | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 01:53 |
| **Surrogates** | | | | | | | | |
| 1,4-Difluorobenzene (surr) | 93.7 | | 77-115 | | % | 1 | | 05/24/24 01:53 |

## Batch Information

Analytical Batch: VFC16814
Analytical Method: SW8021B
Analyst: T.L
Analytical Date/Time: 05/24/24 01:53
Container ID: 1242285028-A

Prep Batch: VXX41188
Prep Method: SW5030B
Prep Date/Time: 05/23/24 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/26/2024 4:16:50PM

## Results of **Dup-5**

Client Sample ID: **Dup-5**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285029
Lab Project ID: 1242285

Collection Date: 05/17/24 08:00
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Volatile GC/MS**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Benzene | 2.60 | | 0.400 | 0.120 | ug/L | 1 | | 05/29/24 07:33 |
| Ethylbenzene | 1.00 | U | 1.00 | 0.310 | ug/L | 1 | | 05/29/24 07:33 |
| o-Xylene | 1.00 | U | 1.00 | 0.310 | ug/L | 1 | | 05/29/24 07:33 |
| P & M -Xylene | 2.00 | U | 2.00 | 0.620 | ug/L | 1 | | 05/29/24 07:33 |
| Toluene | 1.00 | U | 1.00 | 0.310 | ug/L | 1 | | 05/29/24 07:33 |
| Trichloroethene | 3.55 | | 0.500 | 0.150 | ug/L | 1 | | 05/29/24 07:33 |
| Xylenes (total) | 3.00 | U | 3.00 | 1.00 | ug/L | 1 | | 05/29/24 07:33 |
| **Surrogates** | | | | | | | | |
| 1,2-Dichloroethane-D4 (surr) | 106 | | 81-118 | | % | 1 | | 05/29/24 07:33 |
| 4-Bromofluorobenzene (surr) | 102 | | 85-114 | | % | 1 | | 05/29/24 07:33 |
| Toluene-d8 (surr) | 100 | | 89-112 | | % | 1 | | 05/29/24 07:33 |

## Batch Information

Analytical Batch: VMS23263
Analytical Method: SW8260D
Analyst: JY
Analytical Date/Time: 05/29/24 07:33
Container ID: 1242285029-A

Prep Batch: VXX41207
Prep Method: SW5030B
Prep Date/Time: 05/28/24 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/26/2024 4:16:50PM

## Results of **SMW-05**

Client Sample ID: **SMW-05**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285030
Lab Project ID: 1242285

Collection Date: 05/17/24 09:55
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Volatile GC/MS**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Benzene | 2.56 | | 0.400 | 0.120 | ug/L | 1 | | 05/29/24 07:48 |
| Ethylbenzene | 1.00 | U | 1.00 | 0.310 | ug/L | 1 | | 05/29/24 07:48 |
| o-Xylene | 1.00 | U | 1.00 | 0.310 | ug/L | 1 | | 05/29/24 07:48 |
| P & M -Xylene | 2.00 | U | 2.00 | 0.620 | ug/L | 1 | | 05/29/24 07:48 |
| Toluene | 1.00 | U | 1.00 | 0.310 | ug/L | 1 | | 05/29/24 07:48 |
| Trichloroethene | 3.41 | | 0.500 | 0.150 | ug/L | 1 | | 05/29/24 07:48 |
| Xylenes (total) | 3.00 | U | 3.00 | 1.00 | ug/L | 1 | | 05/29/24 07:48 |
| **Surrogates** | | | | | | | | |
| 1,2-Dichloroethane-D4 (surr) | 110 | | 81-118 | | % | 1 | | 05/29/24 07:48 |
| 4-Bromofluorobenzene (surr) | 100 | | 85-114 | | % | 1 | | 05/29/24 07:48 |
| Toluene-d8 (surr) | 99.8 | | 89-112 | | % | 1 | | 05/29/24 07:48 |

## Batch Information

Analytical Batch: VMS23263
Analytical Method: SW8260D
Analyst: JY
Analytical Date/Time: 05/29/24 07:48
Container ID: 1242285030-A

Prep Batch: VXX41207
Prep Method: SW5030B
Prep Date/Time: 05/28/24 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/26/2024 4:16:50PM

## Results of **Dup-4**

Client Sample ID: **Dup-4**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285031
Lab Project ID: 1242285

Collection Date: 05/17/24 08:15
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Benzene | 1.47 | | 0.400 | 0.120 | ug/L | 1 | | 05/29/24 08:50 |
| Ethylbenzene | 1.00 | U | 1.00 | 0.310 | ug/L | 1 | | 05/29/24 08:50 |
| o-Xylene | 1.00 | U | 1.00 | 0.310 | ug/L | 1 | | 05/29/24 08:50 |
| P & M -Xylene | 2.00 | U | 2.00 | 0.620 | ug/L | 1 | | 05/29/24 08:50 |
| Toluene | 1.00 | U | 1.00 | 0.310 | ug/L | 1 | | 05/29/24 08:50 |
| Trichloroethene | 42.7 | | 0.500 | 0.150 | ug/L | 1 | | 05/29/24 08:50 |
| Vinyl chloride | 0.280 | | 0.150 | 0.0500 | ug/L | 1 | | 05/29/24 08:50 |
| Xylenes (total) | 3.00 | U | 3.00 | 1.00 | ug/L | 1 | | 05/29/24 08:50 |
| **Surrogates** | | | | | | | | |
| 1,2-Dichloroethane-D4 (surr) | 101 | | 81-118 | | % | 1 | | 05/29/24 08:50 |
| 4-Bromofluorobenzene (surr) | 99.7 | | 85-114 | | % | 1 | | 05/29/24 08:50 |
| Toluene-d8 (surr) | 101 | | 89-112 | | % | 1 | | 05/29/24 08:50 |

## Batch Information

Analytical Batch: VMS23263
Analytical Method: EPA 624.1
Analyst: JY
Analytical Date/Time: 05/29/24 08:50
Container ID: 1242285031-A

Prep Batch: VXX41207
Prep Method: SW5030B
Prep Date/Time: 05/28/24 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/26/2024 4:16:50PM

## Results of **Dup-4**

Client Sample ID: **Dup-4**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285031
Lab Project ID: 1242285

Collection Date: 05/17/24 08:15
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Metals by ICP/MS**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Calcium | 120000 | | 5000 | 1500 | ug/L | 10 | | 06/06/24 13:18 |
| Iron | 28100 | | 2500 | 780 | ug/L | 10 | | 06/06/24 13:18 |
| Magnesium | 38900 | | 500 | 150 | ug/L | 10 | | 06/06/24 13:18 |
| Manganese | 3270 | | 10.0 | 3.50 | ug/L | 10 | | 06/06/24 13:18 |

### Batch Information

Analytical Batch: MMS12314
Analytical Method: EP200.8
Analyst: HGS
Analytical Date/Time: 06/06/24 13:18
Container ID: 1242285031-H

Prep Batch: MXX36645
Prep Method: E200.2
Prep Date/Time: 05/30/24 12:14
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Hardness as CaCO3 | 460 | | 50.0 | 50.0 | mg/L | 10 | | 06/06/24 13:18 |

### Batch Information

Analytical Batch: MMS12314
Analytical Method: SM21 2340B
Analyst: HGS
Analytical Date/Time: 06/06/24 13:18
Container ID: 1242285031-H

Prep Batch: MXX36645
Prep Method: E200.2
Prep Date/Time: 05/30/24 12:14
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL



SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
**t** 907.562.2343 **f** 907.561.5301 www.us.sgs.com

## Results of **Dup-4**

Client Sample ID: **Dup-4**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285031
Lab Project ID: 1242285

Collection Date: 05/17/24 08:15
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Waters Department**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Sulfate | 380 | | 10.0 | 2.50 | mg/L | 50 | | 05/29/24 20:14 |

### Batch Information

Analytical Batch: WIC6585
Analytical Method: EPA 300.0
Analyst: EBH
Analytical Date/Time: 05/29/24 20:14
Container ID: 1242285031-D

Prep Batch: WXX15250
Prep Method: METHOD
Prep Date/Time: 05/29/24 15:30
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Total Organic Carbon Average | 2.00 | U | 2.00 | 0.500 | mg/L | 1 | | 05/28/24 22:48 |

### Batch Information

Analytical Batch: WTC3425
Analytical Method: SM 5310B
Analyst: EBH
Analytical Date/Time: 05/28/24 22:48
Container ID: 1242285031-F

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Alkalinity | 125 | | 10.0 | 2.50 | mg/L | 1 | | 05/24/24 15:09 |

### Batch Information

Analytical Batch: WTI6441
Analytical Method: SM21 2320B
Analyst: EBH
Analytical Date/Time: 05/24/24 15:09
Container ID: 1242285031-G

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Total Nitrate/Nitrite-N | 0.200 | U | 0.200 | 0.0500 | mg/L | 2 | | 05/24/24 13:52 |

Print Date: 06/26/2024 4:16:50PM

Results of **Dup-4**

Client Sample ID: **Dup-4**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285031
Lab Project ID: 1242285

Collection Date: 05/17/24 08:15
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

**Batch Information**

Analytical Batch: WFI3121
Analytical Method: SM21 4500NO3-F
Analyst: AJP
Analytical Date/Time: 05/24/24 13:52
Container ID: 1242285031-E

Print Date: 06/26/2024 4:16:50PM

## Results of **IWS-6**

Client Sample ID: **IWS-6**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285032
Lab Project ID: 1242285

Collection Date: 05/17/24 15:45
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Benzene | 0.770 | | 0.400 | 0.120 | ug/L | 1 | | 05/29/24 09:06 |
| Ethylbenzene | 1.00 | U | 1.00 | 0.310 | ug/L | 1 | | 05/29/24 09:06 |
| o-Xylene | 1.00 | U | 1.00 | 0.310 | ug/L | 1 | | 05/29/24 09:06 |
| P & M -Xylene | 2.00 | U | 2.00 | 0.620 | ug/L | 1 | | 05/29/24 09:06 |
| Toluene | 1.00 | U | 1.00 | 0.310 | ug/L | 1 | | 05/29/24 09:06 |
| Trichloroethene | 12.8 | | 0.500 | 0.150 | ug/L | 1 | | 05/29/24 09:06 |
| Vinyl chloride | 0.150 | U | 0.150 | 0.0500 | ug/L | 1 | | 05/29/24 09:06 |
| Xylenes (total) | 3.00 | U | 3.00 | 1.00 | ug/L | 1 | | 05/29/24 09:06 |
| **Surrogates** | | | | | | | | |
| 1,2-Dichloroethane-D4 (surr) | 104 | | 81-118 | | % | 1 | | 05/29/24 09:06 |
| 4-Bromofluorobenzene (surr) | 102 | | 85-114 | | % | 1 | | 05/29/24 09:06 |
| Toluene-d8 (surr) | 102 | | 89-112 | | % | 1 | | 05/29/24 09:06 |

## Batch Information

Analytical Batch: VMS23263
Analytical Method: EPA 624.1
Analyst: JY
Analytical Date/Time: 05/29/24 09:06
Container ID: 1242285032-A

Prep Batch: VXX41207
Prep Method: SW5030B
Prep Date/Time: 05/28/24 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/26/2024 4:16:50PM

## Results of **IWS-6**

Client Sample ID: **IWS-6**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285032
Lab Project ID: 1242285

Collection Date: 05/17/24 15:45
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Metals by ICP/MS**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Calcium | 219000 | | 5000 | 1500 | ug/L | 10 | | 06/12/24 17:51 |
| Iron | 44800 | | 2500 | 780 | ug/L | 10 | | 06/06/24 13:23 |
| Magnesium | 69200 | | 500 | 150 | ug/L | 10 | | 06/12/24 17:51 |
| Manganese | 4940 | | 10.0 | 3.50 | ug/L | 10 | | 06/06/24 13:23 |

### Batch Information

Analytical Batch: MMS12314
Analytical Method: EP200.8
Analyst: HGS
Analytical Date/Time: 06/06/24 13:23
Container ID: 1242285032-H

Prep Batch: MXX36645
Prep Method: E200.2
Prep Date/Time: 05/30/24 12:14
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Analytical Batch: MMS12319
Analytical Method: EP200.8
Analyst: HGS
Analytical Date/Time: 06/12/24 17:51
Container ID: 1242285032-H

Prep Batch: MXX36645
Prep Method: E200.2
Prep Date/Time: 05/30/24 12:14
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Hardness as CaCO3 | 831 | | 50.0 | 50.0 | mg/L | 10 | | 06/12/24 17:51 |

### Batch Information

Analytical Batch: MMS12319
Analytical Method: SM21 2340B
Analyst: HGS
Analytical Date/Time: 06/12/24 17:51
Container ID: 1242285032-H

Prep Batch: MXX36645
Prep Method: E200.2
Prep Date/Time: 05/30/24 12:14
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL



SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
**t** 907.562.2343 **f** 907.561.5301 www.us.sgs.com

## Results of **IWS-6**

Client Sample ID: **IWS-6**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285032
Lab Project ID: 1242285

Collection Date: 05/17/24 15:45
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Waters Department**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Sulfate | 710 | | 10.0 | 2.50 | mg/L | 50 | | 05/29/24 20:32 |

### Batch Information

Analytical Batch: WIC6585
Analytical Method: EPA 300.0
Analyst: EBH
Analytical Date/Time: 05/29/24 20:32
Container ID: 1242285032-D

Prep Batch: WXX15250
Prep Method: METHOD
Prep Date/Time: 05/29/24 15:30
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Total Organic Carbon Average | 5.46 | | 2.00 | 0.500 | mg/L | 1 | | 05/28/24 23:06 |

### Batch Information

Analytical Batch: WTC3425
Analytical Method: SM 5310B
Analyst: EBH
Analytical Date/Time: 05/28/24 23:06
Container ID: 1242285032-F

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Alkalinity | 143 | | 10.0 | 2.50 | mg/L | 1 | | 05/24/24 15:17 |

### Batch Information

Analytical Batch: WTI6441
Analytical Method: SM21 2320B
Analyst: EBH
Analytical Date/Time: 05/24/24 15:17
Container ID: 1242285032-G

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Total Nitrate/Nitrite-N | 0.200 | U | 0.200 | 0.0500 | mg/L | 2 | | 05/24/24 13:54 |

Print Date: 06/26/2024 4:16:50PM

Results of **IWS-6**

Client Sample ID: **IWS-6**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285032
Lab Project ID: 1242285

Collection Date: 05/17/24 15:45
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

**Batch Information**

Analytical Batch: WFI3121
Analytical Method: SM21 4500NO3-F
Analyst: AJP
Analytical Date/Time: 05/24/24 13:54
Container ID: 1242285032-E

Print Date: 06/26/2024 4:16:50PM

## Results of **SMW-06**

Client Sample ID: **SMW-06**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285033
Lab Project ID: 1242285

Collection Date: 05/17/24 11:15
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Benzene | 0.760 | | 0.400 | 0.120 | ug/L | 1 | | 05/29/24 05:45 |
| Ethylbenzene | 1.00 | U | 1.00 | 0.310 | ug/L | 1 | | 05/29/24 05:45 |
| o-Xylene | 1.00 | U | 1.00 | 0.310 | ug/L | 1 | | 05/29/24 05:45 |
| P & M -Xylene | 2.00 | U | 2.00 | 0.620 | ug/L | 1 | | 05/29/24 05:45 |
| Toluene | 1.00 | U | 1.00 | 0.310 | ug/L | 1 | | 05/29/24 05:45 |
| Trichloroethene | 1.05 | | 0.500 | 0.150 | ug/L | 1 | | 05/29/24 05:45 |
| Vinyl chloride | 0.150 | U | 0.150 | 0.0500 | ug/L | 1 | | 05/29/24 05:45 |
| Xylenes (total) | 3.00 | U | 3.00 | 1.00 | ug/L | 1 | | 05/29/24 05:45 |
| **Surrogates** | | | | | | | | |
| 1,2-Dichloroethane-D4 (surr) | 105 | | 81-118 | | % | 1 | | 05/29/24 05:45 |
| 4-Bromofluorobenzene (surr) | 99.5 | | 85-114 | | % | 1 | | 05/29/24 05:45 |
| Toluene-d8 (surr) | 102 | | 89-112 | | % | 1 | | 05/29/24 05:45 |

## Batch Information

Analytical Batch: VMS23263
Analytical Method: EPA 624.1
Analyst: JY
Analytical Date/Time: 05/29/24 05:45
Container ID: 1242285033-A

Prep Batch: VXX41207
Prep Method: SW5030B
Prep Date/Time: 05/28/24 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/26/2024 4:16:50PM

## Results of **SMW-06**

Client Sample ID: **SMW-06**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285033
Lab Project ID: 1242285

Collection Date: 05/17/24 11:15
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Metals by ICP/MS**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Calcium | 177000 | | 5000 | 1500 | ug/L | 10 | | 06/06/24 13:28 |
| Iron | 1040 | | 250 | 78.0 | ug/L | 1 | | 06/12/24 17:58 |
| Magnesium | 62200 | | 500 | 150 | ug/L | 10 | | 06/06/24 13:28 |
| Manganese | 763 | | 10.0 | 3.50 | ug/L | 10 | | 06/06/24 13:28 |

### Batch Information

Analytical Batch: MMS12314
Analytical Method: EP200.8
Analyst: HGS
Analytical Date/Time: 06/06/24 13:28
Container ID: 1242285033-H

Prep Batch: MXX36645
Prep Method: E200.2
Prep Date/Time: 05/30/24 12:14
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Analytical Batch: MMS12319
Analytical Method: EP200.8
Analyst: HGS
Analytical Date/Time: 06/12/24 17:58
Container ID: 1242285033-H

Prep Batch: MXX36645
Prep Method: E200.2
Prep Date/Time: 05/30/24 12:14
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Hardness as CaCO3 | 698 | | 50.0 | 50.0 | mg/L | 10 | | 06/06/24 13:28 |

### Batch Information

Analytical Batch: MMS12314
Analytical Method: SM21 2340B
Analyst: HGS
Analytical Date/Time: 06/06/24 13:28
Container ID: 1242285033-H

Prep Batch: MXX36645
Prep Method: E200.2
Prep Date/Time: 05/30/24 12:14
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL



SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 f 907.561.5301 www.us.sgs.com

## Results of **SMW-06**

Client Sample ID: **SMW-06**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285033
Lab Project ID: 1242285

Collection Date: 05/17/24 11:15
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Waters Department**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Sulfate | 533 | | 10.0 | 2.50 | mg/L | 50 | | 05/29/24 20:51 |

### Batch Information

Analytical Batch: WIC6585
Analytical Method: EPA 300.0
Analyst: EBH
Analytical Date/Time: 05/29/24 20:51
Container ID: 1242285033-D

Prep Batch: WXX15250
Prep Method: METHOD
Prep Date/Time: 05/29/24 15:30
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Total Organic Carbon Average | 8.30 | | 2.00 | 0.500 | mg/L | 1 | | 05/28/24 23:23 |

### Batch Information

Analytical Batch: WTC3425
Analytical Method: SM 5310B
Analyst: EBH
Analytical Date/Time: 05/28/24 23:23
Container ID: 1242285033-F

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Alkalinity | 177 | | 10.0 | 2.50 | mg/L | 1 | | 05/24/24 15:25 |

### Batch Information

Analytical Batch: WTI6441
Analytical Method: SM21 2320B
Analyst: EBH
Analytical Date/Time: 05/24/24 15:25
Container ID: 1242285033-G

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Total Nitrate/Nitrite-N | 0.442 | | 0.200 | 0.0500 | mg/L | 2 | | 05/24/24 13:56 |

Print Date: 06/26/2024 4:16:50PM

Results of **SMW-06**

Client Sample ID: **SMW-06**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285033
Lab Project ID: 1242285

Collection Date: 05/17/24 11:15
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

**Batch Information**

Analytical Batch: WFI3121
Analytical Method: SM21 4500NO3-F
Analyst: AJP
Analytical Date/Time: 05/24/24 13:56
Container ID: 1242285033-E

Print Date: 06/26/2024 4:16:50PM

## Results of **SMW-09**

Client Sample ID: **SMW-09**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285034
Lab Project ID: 1242285

