ESHID-603834

Environmental Compliance Programs Group
Los Alamos National Laboratory
P.O. Box 1663, K490
Los Alamos, NM 87545
505-667-0666

National Nuclear Security Administration
Los Alamos Field Office
3747 West Jemez Road, A316
Los Alamos, NM 87544
505-665-7314/Fax 505-667-5948

Symbol: EPC-DO: 24-116
LA-UR: 24-23621
Locates Action No.: N/A
Date: April 30, 2024

Philip Santana, Prevention Inspection Program
Philip.Santana@env.nm.gov
Petroleum Storage Tank Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505

VIA ELECTRONIC MAIL

Subject: LANL TA 55-0560 RLUOB Tank Removal, Remediation and Closure – Final Report

Facility #: 54763 Release ID #: 4670 WPID #: 19157

On behalf of Los Alamos National Laboratory (LANL), Triad is submitting the final TA 55-0560 Tank Removal, Remediation and Closure Report to the New Mexico Environment Department's (NMED) Petroleum Storage Tank Bureau (PSTB). The current due date of deliverable is listed as 30 April 2024 for the submittal of a Secondary/Final Investigation and Report. Based on successful cleanup/remediation results as described herein in partnership with Banda Group International /General CONtractor (BGI/GCON) as the third-party subcontractor here, administrative closure is requested.

Please contact Aaron Dailey of Environmental Compliance Programs Group (EPC-CP) by telephone at (505) 667-7276 or by email at adailey@lanl.gov regarding this request for closure.

Sincerely,

SARAH HOLCOMB (Affiliate)
Digitally signed by SARAH HOLCOMB (Affiliate)
Date: 2024.04.25 08:44:32 -06'00'

Sarah S. Holcomb
Group Leader
EPC-CP
Triad National Security, LLC

Sincerely,

Robert A. Gallegos
Digitally signed by Robert A. Gallegos
Date: 2024.04.29 16:04:07 -06'00'

Robert E. Gallegos
Permitting and Compliance Program Manager
National Nuclear Security Administration
U.S. Department of Energy

Attachment(s): Attachment 1 LANL TA 55-0560 RLUOB Tank Removal, Remediation and Closure - Final Report

Copy: PSTB.Inbox@env.nm.gov
Lorena Goerger, NMED PSTB, Lorena.Goerger@env.nm.gov
Ricardo Maestas, NMED HWB, ricardo.maestas@env.nm.gov
Chris Hamilton, NMED PSTB, Chris.Hamilton@env.nm.gov
Steve Yanicak, NMED, Steve.Yanicak@env.nm.gov
Rick Shean, NMED-HWB, rick.shean@env.nm.gov
Neelam Dhawan, NMED-HWB, neelam.dhawan@env.nm.gov
Siona Briley, NMED-HWB, siona.briley@env.nm.gov
Ken Vernon, BGI, kenv@bandagroupintl.com
Karen E. Armijo, DOE-NA-LA, karen.armijo@nnsa.doe.gov
Robert A. Gallegos, DOE-NA-LA, robert.gallegos@nnsa.doe.gov
Lauren J. Lucero, Triad, TA55-CWF, llucero@lanl.gov
Steven A. Coleman, Triad, ALDESHQ, scoleman@lanl.gov
Jennifer E. Payne, Triad, ALDESHQ, jpayne@lanl.gov
Jeannette T. Hyatt, Triad, EWP, jhyatt@lanl.gov
Steven L. Story, Triad, EPC-DO, story@lanl.gov
Sarah S. Holcomb, Triad, EPC-CP, sholcomb@lanl.gov
Luciana R. Vigil-Holterman, EPC-WMP, luciana@lanl.gov
Kristen Van Horn, Triad, EPC-WMP, klv@lanl.gov
Steve G. Pearson, Triad, EPC-CP, spearson@lanl.gov
Elvin J. Chavez, Triad, EPC-CP, elvin@lanl.gov
Eduardo C. Lopez, Triad, EPC-CP, eclopez@lanl.gov
eshq-dcrm@lanl.gov
epccorrespondence@lanl.gov
lasomailbox@nnsa.doe.gov

ATTACHMENT 1

LANL TA 55-0560 RLUOB Tank Removal, Remediation and Closure – Final Report

EPC-DO: 24-116

LA-UR: 24-23621

Date: 30 April 2024

ABOVEGROUND STORAGE TANK CLOSURE REPORT
TANK TA-55-0560

NMED PSTB FACILITY ID #54763

TA-55
RADIOLOGICAL LABORATORY UTILITY AND OFFICE BUILDING
(RLUOB)
DIESEL TANK REMOVAL PROJECT

Subcontract No. CW24492

Prepared for:

TRIAD NATIONAL SECURITY, LLC

Contract No. 623438

Prepared by:

BGI-GCON, LLC
1460 Trinity Drive, Unit 6
Los Alamos, New Mexico 87544

17 April 2024

ABOVEGROUND STORAGE TANK CLOSURE REPORT

TANK TA-55-0560

NMED PSTB FACILITY ID #54763

TA-55

RADIOLOGICAL LABORATORY UTILITY AND OFFICE BUILDING

(RLUOB)

DIESEL TANK REMOVAL PROJECT

CLIENT:	TRIAD NATIONAL SECURITY, LLC (TRIAD)
CONTRACT NUMBER:	623438
SUBCONTRACT NUMBER:	CW24492

Contributing Authors:	**Signatures:**	**Date:**	**Titles:**
Karen Curtiss		04/17/2024	Project Manager
Gerald Moore		04/17/2024	Health and Safety Professional
Wayland Damon		04/17/2024	Site Superintendent
Reviewed By:	**Signature:**	**Date:**	**Title:**
Ken Vernon		04/17/2024	QA/QC Manager
Approved By:	**Signature:**	**Date:**	**Title:**
Joe Sena		04/17/2024	Executive Director, Government Programs

REVISION LOG

ABOVEGROUND STORAGE TANK CLOSURE REPORT
TA-55-0560
RLUOB DIESEL TANK REMOVAL PROJECT

Revision Number/Date	Description of Changes	Pages Affected
R01/29 March 2024	See Comment/Response Matrix (C/RM)	As listed on C/RM
R02/09 April 2024	See C/RM	As listed on C/RM
R03/17 April 2024	See C/RM	As listed on C/RM

CONTENTS

Executive Summary vi

1.0 Introduction, Background, Regulatory Oversight, and Scope-of-Work Overview **1**

1.1 Introduction, Background, and Regulatory Oversight 1

1.2 Project Scope of Work 1

2.0 Pre-job Submittals Preparation, Site Training and Preparedness Review **3**

3.0 Field Activities **4**

3.1 Site Preparation and Mobilization 4

3.2 Underground Utility Location and Potholing 5

3.3 Removal of Remaining Diesel Fuel from AST 5

3.4 Tank Removal 5

3.5 Concrete Pad Removal, Underlying-Soil Excavation, and Confirmation Soil Sampling 6

3.6 Piping Removal and Confirmation Soil Sampling 7

3.7 Excavation Backfilling, Soil Compaction, and Paving 8

3.8 Site Landscaping & Restoration 8

3.9 Demobilization 8

3.10 Wastes Generated from Field Activities 8

3.11 Project Summary of Sampling 9

3.11.1 Confirmation Soil Sampling 9

3.11.2 Waste-Characterization Sampling 10

4.0 Health and Safety Monitoring **10**

4.1 Health and Safety Monitoring 11

4.2 Incident Reporting 12

4.2.1 Pause Work 13

5.0 Shutdown Periods **13**

5.1 Mexican Spotted Owl Biological Survey Period Shutdown 13

5.2 Weather-Related Shutdowns 13

6.0 Findings, Conclusions, and Recommendations **14**

6.1 Findings 14

6.2 Conclusions 15

6.3 Recommendations 16

7.0 References **17**

List of Figures

Figure 1.0	**Site Location Map**
Figure 2.0	**Above-Ground Storage Tank Location**
Figure 3.0	**Confirmation Soil Sample Locations**

List of Tables

Table 3.1	**Confirmation Soil Sampling Analytical Results- Concrete Pad Excavation (4 Feet Below Grade)**
Table 3.2	**Confirmation Soil Sampling Analytical Results- Concrete Pad Excavation (7 & 8 Feet Below Grade)**
Table 3.3	**Confirmation Soil Sampling Analytical Results- Fuel Piping Trench Excavation**
Table 3.4	**Containerized-Waste Soil Characterization Analytical Results**
Table 4.1	**Health and Safety Program Lessons Learned**

List of Appendices

Appendix A	**NMED PSTB Approvals**
Appendix B	**Project Photolog**
Appendix C	**Geodetic Survey Results (GPS Coordinates)**
Appendix D	**Certificate of Destruction and Manifest Documentation, LANL TA 55-0560 RLUOB Diesel Tank. EPC-DO: 23-302; LA-UR: 23-31081**
Appendix E	**Waste Manifests & Profiles**
Appendix F	**NMED PSTB Notification of Permanent Closure of Tank Disposition Documentation, Petroleum Storage Tank Systems, LANL TA-55-0560 RLUOB Diesel Tank. EPC-DO: 23-302; LA-UR: 23-31081**
Appendix G	**Sample Control Documentation (Sample Collection Logs/Chain-of-Custody Forms/RADCON Survey Forms) and Analytical Laboratory Reports**
Appendix H	**Compaction Testing Results**
Appendix I	**Industrial Hygiene Monitoring Data**

Acronyms and Abbreviations

ANSI	American National Standards Institute
API	American Petroleum Institute
AST	Aboveground Storage Tank
BGI-GCON	Banda Group International-GCON JV, LLC
BMPs	Best Management Practices
cm	centimeter
cps	counts per second.
CSP	Certified Safety Professional
CUB	Central Utility Building
dpm	disintegrations per minute
DRO	Diesel-Range Organics
ES&H	Environmental Safety and Health
fpm	feet per minute
ft	foot or feet
GEL	General Engineering Laboratories, Inc.
GRO	Gasoline-Range Organics
HDP	Heat Dissipation Probe
ID	identification
IDW	investigation-derived waste
IWDs	Integrated Work Documents
JV	Joint Venture
LANL	Los Alamos National Laboratory
LLC	Limited Liability Corporation
mg/kg	milligrams per kilogram
MRO	Motor Oil-Range Organics
NMAC	New Mexico Administrative Code
NMED	New Mexico Environment Department
NTP	Notice to Proceed
PID	Photoionization Detector
PM	Project Manager
PPE	personal protective equipment
PSTB	Petroleum Storage Tank Bureau
PVC	polyvinyl chloride
RCT	Radiological Control Technician
RLUOB	Radiological Laboratory Utility and Office Building
SMO	Sample Management Office
SOPs	standard operating procedures
SOW	Scope of Work
SSESHP	Site-Specific Environmental, Safety, and Health Plan
SSL	Soil Screening Level
STR	Subcontractor Technical Representative
SWPPP	Stormwater Pollution Prevention Plan
TA	Technical Area
TSDF	Treatment, Storage, and Disposal Facility
WCSF	Waste Characterization Strategy Form
yds^3	Cubic yards

Executive Summary

This project Aboveground Storage Tank Closure Report details tank-removal activities conducted in Technical Area-55 (TA-55) of the Los Alamos National Laboratory (LANL or the Laboratory), specifically removal of Aboveground Storage Tank (AST) TA-55-0560, NMED PSTB Facility ID #54763; a 12,000-gallon-capacity aboveground diesel-fuel storage tank.

As previously reported in the *Investigation Report For Addendum to the Work Plan For The Removal of Soils Contaminated with Diesel Fuel Released From RLUOB Aboveground Storage Tank 55-0560 Additional Sampling and Analysis Plan* (LANL, 2014), an unauthorized release of #2 Low Sulfur Diesel Fuel from the skid sump associated with AST 55-0560 impacted subsurface soils in proximity to the AST.

In response, LANL's Emergency Operations Team excavated approximately 5 cubic yards (yds^3) of diesel-contaminated soil at the western end of the AST. Subsequently, an additional 100 yds^3 of diesel-contaminated soils were removed in proximity to AST 55-0560 in accordance with methodology prescribed in LANL's Work Plan For The Removal of Soils Contaminated With Diesel Fuel Released From RLUOB Aboveground Storage Tank 55-0560 (LANL, 2013). Laboratory analysis of confirmation soil samples collected from the resultant excavation indicated the presence of total petroleum hydrocarbons (TPH), including diesel-range organics (DRO), as well as benzene, toluene, ethylbenzene, and xylene (BTEX).

To define the lateral and vertical extent of the soil contaminated by the diesel-fuel release, investigative boreholes were drilled and sampled in April 2014 (LANL, 2014), resulting in the detection of concentrations of organic chemicals (including TPH-DRO and TPH-GRO [gasoline-range organics]), which were compared to New Mexico Environment Department (NMED) Hazardous Waste Bureau industrial soil screening levels (SSLs [NMED 2012]), as well as to EPA regional industrial screening values. In responsible consideration of the presence of the environmental contaminants, LANL notified the NMED Petroleum Storage Tank Bureau (PSTB) of their intention to proceed with permanent closure of the tank and appurtenances. The NMED PSTB provided approval of the workplan prepared to detail the scope of work and methodology proposed to implement permanent closure of the tank (LANL, 2021) 17 October 2022 (NMED, 2022a).

The objective of the tank-removal project detailed herein was, therefore, to remove TPH contaminant sources, including the tank and associated appurtenances, as well as the subsurface soils contaminated by the released diesel fuel of the administrative, field, and laboratory project tasks included in the project scope of work.

Investigative field activities conducted during the tank-removal project included the collection of several confirmation samples from soils located beneath the former concrete pad supporting the tank structure, as well as from beneath the subsurface fuel piping associated with the tank.

Of the 16 total soil confirmation samples collected, three were reported to contain analyte concentrations (of TPH-DRO) that exceeded established screening criteria (i.e., SSLs). These samples were collected from the area shown to be contaminated by spilled diesel fuel via the analysis of soil samples collected during previous investigative efforts, conducted in 2012.

The presence of an underlying layer of confining bedrock precluded additional vertical excavation and sampling of soils beyond the depths of 7-7.5 and 8-8.5 feet below grade reached by soil-removal efforts in the concrete-pad excavation. A total volume of approximately 35.75 yds^3 of soil was excavated above the confining bedrock layer and disposed of as New Mexico Special Waste and transported to the U.S. Ecology facility near Beatty, Nevada.

Based on the results discussed herein, the project investigative and remedial efforts conducted onsite have resulted in an environmentally-sound removal of the potential sources of petroleum-hydrocarbon contamination (i.e., the AST and appurtenant structures, as well as the petroleum-hydrocarbon-contaminated soils), and administrative site-closure status is requested of the NMED.

1.0 Introduction, Background, Regulatory Oversight, and Scope-of-Work Overview

1.1 Introduction, Background, and Regulatory Oversight

This project Aboveground Storage Tank Closure Report (tank closure report) details tank-removal activities conducted in Technical Area-55 (TA-55) of the Los Alamos National Laboratory (LANL or the Laboratory). Located on the Lower Pajarito Plateau in the eastern footprint of the Laboratory, TA-55 occupies approximately 40 acres of LANL (Refer to Figure 1). The closure of the aboveground tank (Tank TA-55-0560 [NMED PSTB Facility ID #54763]; a 12,000-gallon-capacity aboveground diesel-fuel storage tank) was conducted approximately 0.06 miles west-northwest of the intersection of Pajarito Road and Pecos Drive, in Los Alamos, New Mexico.

As previously reported in the *Investigation Report For Addendum to the Work Plan For The Removal of Soils Contaminated with Diesel Fuel Released From RLUOB Aboveground Storage Tank 55-0560 Additional Sampling and Analysis Plan* (LANL, 2014), an unauthorized release of #2 Low Sulfur Diesel Fuel from the skid sump associated with Aboveground Storage Tank (AST) 55-0560 impacted subsurface soils in proximity to the AST and appurtenances. In response, LANL's Emergency Operations Team excavated approximately 5 cubic yards of diesel-contaminated soil at the western end of the AST. Following this initial emergency response, an additional 100 cubic yards of diesel-contaminated soils were removed in proximity to AST 55-0560 in accordance with methodology prescribed in LANL's *Work Plan For The Removal of Soils Contaminated With Diesel Fuel Released From RLUOB Aboveground Storage Tank 55-0560* (LANL, 2013). Laboratory analysis of confirmation soil samples collected from the resultant excavation's sidewalls and floor indicated the presence of total petroleum hydrocarbons (TPH), including diesel-range organics (DRO), as well as benzene, toluene, ethylbenzene, and xylene (BTEX).

In an effort to define the lateral and vertical extent of the soil contaminated by the diesel-fuel release, five investigative boreholes were drilled to a depth of 54 feet, with drilling and sampling activities conducted from 21-24 April 2014 (LANL, 2014). Site-investigation activities resulted in the detection of concentrations of organic chemicals (including TPH-DRO and TPH-GRO [gasoline-range organics]), which were compared to New Mexico Environment Department (NMED) Hazardous Waste Bureau industrial soil screening levels (SSLs [NMED 2012]), as well as to EPA regional industrial screening values. In responsible consideration of the presence of the environmental contaminants (i.e., TPH-DRO at concentrations exceeding the aforementioned screening criteria), LANL notified the NMED Petroleum Storage Tank Bureau (PSTB) of their intention to proceed with permanent closure of the tank and appurtenances, including removal of contaminated soils associated with the unauthorized diesel-fuel release (LANL, 2021). Approval of the workplan prepared to detail the scope of work and methodology proposed to implement permanent closure of the tank (LANL, 2021) was provided by the NMED on 17 October 2022 (NMED, 2022a) (Appendix A).

The objective of the tank-removal project described herein was, therefore, to remove TPH contaminant sources, including the tank and associated appurtenances, as well as the subsurface soils contaminated by the released diesel fuel, via the implementation of the project tasks outlined in the Project Scope of Work section, below.

1.2 Project Scope of Work

The work implemented and completed to facilitate removal of the AST and appurtenances was achieved via performance of the project tasks described below:

Task 1: Pre-Job Submittals Preparation, Site Training, and Preparedness Review – Following the project kickoff meeting, on 21 September 2022, BGI-GCON prepared the required pre-job submittals, including the project Site-Specific Environmental, Safety and Health Plan (SSESHP) and Integrated

Work Documents (IWDs). Concurrently, BGI-GCON initiated site personnel training and badging requirements. Following the completion of pre-job submittals, training, and badging, BGI conducted an internal self-assessment prior to Triad's project preparedness review.

Task 2: Site Preparation and Mobilization – Following receipt of the Notice to Proceed (NTP), on 3 February 2023, BGI-GCON initiated mobilization activities, including the placement of temporary onsite structures (comprised of a field office trailer), equipment, and supplies as well as site-access control measures.

Task 3: Utility Location and Potholing – Underground utility location was performed in proximity to the job site, by LANL's Utility and Infrastructure Locators. Concrete-reinforcement bars (i.e., rebar) in the concrete pad was marked utilizing Ground-Penetrating Radar (GPR) equipment. Subsequently, in order to confirm the absence of underground utilities in the planned excavation/demolition locations, BGI-GCON conducted potholing activities as prescribed in the project potholing plan. This consisted of making localized hand-tool excavations at predetermined locations within the 5-foot variance in proximity to marked underground utility lines.

Task 4: Removal of Remaining Diesel from Tank and Piping – Prior to conducting removal of the AST and pipe, the residual fuel oil was removed using drain-and-capture methods refined during the demolition. Approximately 85 gallons of diesel fuel were removed using these methods and placed in two blue PVC 55-gallon-capacity drums labeled "Fuel Oil For Recycle". The diesel fuel was subsequently removed by the LANL Waste Management Coordinator and personnel and recycled off site.

Task 5: Demolition of the Aboveground Storage Tank, Piping, Components, Secondary Containment, Steel Bollards, and Concrete – The AST, associated piping runs, secondary-containment components (including east and west valve sumps), protective steel bollards, and concrete surfaces beneath the AST and piping runs were removed during field activities and disposed of offsite.

Task 6: Excavation of the Soil Beneath the Concrete Pad and Associated Piping – Subsequent to the removal of the overlying concrete pad and appurtenant structures, subsurface soil was excavated using heavy equipment (i.e., a backhoe and smaller excavator) and hand tools. Approximately 40 cubic yards of soil were removed during the excavation activities. The soil was screened for petroleum hydrocarbons, using a photoionization detector (PID) and, when warranted, segregated by placing the potentially-contaminated soil in containment bins for characterization via laboratory analysis of representative samples, followed by manifest-documented offsite transport and disposal at a licensed hazardous waste facility.

Task 7: Confirmation Soil Sampling and Analysis – Soil samples were collected from the concrete-pad excavation floor and sidewalls at a predetermined depth of four (4) feet below grade and upon reaching the top of a confining lithologic layer (i.e., tuff) underlying the AST tank area at approximately 7-7.5 feet below grade (which was encountered prior to reaching the other predetermined confirmation-soil sampling depth of eight [8] feet below grade) and at 8-8.5 feet below grade along the sloping bedrock (tuff) surface encountered below the unconsolidated soil. Confirmation soil samples were also collected beneath the piping-run locations at lateral intervals of 20 feet. The samples were submitted to General Engineering Laboratories, Inc. (GEL) for analytical laboratory analysis to quantify their petroleum-hydrocarbon content using prescribed analytical methodology, as detailed herein.

Task 8: Excavation Backfilling, Soil Compaction, and Paving – At the completion of confirmation soil sampling, the excavations (at the former concrete pad and piping-run locations) were backfilled with

engineered soil, which was compacted in accordance with prescribed specifications, and subsequently paved or covered over with asphalt (in the piping-run locations) or landscape gravel (in the concrete-pad location).

Task 9: Site Landscaping & Restoration– Following backfilling, compaction, and paving tasks, the site was landscaped with native vegetation and xeriscaping materials and restored in keeping with pre-project site aesthetics.

Task 10: Demobilization – Demobilization from the site, including the removal of equipment and supplies, as well as the demobilization of personnel and temporary project-support structures, was conducted following the conclusion of scheduled project activities. Demobilization and decontamination of equipment from the site was performed in accordance with Radiological Control Technician (RCT) screening and clearance.

The aforementioned project tasks are discussed in greater detail, herein.

2.0 Pre-job Submittals Preparation, Site Training and Preparedness Review

Prior to the mobilization of project personnel and equipment, BGI-GCON provided Triad National Security, LLC (Triad) with the approved project Work Plan (BGI-GCON, 2022), which outlined the project tasks required to achieve project objectives. In this plan, BGI-GCON outlined the sequencing of project activities, equipment, personnel, processes, and schedule required to successfully complete the project SOW.

Key pre-job submittals required to implement the required project tasks included the following:

- Integrated Work Documents (IWDs):
  - IWD 1- Mobilization, Demobilization, Snow Removal and General Site Hazards (BGI-GCON, 2023b)
  - IWD 2- Earthwork and Demolition (BGI-GCON 2023f)
  - IWD 3- Concrete, Rebar, and General Site Hazards (BGI-GCON, 2022b)
  - IWD 4- Electrical and General Site Hazards (BGI-GCON, 2022c)
  - IWD 5- Sampling, Waste Containerization, and General Site Hazards (BGI-GCOON, 2022a)
  - IWD 6- Residual Diesel Fuel Removal (BGI-GCON, 2023c)
  - IWD 7- Aboveground Demolition and General Site Hazards (BGI-GCON, 2023d)
  - IWD 8- Onsite Equipment Refueling (BGI-GCON, 2023e)

- Site Specific Environmental, Safety, and Health Plan (SSESHP), Program Plan For TA-55 Tank Removal Project (BGI-GCON, 2023a)

Each of the key pre-job submittals was approved by Triad project-personnel, prior to mobilization, as indicated through issuance of the NTP.

Concurrent with the preparation of pre-job submittals, BGI-GCON initiated training of all site personnel (including BGI-GCON project employees and lower-tier subcontractors). Training matrices were developed for all site workers outlining the appropriate training procedures, and the resultant training-completion records were submitted to Triad.

Following completion of pre-job submittals and site-worker training, BGI-GCON conducted an internal self-assessment, prior to the Triad Project Preparedness Review.

Once all project planning, training, and badging was completed, the project preparedness review was coordinated and conducted with Triad. The project preparedness meeting was conducted, on 14 January 2023, to ensure the project team was ready for the start of field activities and all team members understood the SOW, as well as their roles and responsibilities. BGI-GCON worked in conjunction with Triad to determine that all permits required to begin work at the project site had been obtained.

Project mobilization began after all project preparedness activities were completed and acknowledged during the project readiness review meeting on 30 January 2023, and the NTP was obtained, from Triad, on 3 February 2023.

3.0 Field Activities

The sections below detail the field activities completed during the performance of the project SOW. Photographs taken during the performance of the project field activities are provided in Appendix B.

3.1 Site Preparation and Mobilization

Following receipt of the NTP, BGI-GCON initiated mobilization activities, including the placement of temporary onsite structures (comprised of a field office trailer/storage unit), equipment, and supplies. Also installed were site-access control measures, including signs, barrier fencing, and 2 gates, one at the site entrance control point and one at the east side to allow through traffic for RLUOB activity.

The tank-removal site for the project was prepared with minimal impact and disturbance to the area. Ground disturbance was kept to a minimum through the placement of best management practice (BMP) controls, installed to minimize erosion, silt entering storm drains and surface water run-on or run-off from the site in accordance with LANL's Storm Water Pollution Prevention Plan (SWPPP) (a project-specific SWPPP was not required based upon the area of the project). All installed BMPs at the project site remained in place until the applicable phases or tasks of the project were completed and authorization to remove them was obtained from Triad. The various BMPs utilized included gravel bags, straw wattles, and regular removal of silt accumulation at the heavy-equipment usage areas established onsite and used to mitigate the tracking out of debris on vehicle tires entering and exiting the site. General traffic control measures were addressed in BGI-GCON's SSESHP and site Traffic Control Plan (BGI-GCON SSESHP, January 2023; BGI-GCON Traffic Control Plan, 11 January 2023). During site preparation and mobilization, BGI-GCON ensured that traffic control measures were in place to safely manage traffic across and adjacent to the project site.

Site preparation and mobilization activities also included an initial underground utility and topographic survey of the project site. Topographic surveying activities were performed by LANL Utility and Institutional Facilities on 19 September 2023. Survey results are provided in Appendix C.

Site preparation also included establishing the construction exclusion zone with one entry/exit point for workers and equipment to gain access to the site exclusion zone each day. This entrance was clearly marked with signs outlining site-entry requirements (including personal protective equipment [PPE] requirements.

Refer to Figure 2, which depicts the site layout and working zones that were established during site preparation and mobilization activities.

3.2 Underground Utility Location and Potholing

Prior to ground-disturbance activity, BGI-GCON obtained an EXID Permit (Permit Number 23X-0671-55) and coordinated location of subsurface utilities in proximity to the job site using GPR equipment, which was performed by LANL's Utilities and Infrastructure Locators. The existing subsurface utilities, as well as the underground fuel piping associated with the AST, were located and marked on the paving surfaces above the utilities and piping and rebar locations were marked on the surface of the concrete pad in red paint on 21 November 2023. The absence of subsurface utilities in the proposed petroleum piping and tank pad excavation areas was confirmed through the performance of potholing activities, which were performed using hand tools to excavate to a depth of three (3) feet below grade. Those utilities that were to remain were protected in place. A deep concrete encased electrical duct bank was beyond the vertical limits of excavation and was not visually identified. A meeting was held 21 September 2023 with attendees of Utilities and Infrastructure, the project Subcontractor Technical Representative (STR), and the LANL Environmental Health and Safety (EH&S) representative, where it was decided that the duct bank was not within the excavation limits and BGI-GCON was given clearance to proceed with breaking and removal of the containment pad. Potholing was performed in accordance with specifications and methodology outlined in the project Potholing Plan dated 19 September 2023 was approved by Triad.

3.3 Removal of Remaining Diesel Fuel from AST

Prior to removal of the AST, approximately 40 gallons of residual diesel fuel were removed from the containment vessel. The diesel fuel was removed by pumping from the tank bottom, as well as by draining from piping and dip tubes, and placed in a labeled 55-gallon container and stored onsite in the project spill-containment equipment area. The diesel fuel was subsequently removed from the site by Triad's Waste Management Group on 25 November 2023 and was ultimately recycled under New Mexico Regulations on Special Waste. It should be noted that the three sets of generators that the diesel tank fueled were disconnected from the tank piping in 2013 and have since been fueled via the use of mobile refuelers.

3.4 Tank Removal

The tank access platform ('catwalk') and diesel tank, itself, were removed after development of approved lift plans that provided specifications for the methodology and equipment needed to meet the requirements to safely lift and disassemble the platform and tank.

Following its delivery to the job site, the project-approved crane was inspected by qualified personnel for applicable performance parameters and project suitability in accordance with project quality-assurance/quality-control protocol on 29 August 2023. It was then connected to the access platform at designated pick points and disconnected from the tank under support from the crane and connecting equipment and tackle. The catwalk was then disconnected from the tank, lifted from its location, and placed on a flatbed truck which was used to remove it from the site and transport it to the disassembly and disposal site.

Following removal of the catwalk, appurtenant tank structures (including the rain hood, remote fill assembly, and sump) were also removed. The crane was then connected to the diesel tank at designated attachment-and-lift points. Vertical support pressure was then applied to the tank, and it was disconnected from the anchor bolts and concrete pad. Adhering to the approved tank lift plan, the project crane was then used to further elevate the tank from its pad and slowly and safely moved into position above a flatbed truck. The tank was then safely lowered onto the flatbed of the truck, secured in place, and transported offsite for disassembly and recycling as scrap metal.

The Certificate of Tank Destruction is included as Appendix D.

3.5 Concrete Pad Removal, Underlying-Soil Excavation, and Confirmation Soil Sampling

The supporting concrete pad and foundation that underlay the AST, prior to removal, was demolished using an excavator mounted hydraulic breaker. The resultant concrete rubble was stockpiled onsite, loaded into dump trucks using front-end loaders, and transported offsite for disposal. Destruction of the pad, which measured approximately 10 feet wide, by 48 feet long, by 2-1/2 feet thick, produced approximately 50 cubic yards of concrete debris, which was transported offsite after being classified as solid, non-hazardous municipal waste, and recycled.

Once the concrete pad was removed and transported offsite, heavy equipment (i.e., a backhoe and excavator) was used to excavate the underlying soil. The soil was excavated in 6-inch lifts, with each lift screened for petroleum-hydrocarbon content using a PID. Soil showing the potential presence of petroleum contaminants (i.e., soils with organic vapor levels greater than 100 parts per million [ppm] as indicated by PID readings) was placed in containment bins for characterization via laboratory analysis and ultimate offsite disposal.

Upon reaching a depth of four (4) feet below grade in the excavation, confirmation soil samples were collected via the use of a handheld drive sampler, outfitted with 2-inch-diameter by 4-inch-long stainless-steel sleeves, sealed, labelled, and placed into coolers outfitted with ice packs. The samples were then delivered to the Triad Sample Management Office (SMO) for preparation and transport to the analytical laboratory (General Engineering Laboratories, Inc.- GEL). Sampling locations are shown on Figure 3. The confirmation soil samples were collected at points located within each of the four quadrants of the excavation (as well as near the approximate center of same). In the interest of preserving the integrity of the samples by utilizing sample-collection methodology that would involve the least amount of disturbance of the sampled media and thereby minimize the potential volatilization of the suspected contaminants, this sampling protocol was chosen in lieu of the collection of composited samples within each of the excavation's quadrants.

Upon receipt at the analytical laboratory (GEL), the samples were analyzed for petroleum-hydrocarbon content using the following analytical methods:

- Total Petroleum Hydrocarbons- Diesel Range Organics by EPA Method SW-846:8015D
- Total Petroleum Hydrocarbons- Gasoline Range Organics by EPA Method SW-846:8015D
- Total Petroleum Hydrocarbons- Motor Oil Range Organics by EPA Method SW-846:8015D
- Benzene, Toluene, Ethylbenzene, Xylene (BTEX- Total) by EPA Method SW-846:8260D

Laboratory analysis of the confirmation soil samples collected at four feet below grade in the excavation indicated the presence of petroleum hydrocarbons. Therefore, the excavation activities were resumed, advancing the removal of subsurface soils from the concrete-pad excavation to depths ranging from approximately seven (7) to eight (8) feet below grade (upon which an underlying sloped layer of tuff was encountered, precluding advancement of the excavation to the intended overall target depth of eight [8] feet below grade throughout the extent of the excavation footprint). Efforts to advance the vertical extent of the excavation beyond 7.5 to 8.5 feet below grade by removing the tuff with a toothed excavator bucket were unsuccessful.

The excavated soil was removed in 6-inch lifts, with screening via the use of a PID performed for each excavated lift. Soil showing the potential presence of petroleum contaminants was, again, segregated into stockpiles and then placed in containment bins for characterization via laboratory analysis and ultimate offsite disposal.

Upon reaching depths of 7 and 8 feet below grade in the excavation, confirmation soil samples were, again, collected via the use of a handheld drive sampler, outfitted with 2-inch-diameter by 4-inch-long stainless-steel sleeves, sealed, labelled, and placed into coolers outfitted with ice packs. The samples

were then delivered to the Triad Sample Management Office (SMO) for preparation and transport to the analytical laboratory. Sampling locations are shown on Figure 3.

Upon receipt at the analytical laboratory (GEL), the samples were (as with the samples collected at 4 feet below grade) analyzed for petroleum-hydrocarbon content using the following analytical methods:

- Total Petroleum Hydrocarbons- Diesel Range Organics by EPA Method SW-846:8015D
- Total Petroleum Hydrocarbons- Gasoline Range Organics by EPA Method SW-846:8015D
- Total Petroleum Hydrocarbons- Motor Oil Range Organics by EPA Method SW-846:8015D
- Benzene, Toluene, Ethylbenzene, Xylene (BTEX- Total) by EPA Method SW-846:8260D

Analytical results are summarized on Tables 3.1 – 3.4 and discussed in Section 3.11.1. Field Chain-of-Custody documents and laboratory analytical reports are presented in Appendix G.

3.6 Piping Removal and Confirmation Soil Sampling

After locating the underground fuel piping through the use of GPR and confirmation of the piping locations via potholing, a backhoe equipped with a toothed bucket was used to excavate the overlying soil and expose the piping run.

The excavated soil was removed in 6-inch lifts, with screening via the use of a PID performed for each excavated lift. Soil showing the potential presence of petroleum contaminants was placed in containment bins for characterization via laboratory analysis and ultimate offsite disposal.

Approximately 240 feet of 2-inch-diameter composite HTFL/PFT tubing was pulled from its corrugated PVC secondary containment tubing then removed from the resultant trench. PVC containment tubing was removed in pieces after the inner tube was removed for the trench. Each section of fuel oil tubing was cut over double containment, capturing residual fuel oil in containment tubs, plugged at each end, removed from the trench and drained into a 55-gallon-capacity drum.

After removing residual diesel fuel contained in the lengths of pipe, they were cut into 4-foot sections, bagged and loaded onto a flatbed truck for offsite transport and disposal.

Once the piping lengths were removed and transported offsite, confirmation soil samples were collected from the floor of the piping trench. The samples were collected via the use of a handheld drive sampler, outfitted with 2-inch-diameter by 4-inch-long stainless-steel sleeves, sealed, labelled, and placed into coolers outfitted with ice packs. The samples were then delivered to the Triad Sample Management Office (SMO) for preparation and transport to the analytical laboratory. Sampling locations are shown on Figure 3.

Upon receipt at the analytical laboratory (GEL), the samples were analyzed for petroleum-hydrocarbon content using the following analytical methods:

- Total Petroleum Hydrocarbons- Diesel Range Organics by EPA Method SW-846:8015D
- Total Petroleum Hydrocarbons- Gasoline Range Organics by EPA Method SW-846:8015D
- Total Petroleum Hydrocarbons- Motor Oil Range Organics by EPA Method SW-846:8015D
- Benzene, Toluene, Ethylbenzene, Xylene (BTEX- Total) by EPA Method SW-846:8260D

Analysis of the confirmation soil samples collected beneath the piping indicated the presence of petroleum hydrocarbons in only one (1) of the eight (8) samples.

During the additional excavation activities conducted onsite, an additional confirmation soil sample (Sample ID: RLUOB-23-289599) was collected at the soil/tuff interface in proximity to the one confirmation soil sample collected beneath the fuel system piping (Sample ID: RLUOB-23-289589) that was found to contain petroleum hydrocarbons. Analysis of this soil sample resulted in the detection of TPH-DRO at a concentration slightly in excess of the SSL. As this sample was collected at the subsurface soil/confining-tuff (i.e., bedrock) interface, sampling at a greater depth was not feasible due to

the absence of unconsolidated soil. The presence of the confining layer of tuff was confirmed during a site visit, on 13 December 2023, by an NMED PTSB staff member, who observed the overall lateral and vertical extent of the excavation (NMED, 2023).

3.7 Excavation Backfilling, Soil Compaction, and Paving

Subsequent to the completion of excavation activities and confirmation soil sampling of the piping trench and concrete-pad excavation, engineered fill from a LANL clean fill stockpile at TA-48 was trucked in and used to backfill the trench and excavation cavity. The engineered fill was placed into the excavation and trench in 1-foot lifts and compacted per project specifications, with compaction testing performed by an independent third party (WSP Testing Lab). Compaction-testing results are provided in Appendix H. The piping trench area and pavement joining edge to the concrete-pad excavation were paved with suitable materials (i.e., asphalt) in compliance with site usage and traffic requirements.

3.8 Site Landscaping & Restoration

After site cleanup activities were completed, the site was stabilized with xeriscape landscaping materials, including gravel similar to that onsite at the onset of field activities. Site grading and drainage were conducted to facilitate positive drainage to the existing storm-drain system.

3.9 Demobilization

Upon the completion of project field activities, demobilization of heavy equipment, tools, health-and-safety equipment and supplies, SWPPP BMPs, site exclusion-zone fencing, signage, spill-control supplies, and the temporary site office/storage trailer were removed. The SWPPP BMPs were removed using a dry method and sweeping without allowing accumulated silt to enter the storm drains.

3.10 Wastes Generated from Field Activities

Excavated soils were generated from the concrete pad and piping areas. The material was screened for petroleum hydrocarbons, via the use of a PID, with potentially-contaminated soils segregated and stockpiled near the excavation locations. The potentially-contaminated soil was subsequently placed into two 20-cubic-yard waste containers that were labeled, sealed, and stored near the excavated areas.

The container ID Numbers and waste-generation start and end dates were as follows:

- Bin #PT-1146 October 2023- 24 January 2024
- Bin #6441 October 2023- 24 January 2024

On 24 January 2024, waste characterization samples were collected from both bins. Samples were collected in accordance with the Waste Characterization Strategy Form (WCSF) titled “Waste Characterization Strategy Form: TA-55 RLUOB Fuel Oil Tank Removal (LANL, 2023). BGI-GCON team members collected one representative composite sample from each bin, for a total of two waste characterization samples, with subsequent analysis resulting in characterization of the material as containing concentrations of petroleum hydrocarbons exceeding SSLs. The analytical laboratory report generated for the soil samples collected from the two containers is provided in Appendix G. Waste manifests prepared for the two containers are provided in Appendix E.

Waste was generated and managed appropriately throughout the project. Waste streams produced are as follows:

- Two 20-cubic-yard bins containing a combined total of approximately 35.75 yds^3 of excavated soil.
- Approximately 50 yds^3 of concrete debris.
- PPE.

- General refuse to include but not limited to food scraps, lunchroom waste, drink containers, paper, plastic, and cardboard containers as well as packing and shipping materials.
- Approximately 240 feet of HTFL/PFT fuel-oil tubing.
- Approximately 250 feet of corrugated PVC secondary-containment tubing.
- Approximately 600 feet of 2-inch-diameter iron pipe and fittings, 50 feet of 1-inch-diameter iron pipe and fittings.
- Two PVC containment sumps.

The excavated soil contained in the two bins was characterized as having an elevated petroleum-hydrocarbon content and were classified as Non-Regulated Waste (Petroleum Contaminated Soil) New Mexico Special Waste. The soils were transported offsite for final Treatment, Storage, and Disposal Facility (TSDF) disposition at the U.S. Ecology facility located on Highway 95, south of Beatty, Nevada. The waste manifests, containing information on the waste storage container contents and disposition, are provided in Appendix E.

The concrete debris was classified as solid, non-hazardous municipal waste and transported offsite for recycling. The waste profile form for the material is provided in Appendix E.

All PPE and general refuse were disposed of offsite and recycled at subcontractors' offsite facilities. During this project, no waste containing free liquids was produced.

3.11 Project Summary of Sampling

Project sampling activities included the collection of confirmation soil samples from the fuel-piping trench excavation and AST concrete pad excavation, as well as the collection of waste-characterization samples from the two 20-cubic-yard waste containers (i.e., roll-off bins) used to hold the potentially-contaminated soils screened and segregated during removal of the overburden overlying the fuel piping and soils underlying the concrete pad. These activities are described in greater detail, below:

3.11.1 Confirmation Soil Sampling

On 10 October 2023, BGI-GCON personnel collected soil samples for petroleum-hydrocarbon content analysis from the initial prescribed 4-foot sampling interval in the concrete-pad excavation. This was followed by collection of confirmation soil samples in the fuel-piping trench excavation on 19 October 2023, and subsequent collection of additional soil samples from the soil/tuff interface at a greater depth (i.e., 7.5 feet below grade) in the concrete-pad excavation on 21 November 2023 (precipitated by the detection of petroleum-hydrocarbon contaminants in those confirmation soil samples collected at a depth of 4 feet below grade in the concrete pad excavation on 10 October 2023).

A tabulated summary of confirmation soil sampling is provided below:

- 10 October 2023: Five (5) soil samples were collected, at a depth of 4 feet below grade in the concrete-pad excavation, at the locations shown on Figure 3.
- 19 October 2023: Eight (8) soil samples were collected, at depths ranging from 33 to 40 inches below grade in the fuel-piping trench, at the locations shown on Figure 3.
- 21 November 2023: Three (3) soil samples were collected on this date- one from the end of the piping trench located nearest the former location of the AST, and two at depths of approximately 7-7.5 and 8-8.5 feet below grade in the concrete-pad excavation.

All confirmation soil samples were collected using a hand-operated, weighted-piston-driven core sampler. Samples were collected by placing one (1) 2-inch-diameter by 6-inch-long stainless-steel liner in the sampler's core barrel. The piston-driven hand sampler and stainless-steel liners were used to minimize intrusive disturbance of the soil during collection (while also maximizing sample preservation) due to the volatility of the suspected soil contaminants. The samples were surveyed for the presence of Volatile

Organic Compounds (VOCs) using a PID. Triad Radiological Control Technicians (RCTs) collected field screening measurements from each soil sample as it was removed from the core barrel. Once field screening measurements were collected, each sample was logged by BGI-GCON's Geologist and then preserved in the following order:

(1) Each end of the sample tube was capped with Teflon sheeting and plastic end caps,

(2) Sealed with SMO-supplied tamper seals,

(3) Labeled with SMO-supplied adhesive identification labels,

(4) Placed in sealable plastic bags, and

(5) Placed on ice, in an SMO-provided cooler along with sample field chain-of-custody paperwork

Based on field measurements collected by RCTs, radiological activity for all soils samples were acceptable for offsite transport and members of the BGI-GCON team transported the samples to the Triad SMO office in Los Alamos, New Mexico within 24 hours of collection. A total of 16 confirmation soil samples were collected (over the course of three sampling events, as listed above) and submitted to the SMO for transport to the offsite laboratory (General Engineering Laboratories, Inc.-GEL) for analysis. A summary of analyses performed on the samples is listed in Tables 3.1-3.3, which also provide summaries of each confirmation soil sample collected. Sample control documentation for all confirmation soil samples, including a sample collection log, chain-of-custody forms (COCs) and field screening measurements can also be found in Appendix G.

3.11.2 Waste-Characterization Sampling

Investigative waste, in the form of potentially-contaminated soil, was produced from the excavation of the soils underlying the subsurface fuel piping, as well as of the soils underlying the concrete pad located beneath the AST. As noted previously, herein (Section 3.10), potentially-contaminated soil (as indicated via screening with a PID) was containerized in two 20-cubic-yard-capacity waste containers (i.e., roll-off bins). On 2 January 2024, BGI-GCON personnel collected waste characterization samples from both roll-off bins.

Sample containers and paperwork were requested and obtained from the Triad SMO prior to waste characterization sampling. Sampling was conducted according to the project WCSF (LANL, 2023). Based on sample activities from radiological field-screening measurements, both waste characterization samples were accepted by the Triad SMO. Members of BGI-GCON's sampling team relinquished the waste characterization samples to the Triad SMO on 24 January 2024 for shipment to an offsite laboratory (GEL). Sample control documentation for the waste characterization samples, including a sample collection log, COCs and field screening measurements, can also be found in Appendix G. A summary of analyses performed on the waste characterization samples can be found on Table 3.4, while the analytical laboratory report can also be found in Appendix G.

4.0 Health and Safety Monitoring

The Health and Safety (H&S) program for the Project was implemented in accordance with the project SSESHP (BGI-GCON, 2023), which addressed applicable hazards and requirements identified in Exhibit F of the RFP, preparation of activity/task-specific IWDs, and full time, onsite EH&S oversight, and monitoring by an individual meeting the requirements of an Environmental, Safety and Health (ESH) Specialist.

The field execution portion of the Project was conducted from August 2023 to March 2024. A total of 2,154 safe working hours were performed with no lost time, reportable/recordable incidents, or injuries. Project H&S program lessons learned (including positive safety execution events) are presented in Table 4.1.

Table 4.1
Health and Safety Program Lessons Learned

Lesson-Learned No.	Background	Lesson(s) Learned
1	BGI's Field Team carefully made the initial cuts into the fuel oil pipe at the CUB aboveground and the tubing below ground. A significant amount of residual fuel oil remained inside – more than expected and in some places had gravity head pressure. The capture of this initial material was successful and there was no spill, but the capability of managing gravity flow and capacity of the temporary containment was challenged.	Topics were discussed at a pause in both areas after the initial cuts and in the following morning's pre-job briefing. Lessons learned: 1. The pipes have more residual fuel oil than was expected 2. There is pressure from gravity on the oil in the pipe. 3. Collection and containment need to be more robust than our original plan. 4. A method of raising the pipe at the cut location and gradually lowering the pipe to drain into containment was established. 5. Larger containment tubs and more spill control/absorbent is needed and is brought on site. 6. Positive pressure plugs (Test Plugs) are now being used to contain residual in the pipe after the initial cut is made. 7. A process of plugging sections of pipe and removing them to a covered staging area for draining, wiping, cutting into small sections and double bagging was established. All BGI/GCON personnel received hands-on training on the proper procedures for the removal of pipe and use of the test plugs and an alternate location for bagging.
2.	Removal/rewiring of low voltage signal wires was beyond the ability of BGI/GCON demolition subcontractors. The wiring for belly tanks level indicators in the emergency generators was too complex and sensitive to unplanned shutdowns than their ability would allow.	Sequence of events reinforced the importance of pause/stop work authority. 1. Do not proceed with removal of conduit and wiring that could not be identified or followed from the open ends of wire that we were tasked to start with. 2. Thoroughly assess the scope of work to understand what wires could be traced and verified disconnected without using testing and metering before attempting to remove. 3. Immediately involve the STR in decisions to access RIO panels that are in service or to sort through live conductors in gutters of enclosures that could cause unplanned shutdown. 4. Some low voltage enclosures that demolition scope required accessing also contained exposed hazardous voltage.

4.1 Health and Safety Monitoring

Air sampling was conducted for airborne dust using SKC AirCheck Model 52 continuous aerosol monitoring pump. Breathing-zone samples were recorded for airborne particles. Air samples were

collected from the workers' representative breathing zone. All samples were collected during excavation and concrete breaking activities, which presented the potential for generating airborne concentrations of respirable silica. monitoring results indicated airborne dust concentrations below the OSHA permissible limit (PEL) of 0.05 mg/m³.

Real-time field monitoring for volatile organic compounds (VOCs) wase conducted during all activities involving soil disturbance, as this would be the most likely source for these compounds. These activities consisted of excavating the soils overlying the subsurface fuel piping and underlying the concrete tank pad, as well as collection of samples from the 20-cubic-yard waste container, etc. This monitoring was performed using a RAE Systems MiniRae 3000 photoionization detector (PID). These measurements were compared against the compounds with the lowest exposure limits. PID alarms were activated by those soils containing petroleum hydrocarbons, as verified by subsequent laboratory analysis for these compounds.

Noise exposure was evaluated during activities which presented the potential for noise levels above the OSHA PEL of 85 dBa, hearing conservation action level of 85 dBa, and/or the 140 dBa instantaneous noise limit. During field activities, 3M Edge 5 personal noise dosimeters were used to collect two personal noise dosimetry measurements, and a Quest Sound Pro sound level meter was used to measure instantaneous noise levels throughout BGI-GCON's work area. A Hearing Protection Required zone was marked on the ground at the perimeter of noisy work exceeding 85 dBA. The highest personal noise dosimetry results were 91 dBa as an 8-hour time-weighted average (TWA) and 140.2 dBa for a peak noise level. These were measured in the dosimeter worn by one of BGI-GCON's subcontractors. who was wearing foam ear plugs with an NRR of 13, corresponding to a 13 dBa reduction in noise exposure. The area sound level readings during the loudest activity (excavator operation) were as follows:

- 91 dBa (with intermittent levels up to 110 dBa) approximately 15 feet from the concrete breaking operation. Inside demarcated work area, hearing protection required during heavy equipment operation including foam roll-down earplugs and over-the-ear hearing protection.
- 86 dBa (with intermittent levels up to 89 dBa) at excavator closed cab. Hearing protection was required.

Real- time particulate monitoring was conducted during activities with the potential to generate airborne concentrations of respirable silica, heavy metals (i.e., from soil), and respirable/inhalable particulates not otherwise stated (PNOS.) These measurements were collected using a Thermo-Fisher PDR 1500. At no time were these readings above the lowest PEL (respirable silica at 0.05 mg/m³.)

BGI-GCON's ES&H Specialist used a hand-held anemometer to gauge wind speed in the worker zone throughout the day. The wind speeds were also compared with those recorded by the Los Alamos Airport. Wind speeds were observed from 0-20 miles per hour (mph) sustained, and at times up to 25 mph gusting, while work was being performed. A finite stopping point was 25 mph sustained and 30 mph gusting. If at any point wind became a working hazard, the work was put into a safe configuration, and the field crew sought shelter until work was safe to resume.

4.2 Incident Reporting

During the field execution of the project, no incidents occurred which required reporting through the incident notification process. However, BGI-GCON did initiate a pause work on 2 occasions. This was initiated by BGI-GCON's ESH professional (see below.)

Project industrial-hygiene monitoring data is included in Appendix I.

4.2.1 Pause Work

On 29 August 2023, BGI-GCON's EHS Representative initiated a pause work during the task of removing steel pipe for the west end of the diesel tank. The demolition subcontractor employees were preparing to remove a 3" pipe with a strainer and about 4' feet of vertical rise. The subcontractor employee started removing a 3/8" plug at the bottom of the pipe when fuel oil began to drip from the threads. The work was paused, and the plug was re-tightened and approximately ½ cup of oil was absorbed and wiped clean from the surface of the concrete pad. The procedure was discussed and a new method with additional containment and absorbent material was used. Additional containment volume adequate to contain the full volume of the vertical pipe was added by bringing in a large containment tub, additional spill control absorbent media was staged, and the worker replaced their gloves and donned a face shield. The remaining fuel oil was then drained from the plug port into the containment tub until no drips were observed. A valve was screwed into the port and shut. Before pipe removal resumed, more residual was drained from the pipe until empty and the remaining pipe was removed. The work was resumed and was able to be completed safely and without any further incident. The new method was used, and no further spills occurred. The method was shared and used in several other areas, plugging and draining while removing pipe. Lessons learned from this pause resulted in development of new procedures and methods for predicting residual fuel oil in pipes and for initial cutting/draining prior to removal.

On 8 September 2023, work to remove conduits from the second floor of the Central Utility Building (CUB) (TA-55 0440) was being conducted when the workers noticed that low voltage wires they didn't recognize present in a junction box that contained wires that were not identified for demolition. The EHS Representative paused the work, and the workers reinstalled the cover on the junction box. The BGI/GCON field superintendent notified the STR of this discovery. The Subcontractor Technical Representative, a team of engineers and craft electricians to determine the best method of resuming work. After the team examined the circuits, it was determined that the unrecognized wires were part of a control wiring configuration that was still in service and lead to an enclosure that contained components of a hazardous voltage. The scope was modified to exclude removal of wires that were still in-service and these were eliminated from the scope.

5.0 Shutdown Periods

There was one seasonal work shutdown period that affected the project, as well as a number of weather-related shutdowns, as discussed below:

5.1 Mexican Spotted Owl Biological Survey Period Shutdown

On 17 March 2023, Triad personnel informed BGI-GCON that LANL had issued an area-wide Pause Work Order in response to the onset of seasonal Mexican Spotted Owl Restrictions that are in effect, annually, from 1 March to 15 May. These restrictions are part of the Laboratory's Habitat Management Plan, per an agreement with the Department of Energy, National Nuclear Security Administration, and the U.S. Fish and Wildlife Service that affords LANL the opportunity to manage threatened or endangered biological habitats and animals that occur on LANL property. LANL's associated Habitat Management Plan restricts certain activities during the owls' annual breeding season.

As a result, BGI-GCON was ordered to suspend all outside work to prevent the use of heavy equipment within and around Mexican Spotted Owl habitat. Notice of the lifting of these noise and access restrictions was received on 18 May 2023, with outside site resuming soon thereafter.

5.2 Weather-Related Shutdowns

Through LANL's Emergency Operations Support Center's notification system, BGI-GCON was informed of a number of weather-related closures that affected the project schedule. These notifications

were for closures due to inclement weather (e.g., rain and/or snow) during the months of December 2023, as well as January and February 2024.

Working in coordination with the Triad PM and STR, BGI-GCON made the necessary adjustments to project-personnel schedules and assignments to compensate for these weather-related shutdowns, keeping the project on schedule.

The seasonal and weather-related shutdowns extended the project field-activities and overall schedule beyond that originally proposed for completion of the project. The NMED PSTB was notified of the extended schedule using formal project extension requests and granted written approvals per 20.5.119.1931 New Mexico Administrative Code (NMAC). The project-extension request approvals are provided in Appendix A.

6.0 Findings, Conclusions, and Recommendations

Presented in the following sections are the project findings resulting from the field and analytical laboratory efforts, followed by conclusions arrived at through comparative evaluation of those findings, and project recommendations.

6.1 Findings

As detailed in Section 3.0 (Subsections 3.5 and 3.6), investigative field activities conducted during the tank-removal project included the collection of several confirmation samples from soils located beneath the former concrete pad supporting the tank structure, as well as from beneath the subsurface fuel piping associated with the tank.

Soil samples were collected in the concrete-pad excavation at the initial workplan-prescribed depth of 4 feet below grade, with subsequent laboratory analysis resulting in the detection of petroleum hydrocarbons (including BTEX and TPH [including DRO, GRO, and MRO]) in the samples. Therefore, three additional confirmation soil samples were collected from the tank-pad excavation at the workplan-prescribed soil/tuff (i.e., bedrock) interface located at depths ranging from approximately 7.5 to 8.5 feet below grade. A total of eight (8) soil samples were also collected from the floor of the fuel-piping trench.

No diesel-contaminated soil was found beneath or in proximity to the western-most transition sump or beneath the conduit piping running between the two transition sumps. All soils found to be contaminated by diesel fuel (as indicated by laboratory analysis) were encountered, specifically, in proximity to the diesel tank itself and at the eastern end of the piping trench, near the eastern transition-sump (i.e., the sump closest to the diesel tank) interface.

Analytical results for the confirmation soil samples (presented on Tables 3.1 – 3.3) are further described below:

The analytical results of the confirmation soil samples were compared to the NMED's Soil Screening Levels (SSLs) for Industrial/Occupational and Industrial/Construction Worker scenarios, as provided in "Volume 1- Soil Screening Guidance for Human Health Risk Assessments" from the NMED's Risk Assessment Guidance for Site Investigations and Remediation (NMED, November 2022).

Of the five soil samples collected at 4 feet below grade in the concrete-pad excavation on 10 October 2023, one (Sample ID: RLUOB-23-289584) contained a target analyte (TPH-DRO) at a concentration (7,760 milligrams per kilogram [mg/kg]) that exceeded the NMED SSL (3,000 mg/kg). Sample RLUOB-23-289584 was collected in the western quadrant of the concrete-pad excavation, in proximity to the juncture at which the subsurface fuel piping was connected to the AST fittings. The sample location is shown on Figure 3. Analytical results provided by the analytical laboratory for the confirmation soil samples collected at four feet below grade in the concrete-pad excavation are provided on Table 3.1.

Evaluation of the laboratory analytical results provided for the eight confirmation soil samples collected from the fuel piping trench, on 19 October 2023, shows that one (Sample ID: RLUOB-23-289589) contained a target analyte (TPH-DRO) at a concentration (3,010 mg/kg) that slightly exceeded the NMED SSL (3,000 mg/kg). Sample RLUOB-23-289589 was collected from the eastern end of the piping trench, in proximity to the juncture at which the fuel piping and tank fittings were connected. The sample location is shown on Figure 3. Analytical results provided by the analytical laboratory for the confirmation soil samples collected from the floor of the fuel-piping trench are provided on Table 3.2.

Comparative evaluation of the three soil samples collected from the concrete-pad excavation at the soil/tuff interface (at depths ranging from 7-7.5 to 8-8.5 feet below grade), on 21 November 2023, revealed one sample (Sample ID: RLUOB-23-289599) contained a target analyte (TPH-DRO) at a concentration (6,380 mg/kg) that exceeded the NMED SSL (3,000 mg/kg). Sample RLUOB-23-289599 was collected in the western quadrant of the concrete-pad excavation, in proximity to the juncture at which the fuel piping and tank fittings were connected. The sample location is shown on Figure 3. Analytical results, provided by the analytical laboratory, for the confirmation soil samples collected from the floor of the concrete-pad excavation are provided on Table 3.3.

Laboratory analytical reports (along with field chain-of-custody documents) are provided in Appendix G.

6.2 Conclusions

Of the 16 total soil confirmation samples collected, three (RLUOB-23-289584, collected at a depth of 4 feet below grade in the western quadrant of the concrete-pad excavation; RLUOB-23-289589, collected in the eastern end of the piping trench, near the western quadrant of the concrete-pad excavation; and RLUOB-23-289599, also collected in the western quadrant of the concrete-pad excavation, at a depth of 7.5 feet below grade) were reported to contain analyte concentrations (of TPH-DRO) that exceeded established screening criteria (i.e., SSLs). Note that these samples were collected from the area shown to be contaminated by spilled diesel fuel via the analysis of soil samples collected during previous investigative efforts, as detailed in the Investigation Report for Addendum to the Work Plan For The Removal of Soils Contaminated With Diesel Fuel Released From RLUOB Aboveground Storage Tank 55-560; LA-UR-14-24294 (LANL, April 2014).

The pervasive presence of an underlying layer of confining bedrock (i.e., the Bandelier Tuff [LANL, 1995]) precluded additional vertical excavation and sampling of soils beyond the depths of 7-7.5 and 8-8.5 feet below grade reached by soil-removal efforts in the concrete-pad excavation. A total volume of approximately 35.75 cubic yards of soil was excavated above the confining bedrock layer and contained in roll-off bins. Characterization samples were collected from each bin on 24 January 2024 and submitted to Triad's SMO for submittal to the analytical laboratory (GEL). Analytical results of the waste-soil characterization samples collected from the bins are summarized on Table 3.4, while the analytical laboratory reports are provided in Appendix G.

The characterized containerized soil was subsequently transported, as Solid, Non-Regulated Waste (Petroleum Contaminated Soil) New Mexico Special Waste, to U.S. Ecology's facility, located south of Beatty, Nevada, on Highway 95, for disposal. Waste manifests for the soils are provided in Appendix E.

The project objectives of removing the AST and appurtenant structures, as well as the associated underlying petroleum-contaminated soils as sources of environmental contamination have been reached, as documented by this tank closure report.

6.3 Recommendations

Based on the results discussed herein, the project investigative and remedial efforts conducted onsite have resulted in an environmentally-sound removal of the potential sources of petroleum-hydrocarbon contamination (i.e., the AST and appurtenant structures, as well as the petroleum-hydrocarbon-contaminated soils), and administrative site-closure status is requested of the NMED.

The completed NMED Notification of Permanent Closure Of Petroleum Storage Tank Systems for Tank TA-55-0560, NMED PSTB Facility ID #54763 is included as Appendix F.

7.0 References

Banda Group International (BGI)-GCON Joint Venture (JV), Limited Liability Corporation (LLC). 2022. *Request for Proposal Doc 428598379. TA-55 Diesel Tank Removal, Technical Proposal Volume. Section 2.4.2. Work Plan*. 24 June.

— BGI-GCON. 2022a. *Integrated Work Document (IWD) Part 5 – Sampling, Waste Containerization and General Site Hazards.* 19 December.

— BGI-GCON. 2022b. *Integrated Work Document (IWD) Part 3 – Concrete, Rebar, and General Site Hazards.* 23 December.

— BGI-GCON. 2022c. *Integrated Work Document (IWD) Part 4 – Electrical and General Site Hazards.* 23 December.

— BGI-GCON. 2023a. *Site Specific Environmental, Safety, & Health Program Plan For TA-55 Diesel Tank Removal Project.* January.

— BGI-GCON. 2023b. *Integrated Work Document (IWD) Part 1 – Mobilization, Demobilization, Snow Removal and General Site Hazards.* 11 January.

— BGI-GCON. 2023c. *Integrated Work Document (IWD) Part 6 – Residual Diesel Fuel Removal*. 9 February.

— BGI-GCON. 2023d. *Integrated Work Document (IWD) Part 7 – Aboveground Demolition and General Site Hazards.* 19 June.

— BGI-GCON. 2023e. *Integrated Work Document (IWD) Part 8 – Onsite Equipment Refueling*. 19 June.

— BGI-GCON. 2023f. *Integrated Work Document (IWD) Part 2 – Earthwork, Demolition, and General Site Hazards.* 18 July.

Los Alamos National Laboratory (LANL). 1995. *Stratigraphic Nomenclature of the Bandelier Tuff for the Environmental Restoration Project at Los Alamos National Laboratory. LA-13010-MS; UC-903*. Broxton, David E. and Steven L. Reneau. August.

— LANL. 2013. Work Plan For The Removal of Soils Contaminated With Diesel Fuel Released From RLUOB Aboveground Storage Tank 55-0560. LA-UR-13-20652; ENV-RCRA 13-0027. February.

— LANL. 2014. Investigative Report For Addendum to the Work Plan For The Removal of Soils Contaminated With Diesel Fuel Released From RLUOB Aboveground Storage Tank 55-560. Additional Sampling And Analysis Plan. ENV-DO-14-0127; LAUR-14-24294. 16 June.

— LANL. 2021. Work Plan For Permanent Closure of the RLUOB Diesel Aboveground Storage Tank Facility ID# 54763. EPC-DO: 21-215; LA-UR: 21: 26213. 27 September.

— LANL. 2023. Waste Characterization Strategy Form: TA-55 RLUOB Fuel Oil Tank Removal. 31 January.

(continued)

New Mexico Environment Department (NMED). 2012. *Risk Assessment Guidance for Site Investigations and Remediation*, Hazardous Waste Bureau and Ground Water Quality Bureau Voluntary Remediation Program, Santa Fe, New Mexico. June.

— NMED. 2017. Risk Assessment Guidance for Site Investigations and Remediation. Volume II. Soil Screening Guidance for Ecological Risk Assessments. 2017 Revised.

— NMED. 2022a. Letter- Technical Approval of Phase 1 Secondary Investigation Workplan for Los Alamos National Laboratory TA-55 RLUOB Fuel Tank, 0.06 miles WNW of Pajarito Road and Pecos Drive, Los Alamos, New Mexico. 17 October.

— NMED. 2022b. Risk Assessment Guidance for Site Investigations and Remediation. Volume I. Soil Screening Guidance for Human Health Risk Assessments. November.

— NMED. 2023. Site Visit and Inspection by- NMED PSTB staff member Mr. Philip Santana- Environmental Scientist & Specialist- Operational. 13 December.