Collection Date: 05/17/24 10:35
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Benzene | 0.590 | | 0.400 | 0.120 | ug/L | 1 | | 05/29/24 06:00 |
| Ethylbenzene | 1.00 | U | 1.00 | 0.310 | ug/L | 1 | | 05/29/24 06:00 |
| o-Xylene | 1.00 | U | 1.00 | 0.310 | ug/L | 1 | | 05/29/24 06:00 |
| P & M -Xylene | 2.00 | U | 2.00 | 0.620 | ug/L | 1 | | 05/29/24 06:00 |
| Toluene | 1.00 | U | 1.00 | 0.310 | ug/L | 1 | | 05/29/24 06:00 |
| Trichloroethene | 0.890 | | 0.500 | 0.150 | ug/L | 1 | | 05/29/24 06:00 |
| Vinyl chloride | 0.510 | | 0.150 | 0.0500 | ug/L | 1 | | 05/29/24 06:00 |
| Xylenes (total) | 3.00 | U | 3.00 | 1.00 | ug/L | 1 | | 05/29/24 06:00 |
| **Surrogates** | | | | | | | | |
| 1,2-Dichloroethane-D4 (surr) | 103 | | 81-118 | | % | 1 | | 05/29/24 06:00 |
| 4-Bromofluorobenzene (surr) | 100 | | 85-114 | | % | 1 | | 05/29/24 06:00 |
| Toluene-d8 (surr) | 99.2 | | 89-112 | | % | 1 | | 05/29/24 06:00 |

## Batch Information

Analytical Batch: VMS23263
Analytical Method: EPA 624.1
Analyst: JY
Analytical Date/Time: 05/29/24 06:00
Container ID: 1242285034-A

Prep Batch: VXX41207
Prep Method: SW5030B
Prep Date/Time: 05/28/24 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/26/2024 4:16:50PM

## Results of **SMW-09**

Client Sample ID: **SMW-09**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285034
Lab Project ID: 1242285

Collection Date: 05/17/24 10:35
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Metals by ICP/MS**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Calcium | 77000 | | 5000 | 1500 | ug/L | 10 | | 06/06/24 13:30 |
| Iron | 34600 | | 2500 | 780 | ug/L | 10 | | 06/06/24 13:30 |
| Magnesium | 21800 | | 500 | 150 | ug/L | 10 | | 06/06/24 13:30 |
| Manganese | 3010 | | 10.0 | 3.50 | ug/L | 10 | | 06/06/24 13:30 |

### Batch Information

Analytical Batch: MMS12314
Analytical Method: EP200.8
Analyst: HGS
Analytical Date/Time: 06/06/24 13:30
Container ID: 1242285034-H

Prep Batch: MXX36645
Prep Method: E200.2
Prep Date/Time: 05/30/24 12:14
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Hardness as CaCO3 | 282 | | 50.0 | 50.0 | mg/L | 10 | | 06/06/24 13:30 |

### Batch Information

Analytical Batch: MMS12314
Analytical Method: SM21 2340B
Analyst: HGS
Analytical Date/Time: 06/06/24 13:30
Container ID: 1242285034-H

Prep Batch: MXX36645
Prep Method: E200.2
Prep Date/Time: 05/30/24 12:14
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL



SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
**t** 907.562.2343 **f** 907.561.5301 www.us.sgs.com

## Results of **SMW-09**

Client Sample ID: **SMW-09**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285034
Lab Project ID: 1242285

Collection Date: 05/17/24 10:35
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Waters Department**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Sulfate | 218 | | 10.0 | 2.50 | mg/L | 50 | | 05/29/24 21:09 |

### Batch Information

Analytical Batch: WIC6585
Analytical Method: EPA 300.0
Analyst: EBH
Analytical Date/Time: 05/29/24 21:09
Container ID: 1242285034-D

Prep Batch: WXX15250
Prep Method: METHOD
Prep Date/Time: 05/29/24 15:30
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Total Organic Carbon Average | 4.67 | | 2.00 | 0.500 | mg/L | 1 | | 05/29/24 17:07 |

### Batch Information

Analytical Batch: WTC3427
Analytical Method: SM 5310B
Analyst: EBH
Analytical Date/Time: 05/29/24 17:07
Container ID: 1242285034-F

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Alkalinity | 103 | | 10.0 | 2.50 | mg/L | 1 | | 05/24/24 15:34 |

### Batch Information

Analytical Batch: WTI6441
Analytical Method: SM21 2320B
Analyst: EBH
Analytical Date/Time: 05/24/24 15:34
Container ID: 1242285034-G

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Total Nitrate/Nitrite-N | 0.200 | U | 0.200 | 0.0500 | mg/L | 2 | | 05/24/24 13:57 |

Print Date: 06/26/2024 4:16:50PM

Results of **SMW-09**

Client Sample ID: **SMW-09**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285034
Lab Project ID: 1242285

Collection Date: 05/17/24 10:35
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

**Batch Information**

Analytical Batch: WFI3121
Analytical Method: SM21 4500NO3-F
Analyst: AJP
Analytical Date/Time: 05/24/24 13:57
Container ID: 1242285034-E

Print Date: 06/26/2024 4:16:50PM

## Results of **SMW-21A**

Client Sample ID: **SMW-21A**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285035
Lab Project ID: 1242285

Collection Date: 05/17/24 12:05
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Benzene | 0.400 | U | 0.400 | 0.120 | ug/L | 1 | | 05/29/24 06:16 |
| Ethylbenzene | 1.00 | U | 1.00 | 0.310 | ug/L | 1 | | 05/29/24 06:16 |
| o-Xylene | 1.00 | U | 1.00 | 0.310 | ug/L | 1 | | 05/29/24 06:16 |
| P & M -Xylene | 2.00 | U | 2.00 | 0.620 | ug/L | 1 | | 05/29/24 06:16 |
| Toluene | 1.00 | U | 1.00 | 0.310 | ug/L | 1 | | 05/29/24 06:16 |
| Trichloroethene | 0.500 | U | 0.500 | 0.150 | ug/L | 1 | | 05/29/24 06:16 |
| Vinyl chloride | 0.150 | U | 0.150 | 0.0500 | ug/L | 1 | | 05/29/24 06:16 |
| Xylenes (total) | 3.00 | U | 3.00 | 1.00 | ug/L | 1 | | 05/29/24 06:16 |
| **Surrogates** | | | | | | | | |
| 1,2-Dichloroethane-D4 (surr) | 106 | | 81-118 | | % | 1 | | 05/29/24 06:16 |
| 4-Bromofluorobenzene (surr) | 99.1 | | 85-114 | | % | 1 | | 05/29/24 06:16 |
| Toluene-d8 (surr) | 101 | | 89-112 | | % | 1 | | 05/29/24 06:16 |

## Batch Information

Analytical Batch: VMS23263
Analytical Method: EPA 624.1
Analyst: JY
Analytical Date/Time: 05/29/24 06:16
Container ID: 1242285035-A

Prep Batch: VXX41207
Prep Method: SW5030B
Prep Date/Time: 05/28/24 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/26/2024 4:16:50PM

## Results of **SMW-21A**

Client Sample ID: **SMW-21A**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285035
Lab Project ID: 1242285

Collection Date: 05/17/24 12:05
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Metals by ICP/MS**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Calcium | 50200 | | 5000 | 1500 | ug/L | 10 | | 06/06/24 13:33 |
| Iron | 7210 | | 2500 | 780 | ug/L | 10 | | 06/06/24 13:33 |
| Magnesium | 24400 | | 500 | 150 | ug/L | 10 | | 06/06/24 13:33 |
| Manganese | 92.3 | | 10.0 | 3.50 | ug/L | 10 | | 06/06/24 13:33 |

### Batch Information

Analytical Batch: MMS12314
Analytical Method: EP200.8
Analyst: HGS
Analytical Date/Time: 06/06/24 13:33
Container ID: 1242285035-H

Prep Batch: MXX36645
Prep Method: E200.2
Prep Date/Time: 05/30/24 12:14
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Hardness as CaCO3 | 226 | | 50.0 | 50.0 | mg/L | 10 | | 06/06/24 13:33 |

### Batch Information

Analytical Batch: MMS12314
Analytical Method: SM21 2340B
Analyst: HGS
Analytical Date/Time: 06/06/24 13:33
Container ID: 1242285035-H

Prep Batch: MXX36645
Prep Method: E200.2
Prep Date/Time: 05/30/24 12:14
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL



SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
**t** 907.562.2343 **f** 907.561.5301 www.us.sgs.com

## Results of **SMW-21A**

Client Sample ID: **SMW-21A**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285035
Lab Project ID: 1242285

Collection Date: 05/17/24 12:05
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Waters Department**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Sulfate | 93.8 | | 2.00 | 0.500 | mg/L | 10 | | 05/24/24 22:41 |

### Batch Information

Analytical Batch: WIC6584
Analytical Method: EPA 300.0
Analyst: EBH
Analytical Date/Time: 05/24/24 22:41
Container ID: 1242285035-D

Prep Batch: WXX15248
Prep Method: METHOD
Prep Date/Time: 05/24/24 15:45
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Total Organic Carbon Average | 3.28 | | 2.00 | 0.500 | mg/L | 1 | | 05/29/24 17:21 |

### Batch Information

Analytical Batch: WTC3427
Analytical Method: SM 5310B
Analyst: EBH
Analytical Date/Time: 05/29/24 17:21
Container ID: 1242285035-F

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Alkalinity | 131 | | 10.0 | 2.50 | mg/L | 1 | | 05/24/24 15:42 |

### Batch Information

Analytical Batch: WTI6441
Analytical Method: SM21 2320B
Analyst: EBH
Analytical Date/Time: 05/24/24 15:42
Container ID: 1242285035-G

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Total Nitrate/Nitrite-N | 0.200 | U | 0.200 | 0.0500 | mg/L | 2 | | 05/24/24 14:04 |

Print Date: 06/26/2024 4:16:50PM

Results of **SMW-21A**

Client Sample ID: **SMW-21A**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285035
Lab Project ID: 1242285

Collection Date: 05/17/24 12:05
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

**Batch Information**

Analytical Batch: WFI3121
Analytical Method: SM21 4500NO3-F
Analyst: AJP
Analytical Date/Time: 05/24/24 14:04
Container ID: 1242285035-E

Print Date: 06/26/2024 4:16:50PM

## Results of **SMW-29**

Client Sample ID: **SMW-29**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285036
Lab Project ID: 1242285

Collection Date: 05/17/24 15:00
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Benzene | 0.950 | | 0.400 | 0.120 | ug/L | 1 | | 05/29/24 06:31 |
| Ethylbenzene | 1.00 | U | 1.00 | 0.310 | ug/L | 1 | | 05/29/24 06:31 |
| o-Xylene | 1.00 | U | 1.00 | 0.310 | ug/L | 1 | | 05/29/24 06:31 |
| P & M -Xylene | 2.00 | U | 2.00 | 0.620 | ug/L | 1 | | 05/29/24 06:31 |
| Toluene | 1.00 | U | 1.00 | 0.310 | ug/L | 1 | | 05/29/24 06:31 |
| Trichloroethene | 1.85 | | 0.500 | 0.150 | ug/L | 1 | | 05/29/24 06:31 |
| Vinyl chloride | 0.150 | U | 0.150 | 0.0500 | ug/L | 1 | | 05/29/24 06:31 |
| Xylenes (total) | 3.00 | U | 3.00 | 1.00 | ug/L | 1 | | 05/29/24 06:31 |
| **Surrogates** | | | | | | | | |
| 1,2-Dichloroethane-D4 (surr) | 105 | | 81-118 | | % | 1 | | 05/29/24 06:31 |
| 4-Bromofluorobenzene (surr) | 102 | | 85-114 | | % | 1 | | 05/29/24 06:31 |
| Toluene-d8 (surr) | 98 | | 89-112 | | % | 1 | | 05/29/24 06:31 |

## Batch Information

Analytical Batch: VMS23263
Analytical Method: EPA 624.1
Analyst: JY
Analytical Date/Time: 05/29/24 06:31
Container ID: 1242285036-A

Prep Batch: VXX41207
Prep Method: SW5030B
Prep Date/Time: 05/28/24 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/26/2024 4:16:50PM

## Results of **SMW-29**

Client Sample ID: **SMW-29**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285036
Lab Project ID: 1242285

Collection Date: 05/17/24 15:00
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Metals by ICP/MS**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Calcium | 26700 | | 5000 | 1500 | ug/L | 10 | | 06/06/24 13:41 |
| Iron | 19800 | | 2500 | 780 | ug/L | 10 | | 06/06/24 13:41 |
| Magnesium | 15900 | | 500 | 150 | ug/L | 10 | | 06/06/24 13:41 |
| Manganese | 1520 | | 10.0 | 3.50 | ug/L | 10 | | 06/06/24 13:41 |

### Batch Information

Analytical Batch: MMS12314
Analytical Method: EP200.8
Analyst: HGS
Analytical Date/Time: 06/06/24 13:41
Container ID: 1242285036-H

Prep Batch: MXX36645
Prep Method: E200.2
Prep Date/Time: 05/30/24 12:14
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Hardness as CaCO3 | 132 | | 50.0 | 50.0 | mg/L | 10 | | 06/06/24 13:41 |

### Batch Information

Analytical Batch: MMS12314
Analytical Method: SM21 2340B
Analyst: HGS
Analytical Date/Time: 06/06/24 13:41
Container ID: 1242285036-H

Prep Batch: MXX36645
Prep Method: E200.2
Prep Date/Time: 05/30/24 12:14
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL



SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
**t** 907.562.2343 **f** 907.561.5301 www.us.sgs.com

## Results of **SMW-29**

Client Sample ID: **SMW-29**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285036
Lab Project ID: 1242285

Collection Date: 05/17/24 15:00
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Waters Department**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Sulfate | 40.9 | | 2.00 | 0.500 | mg/L | 10 | | 05/24/24 23:00 |

### Batch Information

Analytical Batch: WIC6584
Analytical Method: EPA 300.0
Analyst: EBH
Analytical Date/Time: 05/24/24 23:00
Container ID: 1242285036-D

Prep Batch: WXX15248
Prep Method: METHOD
Prep Date/Time: 05/24/24 15:45
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Total Organic Carbon Average | 2.00 | U | 2.00 | 0.500 | mg/L | 1 | | 05/29/24 17:35 |

### Batch Information

Analytical Batch: WTC3427
Analytical Method: SM 5310B
Analyst: EBH
Analytical Date/Time: 05/29/24 17:35
Container ID: 1242285036-F

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Alkalinity | 108 | | 10.0 | 2.50 | mg/L | 1 | | 05/24/24 15:57 |

### Batch Information

Analytical Batch: WTI6441
Analytical Method: SM21 2320B
Analyst: EBH
Analytical Date/Time: 05/24/24 15:57
Container ID: 1242285036-G

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Total Nitrate/Nitrite-N | 0.200 | U | 0.200 | 0.0500 | mg/L | 2 | | 05/24/24 14:10 |

Print Date: 06/26/2024 4:16:50PM

Results of **SMW-29**

Client Sample ID: **SMW-29**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285036
Lab Project ID: 1242285

Collection Date: 05/17/24 15:00
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

**Batch Information**

Analytical Batch: WFI3121
Analytical Method: SM21 4500NO3-F
Analyst: AJP
Analytical Date/Time: 05/24/24 14:10
Container ID: 1242285036-E

Print Date: 06/26/2024 4:16:50PM

## Results of **SMW-31**

Client Sample ID: **SMW-31**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285037
Lab Project ID: 1242285

Collection Date: 05/17/24 13:15
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Benzene | 0.400 | U | 0.400 | 0.120 | ug/L | 1 | | 05/29/24 06:47 |
| Ethylbenzene | 1.00 | U | 1.00 | 0.310 | ug/L | 1 | | 05/29/24 06:47 |
| o-Xylene | 1.00 | U | 1.00 | 0.310 | ug/L | 1 | | 05/29/24 06:47 |
| P & M -Xylene | 2.00 | U | 2.00 | 0.620 | ug/L | 1 | | 05/29/24 06:47 |
| Toluene | 1.00 | U | 1.00 | 0.310 | ug/L | 1 | | 05/29/24 06:47 |
| Trichloroethene | 0.500 | U | 0.500 | 0.150 | ug/L | 1 | | 05/29/24 06:47 |
| Vinyl chloride | 0.170 | | 0.150 | 0.0500 | ug/L | 1 | | 05/29/24 06:47 |
| Xylenes (total) | 3.00 | U | 3.00 | 1.00 | ug/L | 1 | | 05/29/24 06:47 |
| **Surrogates** | | | | | | | | |
| 1,2-Dichloroethane-D4 (surr) | 106 | | 81-118 | | % | 1 | | 05/29/24 06:47 |
| 4-Bromofluorobenzene (surr) | 98.9 | | 85-114 | | % | 1 | | 05/29/24 06:47 |
| Toluene-d8 (surr) | 102 | | 89-112 | | % | 1 | | 05/29/24 06:47 |

## Batch Information

Analytical Batch: VMS23263
Analytical Method: EPA 624.1
Analyst: JY
Analytical Date/Time: 05/29/24 06:47
Container ID: 1242285037-A

Prep Batch: VXX41207
Prep Method: SW5030B
Prep Date/Time: 05/28/24 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/26/2024 4:16:50PM

## Results of **SMW-31**

Client Sample ID: **SMW-31**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285037
Lab Project ID: 1242285

Collection Date: 05/17/24 13:15
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Metals by ICP/MS**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Calcium | 96000 | | 5000 | 1500 | ug/L | 10 | | 06/06/24 13:43 |
| Iron | 62200 | | 2500 | 780 | ug/L | 10 | | 06/06/24 13:43 |
| Magnesium | 30900 | | 500 | 150 | ug/L | 10 | | 06/06/24 13:43 |
| Manganese | 2570 | | 10.0 | 3.50 | ug/L | 10 | | 06/06/24 13:43 |

### Batch Information

Analytical Batch: MMS12314
Analytical Method: EP200.8
Analyst: HGS
Analytical Date/Time: 06/06/24 13:43
Container ID: 1242285037-H

Prep Batch: MXX36645
Prep Method: E200.2
Prep Date/Time: 05/30/24 12:14
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Hardness as CaCO3 | 367 | | 50.0 | 50.0 | mg/L | 10 | | 06/06/24 13:43 |

### Batch Information

Analytical Batch: MMS12314
Analytical Method: SM21 2340B
Analyst: HGS
Analytical Date/Time: 06/06/24 13:43
Container ID: 1242285037-H

Prep Batch: MXX36645
Prep Method: E200.2
Prep Date/Time: 05/30/24 12:14
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL



SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
**t** 907.562.2343 **f** 907.561.5301 www.us.sgs.com

## Results of **SMW-31**

Client Sample ID: **SMW-31**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285037
Lab Project ID: 1242285

Collection Date: 05/17/24 13:15
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Waters Department**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Sulfate | 279 | | 10.0 | 2.50 | mg/L | 50 | | 05/29/24 21:28 |

### Batch Information

Analytical Batch: WIC6585
Analytical Method: EPA 300.0
Analyst: EBH
Analytical Date/Time: 05/29/24 21:28
Container ID: 1242285037-D

Prep Batch: WXX15250
Prep Method: METHOD
Prep Date/Time: 05/29/24 15:30
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Total Organic Carbon Average | 3.94 | | 2.00 | 0.500 | mg/L | 1 | | 05/29/24 18:18 |

### Batch Information

Analytical Batch: WTC3427
Analytical Method: SM 5310B
Analyst: EBH
Analytical Date/Time: 05/29/24 18:18
Container ID: 1242285037-F

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Alkalinity | 111 | | 10.0 | 2.50 | mg/L | 1 | | 05/24/24 16:05 |

### Batch Information

Analytical Batch: WTI6441
Analytical Method: SM21 2320B
Analyst: EBH
Analytical Date/Time: 05/24/24 16:05
Container ID: 1242285037-G

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Total Nitrate/Nitrite-N | 0.273 | | 0.200 | 0.0500 | mg/L | 2 | | 05/24/24 14:11 |

Print Date: 06/26/2024 4:16:50PM

Results of **SMW-31**

Client Sample ID: **SMW-31**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285037
Lab Project ID: 1242285

Collection Date: 05/17/24 13:15
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

**Batch Information**

Analytical Batch: WFI3121
Analytical Method: SM21 4500NO3-F
Analyst: AJP
Analytical Date/Time: 05/24/24 14:11
Container ID: 1242285037-E