List of Figures

Figure 1.0 **Site Location Map**

Figure 2.0 **Above-Ground Storage Tank Location**

Figure 3.0 **Confirmation Soil Sample Locations**

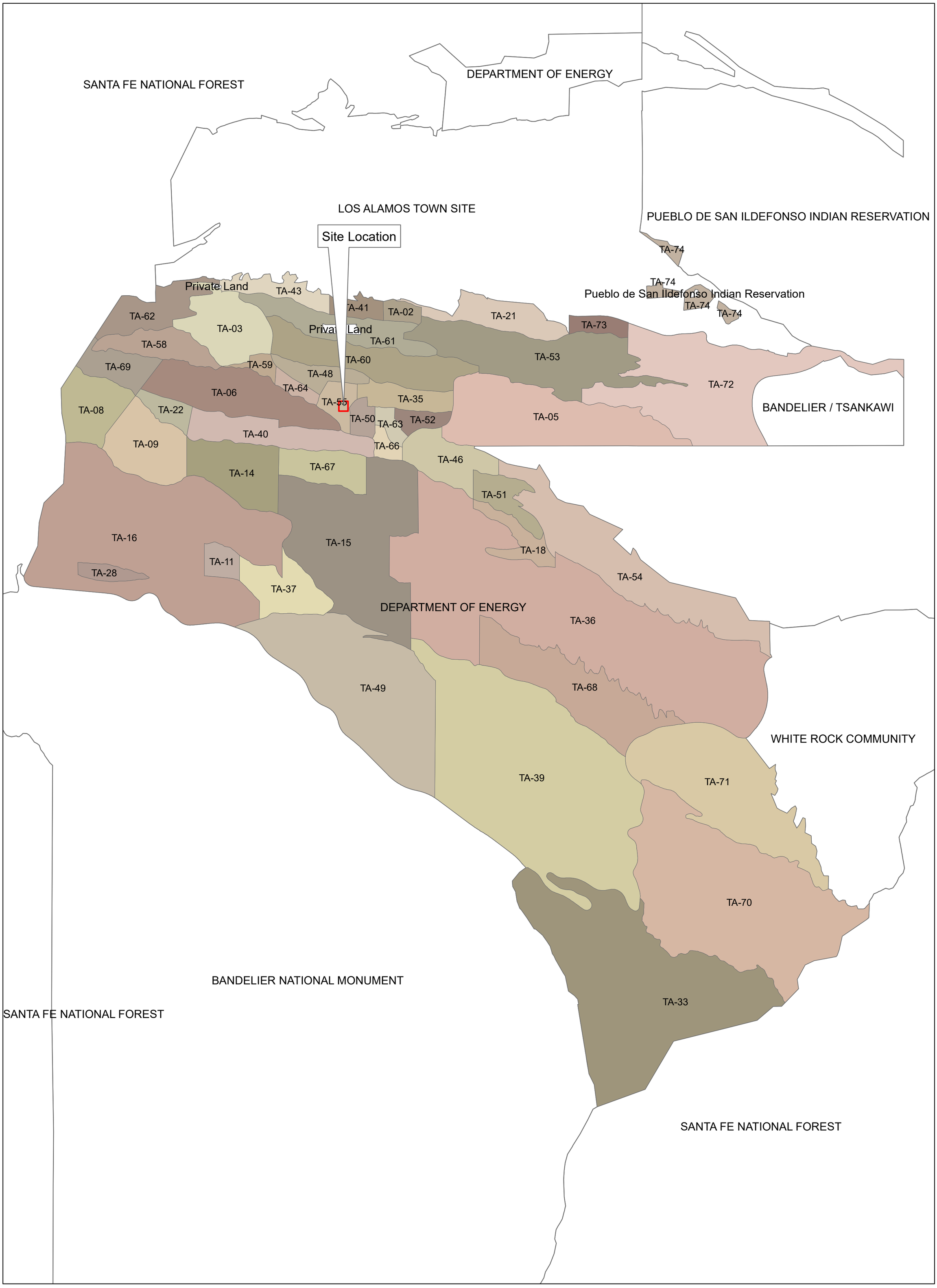


Figure 1. Site Location Map



Figure 2. Above-Ground Storage Tank Location

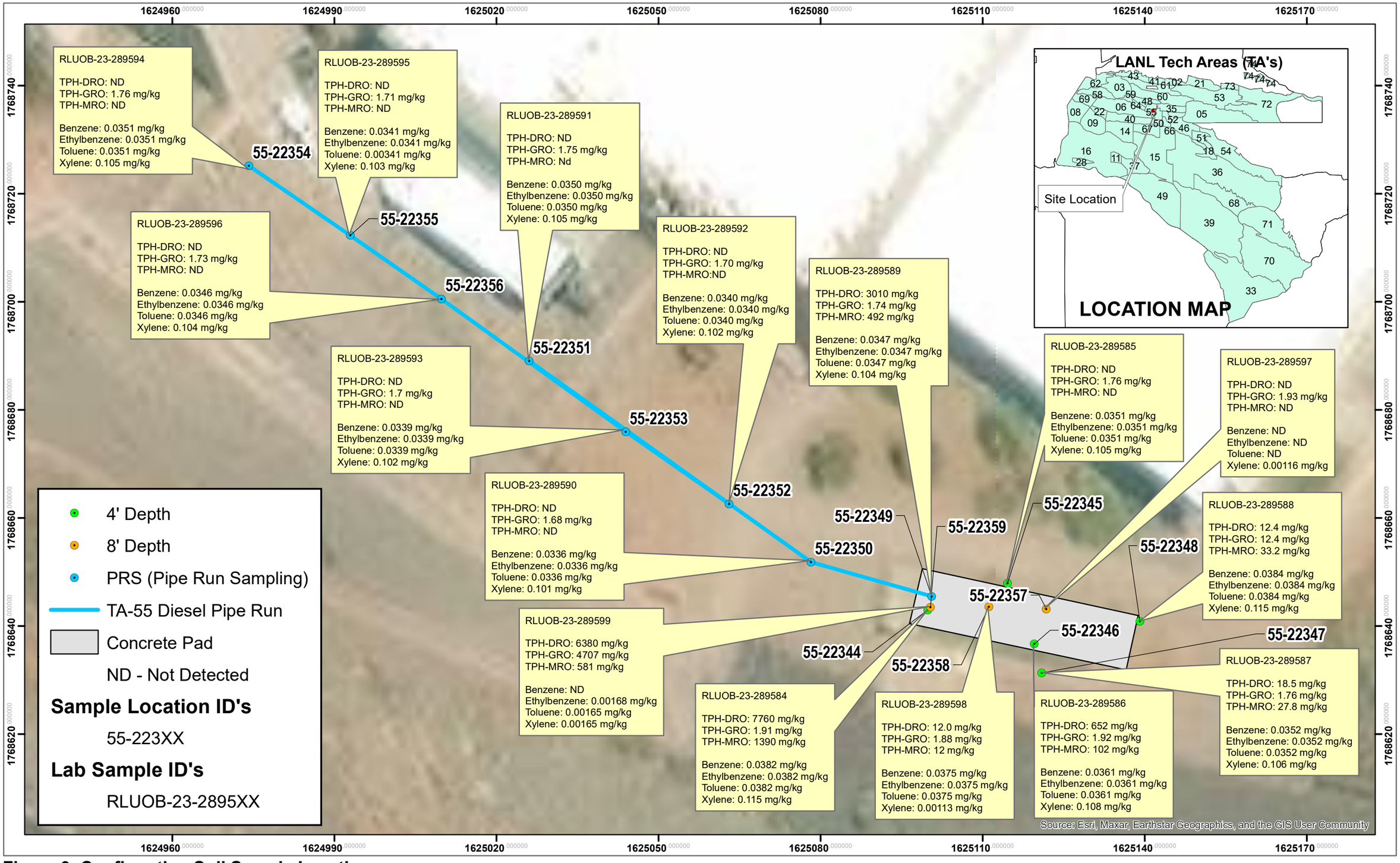


Figure 3. Confirmation Soil Sample Locations

List of Tables

Table 3.1 **Confirmation Soil Sampling Analytical Results- Concrete Pad Excavation (4 Feet Below Grade)**

Table 3.2 **Confirmation Soil Sampling Analytical Results- Concrete Pad Excavation (7 & 8 Feet Below Grade)**

Table 3.3 **Confirmation Soil Sampling Analytical Results- Fuel Piping Trench Excavation**

Table 3.4 **Containerized-Waste Soil Characterization Analytical Results**

Table 4.1 **Health and Safety Program Lessons Learned (*Report Page 11*)**

Table 3.1
RLUOB Diesel Tank Removal Project
Confirmation Soil Samples Collected at 4 Feet In Concrete-Pad Excavation on 10 October 2023

WDS Record #	parameter_category	analytical_method_category	analytical_method	parameter_name	sampling_plan_id	field_sample_id	detect_flag	report_result	report_units	SSL (Indust., Cancer--Indust. Non-cancer)[1]- mg/kg	validation_qualifier[2]	validation_reason_codes[2]	analytical_group_name
109561	INORGANIC	GENERAL CHEMISTRY	EPA:170.0	Temperature	15356	RLUOB-23-289584	Y	6	deg C	NA	NQ	NQ	
109561	INORGANIC	GENERAL CHEMISTRY	EPA:170.0	Temperature	15356	RLUOB-23-289585	Y	6	deg C	NA	NQ	NQ	
109561	INORGANIC	GENERAL CHEMISTRY	EPA:170.0	Temperature	15356	RLUOB-23-289586	Y	6	deg C	NA	NQ	NQ	
109561	INORGANIC	GENERAL CHEMISTRY	EPA:170.0	Temperature	15356	RLUOB-23-289587	Y	6	deg C	NA	NQ	NQ	
109561	INORGANIC	GENERAL CHEMISTRY	EPA:170.0	Temperature	15356	RLUOB-23-289588	Y	6	deg C	NA	NQ	NQ	
109561	ORGANIC	VOC	SW-846:8260D	Benzene	15356	RLUOB-23-289585	N	0.0351	mg/kg	423--142	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Benzene	15356	RLUOB-23-289587	N	0.0352	mg/kg	423--142	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Benzene	15356	RLUOB-23-289586	N	0.0361	mg/kg	423--142	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Benzene	15356	RLUOB-23-289584	N	0.0382	mg/kg	423--142	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Benzene	15356	RLUOB-23-289588	N	0.0384	mg/kg	423--142	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Toluene	15356	RLUOB-23-289585	N	0.0351	mg/kg	NA--1,400	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Toluene	15356	RLUOB-23-289587	N	0.0352	mg/kg	NA--1,400	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Toluene	15356	RLUOB-23-289586	N	0.0361	mg/kg	NA--1,400	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Toluene	15356	RLUOB-23-289584	N	0.0382	mg/kg	NA--1,400	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Toluene	15356	RLUOB-23-289588	N	0.0384	mg/kg	NA--1,400	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Ethylbenzene	15356	RLUOB-23-289585	N	0.0351	mg/kg	1,770--5,800	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Ethylbenzene	15356	RLUOB-23-289587	N	0.0352	mg/kg	1,770--5,800	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Ethylbenzene	15356	RLUOB-23-289586	N	0.0361	mg/kg	1,770--5,800	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Ethylbenzene	15356	RLUOB-23-289584	N	0.0382	mg/kg	1,770--5,800	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Ethylbenzene	15356	RLUOB-23-289588	N	0.0384	mg/kg	1,770--5,800	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Xylene (Total)	15356	RLUOB-23-289585	N	0.105	mg/kg	NA--798	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Xylene (Total)	15356	RLUOB-23-289587	N	0.106	mg/kg	NA--798	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Xylene (Total)	15356	RLUOB-23-289586	N	0.108	mg/kg	NA--798	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Xylene (Total)	15356	RLUOB-23-289584	N	0.115	mg/kg	NA--798	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Xylene (Total)	15356	RLUOB-23-289588	N	0.115	mg/kg	NA--798	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Diesel Range Organics	15356	RLUOB-23-289587	Y	18.5	mg/kg	NA--3,000	NQ	NQ	TPH-DRO+Motor Oil
109561	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Diesel Range Organics	15356	RLUOB-23-289586	Y	652	mg/kg	NA--3,000	NQ	NQ	TPH-DRO+Motor Oil
109561	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Diesel Range Organics	15356	RLUOB-23-289584	Y	**7760**	mg/kg	NA--3,000	NQ	NQ	TPH-DRO+Motor Oil
109561	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Diesel Range Organics	15356	RLUOB-23-289585	N	2.26	mg/kg	NA--3,000	U	U_LAB	TPH-DRO+Motor Oil
109561	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Diesel Range Organics	15356	RLUOB-23-289588	N	12.4	mg/kg	NA--3,000	U	U_LAB	TPH-DRO+Motor Oil
109561	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Gasoline Range Org.	15356	RLUOB-23-289586	Y	1.92	mg/kg	NA--500	J	J_LAB	BTEX + TPH-GRO
109561	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Gasoline Range Org.	15356	RLUOB-23-289585	N	1.76	mg/kg	NA--500	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Gasoline Range Org.	15356	RLUOB-23-289587	N	1.76	mg/kg	NA--500	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Gasoline Range Org.	15356	RLUOB-23-289584	N	1.91	mg/kg	NA--500	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Gasoline Range Org.	15356	RLUOB-23-289588	N	1.92	mg/kg	NA--500	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Motor Oil Range Organics	15356	RLUOB-23-289587	Y	27.8	mg/kg	NA--3,000	J-	DR9,DR4a	TPH-DRO+Motor Oil
109561	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Motor Oil Range Organics	15356	RLUOB-23-289584	Y	1390	mg/kg	NA--3,000	J-	DR9,DR4a	TPH-DRO+Motor Oil
109561	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Motor Oil Range Organics	15356	RLUOB-23-289585	N	2.97	mg/kg	NA--3,000	U	DR4,DR9	TPH-DRO+Motor Oil
109561	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Motor Oil Range Organics	15356	RLUOB-23-289588	N	33.2	mg/kg	NA--3,000	U	DR4,DR9	TPH-DRO+Motor Oil
109561	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Motor Oil Range Organics	15356	RLUOB-23-289586	N	102	mg/kg	NA--3,000	U	DR4,DR9	TPH-DRO+Motor Oil

Notes: [1] **SSL Reference: NMED, 2022 (See Closure Report Reference Section [7.0]).**
[2] **Validation qualifier and reason-code definitions are provided in Appendix D.**

Table 3.2
RLUOB Diesel Tank Removal Project
Confirmation Soil Samples Collected in Fuel Piping Trench on 19 October 2023

WDS Record #	parameter_category	analytical_method_category	analytical_method	parameter_name	sampling_plan_id	field_sample_id	detect_flag	report_result	report_units	SSL (Indust., Cancer--Indust. Non-cancer)[1]- mg/kg	validation_qualifier[2]	validation_reason_codes[2]	analytical_group_name
109561	INORGANIC	GENERAL CHEMISTRY	EPA:170.0	Temperature	15356	RLUOB-23-289589	Y	6	deg C	NA	NQ	NQ	
109561	INORGANIC	GENERAL CHEMISTRY	EPA:170.0	Temperature	15356	RLUOB-23-289590	Y	6	deg C	NA	NQ	NQ	
109561	INORGANIC	GENERAL CHEMISTRY	EPA:170.0	Temperature	15356	RLUOB-23-289591	Y	6	deg C	NA	NQ	NQ	
109561	INORGANIC	GENERAL CHEMISTRY	EPA:170.0	Temperature	15356	RLUOB-23-289592	Y	6	deg C	NA	NQ	NQ	
109561	INORGANIC	GENERAL CHEMISTRY	EPA:170.0	Temperature	15356	RLUOB-23-289593	Y	6	deg C	NA	NQ	NQ	
109561	INORGANIC	GENERAL CHEMISTRY	EPA:170.0	Temperature	15356	RLUOB-23-289594	Y	6	deg C	NA	NQ	NQ	
109561	INORGANIC	GENERAL CHEMISTRY	EPA:170.0	Temperature	15356	RLUOB-23-289595	Y	6	deg C	NA	NQ	NQ	
109561	INORGANIC	GENERAL CHEMISTRY	EPA:170.0	Temperature	15356	RLUOB-23-289596	Y	6	deg C	NA	NQ	NQ	
109561	ORGANIC	VOC	SW-846:8260D	Benzene	15356	RLUOB-23-289590	N	0.0336	mg/kg	423--142	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Benzene	15356	RLUOB-23-289593	N	0.0339	mg/kg	423--142	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Benzene	15356	RLUOB-23-289592	N	0.0340	mg/kg	423--142	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Benzene	15356	RLUOB-23-289595	N	0.0341	mg/kg	423--142	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Benzene	15356	RLUOB-23-289596	N	0.0346	mg/kg	423--142	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Benzene	15356	RLUOB-23-289589	N	0.0347	mg/kg	423--142	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Benzene	15356	RLUOB-23-289591	N	0.0350	mg/kg	423--142	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Benzene	15356	RLUOB-23-289594	N	0.0351	mg/kg	423--142	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Toluene	15356	RLUOB-23-289590	N	0.0336	mg/kg	NA--1,400	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Toluene	15356	RLUOB-23-289593	N	0.0339	mg/kg	NA--1,400	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Toluene	15356	RLUOB-23-289592	N	0.0340	mg/kg	NA--1,400	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Toluene	15356	RLUOB-23-289595	N	0.0341	mg/kg	NA--1,400	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Toluene	15356	RLUOB-23-289596	N	0.0346	mg/kg	NA--1,400	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Toluene	15356	RLUOB-23-289589	N	0.0347	mg/kg	NA--1,400	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Toluene	15356	RLUOB-23-289591	N	0.0350	mg/kg	NA--1,400	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Toluene	15356	RLUOB-23-289594	N	0.0351	mg/kg	NA--1,400	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Ethylbenzene	15356	RLUOB-23-289590	N	0.0336	mg/kg	1,770--5,800	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Ethylbenzene	15356	RLUOB-23-289593	N	0.0339	mg/kg	1,770--5,800	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Ethylbenzene	15356	RLUOB-23-289592	N	0.0340	mg/kg	1,770--5,800	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Ethylbenzene	15356	RLUOB-23-289595	N	0.0341	mg/kg	1,770--5,800	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Ethylbenzene	15356	RLUOB-23-289596	N	0.0346	mg/kg	1,770--5,800	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Ethylbenzene	15356	RLUOB-23-289589	N	0.0347	mg/kg	1,770--5,800	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Ethylbenzene	15356	RLUOB-23-289591	N	0.0350	mg/kg	1,770--5,800	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Ethylbenzene	15356	RLUOB-23-289594	N	0.0351	mg/kg	1,770--5,800	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Xylene (Total)	15356	RLUOB-23-289590	N	0.101	mg/kg	NA--798	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Xylene (Total)	15356	RLUOB-23-289592	N	0.102	mg/kg	NA--798	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Xylene (Total)	15356	RLUOB-23-289593	N	0.102	mg/kg	NA--798	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Xylene (Total)	15356	RLUOB-23-289595	N	0.103	mg/kg	NA--798	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Xylene (Total)	15356	RLUOB-23-289589	N	0.104	mg/kg	NA--798	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Xylene (Total)	15356	RLUOB-23-289596	N	0.104	mg/kg	NA--798	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Xylene (Total)	15356	RLUOB-23-289591	N	0.105	mg/kg	NA--798	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Xylene (Total)	15356	RLUOB-23-289594	N	0.105	mg/kg	NA--798	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Diesel Range Organics	15356	RLUOB-23-289589	Y	3010	mg/kg	NA--3,000	NQ	NQ	TPH-DRO+Motor Oil
109561	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Diesel Range Organics	15356	RLUOB-23-289590	N	2.18	mg/kg	NA--3,000	U	U_LAB	TPH-DRO+Motor Oil
109561	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Diesel Range Organics	15356	RLUOB-23-289593	N	2.19	mg/kg	NA--3,000	U	U_LAB	TPH-DRO+Motor Oil
109561	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Diesel Range Organics	15356	RLUOB-23-289592	N	2.21	mg/kg	NA--3,000	U	U_LAB	TPH-DRO+Motor Oil
109561	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Diesel Range Organics	15356	RLUOB-23-289596	N	2.21	mg/kg	NA--3,000	U	U_LAB	TPH-DRO+Motor Oil
109561	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Diesel Range Organics	15356	RLUOB-23-289595	N	2.22	mg/kg	NA--3,000	U	U_LAB	TPH-DRO+Motor Oil
109561	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Diesel Range Organics	15356	RLUOB-23-289591	N	2.27	mg/kg	NA--3,000	U	U_LAB	TPH-DRO+Motor Oil
109561	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Diesel Range Organics	15356	RLUOB-23-289594	N	2.27	mg/kg	NA--3,000	U	U_LAB	TPH-DRO+Motor Oil
109561	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Motor Oil Range Organics	15356	RLUOB-23-289590	Y	4.13	mg/kg	NA--3,000	J-	DR12e,DR9	TPH-DRO+Motor Oil
109561	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Motor Oil Range Organics	15356	RLUOB-23-289594	Y	4.41	mg/kg	NA--3,000	J-	DR12e,DR9	TPH-DRO+Motor Oil
109561	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Motor Oil Range Organics	15356	RLUOB-23-289592	Y	4.73	mg/kg	NA--3,000	J-	DR12e,DR9	TPH-DRO+Motor Oil
109561	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Motor Oil Range Organics	15356	RLUOB-23-289589	Y	492	mg/kg	NA--3,000	J-	DR12e,DR9	TPH-DRO+Motor Oil
109561	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Motor Oil Range Organics	15356	RLUOB-23-289593	N	2.19	mg/kg	NA--3,000	UJ	DR12e,DR9	TPH-DRO+Motor Oil
109561	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Motor Oil Range Organics	15356	RLUOB-23-289596	N	2.21	mg/kg	NA--3,000	UJ	DR12e,DR9	TPH-DRO+Motor Oil
109561	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Motor Oil Range Organics	15356	RLUOB-23-289595	N	2.22	mg/kg	NA--3,000	UJ	DR12e,DR9	TPH-DRO+Motor Oil
109561	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Motor Oil Range Organics	15356	RLUOB-23-289591	N	2.27	mg/kg	NA--3,000	UJ	DR12e,DR9	TPH-DRO+Motor Oil
109561	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Gasoline Range Org.	15356	RLUOB-23-289590	N	1.68	mg/kg	NA--500	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Gasoline Range Org.	15356	RLUOB-23-289592	N	1.70	mg/kg	NA--500	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Gasoline Range Org.	15356	RLUOB-23-289593	N	1.70	mg/kg	NA--500	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Gasoline Range Org.	15356	RLUOB-23-289595	N	1.71	mg/kg	NA--500	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Gasoline Range Org.	15356	RLUOB-23-289596	N	1.73	mg/kg	NA--500	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Gasoline Range Org.	15356	RLUOB-23-289589	N	1.74	mg/kg	NA--500	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Gasoline Range Org.	15356	RLUOB-23-289591	N	1.75	mg/kg	NA--500	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Gasoline Range Org.	15356	RLUOB-23-289594	N	1.76	mg/kg	NA--500	U	U_LAB	BTEX + TPH-GRO

Notes: [1] **SSL Reference: NMED, 2022 (See Closure Report Reference Section [7.0]).**
[2] **Validation qualifier and reason-code definitions are provided in Appendix D.**

Table 3.3
RLUOB Diesel Tank Removal Project
Confirmation Soil Samples Collected at 7 & 8 Feet In Concrete-Pad Excavation on 21 November 2023

WDS Record #	parameter_category	analytical_method_category	analytical_method	parameter_name	sampling_plan_id	field_sample_id	detect_flag	report_result	report_units	SSL (Indust., Cancer--Indust. Non-cancer)[1]- mg/kg	validation_qualifier[2]	validation_reason_codes[2]	analytical_group_name
109561	INORGANIC	GENERAL CHEMISTRY	EPA: 170.0	Temperature	15356	RLUOB-23-289597	Y	4	deg C	NA	NQ	NQ	
109561	INORGANIC	GENERAL CHEMISTRY	EPA: 170.0	Temperature	15356	RLUOB-23-289598	Y	4	deg C	NA	NQ	NQ	
109561	INORGANIC	GENERAL CHEMISTRY	EPA: 170.0	Temperature	15356	RLUOB-23-289599	Y	4	deg C	NA	NQ	NQ	
109561	ORGANIC	VOC	SW-846:8260D	Benzene	15356	RLUOB-23-289598	N	0.000375	mg/kg	423--142	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Benzene	15356	RLUOB-23-289599	N	0.000375	mg/kg	423--142	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Benzene	15356	RLUOB-23-289597	N	0.000385	mg/kg	423--142	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Toluene	15356	RLUOB-23-289598	N	0.000375	mg/kg	NA--1,400	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Toluene	15356	RLUOB-23-289597	N	0.000385	mg/kg	NA--1,400	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Toluene	15356	RLUOB-23-289599	Y	0.00165	mg/kg	NA--1,400	NQ	NQ	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Ethylbenzene	15356	RLUOB-23-289598	N	0.000375	mg/kg	1,770--5,800	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Ethylbenzene	15356	RLUOB-23-289597	N	0.000385	mg/kg	1,770--5,800	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Ethylbenzene	15356	RLUOB-23-289599	Y	0.00168	mg/kg	1,770--5,800	NQ	NQ	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Xylenes (Total)	15356	RLUOB-23-289598	N	0.00113	mg/kg	NA--798	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Xylenes (Total)	15356	RLUOB-23-289597	N	0.00116	mg/kg	NA--798	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	VOC	SW-846:8260D	Xylenes (Total)	15356	RLUOB-23-289599	Y	0.0992	mg/kg	NA--798	NQ	NQ	BTEX + TPH-GRO
109561	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Diesel Range Organics	15356	RLUOB-23-289597	N	2.49	mg/kg	NA--3,000	U	U_LAB	TPH-DRO+Motor Oil
109561	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Diesel Range Organics	15356	RLUOB-23-289598	N	12.0	mg/kg	NA--3,000	U	U_LAB	TPH-DRO+Motor Oil
109561	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Diesel Range Organics	15356	RLUOB-23-289599	Y	6380	mg/kg	NA--3,000	NQ	NQ	TPH-DRO+Motor Oil
109561	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Gasoline Range Organics	15356	RLUOB-23-289598	N	1.88	mg/kg	NA--500	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Gasoline Range Organics	15356	RLUOB-23-289597	N	1.93	mg/kg	NA--500	U	U_LAB	BTEX + TPH-GRO
109561	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Gasoline Range Organics	15356	RLUOB-23-289599	Y	47.7	mg/kg	NA--500	NQ	NQ	BTEX + TPH-GRO
109561	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Motor Oil Range Organics	15356	RLUOB-23-289597	N	2.49	mg/kg	NA--3,000	UJ	DR9	TPH-DRO+Motor Oil
109561	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Motor Oil Range Organics	15356	RLUOB-23-289598	N	12.0	mg/kg	NA--3,000	UJ	DR9	TPH-DRO+Motor Oil
109561	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Motor Oil Range Organics	15356	RLUOB-23-289599	Y	581	mg/kg	NA--3,000	J-	DR9	TPH-DRO+Motor Oil

Notes: [1] SSL Reference: NMED, 2022 (See Closure Report Reference Section [7.0]).
[2] Validation qualifier and reason-code definitions are provided in Appendix D.

Table 3.4
RLUOB Diesel Tank Removal Project
Waste Characterization Samples

WDS Record #	parameter_category	analytical_method_category	analytical_method	parameter_name	sampling_plan_id	field_sample_id	detect_flag	report_result	report_units	SSL (Indust., Cancer--Indust. Non-cancer)[1]- mg/kg	validation_qualifier[2]	validation_reason_codes[2]	analytical_group_name
109921	INORGANIC	GENERAL CHEMISTRY	EPA:170.0	Temperature	15356	RLUOB-23-289602	Y	5	deg C	NA	NQ	NQ	
109921	INORGANIC	GENERAL CHEMISTRY	EPA:170.0	Temperature	15356	RLUOB-23-289603	Y	5	deg C	NA	NQ	NQ	
109921	ORGANIC	VOC	SW-846:8260D	Benzene	15356	RLUOB-23-289603	N	0.000304	mg/kg	423--142	U	U_LAB	BTEX + TPH-GRO
109921	ORGANIC	VOC	SW-846:8260D	Benzene	15356	RLUOB-23-289602	N	0.000353	mg/kg	423--142	U	U_LAB	BTEX + TPH-GRO
109921	ORGANIC	VOC	SW-846:8260D	Toluene	15356	RLUOB-23-289603	N	0.000304	mg/kg	NA--1,400	U	U_LAB	BTEX + TPH-GRO
109921	ORGANIC	VOC	SW-846:8260D	Toluene	15356	RLUOB-23-289602	N	0.000353	mg/kg	NA--1,400	U	U_LAB	BTEX + TPH-GRO
109921	ORGANIC	VOC	SW-846:8260D	Ethylbenzene	15356	RLUOB-23-289603	N	0.000304	mg/kg	1,770--5,800	U	U_LAB	BTEX + TPH-GRO
109921	ORGANIC	VOC	SW-846:8260D	Ethylbenzene	15356	RLUOB-23-289602	N	0.000353	mg/kg	1,770--5,800	U	U_LAB	BTEX + TPH-GRO
109921	ORGANIC	VOC	SW-846:8260D	Xylene (Total)	15356	RLUOB-23-289603	N	0.000914	mg/kg	NA--798	U	U_LAB	BTEX + TPH-GRO
109921	ORGANIC	VOC	SW-846:8260D	Xylene (Total)	15356	RLUOB-23-289602	N	0.00106	mg/kg	NA--798	U	U_LAB	BTEX + TPH-GRO
109921	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Diesel Range Organics	15356	RLUOB-23-289603	Y	163	mg/kg	NA--3,000	NQ	NQ	TPH-DRO+Motor Oil
109921	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Diesel Range Organics	15356	RLUOB-23-289602	Y	3640	mg/kg	NA--3,000	NQ	NQ	TPH-DRO+Motor Oil
109921	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Gasoline Range Organics	15356	RLUOB-23-289602	Y	18.6	mg/kg	NA--500	NQ	NQ	BTEX + TPH-GRO
109921	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Gasoline Range Organics	15356	RLUOB-23-289603	N	1.75	mg/kg	NA--500	U	U_LAB	BTEX + TPH-GRO
109921	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Motor Oil Range Organics	15356	RLUOB-23-289603	Y	38.9	mg/kg	NA--3,000	J	J_LAB	TPH-DRO+Motor Oil
109921	ORGANIC	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Motor Oil Range Organics	15356	RLUOB-23-289602	Y	581	mg/kg	NA--3,000	NQ	NQ	TPH-DRO+Motor Oil

Notes: [1] **SSL Reference: NMED, 2022 (See Closure Report Reference Section [7.0]).**
[2] **Validation qualifier and reason-code definitions are provided in Appendix D.**

List of Appendices

Appendix A	**NMED PSTB Approvals**
Appendix B	**Project Photolog**
Appendix C	**Geodetic Survey Results (GPS Coordinates)**
Appendix D	**Certificate of Destruction and Manifest Documentation, LANL TA 55-0560 RLUOB Diesel Tank. EPC-DO: 23-302; LA-UR: 23-31081**
Appendix E	**Waste Manifests & Profiles**
Appendix F	**NMED PSTB Notification of Permanent Closure of Tank Disposition Documentation, Petroleum Storage Tank Systems, LANL TA-55-0560 RLUOB Diesel Tank. EPC-DO: 23-302; LA-UR: 23-31081**
Appendix G	**Sample Control Documentation (Sample Collection Logs/Chain-of-Custody Forms/RADCON Survey Forms) and Analytical Laboratory Reports**
Appendix H	**Compaction Testing Results**
Appendix I	**Industrial Hygiene Monitoring Data**

Appendix A

NMED PSTB Approvals

October 17, 2022

Aaron M. Dailey, CHMM
EPC-CP-Water Quality Team
Los Alamos National Laboratory
adailey@lanl.gov

Re: Technical Approval of Phase 1 Secondary Investigation Workplan for Los Alamos National Laboratory TA-55 RLUOB Fuel Tank, 0.06 miles WNW of Pajarito Road and Pecos Drive, Los Alamos, New Mexico

Facility #: 54763 Release ID #: 4670 WPID #: 19157

Dear Aaron Dailey:

The New Mexico Environment Department (Department) approves the technical approach and scope of work in the workplan dated September 27, 2021, which was submitted on your behalf by the Environmental Compliance Programs Group, Los Alamos National Laboratories (LANL). This workplan is for secondary investigation corrective action which includes soil sampling, laboratory analysis and reporting for the Los Alamos National Laboratory TA-55 RLUOB Fuel Tank site.

Please refer to the following table for a breakdown of the expected deliverable and date of completion. The dates listed in the table is the current deadline in the applicable portion of the corrective action timeline for the subject site.

Deliverable Name	Estimated Date of Deliverable	Deliverable ID
Secondary Investigation and Report	12/15/2022	19157-1

Please be reminded that because no expenditure from the corrective action fund shall be authorized for corrective action at sites owned or operated by the United States or any agency or instrumentality thereof, costs for this work will not be reimbursable from the Corrective Action Fund. Commencement of the described project activities will constitute your acceptance of this provision. This will not affect future compliance determinations or reimbursement status for this site.

Please submit electronic copies of all deliverables to PSTB.Inbox@env.nm.gov with a copy to the project manager identified below. Also, please mail hard copies of deliverables to the attention of the project manager.

You may begin work immediately. Approval of this workplan is contingent upon all work being performed on this site in accordance with all local, state, and federal regulations, including 29 CFR 1910 governing occupational health and safety. The Department expects LANL to complete the work as described. All changes to the technical approach and scope of work must be approved in writing prior to the work being performed.

If you have any questions, please contact me at (505) 372-8153 or at susan.vongonten@env.nm.gov. Thank you for your continued voluntary cooperation.

Sincerely,

Tim Noger

Digitally signed by Tim Noger
Date: 2022.10.17 14:48:54 -06'00'

Susan von Gonten, C.P.G. For:
Project Manager
Petroleum Storage Tank Bureau

SvG:tn

cc: Karen Armijo, National Nuclear Security Administration, U.S. Department of Energy (karen.armijo@nnsa.doe.gov)
Lorena Goerger, Acting Bureau Chief (via email)
Tim Noger, Geoscientist Supervisor (via email)
Casey Stavert, Inspector, Prevention and Inspection Program (via email)
Neelam Dhawan, NMED HWB (via email)

cc w/encl: PSTB Master File Santa Fe

May 01, 2023

Aaron M. Dailey, CHMM
EPC-CP-Water Quality Team
Los Alamos National Laboratory
adailey@lanl.gov

Re: Approval of an Extension of Time from the Initially Approved Corrective Action Deadline for Phase 1 Activities at Los Alamos National Laboratory TA-55 RLUOB Fuel Tank, 0.06 miles WNW of Pajarito Road and Pecos Drive, Los Alamos, New Mexico

Facility #: 54763 Release ID #: 4670 WPID #: 19157

Dear Aaron Dailey,

The New Mexico Environment Department (Department) has reviewed a request for extension of time dated April 26, 2023, submitted on your behalf by the Environmental Compliance Programs Group, Los Alamos National Laboratories (LANL) for the deadline previously approved by the Department in the correspondence dated November 4, 2022. The time extension of 6 month was requested for submittal of the Secondary Investigation and Report due to protection from noise in accordance with the Endangered Species Act (ESA) compliance with Mexican spotted owls breeding and nesting season.

The request for extension of time is approved. The new deadline is:

Deliverable Name	Previous Estimated Date of Deliverable	New Estimated Date of Deliverable	Deliverable ID
Secondary Investigation Report	04/30/2023	10/30/2023	19157-1

Requests for extensions must be made in accordance with 20.5.119.1931 NMAC. If you have any questions, please contact me at (505) 372-8150 or tim.noger@env.nm.gov.

Sincerely,

Tim Noger Digitally signed by Tim Noger Date: 2023.05.02 08:10:25 -06'00'

Tim Noger
Interim Project Manager
Petroleum Storage Tank Bureau

TN:jd

cc: Steve Story, Triad, EPC-CP (story@lanl.gov)
Karen Armijo, National Nuclear Security Administration, U.S. Department of Energy (karen.armijo@nnsa.doe.gov)
Lorena Goerger, Bureau Chief (via email)
Chris Hamilton, Inspector Supervisor, Prevention and Inspection Program (via email)
Neelam Dhawan, NMED HWB (via email)
PSTB Master File Santa Fe

October 30, 2023

Aaron M. Dailey, CHMM
EPC-CP-Water Quality Team
Los Alamos National Laboratory
adailey@lanl.gov

Re: Approval of an Extension of Time from the Initially Approved Corrective Action Deadline for Phase 1 Activities at Los Alamos National Laboratory TA-55 RLUOB Fuel Tank, 0.06 miles WNW of Pajarito Road and Pecos Drive, Los Alamos, New Mexico

Facility #: 54763 Release ID #: 4670 WPID #: 19157

Dear Aaron Dailey,

The New Mexico Environment Department (Department) has reviewed a request for extension of time dated October 26, 2023, submitted on your behalf by the Environmental Compliance Programs Group, Los Alamos National Laboratories (LANL) for the deadline previously approved by the Department in the correspondence dated May 1, 2023. The time extension of 6 months was requested for submittal of the Secondary Investigation and Report due to protection from noise in accordance with the Endangered Species Act (ESA) compliance with Mexican spotted owls breeding and nesting season.

The request for extension of time is approved. The new deadline is:

Deliverable Name	Previous Estimated Date of Deliverable	New Estimated Date of Deliverable	Deliverable ID
Secondary Investigation Report	10/30/2023	04/30/2024	19157-1

Requests for extensions must be made in accordance with 20.5.119.1931 NMAC. If you have any questions, please contact me at (505) 470-4896 or corey.dimond@env.nm.gov.

Sincerely,

Corey Dimond Digitally signed by Corey Dimond
Date: 2023.10.31 08:40:06 -06'00'

Corey Dimond
Interim Project Manager
Petroleum Storage Tank Bureau

CAD:kr

cc: Steve Story, Triad, EPC-CP, story@lanl.gov (via email)
Karen Armijo, National Nuclear Security Administration, U.S. DOE, karen.armijo@nnsa.doe.gov, (via email)
Jim Gibb, Manager, Remedial Action Program (via email)
Corey Jarrett, Geoscientist Supervisor (via email)
Chris Hamilton, Inspector Supervisor, Prevention and Inspection Program (via email)
Neelam Dhawan, NMED HWB (via email)
PSTB Master File Santa Fe

November 4, 2022

Aaron M. Dailey, CHMM
EPC-CP-Water Quality Team
Los Alamos National Laboratory
adailey@lanl.gov

Re: Approval of an Extension of Time from the Initially Approved Corrective Action Deadline for Phase 1 Activities at Los Alamos National Laboratory TA-55 RLUOB Fuel Tank, 0.06 miles WNW of Pajarito Road and Pecos Drive, Los Alamos, New Mexico

Facility #: 54763 Release ID #: 4670 WPID #: 19157

Dear Aaron Dailey:

The New Mexico Environment Department (Department) has reviewed a request for extension of time dated October 26, 2022, submitted on your behalf by the Environmental Compliance Programs Group, Los Alamos National Laboratories (LANL) for the deadline previously approved by the Department in the correspondence dated October 17, 2022. The time extension of 136 days was requested for submittal of the Secondary Investigation and Report due to the current schedule and to allow adequate time for unanticipated delays.

The request for extension of time is approved. The new deadline is:

Deliverable Name	Previous Estimated Date of Deliverable	New Estimated Date of Deliverable	Deliverable ID
Secondary Investigation Report	12/15/2022	04/30/2023	19157-1

Requests for extensions must be made in accordance with 20.5.119.1931 NMAC. If you have any questions, please contact me at (505) 372-8153 or susan.vongonten@env.nm.gov.

Sincerely,

Susan Von Gonten

Digitally signed by Susan Von Gonten
Date: 2022.11.04 16:45:16 -06'00'

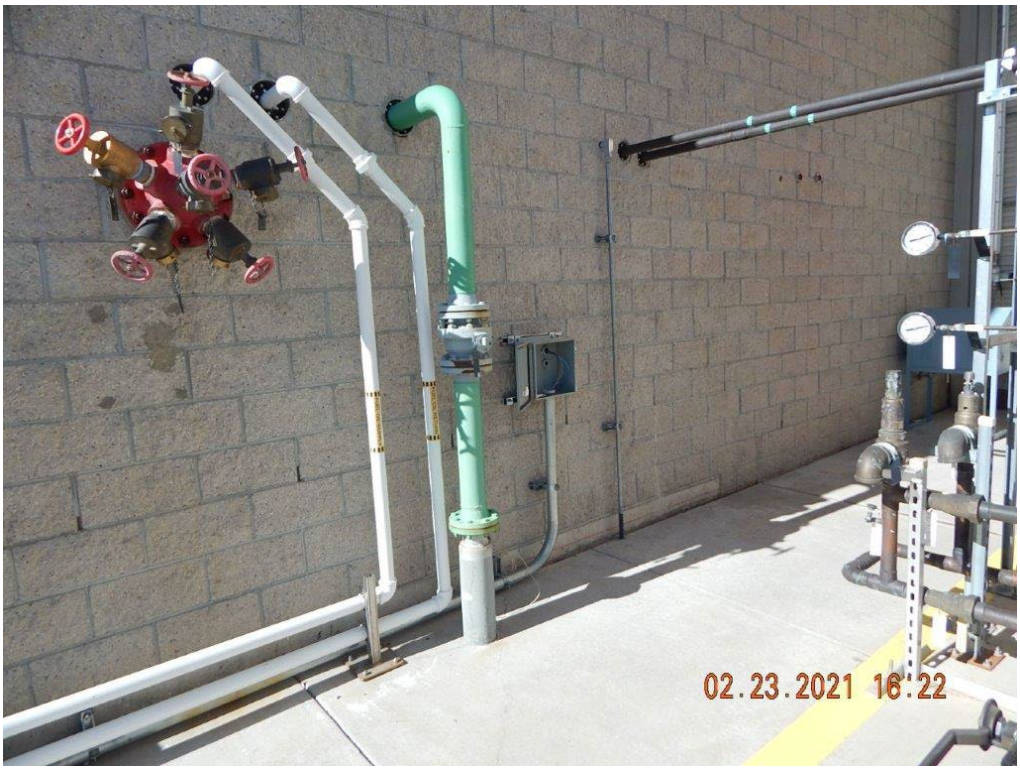
Susan von Gonten
Project Manager
Petroleum Storage Tank Bureau

SvG:tn

cc: Steve Story, Triad, EPC-CP (story@lanl.gov)
Karen Armijo, National Nuclear Security Administration, U.S. Department of Energy (karen.armijo@nnsa.doe.gov)
Lorena Goerger, Bureau Chief (via email)
Tim Noger, Geoscientist Supervisor (via email)
Casey Stavert, Inspector, Prevention and Inspection Program (via email)
Neelam Dhawan, NMED HWB (via email)
PSTB Master File Santa Fe

Appendix B

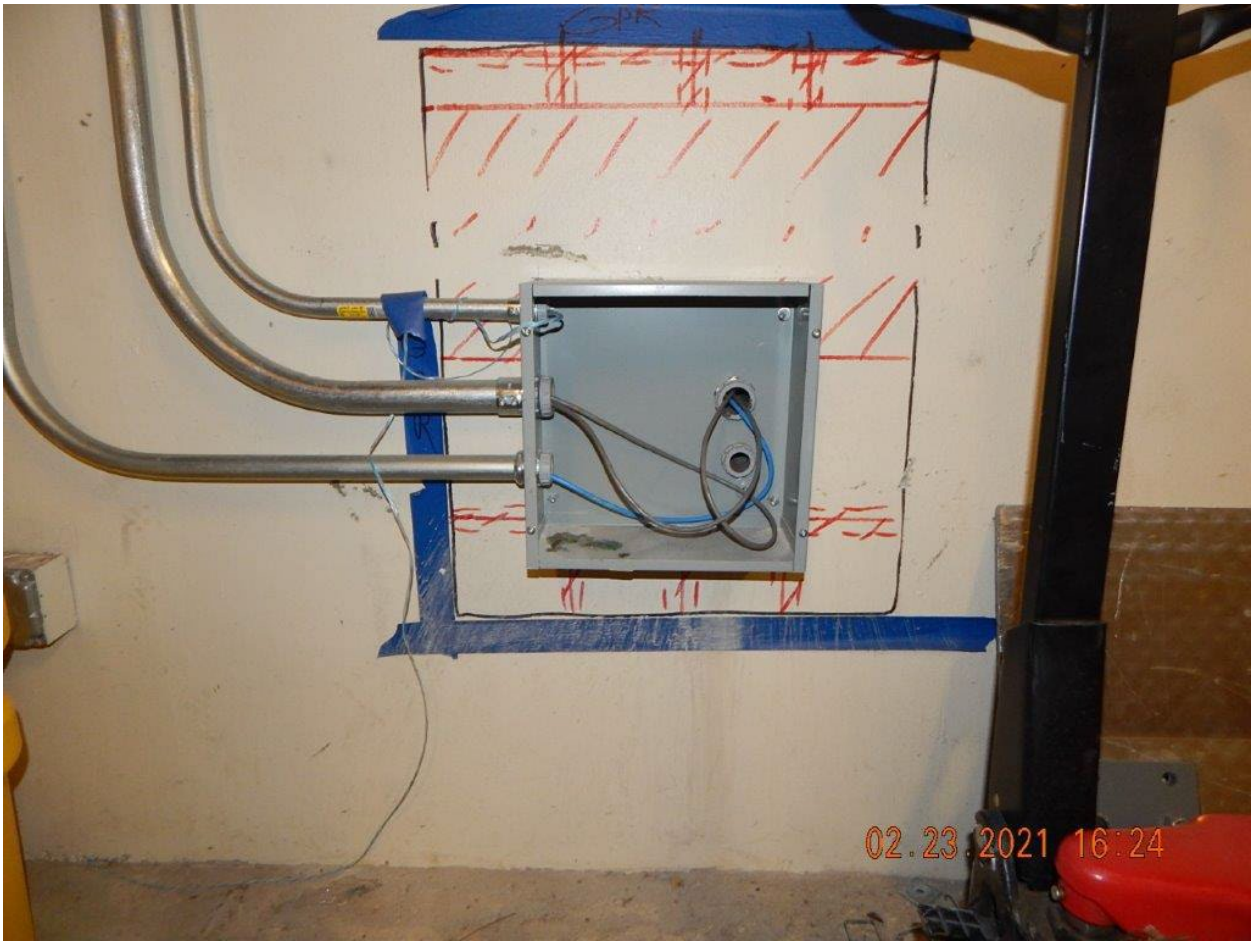
Project Photolog



Exterior penetrations of Fuel Oil Pipe and conduits



Interior penetrations of fuel oil pipe



Interior penetrations of conduits



Starting condition of fuel oil tank



Starting condition of fuel oil tank



Fuel oil tank and sump after removal of hood and piping.



Removing pipe, pumps, instruments and residual fuel oil from tank piping



Starting condition of fuel oil pipe at generators – expansion loop



Fuel oil piping during removal (painted white and blue) at CUB boiler room



Second Expansion loop in exterior fuel oil pipe



RIO Panel in CUB Second Floor



Fuel oil delivery system low voltage wiring inside CUB RIO Panel.



Exterior north CUB piping array. White painted Fuel oil pipe to be removed.



Starting condition of west sump near CUB



Removing fuel oil pipe inside emergency generator enclosure.



Fuel oil pipe to be removed in CUB Boiler room (Blue painted pipe)



Fuel oil pipe penetrations after removal from 1st floor/2nd floor penetration. Note test plug used to contain residual in pipe.



Fuel oil pipe after removal from CUB 2nd floor boiler room



Labelling of filled penetration on exterior wall of CUB.



Plug installed where conduit penetrated j-box to remain for wires in service.



Removal of Catwalk from Diesel Tank



Lifting Tank skid from concrete pad to trailer.



Placing Tank skid on trailer



T

Tank loaded and ready to remove from site



Rebar locations on tank pad from ground penetrating radar survey prior to breaking



Breaking/removal of concrete tank pad.



Aerosol Monitor. Used for monitoring airborne dust real-time, used to validate that the water spray dust control method is effective.



Photo-Ionization detector – verifying that the VOC/LEL in the east sump is below 10% of lower explosive limit.



Selecting location to field measure the VOCs present in subsoil during the breaking/removal of the tank pad.



Field sample of locations where lab samples were taken



Excavating to remove outer secondary containment pipe after primary fuel oil tubing was removed from the trench



Excavation of trench for pipe removal Shows clean soil and no staining from fuel oil.

Blue pipe is the outside secondary containment in the process of removal. All primary fuel oil tubing is removed and all residual is captured and sent to recycle at this point



Clean soil after removal of buried fuel oil pipe, west sump and aboveground pipe.



Backfill and compaction of trench from CUB to Tank pad after removal of all pipe



Excavation to tuff after containerizing of initial contaminated soil



Tape delineating final excavation location after first samples.



Final removal of residual contaminated soil



Lab sample capture and container labelling



GPS identification of lab sample locations



Protection of storm drain from silt.



Recording PID readings for field samples.

.



Field VOC sample method



Field calibration of Industrial Hygiene instruments



Weather protection for subgrade



Wind damage to field fence



Compaction testing by 3rd party inspector



Contaminated soil in bin.



Backfill and compaction with clean fill.



Weather conditions during removal of loaded bins



Subgrade protected from freezing and saturation. Note orange blanket under snow.



Removing silt without adding water and keeping storm drain free of silt.



Final condition of site.

Appendix C

Geodetic Survey Results (GPS Coordinates)

697	1768640	1625096	7265.21	DIESEL CONC PAD CNR TOP
698	1768632	1625137	7265.277	DIESEL CONC PAD CNR TOP
699	1768642	1625139	7265.396	DIESEL CONC PAD CNR TOP
700	1768651	1625099	7265.473	DIESEL CONC PAD CNR TOP
701	1769511	1627351	7223.707	AL CAP A3501

LANM	1776627	1624424	7360.743	LANM	Location ID (Chain-of-Custody)
2144	1768641	1625139	7263.461	PAD-SAMPLE 12	55-22348
2145	1768637	1625120	7263.396	PAD-SAMPLE 18	55-22346
2146	1768631	1625121	7264.401	PAD-SAMPLE 6	55-22347
2147	1768648	1625115	7260.103	PAD-SAMPLE 29	55-22345
2148	1768643	1625100	7261.51	PAD-SAMPLE 24	55-22344
2149	1768646	1625101	7262.008	PRS 1	55-22349
2150	1768652	1625078	7262.345	PRS 2	55-22350
2151	1768689	1625026	7261.822	PRS 5	55-22351
2152	1768663	1625063	7262.011	PRS 3	55-22352
2153	1768676	1625044	7262.184	PRS 4	55-22353
2154	1768701	1625010	7264.836	PRS 6	55-22356
2155	1768712	1624993	7263.562	PRS 7	55-22355
2156	1768725	1624974	7263.693	PRS 8	55-22354

LANM	1776627	1624424	7360.743	LANM	Location ID (Chain-of-Custody)
1001	1768643	1625122	7258.691	sample 31(8')	55-22357
1002	1768644	1625111	7258.593	sample 18(8')	55-22358
1003	1768643	1625100	7259.526	sample 24(8')	55-22359
1524	1769511	1627351	7223.75	al cap a3501	

Appendix D

Certificate of Destruction and Manifest Documentation,

LANL TA 55-0560 RLUOB Diesel Tank. EPC-DO: 23-302; LA-UR: 23-31081

Certificate of Destruction

is presented to

South West Building and Development

for

Received Materials are Hereby Guaranteed Destroyed & Recycled

12,000 gallon Double Wall Above Ground TANK

Signature

9.8.23

Date

Acme Iron and Metal

EPC-DO-24-116
Attachment 1 Page 99 of 970
LA-UR: 24-23621

OnlineSCRAP.com
The Ultimate Software for Scrap Dealers

Ace Metals
5711 Broadway Blvd. SE
Albuquerque, NM 87105-7623
505-877-1092

Date: 09/08/2023 - 13:19:12 Peter **Ticket No: 92938-13**

Purchased From:	Tag No: COMPANY
46457	CHARLES RIDGE GRIGGS
	30 ESTE MIRADA RD
	EL PRADO, NM 875290000

Truck:	Trailer:
Customer PO:	
Scale Ticket:	Vehicle Occupants:
Gross: 0	Tare: 0

Description	Pkg	Gross	Tare	Ded	Net	Price	Extended Price
		pounds					
#Torch		34980	26040	0	8940	0.0300/LB	268.20
#Torch		29240	8340	0	20900	0.0300/LB	627.00
				Total Net	29840		

2023-09-08 12:11:45 Paid by Cash in the amount of: 895.20

Seller certifies by his signature ans/or check endorsement that he/she is the rightful owner or agent of the property described above and has the right to possess and sell the property. Seller also warrants that material delivered does not contain hazardous or dangerous properties as defined under current Federal and State statues.

Agreed to by: _____

X1 Electronically Signed

ATM Bar Code

2350243086

Sep 8, 2023 / 1:19 PM *Page1/1* *2022 PrintLongTicket.NC*

Appendix E

Waste Manifests & Profiles

WASTE PROFILE FORM
COVER SHEET

51397
ACTIVE_APPROVED

Waste Characterization Information

Waste Stream ID:	51397
WPF ID (Legacy):	
Waste Stream Name:	TA 55 RLUOB DIESEL TANK REMOVAL PROJECT CONSTRUCTION & DEBRIS (C&D)
Expiration Date:	11/03/2024
Waste Type:	Municipal Waste
Radiological Type:	Non Radioactive
RCRA Category:	RCRA Solid Non-hazardous
Ancillary Types:	CONSTRUCTION & DEMOLITION DEBRIS
Primary Composition:	Other [Describe]
Composition (other):	
EPA Codes:	
Waste Acceptance:	
EPA Form Code:	NA - Not Applicable
EPA Source Code:	NA - Not Applicable

Waste Generation Estimates

Year	Volume
2024	0.00 CM
2023	100.00 CM
2022	100.00 CM

WASTE PROFILE FORM

Reference Number	
WCATS ID 51397	

Waste Generator		WMC		Other Info	
Z Number:	356755	**Z Number:**	280128	**Waste Generating Group:**	TA55-CWF
Name:	LAUREN LUCERO	**Name:**	CHRISTOPHER MARTINEZ	**Technical Area:**	55
Phone:	5056658293	**Phone:**	5056672770	**Building:**	000001
Mail Stop:	K487	**Mail Stop:**	M983	**Room:**	

Waste Accumulation *(check only one)*

☐	Satellite Accumulation Area	Site No:	
☐	Less-than-90 Days Storage Area	Site No:	
☐	TSDF	Site No:	
☐	Universal Waste Storage Area	Site No:	
☐	Used Oil for Recycle	Site No:	
☐	PCBs Storage Area	Site No:	
☐	NM Special Waste	Site No:	
☐	Rad Staging Area	Site No:	
☐	Rad Storage Area	Site No:	
☑	None of the Above	Site No:	
☐	Central Accumulation Area		

ER Use Only

☐ ER Site SWMU/AOC No:

Method of Characterization *(check as many as apply)*

☑	Acceptable Knowledge Documentation	☑	Attached	Documentation No.:	Waste Certification Statement
☐	Chemical/Physical Analysis	☐	Attached	Sample No.:	
☐	PCB Analysis	☐	Attached	Sample No.:	
☐	Radiological Analysis	☐	Attached	Sample No.:	
☐	Safety Data Sheet (SDS)	☐	Attached		

Section 1 - Waste Prevention/Minimization

Can hazard segregation, elimination, or material substitution be used?	☐ Yes (provide comments)	☑ No	
Can any of the materials in the waste stream be recycled or reused?	☐ Yes (provide comments)	☑ No	
Has waste minimization been incorporated into procedures or other process controls?	☑ Yes	☐ No (provide comments)	
Can this waste be generated outside a RCA?	☐ Yes (provide comments)	☐ No	☐ N/A

Comments:

Section 2 - Chemical and Physical Information

Waste Type:
Process Waste/Spent Chemical/Other

Radiological Information:
Was Waste Generated in a RCA?
☐ Yes ☐ No
☑ Non-Radioactive
☐ Radioactive - Low Level
☐ Radioactive - Transuranic
☐ Radioactive - High Level

Waste Destination:
☐ SWWS
☐ RLWTF
☐ RLWTP
☐ TA-16/HE
☐ NTS

Classified Information:
Unclassified

Waste Category
☑ Inorganic
☑ Organic
☐ Solvent (see instructions)
☐ Degreaser (see instructions)
☐ Dioxin
☐ Electroplating
☐ Treated Hazardous Waste or Residue
☐ No-Longer Contained-In
☐ Explosive Process
☐ Infectious/Medical
☐ Biological
☐ Beryllium
☐ Empty Container (see instructions)
☐ Battery (see instructions)

Asbestos
☐ Friable
☐ Non-Friable

PCB Source Concentration
☐ PCB < 50 ppm
☐ PCB >= 50 - < 500 ppm
☐ PCB >= 500 ppm
☐ Hazardous Waste Contaminated Soil
☐ Untreated Hazardous Debris
☐ Commercial Solid Waste
☐ Other [Describe]
Other:

Waste Source
Waste Source A:
☐ Decon
☐ Materials Processing/Production
☐ Research/Development/Testing
☐ Scheduled Maintenance
☐ Housekeeping - Routine
☐ Spill Cleanup - Routine
☐ Sampling - Routine Monitoring
☐ Other (describe)

Waste Source B:
☐ Abatement
☑ Construction/Upgrades
☐ Demolition
☐ Decon/Decom
☐ Investigative Derived
☐ Orphan/Legacy
☐ Remediation/Restoration
☐ Repacking (secondary)
☐ Unscheduled Maintenance
☐ Housekeeping (non-routine)
☐ Spill Cleanup (non-routine)
☐ Non-Petroleum Tanks
☐ Petroleum Tanks
☐ Other (describe)

Other:

Waste Matrix
Gas:
☐ <= 1.5 Atmospheres Pressure
☐ > 1.5 Atmospheres Pressure
☐ Liquefied Compressed Gas

Liquid:
☐ Aqueous
☐ Non-Aqueous
☐ Suspended Solids/Aqueous
☐ Suspended Solids/Non-Aqueous

Solid:
☐ Powder / Ash/ Dust
☐ Solid
☐ Sludge
☐ Absorbed/Solidified Liquid
☑ Debris

Matrix Type
☐ Homogeneous
☑ Heterogeneous

Estimate Annual Volume (m^3):
100

Section 3 - Process and Waste Description

Process Description
Construction and debris from TA 55 RLUOB Diesel Tank Removal Project

Waste Description
Waste will consist of demolition debris containing concrete, concrete block, vegetation, asphalt, rock, wood, plastic, soil, cellulosics, glass and non RCRA metals (aluminum, iron & steel).

Section 4 - Characteristics

Ignitibility
☐ < 73 F (< 22.8 C)
☐ 73 - 99 F (22.8 - 37.2 C)
☐ 100 - 139 F (37.8 - 59.4 C)
☐ 140 - 200 F (60.0 - 99.3 C)
☐ > 200 (> 99.3 C)
☐ EPA Ignitable - Non-liquid
☐ DOT Flammable Gas
☐ DOT Oxidizer
☑ Not Ignitable

Corrosivity (pH)
☐ <= 2.0
☐ 2.1 - 4.0
☐ 4.1 - 6.0
☐ 6.1 - 9.0
☐ 9.1 - 12.4
☐ >= 12.5
☐ Liquid Corrosive to Steel
☑ Non-aqueous

Reactivity
☐ RCRA Unstable
☐ Water Reactive
☐ Cyanide Bearing
☐ Sulfide Bearing
☐ Pyrophoric
☐ Shock Sensitive
☐ Explosive [Specify DOT Div.]
☑ Non-Reactive

Boiling Point
☐ <= 95 F (<= 35 C)
☐ >95 F (> 35 C)
☑ Not Applicable

Identify for all contaminants listed	Characterization Method				Concentration of Contaminants		Regulatory Limit
	AK	TCLP	Total	None or Non-detect	Contaminant present at Minimum	Maximum	
Toxicity Characteristic Metals							
Arsenic	☑	☐	☐	☑			5.0 ppm
Barium	☑	☐	☐	☑			100.0 ppm
Cadmium	☑	☐	☐	☑			1.0 ppm
Chromium	☑	☐	☐	☑			5.0 ppm
Lead	☑	☐	☐	☑			5.0 ppm
Mercury	☑	☐	☐	☑			0.2 ppm
Selenium	☑	☐	☐	☑			1.0 ppm
Silver	☑	☐	☐	☑			5.0 ppm
Toxicity Characteristic Organics							
Benzene	☑	☐	☐	☑			0.5 ppm
Carbon tetrachloride	☑	☐	☐	☑			0.5 ppm
Chlorobenzene	☑	☐	☐	☑			100.0 ppm
Chloroform	☑	☐	☐	☑			6.0 ppm
o-Cresol	☑	☐	☐	☑			200.0 ppm
m-Cresol	☑	☐	☐	☑			200.0 ppm
Cresol	☑	☐	☐	☑			200.0 ppm
p-Cresol	☑	☐	☐	☑			200.0 ppm
1,4-Dichlorobenzene	☑	☐	☐	☑			7.5 ppm
1,2-Dichloroethane	☑	☐	☐	☑			0.5 ppm
1,1-Dichloroethylene	☑	☐	☐	☑			0.7 ppm
2,4-Dinitrotoluene	☑	☐	☐	☑			0.1 ppm
Hexachlorobenzene	☑	☐	☐	☑			0.1 ppm
Hexachlorobutadiene	☑	☐	☐	☑			0.5 ppm
Hexachloroethane	☑	☐	☐	☑			3.0 ppm
Methyl ethyl ketone	☑	☐	☐	☑			200.0 ppm
Nitrobenzene	☑	☐	☐	☑			2.0 ppm
Pentachlorophenol	☑	☐	☐	☑			100.0 ppm
Pyridine	☑	☐	☐	☑			5.0 ppm
Tetrachloroethylene	☑	☐	☐	☑			0.7 ppm
Trichloroethylene	☑	☐	☐	☑			0.5 ppm
2,4,6-Trichlorophenol	☑	☐	☐	☑			2.0 ppm
2,4,5-Trichlorophenol	☑	☐	☐	☑			400.0 ppm
Vinyl chloride	☑	☐	☐	☑			0.2 ppm
Herbicides and Pesticides							
Lindane (gamma-BHC)	☑	☐	☐	☑			0.4 ppm
Chlordane	☑	☐	☐	☑			0.0 ppm
2,4-D	☑	☐	☐	☑			10.0 ppm
Endrin	☑	☐	☐	☑			0.0 ppm
Heptachlor (& its epoxide)	☑	☐	☐	☑			0.0 ppm
Methoxychlor	☑	☐	☐	☑			10.0 ppm
2,4,5-TP (Silvex)	☑	☐	☐	☑			1.0 ppm
Toxaphene	☑	☐	☐	☑			0.5 ppm

Section 5 - Additional Constituents and Contaminants

Please account for 100% of waste. Range should be given within guidelines of individual constituents. List all other constients (including inerts) not identified above and attach any applicable analysis. No chemical formula allowed in this field. Continue in Section 3 Additional information as necessary. CAS numbers are needed for all chemical constituents, for material without a CAS number, enter "No CAS Number".

CAS No.	Name of constituent	Minimum (ppm)		Maximum (ppm)
No CAS Number	Concrete	150000	to	200000
No CAS Number	Asphalt	150000	to	200000
No CAS Number	Metal (Steel,Iron,Alumnium)	150000	to	200000
No CAS Number	Wood, Lumber	150000	to	200000
No CAS Number	Vegetation, Rock, Clean soil	150000	to	200000
No CAS Number	Cellulosics,Plastic,Paper, Cardboard, Glass	150000	to	200000
	Total of max. ranges of this section and Characteristics			120.00 in %

Additional Information

If additional information is available on the chemical, physical, or radiological character of the waste not covered on this form, provide it below

Waste characterization is based on AK. Waste is inert, non-hazardous debris, does not present any waste imcompatibilty hazards. Waste is compatable with 20 yd roll off dumpster or Trailer to haul waste. This waste will be disposed of at an approved off-site facility. This Waste Stream excludes waste such as: PCB containing materials, asbestos containing materials, electronics, any material with visible staining, and recyclable material. These materials are segregated prior to removal. Project Clean Waste Certification Title: RLUOB Fuel Oil Tank Removal Project.

Section 6 - Work Control Documentation

Do the procedures for this process cover how to manage this waste? ☑ Yes ☐ No (provide comments)

Do the procedures for this process address controls to prevent changes to waste constituents and concentrations or addition or removal of waste to/from containers? ☑ Yes ☐ No (provide comments)

Comments:

Section 7 - Packaging and Storage Control

Describe how the waste will be packaged in according to the applicable WAC.

Dump truck, Roll-off bins or Trailor. Waste is inert/nonhazardous material and does not present any incompatibility issues.

Identify the storage management controls that will be used for this waste stream:

- ☐ Tamper Indication Devices
- ☐ Limited Use Locks with Log-in for Waste
- ☐ Locked Cabinet or Building
- ☑ Other (describe) Behind fence at RLUOB

Section 8 - Waste Certification Statements

☑ Waste appears to meet WAC attachment for: SW-MUNI

☐ Waste stream needs exception/exemption for treatment, storage, or disposal.

☐ Waste does not meet the criteria for any known TSDF. (DOE approval is required. Contact the office of the Principle Associate Director for Weapons Programs [PADWP] for assistance.)

Waste Generator Certification: Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the waste characterization information on this form is correct and that it meets the requirements of the applicable waste acceptance criteria. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Signature: *ALBERT ROYBAL (313118)* Date: *11/03/2022 9:50 AM*

Waste Management Approval: I have reviewed this form and any associated attachments and the characterization information provided appears to be complete and accurate. I certify, to the best of my knowledge, that the waste characterization information provided by the waste generator meets the requirements of the applicable WAC.

Signature: *CHRISTOPHER MARTINEZ (280128)* Date: *11/03/2022 9:51 AM*

RCRA Review: I have reviewed this form and any associated attachments and the characterization information provided appears to be complete and accurate. I certify, to the best of my knowledge, that the waste characterization information provided by the waste generator meets the requirements of the applicable WAC.

Signature: *ROBERT MOLTER (239137)* Date: *11/03/2022 10:55 AM*

Municipal Waste Review: I have reviewed this form and any associated attachments and the characterization information provided appears to be complete and accurate. I certify, to the best of my knowledge, that the waste characterization information provided by the waste generator meets the requirements of the applicable WAC.

Signature: *JOHN VALDEZ (091572)* Date: *11/03/2022 2:43 PM*

Attachment 4 - LDR and UHC

Identify category and presence of any constituents listed below (equal to or above limit).

Non-Wastewater/Wastewater Category

- ☐ Non Wastewater
- ☐ Wastewater [as defined by 40 CFR 268.2(f)]
- ☐ Lab Pack [40 CFR 268.2(f)] **Sign Certification #1**

Notifications and Certifications - Check the appilcable boxes

Generator Requirements:

- ☐ This shipment contains hazardous waste contaminated soil that does not meet treatment standards **Sign Certification #2**
- ☐ This shipment contains untreated hazardous debris to be treated to 40 CFR 268.45 treatment standards **(No certification)**
- ☐ Hazardous wastes (except soil) meeting treatment standards at point of generation **Sign Certification #3**
- ☐ Hazardous wastes contaminated soil meeting treatment standards at point of generation **Sign Certification #4**

TSDF or Generator Treatment:

- ☐ TSDF treated hazardous debris meeting the alternative treatment standards of 40 CFR 268.45 **Sign Certification #5**
- ☐ Generator treated hazardous debris meeting the alternative treatment standards of 40 CFR 268.45 **Sign Certification #6**
- ☐ Hazardous wastes contaminated soil treated to 40 CFR 268.49 **Sign Certification #7**
- ☐ Wastes or residues from characteristic hazardous waste treatment meeting treatment standards and UTS **Sign Certification #8**
- ☐ Wastes or residues from characteristic hazardous waste treatment not meeting UTS **Sign Certification #9**
- ☐ Other TSDF wastes meeting the more stringent 40 CFR 268.40 treatment standards to be land disposed **Sign Certification #10**
- ☐ Other generator wastes meeting the more stringent 40 CFR 268.40 treatment standards to be land disposed **Sign Certification #11**

Notification of Underlying Hazardous Constituents

(Check the applicable underlying constituents above the concentration levels for D001 through D043 characterstic wastes only)

☐ **No Underlying Hazardous Constituents in this waste stream.**

	Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
☐	trans-1,2-Dichloroethylene	156-60-5	0.054	30.0	300.0
☐	trans-1,3-Dichloropropene	10061-02-6	0.036	18.0	180.0
☐	cis-1,3-Dichloropropylene	10061-01-5	0.036	18.0	180.0
☐	Acenaphthene	83-32-9	0.059	3.4	34.0
☐	Acenaphthylene	208-96-8	0.059	3.4	34.0
☐	Acetone	67-64-1	0.28	160.0	1600.0
☐	Acetonitrile	75-05-8	5.6	38.0	380.0
☐	Acetophenone	98-86-2	0.01	9.7	97.0
☐	2-Acetylaminofluorene	53-96-3	0.059	140.0	1400.0
☐	Acrolein	107-02-8	0.29	N/A	N/A
☐	Acrylamide	79-06-1	19.0	23.0	230.0
☐	Acrylonitrile	107-13-1	0.24	84.0	840.0
☐	Aldicarb sulfone	1646-88-4	0.056	0.28	2.8
☐	Aldrin	309-00-2	0.021	0.066	0.66
☐	4-Aminobiphenyl	92-67-1	0.13	N/A	N/A
☐	Aniline	62-53-3	0.81	14.0	140.0
☐	o-Anisidine	90-04-0	0.01	0.66	6.6
☐	Anthracene	120-12-7	0.059	3.4	34.0
☐	Aramite	140-57-8	0.36	N/A	N/A
☐	alpha-BHC	319-84-6	0.0001	0.066	0.66
☐	beta-BHC	319-85-7	0.0001	0.066	0.66
☐	delta-BHC	319-86-8	0.023	0.066	0.66
☐	Lindane (gamma-BHC)	58-89-9	0.0017	0.066	0.66
☐	Barban	101-27-9	0.056	1.4	14.0
☐	Bendiocarb	22781-23-3	0.056	1.4	14.0
☐	Benomyl	17804-35-2	0.056	1.4	14.0

☐	Benz[a]anthracene	56-55-3	0.059	3.4	34.0
☐	Benzal chloride	98-87-3	0.055	6.0	60.0
☐	Benzene	71-43-2	0.14	10.0	100.0
☐	Benzo(b)fluoranthene	205-99-2	0.11	6.8	68.0
☐	Benzo[a]pyrene	50-32-8	0.061	3.4	34.0
☐	Benzo[ghi]perylene	191-24-2	0.0055	1.8	18.0
☐	Benzo[k]fluoranthene	207-08-9	0.11	6.8	68.0
☐	Bromodichloromethane	75-27-4	0.35	15.0	150.0
☐	Bromomethane	74-83-9	0.11	15.0	150.0
☐	4-Bromophenyl phenyl ether	101-55-3	0.055	15.0	150.0
☐	n-Butyl alchohol	71-36-3	5.6	2.6	26.0
☐	Butyl benzyl phthalate	85-68-7	0.017	28.0	280.0
☐	Butylate	2008-41-5	0.042	1.4	14.0
☐	Carbaryl	63-25-2	0.006	0.14	1.4
☐	Carbendazim	10605-21-7	0.056	1.4	14.0
☐	Carbofuran	1563-66-2	0.006	0.14	1.4
☐	Carbofuran phenol	1563-38-8	0.056	1.4	14.0
☐	Carbon disulfide	75-15-0	3.8	4.8	48.0
☐	Carbon tetrachloride	56-23-5	0.057	6.0	60.0
☐	Carbosulfan	55285-14-8	0.028	1.4	14.0
☐	Chlordane	57-74-9	0.0033	0.26	2.6
☐	p-Chloro-m-cresol	59-50-7	0.018	14.0	140.0
☐	p-Chloroaniline	106-47-8	0.46	16.0	160.0
☐	Chlorobenzene	108-90-7	0.057	6.0	60.0
☐	Chlorobenzilate	510-15-6	0.1	N/A	N/A
☐	Chlorodibromomethane	124-48-1	0.057	15.0	150.0
☐	Chloroethane	75-00-3	0.27	6.0	60.0
☐	Bis(2-Chloroethoxy)methane	111-91-1	0.036	7.2	72.0
☐	2-Chloroethyl vinyl ether	110-75-8	0.062	N/A	N/A
☐	Chloroform	67-66-3	0.046	6.0	60.0
☐	Chloromethane	74-87-3	0.19	30.0	300.0
☐	2-Chloronaphthalene	91-58-7	0.055	5.6	56.0
☐	2-Chlorophenol	95-57-8	0.044	5.7	57.0
☐	Chloroprene	126-99-8	0.057	0.28	2.8
☐	3-Chloropropylene	107-05-1	0.036	30.0	300.0
☐	Chrysene	218-01-9	0.059	3.4	34.0
☐	p-Cresidine	120-71-8	0.01	0.66	6.6
☐	m-Cresol	108-39-4	0.77	5.6	56.0
☐	o-Cresol	95-48-7	0.11	5.6	56.0
☐	p-Cresol	106-44-5	0.77	5.6	56.0
☐	m-Cumenyl methylcarbamate	64-00-6	0.056	1.4	14.0
☐	Cyanide (Amenable)	57-12-5*	0.86	30.0	300.0
☐	Cyanide (Total)	57-12-5	1.2	590.0	5900.0
☐	Cyclohexanone	108-94-1	0.36	0.75	7.5
☐	2,4-D	94-75-7	0.72	10.0	100.0
☐	o,p'-DDD	53-19-0	0.023	0.087	0.87
☐	p,p'-DDD	72-54-8	0.023	0.087	0.87
☐	o,p'-DDE	3424-82-6	0.031	0.087	0.87
☐	p,p'-DDE	72-55-9	0.031	0.087	0.87
☐	o,p'-DDT	789-02-6	0.0039	0.087	0.87
☐	p,p'-DDT	50-29-3	0.0039	0.087	0.87
☐	Dibenz[a,h]anthracene	53-70-3	0.055	8.2	82.0

☐	Dibenzo[a,e]pyrene	192-65-4	0.061	N/A	N/A
☐	1,2-Dibromo-3-chloropropane	96-12-8	0.11	15.0	150.0
☐	1,2-Dibromoethane	106-93-4	0.028	15.0	150.0
☐	Dibromomethane	74-95-3	0.11	15.0	150.0
☐	1,4-Dichlorobenzene	106-46-7	0.09	6.0	60.0
☐	m-Dichlorobenzene	541-73-1	0.036	6.0	60.0
☐	o-Dichlorobenzene	95-50-1	0.088	6.0	60.0
☐	Dichlorodifluoromethane	75-71-8	0.23	7.2	72.0
☐	1,1-Dichloroethane	75-34-3	0.059	6.0	60.0
☐	1,2-Dichloroethane	107-06-2	0.21	6.0	60.0
☐	1,1-Dichloroethylene	75-35-4	0.025	6.0	60.0
☐	2,4-Dichlorophenol	120-83-2	0.044	14.0	140.0
☐	2,6-Dichlorophenol	87-65-0	0.044	14.0	140.0
☐	1,2-Dichloropropane	78-87-5	0.85	18.0	180.0
☐	Dieldrin	60-57-1	0.017	0.13	1.3
☐	Diethyl phthalate	84-66-2	0.2	28.0	280.0
☐	Dimethyl phthalate	131-11-3	0.047	28.0	280.0
☐	p-Dimethylaminoazobenzene	60-11-7	0.13	N/A	N/A
☐	2,4-Dimethylphenol	105-67-9	0.036	14.0	140.0
☐	4,6-Dinitro-o-cresol	534-52-1	0.28	160.0	1600.0
☐	1,4-Dinitrobenzene	100-25-4	0.32	2.3	23.0
☐	2,4-Dinitrophenol	51-28-5	0.12	160.0	1600.0
☐	2,4-Dinitrotoluene	121-14-2	0.32	140.0	1400.0
☐	2,6-Dinitrotoluene	606-20-2	0.55	28.0	280.0
☐	Dinoseb	88-85-7	0.066	2.5	25.0
☐	1,4-Dioxane	123-91-1	12.0	170.0	1700.0
☐	Diphenylamine	122-39-4	0.92	13.0	130.0
☐	1,2-Diphenylhydrazine	122-66-7	0.087	N/A	N/A
☐	Disulfoton	298-04-4	0.017	6.2	62.0
☐	Dithiocarbamates (total)	WCATS-001	0.028	28.0	280.0
☐	EPTC	759-94-4	0.042	1.4	14.0
☐	Endosulfan I	959-98-8	0.023	0.066	0.66
☐	Endosulfan II	33213-65-9	0.029	0.13	1.3
☐	Endosulfan sulfate	1031-07-8	0.029	0.13	1.3
☐	Endrin	72-20-8	0.0028	0.13	1.3
☐	Endrin aldehyde	7421-93-4	0.025	0.13	1.3
☐	Ethyl acetate	141-78-6	0.34	33.0	330.0
☐	Ethyl benzene	100-41-4	0.057	10.0	100.0
☐	Ethyl ether	60-29-7	0.12	160.0	1600.0
☐	Ethyl methacrylate	97-63-2	0.14	160.0	1600.0
☐	Ethylene oxide	75-21-8	0.12	N/A	N/A
☐	Famphur	52-85-7	0.017	15.0	150.0
☐	Fluoranthene	206-44-0	0.068	3.4	34.0
☐	Fluorene	86-73-7	0.059	3.4	34.0
☐	Fluoride	16984-48-8	35.0	N/A	N/A
☐	Formetanate hydrochloride	23422-53-9	0.056	1.4	14.0
☐	Heptachlor (& its epoxide)	76-44-8	0.0012	0.066	0.66
☐	Heptachlor epoxide	1024-57-3	0.016	0.066	0.66
☐	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	0.0	0.0025	0.025
☐	1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	0.0	0.0025	0.025
☐	1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	0.0	0.0025	0.025
☐	Hexachlorobenzene	118-74-1	0.055	10.0	100.0

☐	Hexachlorobutadiene	87-68-3	0.055	5.6	56.0
☐	Hexachlorocyclopentadiene	77-47-4	0.057	2.4	24.0
☐	Hexachloroethane	67-72-1	0.055	30.0	300.0
☐	Hexachloropropene	1888-71-7	0.035	30.0	300.0
☐	Iodomethane	74-88-4	0.19	65.0	650.0
☐	Isobutyl alcohol	78-83-1	5.6	170.0	1700.0
☐	Isodrin	465-73-6	0.021	0.066	0.66
☐	Isosafrole	120-58-1	0.081	2.6	26.0
☐	Kepone	143-50-0	0.0011	0.13	1.3
☐	Mercury (Retort Residues)	7439-97-6*	N/A	0.2	2.0
☐	Methacrylonitrile	126-98-7	0.24	84.0	840.0
☐	Methanol	67-56-1	5.6	0.75	7.5
☐	Methapyrilene	91-80-5	0.081	1.5	15.0
☐	Methiocarb	2032-65-7	0.056	1.4	14.0
☐	Methomyl	16752-77-5	0.028	0.14	1.4
☐	Methoxychlor	72-43-5	0.25	0.18	1.8
☐	Methyl ethyl ketone	78-93-3	0.28	36.0	360.0
☐	Methyl isobutyl ketone	108-10-1	0.14	33.0	330.0
☐	Methyl methacrylate	80-62-6	0.14	160.0	1600.0
☐	Methyl methanesulfonate	66-27-3	0.018	N/A	N/A
☐	Methyl parathion	298-00-0	0.014	4.6	46.0
☐	3-Methylcholanthrene	56-49-5	0.0055	15.0	150.0
☐	4,4'-Methylene bis(2-chloroaniline)	101-14-4	0.5	30.0	300.0
☐	Methylene chloride	75-09-2	0.089	30.0	300.0
☐	Metolcarb	1129-41-5	0.056	1.4	14.0
☐	Mexacarbate	315-18-4	0.056	1.4	14.0
☐	Molinate	2212-67-1	0.042	1.4	14.0
☐	Naphthalene	91-20-3	0.059	5.6	56.0
☐	2-Naphthylamine	91-59-8	0.52	N/A	N/A
☐	5-Nitro-o-toluidine	99-55-8	0.32	28.0	280.0
☐	o-Nitroaniline	88-74-4	0.27	14.0	140.0
☐	p-Nitroaniline	100-01-6	0.028	28.0	280.0
☐	Nitrobenzene	98-95-3	0.068	14.0	140.0
☐	o-Nitrophenol	88-75-5	0.028	13.0	130.0
☐	p-Nitrophenol	100-02-7	0.12	29.0	290.0
☐	N-Nitroso-di-n-butylamine	924-16-3	0.4	17.0	170.0
☐	N-Nitrosodiethylamine	55-18-5	0.4	28.0	280.0
☐	N-Nitrosodimethylamine	62-75-9	0.4	2.3	23.0
☐	N-Nitrosodiphenylamine	86-30-6	0.92	13.0	130.0
☐	N-Nitrosomethylethylamine	10595-95-6	0.4	2.3	23.0
☐	N-Nitrosomorpholine	59-89-2	0.4	2.3	23.0
☐	N-Nitrosopiperidine	100-75-4	0.013	35.0	350.0
☐	N-Nitrosopyrrolidine	930-55-2	0.013	35.0	350.0
☐	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	0.0001	0.005	0.05
☐	1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	0.0001	0.005	0.05
☐	Oxamyl	23135-22-0	0.056	0.28	2.8
☐	Parathion	56-38-2	0.014	4.6	46.0
☐	Pebulate	1114-71-2	0.042	1.4	14.0
☐	Pentachlorobenzene	608-93-5	0.055	10.0	100.0
☐	Pentachloroethane	76-01-7	0.055	6.0	60.0
☐	Pentachloronitrobenzene	82-68-8	0.055	4.8	48.0
☐	Pentachlorophenol	87-86-5	0.089	7.4	74.0

☐	Phenacetin	62-44-2	0.081	16.0	160.0
☐	Phenanthrene	85-01-8	0.059	5.6	56.0
☐	Phenol	108-95-2	0.039	6.2	62.0
☐	1,3-Phenylenediamine	108-45-2	N/A	N/A	N/A
☐	o-Phenylenediamine	95-54-5	N/A	N/A	N/A
☐	Phorate	298-02-2	0.021	4.6	46.0
☐	Phthalic acid	100-21-0	0.055	28.0	280.0
☐	Phthalic anhydride	85-44-9	0.055	28.0	280.0
☐	Physostigmine	57-47-6	0.056	1.4	14.0
☐	Physostigmine salicylate	57-64-7	0.056	1.4	14.0
☐	Promecarb	2631-37-0	0.056	1.4	14.0
☐	Pronamide	23950-58-5	0.093	1.5	15.0
☐	Propanenitrile	107-12-0	0.24	360.0	3600.0
☐	Propham	122-42-9	0.056	1.4	14.0
☐	Propoxur	114-26-1	0.056	1.4	14.0
☐	Prosulfocarb	52888-80-9	0.042	1.4	14.0
☐	Pyrene	129-00-0	0.067	8.2	82.0
☐	Pyridine	110-86-1	0.014	16.0	160.0
☐	Safrole	94-59-7	0.081	22.0	220.0
☐	Sulfide	18496-25-8	14.0	N/A	N/A
☐	2,4,5-T	93-76-5	0.72	7.9	79.0
☐	TCDFs (All Tetrachlorodibenzofurans)	30402-14-3	0.0001	0.001	0.01
☐	2,4,5-TP (Silvex)	93-72-1	0.72	7.9	79.0
☐	1,2,4,5-Tetrachlorobenzene	95-94-3	0.055	14.0	140.0
☐	1,1,1,2-Tetrachloroethane	630-20-6	0.057	6.0	60.0
☐	1,1,2,2-Tetrachloroethane	79-34-5	0.057	6.0	60.0
☐	Tetrachloroethylene	127-18-4	0.056	6.0	60.0
☐	2,3,4,6-Tetrachlorophenol	58-90-2	0.03	7.4	74.0
☐	Thiodicarb	59669-26-0	0.019	1.4	14.0
☐	Toluene	108-88-3	0.08	10.0	100.0
☐	Total PCBs (Polychlorinated biphenyls)	1336-36-3	0.1	10.0	100.0
☐	Toxaphene	8001-35-2	0.0095	2.6	26.0
☐	Triallate	2303-17-5	0.042	1.4	14.0
☐	Tribromomethane	75-25-2	0.63	15.0	150.0
☐	2,4,6-Tribromophenol	118-79-6	0.035	7.4	74.0
☐	1,1,2-Trichloro-1,2,2,-trifluoroethane	76-13-1	0.057	30.0	300.0
☐	1,2,4-Trichlorobenzene	120-82-1	0.055	19.0	190.0
☐	1,1,1-Trichloroethane	71-55-6	0.054	6.0	60.0
☐	1,1,2-Trichloroethane	79-00-5	0.054	6.0	60.0
☐	Trichloroethylene	79-01-6	0.054	6.0	60.0
☐	Trichloromonofluoromethane (R11)	75-69-4	0.02	30.0	300.0
☐	2,4,5-Trichlorophenol	95-95-4	0.18	7.4	74.0
☐	2,4,6-Trichlorophenol	88-06-2	0.035	7.4	74.0
☐	1,2,3-Trichloropropane	96-18-4	0.85	30.0	300.0
☐	Triethylamine	121-44-8	0.081	1.5	15.0
☐	Vernolate	1929-77-7	0.042	1.4	14.0
☐	Vinyl chloride	75-01-4	0.27	6.0	60.0
☐	Xylene	1330-20-7	0.32	30.0	300.0
☐	2,4-Xylidine	95-68-1	0.01	0.66	6.6
☐	TCDDs (All Tetrachlorodi-benzo-p-dioxins)	41903-57-5	0.0001	0.001	0.01
☐	Indeno[1,2,3-cd]pyrene	193-39-5	0.0055	3.4	34.0
☐	Bis(2-chloroethyl) ether	111-44-4	0.033	6.0	60.0

☐	Bis(2-chloroisopropyl) ether	39638-32-9	0.055	7.2	72.0
☐	Tris(2,3-dibromopropyl) phosphate	126-72-7	0.11	0.1	1.0
☐	Bis(2-ethylhexyl) phthalate	117-81-7	0.28	28.0	280.0
☐	HxCDFs (All Hexachlorodibenzo-furans)	55684-94-1	0.0001	0.001	0.01
☐	PeCDFs (All Pentachlorodibenzo-furans)	30402-15-4	0.0	0.001	0.01
☐	Thiophanate-methyl	23564-05-8	0.056	1.4	14.0
☐	Di-n-butyl phthalate	84-74-2	0.057	28.0	280.0
☐	Di-n-octyl phthalate	117-84-0	0.017	28.0	280.0
☐	Di-n-propylnitrosamine	621-64-7	0.4	14.0	140.0
☐	HxCDDs (All Hexachlorodibenzo-p-dioxins)	34465-46-8	0.0001	0.001	0.01
☐	PeCDDs (All Pentachlorodibenzo-p-dioxins)	36088-22-9	0.0001	0.001	0.01
☐	Antimony	7440-36-0	1.9	1.15	11.5
☐	Arsenic	7440-38-2	1.4	5.0	50.0
☐	Barium	7440-39-3	1.2	21.0	210.0
☐	Beryllium	7440-41-7	0.82	1.22	12.2
☐	Cadmium	7440-43-9	0.69	0.11	1.1
☐	Chromium	7440-47-3	2.77	0.6	6.0
☐	Lead	7439-92-1	0.69	0.75	7.5
☐	Mercury	7439-97-6	0.15	0.025	0.25
☐	Nickel	7440-02-0	3.98	11.0	110.0
☐	Selenium	7782-49-2	0.82	5.7	57.0
☐	Silver	7440-22-4	0.43	0.14	1.4
☐	Thallium	7440-28-0	1.4	0.2	2.0
☐	Vanadium	7440-62-2	4.3	1.6	16.0
☐	Zinc	7440-66-6	2.61	4.3	43.0

WASTE PROFILE FORM
COVER SHEET

52140
ACTIVE_APPROVED

Waste Characterization Information

Waste Stream ID:	52140
WPF ID (Legacy):	
Waste Stream Name:	TA 55 RLUOB DIESEL TANK REMOVAL PROJECT CONCRETE FOR RECYCLE
Expiration Date:	11/03/2024
Waste Type:	Municipal Waste
Radiological Type:	Non Radioactive
RCRA Category:	RCRA Solid Non-hazardous
Ancillary Types:	CLEAN FILL
Primary Composition:	Concrete
Composition (other):	
EPA Codes:	
Waste Acceptance:	
EPA Form Code:	NA - Not Applicable
EPA Source Code:	NA - Not Applicable

Waste Generation Estimates

Year	Volume
2024	0.00 CM
2023	50.00 CM
2022	50.00 CM

WASTE PROFILE FORM

Reference Number	
WCATS ID 52140	

Waste Generator		WMC		Other Info	
Z Number:	356755	**Z Number:**	280128	**Waste Generating Group:**	WM-WGS
Name:	LAUREN LUCERO	**Name:**	CHRISTOPHER MARTINEZ	**Technical Area:**	55
Phone:	5056658293	**Phone:**	5056672770	**Building:**	000000
Mail Stop:	K487	**Mail Stop:**	M983	**Room:**	

Waste Accumulation *(check only one)*

- ☐ Satellite Accumulation Area — Site No:
- ☐ Less-than-90 Days Storage Area — Site No:
- ☐ TSDF — Site No:
- ☐ Universal Waste Storage Area — Site No:
- ☐ Used Oil for Recycle — Site No:

ER Use Only

- ☐ ER Site — SWMU/AOC No:

- ☐ PCBs Storage Area — Site No:
- ☐ NM Special Waste — Site No:
- ☐ Rad Staging Area — Site No:
- ☐ Rad Storage Area — Site No:
- ☑ None of the Above — Site No:
- ☐ Central Accumulation Area

Method of Characterization *(check as many as apply)*

☑ Acceptable Knowledge Documentation	☑ Attached	Documentation No.:	Clean waste cert
☐ Chemical/Physical Analysis	☐ Attached	Sample No.:	
☐ PCB Analysis	☐ Attached	Sample No.:	
☐ Radiological Analysis	☐ Attached	Sample No.:	
☐ Safety Data Sheet (SDS)	☐ Attached		

Section 1 - Waste Prevention/Minimization

Can hazard segregation, elimination, or material substitution be used?	☐ Yes (provide comments)	☑ No	
Can any of the materials in the waste stream be recycled or reused?	☑ Yes (provide comments)	☐ No	
Has waste minimization been incorporated into procedures or other process controls?	☑ Yes	☐ No (provide comments)	
Can this waste be generated outside a RCA?	☐ Yes (provide comments)	☐ No	☐ N/A

Comments:

Section 2 - Chemical and Physical Information

Waste Type:
Process Waste/Spent Chemical/Other

Radiological Information:
Was Waste Generated in a RCA?
☐ Yes ☐ No
☑ Non-Radioactive
☐ Radioactive - Low Level
☐ Radioactive - Transuranic
☐ Radioactive - High Level

Waste Destination:
☐ SWWS
☐ RLWTF
☐ RLWTP
☐ TA-16/HE
☐ NTS

Classified Information:
Unclassified

Waste Category
☑ Inorganic
☐ Organic
☐ Solvent (see instructions)
☐ Degreaser (see instructions)
☐ Dioxin
☐ Electroplating
☐ Treated Hazardous Waste or Residue
☐ No-Longer Contained-In
☐ Explosive Process
☐ Infectious/Medical
☐ Biological
☐ Beryllium
☐ Empty Container (see instructions)
☐ Battery (see instructions)

Asbestos
☐ Friable
☐ Non-Friable

PCB Source Concentration
☐ PCB < 50 ppm
☐ PCB >= 50 - < 500 ppm
☐ PCB >= 500 ppm
☐ Hazardous Waste Contaminated Soil
☐ Untreated Hazardous Debris
☐ Commercial Solid Waste
☐ Other [Describe]
Other:

Waste Source
Waste Source A:
☐ Decon
☐ Materials Processing/Production
☐ Research/Development/Testing
☐ Scheduled Maintenance
☐ Housekeeping - Routine
☐ Spill Cleanup - Routine
☐ Sampling - Routine Monitoring
☐ Other (describe)

Waste Source B:
☐ Abatement
☑ Construction/Upgrades
☐ Demolition
☐ Decon/Decom
☐ Investigative Derived
☐ Orphan/Legacy
☐ Remediation/Restoration
☐ Repacking (secondary)
☐ Unscheduled Maintenance
☐ Housekeeping (non-routine)
☐ Spill Cleanup (non-routine)
☐ Non-Petroleum Tanks
☐ Petroleum Tanks
☐ Other (describe)

Other:

Waste Matrix
Gas:
☐ <= 1.5 Atmospheres Pressure
☐ > 1.5 Atmospheres Pressure
☐ Liquefied Compressed Gas

Liquid:
☐ Aqueous
☐ Non-Aqueous
☐ Suspended Solids/Aqueous
☐ Suspended Solids/Non-Aqueous

Solid:
☐ Powder / Ash/ Dust
☐ Solid
☐ Sludge
☐ Absorbed/Solidified Liquid
☑ Debris

Matrix Type
☐ Homogeneous
☑ Heterogeneous

Estimate Annual Volume (m^3):
50

Section 3 - Process and Waste Description

Process Description
Recyclable concrete from TA-55 Diesel tank Removal Project. Waste is segregated from other C&D debris and may contain <15% soil.