Print Date: 06/26/2024 4:16:50PM

## Results of **SMW-35**

Client Sample ID: **SMW-35**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285038
Lab Project ID: 1242285

Collection Date: 05/17/24 14:05
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Benzene | 1.64 | | 0.400 | 0.120 | ug/L | 1 | | 05/29/24 07:18 |
| Ethylbenzene | 1.00 | U | 1.00 | 0.310 | ug/L | 1 | | 05/29/24 07:18 |
| o-Xylene | 1.00 | U | 1.00 | 0.310 | ug/L | 1 | | 05/29/24 07:18 |
| P & M -Xylene | 2.00 | U | 2.00 | 0.620 | ug/L | 1 | | 05/29/24 07:18 |
| Toluene | 1.00 | U | 1.00 | 0.310 | ug/L | 1 | | 05/29/24 07:18 |
| Trichloroethene | 43.4 | | 0.500 | 0.150 | ug/L | 1 | | 05/29/24 07:18 |
| Vinyl chloride | 0.320 | | 0.150 | 0.0500 | ug/L | 1 | | 05/29/24 07:18 |
| Xylenes (total) | 3.00 | U | 3.00 | 1.00 | ug/L | 1 | | 05/29/24 07:18 |
| **Surrogates** | | | | | | | | |
| 1,2-Dichloroethane-D4 (surr) | 109 | | 81-118 | | % | 1 | | 05/29/24 07:18 |
| 4-Bromofluorobenzene (surr) | 99.5 | | 85-114 | | % | 1 | | 05/29/24 07:18 |
| Toluene-d8 (surr) | 100 | | 89-112 | | % | 1 | | 05/29/24 07:18 |

## Batch Information

Analytical Batch: VMS23263
Analytical Method: EPA 624.1
Analyst: JY
Analytical Date/Time: 05/29/24 07:18
Container ID: 1242285038-A

Prep Batch: VXX41207
Prep Method: SW5030B
Prep Date/Time: 05/28/24 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/26/2024 4:16:50PM

## Results of **SMW-35**

Client Sample ID: **SMW-35**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285038
Lab Project ID: 1242285

Collection Date: 05/17/24 14:05
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Metals by ICP/MS**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Calcium | 118000 | | 5000 | 1500 | ug/L | 10 | | 06/06/24 13:46 |
| Iron | 29400 | | 2500 | 780 | ug/L | 10 | | 06/06/24 13:46 |
| Magnesium | 37500 | | 500 | 150 | ug/L | 10 | | 06/06/24 13:46 |
| Manganese | 3260 | | 10.0 | 3.50 | ug/L | 10 | | 06/06/24 13:46 |

### Batch Information

Analytical Batch: MMS12314
Analytical Method: EP200.8
Analyst: HGS
Analytical Date/Time: 06/06/24 13:46
Container ID: 1242285038-H

Prep Batch: MXX36645
Prep Method: E200.2
Prep Date/Time: 05/30/24 12:14
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Hardness as CaCO3 | 449 | | 50.0 | 50.0 | mg/L | 10 | | 06/06/24 13:46 |

### Batch Information

Analytical Batch: MMS12314
Analytical Method: SM21 2340B
Analyst: HGS
Analytical Date/Time: 06/06/24 13:46
Container ID: 1242285038-H

Prep Batch: MXX36645
Prep Method: E200.2
Prep Date/Time: 05/30/24 12:14
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL



SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
**t** 907.562.2343 **f** 907.561.5301 www.us.sgs.com

## Results of **SMW-35**

Client Sample ID: **SMW-35**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285038
Lab Project ID: 1242285

Collection Date: 05/17/24 14:05
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Waters Department**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Sulfate | 354 | | 10.0 | 2.50 | mg/L | 50 | | 05/29/24 21:46 |

### Batch Information

Analytical Batch: WIC6585
Analytical Method: EPA 300.0
Analyst: EBH
Analytical Date/Time: 05/29/24 21:46
Container ID: 1242285038-D

Prep Batch: WXX15250
Prep Method: METHOD
Prep Date/Time: 05/29/24 15:30
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Total Organic Carbon Average | 2.00 | U | 2.00 | 0.500 | mg/L | 1 | | 05/29/24 18:34 |

### Batch Information

Analytical Batch: WTC3427
Analytical Method: SM 5310B
Analyst: EBH
Analytical Date/Time: 05/29/24 18:34
Container ID: 1242285038-F

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Alkalinity | 125 | | 10.0 | 2.50 | mg/L | 1 | | 05/24/24 16:13 |

### Batch Information

Analytical Batch: WTI6441
Analytical Method: SM21 2320B
Analyst: EBH
Analytical Date/Time: 05/24/24 16:13
Container ID: 1242285038-G

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Total Nitrate/Nitrite-N | 0.200 | U | 0.200 | 0.0500 | mg/L | 2 | | 05/24/24 14:13 |

Print Date: 06/26/2024 4:16:50PM

Results of **SMW-35**

Client Sample ID: **SMW-35**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285038
Lab Project ID: 1242285

Collection Date: 05/17/24 14:05
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

**Batch Information**

Analytical Batch: WFI3121
Analytical Method: SM21 4500NO3-F
Analyst: AJP
Analytical Date/Time: 05/24/24 14:13
Container ID: 1242285038-E

Print Date: 06/26/2024 4:16:50PM

## Results of **SMW-36**

Client Sample ID: **SMW-36**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285039
Lab Project ID: 1242285

Collection Date: 05/21/24 09:00
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Benzene | 0.990 | | 0.400 | 0.120 | ug/L | 1 | | 05/29/24 07:02 |
| Ethylbenzene | 1.00 | U | 1.00 | 0.310 | ug/L | 1 | | 05/29/24 07:02 |
| o-Xylene | 1.00 | U | 1.00 | 0.310 | ug/L | 1 | | 05/29/24 07:02 |
| P & M -Xylene | 2.00 | U | 2.00 | 0.620 | ug/L | 1 | | 05/29/24 07:02 |
| Toluene | 1.00 | U | 1.00 | 0.310 | ug/L | 1 | | 05/29/24 07:02 |
| Trichloroethene | 3.77 | | 0.500 | 0.150 | ug/L | 1 | | 05/29/24 07:02 |
| Vinyl chloride | 0.150 | U | 0.150 | 0.0500 | ug/L | 1 | | 05/29/24 07:02 |
| Xylenes (total) | 3.00 | U | 3.00 | 1.00 | ug/L | 1 | | 05/29/24 07:02 |
| **Surrogates** | | | | | | | | |
| 1,2-Dichloroethane-D4 (surr) | 106 | | 81-118 | | % | 1 | | 05/29/24 07:02 |
| 4-Bromofluorobenzene (surr) | 100 | | 85-114 | | % | 1 | | 05/29/24 07:02 |
| Toluene-d8 (surr) | 99.5 | | 89-112 | | % | 1 | | 05/29/24 07:02 |

## Batch Information

Analytical Batch: VMS23263
Analytical Method: EPA 624.1
Analyst: JY
Analytical Date/Time: 05/29/24 07:02
Container ID: 1242285039-A

Prep Batch: VXX41207
Prep Method: SW5030B
Prep Date/Time: 05/28/24 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/26/2024 4:16:50PM

## Results of **SMW-36**

Client Sample ID: **SMW-36**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285039
Lab Project ID: 1242285

Collection Date: 05/21/24 09:00
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Metals by ICP/MS**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Calcium | 37200 | | 5000 | 1500 | ug/L | 10 | | 06/06/24 13:49 |
| Iron | 20400 | | 2500 | 780 | ug/L | 10 | | 06/06/24 13:49 |
| Magnesium | 14300 | | 500 | 150 | ug/L | 10 | | 06/06/24 13:49 |
| Manganese | 1510 | | 10.0 | 3.50 | ug/L | 10 | | 06/06/24 13:49 |

### Batch Information

Analytical Batch: MMS12314
Analytical Method: EP200.8
Analyst: HGS
Analytical Date/Time: 06/06/24 13:49
Container ID: 1242285039-H

Prep Batch: MXX36645
Prep Method: E200.2
Prep Date/Time: 05/30/24 12:14
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Hardness as CaCO3 | 152 | | 50.0 | 50.0 | mg/L | 10 | | 06/06/24 13:49 |

### Batch Information

Analytical Batch: MMS12314
Analytical Method: SM21 2340B
Analyst: HGS
Analytical Date/Time: 06/06/24 13:49
Container ID: 1242285039-H

Prep Batch: MXX36645
Prep Method: E200.2
Prep Date/Time: 05/30/24 12:14
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL



SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
**t** 907.562.2343 **f** 907.561.5301 www.us.sgs.com

## Results of **SMW-36**

Client Sample ID: **SMW-36**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285039
Lab Project ID: 1242285

Collection Date: 05/21/24 09:00
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Waters Department**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Sulfate | 20.2 | | 2.00 | 0.500 | mg/L | 10 | | 05/25/24 00:33 |

### Batch Information

Analytical Batch: WIC6584
Analytical Method: EPA 300.0
Analyst: EBH
Analytical Date/Time: 05/25/24 00:33
Container ID: 1242285039-D

Prep Batch: WXX15248
Prep Method: METHOD
Prep Date/Time: 05/24/24 15:45
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Total Organic Carbon Average | 3.58 | | 2.00 | 0.500 | mg/L | 1 | | 05/29/24 18:50 |

### Batch Information

Analytical Batch: WTC3427
Analytical Method: SM 5310B
Analyst: EBH
Analytical Date/Time: 05/29/24 18:50
Container ID: 1242285039-F

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Alkalinity | 145 | | 10.0 | 2.50 | mg/L | 1 | | 05/24/24 16:22 |

### Batch Information

Analytical Batch: WTI6441
Analytical Method: SM21 2320B
Analyst: EBH
Analytical Date/Time: 05/24/24 16:22
Container ID: 1242285039-G

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Total Nitrate/Nitrite-N | 0.200 | U | 0.200 | 0.0500 | mg/L | 2 | | 05/24/24 14:15 |

Print Date: 06/26/2024 4:16:50PM

Results of **SMW-36**

Client Sample ID: **SMW-36**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285039
Lab Project ID: 1242285

Collection Date: 05/21/24 09:00
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

**Batch Information**

Analytical Batch: WFI3121
Analytical Method: SM21 4500NO3-F
Analyst: AJP
Analytical Date/Time: 05/24/24 14:15
Container ID: 1242285039-E

Print Date: 06/26/2024 4:16:50PM

SGS

## Results of **SMW-37**

Client Sample ID: **SMW-37**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285040
Lab Project ID: 1242285

Collection Date: 05/21/24 09:35
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Benzene | 0.780 | | 0.400 | 0.120 | ug/L | 1 | | 05/30/24 06:37 |
| Ethylbenzene | 1.00 | U | 1.00 | 0.310 | ug/L | 1 | | 05/30/24 06:37 |
| o-Xylene | 1.00 | U | 1.00 | 0.310 | ug/L | 1 | | 05/30/24 06:37 |
| P & M -Xylene | 2.00 | U | 2.00 | 0.620 | ug/L | 1 | | 05/30/24 06:37 |
| Toluene | 1.00 | U | 1.00 | 0.310 | ug/L | 1 | | 05/30/24 06:37 |
| Trichloroethene | 7.47 | | 0.500 | 0.150 | ug/L | 1 | | 05/30/24 06:37 |
| Vinyl chloride | 0.250 | | 0.150 | 0.0500 | ug/L | 1 | | 05/30/24 06:37 |
| Xylenes (total) | 3.00 | U | 3.00 | 1.00 | ug/L | 1 | | 05/30/24 06:37 |
| **Surrogates** | | | | | | | | |
| 1,2-Dichloroethane-D4 (surr) | 107 | | 81-118 | | % | 1 | | 05/30/24 06:37 |
| 4-Bromofluorobenzene (surr) | 100 | | 85-114 | | % | 1 | | 05/30/24 06:37 |
| Toluene-d8 (surr) | 99.8 | | 89-112 | | % | 1 | | 05/30/24 06:37 |

## Batch Information

Analytical Batch: VMS23268
Analytical Method: EPA 624.1
Analyst: JY
Analytical Date/Time: 05/30/24 06:37
Container ID: 1242285040-A

Prep Batch: VXX41218
Prep Method: SW5030B
Prep Date/Time: 05/29/24 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/26/2024 4:16:50PM

## Results of **SMW-37**

Client Sample ID: **SMW-37**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285040
Lab Project ID: 1242285

Collection Date: 05/21/24 09:35
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Metals by ICP/MS**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Calcium | 59900 | | 5000 | 1500 | ug/L | 10 | | 06/06/24 13:51 |
| Iron | 42900 | | 2500 | 780 | ug/L | 10 | | 06/06/24 13:51 |
| Magnesium | 22400 | | 500 | 150 | ug/L | 10 | | 06/06/24 13:51 |
| Manganese | 2240 | | 10.0 | 3.50 | ug/L | 10 | | 06/06/24 13:51 |

### Batch Information

Analytical Batch: MMS12314
Analytical Method: EP200.8
Analyst: HGS
Analytical Date/Time: 06/06/24 13:51
Container ID: 1242285040-H

Prep Batch: MXX36645
Prep Method: E200.2
Prep Date/Time: 05/30/24 12:14
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Hardness as CaCO3 | 242 | | 50.0 | 50.0 | mg/L | 10 | | 06/06/24 13:51 |

### Batch Information

Analytical Batch: MMS12314
Analytical Method: SM21 2340B
Analyst: HGS
Analytical Date/Time: 06/06/24 13:51
Container ID: 1242285040-H

Prep Batch: MXX36645
Prep Method: E200.2
Prep Date/Time: 05/30/24 12:14
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL



SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
**t** 907.562.2343 **f** 907.561.5301 www.us.sgs.com

## Results of **SMW-37**

Client Sample ID: **SMW-37**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285040
Lab Project ID: 1242285

Collection Date: 05/21/24 09:35
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Waters Department**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Sulfate | 182 | | 2.00 | 0.500 | mg/L | 10 | | 05/25/24 00:51 |

### Batch Information

Analytical Batch: WIC6584
Analytical Method: EPA 300.0
Analyst: EBH
Analytical Date/Time: 05/25/24 00:51
Container ID: 1242285040-D

Prep Batch: WXX15248
Prep Method: METHOD
Prep Date/Time: 05/24/24 15:45
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Total Organic Carbon Average | 2.00 | U | 2.00 | 0.500 | mg/L | 1 | | 05/29/24 21:36 |

### Batch Information

Analytical Batch: WTC3427
Analytical Method: SM 5310B
Analyst: EBH
Analytical Date/Time: 05/29/24 21:36
Container ID: 1242285040-F

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Alkalinity | 111 | | 10.0 | 2.50 | mg/L | 1 | | 05/24/24 16:30 |

### Batch Information

Analytical Batch: WTI6441
Analytical Method: SM21 2320B
Analyst: EBH
Analytical Date/Time: 05/24/24 16:30
Container ID: 1242285040-G

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Total Nitrate/Nitrite-N | 0.200 | U | 0.200 | 0.0500 | mg/L | 2 | | 05/24/24 14:17 |

Print Date: 06/26/2024 4:16:50PM

Results of **SMW-37**

Client Sample ID: **SMW-37**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285040
Lab Project ID: 1242285

Collection Date: 05/21/24 09:35
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

**Batch Information**

Analytical Batch: WFI3121
Analytical Method: SM21 4500NO3-F
Analyst: AJP
Analytical Date/Time: 05/24/24 14:17
Container ID: 1242285040-E

Print Date: 06/26/2024 4:16:50PM

## Results of **EB 01**

Client Sample ID: **EB 01**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285041
Lab Project ID: 1242285

Collection Date: 05/14/24 10:30
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Volatile Fuels**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Benzene | 0.600 | U | 0.600 | 0.150 | ug/L | 1 | | 05/24/24 02:12 |
| Ethylbenzene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 02:12 |
| o-Xylene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 02:12 |
| P & M -Xylene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 02:12 |
| Toluene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 02:12 |
| Xylenes (total) | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/24/24 02:12 |
| **Surrogates** | | | | | | | | |
| 1,4-Difluorobenzene (surr) | 93.1 | | 77-115 | | % | 1 | | 05/24/24 02:12 |

## Batch Information

Analytical Batch: VFC16814
Analytical Method: SW8021B
Analyst: T.L
Analytical Date/Time: 05/24/24 02:12
Container ID: 1242285041-A

Prep Batch: VXX41188
Prep Method: SW5030B
Prep Date/Time: 05/23/24 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/26/2024 4:16:50PM

## Results of **EB 02**

Client Sample ID: **EB 02**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285042
Lab Project ID: 1242285

Collection Date: 05/17/24 14:20
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Volatile GC/MS**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Benzene | 0.400 | U | 0.400 | 0.120 | ug/L | 1 | | 05/29/24 08:04 |
| Ethylbenzene | 1.00 | U | 1.00 | 0.310 | ug/L | 1 | | 05/29/24 08:04 |
| o-Xylene | 1.00 | U | 1.00 | 0.310 | ug/L | 1 | | 05/29/24 08:04 |
| P & M -Xylene | 2.00 | U | 2.00 | 0.620 | ug/L | 1 | | 05/29/24 08:04 |
| Toluene | 1.00 | U | 1.00 | 0.310 | ug/L | 1 | | 05/29/24 08:04 |
| Trichloroethene | 0.500 | U | 0.500 | 0.150 | ug/L | 1 | | 05/29/24 08:04 |
| Vinyl chloride | 0.150 | U | 0.150 | 0.0500 | ug/L | 1 | | 05/29/24 08:04 |
| Xylenes (total) | 3.00 | U | 3.00 | 1.00 | ug/L | 1 | | 05/29/24 08:04 |
| **Surrogates** | | | | | | | | |
| 1,2-Dichloroethane-D4 (surr) | 102 | | 81-118 | | % | 1 | | 05/29/24 08:04 |
| 4-Bromofluorobenzene (surr) | 98.5 | | 85-114 | | % | 1 | | 05/29/24 08:04 |
| Toluene-d8 (surr) | 98.9 | | 89-112 | | % | 1 | | 05/29/24 08:04 |

## Batch Information

Analytical Batch: VMS23263
Analytical Method: SW8260D
Analyst: JY
Analytical Date/Time: 05/29/24 08:04
Container ID: 1242285042-A

Prep Batch: VXX41207
Prep Method: SW5030B
Prep Date/Time: 05/28/24 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/26/2024 4:16:50PM

## Results of **Trip Blank**

Client Sample ID: **Trip Blank**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285043
Lab Project ID: 1242285

Collection Date: 05/13/24 08:00
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Volatile Fuels**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Benzene | 0.600 | U | 0.600 | 0.150 | ug/L | 1 | | 05/23/24 22:07 |
| Ethylbenzene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/23/24 22:07 |
| o-Xylene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/23/24 22:07 |
| P & M -Xylene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/23/24 22:07 |
| Toluene | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/23/24 22:07 |
| Xylenes (total) | 5.00 | U | 5.00 | 2.50 | ug/L | 1 | | 05/23/24 22:07 |
| **Surrogates** | | | | | | | | |
| 1,4-Difluorobenzene (surr) | 93.6 | | 77-115 | | % | 1 | | 05/23/24 22:07 |

## Batch Information

Analytical Batch: VFC16814
Analytical Method: SW8021B
Analyst: T.L
Analytical Date/Time: 05/23/24 22:07
Container ID: 1242285043-A

Prep Batch: VXX41187
Prep Method: SW5030B
Prep Date/Time: 05/23/24 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/26/2024 4:16:50PM

## Results of **Trip Blank**

Client Sample ID: **Trip Blank**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285043
Lab Project ID: 1242285

Collection Date: 05/13/24 08:00
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Volatile GC/MS**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Benzene | 0.400 | U | 0.400 | 0.120 | ug/L | 1 | | 05/29/24 08:19 |
| Ethylbenzene | 1.00 | U | 1.00 | 0.310 | ug/L | 1 | | 05/29/24 08:19 |
| o-Xylene | 1.00 | U | 1.00 | 0.310 | ug/L | 1 | | 05/29/24 08:19 |
| P & M -Xylene | 2.00 | U | 2.00 | 0.620 | ug/L | 1 | | 05/29/24 08:19 |
| Toluene | 1.00 | U | 1.00 | 0.310 | ug/L | 1 | | 05/29/24 08:19 |
| Trichloroethene | 0.500 | U | 0.500 | 0.150 | ug/L | 1 | | 05/29/24 08:19 |
| Vinyl chloride | 0.150 | U | 0.150 | 0.0500 | ug/L | 1 | | 05/29/24 08:19 |
| Xylenes (total) | 3.00 | U | 3.00 | 1.00 | ug/L | 1 | | 05/29/24 08:19 |
| **Surrogates** | | | | | | | | |
| 1,2-Dichloroethane-D4 (surr) | 108 | | 81-118 | | % | 1 | | 05/29/24 08:19 |
| 4-Bromofluorobenzene (surr) | 102 | | 85-114 | | % | 1 | | 05/29/24 08:19 |
| Toluene-d8 (surr) | 101 | | 89-112 | | % | 1 | | 05/29/24 08:19 |

## Batch Information

Analytical Batch: VMS23263
Analytical Method: SW8260D
Analyst: JY
Analytical Date/Time: 05/29/24 08:19
Container ID: 1242285043-B

Prep Batch: VXX41207
Prep Method: SW5030B
Prep Date/Time: 05/28/24 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/26/2024 4:16:50PM

## Results of **Dup-4**

Client Sample ID: **Dup-4**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285044
Lab Project ID: 1242285

Collection Date: 05/17/24 08:15
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Dissolved Metals by ICP/MS**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Calcium | 114000 | | 5000 | 1500 | ug/L | 10 | | 06/06/24 13:54 |
| Iron | 28200 | | 2500 | 780 | ug/L | 10 | | 06/06/24 13:54 |
| Magnesium | 36200 | | 500 | 150 | ug/L | 10 | | 06/06/24 13:54 |
| Manganese | 3240 | | 10.0 | 3.50 | ug/L | 10 | | 06/06/24 13:54 |

## Batch Information

Analytical Batch: MMS12314
Analytical Method: EP200.8
Analyst: HGS
Analytical Date/Time: 06/06/24 13:54
Container ID: 1242285044-A

Prep Batch: MXX36645
Prep Method: E200.2
Prep Date/Time: 05/30/24 12:14
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Print Date: 06/26/2024 4:16:50PM

## Results of **IWS-6**

Client Sample ID: **IWS-6**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285045
Lab Project ID: 1242285

Collection Date: 05/17/24 15:45
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Dissolved Metals by ICP/MS**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Calcium | 193000 | | 5000 | 1500 | ug/L | 10 | | 06/06/24 13:56 |
| Iron | 43300 | | 2500 | 780 | ug/L | 10 | | 06/06/24 13:56 |
| Magnesium | 63400 | | 500 | 150 | ug/L | 10 | | 06/06/24 13:56 |
| Manganese | 4790 | | 10.0 | 3.50 | ug/L | 10 | | 06/06/24 13:56 |

## Batch Information

Analytical Batch: MMS12314
Analytical Method: EP200.8
Analyst: HGS
Analytical Date/Time: 06/06/24 13:56
Container ID: 1242285045-A

Prep Batch: MXX36645
Prep Method: E200.2
Prep Date/Time: 05/30/24 12:14
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Print Date: 06/26/2024 4:16:50PM

## Results of **SMW-06**

Client Sample ID: **SMW-06**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285046
Lab Project ID: 1242285

Collection Date: 05/17/24 11:15
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Dissolved Metals by ICP/MS**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Calcium | 176000 | | 5000 | 1500 | ug/L | 10 | | 06/06/24 13:59 |
| Iron | 250 | U | 250 | 78.0 | ug/L | 1 | | 06/12/24 18:01 |
| Magnesium | 62100 | | 500 | 150 | ug/L | 10 | | 06/06/24 13:59 |
| Manganese | 692 | | 10.0 | 3.50 | ug/L | 10 | | 06/06/24 13:59 |

## Batch Information

Analytical Batch: MMS12314
Analytical Method: EP200.8
Analyst: HGS
Analytical Date/Time: 06/06/24 13:59
Container ID: 1242285046-A

Prep Batch: MXX36645
Prep Method: E200.2
Prep Date/Time: 05/30/24 12:14
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Analytical Batch: MMS12319
Analytical Method: EP200.8
Analyst: HGS
Analytical Date/Time: 06/12/24 18:01
Container ID: 1242285046-A

Prep Batch: MXX36645
Prep Method: E200.2
Prep Date/Time: 05/30/24 12:14
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL



SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
**t** 907.562.2343 **f** 907.561.5301 www.us.sgs.com

## Results of **SMW-09**

Client Sample ID: **SMW-09**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285047
Lab Project ID: 1242285

Collection Date: 05/17/24 10:35
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Dissolved Metals by ICP/MS**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Calcium | 77400 | | 5000 | 1500 | ug/L | 10 | | 06/06/24 14:01 |
| Iron | 33600 | | 2500 | 780 | ug/L | 10 | | 06/06/24 14:01 |
| Magnesium | 22000 | | 500 | 150 | ug/L | 10 | | 06/06/24 14:01 |
| Manganese | 2950 | | 10.0 | 3.50 | ug/L | 10 | | 06/06/24 14:01 |

## Batch Information

Analytical Batch: MMS12314
Analytical Method: EP200.8
Analyst: HGS
Analytical Date/Time: 06/06/24 14:01
Container ID: 1242285047-A

Prep Batch: MXX36645
Prep Method: E200.2
Prep Date/Time: 05/30/24 12:14
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Print Date: 06/26/2024 4:16:50PM

## Results of **SMW-21A**

Client Sample ID: **SMW-21A**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285048
Lab Project ID: 1242285

Collection Date: 05/17/24 12:05
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Dissolved Metals by ICP/MS**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Calcium | 48500 | | 5000 | 1500 | ug/L | 10 | | 06/06/24 14:04 |
| Iron | 2070 | | 250 | 78.0 | ug/L | 1 | | 06/12/24 18:03 |
| Magnesium | 23700 | | 500 | 150 | ug/L | 10 | | 06/06/24 14:04 |
| Manganese | 73.4 | | 10.0 | 3.50 | ug/L | 10 | | 06/06/24 14:04 |

## Batch Information

Analytical Batch: MMS12314
Analytical Method: EP200.8
Analyst: HGS
Analytical Date/Time: 06/06/24 14:04
Container ID: 1242285048-A

Prep Batch: MXX36645
Prep Method: E200.2
Prep Date/Time: 05/30/24 12:14
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Analytical Batch: MMS12319
Analytical Method: EP200.8
Analyst: HGS
Analytical Date/Time: 06/12/24 18:03
Container ID: 1242285048-A

Prep Batch: MXX36645
Prep Method: E200.2
Prep Date/Time: 05/30/24 12:14
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL



SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
**t** 907.562.2343 **f** 907.561.5301 www.us.sgs.com

## Results of **SMW-29**

Client Sample ID: **SMW-29**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285049
Lab Project ID: 1242285

Collection Date: 05/17/24 15:00
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Dissolved Metals by ICP/MS**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Calcium | 27000 | | 5000 | 1500 | ug/L | 10 | | 06/06/24 14:12 |
| Iron | 18800 | | 2500 | 780 | ug/L | 10 | | 06/06/24 14:12 |
| Magnesium | 15800 | | 500 | 150 | ug/L | 10 | | 06/06/24 14:12 |
| Manganese | 1560 | | 10.0 | 3.50 | ug/L | 10 | | 06/06/24 14:12 |

## Batch Information

Analytical Batch: MMS12314
Analytical Method: EP200.8
Analyst: HGS
Analytical Date/Time: 06/06/24 14:12
Container ID: 1242285049-A

Prep Batch: MXX36645
Prep Method: E200.2
Prep Date/Time: 05/30/24 12:14
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Print Date: 06/26/2024 4:16:50PM

## Results of **SMW-31**

Client Sample ID: **SMW-31**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285050
Lab Project ID: 1242285

Collection Date: 05/17/24 13:15
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Dissolved Metals by ICP/MS**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Calcium | 91900 | | 5000 | 1500 | ug/L | 10 | | 06/06/24 14:14 |
| Iron | 23000 | | 2500 | 780 | ug/L | 10 | | 06/06/24 14:14 |
| Magnesium | 28500 | | 500 | 150 | ug/L | 10 | | 06/06/24 14:14 |
| Manganese | 2550 | | 10.0 | 3.50 | ug/L | 10 | | 06/06/24 14:14 |

## Batch Information

Analytical Batch: MMS12314
Analytical Method: EP200.8
Analyst: HGS
Analytical Date/Time: 06/06/24 14:14
Container ID: 1242285050-A

Prep Batch: MXX36645
Prep Method: E200.2
Prep Date/Time: 05/30/24 12:14
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Print Date: 06/26/2024 4:16:50PM

## Results of **SMW-35**

Client Sample ID: **SMW-35**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285051
Lab Project ID: 1242285

Collection Date: 05/17/24 14:05
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Dissolved Metals by ICP/MS**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Calcium | 118000 | | 5000 | 1500 | ug/L | 10 | | 06/06/24 14:17 |
| Iron | 28200 | | 2500 | 780 | ug/L | 10 | | 06/06/24 14:17 |
| Magnesium | 36400 | | 500 | 150 | ug/L | 10 | | 06/06/24 14:17 |
| Manganese | 3170 | | 10.0 | 3.50 | ug/L | 10 | | 06/06/24 14:17 |

## Batch Information

Analytical Batch: MMS12314
Analytical Method: EP200.8
Analyst: HGS
Analytical Date/Time: 06/06/24 14:17
Container ID: 1242285051-A

Prep Batch: MXX36645
Prep Method: E200.2
Prep Date/Time: 05/30/24 12:14
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL



SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
**t** 907.562.2343 **f** 907.561.5301 www.us.sgs.com

## Results of **SMW-36**

Client Sample ID: **SMW-36**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285052
Lab Project ID: 1242285

Collection Date: 05/21/24 09:00
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Dissolved Metals by ICP/MS**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Calcium | 37900 | | 5000 | 1500 | ug/L | 10 | | 06/06/24 14:20 |
| Iron | 19600 | | 2500 | 780 | ug/L | 10 | | 06/06/24 14:20 |
| Magnesium | 14200 | | 500 | 150 | ug/L | 10 | | 06/06/24 14:20 |
| Manganese | 1510 | | 10.0 | 3.50 | ug/L | 10 | | 06/06/24 14:20 |

## Batch Information

Analytical Batch: MMS12314
Analytical Method: EP200.8
Analyst: HGS
Analytical Date/Time: 06/06/24 14:20
Container ID: 1242285052-A

Prep Batch: MXX36645
Prep Method: E200.2
Prep Date/Time: 05/30/24 12:14
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Print Date: 06/26/2024 4:16:50PM

## Results of **SMW-37**

Client Sample ID: **SMW-37**
Client Project ID: **Marathon 24-3 TESAL-023-0004**
Lab Sample ID: 1242285053
Lab Project ID: 1242285

Collection Date: 05/21/24 09:35
Received Date: 05/22/24 13:47
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

## Results by **Dissolved Metals by ICP/MS**

| Parameter | Result | Qual | LOQ/CL | DL | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Calcium | 59100 | | 5000 | 1500 | ug/L | 10 | | 06/06/24 14:22 |
| Iron | 41800 | | 2500 | 780 | ug/L | 10 | | 06/06/24 14:22 |
| Magnesium | 21100 | | 500 | 150 | ug/L | 10 | | 06/06/24 14:22 |
| Manganese | 2170 | | 10.0 | 3.50 | ug/L | 10 | | 06/06/24 14:22 |

## Batch Information

Analytical Batch: MMS12314
Analytical Method: EP200.8
Analyst: HGS
Analytical Date/Time: 06/06/24 14:22
Container ID: 1242285053-A

Prep Batch: MXX36645
Prep Method: E200.2
Prep Date/Time: 05/30/24 12:14
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Print Date: 06/26/2024 4:16:50PM

## Method Blank

Blank ID: MB for HBN 1887533 [MXX/36645]
Blank Lab ID: 1765679

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1242285031, 1242285032, 1242285033, 1242285034, 1242285035, 1242285036, 1242285037, 1242285038, 1242285039, 1242285040, 1242285044, 1242285045, 1242285046, 1242285047, 1242285048, 1242285049, 1242285050, 1242285051, 1242285052, 1242285053

## Results by **EP200.8**

| Parameter | Results | LOQ/CL | DL | LOD | Units |
|---|---|---|---|---|---|
| Calcium | 375U | 500 | 150 | 375 | ug/L |
| Iron | 188U | 250 | 78.0 | 188 | ug/L |
| Magnesium | 37.5U | 50.0 | 15.0 | 37.5 | ug/L |
| Manganese | 0.750U | 1.00 | 0.350 | 0.750 | ug/L |

## Batch Information

Analytical Batch: MMS12314
Analytical Method: EP200.8
Instrument: P7 Agilent 7800
Analyst: HGS
Analytical Date/Time: 6/6/2024 1:10:54PM

Prep Batch: MXX36645
Prep Method: E200.2
Prep Date/Time: 5/30/2024 12:14:47PM
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Print Date: 06/26/2024 4:16:56PM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1242285 [MXX36645]
Blank Spike Lab ID: 1765680
Date Analyzed: 06/06/2024 13:13

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1242285031, 1242285032, 1242285033, 1242285034, 1242285035, 1242285036, 1242285037, 1242285038, 1242285039, 1242285040, 1242285044, 1242285045, 1242285046, 1242285047, 1242285048, 1242285049, 1242285050, 1242285051, 1242285052, 1242285053

## Results by **EP200.8**

Blank Spike (ug/L)

| Parameter | Spike | Result | Rec (%) | CL |
|---|---|---|---|---|
| Calcium | 10000 | 9500 | 95 | ( 85-115 ) |
| Iron | 5000 | 4890 | 98 | ( 85-115 ) |
| Magnesium | 10000 | 9830 | 98 | ( 85-115 ) |
| Manganese | 500 | 450 | 90 | ( 85-115 ) |

## Batch Information

Analytical Batch: **MMS12314**
Analytical Method: **EP200.8**
Instrument: **P7 Agilent 7800**
Analyst: **HGS**

Prep Batch: **MXX36645**
Prep Method: **E200.2**
Prep Date/Time: **05/30/2024 12:14**
Spike Init Wt./Vol.: 5000 ug/L Extract Vol: 50 mL
Dupe Init Wt./Vol.: Extract Vol:



SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 f 907.561.5301 www.us.sgs.com

## Matrix Spike Summary

Original Sample ID: 1242285031
MS Sample ID: 1765682 MS
MSD Sample ID:

Analysis Date: 06/06/2024 13:18
Analysis Date: 06/06/2024 13:20
Analysis Date:
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1242285031, 1242285032

## Results by **EP200.8**

| | | Matrix Spike (ug/L) | | | | Spike Duplicate (ug/L) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Parameter | Sample | Spike | Result | Rec (%) | | Spike | Result | Rec (%) | CL | RPD (%) | RPD CL |
| Calcium | 120000 | 10000 | 126000 | 62 | * | | | | 70-130 | | |
| Iron | 28100 | 5000 | 34400 | 125 | | | | | 70-130 | | |
| Magnesium | 38900 | 10000 | 47600 | 87 | | | | | 70-130 | | |
| Manganese | 3270 | 500 | 3750 | 97 | | | | | 70-130 | | |

## Batch Information

Analytical Batch: MMS12314
Analytical Method: EP200.8
Instrument: P7 Agilent 7800
Analyst: HGS
Analytical Date/Time: 6/6/2024 1:20:47PM

Prep Batch: MXX36645
Prep Method: DW Digest for Metals on ICP-MS
Prep Date/Time: 5/30/2024 12:14:47PM
Prep Initial Wt./Vol.: 20.00mL
Prep Extract Vol: 50.00mL



SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
**t** 907.562.2343 **f** 907.561.5301 www.us.sgs.com

## Matrix Spike Summary

Original Sample ID: 1242285032
MS Sample ID: 1765683 MS
MSD Sample ID:

Analysis Date: 06/12/2024 17:51
Analysis Date: 06/12/2024 17:54
Analysis Date:
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1242285032, 1242285033, 1242285034, 1242285035, 1242285036, 1242285037, 1242285038, 1242285039, 1242285040, 1242285044, 1242285045, 1242285046, 1242285047, 1242285048, 1242285049, 1242285050, 1242285051, 1242285052, 1242285053

## Results by **EP200.8**

| | | Matrix Spike (ug/L) | | | | Spike Duplicate (ug/L) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Parameter | Sample | Spike | Result | Rec (%) | | Spike | Result | Rec (%) | CL | RPD (%) | RPD CL |
| Calcium | 219000 | 10000 | 226000 | 71 | | | | | 70-130 | | |
| Iron | 44800 | 5000 | 48600 | 77 | | | | | 70-130 | | |
| Magnesium | 69200 | 10000 | 81300 | 121 | | | | | 70-130 | | |
| Manganese | 4940 | 500 | 5160 | 44 | * | | | | 70-130 | | |

## Batch Information

Analytical Batch: MMS12314
Analytical Method: EP200.8
Instrument: P7 Agilent 7800
Analyst: HGS
Analytical Date/Time: 6/6/2024 1:25:00PM

Prep Batch: MXX36645
Prep Method: DW Digest for Metals on ICP-MS
Prep Date/Time: 5/30/2024 12:14:47PM
Prep Initial Wt./Vol.: 20.00mL
Prep Extract Vol: 50.00mL

Analytical Batch: MMS12319
Analytical Method: EP200.8
Instrument: P7 Agilent 7800
Analyst: HGS
Analytical Date/Time: 6/12/2024 5:54:05PM

Prep Batch: MXX36645
Prep Method: DW Digest for Metals on ICP-MS
Prep Date/Time: 5/30/2024 12:14:47PM
Prep Initial Wt./Vol.: 20.00mL
Prep Extract Vol: 50.00mL

Print Date: 06/26/2024 4:17:03PM

## Method Blank

Blank ID: MB for HBN 1885443 [VXX/41187]
Blank Lab ID: 1764902

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1242285006, 1242285008, 1242285013, 1242285015, 1242285043

## Results by **SW8021B**

| Parameter | Results | LOQ/CL | DL | LOD | Units |
|---|---|---|---|---|---|
| Benzene | 0.450U | 0.600 | 0.150 | 0.450 | ug/L |
| Ethylbenzene | 3.75U | 5.00 | 2.50 | 3.75 | ug/L |
| o-Xylene | 3.75U | 5.00 | 2.50 | 3.75 | ug/L |
| P & M -Xylene | 3.75U | 5.00 | 2.50 | 3.75 | ug/L |
| Toluene | 3.75U | 5.00 | 2.50 | 3.75 | ug/L |
| Xylenes (total) | 3.75U | 5.00 | 2.50 | 3.75 | ug/L |
| **Surrogates** | | | | | |
| 1,4-Difluorobenzene (surr) | 93.7 | 77-115 | | 0 | % |

## Batch Information

Analytical Batch: VFC16814
Analytical Method: SW8021B
Instrument: Agilent 7890 PID/FID
Analyst: T.L
Analytical Date/Time: 5/23/2024 3:40:00PM

Prep Batch: VXX41187
Prep Method: SW5030B
Prep Date/Time: 5/23/2024 6:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL



SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
**t** 907.562.2343 **f** 907.561.5301 www.us.sgs.com

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1242285 [VXX41187]
Blank Spike Lab ID: 1764903
Date Analyzed: 05/23/2024 16:18

Spike Duplicate ID: LCSD for HBN 1242285 [VXX41187]
Spike Duplicate Lab ID: 1764904
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1242285006, 1242285008, 1242285013, 1242285015, 1242285043

## Results by **SW8021B**

| | Blank Spike (ug/L) | | | Spike Duplicate (ug/L) | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Parameter | Spike | Result | Rec (%) | Spike | Result | Rec (%) | CL | RPD (%) | RPD CL |
| Benzene | 100 | 93.4 | 93 | 100 | 92.5 | 93 | ( 80-120 ) | 1.00 | (< 20 ) |
| Ethylbenzene | 100 | 94.5 | 95 | 100 | 92.4 | 92 | ( 75-125 ) | 2.30 | (< 20 ) |
| o-Xylene | 100 | 98.5 | 99 | 100 | 96.0 | 96 | ( 80-120 ) | 2.60 | (< 20 ) |
| P & M -Xylene | 200 | 192 | 96 | 200 | 186 | 93 | ( 75-130 ) | 3.00 | (< 20 ) |
| Toluene | 100 | 92.1 | 92 | 100 | 91.1 | 91 | ( 75-120 ) | 1.10 | (< 20 ) |
| Xylenes (total) | 300 | 291 | 97 | 300 | 282 | 94 | ( 79-121 ) | 2.80 | (< 20 ) |
| **Surrogates** | | | | | | | | | |
| 1,4-Difluorobenzene (surr) | 50 | | 106 | 50 | | 105 | ( 77-115 ) | 1.00 | |