Waste Description
Clean concrete for recycle that is segregated from all other C&D and is generated from the concrete pad, jersey barriers, sidewalk, and foundation pours (with or without rebar). Consists of <15% Soil.

Section 4 - Characteristics

Ignitibility
☐ < 73 F (< 22.8 C)
☐ 73 - 99 F (22.8 - 37.2 C)
☐ 100 - 139 F (37.8 - 59.4 C)
☐ 140 - 200 F (60.0 - 99.3 C)
☐ > 200 (> 99.3 C)
☐ EPA Ignitable - Non-liquid
☐ DOT Flammable Gas
☐ DOT Oxidizer
☑ Not Ignitable

Corrosivity (pH)
☐ <= 2.0
☐ 2.1 - 4.0
☐ 4.1 - 6.0
☐ 6.1 - 9.0
☐ 9.1 - 12.4
☐ >= 12.5
☐ Liquid Corrosive to Steel
☑ Non-aqueous

Reactivity
☐ RCRA Unstable
☐ Water Reactive
☐ Cyanide Bearing
☐ Sulfide Bearing
☐ Pyrophoric
☐ Shock Sensitive
☐ Explosive [Specify DOT Div.]
☑ Non-Reactive

Boiling Point
☐ <= 95 F (<= 35 C)
☐ >95 F (> 35 C)
☑ Not Applicable

Identify for all contaminants listed	Characterization Method				Concentration of Contaminants		Regulatory Limit
	AK	TCLP	Total	None or Non-detect	Contaminant present at Minimum	Maximum	
Toxicity Characteristic Metals							
Arsenic	☑	☐	☐	☑			5.0 ppm
Barium	☑	☐	☐	☑			100.0 ppm
Cadmium	☑	☐	☐	☑			1.0 ppm
Chromium	☑	☐	☐	☑			5.0 ppm
Lead	☑	☐	☐	☑			5.0 ppm
Mercury	☑	☐	☐	☑			0.2 ppm
Selenium	☑	☐	☐	☑			1.0 ppm
Silver	☑	☐	☐	☑			5.0 ppm
Toxicity Characteristic Organics							
Benzene	☑	☐	☐	☑			0.5 ppm
Carbon tetrachloride	☑	☐	☐	☑			0.5 ppm
Chlorobenzene	☑	☐	☐	☑			100.0 ppm
Chloroform	☑	☐	☐	☑			6.0 ppm
o-Cresol	☑	☐	☐	☑			200.0 ppm
m-Cresol	☑	☐	☐	☑			200.0 ppm
Cresol	☑	☐	☐	☑			200.0 ppm
p-Cresol	☑	☐	☐	☑			200.0 ppm
1,4-Dichlorobenzene	☑	☐	☐	☑			7.5 ppm
1,2-Dichloroethane	☑	☐	☐	☑			0.5 ppm
1,1-Dichloroethylene	☑	☐	☐	☑			0.7 ppm
2,4-Dinitrotoluene	☑	☐	☐	☑			0.1 ppm
Hexachlorobenzene	☑	☐	☐	☑			0.1 ppm
Hexachlorobutadiene	☑	☐	☐	☑			0.5 ppm
Hexachloroethane	☑	☐	☐	☑			3.0 ppm
Methyl ethyl ketone	☑	☐	☐	☑			200.0 ppm
Nitrobenzene	☑	☐	☐	☑			2.0 ppm
Pentachlorophenol	☑	☐	☐	☑			100.0 ppm
Pyridine	☑	☐	☐	☑			5.0 ppm
Tetrachloroethylene	☑	☐	☐	☑			0.7 ppm
Trichloroethylene	☑	☐	☐	☑			0.5 ppm
2,4,6-Trichlorophenol	☑	☐	☐	☑			2.0 ppm
2,4,5-Trichlorophenol	☑	☐	☐	☑			400.0 ppm
Vinyl chloride	☑	☐	☐	☑			0.2 ppm
Herbicides and Pesticides							
Lindane (gamma-BHC)	☑	☐	☐	☑			0.4 ppm
Chlordane	☑	☐	☐	☑			0.0 ppm
2,4-D	☑	☐	☐	☑			10.0 ppm
Endrin	☑	☐	☐	☑			0.0 ppm
Heptachlor (& its epoxide)	☑	☐	☐	☑			0.0 ppm
Methoxychlor	☑	☐	☐	☑			10.0 ppm
2,4,5-TP (Silvex)	☑	☐	☐	☑			1.0 ppm
Toxaphene	☑	☐	☐	☑			0.5 ppm

Section 5 - Additional Constituents and Contaminants

Please account for 100% of waste. Range should be given within guidelines of individual constituents. List all other constients (including inerts) not identified above and attach any applicable analysis. No chemical formula allowed in this field. Continue in Section 3 Additional information as necessary. CAS numbers are needed for all chemical constituents, for material without a CAS number, enter "No CAS Number".

CAS No.	Name of constituent	Minimum (ppm)		Maximum (ppm)
No CAS Number	Concrete/Concrete Block	900000	to	1000000
No CAS Number	Soil	0	to	150000
No CAS Number	Metal/Rebar	0	to	50000
	Total of max. ranges of this section and Characteristics			120.00 in %

Additional Information

If additional information is available on the chemical, physical, or radiological character of the waste not covered on this form, provide it below

Recyclable concrete from new construction at TA-55 Diesel Tank Removal Project. Waste is segregated from other C&D debris and may contain <15% soil. Attatched in documentation is (AK) Acceptable Knowledge stating the project is not within a PRS. Waste is inert, non hazardous debris, does not present any waste incompatibility hazards, and is compatible with all types of suitable containment. Project waste certification statement: TA-55 Diesel Tank Removal Project Waste stream #2 Materials for recycle

Section 6 - Work Control Documentation

Do the procedures for this process cover how to manage this waste? ☑ Yes ☐ No (provide comments)

Do the procedures for this process address controls to prevent changes to waste constituents and concentrations or addition or removal of waste to/from containers? ☑ Yes ☐ No (provide comments)

Comments:

Section 7 - Packaging and Storage Control

Describe how the waste will be packaged in according to the applicable WAC.

Per DOT, Bulk packaging in roll off bins/ end dumps. Concrete for recycle is inert, non-hazardous material, does not present any waste incompatibilty hazards, and is compatible with all types of suitable containment.

Identify the storage management controls that will be used for this waste stream:

- ☐ Tamper Indication Devices
- ☐ Limited Use Locks with Log-in for Waste
- ☐ Locked Cabinet or Building
- ☑ Other (describe) Within Project Boundary

Section 8 - Waste Certification Statements

☑ Waste appears to meet WAC attachment for: SW-MUNI

☐ Waste stream needs exception/exemption for treatment, storage, or disposal.

☐ Waste does not meet the criteria for any known TSDF. (DOE approval is required. Contact the office of the Principle Associate Director for Weapons Programs [PADWP] for assistance.)

Waste Generator Certification: Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the waste characterization information on this form is correct and that it meets the requirements of the applicable waste acceptance criteria. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Signature: *ALBERT ROYBAL (313118)* Date: *11/03/2022 9:51 AM*

Waste Management Approval: I have reviewed this form and any associated attachments and the characterization information provided appears to be complete and accurate. I certify, to the best of my knowledge, that the waste characterization information provided by the waste generator meets the requirements of the applicable WAC.

Signature: *CHRISTOPHER MARTINEZ (280128)* Date: *11/03/2022 10:05 AM*

RCRA Review: I have reviewed this form and any associated attachments and the characterization information provided appears to be complete and accurate. I certify, to the best of my knowledge, that the waste characterization information provided by the waste generator meets the requirements of the applicable WAC.

Signature: *ROBERT MOLTER (239137)* Date: *11/03/2022 11:21 AM*

Municipal Waste Review: I have reviewed this form and any associated attachments and the characterization information provided appears to be complete and accurate. I certify, to the best of my knowledge, that the waste characterization information provided by the waste generator meets the requirements of the applicable WAC.

Signature: *JOHN VALDEZ (091572)* Date: *11/03/2022 2:46 PM*

Attachment 4 - LDR and UHC

Identify category and presence of any constituents listed below (equal to or above limit).

Non-Wastewater/Wastewater Category

- ☐ Non Wastewater
- ☐ Wastewater [as defined by 40 CFR 268.2(f)]
- ☐ Lab Pack [40 CFR 268.2(f)] **Sign Certification #1**

Notifications and Certifications - Check the appilcable boxes

Generator Requirements:

- ☐ This shipment contains hazardous waste contaminated soil that does not meet treatment standards **Sign Certification #2**
- ☐ This shipment contains untreated hazardous debris to be treated to 40 CFR 268.45 treatment standards **(No certification)**
- ☐ Hazardous wastes (except soil) meeting treatment standards at point of generation **Sign Certification #3**
- ☐ Hazardous wastes contaminated soil meeting treatment standards at point of generation **Sign Certification #4**

TSDF or Generator Treatment:

- ☐ TSDF treated hazardous debris meeting the alternative treatment standards of 40 CFR 268.45 **Sign Certification #5**
- ☐ Generator treated hazardous debris meeting the alternative treatment standards of 40 CFR 268.45 **Sign Certification #6**
- ☐ Hazardous wastes contaminated soil treated to 40 CFR 268.49 **Sign Certification #7**
- ☐ Wastes or residues from characteristic hazardous waste treatment meeting treatment standards and UTS **Sign Certification #8**
- ☐ Wastes or residues from characteristic hazardous waste treatment not meeting UTS **Sign Certification #9**
- ☐ Other TSDF wastes meeting the more stringent 40 CFR 268.40 treatment standards to be land disposed **Sign Certification #10**
- ☐ Other generator wastes meeting the more stringent 40 CFR 268.40 treatment standards to be land disposed **Sign Certification #11**

Notification of Underlying Hazardous Constituents

(Check the applicable underlying constituents above the concentration levels for D001 through D043 characterstic wastes only)

☐ **No Underlying Hazardous Constituents in this waste stream.**

	Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
☐	trans-1,2-Dichloroethylene	156-60-5	0.054	30.0	300.0
☐	trans-1,3-Dichloropropene	10061-02-6	0.036	18.0	180.0
☐	cis-1,3-Dichloropropylene	10061-01-5	0.036	18.0	180.0
☐	Acenaphthene	83-32-9	0.059	3.4	34.0
☐	Acenaphthylene	208-96-8	0.059	3.4	34.0
☐	Acetone	67-64-1	0.28	160.0	1600.0
☐	Acetonitrile	75-05-8	5.6	38.0	380.0
☐	Acetophenone	98-86-2	0.01	9.7	97.0
☐	2-Acetylaminofluorene	53-96-3	0.059	140.0	1400.0
☐	Acrolein	107-02-8	0.29	N/A	N/A
☐	Acrylamide	79-06-1	19.0	23.0	230.0
☐	Acrylonitrile	107-13-1	0.24	84.0	840.0
☐	Aldicarb sulfone	1646-88-4	0.056	0.28	2.8
☐	Aldrin	309-00-2	0.021	0.066	0.66
☐	4-Aminobiphenyl	92-67-1	0.13	N/A	N/A
☐	Aniline	62-53-3	0.81	14.0	140.0
☐	o-Anisidine	90-04-0	0.01	0.66	6.6
☐	Anthracene	120-12-7	0.059	3.4	34.0
☐	Aramite	140-57-8	0.36	N/A	N/A
☐	alpha-BHC	319-84-6	0.0001	0.066	0.66
☐	beta-BHC	319-85-7	0.0001	0.066	0.66
☐	delta-BHC	319-86-8	0.023	0.066	0.66
☐	Lindane (gamma-BHC)	58-89-9	0.0017	0.066	0.66
☐	Barban	101-27-9	0.056	1.4	14.0
☐	Bendiocarb	22781-23-3	0.056	1.4	14.0
☐	Benomyl	17804-35-2	0.056	1.4	14.0

☐	Benz[a]anthracene	56-55-3	0.059	3.4	34.0
☐	Benzal chloride	98-87-3	0.055	6.0	60.0
☐	Benzene	71-43-2	0.14	10.0	100.0
☐	Benzo(b)fluoranthene	205-99-2	0.11	6.8	68.0
☐	Benzo[a]pyrene	50-32-8	0.061	3.4	34.0
☐	Benzo[ghi]perylene	191-24-2	0.0055	1.8	18.0
☐	Benzo[k]fluoranthene	207-08-9	0.11	6.8	68.0
☐	Bromodichloromethane	75-27-4	0.35	15.0	150.0
☐	Bromomethane	74-83-9	0.11	15.0	150.0
☐	4-Bromophenyl phenyl ether	101-55-3	0.055	15.0	150.0
☐	n-Butyl alchohol	71-36-3	5.6	2.6	26.0
☐	Butyl benzyl phthalate	85-68-7	0.017	28.0	280.0
☐	Butylate	2008-41-5	0.042	1.4	14.0
☐	Carbaryl	63-25-2	0.006	0.14	1.4
☐	Carbendazim	10605-21-7	0.056	1.4	14.0
☐	Carbofuran	1563-66-2	0.006	0.14	1.4
☐	Carbofuran phenol	1563-38-8	0.056	1.4	14.0
☐	Carbon disulfide	75-15-0	3.8	4.8	48.0
☐	Carbon tetrachloride	56-23-5	0.057	6.0	60.0
☐	Carbosulfan	55285-14-8	0.028	1.4	14.0
☐	Chlordane	57-74-9	0.0033	0.26	2.6
☐	p-Chloro-m-cresol	59-50-7	0.018	14.0	140.0
☐	p-Chloroaniline	106-47-8	0.46	16.0	160.0
☐	Chlorobenzene	108-90-7	0.057	6.0	60.0
☐	Chlorobenzilate	510-15-6	0.1	N/A	N/A
☐	Chlorodibromomethane	124-48-1	0.057	15.0	150.0
☐	Chloroethane	75-00-3	0.27	6.0	60.0
☐	Bis(2-Chloroethoxy)methane	111-91-1	0.036	7.2	72.0
☐	2-Chloroethyl vinyl ether	110-75-8	0.062	N/A	N/A
☐	Chloroform	67-66-3	0.046	6.0	60.0
☐	Chloromethane	74-87-3	0.19	30.0	300.0
☐	2-Chloronaphthalene	91-58-7	0.055	5.6	56.0
☐	2-Chlorophenol	95-57-8	0.044	5.7	57.0
☐	Chloroprene	126-99-8	0.057	0.28	2.8
☐	3-Chloropropylene	107-05-1	0.036	30.0	300.0
☐	Chrysene	218-01-9	0.059	3.4	34.0
☐	p-Cresidine	120-71-8	0.01	0.66	6.6
☐	m-Cresol	108-39-4	0.77	5.6	56.0
☐	o-Cresol	95-48-7	0.11	5.6	56.0
☐	p-Cresol	106-44-5	0.77	5.6	56.0
☐	m-Cumenyl methylcarbamate	64-00-6	0.056	1.4	14.0
☐	Cyanide (Amenable)	57-12-5*	0.86	30.0	300.0
☐	Cyanide (Total)	57-12-5	1.2	590.0	5900.0
☐	Cyclohexanone	108-94-1	0.36	0.75	7.5
☐	2,4-D	94-75-7	0.72	10.0	100.0
☐	o,p'-DDD	53-19-0	0.023	0.087	0.87
☐	p,p'-DDD	72-54-8	0.023	0.087	0.87
☐	o,p'-DDE	3424-82-6	0.031	0.087	0.87
☐	p,p'-DDE	72-55-9	0.031	0.087	0.87
☐	o,p'-DDT	789-02-6	0.0039	0.087	0.87
☐	p,p'-DDT	50-29-3	0.0039	0.087	0.87
☐	Dibenz[a,h]anthracene	53-70-3	0.055	8.2	82.0

☐	Dibenzo[a,e]pyrene	192-65-4	0.061	N/A	N/A
☐	1,2-Dibromo-3-chloropropane	96-12-8	0.11	15.0	150.0
☐	1,2-Dibromoethane	106-93-4	0.028	15.0	150.0
☐	Dibromomethane	74-95-3	0.11	15.0	150.0
☐	1,4-Dichlorobenzene	106-46-7	0.09	6.0	60.0
☐	m-Dichlorobenzene	541-73-1	0.036	6.0	60.0
☐	o-Dichlorobenzene	95-50-1	0.088	6.0	60.0
☐	Dichlorodifluoromethane	75-71-8	0.23	7.2	72.0
☐	1,1-Dichloroethane	75-34-3	0.059	6.0	60.0
☐	1,2-Dichloroethane	107-06-2	0.21	6.0	60.0
☐	1,1-Dichloroethylene	75-35-4	0.025	6.0	60.0
☐	2,4-Dichlorophenol	120-83-2	0.044	14.0	140.0
☐	2,6-Dichlorophenol	87-65-0	0.044	14.0	140.0
☐	1,2-Dichloropropane	78-87-5	0.85	18.0	180.0
☐	Dieldrin	60-57-1	0.017	0.13	1.3
☐	Diethyl phthalate	84-66-2	0.2	28.0	280.0
☐	Dimethyl phthalate	131-11-3	0.047	28.0	280.0
☐	p-Dimethylaminoazobenzene	60-11-7	0.13	N/A	N/A
☐	2,4-Dimethylphenol	105-67-9	0.036	14.0	140.0
☐	4,6-Dinitro-o-cresol	534-52-1	0.28	160.0	1600.0
☐	1,4-Dinitrobenzene	100-25-4	0.32	2.3	23.0
☐	2,4-Dinitrophenol	51-28-5	0.12	160.0	1600.0
☐	2,4-Dinitrotoluene	121-14-2	0.32	140.0	1400.0
☐	2,6-Dinitrotoluene	606-20-2	0.55	28.0	280.0
☐	Dinoseb	88-85-7	0.066	2.5	25.0
☐	1,4-Dioxane	123-91-1	12.0	170.0	1700.0
☐	Diphenylamine	122-39-4	0.92	13.0	130.0
☐	1,2-Diphenylhydrazine	122-66-7	0.087	N/A	N/A
☐	Disulfoton	298-04-4	0.017	6.2	62.0
☐	Dithiocarbamates (total)	WCATS-001	0.028	28.0	280.0
☐	EPTC	759-94-4	0.042	1.4	14.0
☐	Endosulfan I	959-98-8	0.023	0.066	0.66
☐	Endosulfan II	33213-65-9	0.029	0.13	1.3
☐	Endosulfan sulfate	1031-07-8	0.029	0.13	1.3
☐	Endrin	72-20-8	0.0028	0.13	1.3
☐	Endrin aldehyde	7421-93-4	0.025	0.13	1.3
☐	Ethyl acetate	141-78-6	0.34	33.0	330.0
☐	Ethyl benzene	100-41-4	0.057	10.0	100.0
☐	Ethyl ether	60-29-7	0.12	160.0	1600.0
☐	Ethyl methacrylate	97-63-2	0.14	160.0	1600.0
☐	Ethylene oxide	75-21-8	0.12	N/A	N/A
☐	Famphur	52-85-7	0.017	15.0	150.0
☐	Fluoranthene	206-44-0	0.068	3.4	34.0
☐	Fluorene	86-73-7	0.059	3.4	34.0
☐	Fluoride	16984-48-8	35.0	N/A	N/A
☐	Formetanate hydrochloride	23422-53-9	0.056	1.4	14.0
☐	Heptachlor (& its epoxide)	76-44-8	0.0012	0.066	0.66
☐	Heptachlor epoxide	1024-57-3	0.016	0.066	0.66
☐	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	0.0	0.0025	0.025
☐	1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	0.0	0.0025	0.025
☐	1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	0.0	0.0025	0.025
☐	Hexachlorobenzene	118-74-1	0.055	10.0	100.0

☐	Hexachlorobutadiene	87-68-3	0.055	5.6	56.0
☐	Hexachlorocyclopentadiene	77-47-4	0.057	2.4	24.0
☐	Hexachloroethane	67-72-1	0.055	30.0	300.0
☐	Hexachloropropene	1888-71-7	0.035	30.0	300.0
☐	Iodomethane	74-88-4	0.19	65.0	650.0
☐	Isobutyl alcohol	78-83-1	5.6	170.0	1700.0
☐	Isodrin	465-73-6	0.021	0.066	0.66
☐	Isosafrole	120-58-1	0.081	2.6	26.0
☐	Kepone	143-50-0	0.0011	0.13	1.3
☐	Mercury (Retort Residues)	7439-97-6*	N/A	0.2	2.0
☐	Methacrylonitrile	126-98-7	0.24	84.0	840.0
☐	Methanol	67-56-1	5.6	0.75	7.5
☐	Methapyrilene	91-80-5	0.081	1.5	15.0
☐	Methiocarb	2032-65-7	0.056	1.4	14.0
☐	Methomyl	16752-77-5	0.028	0.14	1.4
☐	Methoxychlor	72-43-5	0.25	0.18	1.8
☐	Methyl ethyl ketone	78-93-3	0.28	36.0	360.0
☐	Methyl isobutyl ketone	108-10-1	0.14	33.0	330.0
☐	Methyl methacrylate	80-62-6	0.14	160.0	1600.0
☐	Methyl methanesulfonate	66-27-3	0.018	N/A	N/A
☐	Methyl parathion	298-00-0	0.014	4.6	46.0
☐	3-Methylcholanthrene	56-49-5	0.0055	15.0	150.0
☐	4,4'-Methylene bis(2-chloroaniline)	101-14-4	0.5	30.0	300.0
☐	Methylene chloride	75-09-2	0.089	30.0	300.0
☐	Metolcarb	1129-41-5	0.056	1.4	14.0
☐	Mexacarbate	315-18-4	0.056	1.4	14.0
☐	Molinate	2212-67-1	0.042	1.4	14.0
☐	Naphthalene	91-20-3	0.059	5.6	56.0
☐	2-Naphthylamine	91-59-8	0.52	N/A	N/A
☐	5-Nitro-o-toluidine	99-55-8	0.32	28.0	280.0
☐	o-Nitroaniline	88-74-4	0.27	14.0	140.0
☐	p-Nitroaniline	100-01-6	0.028	28.0	280.0
☐	Nitrobenzene	98-95-3	0.068	14.0	140.0
☐	o-Nitrophenol	88-75-5	0.028	13.0	130.0
☐	p-Nitrophenol	100-02-7	0.12	29.0	290.0
☐	N-Nitroso-di-n-butylamine	924-16-3	0.4	17.0	170.0
☐	N-Nitrosodiethylamine	55-18-5	0.4	28.0	280.0
☐	N-Nitrosodimethylamine	62-75-9	0.4	2.3	23.0
☐	N-Nitrosodiphenylamine	86-30-6	0.92	13.0	130.0
☐	N-Nitrosomethylethylamine	10595-95-6	0.4	2.3	23.0
☐	N-Nitrosomorpholine	59-89-2	0.4	2.3	23.0
☐	N-Nitrosopiperidine	100-75-4	0.013	35.0	350.0
☐	N-Nitrosopyrrolidine	930-55-2	0.013	35.0	350.0
☐	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	0.0001	0.005	0.05
☐	1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	0.0001	0.005	0.05
☐	Oxamyl	23135-22-0	0.056	0.28	2.8
☐	Parathion	56-38-2	0.014	4.6	46.0
☐	Pebulate	1114-71-2	0.042	1.4	14.0
☐	Pentachlorobenzene	608-93-5	0.055	10.0	100.0
☐	Pentachloroethane	76-01-7	0.055	6.0	60.0
☐	Pentachloronitrobenzene	82-68-8	0.055	4.8	48.0
☐	Pentachlorophenol	87-86-5	0.089	7.4	74.0

☐	Phenacetin	62-44-2	0.081	16.0	160.0
☐	Phenanthrene	85-01-8	0.059	5.6	56.0
☐	Phenol	108-95-2	0.039	6.2	62.0
☐	1,3-Phenylenediamine	108-45-2	N/A	N/A	N/A
☐	o-Phenylenediamine	95-54-5	N/A	N/A	N/A
☐	Phorate	298-02-2	0.021	4.6	46.0
☐	Phthalic acid	100-21-0	0.055	28.0	280.0
☐	Phthalic anhydride	85-44-9	0.055	28.0	280.0
☐	Physostigmine	57-47-6	0.056	1.4	14.0
☐	Physostigmine salicylate	57-64-7	0.056	1.4	14.0
☐	Promecarb	2631-37-0	0.056	1.4	14.0
☐	Pronamide	23950-58-5	0.093	1.5	15.0
☐	Propanenitrile	107-12-0	0.24	360.0	3600.0
☐	Propham	122-42-9	0.056	1.4	14.0
☐	Propoxur	114-26-1	0.056	1.4	14.0
☐	Prosulfocarb	52888-80-9	0.042	1.4	14.0
☐	Pyrene	129-00-0	0.067	8.2	82.0
☐	Pyridine	110-86-1	0.014	16.0	160.0
☐	Safrole	94-59-7	0.081	22.0	220.0
☐	Sulfide	18496-25-8	14.0	N/A	N/A
☐	2,4,5-T	93-76-5	0.72	7.9	79.0
☐	TCDFs (All Tetrachlorodibenzofurans)	30402-14-3	0.0001	0.001	0.01
☐	2,4,5-TP (Silvex)	93-72-1	0.72	7.9	79.0
☐	1,2,4,5-Tetrachlorobenzene	95-94-3	0.055	14.0	140.0
☐	1,1,1,2-Tetrachloroethane	630-20-6	0.057	6.0	60.0
☐	1,1,2,2-Tetrachloroethane	79-34-5	0.057	6.0	60.0
☐	Tetrachloroethylene	127-18-4	0.056	6.0	60.0
☐	2,3,4,6-Tetrachlorophenol	58-90-2	0.03	7.4	74.0
☐	Thiodicarb	59669-26-0	0.019	1.4	14.0
☐	Toluene	108-88-3	0.08	10.0	100.0
☐	Total PCBs (Polychlorinated biphenyls)	1336-36-3	0.1	10.0	100.0
☐	Toxaphene	8001-35-2	0.0095	2.6	26.0
☐	Triallate	2303-17-5	0.042	1.4	14.0
☐	Tribromomethane	75-25-2	0.63	15.0	150.0
☐	2,4,6-Tribromophenol	118-79-6	0.035	7.4	74.0
☐	1,1,2-Trichloro-1,2,2,-trifluoroethane	76-13-1	0.057	30.0	300.0
☐	1,2,4-Trichlorobenzene	120-82-1	0.055	19.0	190.0
☐	1,1,1-Trichloroethane	71-55-6	0.054	6.0	60.0
☐	1,1,2-Trichloroethane	79-00-5	0.054	6.0	60.0
☐	Trichloroethylene	79-01-6	0.054	6.0	60.0
☐	Trichloromonofluoromethane (R11)	75-69-4	0.02	30.0	300.0
☐	2,4,5-Trichlorophenol	95-95-4	0.18	7.4	74.0
☐	2,4,6-Trichlorophenol	88-06-2	0.035	7.4	74.0
☐	1,2,3-Trichloropropane	96-18-4	0.85	30.0	300.0
☐	Triethylamine	121-44-8	0.081	1.5	15.0
☐	Vernolate	1929-77-7	0.042	1.4	14.0
☐	Vinyl chloride	75-01-4	0.27	6.0	60.0
☐	Xylene	1330-20-7	0.32	30.0	300.0
☐	2,4-Xylidine	95-68-1	0.01	0.66	6.6
☐	TCDDs (All Tetrachlorodi-benzo-p-dioxins)	41903-57-5	0.0001	0.001	0.01
☐	Indeno[1,2,3-cd]pyrene	193-39-5	0.0055	3.4	34.0
☐	Bis(2-chloroethyl) ether	111-44-4	0.033	6.0	60.0

☐	Bis(2-chloroisopropyl) ether	39638-32-9	0.055	7.2	72.0
☐	Tris(2,3-dibromopropyl) phosphate	126-72-7	0.11	0.1	1.0
☐	Bis(2-ethylhexyl) phthalate	117-81-7	0.28	28.0	280.0
☐	HxCDFs (All Hexachlorodibenzo-furans)	55684-94-1	0.0001	0.001	0.01
☐	PeCDFs (All Pentachlorodibenzo-furans)	30402-15-4	0.0	0.001	0.01
☐	Thiophanate-methyl	23564-05-8	0.056	1.4	14.0
☐	Di-n-butyl phthalate	84-74-2	0.057	28.0	280.0
☐	Di-n-octyl phthalate	117-84-0	0.017	28.0	280.0
☐	Di-n-propylnitrosamine	621-64-7	0.4	14.0	140.0
☐	HxCDDs (All Hexachlorodibenzo-p-dioxins)	34465-46-8	0.0001	0.001	0.01
☐	PeCDDs (All Pentachlorodibenzo-p-dioxins)	36088-22-9	0.0001	0.001	0.01
☐	Antimony	7440-36-0	1.9	1.15	11.5
☐	Arsenic	7440-38-2	1.4	5.0	50.0
☐	Barium	7440-39-3	1.2	21.0	210.0
☐	Beryllium	7440-41-7	0.82	1.22	12.2
☐	Cadmium	7440-43-9	0.69	0.11	1.1
☐	Chromium	7440-47-3	2.77	0.6	6.0
☐	Lead	7439-92-1	0.69	0.75	7.5
☐	Mercury	7439-97-6	0.15	0.025	0.25
☐	Nickel	7440-02-0	3.98	11.0	110.0
☐	Selenium	7782-49-2	0.82	5.7	57.0
☐	Silver	7440-22-4	0.43	0.14	1.4
☐	Thallium	7440-28-0	1.4	0.2	2.0
☐	Vanadium	7440-62-2	4.3	1.6	16.0
☐	Zinc	7440-66-6	2.61	4.3	43.0

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) * 1 1 4 4 0 5 * Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
NM0890010515	1	505-667-2400	006592655 FLE

GENERATOR

5. Generator's Name and Mailing Address
ATTN: TIMOTHY BROWN
TRIAD on behalf of US Department of Energy
P.O. Box 1663, MS M969
Los Alamos, NM 87545
Generator's Phone: 5054870132

Generator's Site Address (if different than mailing address)
TRIAD on behalf of US Department of Energy
Technical Area 55
Los Alamos, NM 87545

6. Transporter 1 Company Name
MP Environmental Services, Inc. (AZ)
U.S. EPA ID Number: CAT000624247

7. Transporter 2 Company Name
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
U. S. Ecology (NV)
Hwy 95, 12 miles south of Beatty
Beatty, NV 89003
Facility's Phone: 7755532203
U.S. EPA ID Number: NVT330010000

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. 1 NON-REGULATED WASTE, SOLID, (PETROLEUM CONTAMINATED SOIL) NEW MEXICO SPECIAL WASTE	1	CM	15540	K	
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1.1 53959, W890450,
Profile # 070317718-0
Veolia WIP 801153
HWR#112056-020129-002

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: TIMOTHY BROWN | Signature | Month | Day | Year

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name | Signature | Month | Day | Year
Transporter 2 Printed/Typed Name | Signature | Month | Day | Year

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) Month | Day | Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. | 2. | 3. | 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name | Signature | Month | Day | Year

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
NM0890010515	1	505-667-2400	006592658 FLE

GENERATOR

5. Generator's Name and Mailing Address
ATTN: TIMOTHY BROWN
TRIAD on behalf of US Department of Energy
P.O. Box 1663, MS M969
Los Alamos, NM 87545
Generator's Phone: 5054870132

Generator's Site Address (if different than mailing address)
TRIAD on behalf of US Department of Energy
Technical Area 55
Los Alamos, NM 87545

6. Transporter 1 Company Name: MP Environmental Services, Inc. (AZ) — U.S. EPA ID Number: CAT000624247

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
U. S. Ecology (NV)
Hwy 95, 12 miles south of Beatty
Beatty, NV 89003
Facility's Phone: 7755532203

U.S. EPA ID Number: NVT330010000

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. 1 NON-REGULATED WASTE, SOLID, (PETROLEUM CONTAMINATED SOIL) NEW MEXICO SPECIAL WASTE	1	CM	~~11200~~ 15614	K	
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1.1 53959, W890449,
Profile #070317718-0
Veolia WIP 801153

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: TIMOTHY BROWN — Signature — Month / Day / Year

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name — Signature — Month / Day / Year

Transporter 2 Printed/Typed Name — Signature — Month / Day / Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month / Day / Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name — Signature — Month / Day / Year

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Appendix F

NMED PSTB Notification of Permanent Closure of Tank Disposition Documentation, Petroleum Storage Tank Systems, LANL TA-55-0560 RLUOB Diesel Tank. EPC-DO: 23-302; LA-UR: 23-31081

Los Alamos National Laboratory
PO Box 1663, K490
Los Alamos, NM 87545
505-667-0666

Environmental Protection & Compliance Division
Compliance Programs Group

Symbol: EPC-DO: 23-302
LA-UR: 23-31081
Locates: N/A
Date: October 2, 2023

New Mexico Environment Department
Petroleum Storage Tank Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505
PSTB.inbox@env.nm.gov

ATTN: Chris Hamilton and Philip Santana, NMED PSTB Prevention and Inspection Program and Tank Operations and Support Program – Tank Fees

Subject: OID 14138 FID 54763 - TA55-0560 – Notification of Permanent Closure, Tank Disposition Documentation

Pursuant 20.5.115 NMAC, Out-of-Service Storage Tank Systems and Closure, Triad, LLC, on behalf of Los Alamos National Laboratory (LANL), is submitting to the New Mexico Environment Department (NMED) Petroleum Storage Tank Bureau (PSTB) a "Notification of Permanent Closure of Petroleum Storage Tank Systems" (Attachment 1) and documentation supporting the subject tank disposition as required (Attachment 2).

Approximately 8-10 gallons of diesel fuel was removed from the TA55-0560 tank prior to rendering the tank vapor free. This fuel is determined to be of serviceable quality, was containerized, and is being re-used to operate facility reciprocating diesel equipment. No sludge, water or other contaminants was discovered or removed from this tank in preparation for transport to the destination scrap recycle facility.

Please note that this project is ongoing currently. LANL is working with the NMED PSTB Remedial Action Program on final remediation to closure. A third-party closure report will be submitted upon project completion, which will include this documentation in addition to all related environmental closure analyses and documentation as well as analytical testing results of all confirmation soil samples and waste manifests of any contaminated soils shipped offsite.

If you have any questions, please contact Aaron Dailey of Environmental Compliance Programs Group (EPC-CP) by telephone at (505) 667-7276 or by email at adailey@lanl.gov.

Sincerely,

SARAH HOLCOMB
(Affiliate)
Digitally signed by SARAH HOLCOMB (Affiliate)
Date: 2023.10.02 08:32:40 -06'00'

Steven L. Story
Group Leader

An Equal Opportunity Employer / Managed by Triad National Security, LLC, for the U.S. Department of Energy's NNSA

Attachment(s): Attachment 1: Notification of Permanent Closure of Petroleum Tank Systems, LANL TA 55-0560 RLUOB Diesel Tank
Attachment 2: Certificate of Destruction and Manifest Documentation, LANL TA 55-0560 RLUOB Diesel Tank

Copy: Chris Hamilton, NMED PSTB, Chris.Hamilton@env.nm.gov
Philip Santana, NMED PSTB, Philip.Santana@env.nm.gov
Karen E. Armijo, DOE-NA-LA, karen.armijo@nnsa.doe.gov
Robert A. Gallegos, DOE-NA-LA, robert.gallegos@nnsa.doe.gov
Steven A. Coleman, Triad, ALDESHQ, scoleman@lanl.gov
Jennifer E. Payne, Triad, ALDESHQ, jpayne@lanl.gov
Lauren J. Lucero, Triad, TA55-CWF, llucero@lanl.gov
Mark S. Pastirik, Triad, STR, mpastirik@lanl.gov
Charles Tesch, Triad, TA55-DO, tesch@lanl.gov
Stuart A. Mckernan, Triad, TA55-DO, mckernan@lanl.gov
Gerald L. George, Triad, DESH-TA55, jgeorge@lanl.gov
Derek A. Dunlavy, Triad, TA-55-OPS; ddunlavy@lanl.gov
Timothy J. Coogan, Triad, MSS-MP, tcoogan@lanl.gov
Clark E. Anderson, Triad, MSS-MP, ceanderson@lanl.gov
Joseph A. Beauregard, Triad, MSS-MP, jbeauregard@lanl.gov
Jeannette T. Hyatt, Triad, EWP, jhyatt@lanl.gov
Jessica L. Moseley, Triad, EPC-DO, jmoseley@lanl.gov
Luciana R. Vigil-Holterman, Triad, EPC-WM, luciana@lanl.gov
Steven L. Story, Triad, EPC-CP, story@lanl.gov
Sarah S. Holcomb, Triad, EPC-CP, sholcomb@lanl.gov
William J. Foley, Triad, EPC-CP, bfoley@lanl.gov
Jacob N. Pecos, Triad, EPC-CP, pecos@lanl.gov
Eduardo C. Lopez, Triad, EPC-CP, eclopez@lanl.gov
Aaron M. Dailey, Triad, EPC-CP, adailey@lanl.gov
eshq-dcrm@lanl.gov
epccorrespondence@lanl.gov

ATTACHMENT 1

Notification of Permanent Closure of Petroleum Storage Tank Systems, LANL TA 55-0560 RLUOB Diesel Tank

EPC-DO: 23-302

LA-UR: 23-31081

Date: October 2, 2023

Notification of Permanent Closure Of Petroleum Storage Tank Systems

The purpose of this form is for owners to notify the Tank Fee Program of the Petroleum Storage Tank Bureau of the permanent closure of the petroleum storage tank systems listed below. The owner must submit the form within 30 days of permanent closure of the petroleum storage tank systems, regardless of whether the systems are underground storage tank systems or above ground storage tank systems. Once the completed form is submitted to the Bureau, the owner will no longer be invoiced for yearly registration fees unless fees and/or penalties are still owned, or the petroleum storage tank systems have not been properly closed in accordance with Sections 1502 to 1504 of 20.5.115 NMAC. **This form will not be accepted by local program inspectors as a 30-day notification of an impending closure as required in Subsection A of 20.5.115.1500 NMAC.** Mail the completed form to:

New Mexico Environment Department
Petroleum Storage Tank Bureau
2905 Rodeo Park Drive East, Bldg. 1
Santa Fe, NM 87505

I. Ownership of Tank(s)

Owner Name	Owner ID Number
U.S. Department of Energy, National Nuclear Security Administration	14138

Street Address	City
3747 West Jemez Road	Los Alamos

State	Zip Code	County	Phone Number
New Mexico	87544	Los Alamos	+1 (505) 667-7276

II. Location of Tank(s)

Facility Name	Facility ID Number
LANL TA-55-0560 RLUOB Diesel Tank	54763

Street Address	City	Zip Code	County
0.06 Miles WNW of Pajarito Road and Pecos Drive	Los Alamos	87544	Los Alamos

0 **Number of Tank(s) still in service at this location.** **Closure Date:** **September 06, 2023**

III. Certification

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete.

Steve Story, Group Leader, Environmental Protection and Compliance - Compliance Programs, Triad National Security LLC
Name and Official Title of Owner or Owner's Authorized Representative

Signature	Date Signed
for Steve Story	10/2/2023

IV. Description of Petroleum Storage Tank Systems - Facility ID Number:

Tank Registration Number	54763				
A. Estimated Age of Tank (years)	11				
B. Estimated Capacity of tank (gallons)	12,000				
C. Tank Placement					
Above-ground	✓				
Underground					
D. Tank Construction					
Steel	✓				
Fiberglass Reinforced Plastic					
FRP Clad Steel					
Single-walled					
Double-walled	✓				
Farm Tank					
UL Listed	✓				
E. Piping Construction					
Steel	✓				
Black Steel					
Fiberglass Reinforced Plastic					
Flexible					
Other					
Underground	✓				
Above-ground	✓				
F. Content or Substance Last Stored					
Gasoline					
Diesel	✓				
Kerosene					
New Oil					
Waste /Used Oil					
Other					
Unknown					
G. Estimated Date of Last Used	14-Jan-13				
I. Tank Closed in Place	Tank was removed from its former location 6 SEP 2023 and transported to authorized scrap recycle yard.				
Filled with Concrete					
Filled with Sand					
Above-ground					
Inert at Closure					

ATTACHMENT 2

Certificate of Destruction and Manifest Documentation, LANL TA 55-0560 RLUOB Diesel Tank

EPC-DO: 23-302

LA-UR: 23-31081

Date: October 2, 2023

Certificate of Destruction

is presented to

South West Building and Development

for

Received Materials are Hereby Guaranteed Destroyed & Recycled

12,000 gallon Double Wall Above Ground TANK

Signature

9.8.23

Date

Acme Iron and Metal

OnlineSCRAP.com
The Ultimate Software for Scrap Dealers

Ace Metals
5711 Broadway Blvd. SE
Albuquerque, NM 87105-7623
505-877-1092

Date: 09/08/2023 - 13:19:12 Peter **Ticket No: 92938-13**

Purchased From:	Tag No: COMPANY
46457	CHARLES RIDGE GRIGGS
	30 ESTE MIRADA RD
	EL PRADO, NM 875290000

Truck:	Trailer:
Customer PO:	
Scale Ticket:	Vehicle Occupants:
Gross: 0	Tare: 0

Description	Pkg	Gross	Tare	Ded	Net	Price	Extended Price
		pounds					
#Torch		34980	26040	0	8940	0.0300/LB	268.20
#Torch		29240	8340	0	20900	0.0300/LB	627.00
				Total Net	29840		

2023-09-08 12:11:45 Paid by Cash in the amount of: 895.20

Seller certifies by his signature ans/or check endorsement that he/she is the rightful owner or agent of the property described above and has the right to possess and sell the property. Seller also warrants that material delivered does not contain hazardous or dangerous properties as defined under current Federal and State statues.

Agreed to by: _____

X1 Electronically Signed

ATM Bar Code

2350243086

Sep 8, 2023 / 1:19 PM *Page1/1* *2022 PrintLongTicket.NC*

Appendix G

Sample Control Documentation (Sample Collection Logs/Chain-of-Custody Forms/RADCON Survey Forms) and Analytical Laboratory Reports

The order of this data package is as follows:

1. Chain-of-Custody/Lab Request
2. Copies of field COCs
3. Shipping Classification Determination Checklist
4. Data Review Summary (generated in EIM)
5. Laboratory analysis

Comments:

General Engineering Laboratories, Inc., Charleston, SC.

Charleston SC

Chain of Custody/Analysis Request

COC/Lab Request #: 2024-69

Page 1 of 1

Client Contact:

Lab Agreement #: 620266

Site Name: Los Alamos National Laboratory

Project Number: LANL

Analysis Turnaround Time:

24 Hour - ☐ Other - ☒

7 Days - ☐ Value - 5-Day

14 Days - ☐

21 Days - ☐

28 Days - ☐

Total # of bottles: 10

Event ID: 15356

Rad Screening Info: Acceptable knowledge identifies no DOT hazard classification

Lab Reporting Limit Type: Method Detection Limit

Field Sample ID	Sample Date	Sample Time	Sample Matrix	BTEX + TPH-GRO	TPH-DRO+Motor Oil
RLUOB-23-289584	10/10/2023	10:17	SO	1	1
RLUOB-23-289585	10/10/2023	10:42	SO	1	1
RLUOB-23-289586	10/10/2023	10:57	SO	1	1
RLUOB-23-289587	10/10/2023	11:17	SO	1	1
RLUOB-23-289588	10/10/2023	11:36	SO	1	1

Special Instructions:

Relinquished by:	Print Name:	Date/Time:	Received by:	Print Name:	Date/Time:
Relinquished by:	Print Name:	Date/Time:	Received by:	Print Name:	Date/Time:
Relinquished by:	Print Name:	Date/Time:	Received by:	Print Name:	Date/Time:

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 15356 **EVENT NAME:** RLUOB Diesel Tank Removal

SAMPLE ID: RLUOB-23-289584 **WORK ORDER:**

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYYY):	10/10/2023	10/10/2023	FIELD MATRIX:	S	S
TIME COLLECTED (HH:MM):	10:00	10:17/10:21	MEDIA:	SOIL	Soil
SWMU/AOC:	TA-55	TA-55	SAMPLE TECH CODE:	CBS	CBS
LOCATION ID:	55-22344	24(w)	FIELD PREP:	NA	NA
LOCATION TYPE:	GENERIC	GENERIC	FIELD QC TYPE:	REG	REG
TOP DEPTH:	4'	4'	SAMPLE USAGE:	INV	INV
BOTTOM DEPTH:	4'6"	4'6"	EXCAVATED:		YES / (NO) / NA

PRIORITY	ORDER	CONTAINER	#	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
5-DAY T/A	BTEX + TPH-GRO	~~2"x6" SS 125 ML GLASS~~	1X	ICE	Y	
5-DAY T/A	TPH-DRO+Motor Oil	~~0.25 LITER GLASS~~ ~~2"x6" SS~~	1	ICE	Y	

SAMPLE COMMENTS: ADD TPH GRO & MRO PER NMED REQ'MTS. 5-DAY TURNAROUND. CONTAINERS- 2"x6" STAINLESS STEEL TUBES

LOCATION COMMENTS:

FIELD PARAMETERS:

Sample Time 10:17 HH:MM

VOCs - 5 ppm (PID)

O_2 - 20.9%

CO - 0 ppm

H_2S - 0.0 ppm

COLLECTED BY (PRINT):

REVIEWED BY (PRINT):

RELINQUISHED BY (Printed Name) (Signature) Ken Vernon	Date/Time 10/10/23 13:15	RECEIVED BY (Printed Name) (Signature) Melissa Mata	Date/Time 10/10/23 1315
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

Report Date: 09/19/2023

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 15356 **EVENT NAME:** RLUOB Diesel Tank Removal

SAMPLE ID: RLUOB-23-289585 **WORK ORDER:**

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYYY):	10/10/2023	10/10/2023	FIELD MATRIX:	S	S
TIME COLLECTED (HH:MM):	10:30	10:42 / 10:45	MEDIA:	SOIL	SOIL
SWMU/AOC:	TA-55	TA-55	SAMPLE TECH CODE:	CBS	
LOCATION ID:	55-22345	29(N)	FIELD PREP:	NA	N/A
LOCATION TYPE:	GENERIC		FIELD QC TYPE:	REG	REG
TOP DEPTH:	4'	4'	SAMPLE USAGE:	INV	INV
BOTTOM DEPTH:	4'6"	4'6"	EXCAVATED:		YES / (NO) / NA

PRIORITY	ORDER	CONTAINER	#	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
5-DAY T/A	BTEX + TPH-GRO	~~125 ML GLASS~~ 2"x6" SS	1/2	ICE	Y	
5-DAY T/A	TPH-DRO+Motor Oil	~~0.25 LITER GLASS~~ 2"x6" SS	1	ICE	Y	

SAMPLE COMMENTS: ADD TPH GRO & MRO, PER NMED REQ'MTS. 5-DAY TURNAROUND. CONTAINERS - 2" X 6" STAINLESS STEEL TUBES

LOCATION COMMENTS:

FIELD PARAMETERS:

Sample Time 10:45 HH:MM

VOCs - 0.ppm

O_2 - 20.9%

CO - 0 ppm

H_2S - 0.0 ppm

COLLECTED BY (PRINT):

REVIEWED BY (PRINT):

RELINQUISHED BY (Printed Name) KEN VERNON (Signature)	Date/Time 10/10/23 13:15	RECEIVED BY (Printed Name) (Signature)	Date/Time 10/10/23 13:15
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

Report Date: 09/19/2023

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 15356 **EVENT NAME:** RLUOB Diesel Tank Removal

SAMPLE ID: RLUOB-23-289586 **WORK ORDER:**

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYYY):	10/10/2023	10/10/2023	FIELD MATRIX:	S	S
TIME COLLECTED (HH:MM):	11:00	10:57/11:02	MEDIA:	SOIL	Soil
SWMU/AOC:	TA-55	TA-55	SAMPLE TECH CODE:	CBS	CBS
LOCATION ID:	55-22346	18(GRB)	FIELD PREP:	NA	NA
LOCATION TYPE:	GENERIC	GEN	FIELD QC TYPE:	REG	REG
TOP DEPTH:	4'	4'	SAMPLE USAGE:	INV	INV
BOTTOM DEPTH:	4'6"	4'6"	EXCAVATED:		YES / (NO) / NA

PRIORITY	ORDER	CONTAINER	#	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
5-DAY TA	BTEX + TPH-GRO	~~125 ML~~ 2"X6" SS GLASS	1	ICE	Y	
5-DAY TA	TPH-DRO+Motor Oil	~~0.25 LITER~~ 2"X6" SS GLASS	1	ICE	Y	

SAMPLE COMMENTS: ADD TPH GRO & MRO, PER NMED REQ'MTS. 5-DAY TURNAROUND. CONTAINERS - 2"X6" STAINLESS STEEL TUBES

LOCATION COMMENTS:

FIELD PARAMETERS:

Sample Time 11:02 HH:MM

VOCs - 0ppm

O_2 - 20.9%

CO - 0ppm

H_2S - 0.0ppm

COLLECTED BY (PRINT):

REVIEWED BY (PRINT):

RELINQUISHED BY (Printed Name) KEN VERNON (Signature)	Date/Time 10/10/23 13:15	RECEIVED BY (Printed Name) (Signature)	Date/Time 10/10/23 13:15
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

Report Date: 09/19/2023

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 15356 **EVENT NAME:** RLUOB Diesel Tank Removal

SAMPLE ID: RLUOB-23-289587 **WORK ORDER:**

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYYY):	10/10/2023	10/10/2023	FIELD MATRIX:	S	S
TIME COLLECTED (HH:MM):	11:30	11:17/11:21	MEDIA:	SOIL	Soil
SWMU/AOC:	TA-55	TA-55	SAMPLE TECH CODE:	CBS	CBS
LOCATION ID:	55-22347	6(S)	FIELD PREP:	NA	NA
LOCATION TYPE:	GENERIC		FIELD QC TYPE:	REG	REG
TOP DEPTH:	4'	4'	SAMPLE USAGE:	INV	INV
BOTTOM DEPTH:	4'6"	4'6"	EXCAVATED:		YES / NO / NA

PRIORITY	ORDER	CONTAINER	#	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
5-DAY TAT	BTEX + TPH-GRO	2"x6" ~~125 ML SS GLASS~~	1/2	ICE	Y	
5-DAY TAT	TPH-DRO+Motor Oil	~~2"x6" SS 0.25 LITER GLASS~~	1	ICE	Y	

SAMPLE COMMENTS: ADD TPH GRO & MRO, PER NMED REQ'MTS. 5-DAY TURNAROUND

LOCATION COMMENTS:

FIELD PARAMETERS:

Sample Time 11:21 HH:MM

VOCs - 3 ppm

O_2 - 20.9%

CO - 0 ppm

H_2S - 0.0 ppm

COLLECTED BY (PRINT):

REVIEWED BY (PRINT):

RELINQUISHED BY (Printed Name) KEN VERNON (Signature)	Date/Time 10/11/23 13:15	RECEIVED BY (Printed Name) (Signature)	Date/Time 10/10/23 13:15
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

Report Date: 09/19/2023

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 15356 **EVENT NAME:** RLUOB Diesel Tank Removal

SAMPLE ID: RLUOB-23-289588 **WORK ORDER:**

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYYY):	10/10/2023	10/10/2023	FIELD MATRIX:	S	S
TIME COLLECTED (HH:MM):	12:00	11:33/11:36	MEDIA:	SOIL	Soil
SWMU/AOC:	TA-55	TA-55	SAMPLE TECH CODE:	CBS	CBS
LOCATION ID:	55-22348	12(E)	FIELD PREP:	NA	NA
LOCATION TYPE:	GENERIC	GENERIC	FIELD QC TYPE:	REG	REG
TOP DEPTH:	4'	4'	SAMPLE USAGE:	INV	INV
BOTTOM DEPTH:	4'6"	4'6"	EXCAVATED:		YES / NO / NA

PRIORITY	ORDER	CONTAINER	#	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
5-DAY TAT	BTEX + TPH-GRO	~~2"x6" SS~~ ~~125 ML~~ GLASS ~~2"x6" SS~~	1/2	ICE	Y	
5-DAY TAT	TPH-DRO+Motor Oil	~~0.25 LITER~~ ~~GLASS~~	1	ICE	Y	

SAMPLE COMMENTS: ADD TPH GRO & MRO, PER NMED REQ'MTS. 5-DAY TURNAROUND

LOCATION COMMENTS:

FIELD PARAMETERS:

Sample Time 11:36 HH:MM

VOCs - 2 ppm (PID)

O_2 - 20.9%

CO - 0 ppm

H_2S - 0.0 ppm

COLLECTED BY (PRINT): **REVIEWED BY (PRINT):**

RELINQUISHED BY (Printed Name) KEN VERNON (Signature)	Date/Time 10/10/23 13:15	RECEIVED BY (Printed Name) (Signature)	Date/Time 10/10/23 1315
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

Report Date: 09/19/2023

Sample Management Office Shipping Classification Determination Checklist

Sampling Plan ID/Name: EVENT ID 15356

TEST – Chemical Preservation	YES	NO	NA
If the samples were chemically preserved, do the chemical preservations exceed limits given in 40 CFR 136, Table II – Required Containers, Preservation Techniques and Holding Times (footnote 3)? **Note: sample preservation guidance listed on the SCL complies with CFR requirements.**	○	○	○

TEST – DOT Hazardous Material	YES	NO	Unknown
Is the sample a detonable or reactive explosive (DOT Division 1.1 through 1.6)?	○	○	○
Is the sample a compressed gas (DOT Division 2.1, 2.2, or 2.3)?	○	○	○
Is the sample a flammable or combustible liquid (DOT Hazard Class 3)?	○	○	○
Is the sample a flammable solid (DOT Division 4.1)?	○	○	○
Is the sample a spontaneously combustible material (DOT Division 4.2)?	○	○	○
Is the sample a dangerous when wet material (DOT Division 4.3)?	○	○	○
Is the sample an oxidizer or organic peroxide (DOT Division 5.1 or 5.2)?	○	○	○
Is the sample a poisonous material or infectious substance (DOT Division 6.1 or 6.2)?	○	○	○
Is the sample a corrosive material (DOT Hazard Class 8)?	○	○	○
Does the sample contain MORE than 1 lb of a hazardous material (DOT Hazard Class 9)?	○	○	○

TEST – Field Screen

If the samples have field screening measurements of alpha and/or beta activity, then compare the results to the sample and shipment activities limits listed below. Mark the items YES if they equal or exceed the listed activities.

Sample Activity (dpm/100cm²)		Shipment Activity (dpm*g/100cm²)	Sampled Location	YES	NO	NA
Alpha detectable	AND	Alpha ≥ 160,000	AT TA-1 and adjacent hillsides, TA-21, Acid Canyon, MDA C, TA-54 Area G, TA-48 or TA-49	○	○	○
Alpha ≥ 125	AND	Alpha ≥ 1,250,000	AT Other Locations	○	○	○
Beta ≥ 1,500	AND	Beta ≥ 15,000,000	AT Any Location	○	○	○
Alpha ≥ 16,000,000 dpm*g/100cm²?				○	○	○
Beta ≥ 160,000,000 dpm*g/100cm²?				○	○	○
On the external surface of the sample container, is Alpha ≥ 24 dpm/100cm²?				○	○	○
On the external surface of the sample container, is Beta ≥ 240 dpm/100cm²?				○	○	○
On the external surface of the sample container, is surface activity ≥ 0.5 mR/hr?				○	○	○

TEST – Previous Analytical Results

If previous analytical measurements of radioactive isotopes are available for this sampling location, then compare those results to the sample and shipment activity limits listed below. Mark the items YES if they equal or exceed the listed activities.

Sample Activity (pCi/g)		Shipment Activity (pCi)	YES	NO	NA
Am-241 ≥ 27 pCi/g	AND	Am-241 ≥ 270,000 pCi Total	○	○	○
Cs-137 ≥ 270 pCi/g	AND	Cs-137 ≥ 270,000 pCi Total	○	○	○
Pu-238 ≥ 27 pCi/g	AND	Pu-238 ≥ 270,000 pCi Total	○	○	○
Pu-239/240 ≥ 27 pCi/g	AND	Pu-239/240 ≥ 270,000 pCi Total	○	○	○
Th-228 ≥ 27 pCi/g	AND	Th-228 ≥ 270,000 pCi Total	○	○	○
U-234 ≥ 270 pCi/g	AND	U-234 ≥ 1,600,000,000 pCi Total	○	○	○
U-238 ≥ 270 pCi/g	AND	U-238 unlimited	○	○	○
H-3 ≥ 27,000,000 pCi/g	AND	H-3 ≥ 27,000,000,000 pCi Total	○	○	○
Am-241, Pu-238, Pu-239/240, or Th228 ≥ 27,000,000 pCi			○	○	○
Cs-137 ≥ 270,000,000,000 pCi			○	○	○
U-234 ≥ 160,000,000 pCi			○	○	○
H-3 ≥ 1 Ci			○	○	○

If ANY items on this form are marked YES, SMO will not transport the samples. Contact OS-PT for guidance.

Documented Field Team Member Statement

If no items on this form are marked YES, then these samples do not meet the criteria for classification in any hazard class according to 49 CFR Part 173 and may be shipped by the ALDESHQSS SMO.

Hazard Assessment Completed By: (Printed Name) KEN VERNON (Signature)	**Date:** 10/10/'23	**Time:** 13:15
Hazard Assessment Reviewed By: (Printed Name) Melissa Martinez (Signature)	**Date:** 10/10/23	**Time:** 1315

HPAL ANALYSIS REPORT

FILE: 29258403

Sample Description	Analysis Information	Contact Information
Login Date: 10/10/23	Instrument: BEGe-9	Name: BOOZER DOUGLAS E
Sample Type: Soil/Solid	Analysis: Isotopic	Phone: -
Location TA:55 Bldg: 0400	Date: 10/12/23	Email: boozer@lanl.gov
Room: Outside	Analyst: CHANDLER JOSHUA R	
Priority: Routine		

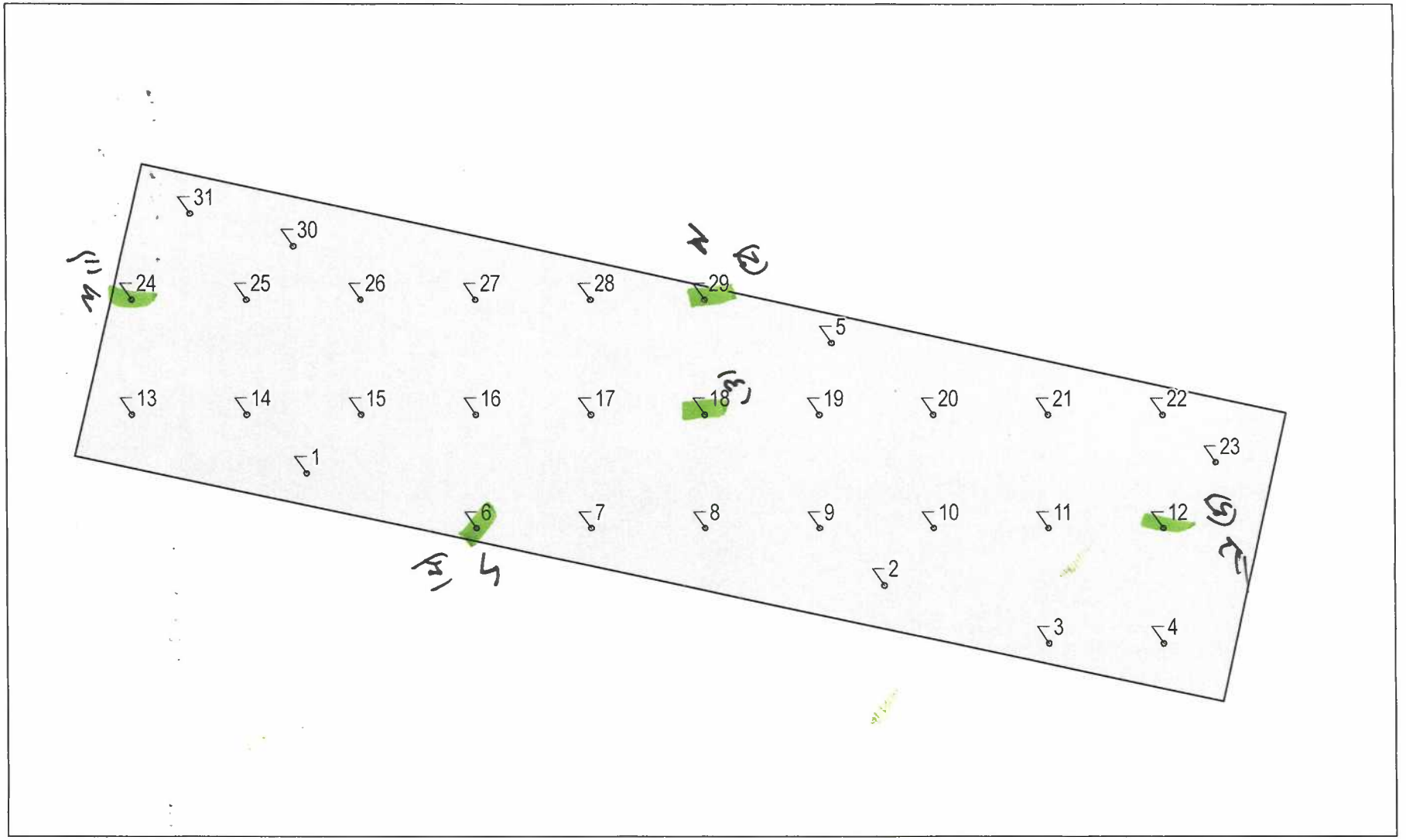
Analyst Comments:

Sample ID or Description: Soil x5. Analysis modified. Samples contain natural decay products.

Submitter Comments:

Soil Sample

Isotope Name	Activity	2* sigma	MDA
	(pCi/g)	(pct)	(pCi/g)
NONE-	NDA	NDA	NDA


31
30
24
25
26
27
28
29
5
13
14
15
16
17
18
19
20
21
22
23
1
6
7
8
9
10
11
12
2
3
4

Label	Label	X	Y
1	1	1625105	1768640
2	2	1625125	1768636
3	3	1625130	1768634
4	4	1625134	1768634
5	5	1625123	1768644
6	6	1625110	1768638
7	7	1625114	1768638
8	8	1625118	1768638
9	9	1625122	1768638
10	10	1625126	1768638
11	11	1625130	1768638
12	12	1625134	1768638
13	13	1625098	1768642
14	14	1625102	1768642
15	15	1625106	1768642
16	16	1625110	1768642
17	17	1625114	1768642
18	18	1625118	1768642
19	19	1625122	1768642
20	20	1625126	1768642
21	21	1625130	1768642
22	22	1625134	1768642
23	23	1625136	1768640
24	24	1625098	1768646
25	25	1625102	1768646
26	26	1625106	1768646
27	27	1625110	1768646
28	28	1625114	1768646
29	29	1625118	1768646
30	30	1625104	1768648
31	31	1625101	1768649

*Required Laboratory Analyses:

Volatile Organic Compounds (Ben
TPH- Diesel Range Organics (DRO)

* Per Los Alamos National Labora

Sampling Locations, in

zene, Toluene, Ethylbenzene, Xylene)- SW-846:8260B
), Gasoline Range Organics (GRO), and Motor Oil Range Organics (MRO)- SW-846:8015M_Extractable

tory Waste Characterization Strategy Form, TA-55 RLUOB Fuel Oil Tank Removal project (31 January 2023)

accordance with NMED PTSB Requirements

(Per NMED PSTB Requirements)

AUTOMATED DATA REVIEW SUMMARY REPORT

Chain Of Custody No. 2024-69

1. Distribution Of Samples In EDD.

SDG	Analytical Method	Regular Samples	Field Duplicates	Trip Blanks	Field Blanks	Equipment Blanks
642223	EPA:170.0	5				
642223	SW-846:8015D	5				
642223	SW-846:8260D	5				

SDG	Analytical Method	Analysis Lot ID	Prep Lot ID	Regular Samples	Field Duplicates	Trip Blanks	Field Blanks	Equipment Blanks	Method Blanks	Matrix Spikes	Matrix Spike Dups	Analytical Spikes	Post-Digestion Spikes	Lab Control Samples	Lab Control Sample Dups	Blank Spike	Blank Spike Dups	Lab Duplicates	Storage Blanks	Preparation Blanks	Reagent Blanks
642223	EPA:170.0	NA	NA	5																	
642223	SW-846:8015D	2512326	2512325	5					1	1	1			1							
642223	SW-846:8015D	2512723	2512720	5					2					1							
642223	SW-846:8260D	2512718	2512717	5					2					1							

2. Distribution Of Analytes In EDD.

Analytical Method	Analytical Method Category	Field Sample ID	Lab Sample ID	Sample Purpose	Target Analytes	Surrogates	Spiked Compounds	TICS
EPA:170.0	GENERAL CHEMISTRY	RLUOB-23-289584	642223001	REG	1	0	0	0
EPA:170.0	GENERAL CHEMISTRY	RLUOB-23-289585	642223002	REG	1	0	0	0
EPA:170.0	GENERAL CHEMISTRY	RLUOB-23-289586	642223003	REG	1	0	0	0
EPA:170.0	GENERAL CHEMISTRY	RLUOB-23-289587	642223004	REG	1	0	0	0
EPA:170.0	GENERAL CHEMISTRY	RLUOB-23-289588	642223005	REG	1	0	0	0
SW-846:8015D	TPH	HB	1205554030	MB	1	1	0	0
SW-846:8015D	TPH	LCS	1205553088	LCS	0	1	2	0
SW-846:8015D	TPH	LCS	1205554028	LCS	0	1	1	0
SW-846:8015D	TPH	MB	1205553087	MB	2	1	0	0
SW-846:8015D	TPH	MB	1205554029	MB	1	1	0	0
SW-846:8015D	TPH	RLUOB-23-289584	1205553089	MS	0	1	2	0
SW-846:8015D	TPH	RLUOB-23-289584	1205553090	MSD	0	1	2	0
SW-846:8015D	TPH	RLUOB-23-289584	1205554031	PS	0	1	1	0
SW-846:8015D	TPH	RLUOB-23-289584	1205554032	PSD	0	1	1	0
SW-846:8015D	TPH	RLUOB-23-289584	642223001	REG	3	2	0	0

Only results shown in Section 13 'Display Flagged Data' are current as of this report generation. All other sections are valid for the date the COC data was inserted into EIM, and may have changed due to data updates in the intervening time.