## Batch Information

Analytical Batch: **VFC16814**
Analytical Method: **SW8021B**
Instrument: **Agilent 7890 PID/FID**
Analyst: **T.L**

Prep Batch: **VXX41187**
Prep Method: **SW5030B**
Prep Date/Time: **05/23/2024 06:00**
Spike Init Wt./Vol.: 100 ug/L Extract Vol: 5 mL
Dupe Init Wt./Vol.: 100 ug/L Extract Vol: 5 mL



SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 f 907.561.5301 www.us.sgs.com

## Method Blank

Blank ID: MB for HBN 1885444 [VXX/41188]
Blank Lab ID: 1764905

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1242285007, 1242285010, 1242285011, 1242285012, 1242285014, 1242285016, 1242285017, 1242285018, 1242285022, 1242285028, 1242285041

## Results by **SW8021B**

| Parameter | Results | LOQ/CL | DL | LOD | Units |
|---|---|---|---|---|---|
| Benzene | 0.450U | 0.600 | 0.150 | 0.450 | ug/L |
| Ethylbenzene | 3.75U | 5.00 | 2.50 | 3.75 | ug/L |
| o-Xylene | 3.75U | 5.00 | 2.50 | 3.75 | ug/L |
| P & M -Xylene | 3.75U | 5.00 | 2.50 | 3.75 | ug/L |
| Toluene | 3.75U | 5.00 | 2.50 | 3.75 | ug/L |
| Xylenes (total) | 3.75U | 5.00 | 2.50 | 3.75 | ug/L |
| **Surrogates** | | | | | |
| 1,4-Difluorobenzene (surr) | 94.1 | 77-115 | | 0 | % |

## Batch Information

Analytical Batch: VFC16814
Analytical Method: SW8021B
Instrument: Agilent 7890 PID/FID
Analyst: T.L
Analytical Date/Time: 5/24/2024 12:19:00AM

Prep Batch: VXX41188
Prep Method: SW5030B
Prep Date/Time: 5/23/2024 6:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL



SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 f 907.561.5301 www.us.sgs.com

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1242285 [VXX41188]
Blank Spike Lab ID: 1764906
Date Analyzed: 05/24/2024 00:00

Spike Duplicate ID: LCSD for HBN 1242285 [VXX41188]
Spike Duplicate Lab ID: 1764907
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1242285007, 1242285010, 1242285011, 1242285012, 1242285014, 1242285016, 1242285017, 1242285018, 1242285022, 1242285028, 1242285041

## Results by **SW8021B**

| | Blank Spike (ug/L) | | | Spike Duplicate (ug/L) | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Parameter | Spike | Result | Rec (%) | Spike | Result | Rec (%) | CL | RPD (%) | RPD CL |
| Benzene | 100 | 92.5 | 93 | 100 | 93.2 | 93 | ( 80-120 ) | 0.82 | (< 20 ) |
| Ethylbenzene | 100 | 92.4 | 92 | 100 | 92.6 | 93 | ( 75-125 ) | 0.27 | (< 20 ) |
| o-Xylene | 100 | 96.0 | 96 | 100 | 95.8 | 96 | ( 80-120 ) | 0.20 | (< 20 ) |
| P & M -Xylene | 200 | 186 | 93 | 200 | 187 | 94 | ( 75-130 ) | 0.40 | (< 20 ) |
| Toluene | 100 | 91.1 | 91 | 100 | 91.7 | 92 | ( 75-120 ) | 0.67 | (< 20 ) |
| Xylenes (total) | 300 | 282 | 94 | 300 | 283 | 94 | ( 79-121 ) | 0.20 | (< 20 ) |
| **Surrogates** | | | | | | | | | |
| 1,4-Difluorobenzene (surr) | 50 | | 105 | 50 | | 105 | ( 77-115 ) | 0.34 | |

## Batch Information

Analytical Batch: **VFC16814**
Analytical Method: **SW8021B**
Instrument: **Agilent 7890 PID/FID**
Analyst: **T.L**

Prep Batch: **VXX41188**
Prep Method: **SW5030B**
Prep Date/Time: **05/23/2024 06:00**
Spike Init Wt./Vol.: 100 ug/L Extract Vol: 5 mL
Dupe Init Wt./Vol.: 100 ug/L Extract Vol: 5 mL



SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 f 907.561.5301 www.us.sgs.com

## Method Blank

Blank ID: MB for HBN 1886941 [VXX/41204]
Blank Lab ID: 1765426

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1242285005, 1242285018, 1242285019, 1242285020, 1242285021, 1242285022, 1242285023, 1242285024

## Results by **SW8021B**

| Parameter | Results | LOQ/CL | DL | LOD | Units |
|---|---|---|---|---|---|
| Benzene | 0.450U | 0.600 | 0.150 | 0.450 | ug/L |
| Ethylbenzene | 3.75U | 5.00 | 2.50 | 3.75 | ug/L |
| o-Xylene | 3.75U | 5.00 | 2.50 | 3.75 | ug/L |
| P & M -Xylene | 3.75U | 5.00 | 2.50 | 3.75 | ug/L |
| Toluene | 3.75U | 5.00 | 2.50 | 3.75 | ug/L |
| Xylenes (total) | 3.75U | 5.00 | 2.50 | 3.75 | ug/L |
| **Surrogates** | | | | | |
| 1,4-Difluorobenzene (surr) | 93.9 | 77-115 | | 0 | % |

## Batch Information

Analytical Batch: VFC16815
Analytical Method: SW8021B
Instrument: Agilent 7890 PID/FID
Analyst: T.L
Analytical Date/Time: 5/24/2024 2:09:00PM

Prep Batch: VXX41204
Prep Method: SW5030B
Prep Date/Time: 5/24/2024 6:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL



SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
**t** 907.562.2343 **f** 907.561.5301 www.us.sgs.com

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1242285 [VXX41204]
Blank Spike Lab ID: 1765427
Date Analyzed: 05/24/2024 14:46

Spike Duplicate ID: LCSD for HBN 1242285 [VXX41204]
Spike Duplicate Lab ID: 1765428
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1242285005, 1242285018, 1242285019, 1242285020, 1242285021, 1242285022, 1242285023, 1242285024

## Results by **SW8021B**

| | Blank Spike (ug/L) | | | Spike Duplicate (ug/L) | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Parameter | Spike | Result | Rec (%) | Spike | Result | Rec (%) | CL | RPD (%) | RPD CL |
| Benzene | 100 | 90.4 | 90 | 100 | 92.6 | 93 | ( 80-120 ) | 2.40 | (< 20 ) |
| Ethylbenzene | 100 | 88.6 | 89 | 100 | 92.3 | 92 | ( 75-125 ) | 4.10 | (< 20 ) |
| o-Xylene | 100 | 91.5 | 92 | 100 | 97.3 | 97 | ( 80-120 ) | 6.10 | (< 20 ) |
| P & M -Xylene | 200 | 178 | 89 | 200 | 188 | 94 | ( 75-130 ) | 5.40 | (< 20 ) |
| Toluene | 100 | 88.8 | 89 | 100 | 90.7 | 91 | ( 75-120 ) | 2.10 | (< 20 ) |
| Xylenes (total) | 300 | 269 | 90 | 300 | 285 | 95 | ( 79-121 ) | 5.70 | (< 20 ) |
| **Surrogates** | | | | | | | | | |
| 1,4-Difluorobenzene (surr) | 50 | | 105 | 50 | | 106 | ( 77-115 ) | 0.38 | |

## Batch Information

Analytical Batch: **VFC16815**
Analytical Method: **SW8021B**
Instrument: **Agilent 7890 PID/FID**
Analyst: **T.L**

Prep Batch: **VXX41204**
Prep Method: **SW5030B**
Prep Date/Time: **05/24/2024 06:00**
Spike Init Wt./Vol.: 100 ug/L Extract Vol: 5 mL
Dupe Init Wt./Vol.: 100 ug/L Extract Vol: 5 mL



SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 f 907.561.5301 www.us.sgs.com

## Method Blank

Blank ID: MB for HBN 1887033 [VXX/41205]
Blank Lab ID: 1765429

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1242285001, 1242285002, 1242285003, 1242285004, 1242285009, 1242285025, 1242285026, 1242285027

## Results by **SW8021B**

| Parameter | Results | LOQ/CL | DL | LOD | Units |
|---|---|---|---|---|---|
| Benzene | 0.450U | 0.600 | 0.150 | 0.450 | ug/L |
| Ethylbenzene | 3.75U | 5.00 | 2.50 | 3.75 | ug/L |
| o-Xylene | 3.75U | 5.00 | 2.50 | 3.75 | ug/L |
| P & M -Xylene | 3.75U | 5.00 | 2.50 | 3.75 | ug/L |
| Toluene | 3.75U | 5.00 | 2.50 | 3.75 | ug/L |
| Xylenes (total) | 3.75U | 5.00 | 2.50 | 3.75 | ug/L |
| **Surrogates** | | | | | |
| 1,4-Difluorobenzene (surr) | 93.7 | 77-115 | | 0 | % |

## Batch Information

Analytical Batch: VFC16816
Analytical Method: SW8021B
Instrument: Agilent 7890 PID/FID
Analyst: T.L
Analytical Date/Time: 5/28/2024 6:15:00PM

Prep Batch: VXX41205
Prep Method: SW5030B
Prep Date/Time: 5/28/2024 6:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL



SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
**t** 907.562.2343 **f** 907.561.5301 www.us.sgs.com

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1242285 [VXX41205]
Blank Spike Lab ID: 1765430
Date Analyzed: 05/28/2024 18:53

Spike Duplicate ID: LCSD for HBN 1242285 [VXX41205]
Spike Duplicate Lab ID: 1765431
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1242285001, 1242285002, 1242285003, 1242285004, 1242285009, 1242285025, 1242285026, 1242285027

## Results by **SW8021B**

| | Blank Spike (ug/L) | | | Spike Duplicate (ug/L) | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Parameter | Spike | Result | Rec (%) | Spike | Result | Rec (%) | CL | RPD (%) | RPD CL |
| Benzene | 100 | 90.6 | 91 | 100 | 94.4 | 94 | ( 80-120 ) | 4.20 | (< 20 ) |
| Ethylbenzene | 100 | 90.8 | 91 | 100 | 94.9 | 95 | ( 75-125 ) | 4.30 | (< 20 ) |
| o-Xylene | 100 | 95.0 | 95 | 100 | 99.2 | 99 | ( 80-120 ) | 4.40 | (< 20 ) |
| P & M -Xylene | 200 | 184 | 92 | 200 | 192 | 96 | ( 75-130 ) | 4.50 | (< 20 ) |
| Toluene | 100 | 89.4 | 89 | 100 | 92.9 | 93 | ( 75-120 ) | 3.90 | (< 20 ) |
| Xylenes (total) | 300 | 279 | 93 | 300 | 292 | 97 | ( 79-121 ) | 4.50 | (< 20 ) |
| **Surrogates** | | | | | | | | | |
| 1,4-Difluorobenzene (surr) | 50 | | 105 | 50 | | 104 | ( 77-115 ) | 1.20 | |

## Batch Information

Analytical Batch: **VFC16816**
Analytical Method: **SW8021B**
Instrument: **Agilent 7890 PID/FID**
Analyst: **T.L**

Prep Batch: **VXX41205**
Prep Method: **SW5030B**
Prep Date/Time: **05/28/2024 06:00**
Spike Init Wt./Vol.: 100 ug/L Extract Vol: 5 mL
Dupe Init Wt./Vol.: 100 ug/L Extract Vol: 5 mL



SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 f 907.561.5301 www.us.sgs.com

## Method Blank

Blank ID: MB for HBN 1887048 [VXX/41207]
Blank Lab ID: 1765488

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1242285029, 1242285030, 1242285031, 1242285032, 1242285033, 1242285034, 1242285035, 1242285036, 1242285037, 1242285038, 1242285039, 1242285042, 1242285043

## Results by **EPA 624.1**

| Parameter | Results | LOQ/CL | DL | LOD | Units |
|---|---|---|---|---|---|
| Benzene | 0.300U | 0.400 | 0.120 | 0.300 | ug/L |
| Ethylbenzene | 0.750U | 1.00 | 0.310 | 0.750 | ug/L |
| o-Xylene | 0.750U | 1.00 | 0.310 | 0.750 | ug/L |
| P & M -Xylene | 1.50U | 2.00 | 0.620 | 1.50 | ug/L |
| Toluene | 0.750U | 1.00 | 0.310 | 0.750 | ug/L |
| Trichloroethene | 0.375U | 0.500 | 0.150 | 0.375 | ug/L |
| Vinyl chloride | 0.112U | 0.150 | 0.0500 | 0.112 | ug/L |
| Xylenes (total) | 2.25U | 3.00 | 1.00 | 2.25 | ug/L |
| **Surrogates** | | | | | |
| 1,2-Dichloroethane-D4 (surr) | 112 | 81-118 | | 0 | % |
| 4-Bromofluorobenzene (surr) | 101 | 85-114 | | 0 | % |
| Toluene-d8 (surr) | 99.7 | 89-112 | | 0 | % |

## Batch Information

Analytical Batch: VMS23263
Analytical Method: EPA 624.1
Instrument: Agilent 7890-75MS
Analyst: JY
Analytical Date/Time: 5/29/2024 3:56:00AM

Prep Batch: VXX41207
Prep Method: SW5030B
Prep Date/Time: 5/28/2024 6:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL



SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 f 907.561.5301 www.us.sgs.com

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1242285 [VXX41207]
Blank Spike Lab ID: 1765489
Date Analyzed: 05/29/2024 04:12

Spike Duplicate ID: LCSD for HBN 1242285 [VXX41207]
Spike Duplicate Lab ID: 1765490
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1242285029, 1242285030, 1242285031, 1242285032, 1242285033, 1242285034, 1242285035, 1242285036, 1242285037, 1242285038, 1242285039, 1242285042, 1242285043

## Results by **EPA 624.1**

| | Blank Spike (ug/L) | | | Spike Duplicate (ug/L) | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Parameter | Spike | Result | Rec (%) | Spike | Result | Rec (%) | CL | RPD (%) | RPD CL |
| Benzene | 30 | 31.5 | 105 | 30 | 29.3 | 98 | ( 79-120 ) | 7.00 | (< 20 ) |
| Ethylbenzene | 30 | 31.7 | 106 | 30 | 30.7 | 102 | ( 79-121 ) | 3.10 | (< 20 ) |
| o-Xylene | 30 | 32.0 | 107 | 30 | 30.8 | 103 | ( 78-122 ) | 3.60 | (< 20 ) |
| P & M -Xylene | 60 | 65.0 | 108 | 60 | 62.3 | 104 | ( 80-121 ) | 4.10 | (< 20 ) |
| Toluene | 30 | 29.6 | 99 | 30 | 29.0 | 97 | ( 80-121 ) | 2.20 | (< 20 ) |
| Trichloroethene | 30 | 30.8 | 103 | 30 | 29.2 | 97 | ( 79-123 ) | 5.40 | (< 20 ) |
| Vinyl chloride | 30 | 31.0 | 103 | 30 | 28.8 | 96 | ( 58-137 ) | 7.60 | (< 20 ) |
| Xylenes (total) | 90 | 96.9 | 108 | 90 | 93.2 | 104 | ( 79-121 ) | 3.90 | (< 20 ) |
| **Surrogates** | | | | | | | | | |
| 1,2-Dichloroethane-D4 (surr) | 30 | | 101 | 30 | | 100 | ( 81-118 ) | 0.93 | |
| 4-Bromofluorobenzene (surr) | 30 | | 97 | 30 | | 100 | ( 85-114 ) | 2.80 | |
| Toluene-d8 (surr) | 30 | | 97 | 30 | | 99 | ( 89-112 ) | 1.30 | |

## Batch Information

Analytical Batch: **VMS23263**
Analytical Method: **EPA 624.1**
Instrument: **Agilent 7890-75MS**
Analyst: **JY**

Prep Batch: **VXX41207**
Prep Method: **SW5030B**
Prep Date/Time: **05/28/2024 06:00**
Spike Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL
Dupe Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL



SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 f 907.561.5301 www.us.sgs.com

## Method Blank

Blank ID: MB for HBN 1887048 [VXX/41207]
Blank Lab ID: 1765488

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1242285029, 1242285030, 1242285031, 1242285032, 1242285033, 1242285034, 1242285035, 1242285036, 1242285037, 1242285038, 1242285039, 1242285042, 1242285043

## Results by **SW8260D**

| Parameter | Results | LOQ/CL | DL | LOD | Units |
|---|---|---|---|---|---|
| Benzene | 0.300U | 0.400 | 0.120 | 0.300 | ug/L |
| Ethylbenzene | 0.750U | 1.00 | 0.310 | 0.750 | ug/L |
| o-Xylene | 0.750U | 1.00 | 0.310 | 0.750 | ug/L |
| P & M -Xylene | 1.50U | 2.00 | 0.620 | 1.50 | ug/L |
| Toluene | 0.750U | 1.00 | 0.310 | 0.750 | ug/L |
| Trichloroethene | 0.375U | 0.500 | 0.150 | 0.375 | ug/L |
| Vinyl chloride | 0.112U | 0.150 | 0.0500 | 0.112 | ug/L |
| Xylenes (total) | 2.25U | 3.00 | 1.00 | 2.25 | ug/L |
| **Surrogates** | | | | | |
| 1,2-Dichloroethane-D4 (surr) | 112 | 81-118 | | 0 | % |
| 4-Bromofluorobenzene (surr) | 101 | 85-114 | | 0 | % |
| Toluene-d8 (surr) | 99.7 | 89-112 | | 0 | % |

## Batch Information

Analytical Batch: VMS23263
Analytical Method: SW8260D
Instrument: Agilent 7890-75MS
Analyst: JY
Analytical Date/Time: 5/29/2024 3:56:00AM

Prep Batch: VXX41207
Prep Method: SW5030B
Prep Date/Time: 5/28/2024 6:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL



SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 f 907.561.5301 www.us.sgs.com

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1242285 [VXX41207]
Blank Spike Lab ID: 1765489
Date Analyzed: 05/29/2024 04:12

Spike Duplicate ID: LCSD for HBN 1242285 [VXX41207]
Spike Duplicate Lab ID: 1765490
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1242285029, 1242285030, 1242285031, 1242285032, 1242285033, 1242285034, 1242285035, 1242285036, 1242285037, 1242285038, 1242285039, 1242285042, 1242285043

## Results by **SW8260D**

| | Blank Spike (ug/L) | | | Spike Duplicate (ug/L) | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Parameter | Spike | Result | Rec (%) | Spike | Result | Rec (%) | CL | RPD (%) | RPD CL |
| Benzene | 30 | 31.5 | 105 | 30 | 29.3 | 98 | ( 79-120 ) | 7.00 | (< 20 ) |
| Ethylbenzene | 30 | 31.7 | 106 | 30 | 30.7 | 102 | ( 79-121 ) | 3.10 | (< 20 ) |
| o-Xylene | 30 | 32.0 | 107 | 30 | 30.8 | 103 | ( 78-122 ) | 3.60 | (< 20 ) |
| P & M -Xylene | 60 | 65.0 | 108 | 60 | 62.3 | 104 | ( 80-121 ) | 4.10 | (< 20 ) |
| Toluene | 30 | 29.6 | 99 | 30 | 29.0 | 97 | ( 80-121 ) | 2.20 | (< 20 ) |
| Trichloroethene | 30 | 30.8 | 103 | 30 | 29.2 | 97 | ( 79-123 ) | 5.40 | (< 20 ) |
| Vinyl chloride | 30 | 31.0 | 103 | 30 | 28.8 | 96 | ( 58-137 ) | 7.60 | (< 20 ) |
| Xylenes (total) | 90 | 96.9 | 108 | 90 | 93.2 | 104 | ( 79-121 ) | 3.90 | (< 20 ) |
| **Surrogates** | | | | | | | | | |
| 1,2-Dichloroethane-D4 (surr) | 30 | | 101 | 30 | | 100 | ( 81-118 ) | 0.93 | |
| 4-Bromofluorobenzene (surr) | 30 | | 97 | 30 | | 100 | ( 85-114 ) | 2.80 | |
| Toluene-d8 (surr) | 30 | | 97 | 30 | | 99 | ( 89-112 ) | 1.30 | |

## Batch Information

Analytical Batch: **VMS23263**
Analytical Method: **SW8260D**
Instrument: **Agilent 7890-75MS**
Analyst: **JY**

Prep Batch: **VXX41207**
Prep Method: **SW5030B**
Prep Date/Time: **05/28/2024 06:00**
Spike Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL
Dupe Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL



SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 f 907.561.5301 www.us.sgs.com

## Method Blank

Blank ID: MB for HBN 1887634 [VXX/41218]
Blank Lab ID: 1765764

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1242285040

## Results by **EPA 624.1**

| Parameter | Results | LOQ/CL | DL | LOD | Units |
|---|---|---|---|---|---|
| Benzene | 0.300U | 0.400 | 0.120 | 0.300 | ug/L |
| Ethylbenzene | 0.750U | 1.00 | 0.310 | 0.750 | ug/L |
| o-Xylene | 0.750U | 1.00 | 0.310 | 0.750 | ug/L |
| P & M -Xylene | 1.50U | 2.00 | 0.620 | 1.50 | ug/L |
| Toluene | 0.750U | 1.00 | 0.310 | 0.750 | ug/L |
| Trichloroethene | 0.375U | 0.500 | 0.150 | 0.375 | ug/L |
| Vinyl chloride | 0.112U | 0.150 | 0.0500 | 0.112 | ug/L |
| Xylenes (total) | 2.25U | 3.00 | 1.00 | 2.25 | ug/L |
| **Surrogates** | | | | | |
| 1,2-Dichloroethane-D4 (surr) | 105 | 81-118 | | 0 | % |
| 4-Bromofluorobenzene (surr) | 99.6 | 85-114 | | 0 | % |
| Toluene-d8 (surr) | 99.9 | 89-112 | | 0 | % |

## Batch Information

Analytical Batch: VMS23268
Analytical Method: EPA 624.1
Instrument: Agilent 7890-75MS
Analyst: JY
Analytical Date/Time: 5/30/2024 1:46:00AM

Prep Batch: VXX41218
Prep Method: SW5030B
Prep Date/Time: 5/29/2024 6:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL



SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 f 907.561.5301 www.us.sgs.com

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1242285 [VXX41218]
Blank Spike Lab ID: 1765765
Date Analyzed: 05/30/2024 02:01

Spike Duplicate ID: LCSD for HBN 1242285 [VXX41218]
Spike Duplicate Lab ID: 1765766
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1242285040

## Results by **EPA 624.1**

| | Blank Spike (ug/L) | | | Spike Duplicate (ug/L) | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Parameter | Spike | Result | Rec (%) | Spike | Result | Rec (%) | CL | RPD (%) | RPD CL |
| Benzene | 30 | 31.2 | 104 | 30 | 30.8 | 103 | ( 79-120 ) | 1.40 | (< 20 ) |
| Ethylbenzene | 30 | 30.1 | 100 | 30 | 31.3 | 104 | ( 79-121 ) | 4.00 | (< 20 ) |
| o-Xylene | 30 | 31.1 | 104 | 30 | 31.4 | 105 | ( 78-122 ) | 0.96 | (< 20 ) |
| P & M -Xylene | 60 | 62.1 | 104 | 60 | 62.9 | 105 | ( 80-121 ) | 1.30 | (< 20 ) |
| Toluene | 30 | 29.3 | 98 | 30 | 29.1 | 97 | ( 80-121 ) | 0.48 | (< 20 ) |
| Trichloroethene | 30 | 30.5 | 102 | 30 | 30.7 | 102 | ( 79-123 ) | 0.56 | (< 20 ) |
| Vinyl chloride | 30 | 31.0 | 103 | 30 | 29.1 | 97 | ( 58-137 ) | 6.40 | (< 20 ) |
| Xylenes (total) | 90 | 93.2 | 104 | 90 | 94.3 | 105 | ( 79-121 ) | 1.20 | (< 20 ) |
| **Surrogates** | | | | | | | | | |
| 1,2-Dichloroethane-D4 (surr) | 30 | | 96 | 30 | | 100 | ( 81-118 ) | 4.10 | |
| 4-Bromofluorobenzene (surr) | 30 | | 99 | 30 | | 98 | ( 85-114 ) | 1.50 | |
| Toluene-d8 (surr) | 30 | | 97 | 30 | | 98 | ( 89-112 ) | 0.89 | |

## Batch Information

Analytical Batch: **VMS23268**
Analytical Method: **EPA 624.1**
Instrument: **Agilent 7890-75MS**
Analyst: **JY**

Prep Batch: **VXX41218**
Prep Method: **SW5030B**
Prep Date/Time: **05/29/2024 06:00**
Spike Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL
Dupe Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL



SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 f 907.561.5301 www.us.sgs.com

## Method Blank

Blank ID: MB for HBN 1885474 (WFI/3121)
Blank Lab ID: 1765063

Matrix: Water (Surface, Eff., Ground)

QC for Samples:

## Results by **SM21 4500NO3-F**

| Parameter | Results | LOQ/CL | DL | LOD | Units |
|---|---|---|---|---|---|
| Nitrate-N | 0.150U | 0.200 | 0.0500 | 0.150 | mg/L |
| Nitrite-N | 0.150U | 0.200 | 0.0500 | 0.150 | mg/L |
| Total Nitrate/Nitrite-N | 0.150U | 0.200 | 0.0500 | 0.150 | mg/L |

## Batch Information

Analytical Batch: WFI3121
Analytical Method: SM21 4500NO3-F
Instrument: Astoria segmented flow
Analyst: AJP
Analytical Date/Time: 5/24/2024 3:07:59PM

Print Date: 06/26/2024 4:18:00PM

## Method Blank

Blank ID: MB for HBN 1885474 (WFI/3121)
Blank Lab ID: 1765065

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1242285035, 1242285036, 1242285037, 1242285038, 1242285039, 1242285040

## Results by **SM21 4500NO3-F**

| Parameter | Results | LOQ/CL | DL | LOD | Units |
|---|---|---|---|---|---|
| Nitrate-N | 0.150U | 0.200 | 0.0500 | 0.150 | mg/L |
| Nitrite-N | 0.150U | 0.200 | 0.0500 | 0.150 | mg/L |
| Total Nitrate/Nitrite-N | 0.150U | 0.200 | 0.0500 | 0.150 | mg/L |

## Batch Information

Analytical Batch: WFI3121
Analytical Method: SM21 4500NO3-F
Instrument: Astoria segmented flow
Analyst: AJP
Analytical Date/Time: 5/24/2024 2:46:59PM

Print Date: 06/26/2024 4:18:00PM

## Method Blank

Blank ID: MB for HBN 1885474 (WFI/3121)
Blank Lab ID: 1765067

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1242285031, 1242285032, 1242285033, 1242285034, 1242285035, 1242285036, 1242285037, 1242285038, 1242285039, 1242285040

## Results by **SM21 4500NO3-F**

| Parameter | Results | LOQ/CL | DL | LOD | Units |
|---|---|---|---|---|---|
| Nitrate-N | 0.150U | 0.200 | 0.0500 | 0.150 | mg/L |
| Nitrite-N | 0.150U | 0.200 | 0.0500 | 0.150 | mg/L |
| Total Nitrate/Nitrite-N | 0.150U | 0.200 | 0.0500 | 0.150 | mg/L |

## Batch Information

Analytical Batch: WFI3121
Analytical Method: SM21 4500NO3-F
Instrument: Astoria segmented flow
Analyst: AJP
Analytical Date/Time: 5/24/2024 2:01:28PM



SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
**t** 907.562.2343 **f** 907.561.5301 www.us.sgs.com

## Method Blank

Blank ID: MB for HBN 1885474 (WFI/3121)
Blank Lab ID: 1765073

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1242285031, 1242285032, 1242285033, 1242285034

## Results by **SM21 4500NO3-F**

| Parameter | Results | LOQ/CL | DL | LOD | Units |
|---|---|---|---|---|---|
| Nitrate-N | 0.150U | 0.200 | 0.0500 | 0.150 | mg/L |
| Nitrite-N | 0.150U | 0.200 | 0.0500 | 0.150 | mg/L |
| Total Nitrate/Nitrite-N | 0.150U | 0.200 | 0.0500 | 0.150 | mg/L |

## Batch Information

Analytical Batch: WFI3121
Analytical Method: SM21 4500NO3-F
Instrument: Astoria segmented flow
Analyst: AJP
Analytical Date/Time: 5/24/2024 1:14:14PM



SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
**t** 907.562.2343 **f** 907.561.5301 www.us.sgs.com

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1242285 [WFI3121]
Blank Spike Lab ID: 1765064
Date Analyzed: 05/24/2024 15:06

Matrix: Water (Surface, Eff., Ground)

QC for Samples:

## Results by **SM21 4500NO3-F**

Blank Spike (mg/L)

| Parameter | Spike | Result | Rec (%) | CL |
|---|---|---|---|---|
| Nitrate-N | 2.5 | 2.68 | 107 | ( 70-130 ) |
| Nitrite-N | 2.5 | 2.65 | 106 | ( 90-110 ) |
| Total Nitrate/Nitrite-N | 5 | 5.32 | 106 | ( 90-110 ) |

## Batch Information

Analytical Batch: **WFI3121**
Analytical Method: **SM21 4500NO3-F**
Instrument: **Astoria segmented flow**
Analyst: **AJP**

Print Date: 06/26/2024 4:18:03PM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1242285 [WFI3121]
Blank Spike Lab ID: 1765066
Date Analyzed: 05/24/2024 14:45

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1242285035, 1242285036, 1242285037, 1242285038, 1242285039, 1242285040

## Results by **SM21 4500NO3-F**

Blank Spike (mg/L)

| Parameter | Spike | Result | Rec (%) | CL |
|---|---|---|---|---|
| Nitrate-N | 2.5 | 2.64 | 106 | ( 70-130 ) |
| Nitrite-N | 2.5 | 2.54 | 102 | ( 90-110 ) |
| Total Nitrate/Nitrite-N | 5 | 5.18 | 104 | ( 90-110 ) |

## Batch Information

Analytical Batch: **WFI3121**
Analytical Method: **SM21 4500NO3-F**
Instrument: **Astoria segmented flow**
Analyst: **AJP**

Print Date: 06/26/2024 4:18:03PM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1242285 [WFI3121]
Blank Spike Lab ID: 1765068
Date Analyzed: 05/24/2024 13:59

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1242285031, 1242285032, 1242285033, 1242285034, 1242285035, 1242285036, 1242285037, 1242285038, 1242285039, 1242285040

## Results by **SM21 4500NO3-F**

Blank Spike (mg/L)

| Parameter | Spike | Result | Rec (%) | CL |
|---|---|---|---|---|
| Nitrate-N | 2.5 | 2.66 | 106 | ( 70-130 ) |
| Nitrite-N | 2.5 | 2.66 | 106 | ( 90-110 ) |
| Total Nitrate/Nitrite-N | 5 | 5.32 | 106 | ( 90-110 ) |

## Batch Information

Analytical Batch: **WFI3121**
Analytical Method: **SM21 4500NO3-F**
Instrument: **Astoria segmented flow**
Analyst: **AJP**



SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
**t** 907.562.2343 **f** 907.561.5301 www.us.sgs.com

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1242285 [WFI3121]
Blank Spike Lab ID: 1765075
Date Analyzed: 05/24/2024 13:12

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1242285031, 1242285032, 1242285033, 1242285034

## Results by **SM21 4500NO3-F**

Blank Spike (mg/L)

| Parameter | Spike | Result | Rec (%) | CL |
|---|---|---|---|---|
| Nitrate-N | 2.5 | 2.59 | 103 | ( 70-130 ) |
| Nitrite-N | 2.5 | 2.59 | 104 | ( 90-110 ) |
| Total Nitrate/Nitrite-N | 5 | 5.17 | 103 | ( 90-110 ) |

## Batch Information

Analytical Batch: **WFI3121**
Analytical Method: **SM21 4500NO3-F**
Instrument: **Astoria segmented flow**
Analyst: **AJP**

Print Date: 06/26/2024 4:18:03PM

## Matrix Spike Summary

Original Sample ID: 1242235001
MS Sample ID: 1765045 MS
MSD Sample ID: 1765046 MSD

Analysis Date: 05/24/2024 13:19
Analysis Date: 05/24/2024 13:21
Analysis Date: 05/24/2024 13:22
Matrix: Drinking Water

QC for Samples: 1242285031, 1242285032, 1242285033, 1242285034, 1242285035

## Results by **SM21 4500NO3-F**

| | | Matrix Spike (mg/L) | | | Spike Duplicate (mg/L) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Parameter | Sample | Spike | Result | Rec (%) | Spike | Result | Rec (%) | CL | RPD (%) | RPD CL |
| Total Nitrate/Nitrite-N | 0.540 | 5.00 | 5.31 | 95 | 5.00 | 5.07 | 91 | 90-110 | 4.60 | (< 25 ) |

## Batch Information

Analytical Batch: WFI3121
Analytical Method: SM21 4500NO3-F
Instrument: Astoria segmented flow
Analyst: AJP
Analytical Date/Time: 5/24/2024 1:21:00PM

Print Date: 06/26/2024 4:18:06PM

## Matrix Spike Summary

Original Sample ID: 1242285035
MS Sample ID: 1765047 MS
MSD Sample ID: 1765048 MSD

Analysis Date: 05/24/2024 14:04
Analysis Date: 05/24/2024 14:06
Analysis Date: 05/24/2024 14:08
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1242285031, 1242285032, 1242285033, 1242285034, 1242285035, 1242285036, 1242285037, 1242285038, 1242285039, 1242285040

## Results by **SM21 4500NO3-F**

| | | Matrix Spike (mg/L) | | | Spike Duplicate (mg/L) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Parameter | Sample | Spike | Result | Rec (%) | Spike | Result | Rec (%) | CL | RPD (%) | RPD CL |
| Total Nitrate/Nitrite-N | 0.200U | 5.00 | 4.55 | 91 | 5.00 | 4.91 | 98 | 90-110 | 7.60 | (< 25 ) |

## Batch Information

Analytical Batch: WFI3121
Analytical Method: SM21 4500NO3-F
Instrument: Astoria segmented flow
Analyst: AJP
Analytical Date/Time: 5/24/2024 2:06:00PM

Print Date: 06/26/2024 4:18:06PM

## Matrix Spike Summary

Original Sample ID: 1242302001
MS Sample ID: 1765049 MS
MSD Sample ID: 1765050 MSD

Analysis Date: 05/24/2024 14:50
Analysis Date: 05/24/2024 14:52
Analysis Date: 05/24/2024 14:53
Matrix: Drinking Water

QC for Samples: 1242285036, 1242285037, 1242285038, 1242285039, 1242285040

## Results by **SM21 4500NO3-F**

| | | Matrix Spike (mg/L) | | | Spike Duplicate (mg/L) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Parameter | Sample | Spike | Result | Rec (%) | Spike | Result | Rec (%) | CL | RPD (%) | RPD CL |
| Total Nitrate/Nitrite-N | 2.59 | 5.00 | 8.4 | 116 * | 5.00 | 8.51 | 118 * | 90-110 | 1.30 | (< 25 ) |

## Batch Information

Analytical Batch: WFI3121
Analytical Method: SM21 4500NO3-F
Instrument: Astoria segmented flow
Analyst: AJP
Analytical Date/Time: 5/24/2024 2:52:00PM

Print Date: 06/26/2024 4:18:06PM

## Method Blank

Blank ID: MB for HBN 1886834 [WTC/3425]
Blank Lab ID: 1765369

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1242285031, 1242285032, 1242285033

## Results by **SM 5310B**

| Parameter | Results | LOQ/CL | DL | LOD | Units |
|---|---|---|---|---|---|
| Total Organic Carbon Average | 1.50U | 2.00 | 0.500 | 1.50 | mg/L |

## Batch Information

Analytical Batch: WTC3425
Analytical Method: SM 5310B
Instrument: TOC Analyzer 2
Analyst: EBH
Analytical Date/Time: 5/28/2024 9:22:57PM

Print Date: 06/26/2024 4:18:08PM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1242285 [WTC3425]
Blank Spike Lab ID: 1765367
Date Analyzed: 05/28/2024 21:09

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1242285031, 1242285032, 1242285033

## Results by **SM 5310B**

Blank Spike (mg/L)

| Parameter | Spike | Result | Rec (%) | CL |
|---|---|---|---|---|
| Total Organic Carbon Average | 75 | 75.5 | 101 | ( 80-120 ) |

## Batch Information

Analytical Batch: **WTC3425**
Analytical Method: **SM 5310B**
Instrument: **TOC Analyzer 2**
Analyst: **EBH**



SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
**t** 907.562.2343 **f** 907.561.5301 www.us.sgs.com

## Matrix Spike Summary

Original Sample ID: 1242285033
MS Sample ID: 1765370 MS
MSD Sample ID: 1765371 MSD

Analysis Date: 05/28/2024 23:23
Analysis Date: 05/28/2024 23:39
Analysis Date: 05/28/2024 23:53
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1242285031, 1242285032, 1242285033

## Results by **SM 5310B**

| | | Matrix Spike (mg/L) | | | Spike Duplicate (mg/L) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Parameter | Sample | Spike | Result | Rec (%) | Spike | Result | Rec (%) | CL | RPD (%) | RPD CL |
| Total Organic Carbon Average | 8.30 | 10.0 | 17.8 | 95 | 10.0 | 17.3 | 90 | 75-125 | 2.70 | (< 25 ) |

## Batch Information

Analytical Batch: WTC3425
Analytical Method: SM 5310B
Instrument: TOC Analyzer 2
Analyst: EBH
Analytical Date/Time: 5/28/2024 11:39:37PM

Print Date: 06/26/2024 4:18:13PM

## Method Blank

Blank ID: MB for HBN 1887340 [WTC/3427]
Blank Lab ID: 1765581

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1242285034, 1242285035, 1242285036, 1242285037, 1242285038, 1242285039, 1242285040

## Results by **SM 5310B**

| Parameter | Results | LOQ/CL | DL | LOD | Units |
|---|---|---|---|---|---|
| Total Organic Carbon Average | 1.50U | 2.00 | 0.500 | 1.50 | mg/L |

## Batch Information

Analytical Batch: WTC3427
Analytical Method: SM 5310B
Instrument: TOC Analyzer 2
Analyst: EBH
Analytical Date/Time: 5/29/2024 4:36:32PM

Print Date: 06/26/2024 4:18:15PM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1242285 [WTC3427]
Blank Spike Lab ID: 1765579
Date Analyzed: 05/29/2024 16:22

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1242285034, 1242285035, 1242285036, 1242285037, 1242285038, 1242285039, 1242285040

## Results by **SM 5310B**

Blank Spike (mg/L)

| Parameter | Spike | Result | Rec (%) | CL |
|---|---|---|---|---|
| Total Organic Carbon Average | 75 | 77.3 | 103 | ( 80-120 ) |

## Batch Information

Analytical Batch: **WTC3427**
Analytical Method: **SM 5310B**
Instrument: **TOC Analyzer 2**
Analyst: **EBH**

Print Date: 06/26/2024 4:18:19PM

## Matrix Spike Summary

Original Sample ID: 1242285036
MS Sample ID: 1765583 MS
MSD Sample ID: 1765584 MSD

Analysis Date: 05/29/2024 17:35
Analysis Date: 05/29/2024 17:50
Analysis Date: 05/29/2024 18:04
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1242285034, 1242285035, 1242285036, 1242285037, 1242285038, 1242285039, 1242285040

## Results by **SM 5310B**

| | | Matrix Spike (mg/L) | | | Spike Duplicate (mg/L) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Parameter | Sample | Spike | Result | Rec (%) | Spike | Result | Rec (%) | CL | RPD (%) | RPD CL |
| Total Organic Carbon Average | 2.00U | 10.0 | 11.5 | 115 | 10.0 | 11.5 | 115 | 75-125 | 0.00 | (< 25 ) |