Analytical Method	Analytical Method Category	Field Sample ID	Lab Sample ID	Sample Purpose	Target Analytes	Surrogates	Spiked Compounds	TICS
SW-846:8015D	TPH	RLUOB-23-289585	642223002	REG	3	2	0	0
SW-846:8015D	TPH	RLUOB-23-289586	642223003	REG	3	2	0	0
SW-846:8015D	TPH	RLUOB-23-289587	642223004	REG	3	2	0	0
SW-846:8015D	TPH	RLUOB-23-289588	642223005	REG	3	2	0	0
SW-846:8260D	VOC	HB	1205554015	MB	4	3	0	0
SW-846:8260D	VOC	LCS	1205554013	LCS	0	3	4	0
SW-846:8260D	VOC	MB	1205554014	MB	4	3	0	0
SW-846:8260D	VOC	RLUOB-23-289584	1205554016	PS	0	3	4	0
SW-846:8260D	VOC	RLUOB-23-289584	1205554017	PSD	0	3	4	0
SW-846:8260D	VOC	RLUOB-23-289584	642223001	REG	4	3	0	0
SW-846:8260D	VOC	RLUOB-23-289585	642223002	REG	4	3	0	0
SW-846:8260D	VOC	RLUOB-23-289586	642223003	REG	4	3	0	0
SW-846:8260D	VOC	RLUOB-23-289587	642223004	REG	4	3	0	0
SW-846:8260D	VOC	RLUOB-23-289588	642223005	REG	4	3	0	0

3. Are any analytes missing?

No.

4. Were any holding times exceeded?

Field Sample ID	Lab Sample ID	Analytical Method	Sample Date	Extraction Date	Analysis Date	Extraction Hold Time	Max Extract Hold Time	Reject Above	Exceeds Limit	Analysis Hold Time	Max Analysis Hold Time	Reject Above	Exceeds Limit
RLUOB-23-289584	642223001	SW-846:8015D	10/10/2023	10/24/2023	10/28/2023	14	7	14	X	4	40	80	
RLUOB-23-289585	642223002	SW-846:8015D	10/10/2023	10/24/2023	10/28/2023	14	7	14	X	4	40	80	
RLUOB-23-289586	642223003	SW-846:8015D	10/10/2023	10/24/2023	10/28/2023	14	7	14	X	4	40	80	
RLUOB-23-289587	642223004	SW-846:8015D	10/10/2023	10/24/2023	10/28/2023	14	7	14	X	4	40	80	
RLUOB-23-289588	642223005	SW-846:8015D	10/10/2023	10/24/2023	10/28/2023	14	7	14	X	4	40	80	

5. Any contaminants in blanks?

Blank FS ID	Blank Lab Sample ID	Blank Type	Analytical Method	Sample Matrix	Parameter Name	Blank Lab Result	Lab Qualifier	Blank Lab Units	Blank Lab Detection Limit
MB	1205553087	METHOD BLANK	SW-846:8015D	SO	Total Petroleum Hydrocarbons Motor Oil Range Organics	2.30	J	mg/kg	6.59

Field Sample ID	Blank Lab Sample	Blank Type	Analytical Method	Parameter Name	Blank Lab Result	Blank Lab Units	Lab Result	Lab Qualifier	Lab Detection Limit	Detect Flag	Detect to Nondetect Factor	Detect to Estimated Factor	Use Factors
RLUOB-23-289584	1205553087	METHOD BLANK	SW-846:8015D	Total Petroleum Hydrocarbons Motor Oil Range Organics	2.30	mg/kg	1390	B	381	Y	5	100	Y
RLUOB-23-289585	1205553087	METHOD BLANK	SW-846:8015D	Total Petroleum Hydrocarbons Motor Oil Range Organics	2.30	mg/kg	2.97	BJ	6.94	Y	5	100	Y
RLUOB-23-289586	1205553087	METHOD BLANK	SW-846:8015D	Total Petroleum Hydrocarbons Motor Oil Range Organics	2.30	mg/kg	102	B	71.7	Y	5	100	Y
RLUOB-23-289587	1205553087	METHOD BLANK	SW-846:8015D	Total Petroleum Hydrocarbons Motor Oil Range Organics	2.30	mg/kg	27.8	B	6.95	Y	5	100	Y
RLUOB-23-289588	1205553087	METHOD BLANK	SW-846:8015D	Total Petroleum Hydrocarbons Motor Oil Range Organics	2.30	mg/kg	33.2	BJ	38.2	Y	5	100	Y

6. Any surrogate recoveries outside the control limits?

No.

7. Any MS/MSD recoveries or RPDs outside the control limits?

No.

8. Any LCS/LCSD or BS/BSD recoveries or RPDs outside the control limits?

No.

9. Any Field Duplicate RPDs outside the desired limits?

No.

10. Any Lab Duplicate RPDs outside the desired limits?

No.

11. Any required reporting limits exceeded?

Analytical Method	Sample Matrix	Parameter Name	Analysis Lot ID	Lowest Reported Limit	Highest Reported Limit	Number of Results	Lab Units	Reporting Limit	Reporting Limit Units	Reporting Limit Type	Dilution Factor
SW-846:8015D	SO	Total Petroleum Hydrocarbons Diesel Range Organics	2512326	23.3	23.3	1	mg/kg	6.7	mg/kg	METHOD_DETECTION_LIMIT	10.0
SW-846:8015D	SO	Total Petroleum Hydrocarbons Diesel Range Organics	2512326	12.4	12.4	1	mg/kg	6.7	mg/kg	METHOD_DETECTION_LIMIT	5.00
SW-846:8015D	SO	Total Petroleum Hydrocarbons Diesel Range Organics	2512326	124	124	1	mg/kg	6.7	mg/kg	METHOD_DETECTION_LIMIT	50.0
SW-846:8015D	SO	Total Petroleum Hydrocarbons Gasoline Range Org.	2512723	1760	1920	5	ug/kg	1000	ug/kg	METHOD_DETECTION_LIMIT	50.0
SW-846:8260D	SO	Benzene	2512718	35.1	38.4	5	ug/kg	1	ug/kg	METHOD_DETECTION_LIMIT	50.0
SW-846:8260D	SO	Ethylbenzene	2512718	35.1	38.4	5	ug/kg	1	ug/kg	METHOD_DETECTION_LIMIT	50.0
SW-846:8260D	SO	Toluene	2512718	35.1	38.4	5	ug/kg	1	ug/kg	METHOD_DETECTION_LIMIT	50.0
SW-846:8260D	SO	Xylene (Total)	2512718	105	115	5	ug/kg	1	ug/kg	METHOD_DETECTION_LIMIT	50.0

12. Additional Validator's Comments.

13. Display Flagged Data.

Location ID	COC Number	Field Sample ID	Sample Purpose	Analysis Type Code	Analytical Suite	Analytical Method	Paramter Name	Lab Qualifier	Validation Qualifier	Validation Reason Codes	Detect Flag	Lab Result	Lab Units	Report Result	Report Units	Report MDA	Report Uncertainty	Lab Matrix	Sample Date	Percent	Analysis Lot ID	Validation Status Code	Use Flag
55-22344	2024-69	RLUOB-23-289584	REG	INIT	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Motor Oil Range Organics	B	J-	DR9,DR4a	Y	1390	mg/kg	1390	mg/kg			SD	10/10/2023		2512326	VAL	Y
55-22345	2024-69	RLUOB-23-289585	REG	INIT	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Motor Oil Range Organics	BJ	U	DR4,DR9	N	2.97	mg/kg	2.97	mg/kg			SD	10/10/2023		2512326	VAL	Y
55-22346	2024-69	RLUOB-23-289586	REG	INIT	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Motor Oil Range Organics	B	U	DR4,DR9	N	102	mg/kg	102	mg/kg			SD	10/10/2023		2512326	VAL	Y
55-22347	2024-69	RLUOB-23-289587	REG	INIT	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Motor Oil Range Organics	B	J-	DR9,DR4a	Y	27.8	mg/kg	27.8	mg/kg			SD	10/10/2023		2512326	VAL	Y
55-22348	2024-69	RLUOB-23-289588	REG	INIT	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Motor Oil Range Organics	BJ	U	DR4,DR9	N	33.2	mg/kg	33.2	mg/kg			SD	10/10/2023		2512326	VAL	Y

Reason Code **Description**

Only results shown in Section 13 'Display Flagged Data' are current as of this report generation. All other sections are valid for the date the COC data was inserted into EIM, and may have changed due to data updates in the intervening time.

Reason Code	Description
DR4	The detected sample result is <5 times the detected concentration of the same analyte in the method blank.
DR4a	The detected sample result is >=5 times and <100 times the detected concentration of the same analyte in the method blank.
DR9	The holding time was greater than the applicable holding time requirement and was <=2 times the applicable holding time requirement.
J_LAB	The analytical laboratory qualified the detected result as estimated (J) because the result was less the PQL but greater than the MDL
NQ	The analytical laboratory did not qualifiy the analyte as not detected and/or any other standard qualifire. The analyte is detected in the sample.
U_LAB	The analytical laboratory qualified the analyte as not detected.

14. Usable Result Count.

Field Sample ID	Location ID	Sample Purpose	Analytical Method	No. Unuseable Records	Total Records
RLUOB-23-289584	55-22344	REG	EPA:170.0	0	1
RLUOB-23-289584	55-22344	REG	SW-846:8015D	0	3
RLUOB-23-289584	55-22344	REG	SW-846:8260D	0	4
RLUOB-23-289585	55-22345	REG	EPA:170.0	0	1
RLUOB-23-289585	55-22345	REG	SW-846:8015D	0	3
RLUOB-23-289585	55-22345	REG	SW-846:8260D	0	4
RLUOB-23-289586	55-22346	REG	EPA:170.0	0	1
RLUOB-23-289586	55-22346	REG	SW-846:8015D	0	3
RLUOB-23-289586	55-22346	REG	SW-846:8260D	0	4
RLUOB-23-289587	55-22347	REG	EPA:170.0	0	1
RLUOB-23-289587	55-22347	REG	SW-846:8015D	0	3
RLUOB-23-289587	55-22347	REG	SW-846:8260D	0	4
RLUOB-23-289588	55-22348	REG	EPA:170.0	0	1
RLUOB-23-289588	55-22348	REG	SW-846:8015D	0	3
RLUOB-23-289588	55-22348	REG	SW-846:8260D	0	4

Only results shown in Section 13 'Display Flagged Data' are current as of this report generation. All other sections are valid for the date the COC data was inserted into EIM, and may have changed due to data updates in the intervening time.

GEL Laboratories LLC
a member of The GEL Group INC

2040 Savage Road | Charleston, SC 29407
843.556.8171
gel.com

October 24, 2023

Mr. Stanislaw Marczak
Los Alamos National Laboratory
TA-00, SM1237, Rm104C
Los Alamos, New Mexico 87545

Re: LANL
Work Order: 642223
SDG: 2024-69

Dear Mr. Marczak:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on October 20, 2023, and analyzed for GC/MS Volatile, Diesel Range Organics and GC Volatiles (GRO). This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4485.

Sincerely,

Jessica Ward for
Valerie Davis
Project Manager

Chain of Custody: 2024-69
Enclosures

Triad National Security, LLC (620266)
LANL
Work Order #: 642223
SDG: 2024-69

Table of Contents

Case Narrative.....1

Chain of Custody and Supporting Documentation.4

Data Review Qualifier Flag Definition Sheet..14

Volatile Analysis.....18

- Case Narrative.....19
- Sample Data Summary.....23
- Quality Control Summary.....29
- Sample Data.....38
- Standards...(Provided Upon Request).....66
- Quality Control Data...(Provided Upon Request)...88
- Miscellaneous.....115

FID Diesel Range Organics Analysis.....119

- Case Narrative.....120
- Sample Data Summary.....124
- Quality Control Summary.....130
- Sample Data.....136
- Standards...(Provided Upon Request).....160
- Quality Control Data....(Provided Upon Request).202
- Miscellaneous.....246

GC Volatiles (GRO) Analysis.....251

Case Narrative.....252

Sample Data Summary.....255

Quality Control Summary.....261

Sample Data.....267

Standards...(Provided Upon Request).....293

Quality Control Data..(Provided Upon Request)...319

Miscellaneous.....345

Case Narrative

Case Narrative for
Triad National Security, LLC (620266)
LANL
Workorder #: 642223
SDG # : 2024-69

October 24, 2023

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on October 20, 2023 for analysis. The samples were delivered with proper chain of custody documentation and signatures. The samples were screened according to GEL Standard Operating Procedure. All sample containers arrived without any visible signs of tampering or breakage. Containers were checked for pH, where appropriate, and matched the preservative as documented on the accompanying chain of custody. Shipping container temperatures were checked, documented, and within specifications. Shipping container temperature was within specification (0 - 6C). There are no additional comments concerning sample receipt.

Sample Identification The laboratory received the following samples:

Laboratory ID	Client ID
642223001	RLUOB-23-289584
642223002	RLUOB-23-289585
642223003	RLUOB-23-289586
642223004	RLUOB-23-289587
642223005	RLUOB-23-289588

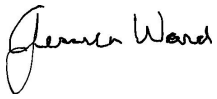
Case Narrative

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Data Package

The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: GC/MS Volatile, Diesel Range Organics and GC Volatiles (GRO).

I certify that this data report is in compliance with the terms and conditions of the subcontract and task order, both technically and for completeness, for other than the conditions detailed in the attached case narrative.



Jessica Ward for
Valerie Davis
Project Manager

Chain of Custody and Supporting Documentation

642223

General Engineering Laboratories, Inc., Charleston, SC.
Charleston SC

Chain of Custody/Analysis Request

COC/Lab Request #: 2024-69
Page 1 of 1

Client Contact:

Lab Agreement #: 620266

Project Number: LANL

Site Name: Los Alamos National Laboratory

Analysis Turnaround Time:
24 Hour - ☐ Other - ☒
7 Days - ☐ Value - 5-Day
14 Days - ☐
21 Days - ☐
28 Days - ☐

Total # of bottles: 10
Event ID: 15356

Rad Screening Info: Acceptable knowledge identifies no DOT hazard classification

Lab Reporting Limit Type: Method Detection Limit

Field Sample ID	Sample Date	Sample Time	Sample Matrix	BTEX + TPH-GRO	TPH-DRO+Motor Oil
RLUOB-23-289584	10/10/2023	10:17	SO	1	1
RLUOB-23-289585	10/10/2023	10:42	SO	1	1
RLUOB-23-289586	10/10/2023	10:57	SO	1	1
RLUOB-23-289587	10/10/2023	11:17	SO	1	1
RLUOB-23-289588	10/10/2023	11:36	SO	1	1

Special Instructions:

Relinquished by:	Print Name: Melissa Martinez	Date/Time: 10/19/23 15:00	Received by:	Print Name: D. Gathers	Date/Time: 10/20/23 930
Relinquished by:	Print Name:	Date/Time:	Received by:	Print Name:	Date/Time:
Relinquished by:	Print Name:	Date/Time:	Received by:	Print Name:	Date/Time:

Page 5 of 348
EPC-DO-24-116
SDG 2024-69
Attachment 1 Page 165 of 970
LA-UR-24-23622

Los Alamos National Laboratory

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 15356 **EVENT NAME:** RLUOB Diesel Tank Removal

SAMPLE ID: RLUOB-23-289584 **WORK ORDER:**

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYYY):	10/10/2023	10/10/2023	FIELD MATRIX:	S	S
TIME COLLECTED (HH:MM):	10:00	10:17/10:21	MEDIA:	SOIL	Soil
SWMU/AOC:	TA-55	TA-55	SAMPLE TECH CODE:	CBS	CBS
LOCATION ID:	55-22344	24(w)	FIELD PREP:	NA	NA
LOCATION TYPE:	GENERIC	GENERIC	FIELD QC TYPE:	REG	REG
TOP DEPTH:	4'	4'	SAMPLE USAGE:	INV	IAN
BOTTOM DEPTH:	4'6"	4'6"	EXCAVATED:		YES / (NO) / NA

PRIORITY	ORDER	CONTAINER	#	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
5-DAY T/A	BTEX + TPH-GRO	~~2"X6" SS 125 ML GLASS~~	12	ICE	Y	
5-DAY T/A	TPH-DRO+Motor Oil	~~0.25 LITER GLASS~~ ~~2"X6" SS~~	1	ICE	Y	

SAMPLE COMMENTS: ADD TPH GRO & MRO PER NMED REQ'MTS. 5-DAY TURNAROUND. CONTAINERS- 2" x 6" STAINLESS STEEL TUBES

LOCATION COMMENTS:

FIELD PARAMETERS:

Sample Time 10:17 HH:MM

VOCs - 5 ppm (PID)
O_2 - 20.9%
CO - 0 ppm
H_2S - 0.0 ppm

COLLECTED BY (PRINT): **REVIEWED BY (PRINT):**

RELINQUISHED BY (Printed Name) KEN VERNON (Signature)	Date/Time 10/10/23 13:15	RECEIVED BY (Printed Name) (Signature)	Date/Time 10/10/23 1315
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

Report Date: 09/19/2023

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 15356 **EVENT NAME:** RLUOB Diesel Tank Removal

SAMPLE ID: RLUOB-23-289585 **WORK ORDER:**

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYYY):	10/10/2023	10/10/2023	FIELD MATRIX:	S	S
TIME COLLECTED (HH:MM):	10:30	10:42/10:45	MEDIA:	SOIL	SOIL
SWMU/AOC:	TA-55	TA-55	SAMPLE TECH CODE:	CBS	
LOCATION ID:	55-22345	29(N)	FIELD PREP:	NA	N/A
LOCATION TYPE:	GENERIC		FIELD QC TYPE:	REG	REG
TOP DEPTH:	4'	4'	SAMPLE USAGE:	INV	INV
BOTTOM DEPTH:	4'6"	4'6"	EXCAVATED:		YES / (NO) / NA

PRIORITY	ORDER	CONTAINER	#	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
5-DAY T/A	BTEX + TPH-GRO	2"X6"SS ~~125 ML~~ GLASS	1/2	ICE	Y	
5-DAY T/A	TPH-DRO+Motor Oil	2"X6"SS ~~0.25 LITER~~ GLASS	1	ICE	Y	

SAMPLE COMMENTS: ADD TPH GRO & MRO, PER NMED REQ'MTS. 5-DAY TURNAROUND. CONTAINERS - 2" X 6" STAINLESS STEEL TUBES

LOCATION COMMENTS:

FIELD PARAMETERS:

Sample Time 10:45 HH:MM

VOCs - 0.ppm

O_2 - 20.9%

CO - 0 ppm

H_2S - 0.0 ppm

COLLECTED BY (PRINT):

REVIEWED BY (PRINT):

RELINQUISHED BY (Printed Name) KEN VERNON (Signature)	Date/Time 10/10/23 13:15	RECEIVED BY (Printed Name) (Signature)	Date/Time 10/10/23 13:15
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

Report Date: 09/19/2023

Los Alamos National Laboratory

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 15356 **EVENT NAME:** RLUOB Diesel Tank Removal

SAMPLE ID: RLUOB-23-289586 **WORK ORDER:**

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYYY):	10/10/2023	10/10/2023	FIELD MATRIX:	S	S
TIME COLLECTED (HH:MM):	11:00	10:57/11:02	MEDIA:	SOIL	Soil
SWMU/AOC:	TA-55	TA-55	SAMPLE TECH CODE:	CBS	CBS
LOCATION ID:	55-22346	18(GRAB)	FIELD PREP:	NA	NA
LOCATION TYPE:	GENERIC	GEN	FIELD QC TYPE:	REG	REG
TOP DEPTH:	4'	4'	SAMPLE USAGE:	INV	ENV
BOTTOM DEPTH:	4'6"	4'6"	EXCAVATED:		YES / (NO) / NA

PRIORITY	ORDER	CONTAINER	#	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
5-DAY TIA	BTEX + TPH-GRO	~~125 ML~~ 2"x6" SS GLASS	1 2	ICE	Y	
5-DAY TIA	TPH-DRO+Motor Oil	~~0.25 LITER GLASS~~ 2"x6" SS	1	ICE	Y	

SAMPLE COMMENTS: ADD TPH GRO & MRO, PER NMED REQ'MTS. 5-DAY TURNAROUND. CONTAINERS - 2"x6" STAINLESS STEEL TUBES

LOCATION COMMENTS:

FIELD PARAMETERS:

Sample Time 11:02 HH:MM

VOCs - 0ppm

O_2 - 20.9%

CO - 0ppm

H_2S - 0.0ppm

COLLECTED BY (PRINT): KEN VERNON

REVIEWED BY (PRINT):

	Date/Time		Date/Time
RELINQUISHED BY (Printed Name) (Signature) Ken Vernon	10/10/23 13:15	RECEIVED BY (Printed Name) (Signature) Melissa Murphy	10/10/23 1315
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

Report Date: 09/19/2023

Los Alamos National Laboratory

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 15356 **EVENT NAME:** RLUOB Diesel Tank Removal

SAMPLE ID: RLUOB-23-289587 **WORK ORDER:**

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYYY):	10/10/2023	10/10/2023	FIELD MATRIX:	S	S
TIME COLLECTED (HH:MM):	11:30	11:17/11:21	MEDIA:	SOIL	Soil
SWMU/AOC:	TA-55	TA-55	SAMPLE TECH CODE:	CBS	CBS
LOCATION ID:	55-22347	6(5)	FIELD PREP:	NA	NA
LOCATION TYPE:	GENERIC		FIELD QC TYPE:	REG	REG
TOP DEPTH:	4'	4'	SAMPLE USAGE:	INV	INV
BOTTOM DEPTH:	4'6"	4'6"	EXCAVATED:		YES / NO / NA

PRIORITY	ORDER	CONTAINER	#	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
5-DAY TIA	BTEX + TPH-GRO	2"x6" ~~125 ML SS GLASS~~	1/2	ICE	Y	
5-DAY TIA	TPH-DRO+Motor Oil	~~2"x6" SS 0.25 LITER GLASS~~	1	ICE	Y	

SAMPLE COMMENTS: ADD TPH GRO PER NMED REQ'MTS. 5-DAY TURNAROUND

LOCATION COMMENTS:

FIELD PARAMETERS:

Sample Time 11:21 HH:MM

VOCs - 3 ppm
O_2 - 20.9%
CO - 0 ppm
H_2S - 0.0 ppm

COLLECTED BY (PRINT):

REVIEWED BY (PRINT):

RELINQUISHED BY (Printed Name) (Signature) Kenny Vernon	Date/Time 10/11/23 13:15	RECEIVED BY (Printed Name) (Signature)	Date/Time 10/10/23 13:15
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

Report Date: 09/19/2023

Los Alamos National Laboratory

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 15356 **EVENT NAME:** RLUOB Diesel Tank Removal

SAMPLE ID: RLUOB-23-289588 **WORK ORDER:**

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYYY):	10/10/2023	10/10/2023	FIELD MATRIX:	S	S
TIME COLLECTED (HH:MM):	12:00	11:33/11:36	MEDIA:	SOIL	Soil
SWMU/AOC:	TA-55	TA-55	SAMPLE TECH CODE:	CBS	CBS
LOCATION ID:	55-22348	12(E)	FIELD PREP:	NA	NA
LOCATION TYPE:	GENERIC	GENERIC	FIELD QC TYPE:	REG	REG
TOP DEPTH:	4'	4'	SAMPLE USAGE:	INV	INV
BOTTOM DEPTH:	4'6"	4'6"	EXCAVATED:		YES / NO / NA

PRIORITY	ORDER	CONTAINER	#	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
5-DAY TIA	BTEX + TPH-GRO	~~2"x6" SS~~ ~~125 ML~~ GLASS	1/2	ICE	Y	
5-DAY TIA	TPH-DRO+Motor Oil	~~2"x6" SS~~ ~~0.25 LITER~~ ~~GLASS~~	1	ICE	Y	

SAMPLE COMMENTS: ADD TPH GRO & MRO, PER NMED REQ'MTS. 5-DAY TURNAROUND

LOCATION COMMENTS:

FIELD PARAMETERS:

Sample Time 11:36 HH:MM

VOCs - 2 ppm (PID)

O_2 - 20.9%

CO - 0 ppm

H_2S - 0.0 ppm

COLLECTED BY (PRINT): KEN VERNON

REVIEWED BY (PRINT):

RELINQUISHED BY (Printed Name) (Signature) KEN VERNON	Date/Time 10/10/23 13:15	RECEIVED BY (Printed Name) (Signature)	Date/Time 10/10/23 1315
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

Report Date: 09/19/2023

HPAL ANALYSIS REPORT

FILE: 29258403

Sample Description	Analysis Information	Contact Information
Login Date: 10/10/23	Instrument: BEGe-9	Name: BOOZER DOUGLAS E
Sample Type: Soil/Solid	Analysis: Isotopic	Phone: -
Location TA:55 Bldg: 0400	Date: 10/12/23	Email: boozer@lanl.gov
Room: Outside	Analyst: CHANDLER JOSHUA R	
Priority: Routine		

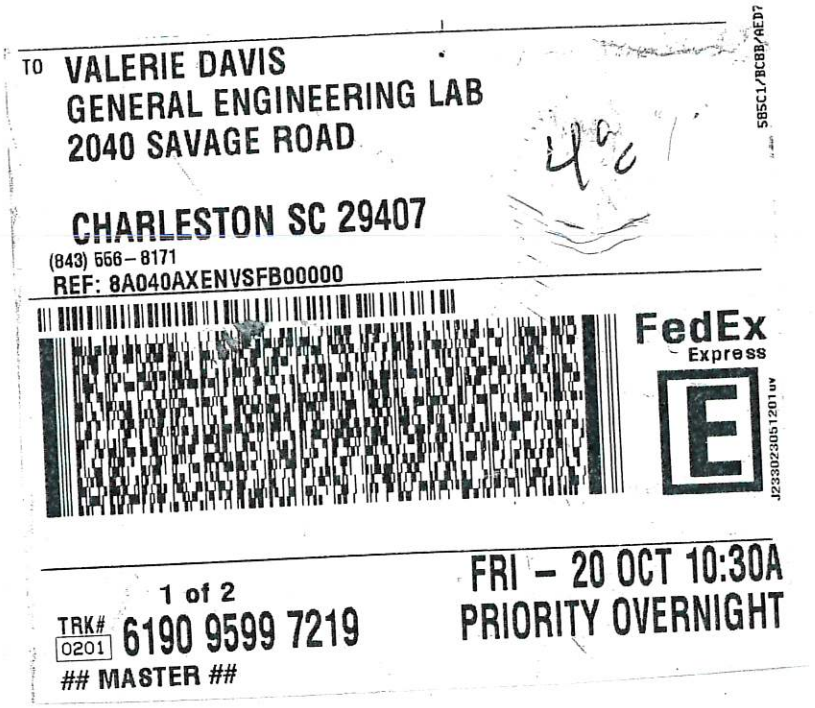
Analyst Comments:

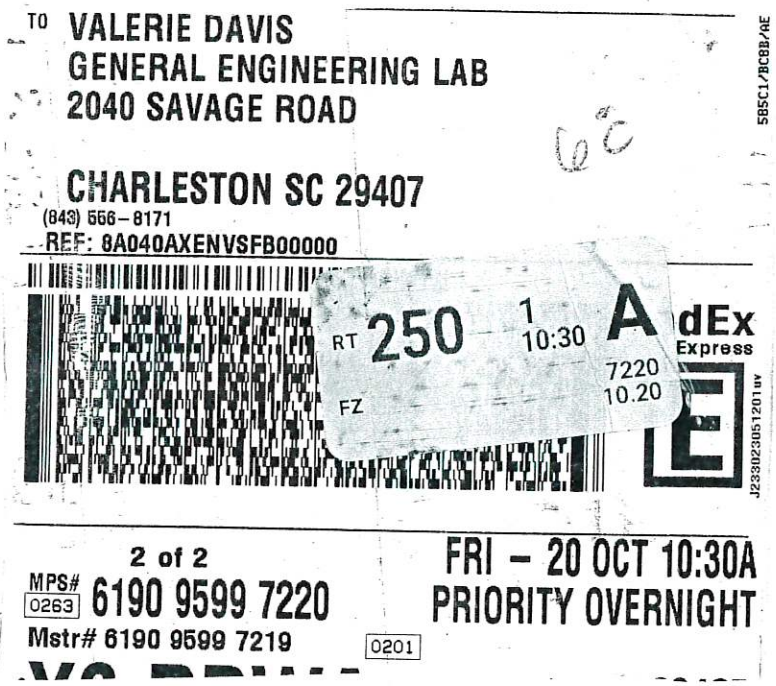
Sample ID or Description: Soil x5. Analysis modified. Samples contain natural decay products.

Submitter Comments:

Soil Sample

Isotope Name	Activity (pCi/g)	2* sigma (pct)	MDA (pCi/g)
NONE-	NDA	NDA	NDA


TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE ROAD
CHARLESTON SC 29407
(843) 566-8171
REF: 8A040AXENVSFB00000
4°C
FedEx
Express
1 of 2
TRK# 0201 6190 9599 7219
MASTER
FRI - 20 OCT 10:30A
PRIORITY OVERNIGHT


TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE ROAD
CHARLESTON SC 29407
(843) 566-8171
REF: 8A040AXENVSFB00000
6°C
RT 250 1 10:30 A
FZ
7220
10.20
dEx
Express
2 of 2
MPS# 0263 6190 9599 7220
Mstr# 6190 9599 7219
0201
FRI - 20 OCT 10:30A
PRIORITY OVERNIGHT

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: TNSI	SDG/AR/COC/Work Order: 642223
Received By: QG	Date Received: 10/20/23
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other 6170 7529 7220 6°C

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A)Shipped as a DOT Hazardous?			Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes___ No___
B) Did the client designate the samples are to be received as radioactive?			COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?			Maximum Net Counts Observed* (Observed Counts - Area Background Counts): 0 0 CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?			COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?			If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?				Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?				Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*				Preservation Method: Wet Ice Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP: See Trackers
4	Daily check performed and passed on IR temperature gun?	✓			Temperature Device Serial #: IR1-23 Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?				Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?				Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?				If Yes, are Encores or Soil Kits present for solids? Yes___ No___ NA___(If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes___ No___ NA___(If unknown, select No) Are liquid VOA vials free of headspace? Yes___ No___ NA___ Sample ID's and containers affected:
8	Samples received within holding time?				ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?				ID's and containers affected:
10	Date & time on COC match date & time on bottles?				Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
11	Number of containers received match number indicated on COC?				Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided by use of GEL labels?				
13	COC form is properly signed in relinquished/received sections?				Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

6170 7529 7219 4°C

PM (or PMA) review: Initials KW Date 10/21/23 Page 1 of 1

GL-CHL-SR-001 Rev 7

Data Review Qualifier Flag Definition Sheet

Data Review Qualifier Definitions

Qualifier	Explanation
*	A quality control analyte recovery is outside of specified acceptance criteria
**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
A	The TIC is a suspected aldol-condensation product
B	Target analyte was detected in the associated blank
B	Metals-Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
d	5-day BOD-The 2:1 depletion requirement was not met for this sample
E	Organics-Concentration of the target analyte exceeds the instrument calibration range
E	Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
H	Analytical holding time was exceeded
h	Preparation or preservation holding time was exceeded
J	Value is estimated
N	Metals-The Matrix spike sample recovery is not within specified control limits
N	Organics-Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND	Analyte concentration is not detected above the reporting limit
UI	Gamma Spectroscopy-Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

P Organics-The concentrations between the primary and confirmation columns/detectors is >40% difference. For HPLC, the difference is >70%.

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

List of current GEL Certifications as of 24 October 2023

State	Certification
Alabama	42200
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-00651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	KY90129
Kentucky Wastewater	KY90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2023019
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122024-04
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2023-152
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-23-21
Utah NELAP	SC000122022-37
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

Volatile Analysis

Case Narrative

GC/MS Volatile
Technical Case Narrative
Triad National Security, LLC
SDG #: 2024-69
Work Order #: 642223

Product: **Volatile Organic Compounds (VOC) by Gas Chromatograph/Mass Spectrometer**
Analytical Method: SW846 8260D
Analytical Procedure: GL-OA-E-038 REV# 29
Analytical Batch: 2512718

Preparation Method: SW846 5030
Preparation Procedure: GL-OA-E-038 REV# 29
Preparation Batch: 2512717

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
642223001	RLUOB-23-289584
642223002	RLUOB-23-289585
642223003	RLUOB-23-289586
642223004	RLUOB-23-289587
642223005	RLUOB-23-289588
1205554013	Laboratory Control Sample (LCS)
1205554014	Method Blank (MB)
1205554015	High Blank (HB)
1205554016	642223001(RLUOB-23-289584) Post Spike (PS)
1205554017	642223001(RLUOB-23-289584) Post Spike Duplicate (PSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Sample Dilutions/Methanol Dilutions
Samples were analyzed employing a methanol dilution extraction procedure because the sample matrices were not amenable to more concentrated analyses.

Analyte	642223				
	001	002	003	004	005
Benzene	50X	50X	50X	50X	50X
Ethylbenzene	50X	50X	50X	50X	50X
Toluene	50X	50X	50X	50X	50X
Xylenes (total)	50X	50X	50X	50X	50X

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report
for

TNSL001 Triad National Security, LLC (620266)

Client SDG: 2024-69 GEL Work Order: 642223

The Qualifiers in this report are defined as follows:

* A quality control analyte recovery is outside of specified acceptance criteria
** Analyte is a surrogate compound
U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

DL Indicates that sample is diluted.
RA Indicates that sample is re-analyzed without re-extraction.
RE Indicates that sample is re-extracted.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: Michael A. Penny Jr. **Name: Michael Penny**

Date: 24 OCT 2023 **Title: Analyst III**

Sample Data Summary

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-69**	**Date Collected:**	**10/10/2023 10:17**	**Matrix:**	**SO**
Lab Sample ID:	**642223001**	**Date Received:**	**10/20/2023 09:30**	**%Moisture:**	**12.9**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289584**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2512718**	**Inst:**	**VOAC.I**	**Dilution:**	**50**
Run Date:	**10/23/2023 13:07**	**Analyst:**	**PXY1**	**Purge Vol:**	**5 mL**
Prep Date:	**10/23/2023 09:31**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**data\102323VC\CD108.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	38.2	ug/kg	38.2	115
108-88-3	Toluene	U	38.2	ug/kg	38.2	115
100-41-4	Ethylbenzene	U	38.2	ug/kg	38.2	115
1330-20-7	Xylenes (total)	U	115	ug/kg	115	344

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	47.6	50.0	ug/L	95	(74%-128%)
1,2-Dichloroethane-d4	42.6	50.0	ug/L	85	(77%-127%)
Toluene-d8	47.7	50.0	ug/L	95	(81%-120%)

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-69**	**Date Collected:**	**10/10/2023 10:42**	**Matrix:**	**SO**
Lab Sample ID:	**642223002**	**Date Received:**	**10/20/2023 09:30**	**%Moisture:**	**5.1**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289585**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2512718**	**Inst:**	**VOAC.I**	**Dilution:**	**50**
Run Date:	**10/23/2023 13:35**	**Analyst:**	**PXY1**	**Purge Vol:**	**5 mL**
Prep Date:	**10/23/2023 09:32**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**data\102323VC\CD109.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	35.1	ug/kg	35.1	105
108-88-3	Toluene	U	35.1	ug/kg	35.1	105
100-41-4	Ethylbenzene	U	35.1	ug/kg	35.1	105
1330-20-7	Xylenes (total)	U	105	ug/kg	105	316

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	46.3	50.0	ug/L	93	(74%-128%)
Toluene-d8	45.6	50.0	ug/L	91	(81%-120%)
1,2-Dichloroethane-d4	42.1	50.0	ug/L	84	(77%-127%)

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-69**	**Date Collected:**	**10/10/2023 10:57**	**Matrix:**	**SO**
Lab Sample ID:	**642223003**	**Date Received:**	**10/20/2023 09:30**	**%Moisture:**	**7.7**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289586**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2512718**	**Inst:**	**VOAC.I**	**Dilution:**	**50**
Run Date:	**10/23/2023 14:03**	**Analyst:**	**PXY1**	**Purge Vol:**	**5 mL**
Prep Date:	**10/23/2023 09:33**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**data\102323VC\CD110.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	36.1	ug/kg	36.1	108
108-88-3	Toluene	U	36.1	ug/kg	36.1	108
100-41-4	Ethylbenzene	U	36.1	ug/kg	36.1	108
1330-20-7	Xylenes (total)	U	108	ug/kg	108	325

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	49.3	50.0	ug/L	99	(74%-128%)
1,2-Dichloroethane-d4	41.9	50.0	ug/L	84	(77%-127%)
Toluene-d8	46.0	50.0	ug/L	92	(81%-120%)

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-69**	**Date Collected:**	**10/10/2023 11:17**	**Matrix:**	**SO**
Lab Sample ID:	**642223004**	**Date Received:**	**10/20/2023 09:30**	**%Moisture:**	**5.5**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289587**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2512718**	**Inst:**	**VOAC.I**	**Dilution:**	**50**
Run Date:	**10/23/2023 14:30**	**Analyst:**	**PXY1**	**Purge Vol:**	**5 mL**
Prep Date:	**10/23/2023 09:34**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**data\102323VC\CD111.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	35.2	ug/kg	35.2	106
108-88-3	Toluene	U	35.2	ug/kg	35.2	106
100-41-4	Ethylbenzene	U	35.2	ug/kg	35.2	106
1330-20-7	Xylenes (total)	U	106	ug/kg	106	317

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	43.9	50.0	ug/L	88	(77%-127%)
Toluene-d8	47.8	50.0	ug/L	96	(81%-120%)
Bromofluorobenzene	48.7	50.0	ug/L	97	(74%-128%)

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-69**	**Date Collected:**	**10/10/2023 11:36**	**Matrix:**	**SO**
Lab Sample ID:	**642223005**	**Date Received:**	**10/20/2023 09:30**	**%Moisture:**	**13.4**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289588**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2512718**	**Inst:**	**VOAC.I**	**Dilution:**	**50**
Run Date:	**10/23/2023 14:58**	**Analyst:**	**PXY1**	**Purge Vol:**	**5 mL**
Prep Date:	**10/23/2023 09:35**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**data\102323VC\CD112.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	38.4	ug/kg	38.4	115
108-88-3	Toluene	U	38.4	ug/kg	38.4	115
100-41-4	Ethylbenzene	U	38.4	ug/kg	38.4	115
1330-20-7	Xylenes (total)	U	115	ug/kg	115	346

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	46.2	50.0	ug/L	92	(74%-128%)
1,2-Dichloroethane-d4	41.7	50.0	ug/L	83	(77%-127%)
Toluene-d8	47.3	50.0	ug/L	95	(81%-120%)

Quality Control Summary

Volatile

Surrogate Recovery Report

SDG Number: 2024-69

Matrix Type: SOLID

Sample ID	Client ID	DCED4 %REC		TOL %REC		BFB %REC	
1205554013	LCS for batch 2512717	87		89		97	
1205554014	MB for batch 2512717	87		93		93	
1205554015	HB for batch 2512717	87	D	94	D	93	D
642223001	RLUOB-23-289584	85	D	95	D	95	D
642223002	RLUOB-23-289585	84	D	91	D	93	D
642223003	RLUOB-23-289586	84	D	92	D	99	D
642223004	RLUOB-23-289587	88	D	96	D	97	D
642223005	RLUOB-23-289588	83	D	95	D	92	D
1205554016	RLUOB-23-289584PS	84	D	93	D	99	D
1205554017	RLUOB-23-289584PSD	82	D	93	D	93	D

Surrogate		Acceptance Limits
DCED4	= 1,2-Dichloroethane-d4	(77%-127%)
TOL	= Toluene-d8	(81%-120%)
BFB	= Bromofluorobenzene	(74%-128%)

* Recovery outside Acceptance Limits
# Column to be used to flag recovery values
D Sample Diluted

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-69
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 2512717
Matrix: SOIL
Lab Sample ID: 1205554013
Instrument: VOAC.I
Analysis Date: 10/23/2023 10:50
Dilution: 1
Analyst: PXY1
Prep Batch ID: 2512717
Purge Vol: 5 mL
Batch ID: 2512718

CAS No.		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
1330-20-7	LCS	Xylenes (total)	150	0.0	146	97	70-121
71-43-2	LCS	Benzene	50.0	0.0	47.7	95	73-126
108-88-3	LCS	Toluene	50.0	0.0	46.6	93	70-120
100-41-4	LCS	Ethylbenzene	50.0	0.0	49.2	98	67-120

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-69
Client ID: RLUOB-23-289584PS
Lab Sample ID: 1205554016
Instrument: VOAC.I
Analyst: PXY1
Purge Vol: 5 mL

Sample Type: Post Spike
Matrix: SO
%Moisture: 12.9
Analysis Date: 10/23/2023 20:00
Prep Batch ID: 2512717
Batch ID: 2512718
Dilution: 50

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits
1330-20-7	PS	Xylenes (total)	150	0.000	U	124	83	45-128
71-43-2	PS	Benzene	50.0	0.000	U	42.1	84	57-131
108-88-3	PS	Toluene	50.0	0.000	U	42.0	84	52-124
100-41-4	PS	Ethylbenzene	50.0	0.000	U	41.2	82	44-124

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-69
Client ID: RLUOB-23-289584PSD
Lab Sample ID: 1205554017
Instrument: VOAC.I
Analyst: PXY1
Purge Vol: 5 mL

Sample Type: Post Spike Duplicate
Matrix: SO
%Moisture: 12.9
Analysis Date: 10/23/2023 20:28
Prep Batch ID: 2512717
Batch ID: 2512718
Dilution: 50

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
1330-20-7	PSD	Xylenes (total)	150	0.000	U	111	74	45-128	11	0-20
71-43-2	PSD	Benzene	50.0	0.000	U	40.0	80	57-131	5	0-20
108-88-3	PSD	Toluene	50.0	0.000	U	39.2	78	52-124	7	0-20
100-41-4	PSD	Ethylbenzene	50.0	0.000	U	36.9	74	44-124	11	0-20

Method Blank Summary

SDG Number:	**2024-69**	**Client:**	**TNSL001**	**Matrix:**	**SOIL**
Client ID:	**MB for batch 2512717**	**Instrument ID:**	**VOAC.I**	**Data File:**	**data\102323VC\CD106T.D**
Lab Sample ID:	**1205554014**	**Prep Date:**	**10/23/2023 09:01**	**Analyzed:**	**10/23/23 12:12**
Column:	**DB-624**				

This method blank applies to the following samples and quality control samples:

	Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01	LCS for batch 2512717	1205554013	data\102323VC\CD103T.D	10/23/23	1050
02	HB for batch 2512717	1205554015	data\102323VC\CD107.D	10/23/23	1240
03	RLUOB-23-289584	642223001	data\102323VC\CD108.D	10/23/23	1307
04	RLUOB-23-289585	642223002	data\102323VC\CD109.D	10/23/23	1335
05	RLUOB-23-289586	642223003	data\102323VC\CD110.D	10/23/23	1403
06	RLUOB-23-289587	642223004	data\102323VC\CD111.D	10/23/23	1430
07	RLUOB-23-289588	642223005	data\102323VC\CD112.D	10/23/23	1458
08	RLUOB-23-289584PS	1205554016	data\102323VC\CD123.D	10/23/23	2000
09	RLUOB-23-289584PSD	1205554017	data\102323VC\CD124.D	10/23/23	2028

Instrument Performance Check

BROMOFLUOROBENZENE

Lab Name GEL Laboratories LLC **Client SDG:** 2024-69

Instrument ID: VOAC.I **Injection Date/Time:** 01-OCT-23 13:06

Column Description: DB-624 **Lab File ID** data\100123VC_ICAL\CZ701.D

m/e	Ion Abundance Criteria	% Relative Abundance
95	50 - 200% of mass 174	86.4
96	5.0 - 9.0% of mass 95	7
173	Less than 2.0% of mass 174	0
174	50 - 200% of mass 95	115.7
175	5.0 -9.0% of mass 174	5.7
176	95.0 - 105.0% of mass 174	101.6
177	5.0 - 10.0% of mass 176	9.5

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
ICALMIX[A]	WCVM231001-01	data\100123VC_ICAL\CZ702.D	01-OCT-23 13:31
ICALMIX[A]	WCVM231001-02	data\100123VC_ICAL\CZ703.D	01-OCT-23 13:59
ICALMIX[A]	WCVM231001-03	data\100123VC_ICAL\CZ704.D	01-OCT-23 14:26
ICALMIX[A]	WCVM231001-04	data\100123VC_ICAL\CZ705.D	01-OCT-23 14:53
ICALMIX[A]	WCVM231001-05	data\100123VC_ICAL\CZ706.D	01-OCT-23 15:21
ICALMIX[A]	WCVM231001-06	data\100123VC_ICAL\CZ707.D	01-OCT-23 15:48
ICALMIX[A]	WCVM231001-07	data\100123VC_ICAL\CZ708.D	01-OCT-23 16:16
ICALMIX[A]	WCVM231001-08	data\100123VC_ICAL\CZ709.D	01-OCT-23 16:43
ICALMIX[A]	WCVM231001-09	data\100123VC_ICAL\CZ710.D	01-OCT-23 17:11
ICVMIX[A]01	WCVM231001-10	data\100123VC_ICAL\CZ712.D	01-OCT-23 18:06
CCVMIX[A]01	WCVM231023-01	data\102323VC\CD102.D	23-OCT-23 10:22
BLK01LCS	1205554013	data\102323VC\CD103T.D	23-OCT-23 10:50
BLK01	1205554014	data\102323VC\CD106T.D	23-OCT-23 12:12
HBLK01	1205554015	data\102323VC\CD107.D	23-OCT-23 12:40
RLUOB-23-289584	642223001	data\102323VC\CD108.D	23-OCT-23 13:07
RLUOB-23-289585	642223002	data\102323VC\CD109.D	23-OCT-23 13:35
RLUOB-23-289586	642223003	data\102323VC\CD110.D	23-OCT-23 14:03
RLUOB-23-289587	642223004	data\102323VC\CD111.D	23-OCT-23 14:30
RLUOB-23-289588	642223005	data\102323VC\CD112.D	23-OCT-23 14:58
RLUOB-23-289584MS	1205554016	data\102323VC\CD123.D	23-OCT-23 20:00

Instrument Performance Check

BROMOFLUOROBENZENE

Lab Name GEL Laboratories LLC **Client SDG:** 2024-69

Instrument ID: VOAC.I **Injection Date/Time:** 01-OCT-23 13:06

Column Description: DB-624 **Lab File ID** data\100123VC_ICAL\CZ701.D

m/e	Ion Abundance Criteria	% Relative Abundance
95	50 - 200% of mass 174	86.4
96	5.0 - 9.0% of mass 95	7
173	Less than 2.0% of mass 174	0
174	50 - 200% of mass 95	115.7
175	5.0 -9.0% of mass 174	5.7
176	95.0 - 105.0% of mass 174	101.6
177	5.0 - 10.0% of mass 176	9.5

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
RLUOB-23-289584MSD	1205554017	data\102323VC\CD124.D	23-OCT-23 20:28

Internal Standard
Area and RT Summary

Lab Name : GEL Laboratories LLC

Client SDG: 2024-69

Instrument: VOAC.I

STD Analysis Time: 23-OCT-23 10:22

GC Column: DB-624

Data File: data\102323VC\CD102.D

	Fluorobenzene		Chlorobenzene-d5		1,4-Dichlorobenzene-d4	
	Area #	RT #	Area #	RT #	Area #	RT #
12 Hour STD	1029133	10.89	848064	14.31	469032	16.88
Upper Limit	2058266	11.39	1696128	14.81	938064	17.38
Lower Limit	514567	10.39	424032	13.81	234516	16.38
Sample ID						
BLK01LCS	1073271	10.9	850183	14.3	479167	16.9
BLK01	1077152	10.9	806302	14.3	467386	16.9
HBLK01	1078029	10.9	792825	14.3	441621	16.9
RLUOB-23-289584	1104733	10.9	791610	14.3	448274	16.9
RLUOB-23-289585	1122965	10.9	816169	14.3	449166	16.9
RLUOB-23-289586	1201549	10.9	943753	14.3	526392	16.9
RLUOB-23-289587	1079778	10.9	813605	14.3	444887	16.9
RLUOB-23-289588	1094405	10.9	793645	14.3	450589	16.9
RLUOB-23-289584MS	1068190	10.9	814334	14.3	433547	16.9
RLUOB-23-289584MSD	1058293	10.9	801869	14.3	443642	16.9

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Value outside of QC Limits

Sample Data

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-69**	**Date Collected:**	**10/10/2023 10:17**	**Matrix:**	**SO**
Lab Sample ID:	**642223001**	**Date Received:**	**10/20/2023 09:30**	**%Moisture:**	**12.9**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289584**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2512718**	**Inst:**	**VOAC.I**	**Dilution:**	**50**
Run Date:	**10/23/2023 13:07**	**Analyst:**	**PXY1**	**Purge Vol:**	**5 mL**
Prep Date:	**10/23/2023 09:31**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**data\102323VC\CD108.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	38.2	ug/kg	38.2	115
108-88-3	Toluene	U	38.2	ug/kg	38.2	115
100-41-4	Ethylbenzene	U	38.2	ug/kg	38.2	115
1330-20-7	Xylenes (total)	U	115	ug/kg	115	344

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	47.6	50.0	ug/L	95	(74%-128%)
1,2-Dichloroethane-d4	42.6	50.0	ug/L	85	(77%-127%)
Toluene-d8	47.7	50.0	ug/L	95	(81%-120%)

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102323VC\
Data File : CD108.D
Acq On : 23 Oct 2023 13:07
Operator : PXY1
InstName : VOAC
Sample : |642223001|2512718|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 8 Sample Multiplier: 1

10/24/2023

10/24/2023

Quant Time: Oct 23 14:33:49 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards								Dev(Min)
1) Fluorobenzene	96	10.872	10.879	1.000	1104733	50.00	ug/L	0.00
43) Chlorobenzene-d5	117	14.305	14.305	1.000	791610	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	16.877	16.884	1.000	448274	50.00	ug/L	0.00
84) B Fluorobenzene	96	10.872	10.879	1.000	1104733	50.00	ug/L	0.00
103) B Chlorobenzene-d5	117	14.305	14.305	1.000	791610	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	16.877	16.884	1.000	448638	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	65	10.482	10.495	0.964	332819	42.55	ug/L	-0.01
45) Toluene-d8	98	12.659	12.665	0.885	974632	47.67	ug/L	0.00
63) Bromofluorobenzene	95	15.573	15.573	0.923	348050	47.58	ug/L	0.00

Compound	Amount	Range	Recovery
30) 1,2-Dichloroethane-d4	50.000	77 - 127	85%
45) Toluene-d8	50.000	81 - 120	95%
63) Bromofluorobenzene	50.000	74 - 128	95%

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.752	0.000	0	N.D.		
3) Chloromethane		0.000	5.185	0.000	0	N.D.		
4) Vinyl chloride		0.000	5.398	0.000	0	N.D.		
5) Bromomethane		0.000	6.038	0.000	0	N.D.		
6) Chloroethane		0.000	6.160	0.000	0	N.D.		
7) Trichlorofluoromethane		0.000	6.550	0.000	0	N.D.		
8) Ethyl ether		0.000	6.922	0.000	0	N.D.		
9) Acetone	43	7.306	7.318	0.672	2058	Below Cal		58
10) 1,1-Dichloroethylene		0.000	7.343	0.000	0	N.D.		
11) Iodomethane		0.000	7.611	0.000	0	N.D.		
12) Acetonitrile	41	7.794	7.690	0.717	117	N.D.		
13) Methyl acetate	43	7.733	7.745	0.711	1249	N.D.		
14) Carbon disulfide		0.000	7.769	0.000	0	N.D.		
15) Methylene chloride	84	7.940	7.946	0.730	3049	N.D.		
16) tert-Butyl methyl ether		0.000	8.275	0.000	0	N.D.		
17) trans-1,2-Dichloroethy...		0.000	8.324	0.000	0	N.D.		
18) Hexane	57	8.629	8.635	0.794	124	N.D.		
19) Vinyl acetate		0.000	8.794	0.000	0	N.D.		
20) 1,1-Dichloroethane		0.000	8.842	0.000	0	N.D.		
21) 2-Butanone	43	9.489	9.476	0.873	865	N.D.		
22) cis-1,2-Dichloroethylene		0.000	9.531	0.000	0	N.D.		
23) 2,2-Dichloropropane		0.000	9.568	0.000	0	N.D.		
24) Bromochloromethane		0.000	9.830	0.000	0	N.D.		
25) Chloroform		0.000	9.867	0.000	0	N.D.		
26) 1,1,1-Trichloroethane		0.000	10.178	0.000	0	N.D.		
27) Cyclohexane		0.000	10.287	0.000	0	N.D.		
28) 1,1-Dichloropropene		0.000	10.348	0.000	0	N.D.		
29) Carbon tetrachloride		0.000	10.391	0.000	0	N.D.		
31) 1,2-Dichloroethane		0.000	10.580	0.000	0	N.D.		
32) Benzene	78	10.604	10.610	0.975	203	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102323VC\
Data File : CD108.D
Acq On : 23 Oct 2023 13:07
Operator : PXY1
InstName : VOAC
Sample : |642223001|2512718|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Oct 23 14:33:49 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
33) Cyclohexene		0.000	10.738	0.000	0	N.D.	
34) n-Butyl alcohol		0.000	10.976	0.000	0	N.D.	
35) Trichloroethylene		0.000	11.305	0.000	0	N.D.	
36) 2-Pentanone	43	11.391	11.385	1.048	374	N.D.	
37) 1,2-Dichloropropane		0.000	11.568	0.000	0	N.D.	
38) Methylcyclohexane		0.000	11.580	0.000	0	N.D.	
39) Dibromomethane		0.000	11.708	0.000	0	N.D.	
40) Bromodichloromethane		0.000	11.830	0.000	0	N.D.	
41) 2-Chloroethylvinyl ether		0.000	12.074	0.000	0	N.D.	
42) cis-1,3-Dichloropropylene		0.000	12.317	0.000	0	N.D.	
44) 4-Methyl-2-pentanone		0.000	12.421	0.000	0	N.D.	
46) Toluene	91	12.738	12.744	0.890	401	N.D.	
47) trans-1,3-Dichloroprop...		0.000	12.903	0.000	0	N.D.	
48) 1,1,2-Trichloroethane		0.000	13.140	0.000	0	N.D.	
49) 2-Hexanone		0.000	13.336	0.000	0	N.D.	
50) 1,3-Dichloropropane		0.000	13.348	0.000	0	N.D.	
51) Tetrachloroethylene		0.000	13.390	0.000	0	N.D.	
52) Dibromochloromethane		0.000	13.634	0.000	0	N.D.	
53) 1,2-Dibromoethane		0.000	13.817	0.000	0	N.D.	
54) Chlorobenzene		0.000	14.341	0.000	0	N.D.	
55) 1,1,1,2-Tetrachloroethane		0.000	14.396	0.000	0	N.D.	
56) Ethylbenzene	91	14.408	14.409	1.007	144	N.D.	
57) m,p-Xylenes		0.000	14.524	0.000	0	N.D.	
58) o-Xylene	91	14.994	14.988	1.048	154	N.D.	
59) Styrene		0.000	14.988	0.000	0	N.D.	
61) Bromoform		0.000	15.262	0.000	0	N.D.	
62) Isopropylbenzene		0.000	15.366	0.000	0	N.D.	
64) 1,1,2,2-Tetrachloroethane	83	15.567	15.646	0.922	318	N.D.	
65) 1,2,3-Trichloropropane		0.000	15.744	0.000	0	N.D.	
66) Bromobenzene		0.000	15.799	0.000	0	N.D.	
67) n-Propylbenzene	91	15.811	15.817	0.937	168	N.D.	
68) 1,3,5-Trimethylbenzene		0.000	15.975	0.000	0	N.D.	
69) 2-Chlorotoluene		0.000	15.975	0.000	0	N.D.	
70) 4-Chlorotoluene	91	16.079	16.079	0.953	534	N.D.	
71) tert-Butylbenzene		0.000	16.372	0.000	0	N.D.	
72) 1,2,4-Trimethylbenzene	105	16.396	16.414	0.971	132	N.D.	
73) sec-Butylbenzene	105	16.597	16.615	0.983	123	N.D.	
74) 4-Isopropyltoluene	119	16.731	16.743	0.991	215	N.D.	
75) 1,3-Dichlorobenzene	146	16.829	16.817	0.997	196	N.D.	
76) 1,4-Dichlorobenzene	146	16.890	16.908	1.001	663	N.D.	
77) n-Butylbenzene	91	17.225	17.231	1.021	526	N.D.	
78) 1,2-Dichlorobenzene	146	17.359	17.378	1.029	138	N.D.	
79) 1,2-Dibromo-3-chloropr...		0.000	18.335	0.000	0	N.D.	
80) 1,2,4-Trichlorobenzene	180	19.517	19.523	1.156	759	N.D.	
81) Hexachlorobutadiene	225	19.718	19.719	1.168	260	N.D.	
82) Naphthalene	128	19.956	19.956	1.182	2623	N.D.	
83) 1,2,3-Trichlorobenzene	180	20.334	20.340	1.205	1047	N.D.	
85) Acrolein		0.000	7.117	0.000	0	N.D.	
86) Trichlorotrifluoroethane		0.000	7.312	0.000	0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102323VC\
Data File : CD108.D
Acq On : 23 Oct 2023 13:07
Operator : PXY1
InstName : VOAC
Sample : |642223001|2512718|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Oct 23 14:33:49 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE

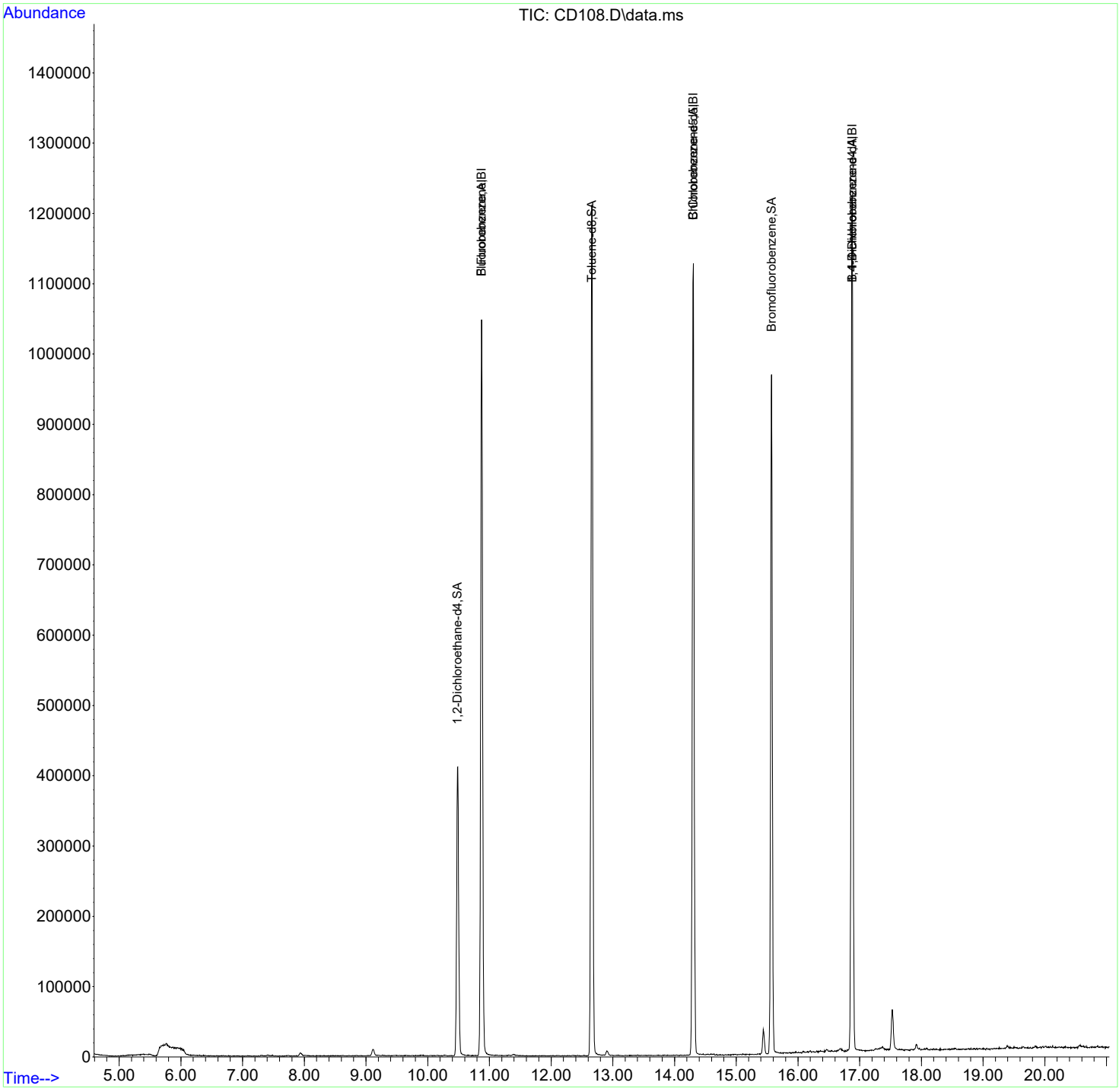
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
87) Isopropyl Alcohol	45	7.398	7.416	0.680	2852	N.D.	
88) Allyl chloride	41	7.794	7.794	0.717	117	N.D.	
89) tert-Butyl Alcohol	59	8.007	7.946	0.736	797	N.D.	
90) Acrylonitrile		0.000	8.208	0.000	0	N.D.	
91) Isopropyl ether		0.000	8.824	0.000	0	N.D.	
92) 2-Chloro-1,3-butadiene		0.000	8.958	0.000	0	N.D.	
93) Ethyl tert-butyl ether		0.000	9.263	0.000	0	N.D.	
94) Ethyl acetate	43	9.489	9.482	0.873	865	N.D.	
95) Propionitrile		0.000	9.543	0.000	0	N.D.	
96) Methacrylonitrile		0.000	9.745	0.000	0	N.D.	
97) Tetrahydrofuran	42	9.903	9.891	0.911	308	N.D.	
98) Isobutyl alcohol		0.000	10.220	0.000	0	N.D.	
99) Methyl tert-amyl ether		0.000	10.629	0.000	0	N.D.	
100) Methyl methacrylate		0.000	11.531	0.000	0	N.D.	
101) 1,4-Dioxane		0.000	11.665	0.000	0	N.D.	
102) 2-Nitropropane		0.000	12.043	0.000	0	N.D.	
104) Ethyl methacrylate		0.000	12.903	0.000	0	N.D.	
106) 1-Chlorohexane		0.000	14.195	0.000	0	N.D.	
107) cis-1,4-Dichloro-2-butene		0.000	15.396	0.000	0	N.D.	
108) Cyclohexanone		0.000	15.530	0.000	0	N.D.	
109) trans-1,4-Dichloro-2-b...		0.000	15.701	0.000	0	N.D.	
110) Pentachloroethane		0.000	16.445	0.000	0	N.D.	
111) Benzyl chloride	91	17.030	17.030	1.009	1047	N.D.	
112) bis(2-Chloroisopropyl)...	45	17.451	17.463	1.034	379	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102323VC\
Data File : CD108.D
Acq On : 23 Oct 2023 13:07
Operator : PXY1
InstName : VOAC
Sample : |642223001|2512718|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Oct 23 14:33:49 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE



Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-69**	**Date Collected:**	**10/10/2023 10:42**	**Matrix:**	**SO**
Lab Sample ID:	**642223002**	**Date Received:**	**10/20/2023 09:30**	**%Moisture:**	**5.1**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289585**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2512718**	**Inst:**	**VOAC.I**	**Dilution:**	**50**
Run Date:	**10/23/2023 13:35**	**Analyst:**	**PXY1**	**Purge Vol:**	**5 mL**
Prep Date:	**10/23/2023 09:32**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**data\102323VC\CD109.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	35.1	ug/kg	35.1	105
108-88-3	Toluene	U	35.1	ug/kg	35.1	105
100-41-4	Ethylbenzene	U	35.1	ug/kg	35.1	105
1330-20-7	Xylenes (total)	U	105	ug/kg	105	316

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	46.3	50.0	ug/L	93	(74%-128%)
Toluene-d8	45.6	50.0	ug/L	91	(81%-120%)
1,2-Dichloroethane-d4	42.1	50.0	ug/L	84	(77%-127%)

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102323VC\
Data File : CD109.D
Acq On : 23 Oct 2023 13:35
Operator : PXY1
InstName : VOAC
Sample : |642223002|2512718|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 9 Sample Multiplier: 1

10/24/2023

10/24/2023

Quant Time: Oct 23 14:34:39 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards								Dev(Min)
1) Fluorobenzene	96	10.873	10.879	1.000	1122965	50.00	ug/L	0.00
43) Chlorobenzene-d5	117	14.305	14.305	1.000	816169	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	16.878	16.884	1.000	449166	50.00	ug/L	0.00
84) B Fluorobenzene	96	10.873	10.879	1.000	1122965	50.00	ug/L	0.00
103) B Chlorobenzene-d5	117	14.305	14.305	1.000	816169	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	16.878	16.884	1.000	452127	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	65	10.482	10.495	0.964	335003	42.13	ug/L	-0.01
45) Toluene-d8	98	12.659	12.665	0.885	961085	45.59	ug/L	0.00
63) Bromofluorobenzene	95	15.573	15.573	0.923	339624	46.33	ug/L	0.00

Compound	Amount	Range	Recovery
30) 1,2-Dichloroethane-d4	50.000	77 - 127	84%
45) Toluene-d8	50.000	81 - 120	91%
63) Bromofluorobenzene	50.000	74 - 128	93%

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.752	0.000	0	N.D.		
3) Chloromethane		0.000	5.185	0.000	0	N.D.		
4) Vinyl chloride		0.000	5.398	0.000	0	N.D.		
5) Bromomethane		0.000	6.038	0.000	0	N.D.		
6) Chloroethane		0.000	6.160	0.000	0	N.D.		
7) Trichlorofluoromethane		0.000	6.550	0.000	0	N.D.		
8) Ethyl ether		0.000	6.922	0.000	0	N.D.		
9) Acetone	43	7.318	7.318	0.673	2175	Below Cal		72
10) 1,1-Dichloroethylene		0.000	7.343	0.000	0	N.D.		
11) Iodomethane		0.000	7.611	0.000	0	N.D.		
12) Acetonitrile	41	7.739	7.690	0.712	124	N.D.		
13) Methyl acetate	43	7.733	7.745	0.711	1004	N.D.		
14) Carbon disulfide		0.000	7.769	0.000	0	N.D.		
15) Methylene chloride	84	7.952	7.946	0.731	3686	N.D.		
16) tert-Butyl methyl ether		0.000	8.275	0.000	0	N.D.		
17) trans-1,2-Dichloroethy...		0.000	8.324	0.000	0	N.D.		
18) Hexane	57	8.617	8.635	0.793	183	N.D.		
19) Vinyl acetate		0.000	8.794	0.000	0	N.D.		
20) 1,1-Dichloroethane		0.000	8.842	0.000	0	N.D.		
21) 2-Butanone	43	9.483	9.476	0.872	1000	N.D.		
22) cis-1,2-Dichloroethylene		0.000	9.531	0.000	0	N.D.		
23) 2,2-Dichloropropane		0.000	9.568	0.000	0	N.D.		
24) Bromochloromethane		0.000	9.830	0.000	0	N.D.		
25) Chloroform		0.000	9.867	0.000	0	N.D.		
26) 1,1,1-Trichloroethane		0.000	10.178	0.000	0	N.D.		
27) Cyclohexane		0.000	10.287	0.000	0	N.D.		
28) 1,1-Dichloropropene		0.000	10.348	0.000	0	N.D.		
29) Carbon tetrachloride		0.000	10.391	0.000	0	N.D.		
31) 1,2-Dichloroethane	62	10.513	10.580	0.967	153	N.D.		
32) Benzene	78	10.610	10.610	0.976	140	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102323VC\
Data File : CD109.D
Acq On : 23 Oct 2023 13:35
Operator : PXY1
InstName : VOAC
Sample : |642223002|2512718|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Oct 23 14:34:39 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
33) Cyclohexene	67	10.714	10.738	0.985	140	N.D.	
34) n-Butyl alcohol		0.000	10.976	0.000	0	N.D.	
35) Trichloroethylene		0.000	11.305	0.000	0	N.D.	
36) 2-Pentanone	43	11.397	11.385	1.048	385	N.D.	
37) 1,2-Dichloropropane		0.000	11.568	0.000	0	N.D.	
38) Methylcyclohexane		0.000	11.580	0.000	0	N.D.	
39) Dibromomethane		0.000	11.708	0.000	0	N.D.	
40) Bromodichloromethane		0.000	11.830	0.000	0	N.D.	
41) 2-Chloroethylvinyl ether		0.000	12.074	0.000	0	N.D.	
42) cis-1,3-Dichloropropylene		0.000	12.317	0.000	0	N.D.	
44) 4-Methyl-2-pentanone		0.000	12.421	0.000	0	N.D.	
46) Toluene	91	12.732	12.744	0.890	362	N.D.	
47) trans-1,3-Dichloroprop...		0.000	12.903	0.000	0	N.D.	
48) 1,1,2-Trichloroethane		0.000	13.140	0.000	0	N.D.	
49) 2-Hexanone	43	13.342	13.336	0.933	185	N.D.	
50) 1,3-Dichloropropane		0.000	13.348	0.000	0	N.D.	
51) Tetrachloroethylene		0.000	13.390	0.000	0	N.D.	
52) Dibromochloromethane		0.000	13.634	0.000	0	N.D.	
53) 1,2-Dibromoethane		0.000	13.817	0.000	0	N.D.	
54) Chlorobenzene		0.000	14.341	0.000	0	N.D.	
55) 1,1,1,2-Tetrachloroethane		0.000	14.396	0.000	0	N.D.	
56) Ethylbenzene	91	14.402	14.409	1.007	414	N.D.	
57) m,p-Xylenes	106	14.512	14.524	1.014	121	N.D.	
58) o-Xylene	91	15.073	14.988	1.054	117	N.D.	
59) Styrene		0.000	14.988	0.000	0	N.D.	
61) Bromoform		0.000	15.262	0.000	0	N.D.	
62) Isopropylbenzene		0.000	15.366	0.000	0	N.D.	
64) 1,1,2,2-Tetrachloroethane	83	15.579	15.646	0.923	374	N.D.	
65) 1,2,3-Trichloropropane		0.000	15.744	0.000	0	N.D.	
66) Bromobenzene		0.000	15.799	0.000	0	N.D.	
67) n-Propylbenzene	91	15.811	15.817	0.937	429	N.D.	
68) 1,3,5-Trimethylbenzene		0.000	15.975	0.000	0	N.D.	
69) 2-Chlorotoluene		0.000	15.975	0.000	0	N.D.	
70) 4-Chlorotoluene	91	16.073	16.079	0.952	496	N.D.	
71) tert-Butylbenzene		0.000	16.372	0.000	0	N.D.	
72) 1,2,4-Trimethylbenzene	105	16.402	16.414	0.972	220	N.D.	
73) sec-Butylbenzene		0.000	16.615	0.000	0	N.D.	
74) 4-Isopropyltoluene	119	16.737	16.743	0.992	357	N.D.	
75) 1,3-Dichlorobenzene	146	16.804	16.817	0.996	126	N.D.	
76) 1,4-Dichlorobenzene	146	16.908	16.908	1.002	481	N.D.	
77) n-Butylbenzene	91	17.201	17.231	1.019	766	N.D.	
78) 1,2-Dichlorobenzene	146	17.365	17.378	1.029	154	N.D.	
79) 1,2-Dibromo-3-chloropr...		0.000	18.335	0.000	0	N.D.	
80) 1,2,4-Trichlorobenzene	180	19.517	19.523	1.156	581	N.D.	
81) Hexachlorobutadiene		0.000	19.719	0.000	0	N.D.	
82) Naphthalene	128	19.950	19.956	1.182	2325	N.D.	
83) 1,2,3-Trichlorobenzene	180	20.322	20.340	1.204	373	N.D.	
85) Acrolein		0.000	7.117	0.000	0	N.D.	
86) Trichlorotrifluoroethane		0.000	7.312	0.000	0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102323VC\
Data File : CD109.D
Acq On : 23 Oct 2023 13:35
Operator : PXY1
InstName : VOAC
Sample : |642223002|2512718|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Oct 23 14:34:39 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE

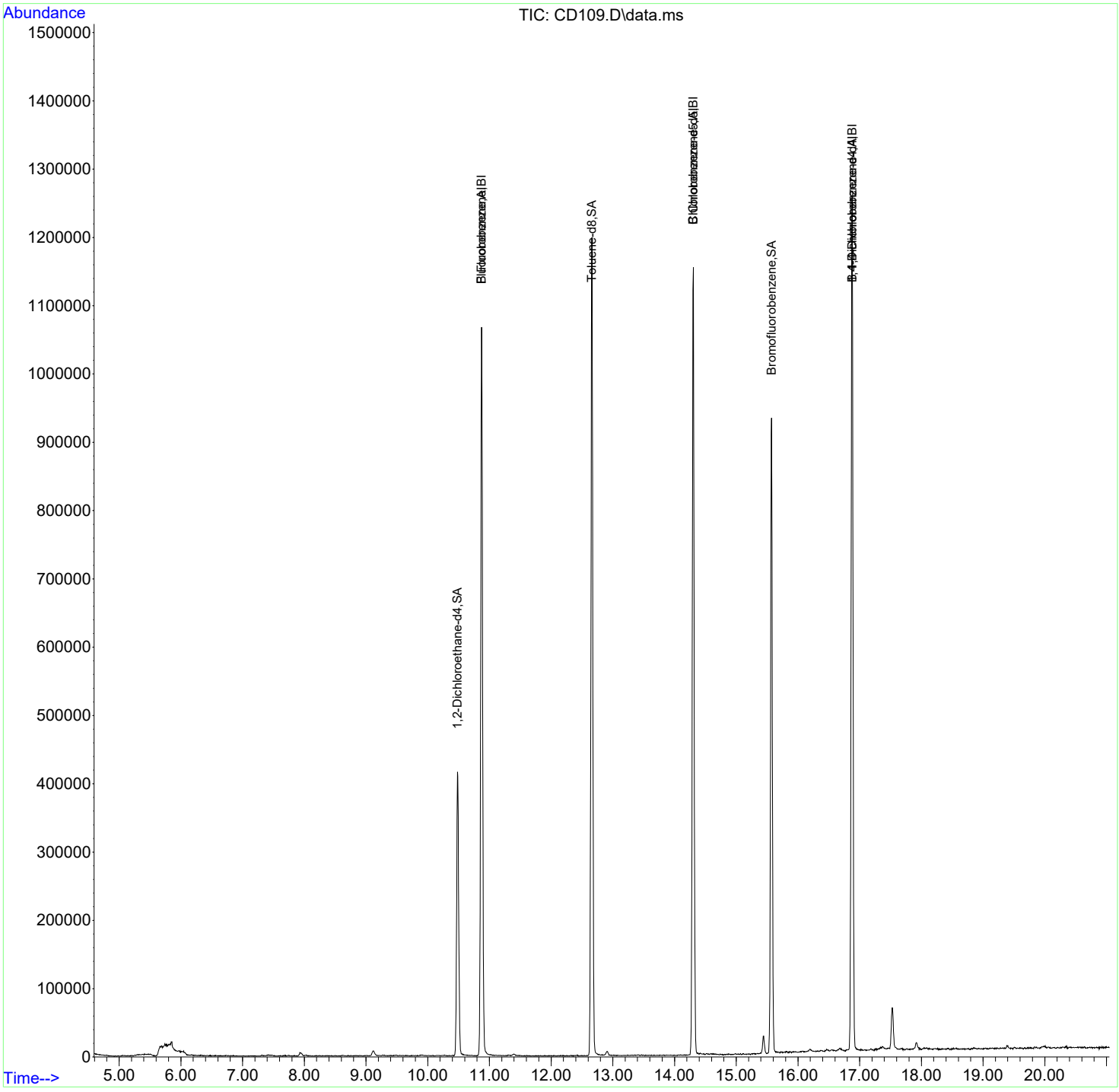
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
87) Isopropyl Alcohol	45	7.410	7.416	0.682	4038	N.D.	
88) Allyl chloride	41	7.739	7.794	0.712	124	N.D.	
89) tert-Butyl Alcohol	59	8.038	7.946	0.739	869	N.D.	
90) Acrylonitrile		0.000	8.208	0.000	0	N.D.	
91) Isopropyl ether		0.000	8.824	0.000	0	N.D.	
92) 2-Chloro-1,3-butadiene		0.000	8.958	0.000	0	N.D.	
93) Ethyl tert-butyl ether		0.000	9.263	0.000	0	N.D.	
94) Ethyl acetate	43	9.483	9.482	0.872	1000	N.D.	
95) Propionitrile		0.000	9.543	0.000	0	N.D.	
96) Methacrylonitrile		0.000	9.745	0.000	0	N.D.	
97) Tetrahydrofuran	42	9.897	9.891	0.910	191	N.D.	
98) Isobutyl alcohol		0.000	10.220	0.000	0	N.D.	
99) Methyl tert-amyl ether		0.000	10.629	0.000	0	N.D.	
100) Methyl methacrylate		0.000	11.531	0.000	0	N.D.	
101) 1,4-Dioxane		0.000	11.665	0.000	0	N.D.	
102) 2-Nitropropane	43	12.043	12.043	1.108	135	N.D.	
104) Ethyl methacrylate		0.000	12.903	0.000	0	N.D.	
106) 1-Chlorohexane		0.000	14.195	0.000	0	N.D.	
107) cis-1,4-Dichloro-2-butene		0.000	15.396	0.000	0	N.D.	
108) Cyclohexanone		0.000	15.530	0.000	0	N.D.	
109) trans-1,4-Dichloro-2-b...		0.000	15.701	0.000	0	N.D.	
110) Pentachloroethane		0.000	16.445	0.000	0	N.D.	
111) Benzyl chloride	91	17.024	17.030	1.009	1089	N.D.	
112) bis(2-Chloroisopropyl)...	45	17.481	17.463	1.036	131	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102323VC\
Data File : CD109.D
Acq On : 23 Oct 2023 13:35
Operator : PXY1
InstName : VOAC
Sample : |642223002|2512718|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Oct 23 14:34:39 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE



Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-69**	**Date Collected:**	**10/10/2023 10:57**	**Matrix:**	**SO**
Lab Sample ID:	**642223003**	**Date Received:**	**10/20/2023 09:30**	**%Moisture:**	**7.7**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289586**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2512718**	**Inst:**	**VOAC.I**	**Dilution:**	**50**
Run Date:	**10/23/2023 14:03**	**Analyst:**	**PXY1**	**Purge Vol:**	**5 mL**
Prep Date:	**10/23/2023 09:33**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**data\102323VC\CD110.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	36.1	ug/kg	36.1	108
108-88-3	Toluene	U	36.1	ug/kg	36.1	108
100-41-4	Ethylbenzene	U	36.1	ug/kg	36.1	108
1330-20-7	Xylenes (total)	U	108	ug/kg	108	325

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	49.3	50.0	ug/L	99	(74%-128%)
1,2-Dichloroethane-d4	41.9	50.0	ug/L	84	(77%-127%)
Toluene-d8	46.0	50.0	ug/L	92	(81%-120%)

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102323VC\
Data File : CD110.D
Acq On : 23 Oct 2023 14:03
Operator : PXY1
InstName : VOAC
Sample : |642223003|2512718|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 10 Sample Multiplier: 1

10/24/2023

10/24/2023

Quant Time: Oct 23 14:34:53 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards								Dev(Min)
1) Fluorobenzene	96	10.873	10.879	1.000	1201549	50.00	ug/L	0.00
43) Chlorobenzene-d5	117	14.305	14.305	1.000	943753	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	16.878	16.884	1.000	526392	50.00	ug/L	0.00
84) B Fluorobenzene	96	10.873	10.879	1.000	1201549	50.00	ug/L	0.00
103) B Chlorobenzene-d5	117	14.305	14.305	1.000	943753	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	16.878	16.884	1.000	526930	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	65	10.483	10.495	0.964	356549	41.91	ug/L	-0.01
45) Toluene-d8	98	12.659	12.665	0.885	1122158	46.04	ug/L	0.00
63) Bromofluorobenzene	95	15.573	15.573	0.923	423210	49.27	ug/L	0.00

Compound	Amount	Range	Recovery
30) 1,2-Dichloroethane-d4	50.000	77 - 127	84%
45) Toluene-d8	50.000	81 - 120	92%
63) Bromofluorobenzene	50.000	74 - 128	99%

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.752	0.000	0	N.D.		
3) Chloromethane		0.000	5.185	0.000	0	N.D.		
4) Vinyl chloride		0.000	5.398	0.000	0	N.D.		
5) Bromomethane		0.000	6.038	0.000	0	N.D.		
6) Chloroethane		0.000	6.160	0.000	0	N.D.		
7) Trichlorofluoromethane		0.000	6.550	0.000	0	N.D.		
8) Ethyl ether		0.000	6.922	0.000	0	N.D.		
9) Acetone	43	7.318	7.318	0.673	1929	Below Cal		85
10) 1,1-Dichloroethylene		0.000	7.343	0.000	0	N.D.		
11) Iodomethane		0.000	7.611	0.000	0	N.D.		
12) Acetonitrile	41	7.690	7.690	0.707	130	N.D.		
13) Methyl acetate	43	7.739	7.745	0.712	1517	N.D.		
14) Carbon disulfide		0.000	7.769	0.000	0	N.D.		
15) Methylene chloride	84	7.934	7.946	0.730	3441	N.D.		
16) tert-Butyl methyl ether		0.000	8.275	0.000	0	N.D.		
17) trans-1,2-Dichloroethy...		0.000	8.324	0.000	0	N.D.		
18) Hexane	57	8.629	8.635	0.794	218	N.D.		
19) Vinyl acetate		0.000	8.794	0.000	0	N.D.		
20) 1,1-Dichloroethane		0.000	8.842	0.000	0	N.D.		
21) 2-Butanone	43	9.471	9.476	0.871	1142	N.D.		
22) cis-1,2-Dichloroethylene		0.000	9.531	0.000	0	N.D.		
23) 2,2-Dichloropropane		0.000	9.568	0.000	0	N.D.		
24) Bromochloromethane		0.000	9.830	0.000	0	N.D.		
25) Chloroform		0.000	9.867	0.000	0	N.D.		
26) 1,1,1-Trichloroethane		0.000	10.178	0.000	0	N.D.		
27) Cyclohexane		0.000	10.287	0.000	0	N.D.		
28) 1,1-Dichloropropene		0.000	10.348	0.000	0	N.D.		
29) Carbon tetrachloride		0.000	10.391	0.000	0	N.D.		
31) 1,2-Dichloroethane	62	10.483	10.580	0.964	174	N.D.		
32) Benzene		0.000	10.610	0.000	0	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102323VC\
Data File : CD110.D
Acq On : 23 Oct 2023 14:03
Operator : PXY1
InstName : VOAC
Sample : |642223003|2512718|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Oct 23 14:34:53 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
33) Cyclohexene		0.000	10.738	0.000	0	N.D.	
34) n-Butyl alcohol		0.000	10.976	0.000	0	N.D.	
35) Trichloroethylene		0.000	11.305	0.000	0	N.D.	
36) 2-Pentanone	43	11.373	11.385	1.046	279	N.D.	
37) 1,2-Dichloropropane		0.000	11.568	0.000	0	N.D.	
38) Methylcyclohexane		0.000	11.580	0.000	0	N.D.	
39) Dibromomethane		0.000	11.708	0.000	0	N.D.	
40) Bromodichloromethane		0.000	11.830	0.000	0	N.D.	
41) 2-Chloroethylvinyl ether		0.000	12.074	0.000	0	N.D.	
42) cis-1,3-Dichloropropylene		0.000	12.317	0.000	0	N.D.	
44) 4-Methyl-2-pentanone		0.000	12.421	0.000	0	N.D.	
46) Toluene	91	12.744	12.744	0.891	387	N.D.	
47) trans-1,3-Dichloroprop...		0.000	12.903	0.000	0	N.D.	
48) 1,1,2-Trichloroethane		0.000	13.140	0.000	0	N.D.	
49) 2-Hexanone	43	13.330	13.336	0.932	157	N.D.	
50) 1,3-Dichloropropane		0.000	13.348	0.000	0	N.D.	
51) Tetrachloroethylene		0.000	13.390	0.000	0	N.D.	
52) Dibromochloromethane		0.000	13.634	0.000	0	N.D.	
53) 1,2-Dibromoethane		0.000	13.817	0.000	0	N.D.	
54) Chlorobenzene		0.000	14.341	0.000	0	N.D.	
55) 1,1,1,2-Tetrachloroethane		0.000	14.396	0.000	0	N.D.	
56) Ethylbenzene	91	14.409	14.409	1.007	354	N.D.	
57) m,p-Xylenes		0.000	14.524	0.000	0	N.D.	
58) o-Xylene	91	14.970	14.988	1.046	153	N.D.	
59) Styrene		0.000	14.988	0.000	0	N.D.	
61) Bromoform		0.000	15.262	0.000	0	N.D.	
62) Isopropylbenzene		0.000	15.366	0.000	0	N.D.	
64) 1,1,2,2-Tetrachloroethane	83	15.652	15.646	0.927	426	N.D.	
65) 1,2,3-Trichloropropane	110	15.866	15.744	0.940	131	N.D.	
66) Bromobenzene		0.000	15.799	0.000	0	N.D.	
67) n-Propylbenzene	91	15.786	15.817	0.935	289	N.D.	
68) 1,3,5-Trimethylbenzene	105	15.969	15.975	0.946	737	N.D.	
69) 2-Chlorotoluene		0.000	15.975	0.000	0	N.D.	
70) 4-Chlorotoluene	91	16.073	16.079	0.952	595	N.D.	
71) tert-Butylbenzene		0.000	16.372	0.000	0	N.D.	
72) 1,2,4-Trimethylbenzene	105	16.408	16.414	0.972	274	N.D.	
73) sec-Butylbenzene	105	16.616	16.615	0.984	933	N.D.	
74) 4-Isopropyltoluene	119	16.738	16.743	0.992	1128	N.D.	
75) 1,3-Dichlorobenzene		0.000	16.817	0.000	0	N.D.	
76) 1,4-Dichlorobenzene		0.000	16.908	0.000	0	N.D.	
77) n-Butylbenzene	91	17.213	17.231	1.020	1006	N.D.	
78) 1,2-Dichlorobenzene		0.000	17.378	0.000	0	N.D.	
79) 1,2-Dibromo-3-chloropr...		0.000	18.335	0.000	0	N.D.	
80) 1,2,4-Trichlorobenzene	180	19.511	19.523	1.156	598	N.D.	
81) Hexachlorobutadiene		0.000	19.719	0.000	0	N.D.	
82) Naphthalene	128	19.938	19.956	1.181	2269	N.D.	
83) 1,2,3-Trichlorobenzene	180	20.377	20.340	1.207	200	N.D.	
85) Acrolein		0.000	7.117	0.000	0	N.D.	
86) Trichlorotrifluoroethane		0.000	7.312	0.000	0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102323VC\
Data File : CD110.D
Acq On : 23 Oct 2023 14:03
Operator : PXY1
InstName : VOAC
Sample : |642223003|2512718|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Oct 23 14:34:53 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE

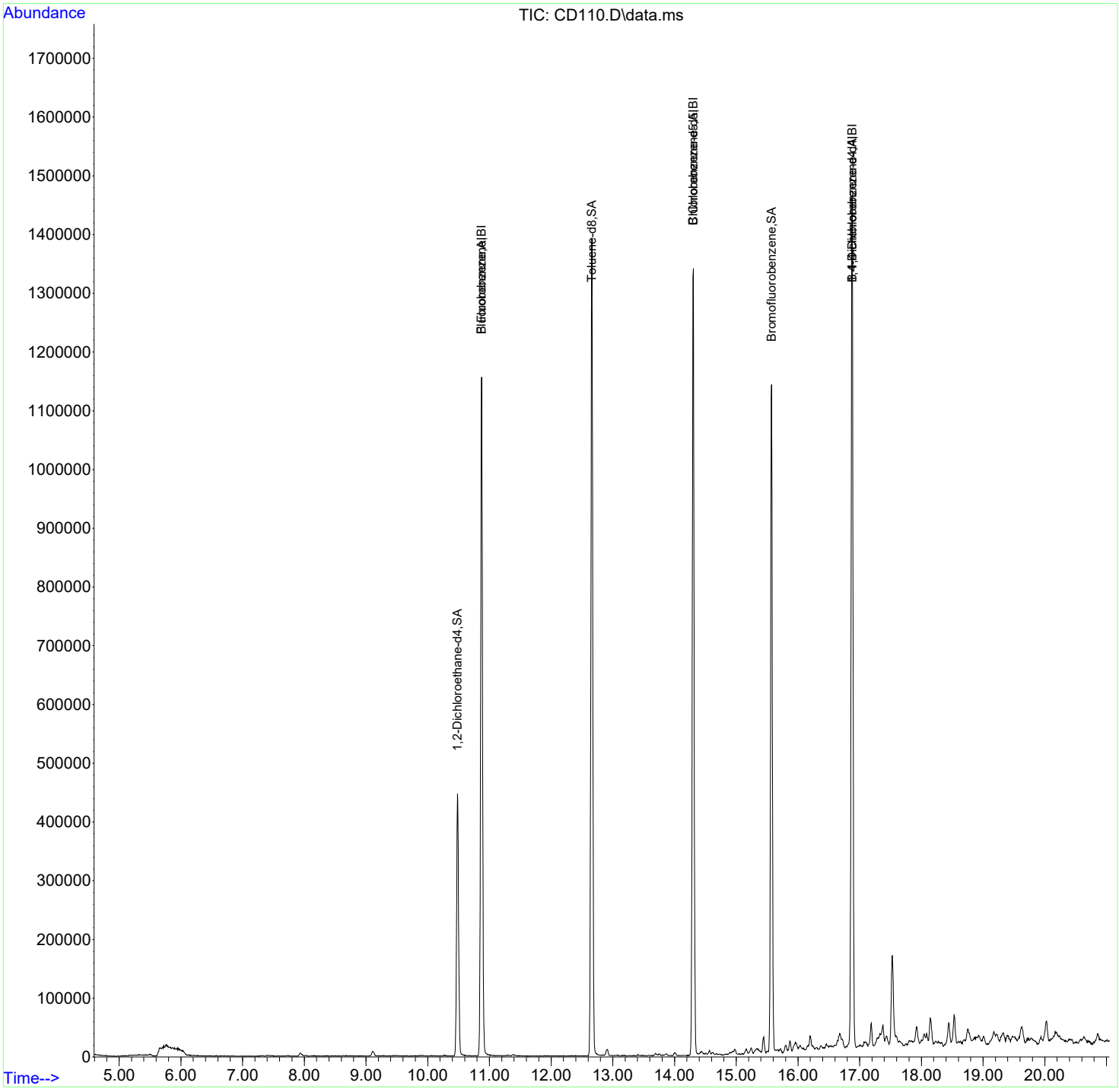
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
87) Isopropyl Alcohol	45	7.410	7.416	0.682	2562	N.D.	
88) Allyl chloride	41	7.934	7.794	0.730	127	N.D.	
89) tert-Butyl Alcohol	59	8.020	7.946	0.738	910	N.D.	
90) Acrylonitrile		0.000	8.208	0.000	0	N.D.	
91) Isopropyl ether		0.000	8.824	0.000	0	N.D.	
92) 2-Chloro-1,3-butadiene		0.000	8.958	0.000	0	N.D.	
93) Ethyl tert-butyl ether		0.000	9.263	0.000	0	N.D.	
94) Ethyl acetate	43	9.471	9.482	0.871	1142	N.D.	
95) Propionitrile		0.000	9.543	0.000	0	N.D.	
96) Methacrylonitrile		0.000	9.745	0.000	0	N.D.	
97) Tetrahydrofuran	42	9.873	9.891	0.908	122	N.D.	
98) Isobutyl alcohol		0.000	10.220	0.000	0	N.D.	
99) Methyl tert-amyl ether		0.000	10.629	0.000	0	N.D.	
100) Methyl methacrylate		0.000	11.531	0.000	0	N.D.	
101) 1,4-Dioxane		0.000	11.665	0.000	0	N.D.	
102) 2-Nitropropane		0.000	12.043	0.000	0	N.D.	
104) Ethyl methacrylate		0.000	12.903	0.000	0	N.D.	
106) 1-Chlorohexane		0.000	14.195	0.000	0	N.D.	
107) cis-1,4-Dichloro-2-butene	53	15.335	15.396	0.909	405	N.D.	
108) Cyclohexanone	42	15.506	15.530	0.919	195	N.D.	
109) trans-1,4-Dichloro-2-b...		0.000	15.701	0.000	0	N.D.	
110) Pentachloroethane		0.000	16.445	0.000	0	N.D.	
111) Benzyl chloride	91	16.981	17.030	1.006	389	N.D.	
112) bis(2-Chloroisopropyl)...		0.000	17.463	0.000	0m	N.D.	d

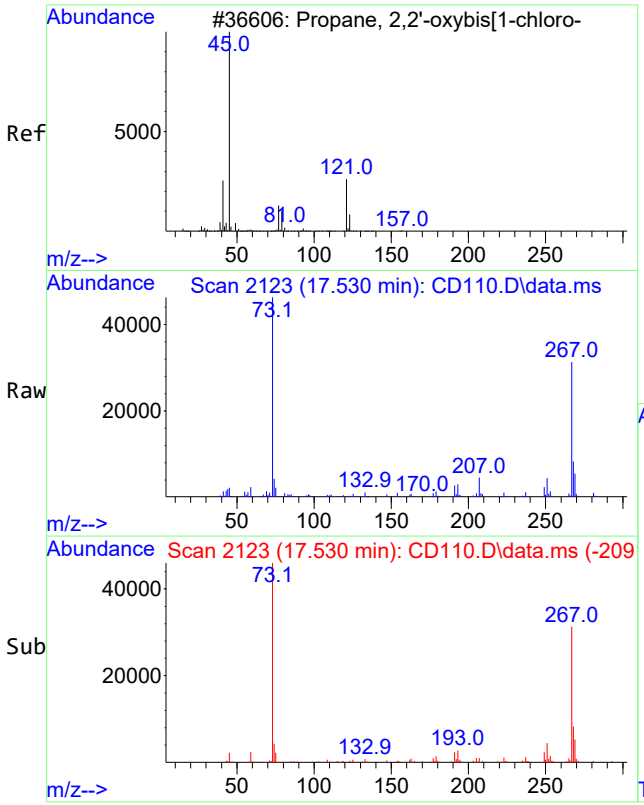
(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102323VC\
Data File : CD110.D
Acq On : 23 Oct 2023 14:03
Operator : PXY1
InstName : VOAC
Sample : |642223003|2512718|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Oct 23 14:34:53 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE

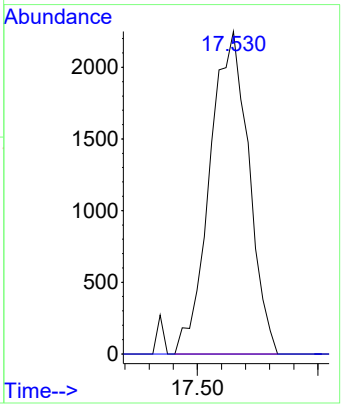




#112 BEFORE analyst DELETION
bis(2-Chloroisopropyl)ether
Concen: 1.90 ug/L
RT: 17.530 min Scan# 2123
Delta R.T. 0.067 min
Lab File: CD110.D
Acq: 23 Oct 2023 14:03

Tgt Ion: 45 Resp: 5067

Ion	Ratio	Lower	Upper
45	100		
121	0.0	4.5	64.5#



Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-69**	**Date Collected:**	**10/10/2023 11:17**	**Matrix:**	**SO**
Lab Sample ID:	**642223004**	**Date Received:**	**10/20/2023 09:30**	**%Moisture:**	**5.5**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289587**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2512718**	**Inst:**	**VOAC.I**	**Dilution:**	**50**
Run Date:	**10/23/2023 14:30**	**Analyst:**	**PXY1**	**Purge Vol:**	**5 mL**
Prep Date:	**10/23/2023 09:34**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**data\102323VC\CD111.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	35.2	ug/kg	35.2	106
108-88-3	Toluene	U	35.2	ug/kg	35.2	106
100-41-4	Ethylbenzene	U	35.2	ug/kg	35.2	106
1330-20-7	Xylenes (total)	U	106	ug/kg	106	317

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	43.9	50.0	ug/L	88	(77%-127%)
Toluene-d8	47.8	50.0	ug/L	96	(81%-120%)
Bromofluorobenzene	48.7	50.0	ug/L	97	(74%-128%)

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102323VC\
Data File : CD111.D
Acq On : 23 Oct 2023 14:30
Operator : PXY1
InstName : VOAC
Sample : |642223004|2512718|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 11 Sample Multiplier: 1

10/24/2023

10/24/2023

Quant Time: Oct 23 14:55:40 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards								Dev(Min)
1) Fluorobenzene	96	10.873	10.879	1.000	1079778	50.00	ug/L	0.00
43) Chlorobenzene-d5	117	14.305	14.305	1.000	813605	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	16.878	16.884	1.000	444887	50.00	ug/L	0.00
84) B Fluorobenzene	96	10.873	10.879	1.000	1079778	50.00	ug/L	0.00
103) B Chlorobenzene-d5	117	14.305	14.305	1.000	813605	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	16.878	16.884	1.000	444887	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	65	10.482	10.495	0.964	335550	43.89	ug/L	-0.01
45) Toluene-d8	98	12.659	12.665	0.885	1003859	47.77	ug/L	0.00
63) Bromofluorobenzene	95	15.573	15.573	0.923	353351	48.67	ug/L	0.00

Compound	Amount	Range	Recovery
30) 1,2-Dichloroethane-d4	50.000	77 - 127	88%
45) Toluene-d8	50.000	81 - 120	96%
63) Bromofluorobenzene	50.000	74 - 128	97%

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.752	0.000	0	N.D.		
3) Chloromethane	50	5.154	5.185	0.474	125	N.D.		
4) Vinyl chloride		0.000	5.398	0.000	0	N.D.		
5) Bromomethane		0.000	6.038	0.000	0	N.D.		
6) Chloroethane		0.000	6.160	0.000	0	N.D.		
7) Trichlorofluoromethane		0.000	6.550	0.000	0	N.D.		
8) Ethyl ether		0.000	6.922	0.000	0	N.D.		
9) Acetone	43	7.306	7.318	0.672	2290	Below Cal	#	46
10) 1,1-Dichloroethylene		0.000	7.343	0.000	0	N.D.		
11) Iodomethane		0.000	7.611	0.000	0	N.D.		
12) Acetonitrile	41	7.672	7.690	0.706	217	N.D.		
13) Methyl acetate	43	7.733	7.745	0.711	4807	N.D.		
14) Carbon disulfide		0.000	7.769	0.000	0	N.D.		
15) Methylene chloride	84	7.934	7.946	0.730	3239	N.D.		
16) tert-Butyl methyl ether		0.000	8.275	0.000	0	N.D.		
17) trans-1,2-Dichloroethy...		0.000	8.324	0.000	0	N.D.		
18) Hexane	57	8.623	8.635	0.793	437	N.D.		
19) Vinyl acetate	43	8.751	8.794	0.805	112	N.D.		
20) 1,1-Dichloroethane		0.000	8.842	0.000	0	N.D.		
21) 2-Butanone	43	9.470	9.476	0.871	1110	N.D.		
22) cis-1,2-Dichloroethylene		0.000	9.531	0.000	0	N.D.		
23) 2,2-Dichloropropane		0.000	9.568	0.000	0	N.D.		
24) Bromochloromethane		0.000	9.830	0.000	0	N.D.		
25) Chloroform		0.000	9.867	0.000	0	N.D.		
26) 1,1,1-Trichloroethane		0.000	10.178	0.000	0	N.D.		
27) Cyclohexane		0.000	10.287	0.000	0	N.D.		
28) 1,1-Dichloropropene		0.000	10.348	0.000	0	N.D.		
29) Carbon tetrachloride		0.000	10.391	0.000	0	N.D.		
31) 1,2-Dichloroethane	62	10.501	10.580	0.966	129	N.D.		
32) Benzene		0.000	10.610	0.000	0	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102323VC\
Data File : CD111.D
Acq On : 23 Oct 2023 14:30
Operator : PXY1
InstName : VOAC
Sample : |642223004|2512718|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Oct 23 14:55:40 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
33) Cyclohexene	67	10.745	10.738	0.988	192	N.D.	
34) n-Butyl alcohol	56	10.994	10.976	1.011	122	N.D.	
35) Trichloroethylene	95	11.324	11.305	1.041	120	N.D.	
36) 2-Pentanone	43	11.385	11.385	1.047	277	N.D.	
37) 1,2-Dichloropropane		0.000	11.568	0.000	0	N.D.	
38) Methylcyclohexane		0.000	11.580	0.000	0	N.D.	
39) Dibromomethane		0.000	11.708	0.000	0	N.D.	
40) Bromodichloromethane		0.000	11.830	0.000	0	N.D.	
41) 2-Chloroethylvinyl ether		0.000	12.074	0.000	0	N.D.	
42) cis-1,3-Dichloropropylene		0.000	12.317	0.000	0	N.D.	
44) 4-Methyl-2-pentanone		0.000	12.421	0.000	0	N.D.	
46) Toluene	91	12.775	12.744	0.893	126	N.D.	
47) trans-1,3-Dichloroprop...		0.000	12.903	0.000	0	N.D.	
48) 1,1,2-Trichloroethane	83	13.110	13.140	0.916	138	N.D.	
49) 2-Hexanone	43	13.342	13.336	0.933	550	N.D.	
50) 1,3-Dichloropropane		0.000	13.348	0.000	0	N.D.	
51) Tetrachloroethylene		0.000	13.390	0.000	0	N.D.	
52) Dibromochloromethane		0.000	13.634	0.000	0	N.D.	
53) 1,2-Dibromoethane		0.000	13.817	0.000	0	N.D.	
54) Chlorobenzene		0.000	14.341	0.000	0	N.D.	
55) 1,1,1,2-Tetrachloroethane	131	14.518	14.396	1.015	201	N.D.	
56) Ethylbenzene	91	14.390	14.409	1.006	134	N.D.	
57) m,p-Xylenes		0.000	14.524	0.000	0	N.D.	
58) o-Xylene	91	14.975	14.988	1.047	535	N.D.	
59) Styrene		0.000	14.988	0.000	0	N.D.	
61) Bromoform		0.000	15.262	0.000	0	N.D.	
62) Isopropylbenzene	105	15.341	15.366	0.909	106	N.D.	
64) 1,1,2,2-Tetrachloroethane	83	15.689	15.646	0.930	125	N.D.	
65) 1,2,3-Trichloropropane		0.000	15.744	0.000	0	N.D.	
66) Bromobenzene		0.000	15.799	0.000	0	N.D.	
67) n-Propylbenzene	91	15.774	15.817	0.935	1072	N.D.	
68) 1,3,5-Trimethylbenzene	105	15.963	15.975	0.946	1039	N.D.	
69) 2-Chlorotoluene		0.000	15.975	0.000	0	N.D.	
70) 4-Chlorotoluene	91	16.042	16.079	0.951	209	N.D.	
71) tert-Butylbenzene		0.000	16.372	0.000	0	N.D.	
72) 1,2,4-Trimethylbenzene	105	16.414	16.414	0.973	511	N.D.	
73) sec-Butylbenzene	105	16.622	16.615	0.985	142	N.D.	
74) 4-Isopropyltoluene	119	16.737	16.743	0.992	641	N.D.	
75) 1,3-Dichlorobenzene	146	16.811	16.817	0.996	134	N.D.	
76) 1,4-Dichlorobenzene	146	16.884	16.908	1.000	185	N.D.	
77) n-Butylbenzene	91	17.195	17.231	1.019	346	N.D.	
78) 1,2-Dichlorobenzene	146	17.384	17.378	1.030	142	N.D.	
79) 1,2-Dibromo-3-chloropr...		0.000	18.335	0.000	0	N.D.	
80) 1,2,4-Trichlorobenzene	180	19.511	19.523	1.156	282	N.D.	
81) Hexachlorobutadiene		0.000	19.719	0.000	0	N.D.	
82) Naphthalene	128	19.950	19.956	1.182	1799	N.D.	
83) 1,2,3-Trichlorobenzene	180	20.334	20.340	1.205	299	N.D.	
85) Acrolein		0.000	7.117	0.000	0	N.D.	
86) Trichlorotrifluoroethane		0.000	7.312	0.000	0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102323VC\
Data File : CD111.D
Acq On : 23 Oct 2023 14:30
Operator : PXY1
InstName : VOAC
Sample : |642223004|2512718|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Oct 23 14:55:40 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE

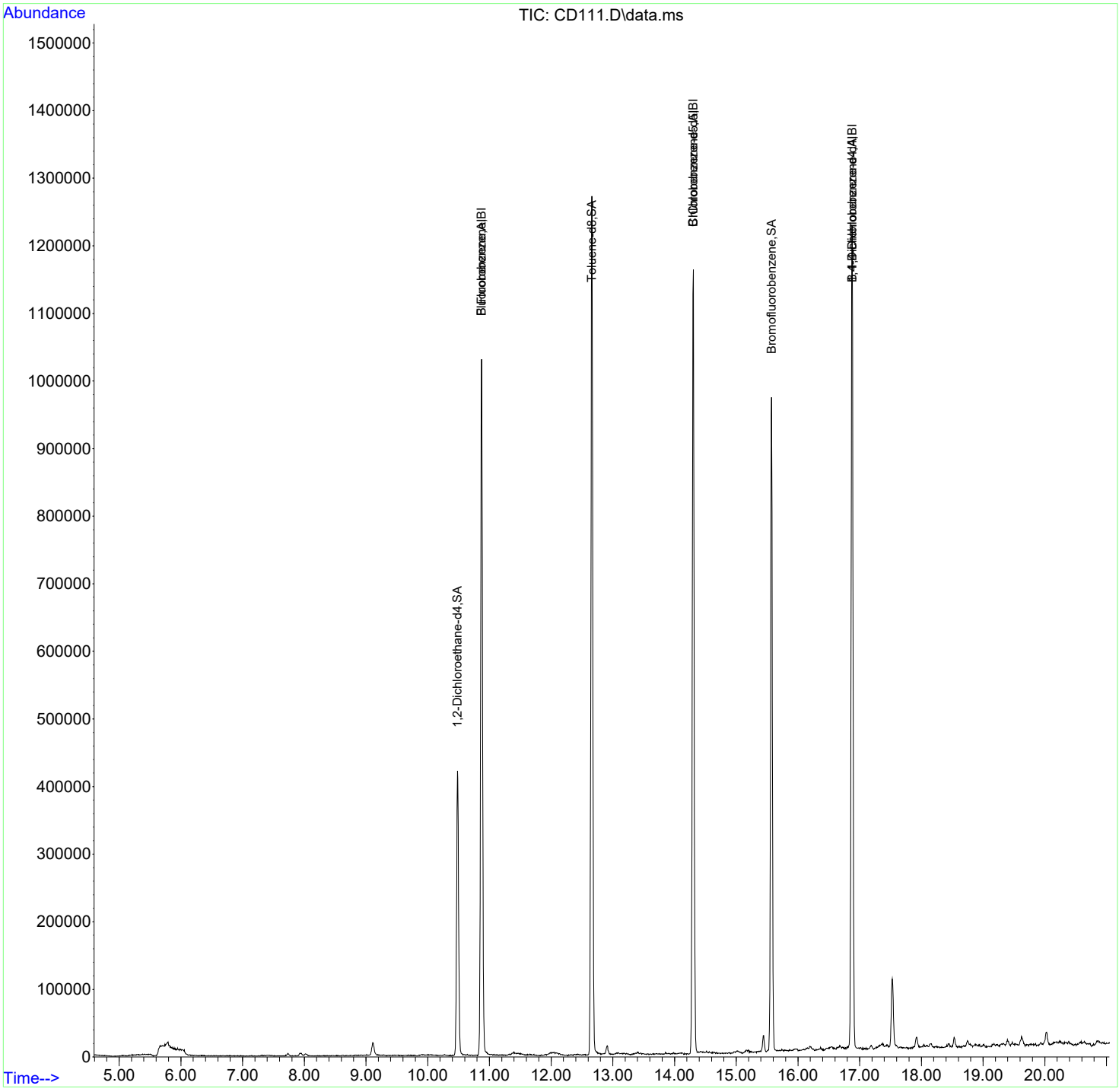
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
87) Isopropyl Alcohol	45	7.416	7.416	0.682	3514	N.D.	
88) Allyl chloride	41	7.739	7.794	0.712	218	N.D.	
89) tert-Butyl Alcohol	59	8.032	7.946	0.739	2361	N.D.	
90) Acrylonitrile		0.000	8.208	0.000	0	N.D.	
91) Isopropyl ether		0.000	8.824	0.000	0	N.D.	
92) 2-Chloro-1,3-butadiene		0.000	8.958	0.000	0	N.D.	
93) Ethyl tert-butyl ether		0.000	9.263	0.000	0	N.D.	
94) Ethyl acetate	43	9.470	9.482	0.871	1110	N.D.	
95) Propionitrile		0.000	9.543	0.000	0	N.D.	
96) Methacrylonitrile	41	9.623	9.745	0.885	218	N.D.	
97) Tetrahydrofuran	42	9.891	9.891	0.910	289	N.D.	
98) Isobutyl alcohol	41	10.281	10.220	0.946	607	N.D.	
99) Methyl tert-amyl ether		0.000	10.629	0.000	0	N.D.	
100) Methyl methacrylate	69	11.519	11.531	1.059	131	N.D.	
101) 1,4-Dioxane		0.000	11.665	0.000	0	N.D.	
102) 2-Nitropropane		0.000	12.043	0.000	0	N.D.	
104) Ethyl methacrylate	69	12.866	12.903	0.899	291	N.D.	
106) 1-Chlorohexane	55	14.220	14.195	0.843	174	N.D.	
107) cis-1,4-Dichloro-2-butene		0.000	15.396	0.000	0	N.D.	
108) Cyclohexanone	42	15.506	15.530	0.919	126	N.D.	
109) trans-1,4-Dichloro-2-b...		0.000	15.701	0.000	0	N.D.	
110) Pentachloroethane		0.000	16.445	0.000	0	N.D.	
111) Benzyl chloride	91	17.109	17.030	1.014	148	N.D.	
112) bis(2-Chloroisopropyl)...		0.000	17.463	0.000	0m	N.D.	d

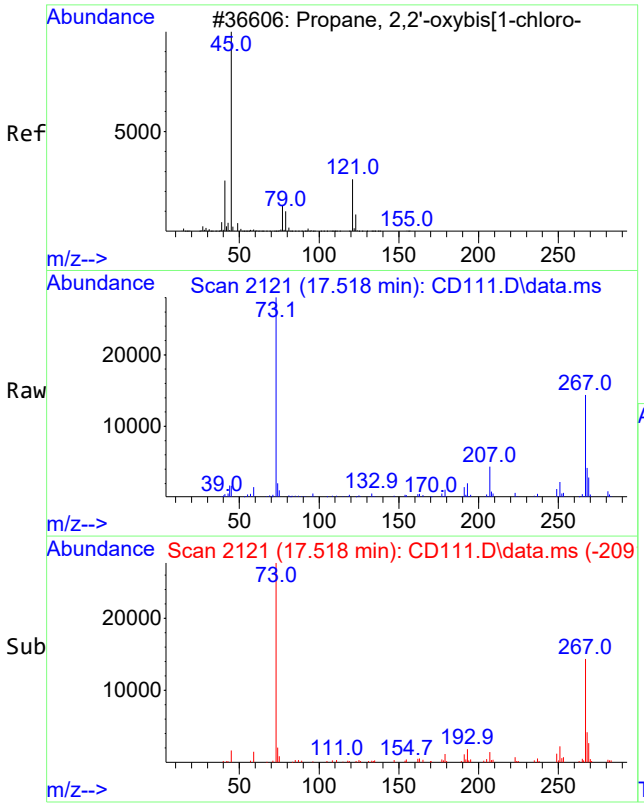
(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102323VC\
Data File : CD111.D
Acq On : 23 Oct 2023 14:30
Operator : PXY1
InstName : VOAC
Sample : |642223004|2512718|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Oct 23 14:55:40 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE

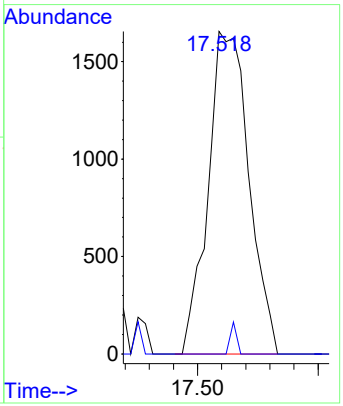




#112 BEFORE analyst DELETION
bis(2-Chloroisopropyl)ether
Concen: 1.74 ug/L
RT: 17.518 min Scan# 2121
Delta R.T. 0.055 min
Lab File: CD111.D
Acq: 23 Oct 2023 14:30

Tgt Ion: 45 Resp: 3914

Ion	Ratio	Lower	Upper
45	100		
121	0.0	4.5	64.5#



Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-69**	**Date Collected:**	**10/10/2023 11:36**	**Matrix:**	**SO**
Lab Sample ID:	**642223005**	**Date Received:**	**10/20/2023 09:30**	**%Moisture:**	**13.4**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289588**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2512718**	**Inst:**	**VOAC.I**	**Dilution:**	**50**
Run Date:	**10/23/2023 14:58**	**Analyst:**	**PXY1**	**Purge Vol:**	**5 mL**
Prep Date:	**10/23/2023 09:35**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**data\102323VC\CD112.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	38.4	ug/kg	38.4	115
108-88-3	Toluene	U	38.4	ug/kg	38.4	115
100-41-4	Ethylbenzene	U	38.4	ug/kg	38.4	115
1330-20-7	Xylenes (total)	U	115	ug/kg	115	346

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	46.2	50.0	ug/L	92	(74%-128%)
1,2-Dichloroethane-d4	41.7	50.0	ug/L	83	(77%-127%)
Toluene-d8	47.3	50.0	ug/L	95	(81%-120%)

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102323VC\
Data File : CD112.D
Acq On : 23 Oct 2023 14:58
Operator : PXY1
InstName : VOAC
Sample : |642223005|2512718|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 12 Sample Multiplier: 1

10/24/2023

10/24/2023

Quant Time: Oct 23 15:27:36 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards								Dev(Min)
1) Fluorobenzene	96	10.873	10.879	1.000	1094405	50.00	ug/L	0.00
43) Chlorobenzene-d5	117	14.305	14.305	1.000	793645	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	16.878	16.884	1.000	450589	50.00	ug/L	0.00
84) B Fluorobenzene	96	10.873	10.879	1.000	1094405	50.00	ug/L	0.00
103) B Chlorobenzene-d5	117	14.305	14.305	1.000	793645	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	16.878	16.884	1.000	451444	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	65	10.489	10.495	0.965	323484	41.74	ug/L	0.00
45) Toluene-d8	98	12.659	12.665	0.885	970060	47.32	ug/L	0.00
63) Bromofluorobenzene	95	15.567	15.573	0.922	339709	46.20	ug/L	0.00

Compound	Amount	Range	Recovery
30) 1,2-Dichloroethane-d4	50.000	77 - 127	83%
45) Toluene-d8	50.000	81 - 120	95%
63) Bromofluorobenzene	50.000	74 - 128	92%

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.752	0.000	0	N.D.		
3) Chloromethane		0.000	5.185	0.000	0	N.D.		
4) Vinyl chloride		0.000	5.398	0.000	0	N.D.		
5) Bromomethane		0.000	6.038	0.000	0	N.D.		
6) Chloroethane		0.000	6.160	0.000	0	N.D.		
7) Trichlorofluoromethane		0.000	6.550	0.000	0	N.D.		
8) Ethyl ether		0.000	6.922	0.000	0	N.D.		
9) Acetone	43	7.312	7.318	0.673	1843	Below Cal		69
10) 1,1-Dichloroethylene		0.000	7.343	0.000	0	N.D.		
11) Iodomethane		0.000	7.611	0.000	0	N.D.		
12) Acetonitrile	41	7.715	7.690	0.710	154	N.D.		
13) Methyl acetate	43	7.733	7.745	0.711	1191	N.D.		
14) Carbon disulfide		0.000	7.769	0.000	0	N.D.		
15) Methylene chloride	84	7.940	7.946	0.730	3284	N.D.		
16) tert-Butyl methyl ether		0.000	8.275	0.000	0	N.D.		
17) trans-1,2-Dichloroethy...		0.000	8.324	0.000	0	N.D.		
18) Hexane		0.000	8.635	0.000	0	N.D.		
19) Vinyl acetate	43	8.782	8.794	0.808	124	N.D.		
20) 1,1-Dichloroethane		0.000	8.842	0.000	0	N.D.		
21) 2-Butanone	43	9.477	9.476	0.872	1099	N.D.		
22) cis-1,2-Dichloroethylene		0.000	9.531	0.000	0	N.D.		
23) 2,2-Dichloropropane		0.000	9.568	0.000	0	N.D.		
24) Bromochloromethane		0.000	9.830	0.000	0	N.D.		
25) Chloroform		0.000	9.867	0.000	0	N.D.		
26) 1,1,1-Trichloroethane		0.000	10.178	0.000	0	N.D.		
27) Cyclohexane		0.000	10.287	0.000	0	N.D.		
28) 1,1-Dichloropropene		0.000	10.348	0.000	0	N.D.		
29) Carbon tetrachloride		0.000	10.391	0.000	0	N.D.		
31) 1,2-Dichloroethane		0.000	10.580	0.000	0	N.D.		
32) Benzene		0.000	10.610	0.000	0	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102323VC\
Data File : CD112.D
Acq On : 23 Oct 2023 14:58
Operator : PXY1
InstName : VOAC
Sample : |642223005|2512718|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Oct 23 15:27:36 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
33) Cyclohexene		0.000	10.738	0.000	0	N.D.	
34) n-Butyl alcohol		0.000	10.976	0.000	0	N.D.	
35) Trichloroethylene		0.000	11.305	0.000	0	N.D.	
36) 2-Pentanone	43	11.379	11.385	1.047	229	N.D.	
37) 1,2-Dichloropropane		0.000	11.568	0.000	0	N.D.	
38) Methylcyclohexane		0.000	11.580	0.000	0	N.D.	
39) Dibromomethane		0.000	11.708	0.000	0	N.D.	
40) Bromodichloromethane		0.000	11.830	0.000	0	N.D.	
41) 2-Chloroethylvinyl ether		0.000	12.074	0.000	0	N.D.	
42) cis-1,3-Dichloropropylene		0.000	12.317	0.000	0	N.D.	
44) 4-Methyl-2-pentanone		0.000	12.421	0.000	0	N.D.	
46) Toluene	91	12.738	12.744	0.890	679	N.D.	
47) trans-1,3-Dichloroprop...		0.000	12.903	0.000	0	N.D.	
48) 1,1,2-Trichloroethane	83	13.092	13.140	0.915	180	N.D.	
49) 2-Hexanone	43	13.342	13.336	0.933	512	N.D.	
50) 1,3-Dichloropropane		0.000	13.348	0.000	0	N.D.	
51) Tetrachloroethylene		0.000	13.390	0.000	0	N.D.	
52) Dibromochloromethane		0.000	13.634	0.000	0	N.D.	
53) 1,2-Dibromoethane		0.000	13.817	0.000	0	N.D.	
54) Chlorobenzene		0.000	14.341	0.000	0	N.D.	
55) 1,1,1,2-Tetrachloroethane		0.000	14.396	0.000	0	N.D.	
56) Ethylbenzene	91	14.464	14.409	1.011	147	N.D.	
57) m,p-Xylenes		0.000	14.524	0.000	0	N.D.	
58) o-Xylene	91	14.957	14.988	1.046	105	N.D.	
59) Styrene		0.000	14.988	0.000	0	N.D.	
61) Bromoform		0.000	15.262	0.000	0	N.D.	
62) Isopropylbenzene	105	15.366	15.366	0.910	294	N.D.	
64) 1,1,2,2-Tetrachloroethane	83	15.665	15.646	0.928	174	N.D.	
65) 1,2,3-Trichloropropane		0.000	15.744	0.000	0	N.D.	
66) Bromobenzene		0.000	15.799	0.000	0	N.D.	
67) n-Propylbenzene	91	15.799	15.817	0.936	332	N.D.	
68) 1,3,5-Trimethylbenzene	105	15.957	15.975	0.945	646	N.D.	
69) 2-Chlorotoluene		0.000	15.975	0.000	0	N.D.	
70) 4-Chlorotoluene	91	16.140	16.079	0.956	298	N.D.	
71) tert-Butylbenzene		0.000	16.372	0.000	0	N.D.	
72) 1,2,4-Trimethylbenzene	105	16.402	16.414	0.972	367	N.D.	
73) sec-Butylbenzene	105	16.622	16.615	0.985	286	N.D.	
74) 4-Isopropyltoluene	119	16.817	16.743	0.996	633	N.D.	
75) 1,3-Dichlorobenzene		0.000	16.817	0.000	0	N.D.	
76) 1,4-Dichlorobenzene	146	16.908	16.908	1.002	266	N.D.	
77) n-Butylbenzene	91	17.231	17.231	1.021	188	N.D.	
78) 1,2-Dichlorobenzene		0.000	17.378	0.000	0	N.D.	
79) 1,2-Dibromo-3-chloropr...		0.000	18.335	0.000	0	N.D.	
80) 1,2,4-Trichlorobenzene	180	19.517	19.523	1.156	147	N.D.	
81) Hexachlorobutadiene		0.000	19.719	0.000	0	N.D.	
82) Naphthalene	128	19.950	19.956	1.182	1695	N.D.	
83) 1,2,3-Trichlorobenzene	180	20.334	20.340	1.205	135	N.D.	
85) Acrolein		0.000	7.117	0.000	0	N.D.	
86) Trichlorotrifluoroethane		0.000	7.312	0.000	0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102323VC\
Data File : CD112.D
Acq On : 23 Oct 2023 14:58
Operator : PXY1
InstName : VOAC
Sample : |642223005|2512718|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Oct 23 15:27:36 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE

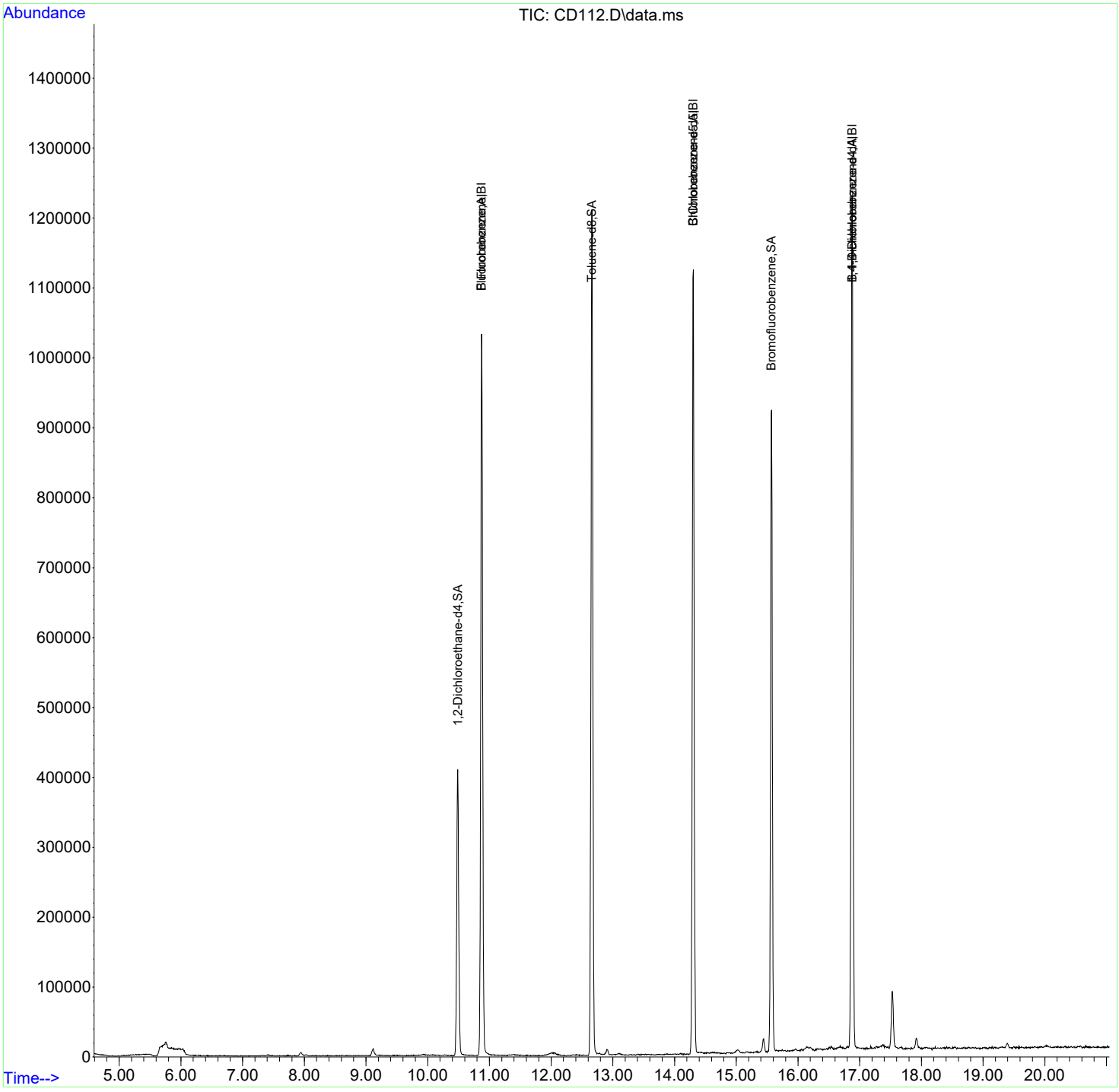
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
87) Isopropyl Alcohol	45	7.416	7.416	0.682	2890	N.D.	
88) Allyl chloride	41	7.782	7.794	0.716	134	N.D.	
89) tert-Butyl Alcohol	59	8.020	7.946	0.738	1184	N.D.	
90) Acrylonitrile		0.000	8.208	0.000	0	N.D.	
91) Isopropyl ether		0.000	8.824	0.000	0	N.D.	
92) 2-Chloro-1,3-butadiene		0.000	8.958	0.000	0	N.D.	
93) Ethyl tert-butyl ether		0.000	9.263	0.000	0	N.D.	
94) Ethyl acetate	43	9.477	9.482	0.872	1099	N.D.	
95) Propionitrile		0.000	9.543	0.000	0	N.D.	
96) Methacrylonitrile	41	9.745	9.745	0.896	122	N.D.	
97) Tetrahydrofuran	42	9.897	9.891	0.910	310	N.D.	
98) Isobutyl alcohol	41	10.233	10.220	0.941	232	N.D.	
99) Methyl tert-amyl ether	73	10.751	10.629	0.989	120	N.D.	
100) Methyl methacrylate	69	11.592	11.531	1.066	124	N.D.	
101) 1,4-Dioxane		0.000	11.665	0.000	0	N.D.	
102) 2-Nitropropane		0.000	12.043	0.000	0	N.D.	
104) Ethyl methacrylate	69	12.878	12.903	0.900	133	N.D.	
106) 1-Chlorohexane	55	14.177	14.195	0.840	348	N.D.	
107) cis-1,4-Dichloro-2-butene		0.000	15.396	0.000	0	N.D.	
108) Cyclohexanone		0.000	15.530	0.000	0	N.D.	
109) trans-1,4-Dichloro-2-b...		0.000	15.701	0.000	0	N.D.	
110) Pentachloroethane		0.000	16.445	0.000	0	N.D.	
111) Benzyl chloride	91	17.012	17.030	1.008	949	N.D.	
112) bis(2-Chloroisopropyl)...	45	17.530	17.463	1.039	3096	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102323VC\
Data File : CD112.D
Acq On : 23 Oct 2023 14:58
Operator : PXY1
InstName : VOAC
Sample : |642223005|2512718|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Oct 23 15:27:36 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE



FID Diesel Range Organics Analysis

Case Narrative

Diesel Range Organics
Technical Case Narrative
Triad National Security, LLC
SDG #: 2024-69
Work Order #: 642223

Product: **Analysis of Diesel Range Organics by Flame Ionization Detector**
Analytical Method: SW846 3541/8015D
Analytical Procedure: GL-OA-E-003 REV# 33
Analytical Batch: 2512326

Preparation Method: SW846 3541
Preparation Procedure: GL-OA-E-066 REV# 9
Preparation Batch: 2512325

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
642223001	RLUOB-23-289584
642223002	RLUOB-23-289585
642223003	RLUOB-23-289586
642223004	RLUOB-23-289587
642223005	RLUOB-23-289588
1205553087	Method Blank (MB)
1205553088	Laboratory Control Sample (LCS)
1205553089	642223001(RLUOB-23-289584) Matrix Spike (MS)
1205553090	642223001(RLUOB-23-289584) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Quality Control (QC) Information

Surrogate Recoveries
Samples (See Below) failed to meet surrogate recovery acceptance criteria due to dilution.

Sample	Analyte	Value
1205553089 (RLUOB-23-289584MS)	o-Terphenyl	0* (32%-118%)
1205553090 (RLUOB-23-289584MSD)	o-Terphenyl	0* (32%-118%)
642223001 (RLUOB-23-289584)	o-Terphenyl	0* (32%-118%)
642223003 (RLUOB-23-289586)	o-Terphenyl	148* (32%-118%)

Matrix Spike (MS/MSD) Recovery Statement
The MS and/or MSD (See Below) did not meet spike recovery acceptance limits due to dilution.

Sample	Analyte	Value
1205553089 (RLUOB-23-289584MS)	Diesel Range Organics	0* (23%-131%)
	Motor Oil	0* (46%-134%)
1205553090 (RLUOB-23-289584MSD)	Diesel Range Organics	4480* (23%-131%)
	Motor Oil	289* (46%-134%)

Technical Information

Sample Dilutions
Samples 1205553089 (RLUOB-23-289584MS), 1205553090 (RLUOB-23-289584MSD), 642223001 (RLUOB-23-289584), 642223003 (RLUOB-23-289586) and 642223005 (RLUOB-23-289588) were diluted due to the presence of over-range target analytes.

Miscellaneous Information

Manual Integrations
Samples (See Below) required manual integration to correctly position the baseline as set in the calibration standard injections.

Sample	Analyte	Value
1205553088 (LCS)	o-Terphenyl	Result 779ug/kg
642223002 (RLUOB-23-289585)	o-Terphenyl	Result 754ug/kg
642223003 (RLUOB-23-289586)	o-Terphenyl	Result 1060ug/kg
642223004 (RLUOB-23-289587)	o-Terphenyl	Result 675ug/kg
642223005 (RLUOB-23-289588)	o-Terphenyl	Result 621ug/kg

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report
for

TNSL001 Triad National Security, LLC (620266)

Client SDG: 2024-69 GEL Work Order: 642223

The Qualifiers in this report are defined as follows:

* A quality control analyte recovery is outside of specified acceptance criteria
** Analyte is a surrogate compound
B The target analyte was detected in the associated blank.
E Concentration of the target analyte exceeds the instrument calibration range
J Value is estimated
U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

DL Indicates that sample is diluted.
RA Indicates that sample is re-analyzed without re-extraction.
RE Indicates that sample is re-extracted.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: Cameron Bearden **Name: Cameron Bearden**

Date: 30 OCT 2023 **Title: Group Leader**

Sample Data Summary

FID Diesel Range Organics
Certificate of Analysis
Sample Summary

SDG Number:	**2024-69**	**Date Collected:**	**10/10/2023 10:17**	**Matrix:**	**SO**
Lab Sample ID:	**642223001**	**Date Received:**	**10/20/2023 09:30**	**%Moisture:**	**12.9**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289584**	**Method:**	**SW846 3541/8015D**	**SOP Ref:**	**GL-OA-E-003**
Batch ID:	**2512326**	**Inst:**	**FIDC.I**	**Dilution:**	**50**
Run Date:	**10/28/2023 13:44**	**Analyst:**	**RXC1**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/24/2023 07:19**	**Aliquot:**	**30.17 g**	**Final Volume:**	**1 mL**
Data File:	**102723DROMO\FCJ2746.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	Motor Oil	B	1390	mg/kg	124	381
68334-30-5	Diesel Range Organics		7760	mg/kg	124	381

Surrogate/Tracer recovery	Result	Nominal		Recovery%		Acceptable Limits
o-Terphenyl	0.000	0.761	mg/kg	0	*	(32%-118%)

FID Diesel Range Organics
Certificate of Analysis
Sample Summary

SDG Number:	**2024-69**	**Date Collected:**	**10/10/2023 10:42**	**Matrix:**	**SO**
Lab Sample ID:	**642223002**	**Date Received:**	**10/20/2023 09:30**	**%Moisture:**	**5.1**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289585**	**Method:**	**SW846 3541/8015D**	**SOP Ref:**	**GL-OA-E-003**
Batch ID:	**2512326**	**Inst:**	**FIDC.I**	**Dilution:**	**1**
Run Date:	**10/28/2023 15:39**	**Analyst:**	**RXC1**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/24/2023 07:19**	**Aliquot:**	**30.34 g**	**Final Volume:**	**1 mL**
Data File:	**102723DROMO\FCJ2749.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	Motor Oil	BJ	2.97	mg/kg	2.26	6.94
68334-30-5	Diesel Range Organics	U	2.26	mg/kg	2.26	6.94

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
o-Terphenyl	0.754	0.694	mg/kg	109	(32%-118%)

FID Diesel Range Organics
Certificate of Analysis
Sample Summary

SDG Number:	**2024-69**	**Date Collected:**	**10/10/2023 10:57**	**Matrix:**	**SO**
Lab Sample ID:	**642223003**	**Date Received:**	**10/20/2023 09:30**	**%Moisture:**	**7.7**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289586**	**Method:**	**SW846 3541/8015D**	**SOP Ref:**	**GL-OA-E-003**
Batch ID:	**2512326**	**Inst:**	**FIDC.I**	**Dilution:**	**10**
Run Date:	**10/28/2023 16:17**	**Analyst:**	**RXC1**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/24/2023 07:19**	**Aliquot:**	**30.24 g**	**Final Volume:**	**1 mL**
Data File:	**102723DROMO\FCJ2750.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	Motor Oil	B	102	mg/kg	23.3	71.7
68334-30-5	Diesel Range Organics		652	mg/kg	23.3	71.7

Surrogate/Tracer recovery	Result	Nominal		Recovery%		Acceptable Limits
o-Terphenyl	1.06	0.717	mg/kg	148	*	(32%-118%)

FID Diesel Range Organics
Certificate of Analysis
Sample Summary

SDG Number:	**2024-69**	**Date Collected:**	**10/10/2023 11:17**	**Matrix:**	**SO**
Lab Sample ID:	**642223004**	**Date Received:**	**10/20/2023 09:30**	**%Moisture:**	**5.5**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289587**	**Method:**	**SW846 3541/8015D**	**SOP Ref:**	**GL-OA-E-003**
Batch ID:	**2512326**	**Inst:**	**FIDC.I**	**Dilution:**	**1**
Run Date:	**10/28/2023 16:55**	**Analyst:**	**RXC1**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/24/2023 07:19**	**Aliquot:**	**30.45 g**	**Final Volume:**	**1 mL**
Data File:	**102723DROMO\FCJ2751.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	Motor Oil	B	27.8	mg/kg	2.26	6.95
68334-30-5	Diesel Range Organics		18.5	mg/kg	2.26	6.95

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
o-Terphenyl	0.675	0.695	mg/kg	97	(32%-118%)

FID Diesel Range Organics
Certificate of Analysis
Sample Summary

SDG Number:	**2024-69**	**Date Collected:**	**10/10/2023 11:36**	**Matrix:**	**SO**
Lab Sample ID:	**642223005**	**Date Received:**	**10/20/2023 09:30**	**%Moisture:**	**13.4**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289588**	**Method:**	**SW846 3541/8015D**	**SOP Ref:**	**GL-OA-E-003**
Batch ID:	**2512326**	**Inst:**	**FIDC.I**	**Dilution:**	**5**
Run Date:	**10/28/2023 01:20**	**Analyst:**	**RXC1**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/24/2023 07:19**	**Aliquot:**	**30.21 g**	**Final Volume:**	**1 mL**
Data File:	**102723DROMO\FCJ2727.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	Motor Oil	BJ	33.2	mg/kg	12.4	38.2
68334-30-5	Diesel Range Organics	U	12.4	mg/kg	12.4	38.2

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
o-Terphenyl	0.621	0.764	mg/kg	81	(32%-118%)

Quality Control Summary

FID Diesel Range Organics

Surrogate Recovery Report

SDG Number: 2024-69

Matrix Type: SOLID

Sample ID	Client ID	OTP %REC	
1205553087	MB for batch 2512325	104	
1205553088	LCS for batch 2512325	117	
642223005	RLUOB-23-289588	81	D
642223001	RLUOB-23-289584	0 *	D
1205553089	RLUOB-23-289584MS	0 *	D
1205553090	RLUOB-23-289584MSD	0 *	D
642223002	RLUOB-23-289585	109	
642223003	RLUOB-23-289586	148 *	D
642223004	RLUOB-23-289587	97	

Surrogate		Acceptance Limits
OTP	= o-Terphenyl	(32%-118%)

* Recovery outside Acceptance Limits
# Column to be used to flag recovery values
D Sample Diluted

FID Diesel Range Organics

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-69
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 2512325
Matrix: SOIL
Lab Sample ID: 1205553088
Instrument: FIDC.I
Analysis Date: 10/27/2023 20:54
Dilution: 1
Analyst: RXC1
Prep Batch ID: 2512325
Inj. Vol: 1 uL
Batch ID: 2512326

CAS No.		Parmname	Amount Added mg/kg	Sample Conc. mg/kg	Spike Conc. mg/kg	Recovery %	Acceptance Limits
68334-30-5	LCS	Diesel Range Organics	66.5	0.0	66.1	99	47-128
	LCS	Motor Oil	66.5	0.0	69.9	105	62-133

FID Diesel Range Organics

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-69
Client ID: RLUOB-23-289584MS
Lab Sample ID: 1205553089
Instrument: FIDC.I
Analyst: RXC1
Inj. Vol: 1 uL

Sample Type: Matrix Spike
Matrix: SO
%Moisture: 12.9
Analysis Date: 10/28/2023 14:22
Prep Batch ID: 2512325
Batch ID: 2512326
Dilution: 50

CAS No.		Parmname	Amount Added mg/kg	Sample Conc. mg/kg		Spike Conc. mg/kg	Recovery %	Acceptance Limits
	MS	Motor Oil	75.8	1390	B	1230	0	46-134
68334-30-5	MS	Diesel Range Organics	75.8	7760		7170	0	23-131

FID Diesel Range Organics

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-69
Client ID: RLUOB-23-289584MSD
Lab Sample ID: 1205553090
Instrument: FIDC.I
Analyst: RXC1
Inj. Vol: 1 uL

Sample Type: Matrix Spike Duplicate
Matrix: SO
%Moisture: 12.9
Analysis Date: 10/28/2023 15:01
Dilution: 50
Prep Batch ID: 2512325
Batch ID: 2512326

CAS No.		Parmname	Amount Added mg/kg	Sample Conc. mg/kg		Spike Conc. mg/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
	MSD	Motor Oil	75.1	1390	B	1610	289	46-134	27	0-30
68334-30-5	MSD	Diesel Range Organics	75.1	7760		11100	4477	23-131	43	0-72

Method Blank Summary

SDG Number:	**2024-69**	**Client:**	**TNSL001**	**Matrix:**	**SOIL**
Client ID:	**MB for batch 2512325**	**Instrument ID:**	**FIDC.I**	**Data File:**	**102723DROMO\FCJ2719.D**
Lab Sample ID:	**1205553087**	**Prep Date:**	**10/24/2023 07:19**	**Analyzed:**	**10/27/23 20:16**
Column:	**DB-5ms**				

This method blank applies to the following samples and quality control samples:

	Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01	LCS for batch 2512325	1205553088	102723DROMO\FCJ2720.D	10/27/23	2054
02	RLUOB-23-289588	642223005	102723DROMO\FCJ2727.D	10/28/23	0120
03	RLUOB-23-289584	642223001	102723DROMO\FCJ2746.D	10/28/23	1344
04	RLUOB-23-289584MS	1205553089	102723DROMO\FCJ2747.D	10/28/23	1422
05	RLUOB-23-289584MSD	1205553090	102723DROMO\FCJ2748.D	10/28/23	1501
06	RLUOB-23-289585	642223002	102723DROMO\FCJ2749.D	10/28/23	1539
07	RLUOB-23-289586	642223003	102723DROMO\FCJ2750.D	10/28/23	1617
08	RLUOB-23-289587	642223004	102723DROMO\FCJ2751.D	10/28/23	1655

Sample Data

FID Diesel Range Organics
Certificate of Analysis
Sample Summary

SDG Number:	**2024-69**	**Date Collected:**	**10/10/2023 11:36**	**Matrix:**	**SO**
Lab Sample ID:	**642223005**	**Date Received:**	**10/20/2023 09:30**	**%Moisture:**	**13.4**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289588**	**Method:**	**SW846 3541/8015D**	**SOP Ref:**	**GL-OA-E-003**
Batch ID:	**2512326**	**Inst:**	**FIDC.I**	**Dilution:**	**5**
Run Date:	**10/28/2023 01:20**	**Analyst:**	**RXC1**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/24/2023 07:19**	**Aliquot:**	**30.21 g**	**Final Volume:**	**1 mL**
Data File:	**102723DROMO\FCJ2727.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	Motor Oil	BJ	33.2	mg/kg	12.4	38.2
68334-30-5	Diesel Range Organics	U	12.4	mg/kg	12.4	38.2

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
o-Terphenyl	0.621	0.764	mg/kg	81	(32%-118%)

Quantitation Report
GEL Laboratories, LLC

10/29/2023

Data Path : D:\MSDCHEM\1\Data\102723DROMO\
Data File : FCJ2727.D
Signal(s) : FID1A.ch
Acq On : 28 Oct 2023 01:20
Operator : RXC1 InstName : FIDC
Sample : |642223005|2512326|5|DROQ|1|TNSL|||
Misc : |FIDD415D_S|SOIL|RLUOB-23-289588|MIX[A,D]||
ALS Vial : 27 Sample Multiplier: 5

10/30/2023

Integration File: autoint1.e
Quant Time: Oct 28 11:22:45 2023
Quant Method : D:\MSDCHEM\1\Data\102723DROMO\FIDCNW_102723.m
Quant Title : DRO TPH SubList :
QLast Update : Sat Oct 28 11:09:33 2023
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : DB-5MS
Signal Info : 30m x 250um x 0.25um

Compound	Exp	R.T.	Delta	Response	Conc	Units
System Monitoring Compounds						
4) SD o-Terphenyl	14.400	14.390	-0.010	5897576	16.243	mg/L m

Compound	Amount	Range	Recovery
4) o-Terphenyl	20.000	No Limits	81%

Target Compounds					
1) HA Diesel Range Organics	Range	8.240 - 14.865	20595351	<MDL	mg/L m
2) HA Motor Oil	Range	14.865 - 23.074	298941724	173.923	mg/L

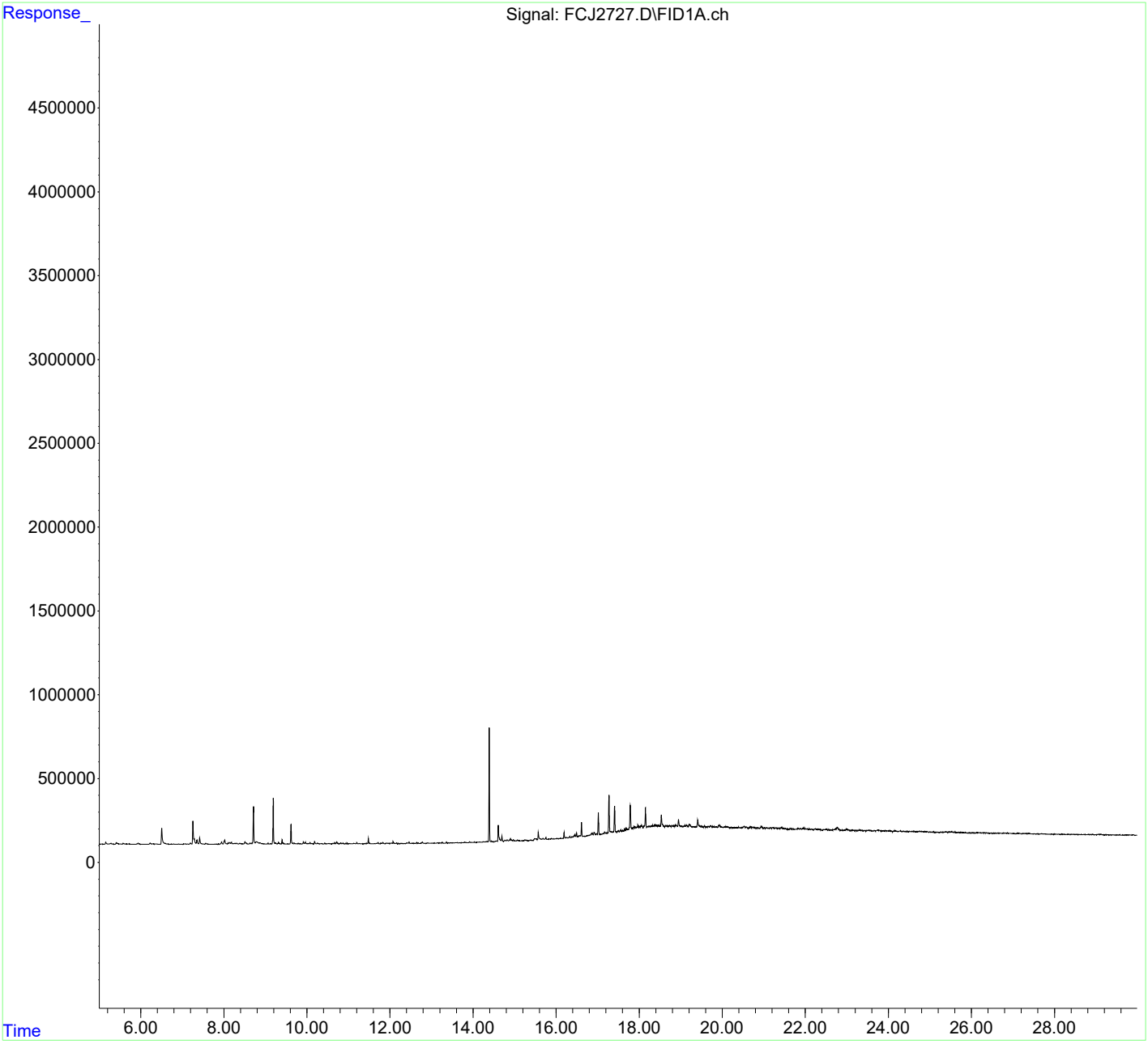
(f)=RT Delta > 1/2 Window (A) = Over the calibration range (d) = deleted (m)=manual int.

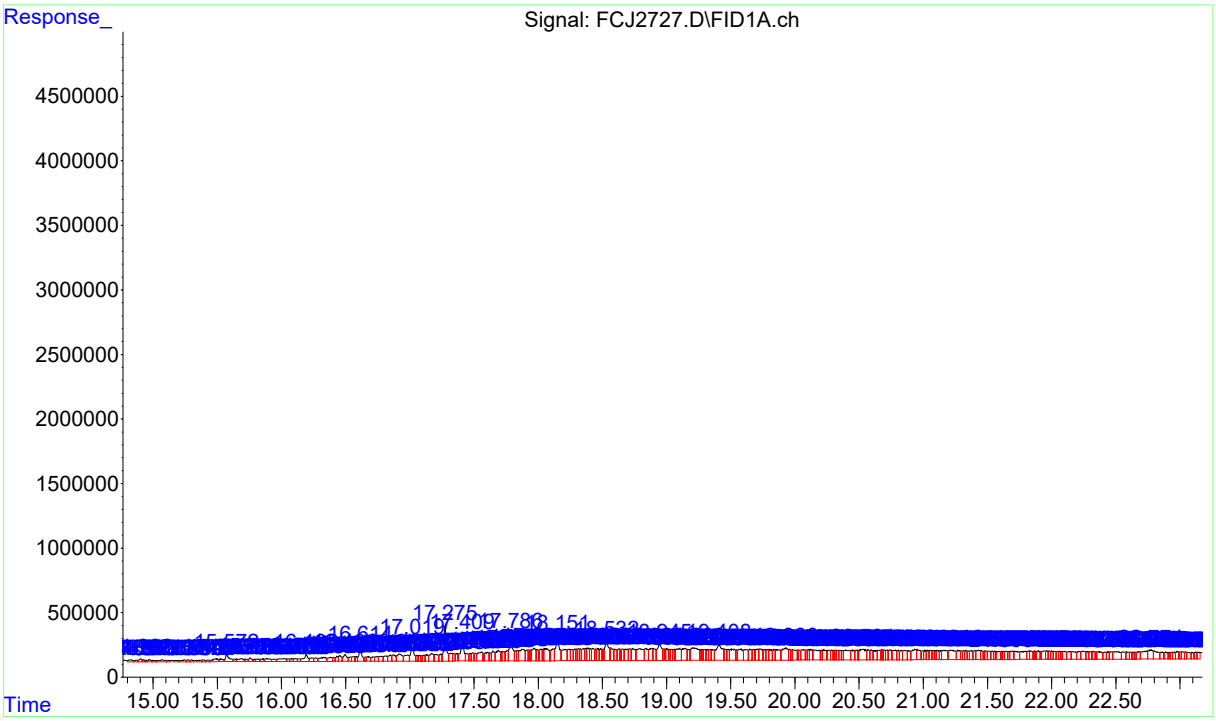
Quantitation Report
GEL Laboratories, LLC

DaData Path : D:\MSDCHEM\1\Data\102723DROMO\
DaData File : FCJ2727.D
Signal(s) : FID1A.ch
Acq On : 28 Oct 2023 01:20
Operator : RXC1 InstName : FIDC
Sample : |642223005|2512326|5|DROQ|1|TNSL|||
Misc : |FIDD415D_S|SOIL|RLUOB-23-289588|MIX[A,D]||
ALS Vial : 27 Sample Multiplier: 5

Integration File: autoint1.e
Quant Time: Oct 28 11:22:45 2023
Quant Method : D:\MSDCHEM\1\Data\102723DROMO\FIDCNW_102723.m
Quant Title : DRO TPH SubList :
QLast Update : Sat Oct 28 11:09:33 2023
Response via : Initial Calibration
Integrator: ChemStation

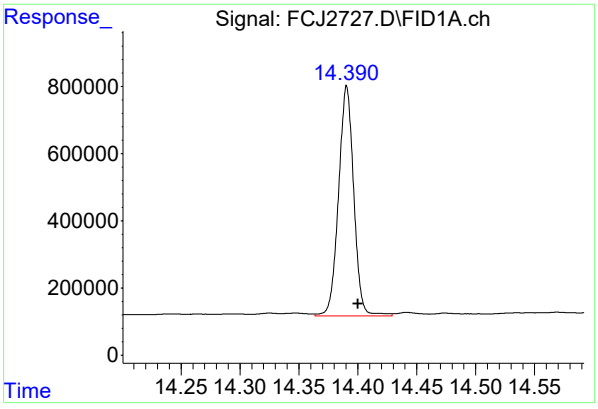
Volume Inj. : 1 ul
Signal Phase : DB-5MS
Signal Info : 30m x 250um x 0.25um



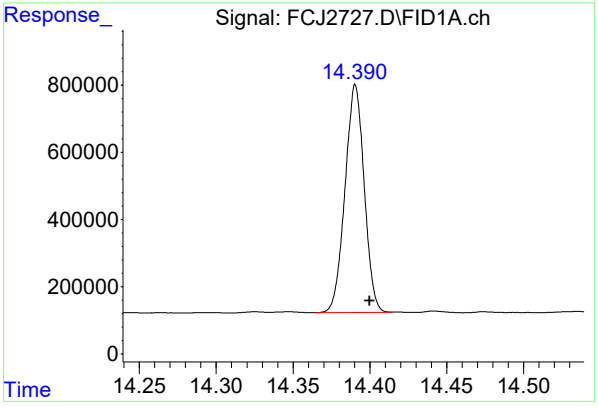


Compound: Motor Oil

RT Range: 14.865: 23.074
Total TPH Resp: 298941724
Total SMC/ISTD Resp: 0
Final Resp: 298941724



#4 BEFORE analyst INTEGRATION
o-Terphenyl
R.T.: 14.391 min
Delta R.T.: -0.009 min
Response: 6138371
Conc: 16.91 mg/L



#4 AFTER analyst INTEGRATION
o-Terphenyl AB
R.T.: 14.390 min
Delta R.T.: -0.010 min
Response: 5897576
Conc: 16.24 mg/L MANUALLY INTEGRATED

FID Diesel Range Organics
Certificate of Analysis
Sample Summary

SDG Number:	**2024-69**	**Date Collected:**	**10/10/2023 10:17**	**Matrix:**	**SO**
Lab Sample ID:	**642223001**	**Date Received:**	**10/20/2023 09:30**	**%Moisture:**	**12.9**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289584**	**Method:**	**SW846 3541/8015D**	**SOP Ref:**	**GL-OA-E-003**
Batch ID:	**2512326**	**Inst:**	**FIDC.I**	**Dilution:**	**50**
Run Date:	**10/28/2023 13:44**	**Analyst:**	**RXC1**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/24/2023 07:19**	**Aliquot:**	**30.17 g**	**Final Volume:**	**1 mL**
Data File:	**102723DROMO\FCJ2746.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	Motor Oil	B	1390	mg/kg	124	381
68334-30-5	Diesel Range Organics		7760	mg/kg	124	381

Surrogate/Tracer recovery	Result	Nominal		Recovery%		Acceptable Limits
o-Terphenyl	0.000	0.761	mg/kg	0	*	(32%-118%)

Quantitation Report
GEL Laboratories, LLC

10/29/2023

Data Path : D:\MSDCHEM\1\Data\102723DROMO\
Data File : FCJ2746.D
Signal(s) : FID1A.ch
Acq On : 28 Oct 2023 13:44
Operator : RXC1 InstName : FIDC
Sample : |642223001|2512326|50|DROQ|1|TNSL|||
Misc : |FIDD415D_S|SOIL|RLUOB-23-289584|MIX[A,D]||
ALS Vial : 21 Sample Multiplier: 50

10/30/2023

Integration File: autoint1.e
Quant Time: Oct 29 11:20:32 2023
Quant Method : D:\MSDCHEM\1\Data\102723DROMO\FIDCNW_102723.m
Quant Title : DRO TPH SubList :
QLast Update : Sat Oct 28 11:09:33 2023
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : DB-5MS
Signal Info : 30m x 250um x 0.25um

Compound	Exp	R.T.	Delta	Response	Conc	Units	
System Monitoring Compounds							
4) SD o-Terphenyl		14.400	14.392	-0.008	51853976	N.D.	mg/L d

Compound	Amount	Range	Recovery
4) o-Terphenyl	20.000	No Limits	0%

Target Compounds					
1) HA Diesel Range Organics	Range	8.240 - 14.865	5649475185	4077.375	mg/L m
2) HA Motor Oil	Range	14.865 - 23.074	1257700309	731.726	mg/L

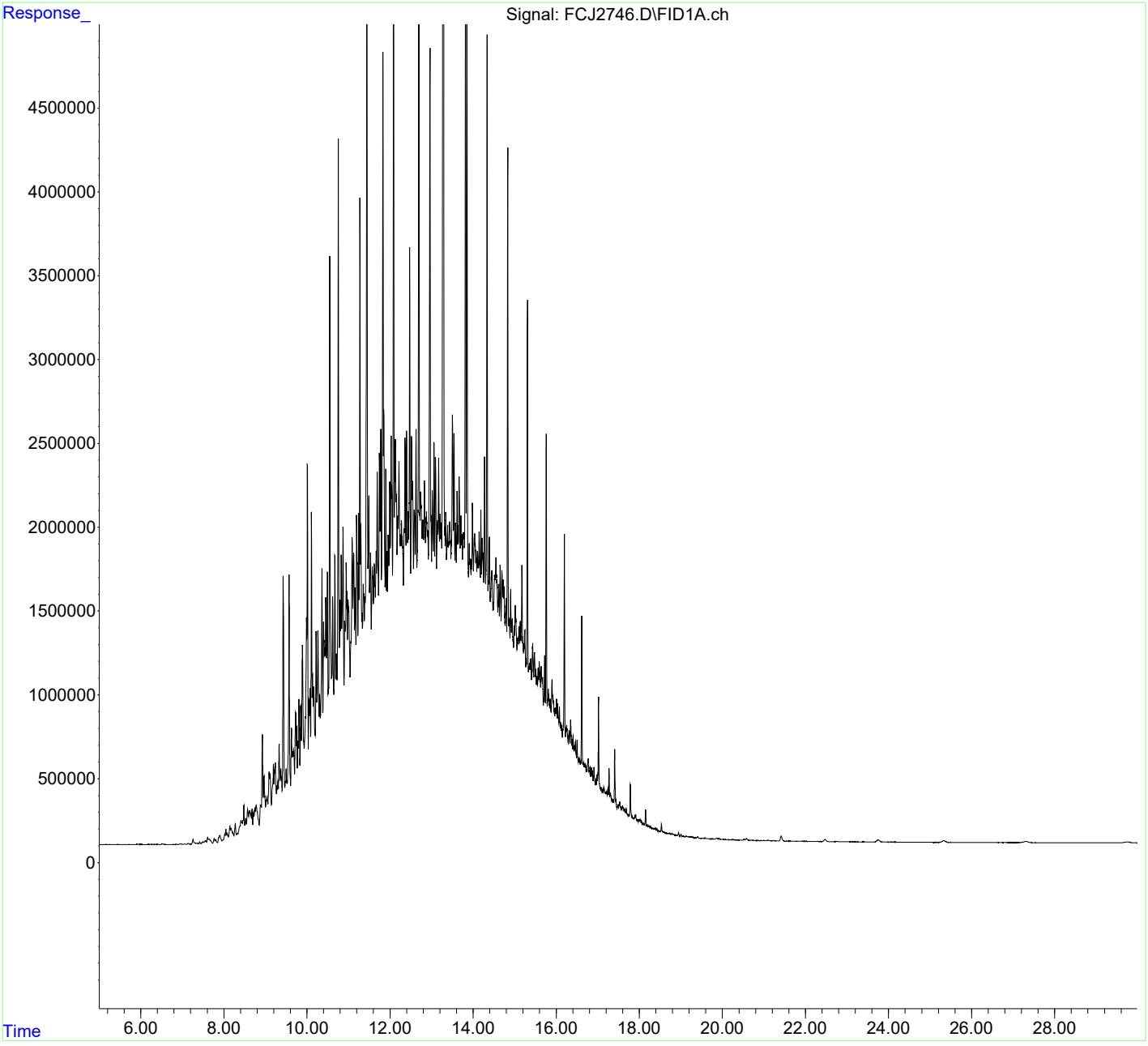
(f)=RT Delta > 1/2 Window (A) = Over the calibration range (d) = deleted (m)=manual int.

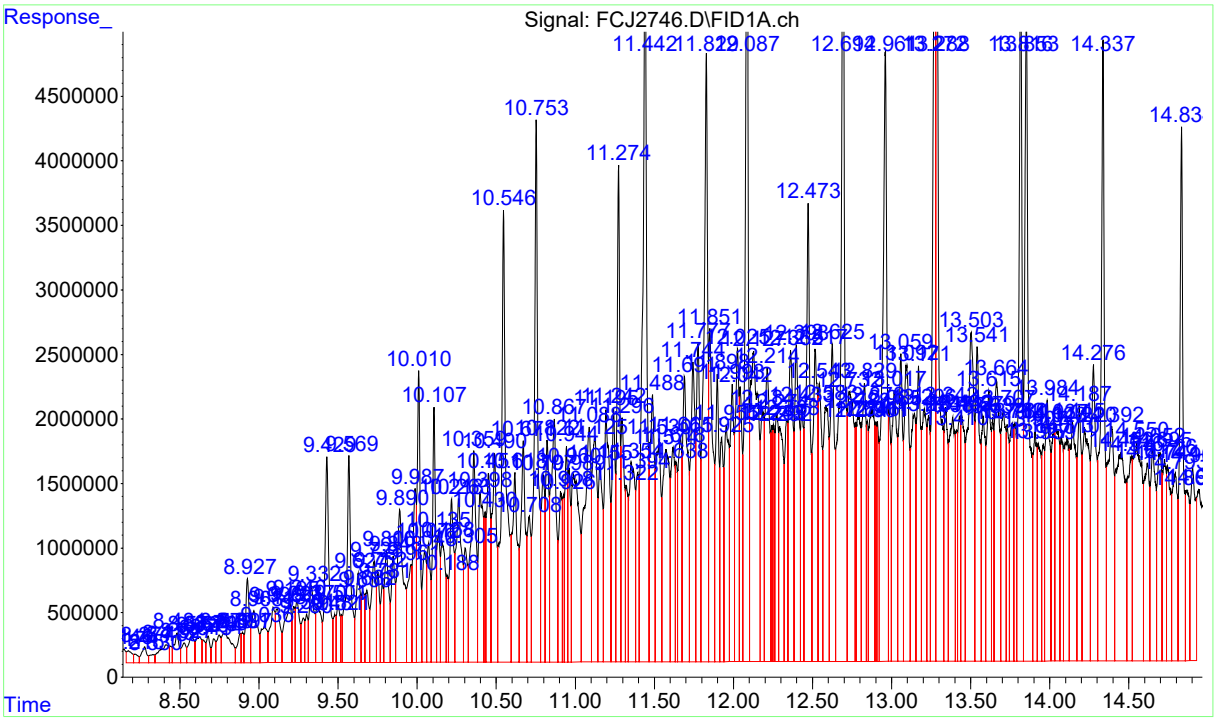
Quantitation Report
GEL Laboratories, LLC

DaData Path : D:\MSDCHEM\1\Data\102723DROMO\
DaData File : FCJ2746.D
Signal(s) : FID1A.ch
Acq On : 28 Oct 2023 13:44
Operator : RXC1 InstName : FIDC
Sample : |642223001|2512326|50|DROQ|1|TNSL|||
Misc : |FIDD415D_S|SOIL|RLUOB-23-289584|MIX[A,D]||
ALS Vial : 21 Sample Multiplier: 50

Integration File: autoint1.e
Quant Time: Oct 29 11:20:32 2023
Quant Method : D:\MSDCHEM\1\Data\102723DROMO\FIDCNW_102723.m
Quant Title : DRO TPH SubList :
QLast Update : Sat Oct 28 11:09:33 2023
Response via : Initial Calibration
Integrator: ChemStation

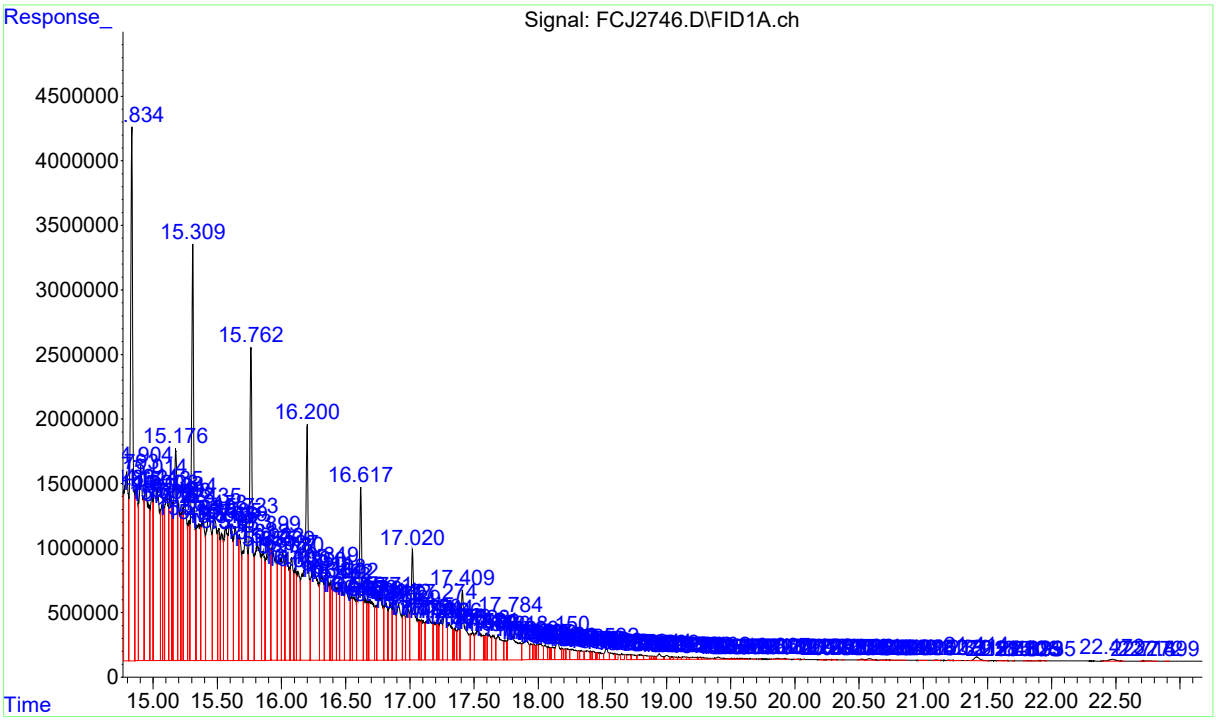
Volume Inj. : 1 ul
Signal Phase : DB-5MS
Signal Info : 30m x 250um x 0.25um





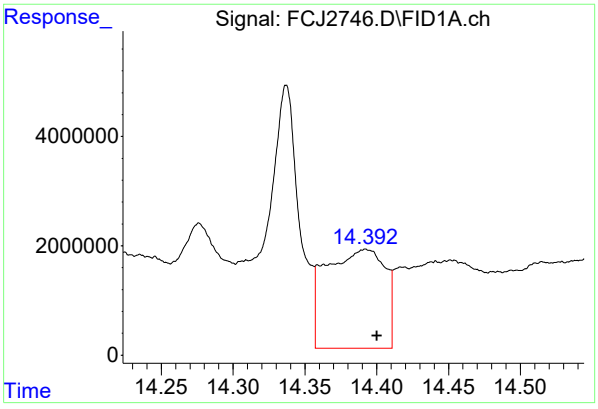
Compound: Diesel Range Organics

RT Range:	8.240: 14.865
Total TPH Resp:	5649475185
Total SMC/ISTD Resp:	0
Final Resp:	5649475185

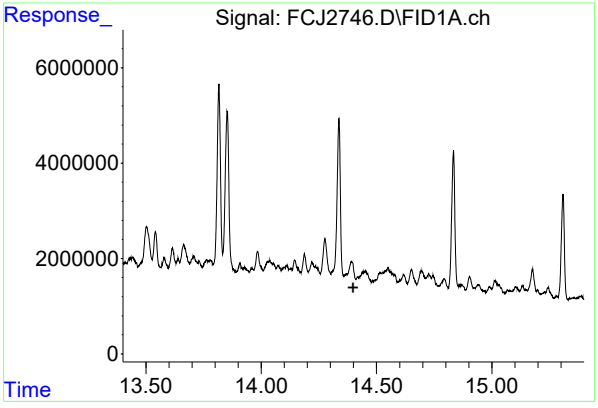


Compound: Motor Oil

RT Range: 14.865: 23.074
Total TPH Resp: 1257700309
Total SMC/ISTD Resp: 0
Final Resp: 1257700309



#4 BEFORE analyst DELETION
o-Terphenyl PPS
R.T.: 14.392 min
Delta R.T.: -0.008 min
Response: 51853976
Conc: 1428.16 mg/L



#4 AFTER analyst DELETION
o-Terphenyl
R.T.: 0.000 min
Exp R.T. : 14.400 min
Response: 0
Conc: N.D. DELETED

FID Diesel Range Organics
Certificate of Analysis
Sample Summary

SDG Number:	**2024-69**	**Date Collected:**	**10/10/2023 10:42**	**Matrix:**	**SO**
Lab Sample ID:	**642223002**	**Date Received:**	**10/20/2023 09:30**	**%Moisture:**	**5.1**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289585**	**Method:**	**SW846 3541/8015D**	**SOP Ref:**	**GL-OA-E-003**
Batch ID:	**2512326**	**Inst:**	**FIDC.I**	**Dilution:**	**1**
Run Date:	**10/28/2023 15:39**	**Analyst:**	**RXC1**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/24/2023 07:19**	**Aliquot:**	**30.34 g**	**Final Volume:**	**1 mL**
Data File:	**102723DROMO\FCJ2749.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	Motor Oil	BJ	2.97	mg/kg	2.26	6.94
68334-30-5	Diesel Range Organics	U	2.26	mg/kg	2.26	6.94

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
o-Terphenyl	0.754	0.694	mg/kg	109	(32%-118%)

Quantitation Report
GEL Laboratories, LLC

10/29/2023

Data Path : D:\MSDCHEM\1\Data\102723DROMO\
Data File : FCJ2749.D
Signal(s) : FID1A.ch
Acq On : 28 Oct 2023 15:39
Operator : RXC1 InstName : FIDC
Sample : |642223002|2512326|1|DROQ|1|TNSL|||
Misc : |FIDD415D_S|SOIL|RLUOB-23-289585|MIX[A,D]||
ALS Vial : 24 Sample Multiplier: 1

10/30/2023

Integration File: autoint1.e
Quant Time: Oct 29 11:21:46 2023
Quant Method : D:\MSDCHEM\1\Data\102723DROMO\FIDCNW_102723.m
Quant Title : DRO TPH SubList :
QLast Update : Sat Oct 28 11:09:33 2023
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : DB-5MS
Signal Info : 30m x 250um x 0.25um

Compound	Exp	R.T.	Delta	Response	Conc	Units
System Monitoring Compounds						
4) SD o-Terphenyl	14.400	14.395	-0.005	39440738	21.725	mg/L m

Compound	Amount	Range	Recovery
4) o-Terphenyl	20.000	No Limits	109%

Target Compounds					
1) HA Diesel Range Organics	Range	8.240 - 14.865	52882642	<MDL	mg/L m
2) HA Motor Oil	Range	14.865 - 23.074	146964101	85.503	mg/L

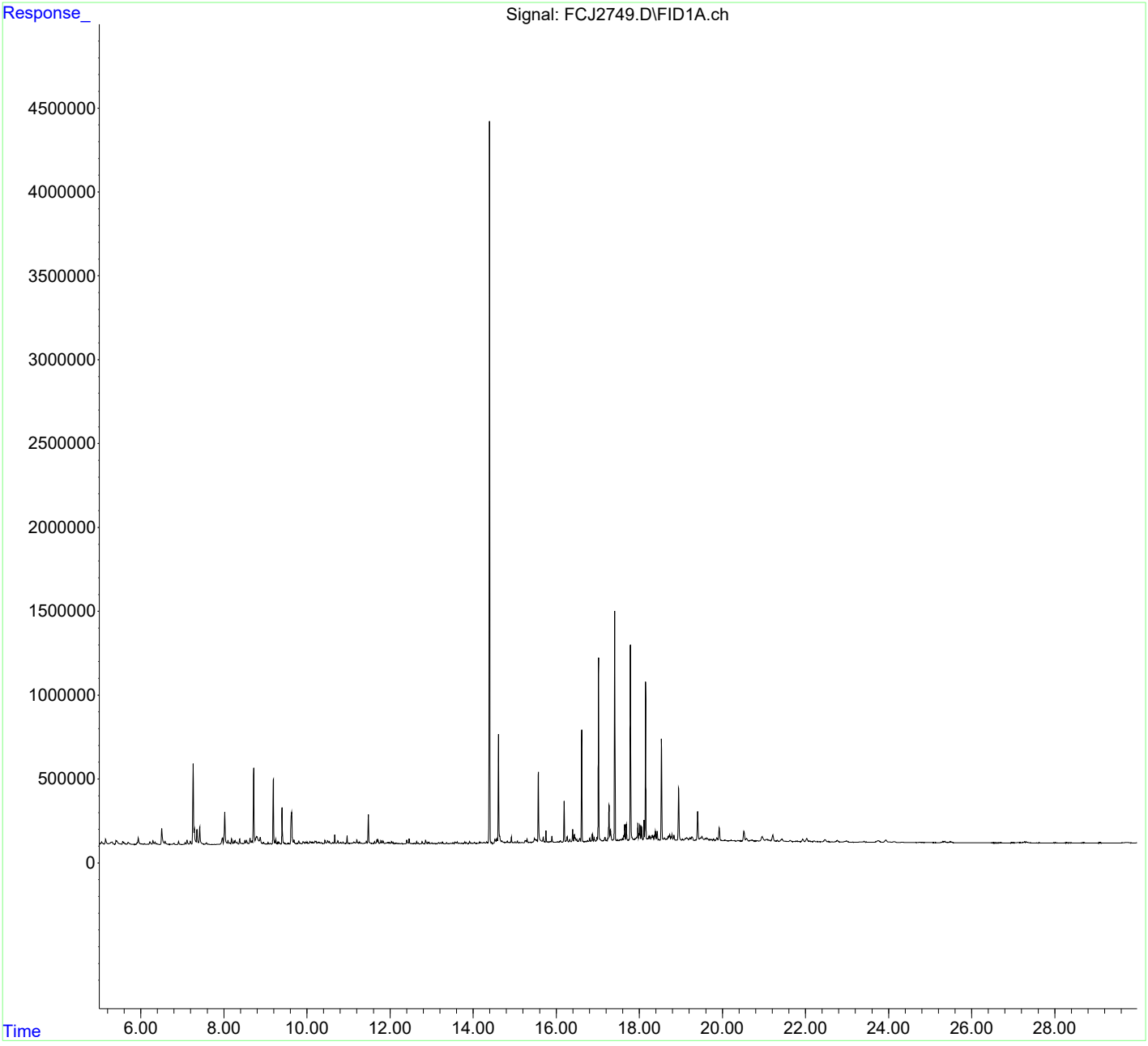
(f)=RT Delta > 1/2 Window (A) = Over the calibration range (d) = deleted (m)=manual int.

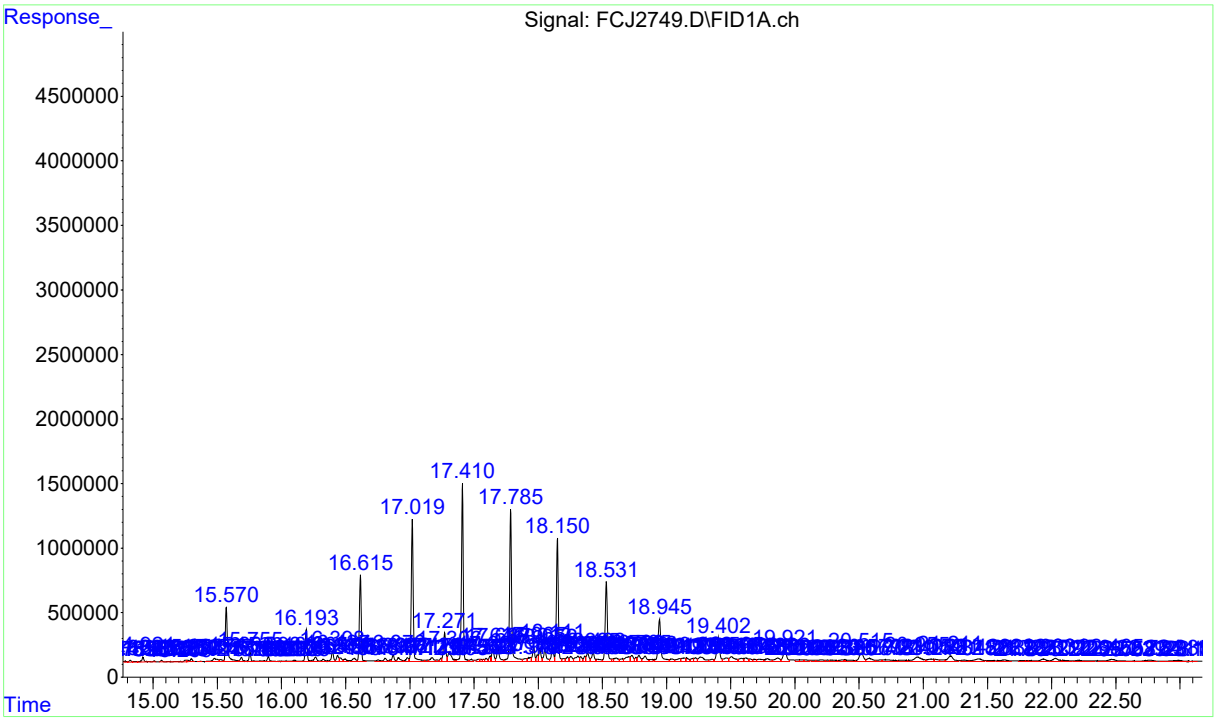
Quantitation Report
GEL Laboratories, LLC

DaData Path : D:\MSDCHEM\1\Data\102723DROMO\
DaData File : FCJ2749.D
Signal(s) : FID1A.ch
Acq On : 28 Oct 2023 15:39
Operator : RXC1 InstName : FIDC
Sample : |642223002|2512326|1|DROQ|1|TNSL|||
Misc : |FIDD415D_S|SOIL|RLUOB-23-289585|MIX[A,D]||
ALS Vial : 24 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Oct 29 11:21:46 2023
Quant Method : D:\MSDCHEM\1\Data\102723DROMO\FIDCNW_102723.m
Quant Title : DRO TPH SubList :
QLast Update : Sat Oct 28 11:09:33 2023
Response via : Initial Calibration
Integrator: ChemStation

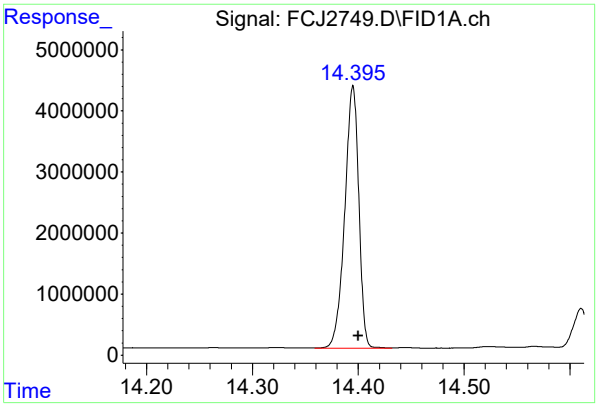
Volume Inj. : 1 ul
Signal Phase : DB-5MS
Signal Info : 30m x 250um x 0.25um



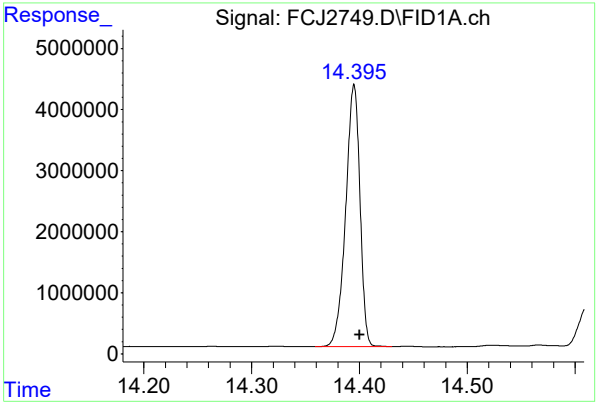


Compound: Motor Oil

RT Range: 14.865: 23.074
Total TPH Resp: 146964101
Total SMC/ISTD Resp: 0
Final Resp: 146964101



#4 BEFORE analyst INTEGRATION
o-Terphenyl
R.T.: 14.395 min
Delta R.T.: -0.005 min
Response: 39559416
Conc: 21.79 mg/L



#4 AFTER analyst INTEGRATION
o-Terphenyl AB
R.T.: 14.395 min
Delta R.T.: -0.005 min
Response: 39440738
Conc: 21.73 mg/L MANUALLY INTEGRATED

FID Diesel Range Organics
Certificate of Analysis
Sample Summary

SDG Number:	**2024-69**	**Date Collected:**	**10/10/2023 10:57**	**Matrix:**	**SO**
Lab Sample ID:	**642223003**	**Date Received:**	**10/20/2023 09:30**	**%Moisture:**	**7.7**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289586**	**Method:**	**SW846 3541/8015D**	**SOP Ref:**	**GL-OA-E-003**
Batch ID:	**2512326**	**Inst:**	**FIDC.I**	**Dilution:**	**10**
Run Date:	**10/28/2023 16:17**	**Analyst:**	**RXC1**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/24/2023 07:19**	**Aliquot:**	**30.24 g**	**Final Volume:**	**1 mL**
Data File:	**102723DROMO\FCJ2750.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	Motor Oil	B	102	mg/kg	23.3	71.7
68334-30-5	Diesel Range Organics		652	mg/kg	23.3	71.7

Surrogate/Tracer recovery	Result	Nominal		Recovery%		Acceptable Limits
o-Terphenyl	1.06	0.717	mg/kg	148	*	(32%-118%)

Quantitation Report
GEL Laboratories, LLC

10/29/2023

10/30/2023

Data Path : D:\MSDCHEM\1\Data\102723DROMO\
Data File : FCJ2750.D
Signal(s) : FID1A.ch
Acq On : 28 Oct 2023 16:17
Operator : RXC1 InstName : FIDC
Sample : |642223003|2512326|10|DROQ|1|TNSL|||
Misc : |FIDD415D_S|SOIL|RLUOB-23-289586|MIX[A,D]||
ALS Vial : 25 Sample Multiplier: 10

Integration File: autoint1.e
Quant Time: Oct 29 11:22:15 2023
Quant Method : D:\MSDCHEM\1\Data\102723DROMO\FIDCNW_102723.m
Quant Title : DRO TPH SubList :
QLast Update : Sat Oct 28 11:09:33 2023
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : DB-5MS
Signal Info : 30m x 250um x 0.25um

Compound	Exp	R.T.	Delta	Response	Conc	Units
System Monitoring Compounds						
4) SD o-Terphenyl	14.400	14.392	-0.008	5381045	29.641	mg/L m

Compound	Amount	Range	Recovery
4) o-Terphenyl	20.000	No Limits	148%

Target Compounds					
1) HA Diesel Range Organics	Range	8.240 - 14.865	2519642657	1818.492	mg/L m
2) HA Motor Oil	Range	14.865 - 23.074	490089345	285.132	mg/L

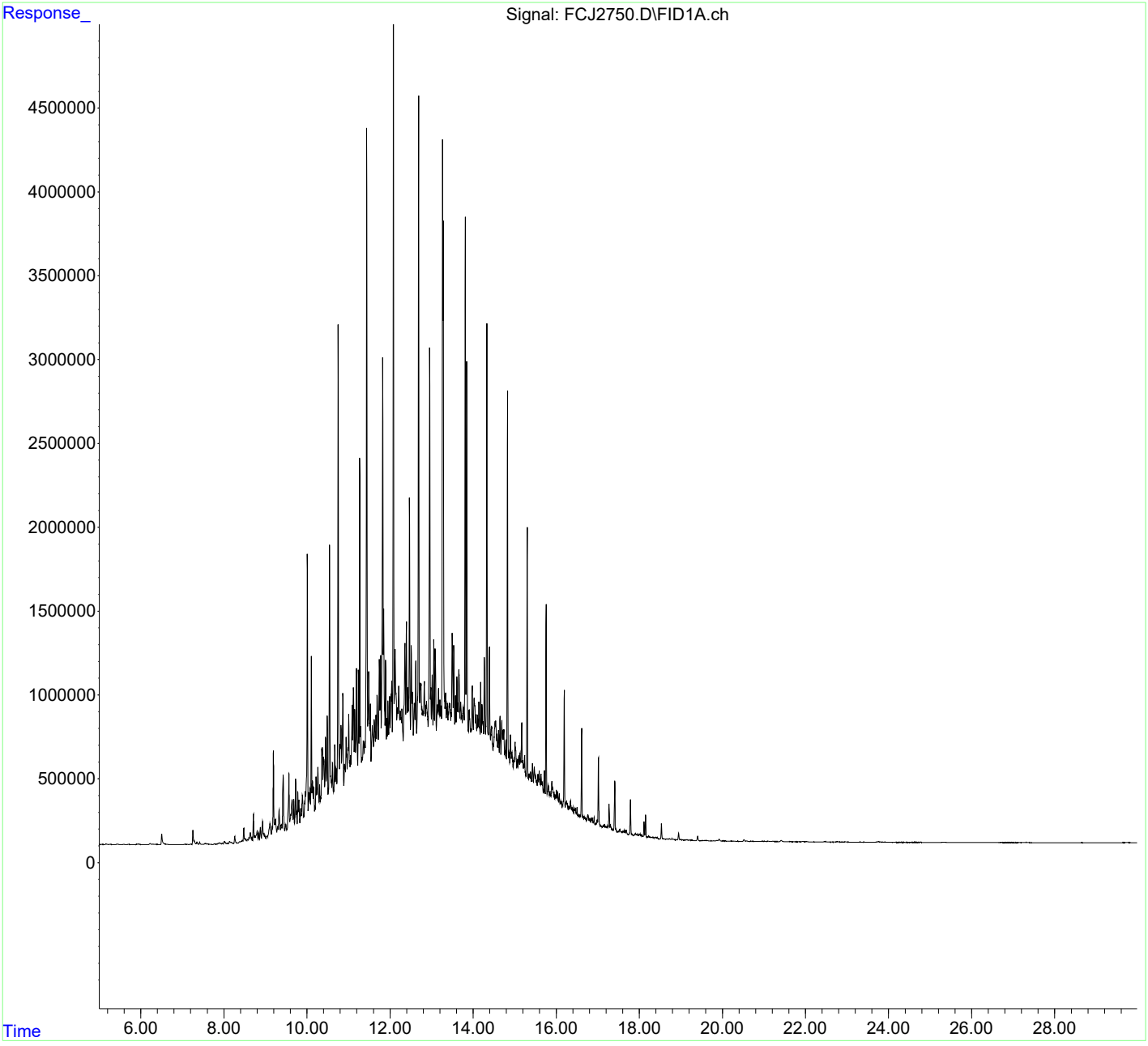
(f)=RT Delta > 1/2 Window (A) = Over the calibration range (d) = deleted (m)=manual int.

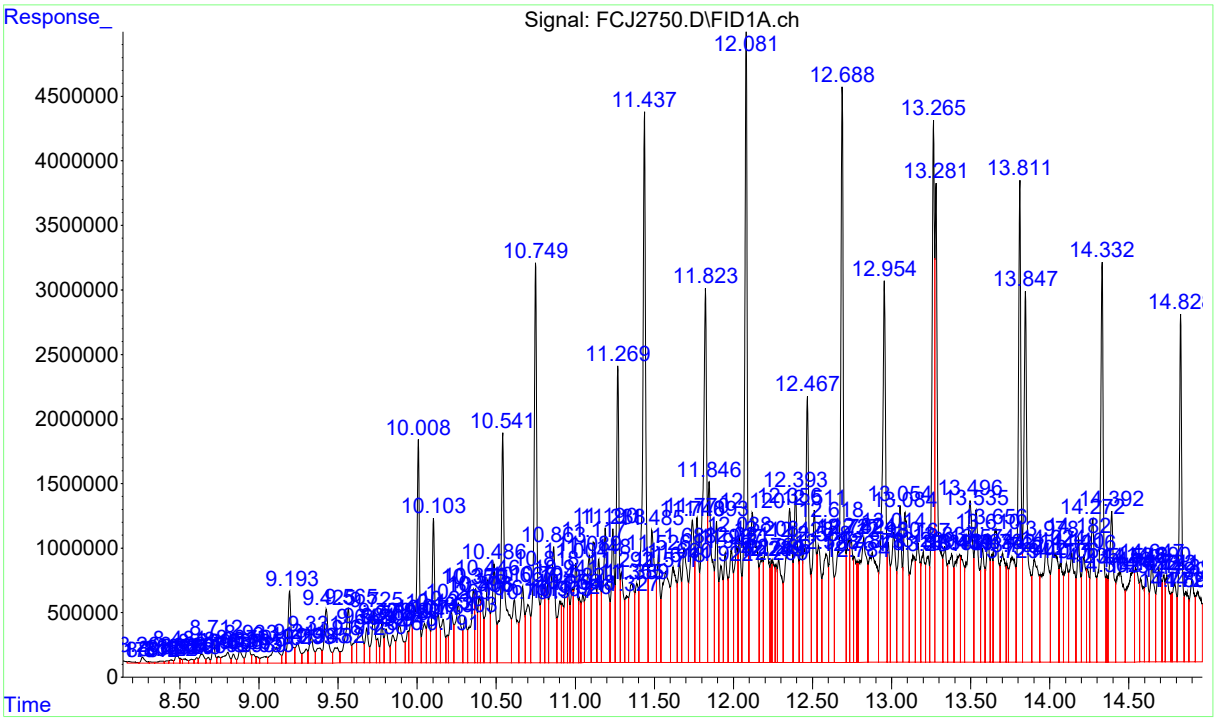
Quantitation Report
GEL Laboratories, LLC

DaData Path : D:\MSDCHEM\1\Data\102723DROMO\
DaData File : FCJ2750.D
Signal(s) : FID1A.ch
Acq On : 28 Oct 2023 16:17
Operator : RXC1 InstName : FIDC
Sample : |642223003|2512326|10|DROQ|1|TNSL|||
Misc : |FIDD415D_S|SOIL|RLUOB-23-289586|MIX[A,D]||
ALS Vial : 25 Sample Multiplier: 10

Integration File: autoint1.e
Quant Time: Oct 29 11:22:15 2023
Quant Method : D:\MSDCHEM\1\Data\102723DROMO\FIDCNW_102723.m
Quant Title : DRO TPH SubList :
QLast Update : Sat Oct 28 11:09:33 2023
Response via : Initial Calibration
Integrator: ChemStation

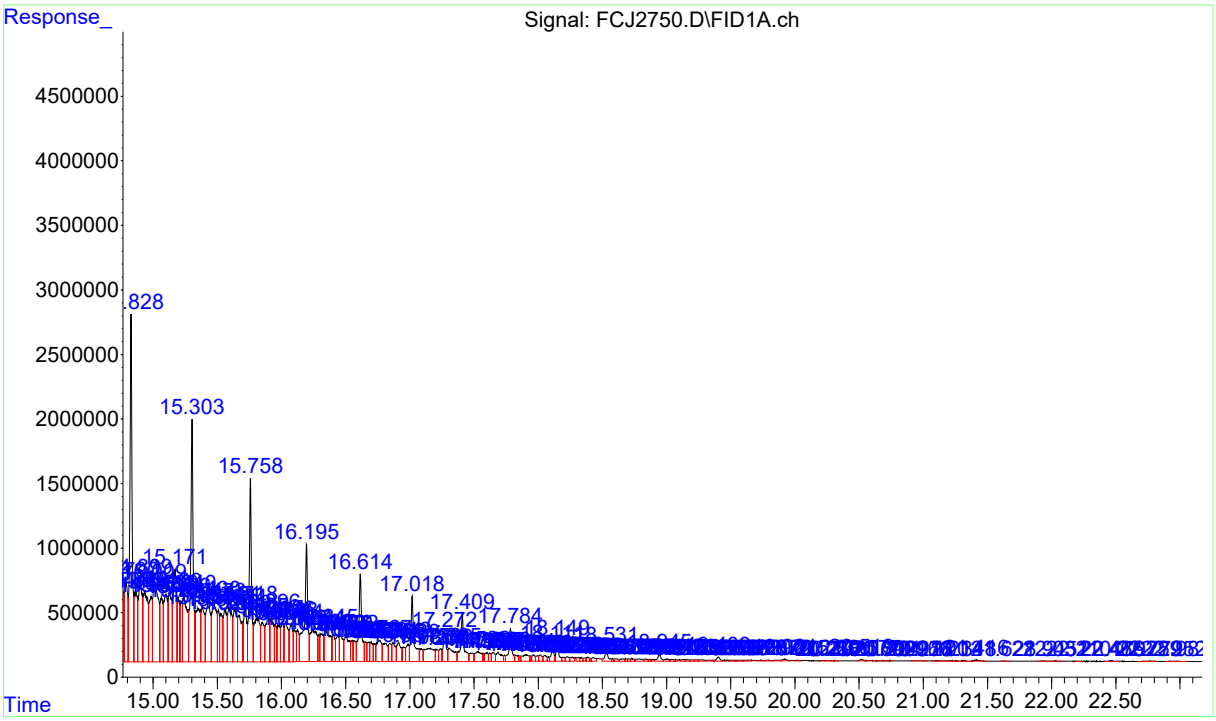
Volume Inj. : 1 ul
Signal Phase : DB-5MS
Signal Info : 30m x 250um x 0.25um





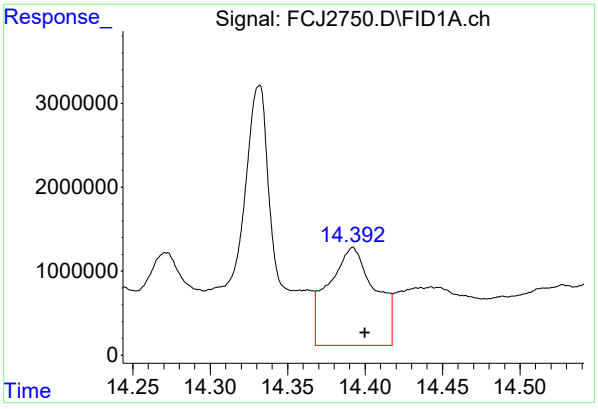
Compound: Diesel Range Organics

RT Range:	8.240: 14.865
Total TPH Resp:	2525023702
Total SMC/ISTD Resp:	5381045
Final Resp:	2519642657

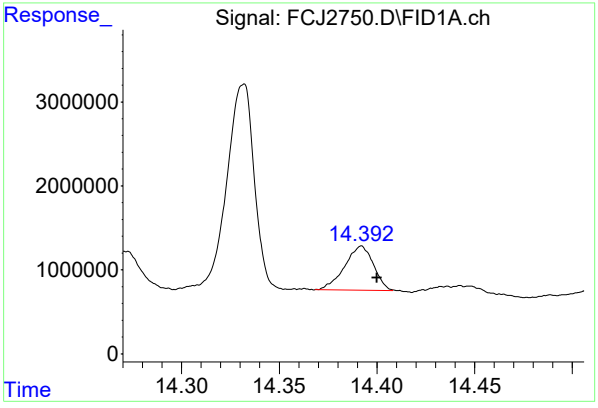


Compound: Motor Oil

RT Range: 14.865: 23.074
Total TPH Resp: 490089345
Total SMC/ISTD Resp: 0
Final Resp: 490089345



#4 BEFORE analyst INTEGRATION
o-Terphenyl
R.T.: 14.392 min
Delta R.T.: -0.008 min
Response: 24458099
Conc: 134.72 mg/L



#4 AFTER analyst INTEGRATION
o-Terphenyl AB
R.T.: 14.392 min
Delta R.T.: -0.008 min
Response: 5381045
Conc: 29.64 mg/L MANUALLY INTEGRATED

FID Diesel Range Organics
Certificate of Analysis
Sample Summary

SDG Number:	**2024-69**	**Date Collected:**	**10/10/2023 11:17**	**Matrix:**	**SO**
Lab Sample ID:	**642223004**	**Date Received:**	**10/20/2023 09:30**	**%Moisture:**	**5.5**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289587**	**Method:**	**SW846 3541/8015D**	**SOP Ref:**	**GL-OA-E-003**
Batch ID:	**2512326**	**Inst:**	**FIDC.I**	**Dilution:**	**1**
Run Date:	**10/28/2023 16:55**	**Analyst:**	**RXC1**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/24/2023 07:19**	**Aliquot:**	**30.45 g**	**Final Volume:**	**1 mL**
Data File:	**102723DROMO\FCJ2751.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	Motor Oil	B	27.8	mg/kg	2.26	6.95
68334-30-5	Diesel Range Organics		18.5	mg/kg	2.26	6.95

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
o-Terphenyl	0.675	0.695	mg/kg	97	(32%-118%)

Quantitation Report
GEL Laboratories, LLC

10/29/2023

10/30/2023

Data Path : D:\MSDCHEM\1\Data\102723DROMO\
Data File : FCJ2751.D
Signal(s) : FID1A.ch
Acq On : 28 Oct 2023 16:55
Operator : RXC1 InstName : FIDC
Sample : |642223004|2512326|1|DROQ|1|TNSL|||
Misc : |FIDD415D_S|SOIL|RLUOB-23-289587|MIX[A,D]||
ALS Vial : 26 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Oct 29 11:22:38 2023
Quant Method : D:\MSDCHEM\1\Data\102723DROMO\FIDCNW_102723.m
Quant Title : DRO TPH SubList :
QLast Update : Sat Oct 28 11:09:33 2023
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : DB-5MS
Signal Info : 30m x 250um x 0.25um

Compound	Exp	R.T.	Delta	Response	Conc	Units
System Monitoring Compounds						
4) SD o-Terphenyl	14.400	14.396	-0.004	35248398	19.416	mg/L m

Compound	Amount	Range	Recovery
4) o-Terphenyl	20.000	No Limits	97%

Target Compounds					
1) HA Diesel Range Organics	Range	8.240 - 14.865	739477648	533.700	mg/L m
2) HA Motor Oil	Range	14.865 - 23.074	1373406341	799.044	mg/L

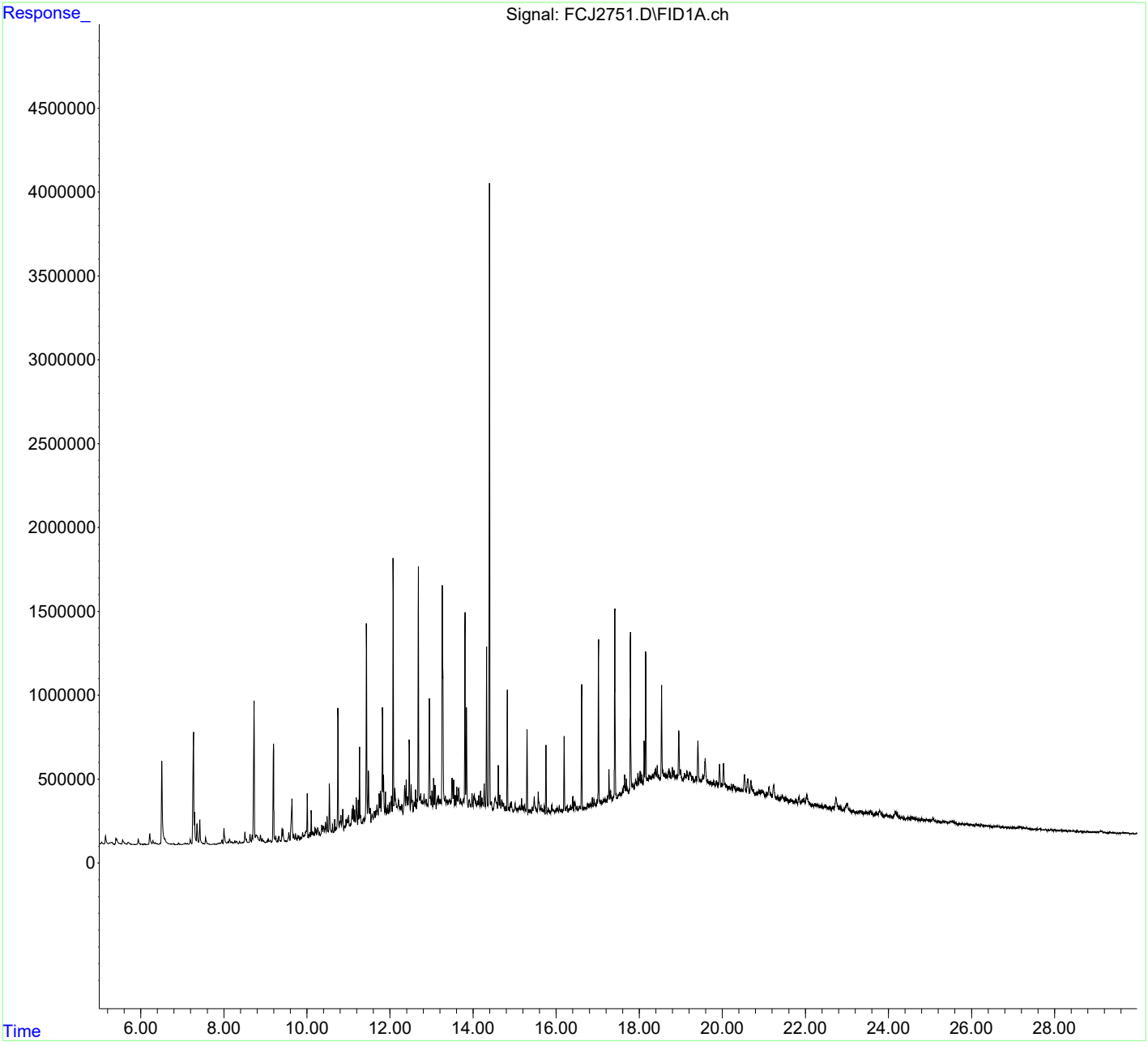
(f)=RT Delta > 1/2 Window (A) = Over the calibration range (d) = deleted (m)=manual int.

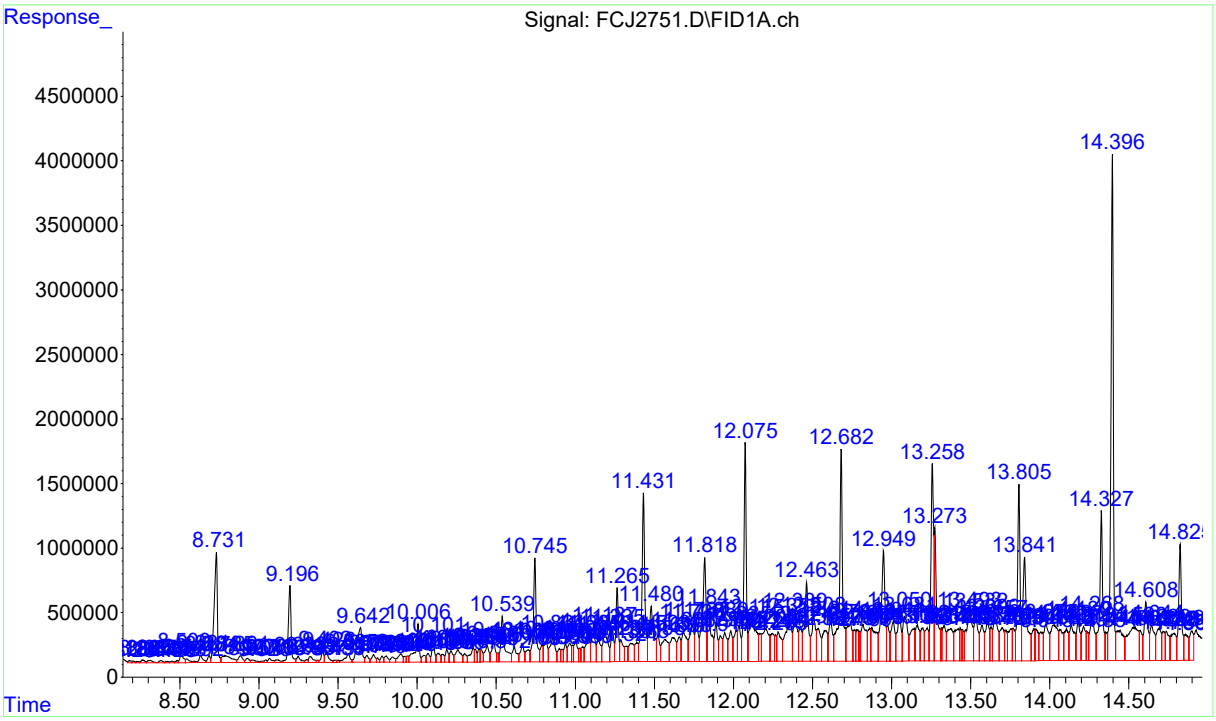
Quantitation Report
GEL Laboratories, LLC

DaData Path : D:\MSDCHEM\1\Data\102723DROMO\
DaData File : FCJ2751.D
Signal(s) : FID1A.ch
Acq On : 28 Oct 2023 16:55
Operator : RXC1 InstName : FIDC
Sample : |642223004|2512326|1|DROQ|1|TNSL|||
Misc : |FIDD415D_S|SOIL|RLUOB-23-289587|MIX[A,D]||
ALS Vial : 26 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Oct 29 11:22:38 2023
Quant Method : D:\MSDCHEM\1\Data\102723DROMO\FIDCNW_102723.m
Quant Title : DRO TPH SubList :
QLast Update : Sat Oct 28 11:09:33 2023
Response via : Initial Calibration
Integrator: ChemStation

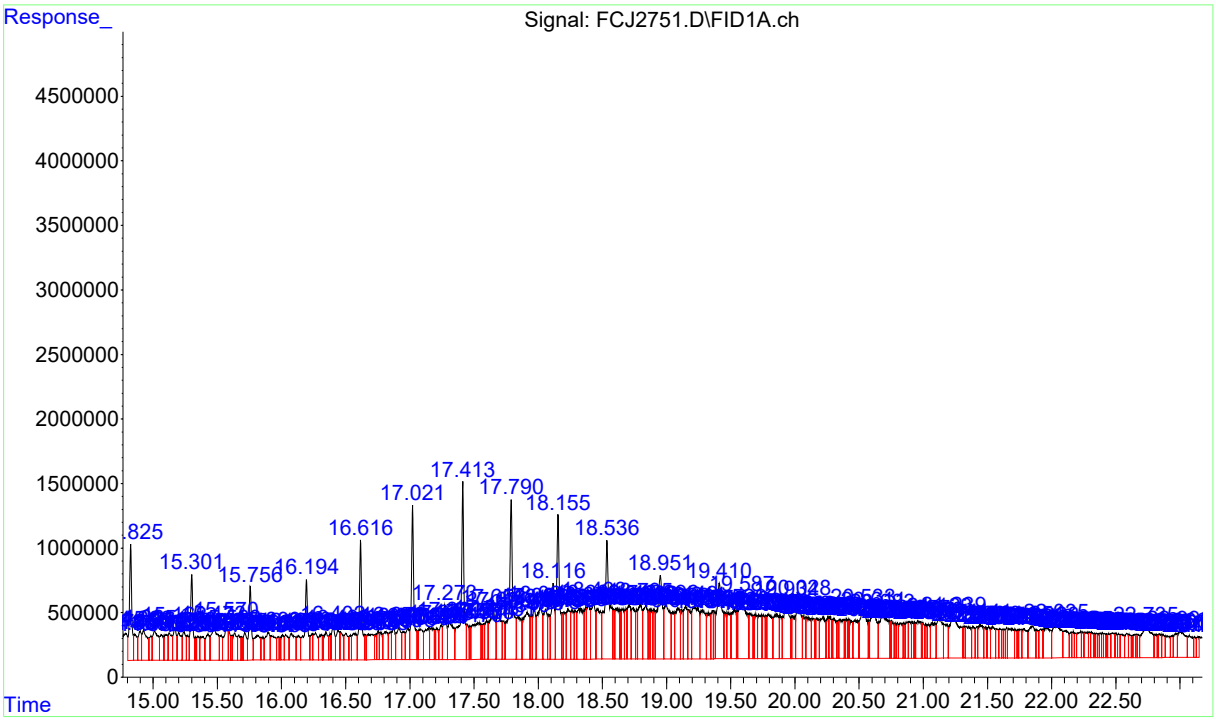
Volume Inj. : 1 ul
Signal Phase : DB-5MS
Signal Info : 30m x 250um x 0.25um





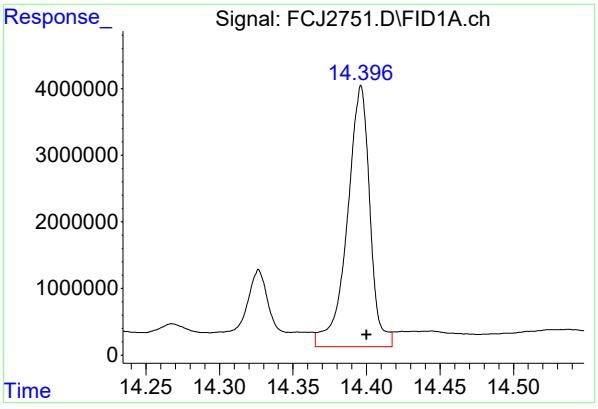
Compound: Diesel Range Organics

RT Range:	8.240: 14.865
Total TPH Resp:	774726047
Total SMC/ISTD Resp:	35248398
Final Resp:	739477648

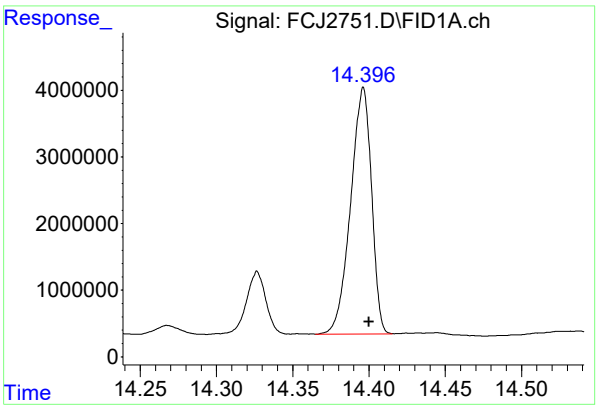


Compound: Motor Oil

RT Range: 14.865: 23.074
Total TPH Resp: 1373406341
Total SMC/ISTD Resp: 0
Final Resp: 1373406341



#4 BEFORE analyst INTEGRATION
o-Terphenyl
R.T.: 14.396 min
Delta R.T.: -0.004 min
Response: 41989805
Conc: 23.13 mg/L



#4 AFTER analyst INTEGRATION
o-Terphenyl AB
R.T.: 14.396 min
Delta R.T.: -0.004 min
Response: 35248398
Conc: 19.42 mg/L MANUALLY INTEGRATED

Miscellaneous

Prep Logbook

Automated Soxhlet Extraction

Batch ID: 2512325 **Verified by:** _____
Analyst: Carlethea Bing
Method: SW846 3541

Lab SOP: GL-OA-E-066 REV# 9
Instrument: Semi-Volatiles Manual

Sample ID	Prep Date	Aliquot (g)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1205553087 MB	24-OCT-2023 07:19:00	30.37	1	0.03293
1205553088 LCS	24-OCT-2023 07:19:00	30.08	1	0.03324
642223001	24-OCT-2023 07:19:00	30.17	1	0.03315
1205553089 MS (642223001)	24-OCT-2023 07:19:00	30.3	1	0.033
1205553090 MSD (642223001)	24-OCT-2023 07:19:00	30.57	1	0.03271
642223002	24-OCT-2023 07:19:00	30.34	1	0.03296
642223003	24-OCT-2023 07:19:00	30.24	1	0.03307
642223004	24-OCT-2023 07:19:00	30.45	1	0.03284
642223005	24-OCT-2023 07:19:00	30.21	1	0.0331

Type	Sample Id	Description	Serial Number	Spike Amt	Units
LCS	1205553088	AZDRO SPIKE LCS STD,4000ug/ml	WE230927-06	1	mL
MS	1205553089	AZDRO SPIKE LCS STD,4000ug/ml	WE230927-06	1	mL
MSD	1205553090	AZDRO SPIKE LCS STD,4000ug/ml	WE230927-06	1	mL
SURR	All	20 ppm surrogate	WE231010-07	1	mL
REGNT	All	Sand pure 40-100 mesh	3951793-A	30	g
REGNT	All	Methylene Chloride	3969728	120	mL

Comments:

Samples were powder and rocks.
Soxtherm Unit:: 8A,9A,10A
Logbook Reviewer: DC
Final Solvent: CH2Cl2
Start Time:: 0732
End Time:: 0835
Verified by: JG

ORGANIC RUN LOG - INSTRUMENT ID#FIDC

GEL ORGANIC RUN LOG INSTRUMENT BATCH: 102723DROMO

DATE: 27-Oct-23 METHOD: See Data OPERATOR: RXC1 Sequence Number: 102723DRC

10/30/2023

Solvent Lot: 230706

Injection Volume: 1.0 uL

Calibration Information:
Initial Calibration Dates: See Calibration History
Initial Calibration Std ID's: See Associated Data and Run Log
FID Analysis of GEL SOP: GL-OA-E-003

Analysis Date	Time	Data File	Lab Sample ID	Client	Batch #	Dil. Factor	AS Slot #	Analyst	Comme
10/27/2023	08:49	FCJ2701.D	WFI231012-98	IBLK	BLANK	1	1	RXC1	
10/27/2023	09:27	FCJ2702.D	WFI230929-99	FID_RT	RTCHECK	1	2	RXC1	
10/27/2023	10:05	FCJ2703.D	WFI231009-30	DRO-MO-1	ICAL	1	3	RXC1	
10/27/2023	10:43	FCJ2704.D	WFI231009-31	DRO-MO-2	ICAL	1	4	RXC1	
10/27/2023	11:21	FCJ2705.D	WFI231009-32	DRO-MO-3	ICAL	1	5	RXC1	
10/27/2023	11:59	FCJ2706.D	WFI231009-33	DRO-MO-4	ICAL	1	6	RXC1	
10/27/2023	12:38	FCJ2707.D	WFI231009-34	DRO-MO-5	ICAL	1	7	RXC1	
10/27/2023	13:16	FCJ2708.D	WFI231020-36	RO-MO-IC	ICV	1	8	RXC1	
10/27/2023	13:54	FCJ2709.D	WFI230929-99	FID_RT	RTCHECK	1	9	RXC1	
10/27/2023	14:32	FCJ2710.D	WFI231012-98	IBLK	BLANK	1	10	RXC1	
10/27/2023	15:11	FCJ2711.D	UFI230629-20.3	KER-1	ICAL	1	11	RXC1	
10/27/2023	15:49	FCJ2712.D	UFI230629-21.3	KER-2	ICAL	1	12	RXC1	
10/27/2023	16:27	FCJ2713.D	UFI230629-22.3	KER-3	ICAL	1	13	RXC1	
10/27/2023	17:05	FCJ2714.D	UFI230629-23.3	KER-4	ICAL	1	14	RXC1	
10/27/2023	17:43	FCJ2715.D	UFI230629-24.3	KER-5	ICAL	1	15	RXC1	
10/27/2023	18:22	FCJ2716.D	UFI231003-25.1	KER-ICV	ICV	1	16	RXC1	
10/27/2023	19:00	FCJ2717.D	WFI230929-99	FID_RT	RTCHECK	1	17	RXC1	
10/27/2023	19:38	FCJ2718.D	WFI231012-xx	scrn	SCREEN	1	18	RXC1	
10/27/2023	20:16	FCJ2719.D	1205553087	MB	2512326	1	19	RXC1	
10/27/2023	20:54	FCJ2720.D	1205553088	LCS	2512326	1	20	RXC1	
10/27/2023	21:32	FCJ2721.D	642223001	TNSL	2512326	1	21	RXC1	
10/27/2023	22:10	FCJ2722.D	1205553089	MS	2512326	1	22	RXC1	
10/27/2023	22:48	FCJ2723.D	1205553090	MSD	2512326	1	23	RXC1	
10/27/2023	23:26	FCJ2724.D	642223002	TNSL	2512326	1	24	RXC1	
10/28/2023	00:04	FCJ2725.D	642223003	TNSL	2512326	1	25	RXC1	
10/28/2023	00:42	FCJ2726.D	642223004	TNSL	2512326	1	26	RXC1	
10/28/2023	01:20	FCJ2727.D	642223005	TNSL	2512326	5	27	RXC1	
10/28/2023	01:58	FCJ2728.D	WFI231020-36	RO-MO-CC	CCV	1	28	RXC1	
10/28/2023	02:36	FCJ2729.D	UFI231003-25.1	KER-CCV	CCV	1	29	RXC1	
10/28/2023	03:14	FCJ2730.D	WFI231012-98	IBLK	BLANK	1	30	RXC1	
10/28/2023	03:52	FCJ2731.D	1205553091	MB	2512328	1	31	RXC1	
10/28/2023	04:30	FCJ2732.D	1205553092	LCS	2512328	1	32	RXC1	

GEL ORGANIC RUN LOG INSTRUMENT BATCH: 102723DROMO

10/28/2023 05:08	FCJ2733.D	1205553093	LCS	2512328	1	33	RXC1	
10/28/2023 05:46	FCJ2734.D	1205553094	LCSD	2512328	1	34	RXC1	
10/28/2023 06:24	FCJ2735.D	1205553095	LCSD	2512328	1	35	RXC1	
10/28/2023 07:02	FCJ2736.D	641944001	HAND	2512328	1	36	RXC1	
10/28/2023 07:40	FCJ2737.D	WFI231020-36	RO-MO-CC	CCV	1	37	RXC1	
10/28/2023 08:18	FCJ2738.D	UFI231003-25.1	KER-CCV	CCV	1	38	RXC1	
10/28/2023 08:56	FCJ2739.D	WFI231012-98	IBLK	BLANK	1	39	RXC1	
10/28/2023 09:34	FCJ2740.D	1205550996	MB	2510991	1	40	RXC1	
10/28/2023 10:12	FCJ2741.D	639713002	QCQA	2510991	1	41	RXC1	
10/28/2023 10:51	FCJ2742.D	639713003	QCQA	2510991	1	42	RXC1	
10/28/2023 11:50	FCJ2743.D	WFI231020-36	RO-MO-CC	CCV	1	43	RXC1	
10/28/2023 12:28	FCJ2744.D	UFI231003-25.1	KER-CCV	CCV	1	44	RXC1	
10/28/2023 13:06	FCJ2745.D	WFI231012-98	IBLK	BLANK	1	45	RXC1	
10/28/2023 13:44	FCJ2746.D	642223001	TNSL	2512326	50	21	RXC1	
10/28/2023 14:22	FCJ2747.D	1205553089	MS	2512326	50	22	RXC1	
10/28/2023 15:01	FCJ2748.D	1205553090	MSD	2512326	50	23	RXC1	
10/28/2023 15:39	FCJ2749.D	642223002	TNSL	2512326	1	24	RXC1	
10/28/2023 16:17	FCJ2750.D	642223003	TNSL	2512326	10	25	RXC1	
10/28/2023 16:55	FCJ2751.D	642223004	TNSL	2512326	1	26	RXC1	
10/28/2023 17:33	FCJ2752.D	WFI231020-36	RO-MO-CC	CCV	1	55	RXC1	
10/28/2023 18:11	FCJ2753.D	UFI231003-25.1	KER-CCV	CCV	1	56	RXC1	
10/28/2023 18:49	FCJ2754.D	WFI231012-98	IBLK	BLANK	1	57	RXC1	
10/28/2023 19:27	FCJ2755.D	1205556892	MB	2514381	1	58	RXC1	
10/28/2023 20:05	FCJ2756.D	1205556893	LCS	2514381	1	59	RXC1	
10/28/2023 20:43	FCJ2757.D	641989001	LLNL	2514381	1	60	RXC1	
10/28/2023 21:21	FCJ2758.D	642493001	TNSL	2514381	5	61	RXC1	
10/28/2023 21:59	FCJ2759.D	1205556894	MS	2514381	5	62	RXC1	
10/28/2023 22:37	FCJ2760.D	1205556895	MSD	2514381	5	63	RXC1	
10/28/2023 23:15	FCJ2761.D	642493002	TNSL	2514381	1	64	RXC1	
10/28/2023 23:53	FCJ2762.D	642493003	TNSL	2514381	1	65	RXC1	
10/29/2023 00:31	FCJ2763.D	642493004	TNSL	2514381	1	66	RXC1	
10/29/2023 01:09	FCJ2764.D	642648001	TNSL	2514381	1	67	RXC1	
10/29/2023 01:47	FCJ2765.D	WFI231020-36	RO-MO-CC	CCV	1	68	RXC1	
10/29/2023 02:25	FCJ2766.D	WFI231012-98	IBLK	BLANK	1	69	RXC1	
10/29/2023 03:03	FCJ2767.D	642648002	TNSL	2514381	1	70	RXC1	
10/29/2023 03:41	FCJ2768.D	642648003	TNSL	2514381	1	71	RXC1	
10/29/2023 04:19	FCJ2769.D	642648004	TNSL	2514381	1	72	RXC1	
10/29/2023 04:57	FCJ2770.D	642648005	TNSL	2514381	1	73	RXC1	
10/29/2023 05:36	FCJ2771.D	642648006	TNSL	2514381	1	74	RXC1	
10/29/2023 06:13	FCJ2772.D	642648007	TNSL	2514381	1	75	RXC1	
10/29/2023 06:52	FCJ2773.D	642648008	TNSL	2514381	1	76	RXC1	

GEL ORGANIC RUN LOG INSTRUMENT BATCH: 102723DROMO

10/29/2023 07:30	FCJ2774.D	642648012	TNSL	2514381	1	77	RXC1	
10/29/2023 08:08	FCJ2775.D	WFI231020-36	RO-MO-CC	CCV	1	78	RXC1	
10/29/2023 08:46	FCJ2776.D	UFI231003-25.1	KER-CCV	CCV	1	79	RXC1	
10/29/2023 09:24	FCJ2777.D	WFI231012-98	IBLK	BLANK	1	80	RXC1	
10/29/2023 10:02	FCJ2778.D	1205556012	MB	2513751	1	46	RXC1	
10/29/2023 10:40	FCJ2779.D	1205556013	LCS	2513751	1	47	RXC1	
10/29/2023 11:18	FCJ2780.D	1205556016	LCS	2513751	1	48	RXC1	
10/29/2023 11:56	FCJ2781.D	1205556017	LCSD	2513751	1	49	RXC1	

GC Volatiles (GRO) Analysis

Case Narrative

GC Volatiles (GRO)
Technical Case Narrative
Triad National Security, LLC
SDG #: 2024-69
Work Order #: 642223

Product: **Volatile Total Petroleum Hydrocarbons by Flame Ionization Detector**
Analytical Method: SW846 8015D
Analytical Procedure: GL-OA-E-004 REV# 31
Analytical Batch: 2512723