## Batch Information

Analytical Batch: WTC3427
Analytical Method: SM 5310B
Instrument: TOC Analyzer 2
Analyst: EBH
Analytical Date/Time: 5/29/2024 5:50:43PM

Print Date: 06/26/2024 4:18:21PM

## Matrix Spike Summary

Original Sample ID: 1242285040
MS Sample ID: 1765587 MS
MSD Sample ID: 1765588 MSD

Analysis Date: 05/29/2024 21:36
Analysis Date: 05/29/2024 21:53
Analysis Date: 05/29/2024 22:08
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1242285037, 1242285038, 1242285039, 1242285040

## Results by **SM 5310B**

| | | Matrix Spike (mg/L) | | | Spike Duplicate (mg/L) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Parameter | Sample | Spike | Result | Rec (%) | Spike | Result | Rec (%) | CL | RPD (%) | RPD CL |
| Total Organic Carbon Average | 2.00U | 10.0 | 11.7 | 117 | 10.0 | 11.6 | 116 | 75-125 | 0.84 | (< 25 ) |

## Batch Information

Analytical Batch: WTC3427
Analytical Method: SM 5310B
Instrument: TOC Analyzer 2
Analyst: EBH
Analytical Date/Time: 5/29/2024 9:53:19PM

Print Date: 06/26/2024 4:18:21PM

## Method Blank

Blank ID: MB for HBN 1885634 [WTI/6441]
Blank Lab ID: 1765147

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1242285031, 1242285032, 1242285033, 1242285034, 1242285035, 1242285036, 1242285037, 1242285038, 1242285039, 1242285040

## Results by **SM21 2320B**

| Parameter | Results | LOQ/CL | DL | LOD | Units |
|---|---|---|---|---|---|
| Alkalinity | 2.79J | 10.0 | 2.50 | 7.50 | mg/L |

## Batch Information

Analytical Batch: WTI6441
Analytical Method: SM21 2320B
Instrument: Titration
Analyst: EBH
Analytical Date/Time: 5/24/2024 12:43:22PM

Print Date: 06/26/2024 4:18:23PM

## Duplicate Sample Summary

Original Sample ID: 1242285035
Duplicate Sample ID: 1765150

Analysis Date: 05/24/2024 15:49
Matrix: Water (Surface, Eff., Ground)

QC for Samples:

1242285031, 1242285032, 1242285033, 1242285034, 1242285035, 1242285036, 1242285037, 1242285038, 1242285039, 1242285040

## Results by **SM21 2320B**

| NAME | Original | Duplicate | Units | RPD (%) | RPD CL |
|---|---|---|---|---|---|
| Alkalinity | 131 | 131 | mg/L | 0.22 | (< 25 ) |

## Batch Information

Analytical Batch: WTI6441
Analytical Method: SM21 2320B
Instrument: Titration
Analyst: EBH

Print Date: 06/26/2024 4:18:25PM

## Duplicate Sample Summary

Original Sample ID: 1242296004
Duplicate Sample ID: 1765151
Analysis Date: 05/24/2024 16:52
Matrix: Water (Surface, Eff., Ground)

QC for Samples:

1242285036, 1242285037, 1242285038, 1242285039, 1242285040

## Results by **SM21 2320B**

| NAME | Original | Duplicate | Units | RPD (%) | RPD CL |
|---|---|---|---|---|---|
| Alkalinity | 27.2 | 27.1 | mg/L | 0.15 | (< 25 ) |

## Batch Information

Analytical Batch: WTI6441
Analytical Method: SM21 2320B
Instrument: Titration
Analyst: EBH

Print Date: 06/26/2024 4:18:25PM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1242285 [WTI6441]
Blank Spike Lab ID: 1765148
Date Analyzed: 05/24/2024 12:52

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1242285031, 1242285032, 1242285033, 1242285034, 1242285035, 1242285036, 1242285037, 1242285038, 1242285039, 1242285040

## Results by **SM21 2320B**

Blank Spike (mg/L)

| Parameter | Spike | Result | Rec (%) | CL |
|---|---|---|---|---|
| Alkalinity | 250 | 243 | 97 | ( 85-115 ) |

## Batch Information

Analytical Batch: **WTI6441**
Analytical Method: **SM21 2320B**
Instrument: **Titration**
Analyst: **EBH**

Print Date: 06/26/2024 4:18:27PM

## Method Blank

Blank ID: MB for HBN 1885931 [WXX/15248]
Blank Lab ID: 1765165

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1242285035, 1242285036, 1242285039, 1242285040

## Results by **EPA 300.0**

| Parameter | Results | LOQ/CL | DL | LOD | Units |
|---|---|---|---|---|---|
| Sulfate | 0.150U | 0.200 | 0.0500 | 0.150 | mg/L |

## Batch Information

Analytical Batch: WIC6584
Analytical Method: EPA 300.0
Instrument: 930 Metrohm compact IC flex
Analyst: EBH
Analytical Date/Time: 5/24/2024 5:27:18PM

Prep Batch: WXX15248
Prep Method: METHOD
Prep Date/Time: 5/24/2024 3:45:00PM
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

Print Date: 06/26/2024 4:18:31PM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1242285 [WXX15248]
Blank Spike Lab ID: 1765166
Date Analyzed: 05/24/2024 17:45

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1242285035, 1242285036, 1242285039, 1242285040

## Results by **EPA 300.0**

Blank Spike (mg/L)

| Parameter | Spike | Result | Rec (%) | CL |
|---|---|---|---|---|
| Sulfate | 5 | 5.31 | 106 | ( 90-110 ) |

## Batch Information

Analytical Batch: **WIC6584**
Analytical Method: **EPA 300.0**
Instrument: **930 Metrohm compact IC flex**
Analyst: **EBH**

Prep Batch: **WXX15248**
Prep Method: **METHOD**
Prep Date/Time: **05/24/2024 15:45**
Spike Init Wt./Vol.: 5 mg/L Extract Vol: 10 mL
Dupe Init Wt./Vol.: Extract Vol:

Print Date: 06/26/2024 4:18:34PM

## Matrix Spike Summary

Original Sample ID: 1765163
MS Sample ID: 1765168 MS
MSD Sample ID:

Analysis Date: 05/24/2024 18:22
Analysis Date: 05/24/2024 18:41
Analysis Date:
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1242285035, 1242285036, 1242285039, 1242285040

## Results by **EPA 300.0**

| | | Matrix Spike (mg/L) | | | Spike Duplicate (mg/L) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Parameter | Sample | Spike | Result | Rec (%) | Spike | Result | Rec (%) | CL | RPD (%) | RPD CL |
| Sulfate | 4.82 | 50.0 | 57.7 | 106 | | | | 90-110 | | |

## Batch Information

Analytical Batch: WIC6584
Analytical Method: EPA 300.0
Instrument: 930 Metrohm compact IC flex
Analyst: EBH
Analytical Date/Time: 5/24/2024 6:41:00PM

Prep Batch: WXX15248
Prep Method: EPA 300.0 Extraction Waters/Liquids
Prep Date/Time: 5/24/2024 3:45:00PM
Prep Initial Wt./Vol.: 10.00mL
Prep Extract Vol: 10.00mL



SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 f 907.561.5301 www.us.sgs.com

## Matrix Spike Summary

Original Sample ID: 1765164
MS Sample ID: 1765169 MS
MSD Sample ID:

Analysis Date: 05/24/2024 19:55
Analysis Date: 05/24/2024 20:50
Analysis Date:
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1242285035, 1242285036, 1242285039, 1242285040

## Results by **EPA 300.0**

| | | Matrix Spike (mg/L) | | | Spike Duplicate (mg/L) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Parameter | Sample | Spike | Result | Rec (%) | Spike | Result | Rec (%) | CL | RPD (%) | RPD CL |
| Sulfate | 0.150U | 5.00 | 5.19 | 104 | | | | 90-110 | | |

## Batch Information

Analytical Batch: WIC6584
Analytical Method: EPA 300.0
Instrument: 930 Metrohm compact IC flex
Analyst: EBH
Analytical Date/Time: 5/24/2024 8:50:54PM

Prep Batch: WXX15248
Prep Method: EPA 300.0 Extraction Waters/Liquids
Prep Date/Time: 5/24/2024 3:45:00PM
Prep Initial Wt./Vol.: 10.00mL
Prep Extract Vol: 10.00mL



SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 f 907.561.5301 www.us.sgs.com

## Method Blank

Blank ID: MB for HBN 1887632 [WXX/15250]
Blank Lab ID: 1765747

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1242285031, 1242285032, 1242285033, 1242285034, 1242285037, 1242285038

## Results by **EPA 300.0**

| Parameter | Results | LOQ/CL | DL | LOD | Units |
|---|---|---|---|---|---|
| Sulfate | 0.150U | 0.200 | 0.0500 | 0.150 | mg/L |

## Batch Information

Analytical Batch: WIC6585
Analytical Method: EPA 300.0
Instrument: 930 Metrohm compact IC flex
Analyst: EBH
Analytical Date/Time: 5/29/2024 7:18:34PM

Prep Batch: WXX15250
Prep Method: METHOD
Prep Date/Time: 5/29/2024 3:30:00PM
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL



SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
**t** 907.562.2343 **f** 907.561.5301 www.us.sgs.com

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1242285 [WXX15250]
Blank Spike Lab ID: 1765748
Date Analyzed: 05/29/2024 19:37

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1242285031, 1242285032, 1242285033, 1242285034, 1242285037, 1242285038

## Results by **EPA 300.0**

Blank Spike (mg/L)

| Parameter | Spike | Result | Rec (%) | CL |
|---|---|---|---|---|
| Sulfate | 5 | 5.14 | 103 | ( 90-110 ) |

## Batch Information

Analytical Batch: **WIC6585**
Analytical Method: **EPA 300.0**
Instrument: **930 Metrohm compact IC flex**
Analyst: **EBH**

Prep Batch: **WXX15250**
Prep Method: **METHOD**
Prep Date/Time: **05/29/2024 15:30**
Spike Init Wt./Vol.: 5 mg/L Extract Vol: 10 mL
Dupe Init Wt./Vol.: Extract Vol:



SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 f 907.561.5301 www.us.sgs.com

## Matrix Spike Summary

Original Sample ID: 1765745
MS Sample ID: 1765750 MS
MSD Sample ID:

Analysis Date: 05/29/2024 22:42
Analysis Date: 05/29/2024 23:00
Analysis Date:
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1242285031, 1242285032, 1242285033, 1242285034, 1242285037, 1242285038

## Results by **EPA 300.0**

| | | Matrix Spike (mg/L) | | | Spike Duplicate (mg/L) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Parameter | Sample | Spike | Result | Rec (%) | Spike | Result | Rec (%) | CL | RPD (%) | RPD CL |
| Sulfate | 0.898 | 5.00 | 6.03 | 103 | | | | 90-110 | | |

## Batch Information

Analytical Batch: WIC6585
Analytical Method: EPA 300.0
Instrument: 930 Metrohm compact IC flex
Analyst: EBH
Analytical Date/Time: 5/29/2024 11:00:48PM

Prep Batch: WXX15250
Prep Method: EPA 300.0 Extraction Waters/Liquids
Prep Date/Time: 5/29/2024 3:30:00PM
Prep Initial Wt./Vol.: 10.00mL
Prep Extract Vol: 10.00mL



SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 f 907.561.5301 www.us.sgs.com

## Matrix Spike Summary

Original Sample ID: 1765746
MS Sample ID: 1765751 MS
MSD Sample ID:

Analysis Date: 05/30/2024 1:28
Analysis Date: 05/30/2024 2:24
Analysis Date:
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1242285031, 1242285032, 1242285033, 1242285034, 1242285037, 1242285038

## Results by **EPA 300.0**

| | | Matrix Spike (mg/L) | | | Spike Duplicate (mg/L) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Parameter | Sample | Spike | Result | Rec (%) | Spike | Result | Rec (%) | CL | RPD (%) | RPD CL |
| Sulfate | 0.150U | 5.00 | 5.13 | 103 | | | | 90-110 | | |

## Batch Information

Analytical Batch: WIC6585
Analytical Method: EPA 300.0
Instrument: 930 Metrohm compact IC flex
Analyst: EBH
Analytical Date/Time: 5/30/2024 2:24:26AM

Prep Batch: WXX15250
Prep Method: EPA 300.0 Extraction Waters/Liquids
Prep Date/Time: 5/29/2024 3:30:00PM
Prep Initial Wt./Vol.: 10.00mL
Prep Extract Vol: 10.00mL

Print Date: 06/26/2024 4:18:44PM

# CHAIN OF CUSTODY



**Trihydro Corporation**
312 Tyee Street
Soldotna, Alaska 99669
(907) 262-2315 - (907) 262-2320 (fax)

**Laboratory:** SGS

**Address:**

**Lab Accession No.**
**1242285**

**CONTACT** (Trihydro Corporation)
Brianna Force bforce@trihydro.com
(573)239-2434

**JOB #**
TESAL-023-0004

**CLIENT:**
Marathon

**PROJECT NAME:**
24-3

**REPORTS TO:** Maya Lehl
**EMAIL:** mlehl@marathonpetroleum.com

**INVOICE TO:** Marathon
**P.O. #:** 4900172614

**Billing Information**
Bill: Trihydro (Our Client)

**Turnaround:**
24-HR 48-HR 5-Day (2-WKS) Other
**Data Deliverables:**
(Standard) Level 3 Other
**EDD Required?** (Y) - N

| Lab No. | Sample No. | Matrix | Date | Time | No. of Jars per Analysis: BTEX (8021B) | | | | | | | | | | Comments & Special Instructions |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (1) A-C | Dup-1 | GW | 5/15/2024 | 8:30 | 3 | | | | | | | | | | Marathon List 1 |
| (2) A-C | Dup-2 | GW | 5/14/2024 | 8:00 | 3 | | | | | | | | | | Marathon List 1 |
| (3) A-C | Dup-3 | GW | 5/15/2024 | 8:00 | 3 | | | | | | | | | | Marathon List 1 |
| (4) A-C | E-010 | GW | 5/15/2024 | 15:15 | 3 | | | | | | | | | | Marathon List 1 |
| (5) A-C | E-072RR | GW | 5/14/2024 | 12:30 | 3 | | | | | | | | | | Marathon List 1 |
| (6) A-C | E-097 | GW | 5/14/2024 | 11:40 | 3 | | | | | | | | | | Marathon List 1 |
| (7) A-C | E-137A | GW | 5/13/2024 | 13:55 | 3 | | | | | | | | | | Marathon List 1 |
| (8) A-C | E-137B | GW | 5/13/2024 | 14:20 | 3 | | | | | | | | | | Marathon List 1 |
| (9) A-C | E-147 | GW | 5/15/2024 | 10:50 | 3 | | | | | | | | | | Marathon List 1 |
| (10) A-C | E-155 | GW | 5/13/2024 | 13:20 | 3 | | | | | | | | | | Marathon List 1 |

| Relinquished By (Name and Company): | Date | Time | Received By (Name and Company): | Date | Time |
|---|---|---|---|---|---|
| Trihydro | 5/22/2024 | 11:00 | Jeremy Grethy SGS | 5/22/24 | 13:47 ~~13:56~~ |
| profile # 333517 | | | Cooler 1 Temp: 5.4 DSB GS: Intact FL Cooler 1 | | |
| | | | Cooler Temp Cooler 2 Temp: 3.1 Cooler 2 | | |

# CHAIN OF CUSTODY



**Trihydro Corporation**
312 Tyee Street
Soldotna, Alaska 99669
(907) 262-2315 - (907) 262-2320 (fax)

**Laboratory:** SGS

**Address:**

**Lab Accession No**
**1242285**

**CONTACT** (Trihydro Corporation)
Brianna Force bforce@trihydro.com
(573)239-2434

**JOB #**
TESAL-023-0004

**CLIENT:**
Marathon

**PROJECT NAME:**
24-3

**REPORTS TO:** Maya Lehl
**EMAIL:** mlehl@marathonpetroleum.com

**INVOICE TO:** Marathon
**P.O. #:** 4900172614

**Billing Information**
Bill: Trihydro (Our Client)

**Turnaround:**
24-HR 48-HR 5-Day (2-WKS) Other
**Data Deliverables:**
(Standard) Level 3 Other
**EDD Required?** (Y) - N

| Lab No. | Sample No. | Matrix | Date | Time | No. of Jars per Analysis: BTEX (8021B) | | | | | | | | | | Comments & Special Instructions |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (11) A-C | E-156 | GW | 5/13/2024 | 12:25 | 3 | | | | | | | | | | Marathon List 1 |
| (12) A-C | E-160 | GW | 5/13/2024 | 14:55 | 3 | | | | | | | | | | Marathon List 1 |
| (13) A-C | E-162 | GW | 5/14/2024 | 11:00 | 3 | | | | | | | | | | Marathon List 1 |
| (14) A-C | E-171 | GW | 5/13/2024 | 15:30 | 3 | | | | | | | | | | Marathon List 1 |
| (15) A-C | E-179 | GW | 5/14/2024 | 10:20 | 3 | | | | | | | | | | Marathon List 1 |
| (16) A-C | E-190A | GW | 5/13/2024 | 11:16 | 3 | | | | | | | | | | Marathon List 1 |
| (17) A-C | E-234A-R | GW | 5/14/2024 | 16:05 | 3 | | | | | | | | | | Marathon List 1 |
| (18) A-C | E-234B-R | GW | 5/14/2024 | 16:30 | 3 | | | | | | | | | | Marathon List 1 |
| (19) A-C | E-247A | GW | 5/14/2024 | 13:40 | 3 | | | | | | | | | | Marathon List 1 |
| (20) A-C | E-247B | GW | 5/14/2024 | 14:05 | 3 | | | | | | | | | | Marathon List 1 |

| Relinquished By (Name and Company): | Date | Time | Received By (Name and Company): | Date | Time |
|---|---|---|---|---|---|
| Trihydro | 5/22/2024 | 11:00 | Jeremy Gooth SGS | 5/22/24 | 13:47 |
| | | | Cooler 1 Temp: 5.4 D58 CS: Intact FL | | |
| | | | Cooler 2 Temp: 3.1 D58 CS: Intact FR | | |

Cooler Temp

# CHAIN OF CUSTODY



**Trihydro Corporation**
312 Tyee Street
Soldotna, Alaska 99669
(907) 262-2315 - (907) 262-2320 (fax)

**Laboratory:** SGS

**Address:**

**Lab Accession No.**
**1242285**

**CONTACT** (Trihydro Corporation)
Brianna Force bforce@trihydro.com
(573)239-2434

**JOB #**
TESAL-023-0004

**CLIENT:**
Marathon

**PROJECT NAME:**
24-3

**REPORTS TO:** Maya Lehl
**EMAIL:** mlehl@marathonpetroleum.com

**INVOICE TO:** Marathon
**P.O. #:** 4900172614

**Billing Information**
Bill: Trihydro (Our Client)

**Turnaround:**
24-HR 48-HR 5-Day (2-WKS) Other
**Data Deliverables:**
(Standard) Level 3 Other
**EDD Required?** (Y) - N

| Lab No. | Sample No. | Matrix | Date | Time | No. of Jars per Analysis: BTEX (8021B) | BTEX + TCE (8260C) List2 | | | | | | | | | Comments & Special Instructions |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 A-C | E-249A | GW | 5/15/2024 | 11:20 | 3 | | | | | | | | | | Marathon List 1 |
| 02 A-C | E-249B | GW | 5/14/2024 | 15:25 | 3 | | | | | | | | | | Marathon List 1 |
| 03 A-C | E-249C | GW | 5/14/2024 | 14:50 | 3 | | | | | | | | | | Marathon List 1 |
| 04 A-C | E-250A | GW | 5/15/2024 | 13:25 | 3 | | | | | | | | | | Marathon List 1 |
| 05 A-C | E-250B | GW | 5/15/2024 | 14:00 | 3 | | | | | | | | | | Marathon List 1 |
| 06 A-C | E-255 | GW | 5/15/2024 | 12:20 | 3 | | | | | | | | | | Marathon List 1 |
| 07 A-C | E-256 | GW | 5/15/2024 | 14:25 | 3 | | | | | | | | | | Marathon List 1 |
| 08 A-C | E-259 | GW | 5/14/2024 | 9:45 | 3 | | | | | | | | | | Marathon List 1 |
| 09 A-C | Dup-5 | GW | 5/17/2024 | 8:00 | | 3 | | | | | | | | | Marathon List 2 |
| 30 A-C | SMW-05 | GW | 5/17/2024 | 9:55 | | 3 | | | | | | | | | Marathon List 2 |

| Relinquished By (Name and Company): | Date | Time | Received By (Name and Company): | Date | Time |
|---|---|---|---|---|---|
| Trihydro | 5/22/2024 | 11:00 | Jeremy Groth SGS | 5/22/24 | 13:47 |
| | | | Cooler 1 Temp: 5.4 D58 CS: | intact | FL |
| | | | Cooler 2 Temp: 3.1 D58 CS: | intact | FR |