Preparation Method: SW846 5035A
Preparation Procedure: GL-OA-E-004 REV# 31
Preparation Batch: 2512720

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
642223001	RLUOB-23-289584
642223002	RLUOB-23-289585
642223003	RLUOB-23-289586
642223004	RLUOB-23-289587
642223005	RLUOB-23-289588
1205554028	Laboratory Control Sample (LCS)
1205554029	Method Blank (MB)
1205554030	High Blank (HB)
1205554031	642223001(RLUOB-23-289584) Post Spike (PS)
1205554032	642223001(RLUOB-23-289584) Post Spike Duplicate (PSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Sample Dilutions
Samples were analyzed using a methanol extraction procedure at 1:50 dilution. The samples were analyzed at the lowest dilution possible when using a methanol extraction procedure.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report
for

TNSL001 Triad National Security, LLC (620266)

Client SDG: 2024-69 GEL Work Order: 642223

The Qualifiers in this report are defined as follows:

* A quality control analyte recovery is outside of specified acceptance criteria
** Analyte is a surrogate compound
J Value is estimated
U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

DL Indicates that sample is diluted.
RA Indicates that sample is re-analyzed without re-extraction.
RE Indicates that sample is re-extracted.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: Erin Haubert **Name: Erin Haubert**

Date: 25 OCT 2023 **Title: Data Validator**

Sample Data Summary

GC Volatiles (GRO)
Certificate of Analysis
Sample Summary

SDG Number:	**2024-69**	**Date Collected:**	**10/10/2023 10:17**	**Matrix:**	**SO**
Lab Sample ID:	**642223001**	**Date Received:**	**10/20/2023 09:30**	**%Moisture:**	**12.9**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289584**	**Method:**	**SW846 8015D**	**SOP Ref:**	**GL-OA-E-004**
Batch ID:	**2512723**	**Inst:**	**VOC4A.I**	**Dilution:**	**50**
Run Date:	**10/23/2023 12:53**	**Analyst:**	**PXY1**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/23/2023 09:31**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**102323\4C107.D**	**Column:**	**DB-MTBE**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
8006-61-9	Gasoline Range Organics	U	1910	ug/kg	1910	11500

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	6070	50.0	ug/kg	106	(51%-131%)

GC Volatiles (GRO)
Certificate of Analysis
Sample Summary

SDG Number:	**2024-69**	**Date Collected:**	**10/10/2023 10:42**	**Matrix:**	**SO**
Lab Sample ID:	**642223002**	**Date Received:**	**10/20/2023 09:30**	**%Moisture:**	**5.1**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289585**	**Method:**	**SW846 8015D**	**SOP Ref:**	**GL-OA-E-004**
Batch ID:	**2512723**	**Inst:**	**VOC4A.I**	**Dilution:**	**50**
Run Date:	**10/23/2023 13:18**	**Analyst:**	**PXY1**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/23/2023 09:32**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**102323\4C108.D**	**Column:**	**DB-MTBE**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
8006-61-9	Gasoline Range Organics	U	1760	ug/kg	1760	10500

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	5300	50.0	ug/kg	101	(51%-131%)

GC Volatiles (GRO)
Certificate of Analysis
Sample Summary

SDG Number:	**2024-69**	**Date Collected:**	**10/10/2023 10:57**	**Matrix:**	**SO**
Lab Sample ID:	**642223003**	**Date Received:**	**10/20/2023 09:30**	**%Moisture:**	**7.7**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289586**	**Method:**	**SW846 8015D**	**SOP Ref:**	**GL-OA-E-004**
Batch ID:	**2512723**	**Inst:**	**VOC4A.I**	**Dilution:**	**50**
Run Date:	**10/23/2023 13:43**	**Analyst:**	**PXY1**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/23/2023 09:33**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**102323\4C109.D**	**Column:**	**DB-MTBE**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
8006-61-9	Gasoline Range Organics	J	1920	ug/kg	1810	10800

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	5560	50.0	ug/kg	103	(51%-131%)

GC Volatiles (GRO)
Certificate of Analysis
Sample Summary

SDG Number:	**2024-69**	**Date Collected:**	**10/10/2023 11:17**	**Matrix:**	**SO**
Lab Sample ID:	**642223004**	**Date Received:**	**10/20/2023 09:30**	**%Moisture:**	**5.5**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289587**	**Method:**	**SW846 8015D**	**SOP Ref:**	**GL-OA-E-004**
Batch ID:	**2512723**	**Inst:**	**VOC4A.I**	**Dilution:**	**50**
Run Date:	**10/23/2023 14:08**	**Analyst:**	**PXY1**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/23/2023 09:34**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**102323\4C110.D**	**Column:**	**DB-MTBE**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
8006-61-9	Gasoline Range Organics	U	1760	ug/kg	1760	10600

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	5270	50.0	ug/kg	100	(51%-131%)

GC Volatiles (GRO)
Certificate of Analysis
Sample Summary

SDG Number:	**2024-69**	**Date Collected:**	**10/10/2023 11:36**	**Matrix:**	**SO**
Lab Sample ID:	**642223005**	**Date Received:**	**10/20/2023 09:30**	**%Moisture:**	**13.4**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289588**	**Method:**	**SW846 8015D**	**SOP Ref:**	**GL-OA-E-004**
Batch ID:	**2512723**	**Inst:**	**VOC4A.I**	**Dilution:**	**50**
Run Date:	**10/23/2023 14:32**	**Analyst:**	**PXY1**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/23/2023 09:35**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**102323\4C111.D**	**Column:**	**DB-MTBE**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
8006-61-9	Gasoline Range Organics	U	1920	ug/kg	1920	11500

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	5830	50.0	ug/kg	101	(51%-131%)

Quality Control Summary

GC Volatiles (GRO)

Surrogate Recovery Report

SDG Number: 2024-69

Matrix Type: SOLID

Sample ID	Client ID	BFB %REC	
1205554028	LCS for batch 2512720	108	
1205554029	MB for batch 2512720	108	
1205554030	HB for batch 2512720	101	D
642223001	RLUOB-23-289584	106	D
642223002	RLUOB-23-289585	101	D
642223003	RLUOB-23-289586	103	D
642223004	RLUOB-23-289587	100	D
642223005	RLUOB-23-289588	101	D
1205554031	RLUOB-23-289584PS	96	D
1205554032	RLUOB-23-289584PSD	99	D

Surrogate		Acceptance Limits
BFB	= Bromofluorobenzene	(51%-131%)

* Recovery outside Acceptance Limits

Column to be used to flag recovery values

D Sample Diluted

GC Volatiles (GRO)

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-69
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 2512720
Matrix: SOIL
Lab Sample ID: 1205554028
Instrument: VOC4A.I
Analysis Date: 10/23/2023 11:13
Dilution: 1
Analyst: PXY1
Prep Batch ID: 2512720
Inj. Vol: 1 uL
Batch ID: 2512723

CAS No.		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
8006-61-9	LCS	Gasoline Range Organics	500	0.0	593	119	70-130

GC Volatiles (GRO)

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-69
Client ID: RLUOB-23-289584PS
Lab Sample ID: 1205554031
Instrument: VOC4A.I
Analyst: PXY1
Inj. Vol: 1 uL

Sample Type: Post Spike
Matrix: SO
%Moisture: 12.9
Analysis Date: 10/23/2023 15:48
Prep Batch ID: 2512720
Batch ID: 2512723

Dilution: 50

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits
8006-61-9	PS	Gasoline Range Organics	500	0.000	U	495	99	37-135

GC Volatiles (GRO)

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-69
Client ID: RLUOB-23-289584PSD
Lab Sample ID: 1205554032
Instrument: VOC4A.I
Analyst: PXY1
Inj. Vol: 1 uL

Sample Type: Post Spike Duplicate
Matrix: SO
%Moisture: 12.9
Analysis Date: 10/23/2023 16:12
Prep Batch ID: 2512720
Batch ID: 2512723
Dilution: 50

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
8006-61-9	PSD	Gasoline Range Organics	500	0.000	U	504	101	37-135	2	0-32

Method Blank Summary

SDG Number:	**2024-69**	**Client:**	**TNSL001**	**Matrix:**	**SOIL**
Client ID:	**MB for batch 2512720**	**Instrument ID:**	**VOC4A.I**	**Data File:**	**102323\4C105TN.D**
Lab Sample ID:	**1205554029**	**Prep Date:**	**10/23/2023 09:01**	**Analyzed:**	**10/23/23 12:03**
Column:	**DB-MTBE**				

This method blank applies to the following samples and quality control samples:

	Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01	LCS for batch 2512720	1205554028	102323\4C103TN.D	10/23/23	1113
02	HB for batch 2512720	1205554030	102323\4C106.D	10/23/23	1228
03	RLUOB-23-289584	642223001	102323\4C107.D	10/23/23	1253
04	RLUOB-23-289585	642223002	102323\4C108.D	10/23/23	1318
05	RLUOB-23-289586	642223003	102323\4C109.D	10/23/23	1343
06	RLUOB-23-289587	642223004	102323\4C110.D	10/23/23	1408
07	RLUOB-23-289588	642223005	102323\4C111.D	10/23/23	1432
08	RLUOB-23-289584PS	1205554031	102323\4C114.D	10/23/23	1548
09	RLUOB-23-289584PSD	1205554032	102323\4C115.D	10/23/23	1612

Sample Data

GC Volatiles (GRO)
Certificate of Analysis
Sample Summary

SDG Number:	**2024-69**	**Date Collected:**	**10/10/2023 10:17**	**Matrix:**	**SO**
Lab Sample ID:	**642223001**	**Date Received:**	**10/20/2023 09:30**	**%Moisture:**	**12.9**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289584**	**Method:**	**SW846 8015D**	**SOP Ref:**	**GL-OA-E-004**
Batch ID:	**2512723**	**Inst:**	**VOC4A.I**	**Dilution:**	**50**
Run Date:	**10/23/2023 12:53**	**Analyst:**	**PXY1**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/23/2023 09:31**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**102323\4C107.D**	**Column:**	**DB-MTBE**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
8006-61-9	Gasoline Range Organics	U	1910	ug/kg	1910	11500

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	6070	50.0	ug/kg	106	(51%-131%)

Quantitation Report
GEL Laboratories, LLC

10/24/2023

Data Path : C:\msdchem\1\data\102323\
Data File : 4C107.D
Signal(s) : FID1A.CH
Acq On : 23 Oct 2023 12:53
Operator : PXY1 InstName : VOC4A
Sample : |642223001|2512723|50|GROF|1|VOC8015D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 7 Sample Multiplier: 1

10/25/2023

Integration File: events.e
Quant Time: Oct 23 13:14:40 2023
Quant Method : C:\msdchem\1\data\102323\VOC8015C060723.m
Quant Title : GRO TPH SubList :
QLast Update : Fri Jun 09 12:38:36 2023
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 5 mL Purge Volume
Signal Phase : Durabond 30m x 0.53 ID x 3 um
Signal Info : DB-MTBE

Compound	Exp	R.T.	Delta	Response	Conc	Units
System Monitoring Compounds						
4) S Bromofluorobenzene	10.218	10.218	0.000	19480233	52.863	ug/L

Compound	Amount	Range	Recovery
4) Bromofluorobenzene	50.000	51 - 131	106%

Target Compounds						
3) H Gasoline Range Organics	Range	3.418 - 11.634		2708916	<MDL	ug/L
SemiQuant Compounds - Not Calibrated on this Instrument						
1) 2-Methylpentane	3.466	3.440	-0.026f	383683	NoCal	ug/L
2) 1,2,4-Trimethylbenzene	11.621	0.000	-11.621	0	N.D.	ug/L

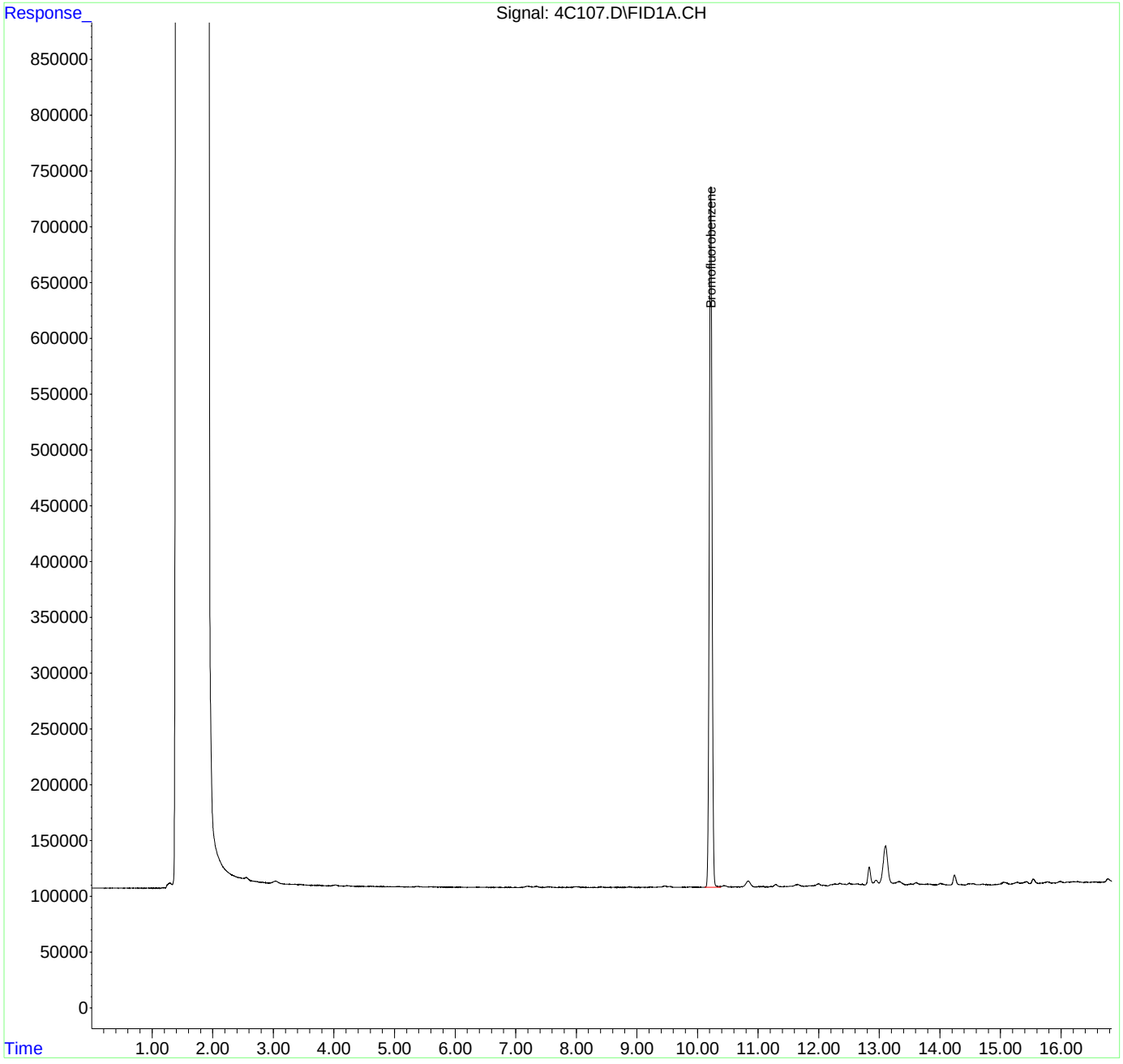
(f)=RT Delta > 1/2 Window (A) = Over the calibration range (d) = deleted (m)=manual int.

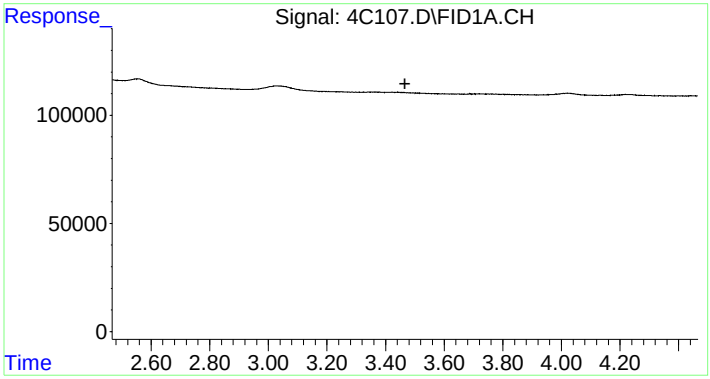
Quantitation Report
GEL Laboratories, LLC

DaData Path : C:\msdchem\1\data\102323\
DaData File : 4C107.D
Signal(s) : FID1A.CH
Acq On : 23 Oct 2023 12:53
Operator : PXY1 InstName : VOC4A
Sample : |642223001|2512723|50|GROF|1|VOC8015D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 7 Sample Multiplier: 1

Integration File: events.e
Quant Time: Oct 23 13:14:40 2023
Quant Method : C:\msdchem\1\data\102323\VOC8015C060723.m
Quant Title : GRO TPH SubList :
QLast Update : Fri Jun 09 12:38:36 2023
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

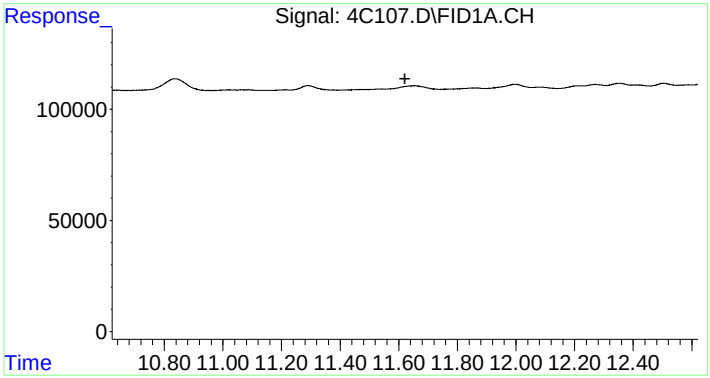
Volume Inj. : 5 mL Purge Volume
Signal Phase : Durabond 30m x 0.53 ID x 3 um
Signal Info : DB-MTBE





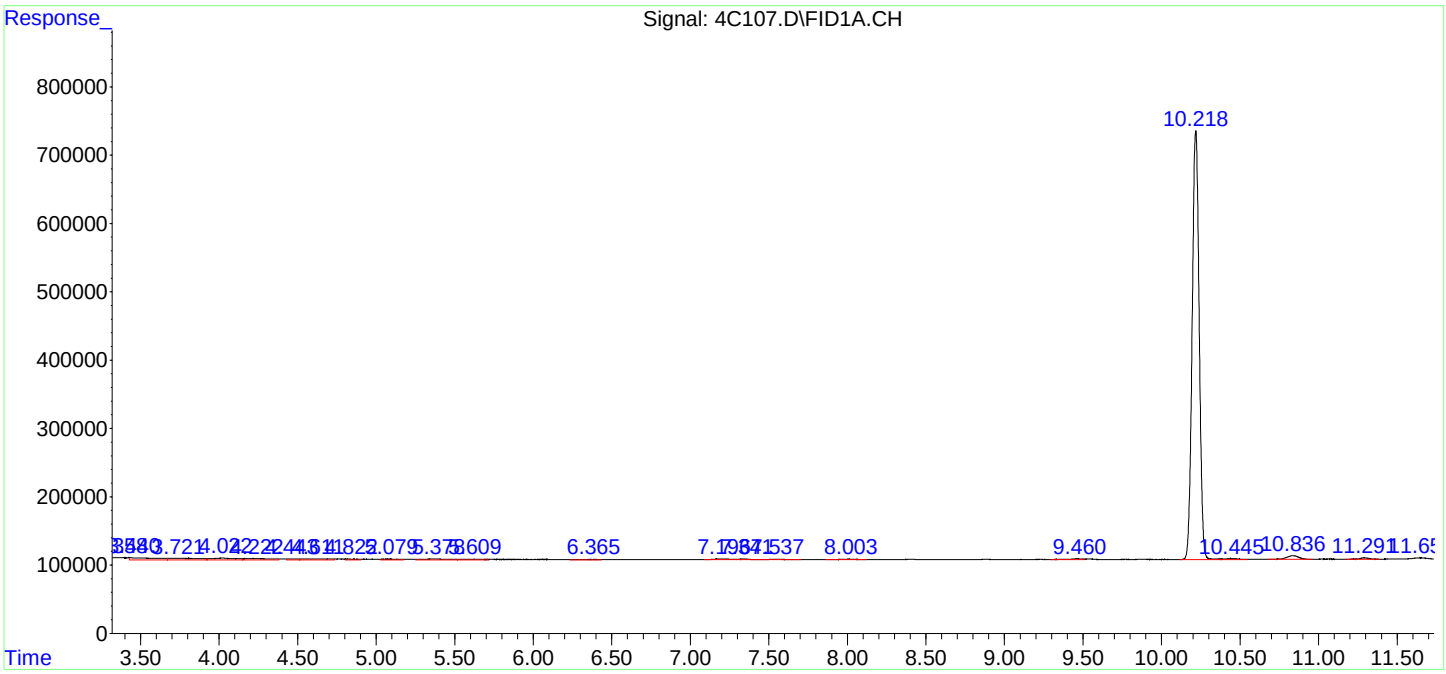
#1
2-Methylpentane
R.T.: 3.440 min
Delta R.T.: -0.026 min
Response: 383683
Conc: N.D.

SemiQuant



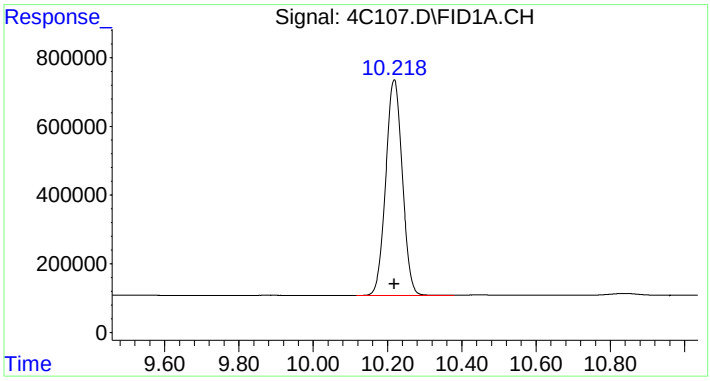
#2
1,2,4-Trimethylbenzene
R.T.: 0.000 min
Exp R.T. : 11.621 min
Response: 0
Conc: N.D.

SemiQuant



Compound: Gasoline Range Organics

RT Range: 3.418: 11.634
Total TPH Resp: 22189149
Total SMC/ISTD Resp: 19480233
Final Resp: 2708916



#4
Bromofluorobenzene
R.T.: 10.218 min
Delta R.T.: 0.000 min
Response: 19480233
Conc: 52.86 ug/L

GC Volatiles (GRO)
Certificate of Analysis
Sample Summary

SDG Number:	**2024-69**	**Date Collected:**	**10/10/2023 10:42**	**Matrix:**	**SO**
Lab Sample ID:	**642223002**	**Date Received:**	**10/20/2023 09:30**	**%Moisture:**	**5.1**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289585**	**Method:**	**SW846 8015D**	**SOP Ref:**	**GL-OA-E-004**
Batch ID:	**2512723**	**Inst:**	**VOC4A.I**	**Dilution:**	**50**
Run Date:	**10/23/2023 13:18**	**Analyst:**	**PXY1**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/23/2023 09:32**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**102323\4C108.D**	**Column:**	**DB-MTBE**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
8006-61-9	Gasoline Range Organics	U	1760	ug/kg	1760	10500

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	5300	50.0	ug/kg	101	(51%-131%)

Quantitation Report
GEL Laboratories, LLC

10/24/2023

Data Path : C:\msdchem\1\data\102323\
Data File : 4C108.D
Signal(s) : FID1A.CH
Acq On : 23 Oct 2023 13:18
Operator : PXY1 InstName : VOC4A
Sample : |642223002|2512723|50|GROF|1|VOC8015D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 8 Sample Multiplier: 1

10/25/2023

Integration File: events.e
Quant Time: Oct 23 14:40:03 2023
Quant Method : C:\msdchem\1\data\102323\VOC8015C060723.m
Quant Title : GRO TPH SubList :
QLast Update : Fri Jun 09 12:38:36 2023
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 5 mL Purge Volume
Signal Phase : Durabond 30m x 0.53 ID x 3 um
Signal Info : DB-MTBE

Compound	Exp	R.T.	Delta	Response	Conc	Units
System Monitoring Compounds						
4) S Bromofluorobenzene	10.218	10.217	-0.001	18542934	50.319	ug/L

Compound	Amount	Range	Recovery
4) Bromofluorobenzene	50.000	51 - 131	101%

Target Compounds						
3) H Gasoline Range Organics	Range	3.418 - 11.634		2497518	<MDL	ug/L
SemiQuant Compounds - Not Calibrated on this Instrument						
1) 2-Methylpentane	3.466	0.000	-3.466	0	N.D.	ug/L
2) 1,2,4-Trimethylbenzene	11.621	11.642	0.021f	160685	NoCal	ug/L

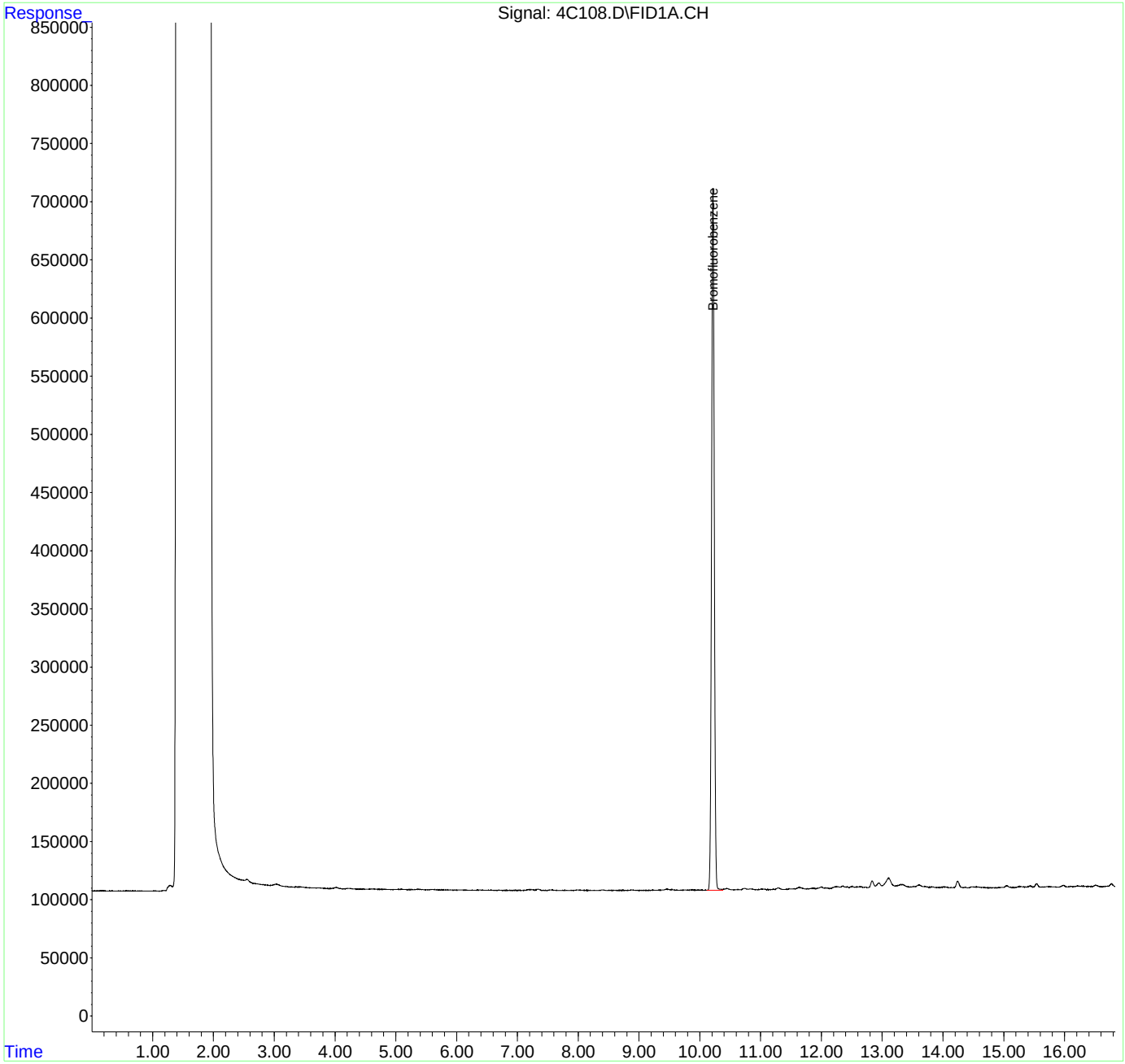
(f)=RT Delta > 1/2 Window (A) = Over the calibration range (d) = deleted (m)=manual int.

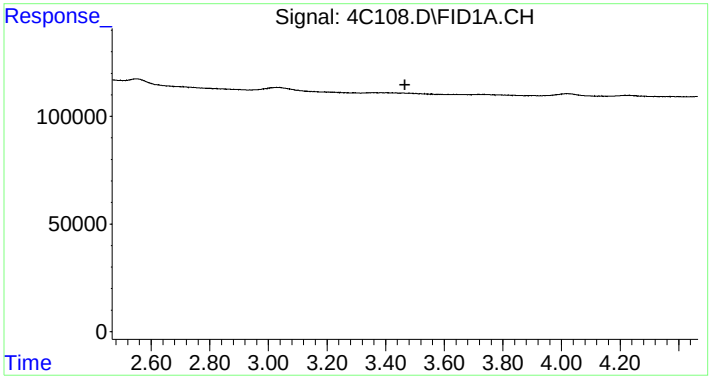
Quantitation Report
GEL Laboratories, LLC

DaData Path : C:\msdchem\1\data\102323\
DaData File : 4C108.D
Signal(s) : FID1A.CH
Acq On : 23 Oct 2023 13:18
Operator : PXY1 InstName : VOC4A
Sample : |642223002|2512723|50|GROF|1|VOC8015D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 8 Sample Multiplier: 1

Integration File: events.e
Quant Time: Oct 23 14:40:03 2023
Quant Method : C:\msdchem\1\data\102323\VOC8015C060723.m
Quant Title : GRO TPH SubList :
QLast Update : Fri Jun 09 12:38:36 2023
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

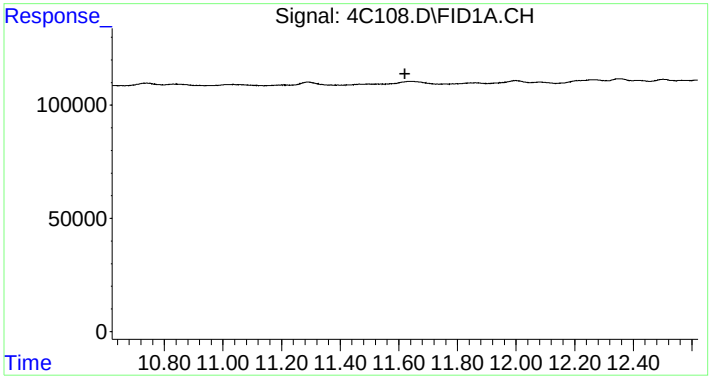
Volume Inj. : 5 mL Purge Volume
Signal Phase : Durabond 30m x 0.53 ID x 3 um
Signal Info : DB-MTBE





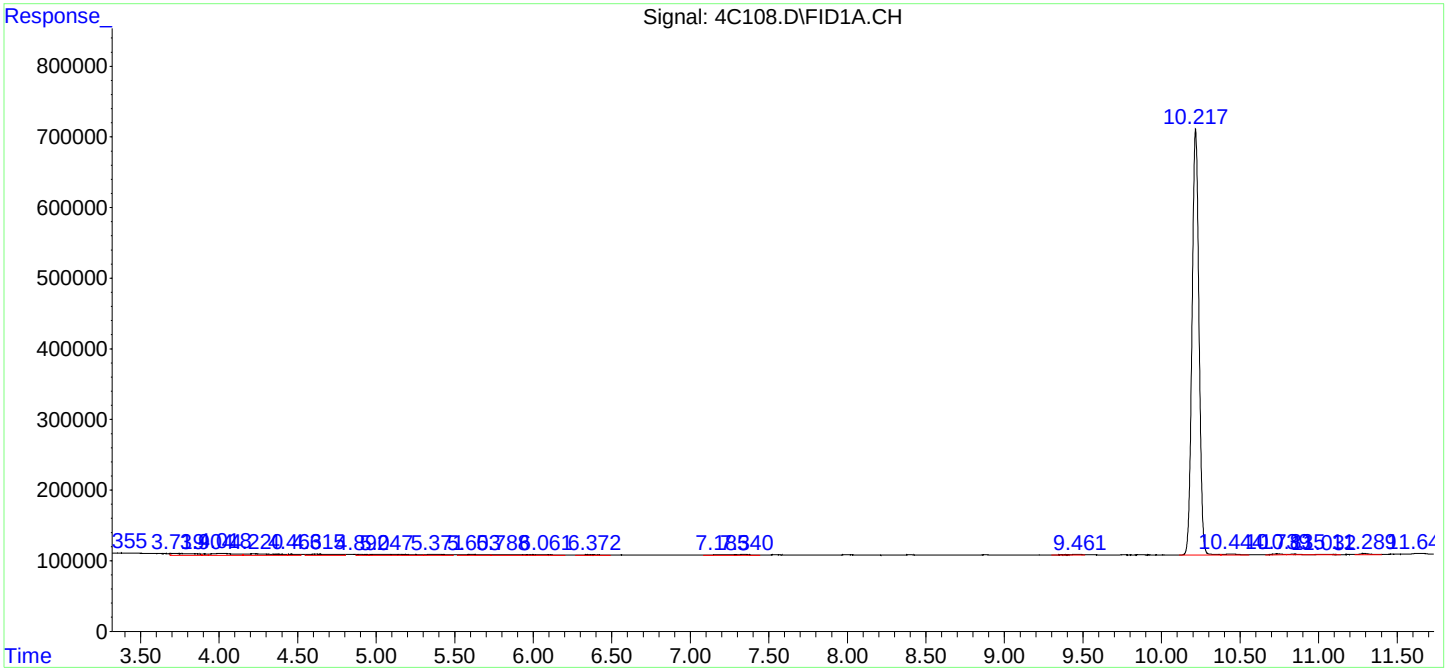
#1
2-Methylpentane
R.T.: 0.000 min
Exp R.T. : 3.466 min
Response: 0
Conc: N.D.

SemiQuant



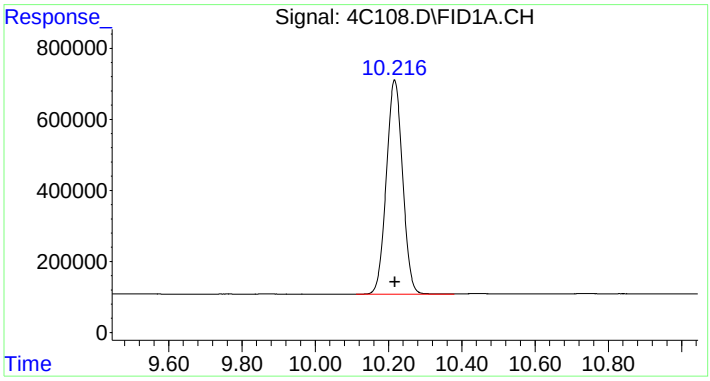
#2
1,2,4-Trimethylbenzene
R.T.: 11.642 min
Delta R.T.: 0.021 min
Response: 160685
Conc: N.D.

SemiQuant



Compound: Gasoline Range Organics

RT Range:	3.418: 11.634
Total TPH Resp:	21040452
Total SMC/ISTD Resp:	18542934
Final Resp:	2497518



#4
Bromofluorobenzene

R.T.:	10.217 min
Delta R.T.:	-0.001 min
Response:	18542934
Conc:	50.32 ug/L

GC Volatiles (GRO)
Certificate of Analysis
Sample Summary

SDG Number:	**2024-69**	**Date Collected:**	**10/10/2023 10:57**	**Matrix:**	**SO**
Lab Sample ID:	**642223003**	**Date Received:**	**10/20/2023 09:30**	**%Moisture:**	**7.7**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289586**	**Method:**	**SW846 8015D**	**SOP Ref:**	**GL-OA-E-004**
Batch ID:	**2512723**	**Inst:**	**VOC4A.I**	**Dilution:**	**50**
Run Date:	**10/23/2023 13:43**	**Analyst:**	**PXY1**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/23/2023 09:33**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**102323\4C109.D**	**Column:**	**DB-MTBE**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
8006-61-9	Gasoline Range Organics	J	1920	ug/kg	1810	10800

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	5560	50.0	ug/kg	103	(51%-131%)

10/24/2023

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\102323\
Data File : 4C109.D
Signal(s) : FID1A.CH
Acq On : 23 Oct 2023 13:43
Operator : PXY1 InstName : VOC4A
Sample : |642223003|2512723|50|GROF|1|VOC8015D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 9 Sample Multiplier: 1

10/25/2023

Integration File: events.e
Quant Time: Oct 23 14:40:20 2023
Quant Method : C:\msdchem\1\data\102323\VOC8015C060723.m
Quant Title : GRO TPH SubList :
QLast Update : Fri Jun 09 12:38:36 2023
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 5 mL Purge Volume
Signal Phase : Durabond 30m x 0.53 ID x 3 um
Signal Info : DB-MTBE

Compound	Exp	R.T.	Delta	Response	Conc	Units
System Monitoring Compounds						
4) S Bromofluorobenzene	10.218	10.218	0.000	18901544	51.293	ug/L

Compound	Amount	Range	Recovery
4) Bromofluorobenzene	50.000	51 - 131	103%

Target Compounds						
3) H Gasoline Range Organics	Range	3.418 - 11.634		6310504	17.726	ug/L
SemiQuant Compounds - Not Calibrated on this Instrument						
1) 2-Methylpentane	3.466	0.000	-3.466	0	N.D.	ug/L
2) 1,2,4-Trimethylbenzene	11.621	0.000	-11.621	0	N.D.	ug/L

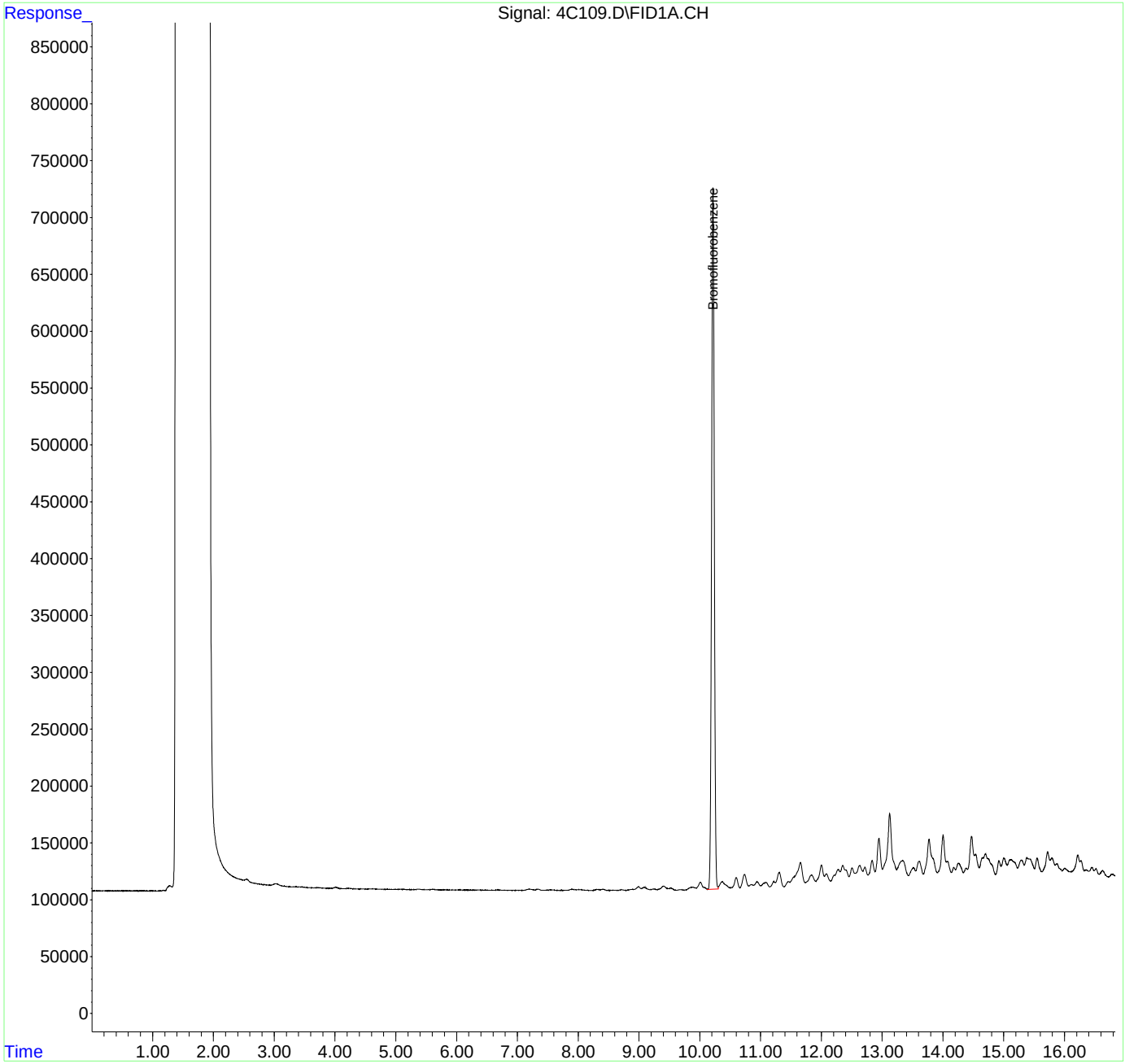
(f)=RT Delta > 1/2 Window (A) = Over the calibration range (d) = deleted (m)=manual int.

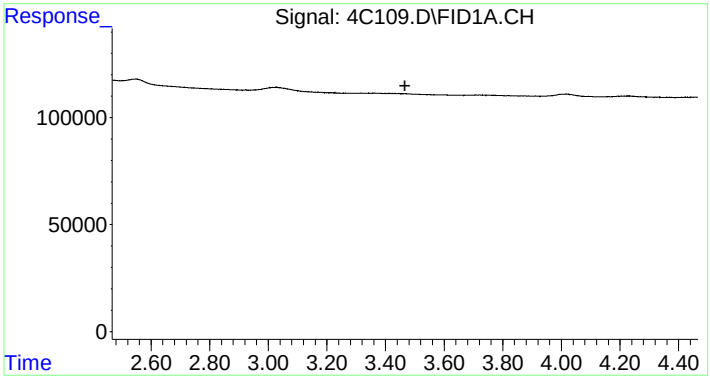
Quantitation Report
GEL Laboratories, LLC

DaData Path : C:\msdchem\1\data\102323\
DaData File : 4C109.D
Signal(s) : FID1A.CH
Acq On : 23 Oct 2023 13:43
Operator : PXY1 InstName : VOC4A
Sample : |642223003|2512723|50|GROF|1|VOC8015D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 9 Sample Multiplier: 1

Integration File: events.e
Quant Time: Oct 23 14:40:20 2023
Quant Method : C:\msdchem\1\data\102323\VOC8015C060723.m
Quant Title : GRO TPH SubList :
QLast Update : Fri Jun 09 12:38:36 2023
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

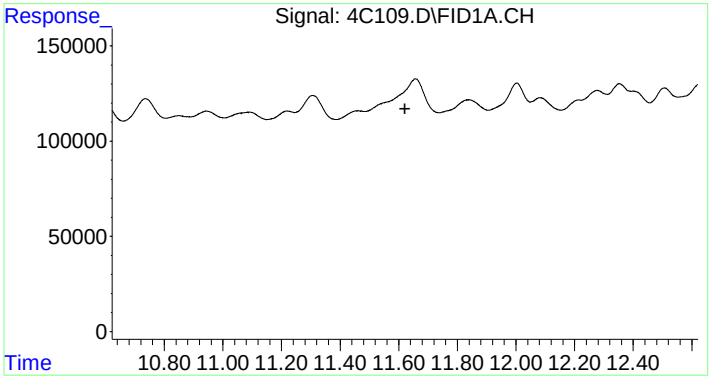
Volume Inj. : 5 mL Purge Volume
Signal Phase : Durabond 30m x 0.53 ID x 3 um
Signal Info : DB-MTBE





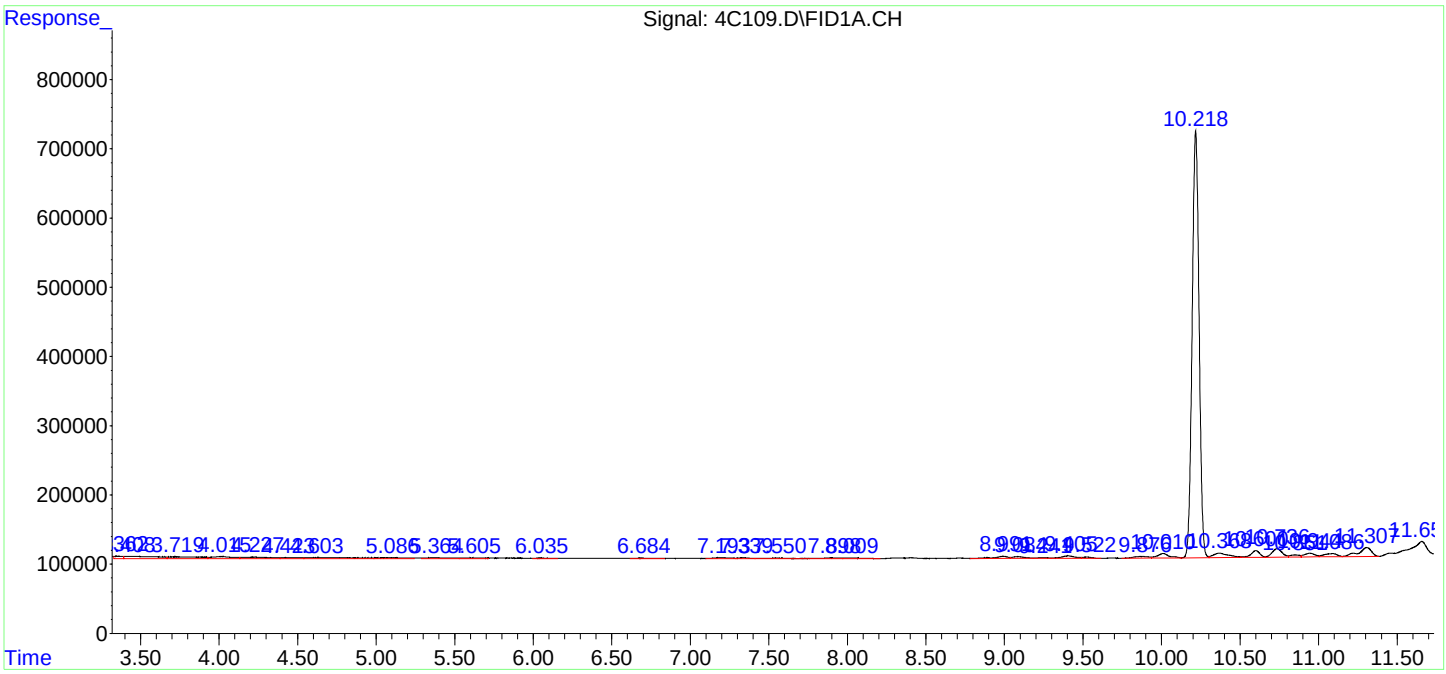
#1
2-Methylpentane
R.T.: 0.000 min
Exp R.T. : 3.466 min
Response: 0
Conc: N.D.

SemiQuant



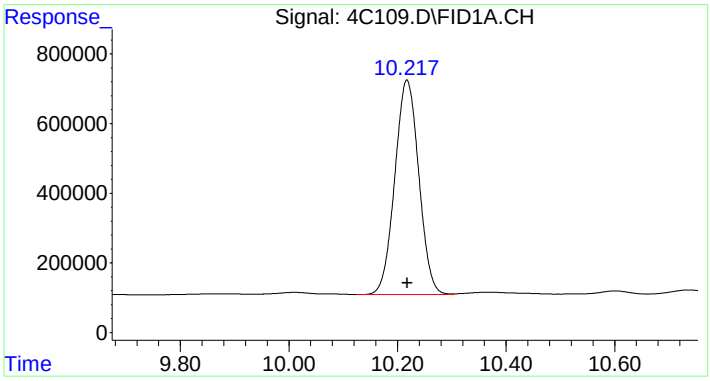
#2
1,2,4-Trimethylbenzene
R.T.: 0.000 min
Exp R.T. : 11.621 min
Response: 0
Conc: N.D.

SemiQuant



Compound: Gasoline Range Organics

RT Range:	3.418: 11.634
Total TPH Resp:	25212048
Total SMC/ISTD Resp:	18901544
Final Resp:	6310504



#4
Bromofluorobenzene

R.T.:	10.218 min
Delta R.T.:	0.000 min
Response:	18901544
Conc:	51.29 ug/L

GC Volatiles (GRO)
Certificate of Analysis
Sample Summary

SDG Number:	**2024-69**	**Date Collected:**	**10/10/2023 11:17**	**Matrix:**	**SO**
Lab Sample ID:	**642223004**	**Date Received:**	**10/20/2023 09:30**	**%Moisture:**	**5.5**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289587**	**Method:**	**SW846 8015D**	**SOP Ref:**	**GL-OA-E-004**
Batch ID:	**2512723**	**Inst:**	**VOC4A.I**	**Dilution:**	**50**
Run Date:	**10/23/2023 14:08**	**Analyst:**	**PXY1**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/23/2023 09:34**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**102323\4C110.D**	**Column:**	**DB-MTBE**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
8006-61-9	Gasoline Range Organics	U	1760	ug/kg	1760	10600

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	5270	50.0	ug/kg	100	(51%-131%)

Quantitation Report
GEL Laboratories, LLC

10/24/2023

Data Path : C:\msdchem\1\data\102323\
Data File : 4C110.D
Signal(s) : FID1A.CH
Acq On : 23 Oct 2023 14:08
Operator : PXY1 InstName : VOC4A
Sample : |642223004|2512723|50|GROF|1|VOC8015D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 10 Sample Multiplier: 1

10/25/2023

Integration File: events.e
Quant Time: Oct 23 14:40:34 2023
Quant Method : C:\msdchem\1\data\102323\VOC8015C060723.m
Quant Title : GRO TPH SubList :
QLast Update : Fri Jun 09 12:38:36 2023
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 5 mL Purge Volume
Signal Phase : Durabond 30m x 0.53 ID x 3 um
Signal Info : DB-MTBE

Compound	Exp	R.T.	Delta	Response	Conc	Units
System Monitoring Compounds						
4) S Bromofluorobenzene	10.218	10.217	-0.001	18369511	49.849	ug/L

Compound	Amount	Range	Recovery
4) Bromofluorobenzene	50.000	51 - 131	100%

Target Compounds						
3) H Gasoline Range Organics	Range	3.418 - 11.634		2766033	<MDL	ug/L
SemiQuant Compounds - Not Calibrated on this Instrument						
1) 2-Methylpentane	3.466	0.000	-3.466	0	N.D.	ug/L
2) 1,2,4-Trimethylbenzene	11.621	0.000	-11.621	0	N.D.	ug/L

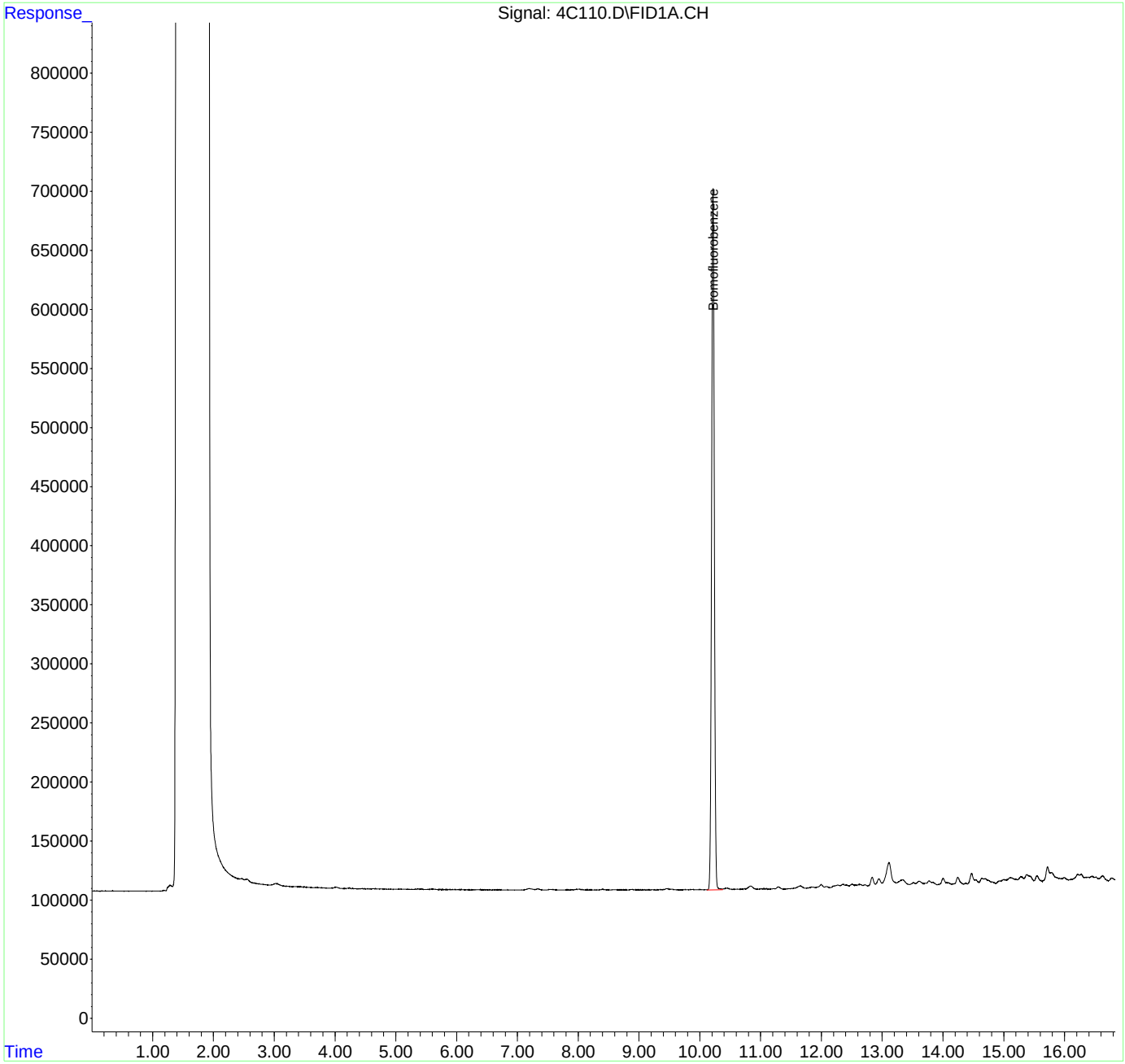
(f)=RT Delta > 1/2 Window (A) = Over the calibration range (d) = deleted (m)=manual int.

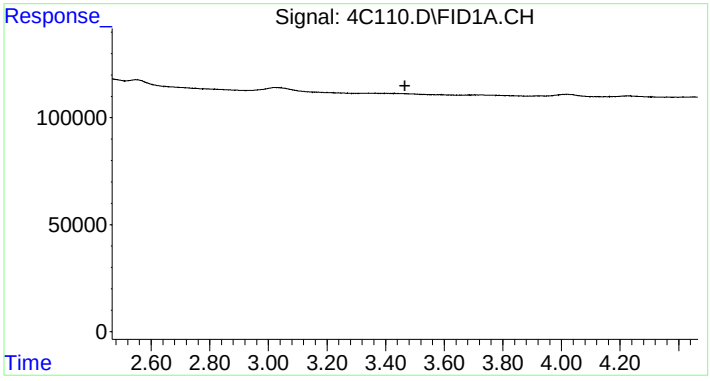
Quantitation Report
GEL Laboratories, LLC

DaData Path : C:\msdchem\1\data\102323\
DaData File : 4C110.D
Signal(s) : FID1A.CH
Acq On : 23 Oct 2023 14:08
Operator : PXY1 InstName : VOC4A
Sample : |642223004|2512723|50|GROF|1|VOC8015D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 10 Sample Multiplier: 1

Integration File: events.e
Quant Time: Oct 23 14:40:34 2023
Quant Method : C:\msdchem\1\data\102323\VOC8015C060723.m
Quant Title : GRO TPH SubList :
QLast Update : Fri Jun 09 12:38:36 2023
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

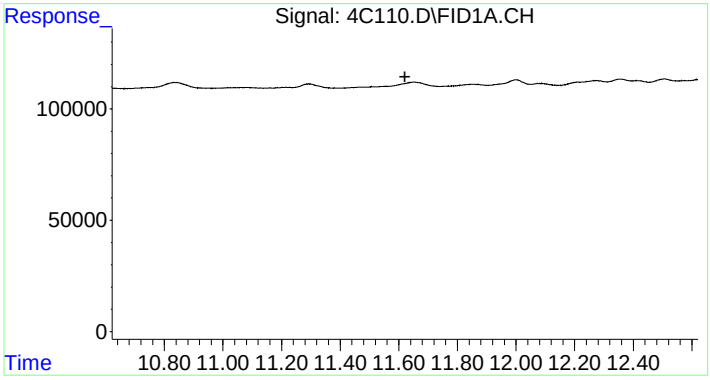
Volume Inj. : 5 mL Purge Volume
Signal Phase : Durabond 30m x 0.53 ID x 3 um
Signal Info : DB-MTBE





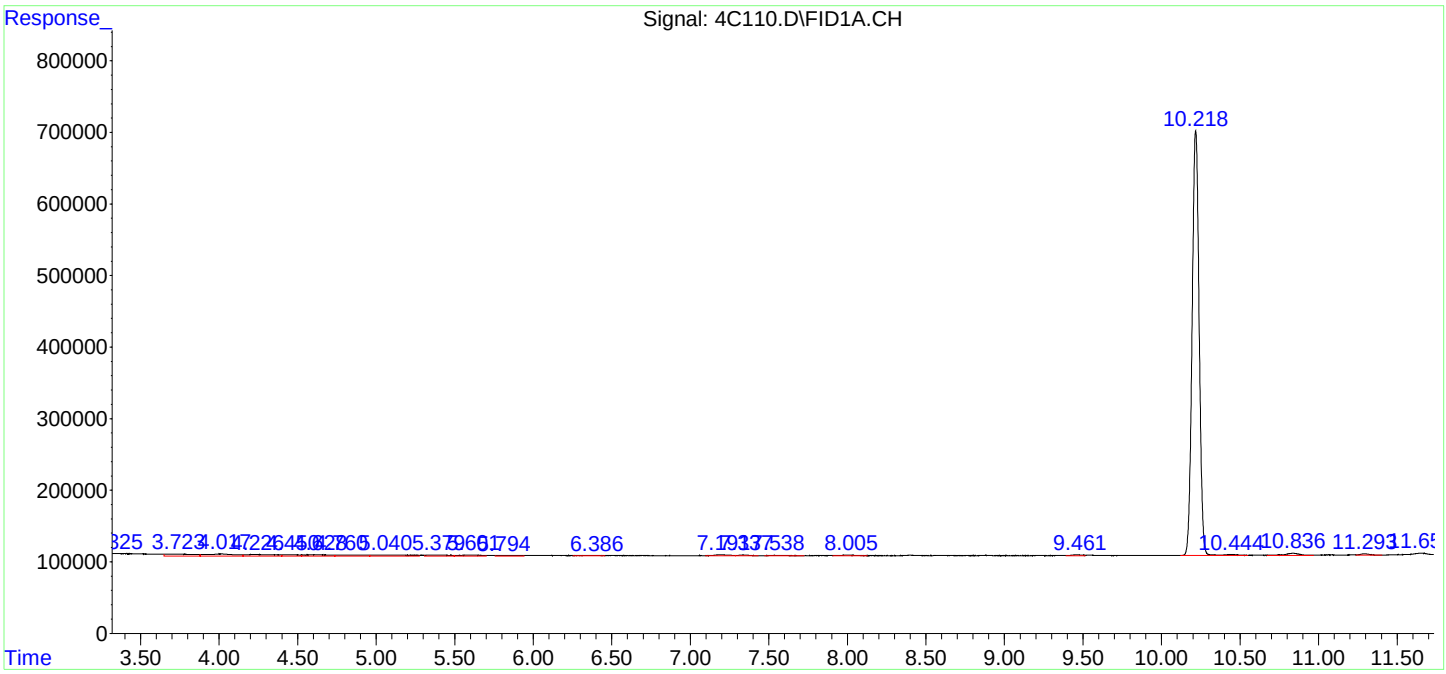
#1
2-Methylpentane
R.T.: 0.000 min
Exp R.T. : 3.466 min
Response: 0
Conc: N.D.

SemiQuant



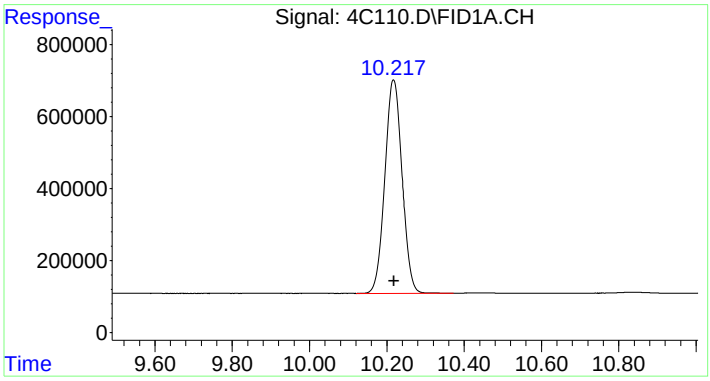
#2
1,2,4-Trimethylbenzene
R.T.: 0.000 min
Exp R.T. : 11.621 min
Response: 0
Conc: N.D.

SemiQuant



Compound: Gasoline Range Organics

RT Range: 3.418: 11.634
Total TPH Resp: 21135544
Total SMC/ISTD Resp: 18369511
Final Resp: 2766033



#4
Bromofluorobenzene
R.T.: 10.217 min
Delta R.T.: 0.000 min
Response: 18369511
Conc: 49.85 ug/L

GC Volatiles (GRO)
Certificate of Analysis
Sample Summary

SDG Number:	**2024-69**	**Date Collected:**	**10/10/2023 11:36**	**Matrix:**	**SO**
Lab Sample ID:	**642223005**	**Date Received:**	**10/20/2023 09:30**	**%Moisture:**	**13.4**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289588**	**Method:**	**SW846 8015D**	**SOP Ref:**	**GL-OA-E-004**
Batch ID:	**2512723**	**Inst:**	**VOC4A.I**	**Dilution:**	**50**
Run Date:	**10/23/2023 14:32**	**Analyst:**	**PXY1**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/23/2023 09:35**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**102323\4C111.D**	**Column:**	**DB-MTBE**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
8006-61-9	Gasoline Range Organics	U	1920	ug/kg	1920	11500

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	5830	50.0	ug/kg	101	(51%-131%)

Quantitation Report
GEL Laboratories, LLC

10/24/2023

Data Path : C:\msdchem\1\data\102323\
Data File : 4C111.D
Signal(s) : FID1A.CH
Acq On : 23 Oct 2023 14:32
Operator : PXY1 InstName : VOC4A
Sample : |642223005|2512723|50|GROF|1|VOC8015D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 11 Sample Multiplier: 1

10/25/2023

Integration File: events.e
Quant Time: Oct 23 15:17:29 2023
Quant Method : C:\msdchem\1\data\102323\VOC8015C060723.m
Quant Title : GRO TPH SubList :
QLast Update : Fri Jun 09 12:38:36 2023
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 5 mL Purge Volume
Signal Phase : Durabond 30m x 0.53 ID x 3 um
Signal Info : DB-MTBE

Compound	Exp	R.T.	Delta	Response	Conc	Units
System Monitoring Compounds						
4) S Bromofluorobenzene	10.218	10.218	0.000	18610780	50.504	ug/L

Compound	Amount	Range	Recovery
4) Bromofluorobenzene	50.000	51 - 131	101%

Target Compounds						
3) H Gasoline Range Organics	Range	3.418 - 11.634		2970213	<MDL	ug/L
SemiQuant Compounds - Not Calibrated on this Instrument						
1) 2-Methylpentane	3.466	0.000	-3.466	0	N.D.	ug/L
2) 1,2,4-Trimethylbenzene	11.621	11.650	0.029f	191915	NoCal	ug/L

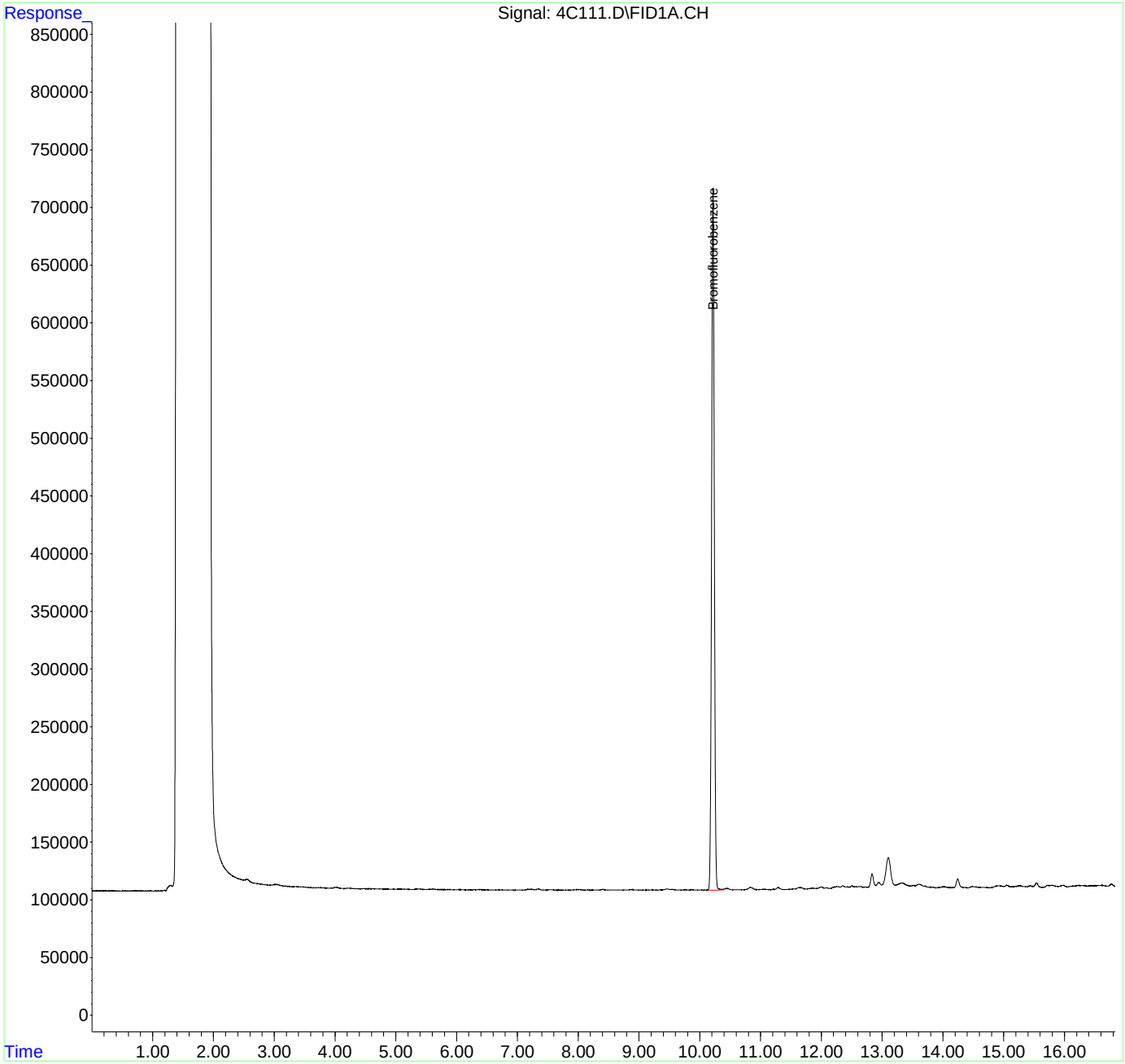
(f)=RT Delta > 1/2 Window (A) = Over the calibration range (d) = deleted (m)=manual int.

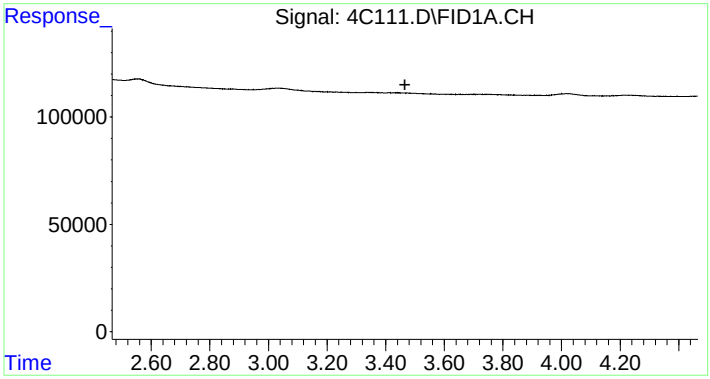
Quantitation Report
GEL Laboratories, LLC

DaData Path : C:\msdchem\1\data\102323\
DaData File : 4C111.D
Signal(s) : FID1A.CH
Acq On : 23 Oct 2023 14:32
Operator : PXY1 InstName : VOC4A
Sample : |642223005|2512723|50|GROF|1|VOC8015D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 11 Sample Multiplier: 1

Integration File: events.e
Quant Time: Oct 23 15:17:29 2023
Quant Method : C:\msdchem\1\data\102323\VOC8015C060723.m
Quant Title : GRO TPH SubList :
QLast Update : Fri Jun 09 12:38:36 2023
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

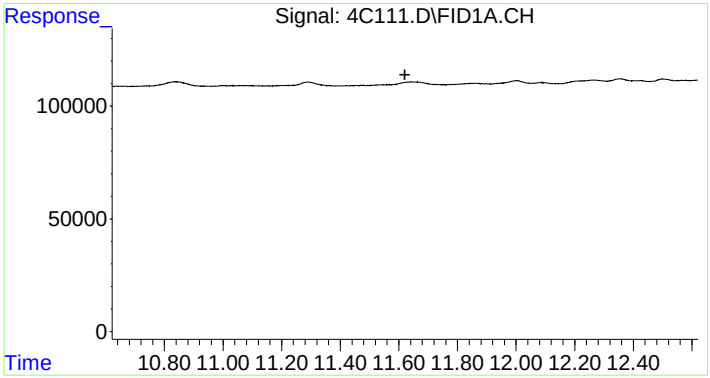
Volume Inj. : 5 mL Purge Volume
Signal Phase : Durabond 30m x 0.53 ID x 3 um
Signal Info : DB-MTBE





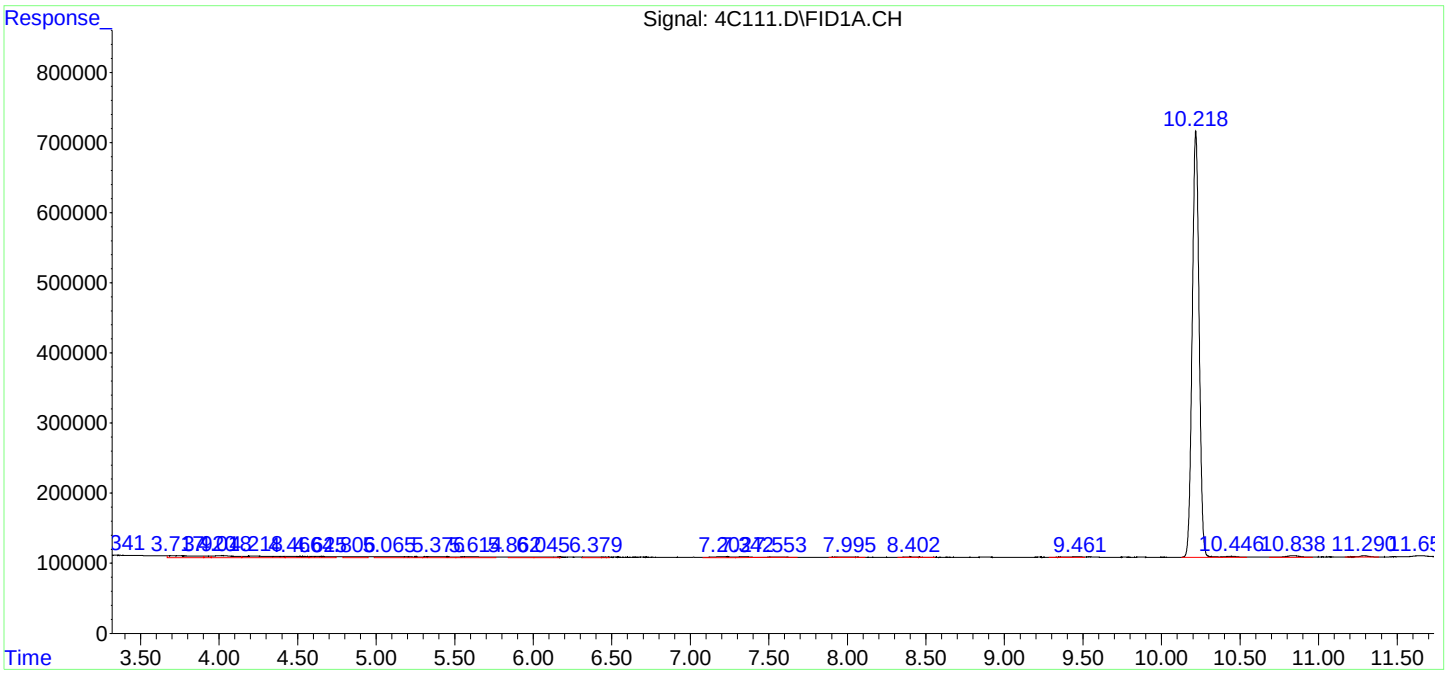
#1
2-Methylpentane
R.T.: 0.000 min
Exp R.T. : 3.466 min
Response: 0
Conc: N.D.