Cooler Temp

# CHAIN OF CUSTODY



**Trihydro Corporation**
312 Tyee Street
Soldotna, Alaska 99669
(907) 262-2315 - (907) 262-2320 (fax)

**Laboratory:** SGS

**Address:**

**Lab Accession No.**
**1242285**

**CONTACT** (Trihydro Corporation)
Brianna Force bforce@trihydro.com
(573)239-2434

**JOB #**
TESAL-023-0004

**Billing Information**
Bill: Trihydro (Our Client)

**CLIENT:**
Marathon

**PROJECT NAME:**
24-3

**REPORTS TO:** Maya Lehl
**EMAIL:** mlehl@marathonpetroleum.com

**INVOICE TO:** Marathon
**P.O. #:** 4900172614

**Turnaround:**
24-HR 48-HR 5-Day (2-WKS) Other
**Data Deliverables:**
(Standard) Level 3 Other
**EDD Required?** (Y) - N

| Lab No. | Sample No. | Matrix | Date | Time | BTEX, TCE, VC (EPA624) | Sulfate (EPA300) | Nitrate+Nitrite (4500N03) | Total Organic Carbon (SM5310B) | Alkalinity (SM2320B) | Hardness total (SM2340B) | Total Fe, Mn, Mg, Ca (EPA200_8) | Dissolved Fe, Mn, Mg, Ca (EPA200_8) | | | Comments & Special Instructions |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (31) | Dup-4 | GW | 5/17/2024 | 8:15 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | (44) A | Marathon List 5, Dissolved Fe,Mn,Mg,Ca was field filtered |
| (32) | IWS-6 | GW | 5/17/2024 | 15:45 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | (45) A | Marathon List 5, Dissolved Fe,Mn,Mg,Ca was field filtered |
| (33) | SMW-06 | GW | 5/17/2024 | 11:15 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | (46) H | Marathon List 5, Dissolved Fe,Mn,Mg,Ca was field filtered |
| (34) | SMW-09 | GW | 5/17/2024 | 10:35 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | (47) A | Marathon List 5, Dissolved Fe,Mn,Mg,Ca was field filtered |
| (35) | SMW-21A | GW | 5/17/2024 | 12:05 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | (48) A | Marathon List 5, Dissolved Fe,Mn,Mg,Ca was field filtered |
| (36) | SMW-29 | GW | 5/17/2024 | 15:00 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | (49) A | Marathon List 5, Dissolved Fe,Mn,Mg,Ca was field filtered |
| (37) | SMW-31 | GW | 5/17/2024 | 13:15 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | (50) A | Marathon List 5, Dissolved Fe,Mn,Mg,Ca was field filtered |
| (38) | SMW-35 | GW | 5/17/2024 | 14:05 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | (51) A | Marathon List 5, Dissolved Fe,Mn,Mg,Ca was field filtered |
| (39) | SMW-36 | GW | 5/21/2024 | 9:00 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | (52) A | Marathon List 5, Dissolved Fe,Mn,Mg,Ca was field filtered |
| (40) | SMW-37 | GW | 5/21/2024 | 9:35 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | (53) A | Marathon List 5, Dissolved Fe,Mn,Mg,Ca was field filtered |

| Relinquished By (Name and Company): | Date | Time | Received By (Name and Company): | Date | Time |
|---|---|---|---|---|---|
| Trihydro | 5/22/2024 | 11:00 | Jeremy Gotch SGS | 5/22/24 | 13:47 |
| | | | Cooler 1 Temp: 5.4 D58 CS: intact | | FL |
| | | | Cooler 2 Temp: 3.1 D58 CS: intact | | FL |

Cooler Temp

# CHAIN OF CUSTODY



**Trihydro Corporation**
312 Tyee Street
Soldotna, Alaska 99669
(907) 262-2315 - (907) 262-2320 (fax)

**Laboratory:** SGS

**Address:**

**Lab Accession No**
1242285

**CONTACT** (Trihydro Corporation)
Brianna Force bforce@trihydro.com
(573)239-2434

**JOB #**
TESAL-023-0004

**CLIENT:**
Marathon

**PROJECT NAME:**
24-3

**REPORTS TO:** Maya Lehl
**EMAIL:** mlehl@marathonpetroleum.com

**INVOICE TO:** Marathon
**P.O. #:** 4900172614

**Billing Information**
Bill: Trihydro (Our Client)

**Turnaround:**
24-HR 48-HR 5-Day (2-WKS) Other
**Data Deliverables:**
(Standard) Level 3 Other
**EDD Required?** (Y) - N

| Lab No. | Sample No. | Matrix | Date | Time | No. of Jars per Analysis: BTEX (8021B) | BTEX + TCE (8260C) List2 | VOCs (8260C) | GRO (AK101) | | | | | | Comments & Special Instructions |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (41) QC | EB 01 | GW | 5/14/2024 | 10:30 | 3 | | | | | | | | | |
| (40) QC | EB 02 | GW | 5/17/2024 | 14:20 | | 3 | | | | | | | | |
| (43) | Trip Blank | GW | 5/13/2024 | 08:00 | 3 | | 3 | 3 | | | | | | |
| AC | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |

| Relinquished By (Name and Company): | Date | Time | Received By (Name and Company): | Date | Time |
|---|---|---|---|---|---|
| Trihydro | 5/22/2024 | 11:00 | Jeremy Greth SGS | 5/22/24 | 13:47 |
| | | | Cooler 1 Temp: 5.4 D58 C3: intact<br>Cooler 2 Temp: 3.1 D58 C3: intact | | FL<br>FR |

Cooler Temp

SGS

1242285

# SAMPLE RECEIPT FORM

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

**Additional Notes/Clarification where Applicable, including resolution of "No" answers when a change order is not attached:**

1TB for 8260/8021 ap

# AIRBILL 13645816

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:** May 22 24 11:55 AM

**Receiver:** SGS
907-562-2343

**Sender:** TRIHYDRO
907-598-0994

**Accepted:** Wed, May 22 24 11:01:00 AM

| Description & Comment | Quan. | Wgt. | Handle Fee | Hazmat Fee | Total |
|---|---|---|---|---|---|
| Standard Freight | 2 | 94 | - | - | $70.78 |
| | | | | Total Tax: | $4.42 |
| | | | | Total Payments made: | $75.20 |
| | | | | **Total Unpaid:** | **$0.00** |

Received in good condition by: .....

**CUSTOMER COPY**

# AIRBILL 13645816

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:** May 22 24 11:55 AM

**Receiver:** SGS
907-562-2343

**Sender:** TRIHYDRO
907-598-0994

**Accepted:** Wed, May 22 24 11:01:00 AM

| Description & Comment | Quan. | Wgt. | Handle Fee | Hazmat Fee | Total |
|---|---|---|---|---|---|
| Standard Freight | 2 | 94 | - | - | $70.78 |
| TAX: Federal Excise Tax | | | | | $4.42 |
| | | | | Total Payments made: | $75.20 |
| | | | | **Total Unpaid:** | **$0.00** |

## TERMS AND CONDITIONS

Consignemnt Note Text

1242285

# *Alert Expeditors Inc.*

**#432611**

Citywide Delivery • 440-3351
8421 Flamingo Drive • Anchorage, Alaska 99502

Date 5-22-24

From TVI Hydro

To SGS Labs Anc

| Collect ❐ | Prepay ❐ | Advance Charges ❐ |
|---|---|---|
| Job # FHA | PO# Grant 1869516 | |

Sample x2

Shipped Signature

Total Charge

Received By:

## Sample Containers and Preservatives

| Container Id | Preservative | Container Condition | Container Id | Preservative | Container Condition |
|---|---|---|---|---|---|
| 1242285001-A | HCL to pH < 2 | OK | 1242285017-B | HCL to pH < 2 | OK |
| 1242285001-B | HCL to pH < 2 | OK | 1242285017-C | HCL to pH < 2 | OK |
| 1242285001-C | HCL to pH < 2 | OK | 1242285018-A | HCL to pH < 2 | OK |
| 1242285002-A | HCL to pH < 2 | OK | 1242285018-B | HCL to pH < 2 | OK |
| 1242285002-B | HCL to pH < 2 | OK | 1242285018-C | HCL to pH < 2 | OK |
| 1242285002-C | HCL to pH < 2 | OK | 1242285019-A | HCL to pH < 2 | OK |
| 1242285003-A | HCL to pH < 2 | OK | 1242285019-B | HCL to pH < 2 | OK |
| 1242285003-B | HCL to pH < 2 | OK | 1242285019-C | HCL to pH < 2 | OK |
| 1242285003-C | HCL to pH < 2 | OK | 1242285020-A | HCL to pH < 2 | OK |
| 1242285004-A | HCL to pH < 2 | OK | 1242285020-B | HCL to pH < 2 | OK |
| 1242285004-B | HCL to pH < 2 | OK | 1242285020-C | HCL to pH < 2 | OK |
| 1242285004-C | HCL to pH < 2 | OK | 1242285021-A | HCL to pH < 2 | OK |
| 1242285005-A | HCL to pH < 2 | OK | 1242285021-B | HCL to pH < 2 | OK |
| 1242285005-B | HCL to pH < 2 | OK | 1242285021-C | HCL to pH < 2 | OK |
| 1242285005-C | HCL to pH < 2 | OK | 1242285022-A | HCL to pH < 2 | OK |
| 1242285006-A | HCL to pH < 2 | OK | 1242285022-B | HCL to pH < 2 | OK |
| 1242285006-B | HCL to pH < 2 | OK | 1242285022-C | HCL to pH < 2 | OK |
| 1242285006-C | HCL to pH < 2 | OK | 1242285023-A | HCL to pH < 2 | OK |
| 1242285007-A | HCL to pH < 2 | OK | 1242285023-B | HCL to pH < 2 | OK |
| 1242285007-B | HCL to pH < 2 | OK | 1242285023-C | HCL to pH < 2 | OK |
| 1242285007-C | HCL to pH < 2 | OK | 1242285024-A | HCL to pH < 2 | OK |
| 1242285008-A | HCL to pH < 2 | OK | 1242285024-B | HCL to pH < 2 | OK |
| 1242285008-B | HCL to pH < 2 | OK | 1242285024-C | HCL to pH < 2 | OK |
| 1242285008-C | HCL to pH < 2 | OK | 1242285025-A | HCL to pH < 2 | OK |
| 1242285009-A | HCL to pH < 2 | OK | 1242285025-B | HCL to pH < 2 | OK |
| 1242285009-B | HCL to pH < 2 | OK | 1242285025-C | HCL to pH < 2 | OK |
| 1242285009-C | HCL to pH < 2 | OK | 1242285026-A | HCL to pH < 2 | OK |
| 1242285010-A | HCL to pH < 2 | OK | 1242285026-B | HCL to pH < 2 | OK |
| 1242285010-B | HCL to pH < 2 | OK | 1242285026-C | HCL to pH < 2 | OK |
| 1242285010-C | HCL to pH < 2 | OK | 1242285027-A | HCL to pH < 2 | OK |
| 1242285011-A | HCL to pH < 2 | OK | 1242285027-B | HCL to pH < 2 | OK |
| 1242285011-B | HCL to pH < 2 | OK | 1242285027-C | HCL to pH < 2 | OK |
| 1242285011-C | HCL to pH < 2 | OK | 1242285028-A | HCL to pH < 2 | OK |
| 1242285012-A | HCL to pH < 2 | OK | 1242285028-B | HCL to pH < 2 | OK |
| 1242285012-B | HCL to pH < 2 | OK | 1242285028-C | HCL to pH < 2 | OK |
| 1242285012-C | HCL to pH < 2 | OK | 1242285029-A | HCL to pH < 2 | OK |
| 1242285013-A | HCL to pH < 2 | OK | 1242285029-B | HCL to pH < 2 | OK |
| 1242285013-B | HCL to pH < 2 | OK | 1242285029-C | HCL to pH < 2 | OK |
| 1242285013-C | HCL to pH < 2 | OK | 1242285030-A | HCL to pH < 2 | OK |
| 1242285014-A | HCL to pH < 2 | OK | 1242285030-B | HCL to pH < 2 | OK |
| 1242285014-B | HCL to pH < 2 | OK | 1242285030-C | HCL to pH < 2 | OK |
| 1242285014-C | HCL to pH < 2 | OK | 1242285031-A | HCL to pH < 2 | OK |
| 1242285015-A | HCL to pH < 2 | OK | 1242285031-B | HCL to pH < 2 | OK |
| 1242285015-B | HCL to pH < 2 | OK | 1242285031-C | HCL to pH < 2 | OK |
| 1242285015-C | HCL to pH < 2 | OK | 1242285031-D | No Preservative Required | OK |
| 1242285016-A | HCL to pH < 2 | OK | 1242285031-E | H2SO4 to pH < 2 | OK |
| 1242285016-B | HCL to pH < 2 | OK | 1242285031-F | HCL to pH < 2 | OK |
| 1242285016-C | HCL to pH < 2 | OK | 1242285031-G | No Preservative Required | OK |
| 1242285017-A | HCL to pH < 2 | OK | 1242285031-H | HNO3 to pH < 2 | OK |

| Container Id | Preservative | Container Condition |
|---|---|---|
| 1242285031-I | HNO3 to pH < 2 | OK |
| 1242285032-A | HCL to pH < 2 | OK |
| 1242285032-B | HCL to pH < 2 | OK |
| 1242285032-C | HCL to pH < 2 | OK |
| 1242285032-D | No Preservative Required | OK |
| 1242285032-E | H2SO4 to pH < 2 | OK |
| 1242285032-F | HCL to pH < 2 | OK |
| 1242285032-G | No Preservative Required | OK |
| 1242285032-H | HNO3 to pH < 2 | OK |
| 1242285032-I | HNO3 to pH < 2 | OK |
| 1242285033-A | HCL to pH < 2 | OK |
| 1242285033-B | HCL to pH < 2 | OK |
| 1242285033-C | HCL to pH < 2 | OK |
| 1242285033-D | No Preservative Required | OK |
| 1242285033-E | H2SO4 to pH < 2 | OK |
| 1242285033-F | HCL to pH < 2 | OK |
| 1242285033-G | No Preservative Required | OK |
| 1242285033-H | HNO3 to pH < 2 | OK |
| 1242285033-I | HNO3 to pH < 2 | OK |
| 1242285034-A | HCL to pH < 2 | OK |
| 1242285034-B | HCL to pH < 2 | OK |
| 1242285034-C | HCL to pH < 2 | OK |
| 1242285034-D | No Preservative Required | OK |
| 1242285034-E | H2SO4 to pH < 2 | OK |
| 1242285034-F | HCL to pH < 2 | OK |
| 1242285034-G | No Preservative Required | OK |
| 1242285034-H | HNO3 to pH < 2 | OK |
| 1242285034-I | HNO3 to pH < 2 | OK |
| 1242285035-A | HCL to pH < 2 | OK |
| 1242285035-B | HCL to pH < 2 | OK |
| 1242285035-C | HCL to pH < 2 | OK |
| 1242285035-D | No Preservative Required | OK |
| 1242285035-E | H2SO4 to pH < 2 | OK |
| 1242285035-F | HCL to pH < 2 | OK |
| 1242285035-G | No Preservative Required | OK |
| 1242285035-H | HNO3 to pH < 2 | OK |
| 1242285035-I | HNO3 to pH < 2 | OK |
| 1242285036-A | HCL to pH < 2 | OK |
| 1242285036-B | HCL to pH < 2 | OK |
| 1242285036-C | HCL to pH < 2 | OK |
| 1242285036-D | No Preservative Required | OK |
| 1242285036-E | H2SO4 to pH < 2 | OK |
| 1242285036-F | HCL to pH < 2 | OK |
| 1242285036-G | No Preservative Required | OK |
| 1242285036-H | HNO3 to pH < 2 | OK |
| 1242285036-I | HNO3 to pH < 2 | OK |
| 1242285037-A | HCL to pH < 2 | OK |
| 1242285037-B | HCL to pH < 2 | OK |
| 1242285037-C | HCL to pH < 2 | OK |
| 1242285037-D | No Preservative Required | OK |
| 1242285037-E | H2SO4 to pH < 2 | OK |
| 1242285037-F | HCL to pH < 2 | OK |
| 1242285037-G | No Preservative Required | OK |
| 1242285037-H | HNO3 to pH < 2 | OK |
| 1242285037-I | HNO3 to pH < 2 | OK |
| 1242285038-A | HCL to pH < 2 | OK |
| 1242285038-B | HCL to pH < 2 | OK |
| 1242285038-C | HCL to pH < 2 | OK |
| 1242285038-D | No Preservative Required | OK |
| 1242285038-E | H2SO4 to pH < 2 | OK |
| 1242285038-F | HCL to pH < 2 | OK |
| 1242285038-G | No Preservative Required | OK |
| 1242285038-H | HNO3 to pH < 2 | OK |
| 1242285038-I | HNO3 to pH < 2 | OK |
| 1242285039-A | HCL to pH < 2 | OK |
| 1242285039-B | HCL to pH < 2 | OK |
| 1242285039-C | HCL to pH < 2 | OK |
| 1242285039-D | No Preservative Required | OK |
| 1242285039-E | H2SO4 to pH < 2 | OK |
| 1242285039-F | HCL to pH < 2 | OK |
| 1242285039-G | No Preservative Required | OK |
| 1242285039-H | HNO3 to pH < 2 | OK |
| 1242285039-I | HNO3 to pH < 2 | OK |
| 1242285040-A | HCL to pH < 2 | OK |
| 1242285040-B | HCL to pH < 2 | OK |
| 1242285040-C | HCL to pH < 2 | OK |
| 1242285040-D | No Preservative Required | OK |
| 1242285040-E | H2SO4 to pH < 2 | OK |
| 1242285040-F | HCL to pH < 2 | OK |
| 1242285040-G | No Preservative Required | OK |
| 1242285040-H | HNO3 to pH < 2 | OK |
| 1242285040-I | HNO3 to pH < 2 | OK |
| 1242285041-A | HCL to pH < 2 | OK |
| 1242285041-B | HCL to pH < 2 | OK |
| 1242285041-C | HCL to pH < 2 | OK |
| 1242285042-A | HCL to pH < 2 | OK |
| 1242285042-B | HCL to pH < 2 | OK |
| 1242285042-C | HCL to pH < 2 | OK |
| 1242285043-A | HCL to pH < 2 | OK |
| 1242285043-B | No Preservative Required | OK |
| 1242285043-C | No Preservative Required | OK |
| 1242285043-D | No Preservative Required | OK |
| 1242285043-E | No Preservative Required | OK |
| 1242285043-F | No Preservative Required | OK |
| 1242285043-G | No Preservative Required | OK |
| 1242285043-H | No Preservative Required | OK |
| 1242285043-I | No Preservative Required | OK |
| 1242285044-A | HNO3 to pH < 2 | OK |
| 1242285045-A | HNO3 to pH < 2 | OK |
| 1242285046-A | HNO3 to pH < 2 | OK |

| Container Id | Preservative | Container Condition | Container Id | Preservative | Container Condition |
|---|---|---|---|---|---|
| 1242285047-A | HNO3 to pH < 2 | OK | | | |
| 1242285048-A | HNO3 to pH < 2 | OK | | | |
| 1242285049-A | HNO3 to pH < 2 | OK | | | |
| 1242285050-A | HNO3 to pH < 2 | OK | | | |
| 1242285051-A | HNO3 to pH < 2 | OK | | | |
| 1242285052-A | HNO3 to pH < 2 | OK | | | |
| 1242285053-A | HNO3 to pH < 2 | OK | | | |

Container Condition Glossary

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

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