SemiQuant



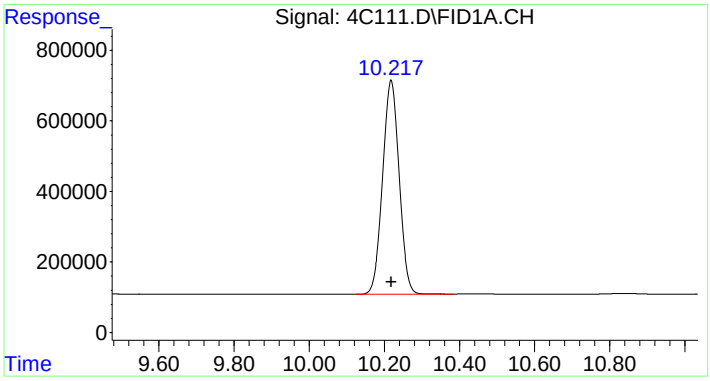
#2
1,2,4-Trimethylbenzene
R.T.: 11.650 min
Delta R.T.: 0.029 min
Response: 191915
Conc: N.D.

SemiQuant



Compound: Gasoline Range Organics

RT Range: 3.418: 11.634
Total TPH Resp: 21580992
Total SMC/ISTD Resp: 18610780
Final Resp: 2970213



#4
Bromofluorobenzene
R.T.: 10.218 min
Delta R.T.: 0.000 min
Response: 18610780
Conc: 50.50 ug/L

Miscellaneous

Prep Logbook

Volatile Total Petroleum Hydrocarbons by Flame Ionization Detector

Batch ID: **2512720**
Analyst: Patrick Yib
Method: SW846 5035A
Lab SOP: GL-OA-E-004 REV# 31
Instrument: VOAB-003 OH AUS Balance

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units

Sample ID	Prep Date	Matrix	Initial Weight (g)	Final Volume (mL)	Prep Factor (mL/g)	pH Check
1205554028 LCS	23-OCT-2023 09:00:00	Soil	5	5	1	N/A
1205554029 MB	23-OCT-2023 09:01:00	Soil	5	5	1	N/A
1205554030 HB	23-OCT-2023 09:30:00	Soil	5	10	2	N/A
642223001	23-OCT-2023 09:31:00	Soil	5	10	2	N/A
1205554031 PS (642223001)	23-OCT-2023 09:31:00	Soil	5	10	2	N/A
1205554032 PSD (642223001)	23-OCT-2023 09:31:00	Soil	5	10	2	N/A
642223002	23-OCT-2023 09:32:00	Soil	5	10	2	N/A
642223003	23-OCT-2023 09:33:00	Soil	5	10	2	N/A
642223004	23-OCT-2023 09:34:00	Soil	5	10	2	N/A
642223005	23-OCT-2023 09:35:00	Soil	5	10	2	N/A

Reagent/Solvent Lot ID	Description	Amount

Comments:

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOC4A

JEB 06/09/2023

KP 06/12/2023

Date: 6/7/2023 Method 8015/TPHGx Operator: JEB

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 1 Daily Instrument Readings:

Multiplier Voltage: N/A

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 6/7/2023

(See pg. 1 for ICAL Std. Ids)

NaHSO4 lot # N/A

Cl test lot # N/A

Sequence Number: 060723VG

Daily Standard Solution ID#		Volume Added for Purge (ul) Blk/Smpl	CCV	MS/LCS	RT
CCV	N/A		5		
IS	N/A				
SS	UVG230317-02B	2.5	2.5	2.5	2.5
LCS/MS	N/A			5	
RTCHECK	WVG230607-01,05,10				5+5

Purge Amount	
5mL	Water Purge Vol:
N/A	Soil Purge Wt.
N/A	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
X	Heated Purge

Analysis Date Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable(O/X)	Comments
6/7/2023 8:29	4S301.D	WVG230607-01	RT	RTCHECK	5ML	1	N/A	1	w	JEB	N/A	O	UVG230317-01A/UVG220519-01B
6/7/2023 8:55	4S302.D	WVG230607-02	VSTD100	ICAL	5ML	1	N/A	2	w	JEB	N/A	O	IVG230522-01
6/7/2023 9:20	4S303.D	WVG230607-03	VSTD250	ICAL	5ML	1	N/A	3	w	JEB	N/A	O	IVG230522-01
6/7/2023 9:45	4S304.D	WVG230607-04	VSTD500	ICAL	5ML	1	N/A	4	w	JEB	N/A	O	IVG230522-01
6/7/2023 10:10	4S305.D	WVG230607-05	RT	RTCHECK	5ML	1	N/A	5	w	JEB	N/A	O	UVG230317-01A/UVG220519-01B
6/7/2023 10:35	4S306.D	WVG230607-06	VSTD750	ICAL	5ML	1	N/A	6	w	JEB	N/A	O	IVG230522-01
6/7/2023 11:00	4S307.D	WVG230607-07	VSTD1000	ICAL	5ML	1	N/A	7	w	JEB	N/A	O	IVG230522-01
6/7/2023 11:25	4S308.D	WVG230607-08	VSTD2000	ICAL	5ML	1	N/A	8	w	JEB	N/A	O	IVG230522-01
6/7/2023 12:23	4S309.D	1205----------	blk	BLK	5ML	1	N/A	9	w	JEB	N/A	x	
6/7/2023 13:29	4S310.D	WVG230607-09	ICV500	ICV	5ML	1	N/A	10	w	JEB	N/A	O	IVG230522-02
6/7/2023 13:55	4S311.D	WVG230607-10	RT	RTCHECK	5ML	1	N/A	11	w	JEB	N/A	O	UVG230317-01A/UVG220519-01B

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOC4A

10/24/2023
10/25/2023

Date: 10/23/2023 Method 8015/TPHGx Operator: PXY1

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 1 Daily Instrument Readings:

Multiplier Voltage: N/A

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 6/7/2023 Daily Standard Volume Added for Purge (ul)

	Solution ID#	Blk/ Smpl	CCV	MS/ LCS	RT
(See pg. 1 for ICAL Std. Ids)	CCV WVG231023-02		5		
	IS N/A				
NaHSO4 lot # N/A	SS UVG230829-01B	2.5	2.5	2.5	2.5
	LCS/MS WVG231023-02/-03			5	
Cl test lot # N/A	RTCHECK WVG231023-01				5+5
Sequence Number: 102323V4A					

Purge Amount

5mL	Water Purge Vol:
N/A	Soil Purge Wt.
N/A	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
X	Heated Purge

Analysis Date Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable(O/X)	Comments
10/23/2023 10:22	4C101.D	WVG231023-01	GEL	RTCHECK	5ML	1	N/A	1	W	PXY1	N/A	O	UVM220529-01A/UVG230317-01B
10/23/2023 10:48	4C102.D	WVG231023-02	GEL	CCV	5ML	1	N/A	2	W	PXY1	N/A	O	IVG230927-02
10/23/2023 11:13	4C103.D	WVG231023-03	GEL	LCS	5ML	1	N/A	3	S	PXY1	N/A	O	SOIL IVG230927-02
10/23/2023 11:38	4C104.D	1205----------	GEL	BLK	5ML	1	N/A	4	W	PXY1	N/A	O	
10/23/2023 12:03	4C105.D	1205----------	GEL	BLK	5G	1	N/A	5	S	PXY1	N/A	O	SOIL
10/23/2023 12:28	4C106.D	1205554030	GEL	2512723	5.0G/100UL	50	N/A	6	S	PXY1	N/A	O	SOIL HB
10/23/2023 12:53	4C107.D	642223001	TNSL	2512723	5.0G/100UL	50	N/A	7	S	PXY1	N/A	O	SOIL
10/23/2023 13:18	4C108.D	642223002	TNSL	2512723	5.0G/100UL	50	N/A	8	S	PXY1	N/A	O	SOIL
10/23/2023 13:43	4C109.D	642223003	TNSL	2512723	5.0G/100UL	50	N/A	9	S	PXY1	N/A	O	SOIL
10/23/2023 14:08	4C110.D	642223004	TNSL	2512723	5.0G/100UL	50	N/A	10	S	PXY1	N/A	O	SOIL
10/23/2023 14:32	4C111.D	642223005	TNSL	2512723	5.0G/100UL	50	N/A	11	S	PXY1	N/A	O	SOIL
10/23/2023 14:58	4C112.D	1205552357	LLNL	2511798	100UL	50	N/A	12	W	PXY1	N/A	O	SOIL 5G/10ML
10/23/2023 15:23	4C113.D	1205552358	LLNL	2511798	100UL	50	N/A	13	W	PXY1	N/A	O	SOIL 5G/10ML
10/23/2023 15:48	4C114.D	1205554031	TNSL	2512723	5.0G/100UL	50	N/A	14	S	PXY1	N/A	O	SOIL 642223001PS
10/23/2023 16:12	4C115.D	1205554032	TNSL	2512723	5.0G/100UL	50	N/A	15	S	PXY1	N/A	O	SOIL 642223001PSD
10/23/2023 16:37	4C116.D	WVG231023-04	GEL	CCV	5ML	1	N/A	16	W	PXY1	N/A	O	
10/23/2023 17:02	4C117.D	642056001	SNLS	2511745	5ML	1	PH7	17	W	PXY1	N	O	
10/23/2023 17:28	4C118.D	642056004	SNLS	2511745	5ML	1	PH7	18	W	PXY1	N	O	
10/23/2023 17:53	4C119.D	642056005	SNLS	2511745	5ML	1	PH7	19	W	PXY1	N	O	
10/23/2023 18:18	4C120.D	642056008	SNLS	2511745	5ML	1	PH7	20	W	PXY1	N	O	
10/23/2023 18:43	4C121.D	1205554762	GEL	2512995	5.0G/100UL	50	N/A	21	S	PXY1	N/A	O	SOIL HB
10/23/2023 19:08	4C122.D	641891001	CPRC	2512995	5.0G/100UL	50	N/A	22	S	PXY1	N/A	O	SOIL
10/23/2023 19:33	4C123.D	1205554763	CPRC	2512995	5.0G/100UL	50	N/A	23	S	PXY1	N/A	O	SOIL 641891001PS
10/23/2023 19:58	4C124.D	1205554764	CPRC	2512995	5.0G/100UL	50	N/A	24	S	PXY1	N/A	O	SOIL 641891001PSD
10/23/2023 20:23	4C125.D	WVG231023-05	GEL	CCV	5ML	1	N/A	25	W	PXY1	N/A	O	

The order of this data package is as follows:

1. Chain-of-Custody/Lab Request
2. Copies of field COCs
3. Shipping Classification Determination Checklist
4. Data Review Summary (generated in EIM)
5. Laboratory analysis

Comments:

General Engineering Laboratories, Inc., Charleston, SC.

Charleston SC

Chain of Custody/Analysis Request

COC/Lab Request #: 2024-76

Client Contact:

Lab Agreement #: 620266

Project Number: LANL

Site Name: Los Alamos National Laboratory

Analysis Turnaround Time:

24 Hour - ☐ Other - ☒

7 Days - ☐ Value - 5-Day

14 Days - ☐

21 Days - ☐

28 Days - ☐

Total # of bottles: 22

Event ID: 15356

Rad Screening Info: Acceptable knowledge identifies no DOT hazard classification

Lab Reporting Limit Type: Method Detection Limit

Field Sample ID	Sample Date	Sample Time	Sample Matrix	8260B	8260B Trip Blank	BTEX + TPH-GRO	TPH-DRO+Motor Oil
RLUOB-23-289589	10/19/2023	10:15	SO			1	1
RLUOB-23-289590	10/19/2023	10:32	SO			1	1
RLUOB-23-289591	10/19/2023	10:52	SO			1	1
RLUOB-23-289592	10/19/2023	11:09	SO			1	1
RLUOB-23-289593	10/19/2023	11:45	SO			1	1
RLUOB-23-289594	10/19/2023	12:00	SO			1	1
RLUOB-23-289595	10/19/2023	12:15	SO			1	1
RLUOB-23-289596	10/19/2023	12:47	SO			1	1
RLUOB-23-302822	10/19/2023	10:15	SO		2		
RLUOB-23-302827	10/19/2023	14:04	W	2			
RLUOB-23-302828	10/19/2023	14:16	W	2			

Special Instructions:

Relinquished by:	Print Name: Elisa Mc	Date/Time: 10/19/23 1500	Received by:	Print Name:	Date/Time:
Relinquished by:	Print Name:	Date/Time:	Received by:	Print Name:	Date/Time:
Relinquished by:	Print Name:	Date/Time:	Received by:	Print Name:	Date/Time:

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 15356 **EVENT NAME:** RLUOB Diesel Tank Removal

SAMPLE ID: RLUOB-23-289589 **WORK ORDER:**

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYYY):		10/19/'23	FIELD MATRIX:	S	S
TIME COLLECTED (HH:MM):		10:18 10:15	MEDIA:	SOIL	SOIL
SWMU/AOC:		TA-55	SAMPLE TECH CODE:	CBS	CBS
LOCATION ID:	55-22349	PRS-1	FIELD PREP:	NA	NA
LOCATION TYPE:	GENERIC	GENERIC	FIELD QC TYPE:	REG	REG
TOP DEPTH:		07" BGS	SAMPLE USAGE:	INV	INV
BOTTOM DEPTH:		33" BGS	EXCAVATED:		YES / (NO) / NA

PRIORITY	ORDER	CONTAINER	#	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
5-DAY T/A	BTEX + TPH-GRO	~~2" x 6" SS 125 ML GLASS~~	1/2	ICE	Y	
5-DAY T/A	TPH-DRO+Motor Oil	~~0.25 LITER GLASS~~ 2" x 6" SS	1	ICE	Y	

SAMPLE COMMENTS: CONTAINERS - 2" x 6" STAINLESS STEEL TUBES

LOCATION COMMENTS: PIPING TRENCH - ~~WEST~~ EAST END.

FIELD PARAMETERS:

Sample Time 10:24 HH:MM PID READINGS -

VOCs - 0 ppm

H_2S - 0

CO - 0

LEL - 0%

O^2 - 20.9%

COLLECTED BY (PRINT): KEN VERNON **REVIEWED BY (PRINT):**

	Date/Time		Date/Time
RELINQUISHED BY (Printed Name) (Signature) Ken Vernon	10/20/'23 10:43	RECEIVED BY (Printed Name) (Signature) S MARLEAU	10/20/23 10:43
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

Report Date: 09/19/2023

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 15356 **EVENT NAME:** RLUOB Diesel Tank Removal

SAMPLE ID: RLUOB-23-289590 **WORK ORDER:**

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYYY):		10-19-'23	FIELD MATRIX:	S	S
TIME COLLECTED (HH:MM):		10:32 & 10:37	MEDIA:	SOIL	SOIL
SWMU/AOC:		TA-55	SAMPLE TECH CODE:	CBS	CBS
LOCATION ID:	55-22350	PRS-2	FIELD PREP:	NA	NA
LOCATION TYPE:	GENERIC	GEN.	FIELD QC TYPE:	REG	REG
TOP DEPTH:		31" BGS	SAMPLE USAGE:	INV	INV
BOTTOM DEPTH:		37" BGS	EXCAVATED:		YES / (NO) / NA

PRIORITY	ORDER	CONTAINER	#	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
5-DAY TIA	BTEX + TPH-GRO	~~125 ML GLASS~~ 2"X6"SS	1/2	ICE	Y	
5-DAY TIA	TPH-DRO+Motor Oil	~~0.25 LITER GLASS~~	1	ICE	Y	

SAMPLE COMMENTS: 2"X6"SS
CONTAINER: 2" X 6" STAINLESS STEEL TUBES

LOCATION COMMENTS: PIPING TRENCH - 20' WEST OF ~~WEST~~ EAST EDGE

FIELD PARAMETERS:

Sample Time 10:41 HH:MM

VOCs - 0 ppm
H2S - 0
CO - 0
LEL - 0%
O2 - 20.6%

COLLECTED BY (PRINT): KEN VERNON

REVIEWED BY (PRINT):

	Date/Time		Date/Time
RELINQUISHED BY (Printed Name) (Signature) Ken Vernon	10/20/23 10:43	RECEIVED BY (Printed Name) S. MARCZAK (Signature) Electronically	10/20/23 10:43
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

Report Date: 09/19/2023

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 15356 **EVENT NAME:** RLUOB Diesel Tank Removal

SAMPLE ID: RLUOB-23-289591 **WORK ORDER:**

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYYY):		10/19/'23	FIELD MATRIX:	S	S
TIME COLLECTED (HH:MM):		10:52/10:57	MEDIA:	SOIL	SOIL
SWMU/AOC:		TA-55	SAMPLE TECH CODE:	CBS	CBS
LOCATION ID:	55-22351	PRS-5	FIELD PREP:	NA	NA
LOCATION TYPE:	GENERIC	GEN.	FIELD QC TYPE:	REG	DUPLICATE
TOP DEPTH:		34"	SAMPLE USAGE:	INV	INV
BOTTOM DEPTH:		40"	EXCAVATED:		YES / (NO) / NA

PRIORITY	ORDER	CONTAINER	#	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
5-DAY T/A	BTEX + TPH-GRO	~~2"X6"SS 125 ML GLASS~~	2	ICE	Y	SAMPLE + DUPLICATE
5-DAY T/A	TPH-DRO+Motor Oil	~~0.25 LITER GLASS 2"X6"SS~~	2	ICE	Y	SAMPLE + DUPLICATE

SAMPLE COMMENTS: ... TOOK SAMPLE + DUPLICATE FOR QA/QC ...

LOCATION COMMENTS: PIPING TRENCH - 80' WEST OF EAST END.

FIELD PARAMETERS:

Sample Time 10:53 HH:MM

VOCs - 0 ppm
H_2S - 0
CO - 0
LEL - 0%
O^2 - 20.9%

COLLECTED BY (PRINT): KEN VERNON **REVIEWED BY (PRINT):**

	Date/Time		Date/Time
RELINQUISHED BY (Printed Name) (Signature) Ken Vernon	10/20/23 10:43	RECEIVED BY (Printed Name) (Signature) S. MARCZAK	10/20/23 10:43
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

Report Date: 09/19/2023

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 15356 **EVENT NAME:** RLUOB Diesel Tank Removal

SAMPLE ID: RLUOB-23-289592 **WORK ORDER:**

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYYY):		10/19/23	FIELD MATRIX:	S	S
TIME COLLECTED (HH:MM):		11:09 & 11:15	MEDIA:	SOIL	SOIL
SWMU/AOC:		TA-55	SAMPLE TECH CODE:	CBS	CBS
LOCATION ID:	55-22352	PRS-3	FIELD PREP:	NA	NA
LOCATION TYPE:	GENERIC	GEN.	FIELD QC TYPE:	REG	REG
TOP DEPTH:		31"	SAMPLE USAGE:	INV	INV
BOTTOM DEPTH:		37"	EXCAVATED:		YES / (NO) / NA

PRIORITY	ORDER	CONTAINER	#	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
	BTEX + TPH-GRO	~~2"x6" SS 125 ML GLASS~~ KV	1 KV	ICE		~~QA/QC~~ KV ~~DUPLICATE TAKEN~~
	TPH-DRO+Motor Oil	~~2"x6" SS 0.25 LITER GLASS~~ KV	1	ICE		~~QA/QC~~ KV ~~DUPLICATE TAKEN~~

SAMPLE COMMENTS: CONTAINERS: 2"x6" STAINLESS STEEL TUBES

LOCATION COMMENTS: PIPING TRENCH - 40' WEST OF EAST END.

FIELD PARAMETERS:

Sample Time 11:14 HH:MM

VOCs - 0 ppm

H_2S - 0

CO - 0

LEL - 0 %

O_2 - 20.9

COLLECTED BY (PRINT): KEN VERNON **REVIEWED BY (PRINT):**

RELINQUISHED BY (Printed Name) (Signature) Ken Vernon	Date/Time 10/20/23 10:43	RECEIVED BY (Printed Name) (Signature) S. MARCZAK Marczak	Date/Time 10/20/23 10:43
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

Report Date: 09/19/2023

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 15356 **EVENT NAME:** RLUOB Diesel Tank Removal

SAMPLE ID: RLUOB-23-289593 **WORK ORDER:**

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYYY):		10/19/'23	FIELD MATRIX:	S	S
TIME COLLECTED (HH:MM):		11:45 - 11:49	MEDIA:	SOIL	SOIL
SWMU/AOC:		TA-55	SAMPLE TECH CODE:	CBS	CBS
LOCATION ID:	55-22353	PRS-4	FIELD PREP:	NA	NA
LOCATION TYPE:	GENERIC	GEN.	FIELD QC TYPE:	REG	REG
TOP DEPTH:		29"	SAMPLE USAGE:	INV	INV
BOTTOM DEPTH:		35"	EXCAVATED:		YES / (NO) / NA

PRIORITY	ORDER	CONTAINER	#	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
5-DAY TIA	BTEX + TPH-GRO	~~2"x6" SS 125 ML GLASS~~	1	ICE	Y	
5-DAY TIA	TPH-DRO+Motor Oil	~~0.25 LITER GLASS~~ 2"x6" SS	1	ICE	Y	

SAMPLE COMMENTS:

LOCATION COMMENTS: PIPING TRENCH - 60' WEST OF EAST END.

FIELD PARAMETERS:

Sample Time 11:46 HH:MM

VOCs - 0 ppm
H_2S - 0
CO - 0
LEL - 0
O^2 - 21.2%

COLLECTED BY (PRINT): KEN VERNON **REVIEWED BY (PRINT):**

RELINQUISHED BY (Printed Name) (Signature) Ken Vernon	Date/Time 10/20/23 10:43	RECEIVED BY (Printed Name) S. MARCZAK (Signature)	Date/Time 10/20/23 10:43
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

Report Date: 09/19/2023

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 15356 **EVENT NAME:** RLUOB Diesel Tank Removal

SAMPLE ID: RLUOB-23-289594 **WORK ORDER:**

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYYY):		10/19/'23	FIELD MATRIX:	S	S
TIME COLLECTED (HH:MM):		12:00 & 12:04	MEDIA:	SOIL	SOIL
SWMU/AOC:		TA-55	SAMPLE TECH CODE:	CBS	CBS
LOCATION ID:	55-22354	PRS-8	FIELD PREP:	NA	NA
LOCATION TYPE:	GENERIC	GEN.	FIELD QC TYPE:	REG	REG.
TOP DEPTH:		34"	SAMPLE USAGE:	INV	INV
BOTTOM DEPTH:		40"	EXCAVATED:		YES / (NO) / NA

PRIORITY	ORDER	CONTAINER	#	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
5-DAY T/A	BTEX + TPH-GRO	~~2"x6" SS 125 ML GLASS~~	1	ICE	Y	
5-DAY T/A	TPH-DRO+Motor Oil	~~0.25 LITER GLASS~~	1	ICE	Y	

SAMPLE COMMENTS: 2"x6" SS

LOCATION COMMENTS:

FIELD PARAMETERS:

Sample Time 12:01 HH:MM

VOCs - 0 ppm

H_2S - 0

CO - 0

LEL - 0

O^2 - 21.3%

COLLECTED BY (PRINT): KEN VERNON **REVIEWED BY (PRINT):**

RELINQUISHED BY (Printed Name) (Signature) Ken Vernon	Date/Time 10/20/23 10:43	RECEIVED BY (Printed Name) (Signature) S. MARCZAK	Date/Time 10/20/23 10:43
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

Report Date: 09/19/2023

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 15356 **EVENT NAME:** RLUOB Diesel Tank Removal

SAMPLE ID: RLUOB-23-289595 **WORK ORDER:**

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYYY):		10/19/'23	FIELD MATRIX:	S	S
TIME COLLECTED (HH:MM):		12:15 & 12:21	MEDIA:	SOIL	SOIL
SWMU/AOC:		TA-55	SAMPLE TECH CODE:	CBS	CBS
LOCATION ID:	55-22355	PRS-7	FIELD PREP:	NA	NA
LOCATION TYPE:	GENERIC	GEN.	FIELD QC TYPE:	REG	REG.
TOP DEPTH:		32.5"	SAMPLE USAGE:	INV	INV.
BOTTOM DEPTH:		38.5"	EXCAVATED:		YES / (NO) / NA

PRIORITY	ORDER	CONTAINER	#	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
5-DAY T/A	BTEX + TPH-GRO	2"x6"SS ~~125 ML GLASS~~	1 2	ICE	Y	
5-DAY T/A	TPH-DRO+Motor Oil	~~0.25 LITER GLASS~~	1	ICE	Y	

SAMPLE COMMENTS: 2"x6"SS

LOCATION COMMENTS:

FIELD PARAMETERS:

Sample Time 12:24 HH:MM

VOCs - 0 ppm
H_2S - 0
CO - 0
LEL - 0
O_2 - 21.37.

COLLECTED BY (PRINT): KEN VERNON **REVIEWED BY (PRINT):**

	Date/Time		Date/Time
RELINQUISHED BY (Printed Name) (Signature) Ken Vernon	10/20/23 10:43	RECEIVED BY (Printed Name) (Signature) S. NAREZAH	10/20/23 10:43
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

Report Date: 09/19/2023

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 15356 **EVENT NAME:** RLUOB Diesel Tank Removal

SAMPLE ID: RLUOB-23-289596 **WORK ORDER:**

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYYY):		10/19/'23	FIELD MATRIX:	S	S
TIME COLLECTED (HH:MM):		12:47:12:52	MEDIA:	SOIL	SOIL
SWMU/AOC:		TA-55	SAMPLE TECH CODE:	CBS	CBS
LOCATION ID:	55-22356	PRS-6	FIELD PREP:	NA	NA
LOCATION TYPE:	GENERIC	GENERIC	FIELD QC TYPE:	REG	REG.
TOP DEPTH:		34"	SAMPLE USAGE:	INV	INV.
BOTTOM DEPTH:		40"	EXCAVATED:		YES / (NO) / NA

PRIORITY	ORDER	CONTAINER	#	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
~~TA-5~~ 5-DAY T/A	BTEX + TPH-GRO	~~2"x6" SS~~ ~~125 ML GLASS~~	1/2	ICE	Y	
5-DAY T/A	TPH-DRO+Motor Oil	~~0.25 LITER GLASS~~ 2"x6" SS	1	ICE	Y	

SAMPLE COMMENTS:

LOCATION COMMENTS:

FIELD PARAMETERS:

Sample Time 12:47 HH:MM

VOCs - 0 ppm
H2S - 0
CO - 0
LEL - 0
O2 - 21.3%

COLLECTED BY (PRINT): KEN VERNON

REVIEWED BY (PRINT):

RELINQUISHED BY (Printed Name) (Signature) Ken Vernon	Date/Time 10/20/23 10:43	RECEIVED BY (Printed Name) (Signature) S. MARCZAK	Date/Time 10/20/23 10:43
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

Report Date: 09/19/2023

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 15356 **EVENT NAME:** RLUOB Diesel Tank Removal QC samples

SAMPLE ID: RLUOB-23-302822 **WORK ORDER:**

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYYY):		10/19/'23	FIELD MATRIX:	S	S
TIME COLLECTED (HH:MM):		10:15	MEDIA:		
SWMU/AOC:		TA-55	SAMPLE TECH CODE:	DC	DC
LOCATION ID:	UNK		FIELD PREP:	NA	NA
LOCATION TYPE:	BHover10ft		FIELD QC TYPE:	FTB	FTB
TOP DEPTH:		NA	SAMPLE USAGE:	QC	QC
BOTTOM DEPTH:		NA	EXCAVATED:		YES / ~~NO~~ / NA

PRIORITY	ORDER	CONTAINER	#	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
5-DAY TA	8260B Trip Blank	40 ML SEPTUM AMBER GLASS	2	ICE	Y	

SAMPLE COMMENTS:

LOCATION COMMENTS:

FIELD PARAMETERS: NA

Sample Time _____ HH:MM

COLLECTED BY (PRINT): KEN VERNON **REVIEWED BY (PRINT):**

RELINQUISHED BY (Printed Name) (Signature) Ken Vernon	Date/Time 10/20/23 10:43	RECEIVED BY (Printed Name) (Signature) 10/20/23 S. MARQUEZ	Date/Time 10/20/23 10:43
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

Report Date: 10/16/2023

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 15356 **EVENT NAME:** RLUOB Diesel Tank Removal QC samples

SAMPLE ID: RLUOB-23-302827 **WORK ORDER:**

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYYY):		10/19/'23	FIELD MATRIX:	W	W
TIME COLLECTED (HH:MM):		14:04	MEDIA:		
SWMU/AOC:		TA-55	SAMPLE TECH CODE:	DC	DC
LOCATION ID:	UNK		FIELD PREP:	UF	UF
LOCATION TYPE:	BHover10ft		FIELD QC TYPE:	FR	FR
TOP DEPTH:		NA	SAMPLE USAGE:	QC	QC
BOTTOM DEPTH:		NA	EXCAVATED:		YES / (NO) / NA

PRIORITY	ORDER	CONTAINER	#	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
5-day T/A	8260B	40 ML SEPTUM AMBER GLASS	2	HCL	Y	

SAMPLE COMMENTS:

LOCATION COMMENTS:

FIELD PARAMETERS: NA

Sample Time _____ HH:MM

COLLECTED BY (PRINT): KEN VERNON **REVIEWED BY (PRINT):**

RELINQUISHED BY (Printed Name) (Signature) Ken Vernon	Date/Time 10/20/23 10:43	RECEIVED BY (Printed Name) (Signature) S. MARCZAK Marczak	Date/Time 10/20/23 10:43
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

Report Date: 10/16/2023

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 15356 **EVENT NAME:** RLUOB Diesel Tank Removal QC samples

SAMPLE ID: RLUOB-23-302828 **WORK ORDER:**

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYYY):		10/19/'23	FIELD MATRIX:	W	W
TIME COLLECTED (HH:MM):		14:16	MEDIA:		
SWMU/AOC:		TA-55	SAMPLE TECH CODE:	DC	DC
LOCATION ID:	UNK		FIELD PREP:	UF	UF
LOCATION TYPE:	BHover10ft		FIELD QC TYPE:	EQB	EQB
TOP DEPTH:			SAMPLE USAGE:	QC	QC
BOTTOM DEPTH:			EXCAVATED:		YES / (NO) / NA

PRIORITY	ORDER	CONTAINER	#	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
5-DAY TAT	8260B	40 ML SEPTUM AMBER GLASS	2	HCL	Y	

SAMPLE COMMENTS:

LOCATION COMMENTS:

FIELD PARAMETERS: NA

Sample Time _____ HH:MM

COLLECTED BY (PRINT): KEN VERNON **REVIEWED BY (PRINT):**

RELINQUISHED BY (Printed Name) (Signature) Ken Vernon	Date/Time 10/20/23 10:43	RECEIVED BY (Printed Name) S. MARCZAK (Signature)	Date/Time 10/20/23 10:43
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

Report Date: 10/16/2023

HPAL ANALYSIS REPORT

FILE: 29258418

Sample Description	Analysis Information	Contact Information
Login Date: 10/19/23	Instrument: BEGe-12	Name: BUCHANAN PHILIP D II
Sample Type: Soil/Solid	Analysis: Isotopic	Phone: -
Location TA:55 Bldg: 0400	Date: 10/23/23	Email: buchanan@lanl.gov
Room: OUTSIDE	Analyst: CHANDLER JOSHUA R	
Priority: Priority		

Analyst Comments:

Sample ID or Description: Soils 1-8. Analysis modified. Contains natural decay products

Submitter Comments:

SOIL SAMPLE FROM DISMANTLE JOB (NOT IN RCA)

Isotope Name	Activity (pCi/g)	2* sigma (pct)	MDA (pCi/g)
NONE-	NDA	NDA	NDA

Sample Management Office Shipping Classification Determination Checklist

Sampling Plan ID/Name: EVENT ID 15356

TEST – Chemical Preservation	YES	NO	NA
If the samples were chemically preserved, do the chemical preservations exceed limits given in 40 CFR 136, Table II – Required Containers, Preservation Techniques and Holding Times (footnote 3)? **Note: sample preservation guidance listed on the SCL complies with CFR requirements.**	○	✓	○

TEST – DOT Hazardous Material	YES	NO	Unknown
Is the sample a detonable or reactive explosive (DOT Division 1.1 through 1.6)?	○	✓	○
Is the sample a compressed gas (DOT Division 2.1, 2.2, or 2.3)?	○	✓	○
Is the sample a flammable or combustible liquid (DOT Hazard Class 3)?	○	✓	○
Is the sample a flammable solid (DOT Division 4.1)?	○	✓	○
Is the sample a spontaneously combustible material (DOT Division 4.2)?	○	✓	○
Is the sample a dangerous when wet material (DOT Division 4.3)?	○	✓	○
Is the sample an oxidizer or organic peroxide (DOT Division 5.1 or 5.2)?	○	✓	○
Is the sample a poisonous material or infectious substance (DOT Division 6.1 or 6.2)?	○	✓	○
Is the sample a corrosive material (DOT Hazard Class 8)?	○	✓	○
Does the sample contain MORE than 1 lb of a hazardous material (DOT Hazard Class 9)?	○	✓	○

TEST – Field Screen

If the samples have field screening measurements of alpha and/or beta activity, then compare the results to the sample and shipment activities limits listed below. Mark the items YES if they equal or exceed the listed activities.

Sample Activity (dpm/100cm²)		Shipment Activity (dpm*g/100cm²)	Sampled Location	YES	NO	NA
Alpha detectable	AND	Alpha ≥ 160,000	AT TA-1 and adjacent hillsides, TA-21, Acid Canyon, MDA C, TA-54 Area G, TA-48 or TA-49	○	✓	○
Alpha ≥ 125	AND	Alpha ≥ 1,250,000	AT Other Locations	○	✓	○
Beta ≥ 1,500	AND	Beta ≥ 15,000,000	AT Any Location	○	✓	○
Alpha ≥ 16,000,000 dpm*g/100cm²?				○	✓	○
Beta ≥ 160,000,000 dpm*g/100cm²?				○	✓	○
On the external surface of the sample container, is Alpha ≥ 24 dpm/100cm²?				○	✓	○
On the external surface of the sample container, is Beta ≥ 240 dpm/100cm²?				○	✓	○
On the external surface of the sample container, is surface activity ≥ 0.5 mR/hr?				○	✓	○

TEST – Previous Analytical Results

If previous analytical measurements of radioactive isotopes are available for this sampling location, then compare those results to the sample and shipment activity limits listed below. Mark the items YES if they equal or exceed the listed activities.

Sample Activity (pCi/g)		Shipment Activity (pCi)	YES	NO	NA
Am-241 ≥ 27 pCi/g	AND	Am-241 ≥ 270,000 pCi Total	○	✓	○
Cs-137 ≥ 270 pCi/g	AND	Cs-137 ≥ 270,000 pCi Total	○	✓	○
Pu-238 ≥ 27 pCi/g	AND	Pu-238 ≥ 270,000 pCi Total	○	✓	○
Pu-239/240 ≥ 27 pCi/g	AND	Pu-239/240 ≥ 270,000 pCi Total	○	✓	○
Th-228 ≥ 27 pCi/g	AND	Th-228 ≥ 270,000 pCi Total	○	✓	○
U-234 ≥ 270 pCi/g	AND	U-234 ≥ 1,600,000,000 pCi Total	○	✓	○
U-238 ≥ 270 pCi/g	AND	U-238 unlimited	○	✓	○
H-3 ≥ 27,000,000 pCi/g	AND	H-3 ≥ 27,000,000,000 pCi Total	○	✓	○
Am-241, Pu-238, Pu-239/240, or Th228 ≥ 27,000,000 pCi			○	✓	○
Cs-137 ≥ 270,000,000,000 pCi			○	✓	○
U-234 ≥ 160,000,000 pCi			○	✓	○
H-3 ≥ 1 Ci			○	✓	○

If ANY items on this form are marked YES, SMO will not transport the samples. Contact OS-PT for guidance.

Documented Field Team Member Statement

If no items on this form are marked YES, then these samples do not meet the criteria for classification in any hazard class according to 49 CFR Part 173 and may be shipped by the ALDESHQSS SMO.

Hazard Assessment Completed By: (Printed Name) KEN VERNON (Signature)	**Date:** 24 Oct. 23	**Time:** 08:00
Hazard Assessment Reviewed By: (Printed Name) Melissa Nuñez (Signature)	**Date:** 10/24/23	**Time:** 8:00

AUTOMATED DATA REVIEW SUMMARY REPORT

Chain Of Custody No. 2024-76

1. Distribution Of Samples In EDD.

SDG	Analytical Method	Regular Samples	Field Duplicates	Trip Blanks	Field Blanks	Equipment Blanks
642648	EPA:170.0	8		1		1
642648	SW-846:8015D	8				
642648	SW-846:8260D	8		1		1

SDG	Analytical Method	Analysis Lot ID	Prep Lot ID	Regular Samples	Field Duplicates	Trip Blanks	Field Blanks	Equipment Blanks	Method Blanks	Matrix Spikes	Matrix Spike Dups	Analytical Spikes	Post-Digestion Spikes	Lab Control Samples	Lab Control Sample Dups	Blank Spike	Blank Spike Dups	Lab Duplicates	Storage Blanks	Preparation Blanks	Reagent Blanks
642648	EPA:170.0	NA	NA	8		1		1										1			
642648	SW-846:8015D	2514381	2514380	8					1	1	1			1				1			
642648	SW-846:8015D	2514414	2514413	8					2					1				1			
642648	SW-846:8260D	2514596	2514593	8		1			2					2				1			
642648	SW-846:8260D	2514703	2514703					1	1					2							

2. Distribution Of Analytes In EDD.

Analytical Method	Analytical Method Category	Field Sample ID	Lab Sample ID	Sample Purpose	Target Analytes	Surrogates	Spiked Compounds	TICS
EPA:170.0	GENERAL CHEMISTRY	RLUOB-23-289589	642648001	REG	1	0	0	0
EPA:170.0	GENERAL CHEMISTRY	RLUOB-23-289590	642648002	REG	1	0	0	0
EPA:170.0	GENERAL CHEMISTRY	RLUOB-23-289591	642648003	REG	1	0	0	0
EPA:170.0	GENERAL CHEMISTRY	RLUOB-23-289591	642648012	DUP	1	0	0	0
EPA:170.0	GENERAL CHEMISTRY	RLUOB-23-289592	642648004	REG	1	0	0	0
EPA:170.0	GENERAL CHEMISTRY	RLUOB-23-289593	642648005	REG	1	0	0	0
EPA:170.0	GENERAL CHEMISTRY	RLUOB-23-289594	642648006	REG	1	0	0	0
EPA:170.0	GENERAL CHEMISTRY	RLUOB-23-289595	642648007	REG	1	0	0	0
EPA:170.0	GENERAL CHEMISTRY	RLUOB-23-289596	642648008	REG	1	0	0	0
EPA:170.0	GENERAL CHEMISTRY	RLUOB-23-302822	642648009	FTB	1	0	0	0
EPA:170.0	GENERAL CHEMISTRY	RLUOB-23-302827	642648010	FR	1	0	0	0
EPA:170.0	GENERAL CHEMISTRY	RLUOB-23-302828	642648011	EQB	1	0	0	0
SW-846:8015D	TPH	HB	1205556978	MB	1	1	0	0
SW-846:8015D	TPH	LCS	1205556893	LCS	0	1	2	0

Only results shown in Section 13 'Display Flagged Data' are current as of this report generation. All other sections are valid for the date the COC data was inserted into EIM, and may have changed due to data updates in the intervening time.

AUTOMATED DATA REVIEW SUMMARY REPORT

Analytical Method	Analytical Method Category	Field Sample ID	Lab Sample ID	Sample Purpose	Target Analytes	Surrogates	Spiked Compounds	TICS
SW-846:8015D	TPH	LCS	1205556974	LCS	0	1	1	0
SW-846:8015D	TPH	MB	1205556892	MB	2	1	0	0
SW-846:8015D	TPH	MB	1205556975	MB	1	1	0	0
SW-846:8015D	TPH	RLUOB-23-289589	1205556976	PS	0	1	1	0
SW-846:8015D	TPH	RLUOB-23-289589	1205556977	PSD	0	1	1	0
SW-846:8015D	TPH	RLUOB-23-289589	642648001	REG	3	2	0	0
SW-846:8015D	TPH	RLUOB-23-289590	642648002	REG	3	2	0	0
SW-846:8015D	TPH	RLUOB-23-289591	642648003	REG	3	2	0	0
SW-846:8015D	TPH	RLUOB-23-289591	642648012	DUP	3	2	0	0
SW-846:8015D	TPH	RLUOB-23-289592	642648004	REG	3	2	0	0
SW-846:8015D	TPH	RLUOB-23-289593	642648005	REG	3	2	0	0
SW-846:8015D	TPH	RLUOB-23-289594	642648006	REG	3	2	0	0
SW-846:8015D	TPH	RLUOB-23-289595	642648007	REG	3	2	0	0
SW-846:8015D	TPH	RLUOB-23-289596	642648008	REG	3	2	0	0
SW-846:8015D	TPH	WST15-24-303425	1205556894	MS	0	1	2	0
SW-846:8015D	TPH	WST15-24-303425	1205556895	MSD	0	1	2	0
SW-846:8260D	VOC	HB	1205557487	MB	63	3	0	0
SW-846:8260D	VOC	LCS	1205557485	LCS	0	3	62	0
SW-846:8260D	VOC	LCS	1205557613	LCS	0	3	1	0
SW-846:8260D	VOC	LCS	1205557763	LCS	0	3	70	0
SW-846:8260D	VOC	LCS	1205557764	LCS	0	3	10	0
SW-846:8260D	VOC	MB	1205557486	MB	63	3	0	0
SW-846:8260D	VOC	MB	1205557765	MB	80	3	0	0
SW-846:8260D	VOC	RLUOB-23-289589	1205557488	PS	0	3	62	0
SW-846:8260D	VOC	RLUOB-23-289589	1205557489	PSD	0	3	62	0
SW-846:8260D	VOC	RLUOB-23-289589	1205557614	PS	0	3	1	0
SW-846:8260D	VOC	RLUOB-23-289589	1205557615	PSD	0	3	1	0
SW-846:8260D	VOC	RLUOB-23-289589	642648001	REG	4	3	0	0
SW-846:8260D	VOC	RLUOB-23-289590	642648002	REG	4	3	0	0
SW-846:8260D	VOC	RLUOB-23-289591	642648003	REG	4	3	0	0
SW-846:8260D	VOC	RLUOB-23-289591	642648012	DUP	4	3	0	0
SW-846:8260D	VOC	RLUOB-23-289592	642648004	REG	4	3	0	0
SW-846:8260D	VOC	RLUOB-23-289593	642648005	REG	4	3	0	0
SW-846:8260D	VOC	RLUOB-23-289594	642648006	REG	4	3	0	0
SW-846:8260D	VOC	RLUOB-23-289595	642648007	REG	4	3	0	0
SW-846:8260D	VOC	RLUOB-23-289596	642648008	REG	4	3	0	0
SW-846:8260D	VOC	RLUOB-23-302822	642648009	FTB	62	3	0	0
SW-846:8260D	VOC	RLUOB-23-302827	1205557766	PS	0	3	70	0
SW-846:8260D	VOC	RLUOB-23-302827	1205557767	PS	0	3	10	0

Only results shown in Section 13 'Display Flagged Data' are current as of this report generation. All other sections are valid for the date the COC data was inserted into EIM, and may have changed due to data updates in the intervening time.

AUTOMATED DATA REVIEW SUMMARY REPORT

Analytical Method	Analytical Method Category	Field Sample ID	Lab Sample ID	Sample Purpose	Target Analytes	Surrogates	Spiked Compounds	TICS
SW-846:8260D	VOC	RLUOB-23-302827	1205557768	PSD	0	3	70	0
SW-846:8260D	VOC	RLUOB-23-302827	1205557769	PSD	0	3	10	0
SW-846:8260D	VOC	RLUOB-23-302827	642648010	FR	80	3	0	0
SW-846:8260D	VOC	RLUOB-23-302828	642648011	EQB	80	3	0	0

3. Are any analytes missing?

No.

4. Were any holding times exceeded?

Field Sample ID	Lab Sample ID	Analytical Method	Sample Date	Extraction Date	Analysis Date	Extraction Hold Time	Max Extract Hold Time	Reject Above	Exceeds Limit	Analysis Hold Time	Max Analysis Hold Time	Reject Above	Exceeds Limit
RLUOB-23-289589	642648001	SW-846:8015D	10/19/2023	10/27/2023	10/30/2023	8	7	14	X	3	40	80	
RLUOB-23-289590	642648002	SW-846:8015D	10/19/2023	10/27/2023	10/29/2023	8	7	14	X	2	40	80	
RLUOB-23-289591	642648003	SW-846:8015D	10/19/2023	10/27/2023	10/29/2023	8	7	14	X	2	40	80	
RLUOB-23-289592	642648004	SW-846:8015D	10/19/2023	10/27/2023	10/29/2023	8	7	14	X	2	40	80	
RLUOB-23-289593	642648005	SW-846:8015D	10/19/2023	10/27/2023	10/29/2023	8	7	14	X	2	40	80	
RLUOB-23-289594	642648006	SW-846:8015D	10/19/2023	10/27/2023	10/29/2023	8	7	14	X	2	40	80	
RLUOB-23-289595	642648007	SW-846:8015D	10/19/2023	10/27/2023	10/29/2023	8	7	14	X	2	40	80	
RLUOB-23-289596	642648008	SW-846:8015D	10/19/2023	10/27/2023	10/29/2023	8	7	14	X	2	40	80	

5. Any contaminants in blanks?

No.

6. Any surrogate recoveries outside the control limits?

AUTOMATED DATA REVIEW SUMMARY REPORT

Field Sample ID	Lab Sample ID	Analytical Method	Parameter Name	Analysis Lot ID	Analysis Date	Spike Recovery	Upper Limit	Lower Limit	Rejection Limit
WST15-24-303425	1205556894	SW-846:8015D	o-Terphenyl	2514381	10/28/2023	121	118	32	10

7. Any MS/MSD recoveries or RPDs outside the control limits?

Field Sample ID	MS Lab Sample ID	MSD Lab Sample ID	Analytical Method	Parameter Name	Analysis Lot ID	Analysis Date	Sample Matrix	MS Spike Recovery	MSD Spike Recovery	MS Upper Limit	MS Lower Limit	MS Reject Limit	RPD	RPD Limit
RLUOB-23-289590	1205556894	1205556895	SW-846:8015D	Total Petroleum Hydrocarbons Motor Oil Range Organics	2514381	10/29/2023	SO	71	32	134	46		11	30
RLUOB-23-289591	1205556894	1205556895	SW-846:8015D	Total Petroleum Hydrocarbons Motor Oil Range Organics	2514381	10/29/2023	SO	71	32	134	46		11	30
RLUOB-23-289592	1205556894	1205556895	SW-846:8015D	Total Petroleum Hydrocarbons Motor Oil Range Organics	2514381	10/29/2023	SO	71	32	134	46		11	30
RLUOB-23-289593	1205556894	1205556895	SW-846:8015D	Total Petroleum Hydrocarbons Motor Oil Range Organics	2514381	10/29/2023	SO	71	32	134	46		11	30
RLUOB-23-289594	1205556894	1205556895	SW-846:8015D	Total Petroleum Hydrocarbons Motor Oil Range Organics	2514381	10/29/2023	SO	71	32	134	46		11	30
RLUOB-23-289595	1205556894	1205556895	SW-846:8015D	Total Petroleum Hydrocarbons Motor Oil Range Organics	2514381	10/29/2023	SO	71	32	134	46		11	30
RLUOB-23-289596	1205556894	1205556895	SW-846:8015D	Total Petroleum Hydrocarbons Motor Oil Range Organics	2514381	10/29/2023	SO	71	32	134	46		11	30

8. Any LCS/LCSD or BS/BSD recoveries or RPDs outside the control limits?

No.

9. Any Field Duplicate RPDs outside the desired limits?

No.

10. Any Lab Duplicate RPDs outside the desired limits?

No.

11. Any required reporting limits exceeded?

Analytical Method	Sample Matrix	Parameter Name	Analysis Lot ID	Lowest Reported Limit	Highest Reported Limit	Number of Results	Lab Units	Reporting Limit	Reporting Limit Units	Reporting Limit Type	Dilution Factor
SW-846:8015D	SO	Total Petroleum Hydrocarbons Diesel Range Organics	2514381	112	112	1	mg/kg	6.7	mg/kg	METHOD_DETECTION_LIMIT	50
SW-846:8015D	SO	Total Petroleum Hydrocarbons Gasoline Range Org.	2514414	1680	1760	8	ug/kg	1000	ug/kg	METHOD_DETECTION_LIMIT	50
SW-846:8260D	SO	Benzene	2514596	33.6	35.1	8	ug/kg	1	ug/kg	METHOD_DETECTION_LIMIT	50
SW-846:8260D	SO	Ethylbenzene	2514596	33.6	35.1	8	ug/kg	1	ug/kg	METHOD_DETECTION_LIMIT	50
SW-846:8260D	SO	Toluene	2514596	33.6	35.1	8	ug/kg	1	ug/kg	METHOD_DETECTION_LIMIT	50
SW-846:8260D	W	Trichloro-1,2,2-trifluoroethane[1,1,2-]	2514703	2.98	2.98	2	ug/L	2	ug/L	METHOD_DETECTION_LIMIT	1
SW-846:8260D	SO	Xylene (Total)	2514596	101	105	8	ug/kg	1	ug/kg	METHOD_DETECTION_LIMIT	50

12. Additional Validator's Comments.

13. Display Flagged Data.

Location ID	COC Number	Field Sample ID	Sample Purpose	Analysis Type Code	Analytical Suite	Analytical Method	Paramter Name	Lab Qualifier	Validation Qualifier	Validation Reason Codes	Detect Flag	Lab Result	Lab Units	Report Result	Report Units	Report MDA	Report Uncertainty	Lab Matrix	Sample Date	Percent	Analysis Lot ID	Validation Status Code	Use Flag
55-22349	2024-76	RLUOB-23-289589	REG	INIT	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Motor Oil Range Organics		J-	DR12e,DR9	Y	492	mg/kg	492	mg/kg			SD	10/19/2023		2514381	VAL	Y
55-22350	2024-76	RLUOB-23-289590	REG	INIT	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Motor Oil Range Organics	J	J-	DR12e,DR9	Y	4.13	mg/kg	4.13	mg/kg			SD	10/19/2023		2514381	VAL	Y
55-22351	2024-76	RLUOB-23-289591	REG	INIT	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Motor Oil Range Organics	U	UJ	DR12e,DR9	N	2.27	mg/kg	2.27	mg/kg			SD	10/19/2023		2514381	VAL	Y
55-22352	2024-76	RLUOB-23-289592	REG	INIT	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Motor Oil Range Organics	J	J-	DR12e,DR9	Y	4.73	mg/kg	4.73	mg/kg			SD	10/19/2023		2514381	VAL	Y
55-22353	2024-76	RLUOB-23-289593	REG	INIT	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Motor Oil Range Organics	U	UJ	DR12e,DR9	N	2.19	mg/kg	2.19	mg/kg			SD	10/19/2023		2514381	VAL	Y
55-22354	2024-76	RLUOB-23-289594	REG	INIT	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Motor Oil Range Organics	J	J-	DR12e,DR9	Y	4.41	mg/kg	4.41	mg/kg			SD	10/19/2023		2514381	VAL	Y
55-22355	2024-76	RLUOB-23-289595	REG	INIT	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Motor Oil Range Organics	U	UJ	DR12e,DR9	N	2.22	mg/kg	2.22	mg/kg			SD	10/19/2023		2514381	VAL	Y
55-22356	2024-76	RLUOB-23-289596	REG	INIT	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Motor Oil Range Organics	U	UJ	DR12e,DR9	N	2.21	mg/kg	2.21	mg/kg			SD	10/19/2023		2514381	VAL	Y

Reason Code	Description
DR12e	The matrix spike percent recovery is less than the lower acceptance limit.
DR9	The holding time was greater than the applicable holding time requirement and was <=2 times the applicable holding time requirement.
J_LAB	The analytical laboratory qualified the detected result as estimated (J) because the result was less the PQL but greater than the MDL
NQ	The analytical laboratory did not qualifiy the analyte as not detected and/or any other standard qualifire. The analyte is detected in the sample.
U_LAB	The analytical laboratory qualified the analyte as not detected.

Only results shown in Section 13 'Display Flagged Data' are current as of this report generation. All other sections are valid for the date the COC data was inserted into EIM, and may have changed due to data updates in the intervening time.

14. Usable Result Count.

Field Sample ID	Location ID	Sample Purpose	Analytical Method	No. Unuseable Records	Total Records
RLUOB-23-289589	55-22349	REG	EPA:170.0	0	1
RLUOB-23-289589	55-22349	REG	SW-846:8015D	0	3
RLUOB-23-289589	55-22349	REG	SW-846:8260D	0	4
RLUOB-23-289590	55-22350	REG	EPA:170.0	0	1
RLUOB-23-289590	55-22350	REG	SW-846:8015D	0	3
RLUOB-23-289590	55-22350	REG	SW-846:8260D	0	4
RLUOB-23-289591	55-22351	REG	EPA:170.0	0	1
RLUOB-23-289591	55-22351	REG	SW-846:8015D	0	3
RLUOB-23-289591	55-22351	REG	SW-846:8260D	0	4
RLUOB-23-289592	55-22352	REG	EPA:170.0	0	1
RLUOB-23-289592	55-22352	REG	SW-846:8015D	0	3
RLUOB-23-289592	55-22352	REG	SW-846:8260D	0	4
RLUOB-23-289593	55-22353	REG	EPA:170.0	0	1
RLUOB-23-289593	55-22353	REG	SW-846:8015D	0	3
RLUOB-23-289593	55-22353	REG	SW-846:8260D	0	4
RLUOB-23-289594	55-22354	REG	EPA:170.0	0	1
RLUOB-23-289594	55-22354	REG	SW-846:8015D	0	3
RLUOB-23-289594	55-22354	REG	SW-846:8260D	0	4
RLUOB-23-289595	55-22355	REG	EPA:170.0	0	1
RLUOB-23-289595	55-22355	REG	SW-846:8015D	0	3
RLUOB-23-289595	55-22355	REG	SW-846:8260D	0	4
RLUOB-23-289596	55-22356	REG	EPA:170.0	0	1
RLUOB-23-289596	55-22356	REG	SW-846:8015D	0	3
RLUOB-23-289596	55-22356	REG	SW-846:8260D	0	4
RLUOB-23-302822	UNK	FTB	EPA:170.0	0	1
RLUOB-23-302822	UNK	FTB	SW-846:8260D	0	62
RLUOB-23-302827	UNK	FR	EPA:170.0	0	1
RLUOB-23-302827	UNK	FR	SW-846:8260D	0	80
RLUOB-23-302828	UNK	EQB	EPA:170.0	0	1
RLUOB-23-302828	UNK	EQB	SW-846:8260D	0	80

Only results shown in Section 13 'Display Flagged Data' are current as of this report generation. All other sections are valid for the date the COC data was inserted into EIM, and may have changed due to data updates in the intervening time.

GEL Laboratories LLC
a member of The GEL Group INC

2040 Savage Road | Charleston, SC 29407
843.556.8171
gel.com

October 27, 2023

Mr. Stanislaw Marczak
Los Alamos National Laboratory
TA-00, SM1237, Rm104C
Los Alamos, New Mexico 87545

Re: LANL
Work Order: 642648
SDG: 2024-76

Dear Mr. Marczak:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on October 25, 2023, and analyzed for GC/MS Volatile, Diesel Range Organics and GC Volatiles (GRO). This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4485.

Sincerely,

Jessica Ward for
Valerie Davis
Project Manager

Chain of Custody: 2024-76
Enclosures

Triad National Security, LLC (620266)
LANL
Work Order #: 642648
SDG: 2024-76

Table of Contents

Case Narrative.....1

Chain of Custody and Supporting Documentation.4

Data Review Qualifier Flag Definition Sheet..10

Volatile Analysis.....14

- Case Narrative.....15
- Sample Data Summary.....19
- Quality Control Summary.....37
- Sample Data.....75
- Standards...(Provided Upon Request).....154
- Quality Control Data...(Provided Upon Request)..220
- Miscellaneous.....326

FID Diesel Range Organics Analysis.....332

- Case Narrative.....333
- Sample Data Summary.....337
- Quality Control Summary.....347
- Sample Data.....353
- Standards...(Provided Upon Request).....391
- Quality Control Data..(Provided Upon Request)...432
- Miscellaneous.....467

GC Volatiles (GRO) Analysis.....473

Case Narrative.....474

Sample Data Summary.....477

Quality Control Summary.....487

Sample Data.....493

Standards...(Provided Upon Request).....521

Quality Control Data...(Provided Upon Request)..544

Miscellaneous.....560

Case Narrative

Case Narrative for
Triad National Security, LLC (620266)
LANL
Workorder #: 642648
SDG # : 2024-76

October 27, 2023

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on October 25, 2023 for analysis. The samples were delivered with proper chain of custody documentation and signatures. The samples were screened according to GEL Standard Operating Procedure. One 40ml container was broken during transit, client notified*642648011(RLUOB-23-302828)*. Containers were checked for pH, where appropriate, and matched the preservative as documented on the accompanying chain of custody. Shipping container temperatures were checked, documented, and within specifications. Shipping container temperature was within specification (0 - 6C). There are no additional comments concerning sample receipt.

Sample Identification The laboratory received the following samples:

Laboratory ID	Client ID
642648001	RLUOB-23-289589
642648002	RLUOB-23-289590
642648003	RLUOB-23-289591
642648004	RLUOB-23-289592
642648005	RLUOB-23-289593
642648006	RLUOB-23-289594
642648007	RLUOB-23-289595
642648008	RLUOB-23-289596
642648009	RLUOB-23-302822
642648010	RLUOB-23-302827
642648011	RLUOB-23-302828
642648012	RLUOB-23-289591 DUP

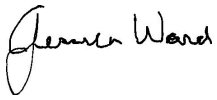
Case Narrative

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Data Package

The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: GC/MS Volatile, Diesel Range Organics and GC Volatiles (GRO).

I certify that this data report is in compliance with the terms and conditions of the subcontract and task order, both technically and for completeness, for other than the conditions detailed in the attached case narrative.



Jessica Ward for
Valerie Davis
Project Manager

Chain of Custody and Supporting Documentation

642648

General Engineering Laboratories, Inc., Charleston, SC.
Charleston SC

Chain of Custody/Analysis Request

COC/Lab Request #: 2024-76
Page 1 of 1

Client Contact:

Lab Agreement #: 620266
Project Number: LANL
Site Name: Los Alamos National Laboratory

Analysis Turnaround Time:
24 Hour - ☐ Other - ☒
7 Days - ☐ Value - 5-Day
14 Days - ☐
21 Days - ☐
28 Days - ☐

Total # of bottles: 22
Event ID: 15356

Rad Screening Info: Acceptable knowledge identifies no DOT hazard classification

Lab Reporting Limit Type: Method Detection Limit

Field Sample ID	Sample Date	Sample Time	Sample Matrix	8260B	8260B Trip Blank	BTEX + TPH-GRO	TPH-DRO+Motor Oil
RLUOB-23-289589	10/19/2023	10:15	SO			1	1
RLUOB-23-289590	10/19/2023	10:32	SO			1	1
RLUOB-23-289591	10/19/2023	10:52	SO			1	1
RLUOB-23-289592	10/19/2023	11:09	SO			1	1
RLUOB-23-289593	10/19/2023	11:45	SO			1	1
RLUOB-23-289594	10/19/2023	12:00	SO			1	1
RLUOB-23-289595	10/19/2023	12:15	SO			1	1
RLUOB-23-289596	10/19/2023	12:47	SO			1	1
RLUOB-23-302822	10/19/2023	10:15	SO		2		
RLUOB-23-302827	10/19/2023	14:04	W	2			
RLUOB-23-302828	10/19/2023	14:16	W	2			

Special Instructions:

Relinquished by:	Print Name: M. Lis. Mart	Date/Time: 10/24/23 1500	Received by:	Print Name: Q. Gathers	Date/Time: 6/25/23 1110
Relinquished by:	Print Name:	Date/Time:	Received by:	Print Name:	Date/Time:
Relinquished by:	Print Name:	Date/Time:	Received by:	Print Name:	Date/Time:

HPAL ANALYSIS REPORT

FILE: 29258418

Sample Description	Analysis Information	Contact Information
Login Date: 10/19/23	Instrument: BEGe-12	Name: BUCHANAN PHILIP D II
Sample Type: Soil/Solid	Analysis: Isotopic	Phone: -
Location TA:55 Bldg: 0400	Date: 10/23/23	Email: buchanan@lanl.gov
Room: OUTSIDE	Analyst: CHANDLER JOSHUA R	
Priority: Priority		

Analyst Comments:

Sample ID or Description: Soils 1-8. Analysis modified. Contains natural decay products

Submitter Comments:

SOIL SAMPLE FROM DISMANTLE JOB (NOT IN RCA)

Isotope Name	Activity (pCi/g)	2* sigma (pct)	MDA (pCi/g)
NONE-	NDA	NDA	NDA

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE ROAD

CHARLESTON SC 29407
(843) 556-8171
REF: 5K030AJ1JR00000000

FedEx Express

1 of 2
TRK# 0201 6190 9599 7263
TUE - 24 OCT 10:3
PRIORITY OVERNIGI
MASTER
X6 RBWA 4c
294
SC-US CH
EXP 12/22 ##

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE ROAD

CHARLESTON SC 29407
(843) 556-8171
REF: 7D170CKBMP2F560400

6 c

FedEx Express

TRK# 0201 6190 9599 7311
WED - 25 OCT 10:30A
PRIORITY OVERNIGHT

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: TNSC	SDG/AR/COC/Work Order: 642648
Received By: QG	Date Received: 10/25/23
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other 6190 9579 7311 62

Suspected Hazard Information	Yes	No	
			*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A)Shipped as a DOT Hazardous?			Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes___ No___
B) Did the client designate the samples are to be received as radioactive?			COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?			Maximum Net Counts Observed* (Observed Counts - Area Background Counts): 0 CPM/mR/Hr Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?			COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?			If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?				Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?				Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*				Preservation Method: Wet Ice Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP: 6°
4	Daily check performed and passed on IR temperature gun?	✓			Temperature Device Serial #: IR1-23 Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?				Circle Applicable: Seals broken Damaged container Leaking container Other (describe) RLU08 - 27 - 302828 applies to WO 642648
6	Samples requiring chemical preservation at proper pH?				Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?				If Yes, are Encores or Soil Kits present for solids? Yes___ No___ NA___(If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes___ No___ NA___(If unknown, select No) Are liquid VOA vials free of headspace? Yes___ No___ NA___ Sample ID's and containers affected:
8	Samples received within holding time?				ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?				ID's and containers affected:
10	Date & time on COC match date & time on bottles?				Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
11	Number of containers received match number indicated on COC?				Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided by use of GEL labels?				
13	COC form is properly signed in relinquished/received sections?				Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials ZW Date 10/26/23 Page 1 of 1

GL-CHL-SR-001 Rev 7

Sample Receipt Issue: Broken container for COC 2024-76

Jessica Ward <Jessica.Ward@gel.com>

Thu 10/26/2023 9:32 AM

To:Stas@lanl.gov <stas@lanl.gov>
Cc:Team Davis <Team.Davis@gel.com>

Stas,

Our receiving team has informed us that one container for COC 2024-76 was broken during transit. One 40 ml vial for 8260B was broken for sample ID RLUOB-23-302828. I will let you know if the lab has any volume concerns.

Jessica Ward
Project Manager Assistant

GEL Laboratories LLC EST. 1981

2040 Savage Road, Charleston, SC 29407
Office Direct: 843.556.8171 ext. 4523 | Office Main: 843.556.8171 | Fax: 843.766.1178

Email: Jessica.Ward@gel.com

Data Review Qualifier Flag Definition Sheet

Data Review Qualifier Definitions

Qualifier	Explanation
*	A quality control analyte recovery is outside of specified acceptance criteria
**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
A	The TIC is a suspected aldol-condensation product
B	Target analyte was detected in the associated blank
B	Metals-Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
d	5-day BOD-The 2:1 depletion requirement was not met for this sample
E	Organics-Concentration of the target analyte exceeds the instrument calibration range
E	Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
H	Analytical holding time was exceeded
h	Preparation or preservation holding time was exceeded
J	Value is estimated
N	Metals-The Matrix spike sample recovery is not within specified control limits
N	Organics-Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND	Analyte concentration is not detected above the reporting limit
UI	Gamma Spectroscopy-Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

P Organics-The concentrations between the primary and confirmation columns/detectors is >40% difference. For HPLC, the difference is >70%.

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

List of current GEL Certifications as of 27 October 2023

State	Certification
Alabama	42200
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-00651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	KY90129
Kentucky Wastewater	KY90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2023019
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122024-04
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2023-152
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-23-21
Utah NELAP	SC000122022-37
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

Volatile Analysis

Case Narrative

GC/MS Volatile
Technical Case Narrative
Triad National Security, LLC
SDG #: 2024-76
Work Order #: 642648

Product: **Volatile Organic Compounds (VOC) by Gas Chromatograph/Mass Spectrometer**
Analytical Method: SW846 8260D
Analytical Procedure: GL-OA-E-038 REV# 29
Analytical Batches: 2514596 and 2514703

Preparation Method: SW846 5030
Preparation Procedure: GL-OA-E-038 REV# 29
Preparation Batch: 2514593

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
642648001	RLUOB-23-289589
642648002	RLUOB-23-289590
642648003	RLUOB-23-289591
642648004	RLUOB-23-289592
642648005	RLUOB-23-289593
642648006	RLUOB-23-289594
642648007	RLUOB-23-289595
642648008	RLUOB-23-289596
642648009	RLUOB-23-302822
642648010	RLUOB-23-302827
642648011	RLUOB-23-302828
642648012	RLUOB-23-289591 DUP
1205557485	Laboratory Control Sample (LCS)
1205557486	Method Blank (MB)
1205557487	High Blank (HB)
1205557488	642648001(RLUOB-23-289589) Post Spike (PS)
1205557489	642648001(RLUOB-23-289589) Post Spike Duplicate (PSD)
1205557613	Laboratory Control Sample (LCS)
1205557614	642648001(RLUOB-23-289589) Post Spike (PS)
1205557615	642648001(RLUOB-23-289589) Post Spike Duplicate (PSD)
1205557763	Laboratory Control Sample (LCS)
1205557764	Laboratory Control Sample (LCS)
1205557765	Method Blank (MB)
1205557766	642648010(RLUOB-23-302827) Post Spike (PS)
1205557767	642648010(RLUOB-23-302827) Post Spike (PS)
1205557768	642648010(RLUOB-23-302827) Post Spike Duplicate (PSD)
1205557769	642648010(RLUOB-23-302827) Post Spike Duplicate (PSD)

Samples 642648001, 002, 003, 004, 005, 006, 007, 008, 009 and 012 in this SDG were analyzed on a "dry weight corrected" basis. Samples 642648010 and 011 in this SDG were analyzed on an "as received" basis.
Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Quality Control (QC) Information

Relative Percent Difference (RPD) Statement
The RPD between the matrix spike pair (See Below) were not all within the acceptance limits. However, the spike recoveries passed. The unacceptable RPD may be attributed to matrix interference and/or sample non-homogeneity.

Sample	Analyte	Value
1205557488PS and 1205557489PSD (RLUOB-23-289589)	Dichlorodifluoromethane	RPD 23* (0%-20%)
	Trichlorofluoromethane	RPD 25* (0%-20%)

Technical Information

Sample Dilutions/Methanol Dilutions
Samples 642648001 (RLUOB-23-289589), 642648002 (RLUOB-23-289590), 642648003 (RLUOB-23-289591), 642648004 (RLUOB-23-289592), 642648005 (RLUOB-23-289593), 642648006 (RLUOB-23-289594), 642648007 (RLUOB-23-289595), 642648008 (RLUOB-23-289596) and 642648012 (RLUOB-23-289591 DUP) were analyzed employing a methanol dilution extraction procedure because the sample matrices were not amenable to more concentrated analyses.

Analyte	642648								
	001	002	003	004	005	006	007	008	012
Benzene	50X	50X	50X	50X	50X	50X	50X	50X	50X
Ethylbenzene	50X	50X	50X	50X	50X	50X	50X	50X	50X
Toluene	50X	50X	50X	50X	50X	50X	50X	50X	50X
Xylenes (total)	50X	50X	50X	50X	50X	50X	50X	50X	50X

Miscellaneous Information

TIC Comment
Tentatively identified compounds (TIC) were requested for samples 642648009 (RLUOB-23-302822), 642648010 (RLUOB-23-302827) and 642648011 (RLUOB-23-302828) in this delivery group/work order. Please note that non-requested calibrated analytes detected in a client sample may be reported on the Form 1/Certificate of Analysis as TICs. TIC data, if requested, were included on the Sample Data Summary (Form 1) and included with the sample raw data.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report
for

TNSL001 Triad National Security, LLC (620266)

Client SDG: 2024-76 GEL Work Order: 642648

The Qualifiers in this report are defined as follows:

* A quality control analyte recovery is outside of specified acceptance criteria
** Analyte is a surrogate compound
J Value is estimated
U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

DL Indicates that sample is diluted.
RA Indicates that sample is re-analyzed without re-extraction.
RE Indicates that sample is re-extracted.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: Michael A. Penny Jr. **Name: Michael Penny**

Date: 27 OCT 2023 **Title: Analyst III**

Sample Data Summary

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 10:15**	**Matrix:**	**SO**
Lab Sample ID:	**642648001**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**4**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289589**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2514596**	**Inst:**	**VOAC.I**	**Dilution:**	**50**
Run Date:	**10/26/2023 12:19**	**Analyst:**	**PXY1**	**Purge Vol:**	**5 mL**
Prep Date:	**10/26/2023 09:01**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**data\102623VC\CD409.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	34.7	ug/kg	34.7	104
108-88-3	Toluene	U	34.7	ug/kg	34.7	104
100-41-4	Ethylbenzene	U	34.7	ug/kg	34.7	104
1330-20-7	Xylenes (total)	U	104	ug/kg	104	312

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Toluene-d8	46.7	50.0	ug/L	93	(81%-120%)
Bromofluorobenzene	45.4	50.0	ug/L	91	(74%-128%)
1,2-Dichloroethane-d4	41.4	50.0	ug/L	83	(77%-127%)

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 10:32**	**Matrix:**	**SO**
Lab Sample ID:	**642648002**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**1**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289590**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2514596**	**Inst:**	**VOAC.I**	**Dilution:**	**50**
Run Date:	**10/26/2023 12:46**	**Analyst:**	**PXY1**	**Purge Vol:**	**5 mL**
Prep Date:	**10/26/2023 09:02**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**data\102623VC\CD410.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	33.6	ug/kg	33.6	101
108-88-3	Toluene	U	33.6	ug/kg	33.6	101
100-41-4	Ethylbenzene	U	33.6	ug/kg	33.6	101
1330-20-7	Xylenes (total)	U	101	ug/kg	101	303

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	46.2	50.0	ug/L	92	(74%-128%)
Toluene-d8	46.9	50.0	ug/L	94	(81%-120%)
1,2-Dichloroethane-d4	40.4	50.0	ug/L	81	(77%-127%)

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 10:52**	**Matrix:**	**SO**
Lab Sample ID:	**642648003**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**4.8**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289591**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2514596**	**Inst:**	**VOAC.I**	**Dilution:**	**50**
Run Date:	**10/26/2023 13:14**	**Analyst:**	**PXY1**	**Purge Vol:**	**5 mL**
Prep Date:	**10/26/2023 09:03**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**data\102623VC\CD411.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	35.0	ug/kg	35.0	105
108-88-3	Toluene	U	35.0	ug/kg	35.0	105
100-41-4	Ethylbenzene	U	35.0	ug/kg	35.0	105
1330-20-7	Xylenes (total)	U	105	ug/kg	105	315

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Toluene-d8	46.5	50.0	ug/L	93	(81%-120%)
Bromofluorobenzene	45.6	50.0	ug/L	91	(74%-128%)
1,2-Dichloroethane-d4	42.0	50.0	ug/L	84	(77%-127%)

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 11:09**	**Matrix:**	**SO**
Lab Sample ID:	**642648004**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**2**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289592**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2514596**	**Inst:**	**VOAC.I**	**Dilution:**	**50**
Run Date:	**10/26/2023 13:41**	**Analyst:**	**PXY1**	**Purge Vol:**	**5 mL**
Prep Date:	**10/26/2023 09:04**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**data\102623VC\CD412.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	34.0	ug/kg	34.0	102
108-88-3	Toluene	U	34.0	ug/kg	34.0	102
100-41-4	Ethylbenzene	U	34.0	ug/kg	34.0	102
1330-20-7	Xylenes (total)	U	102	ug/kg	102	306

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Toluene-d8	47.1	50.0	ug/L	94	(81%-120%)
Bromofluorobenzene	46.4	50.0	ug/L	93	(74%-128%)
1,2-Dichloroethane-d4	41.2	50.0	ug/L	82	(77%-127%)

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 11:45**	**Matrix:**	**SO**
Lab Sample ID:	**642648005**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**1.7**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289593**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2514596**	**Inst:**	**VOAC.I**	**Dilution:**	**50**
Run Date:	**10/26/2023 14:09**	**Analyst:**	**PXY1**	**Purge Vol:**	**5 mL**
Prep Date:	**10/26/2023 09:05**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**data\102623VC\CD413.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	33.9	ug/kg	33.9	102
108-88-3	Toluene	U	33.9	ug/kg	33.9	102
100-41-4	Ethylbenzene	U	33.9	ug/kg	33.9	102
1330-20-7	Xylenes (total)	U	102	ug/kg	102	305

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	43.0	50.0	ug/L	86	(77%-127%)
Toluene-d8	47.2	50.0	ug/L	94	(81%-120%)
Bromofluorobenzene	47.7	50.0	ug/L	95	(74%-128%)

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 12:00**	**Matrix:**	**SO**
Lab Sample ID:	**642648006**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**5.1**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289594**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2514596**	**Inst:**	**VOAC.I**	**Dilution:**	**50**
Run Date:	**10/26/2023 14:36**	**Analyst:**	**PXY1**	**Purge Vol:**	**5 mL**
Prep Date:	**10/26/2023 09:06**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**data\102623VC\CD414.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	35.1	ug/kg	35.1	105
108-88-3	Toluene	U	35.1	ug/kg	35.1	105
100-41-4	Ethylbenzene	U	35.1	ug/kg	35.1	105
1330-20-7	Xylenes (total)	U	105	ug/kg	105	316

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Toluene-d8	47.4	50.0	ug/L	95	(81%-120%)
Bromofluorobenzene	48.2	50.0	ug/L	96	(74%-128%)
1,2-Dichloroethane-d4	41.9	50.0	ug/L	84	(77%-127%)

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 12:15**	**Matrix:**	**SO**
Lab Sample ID:	**642648007**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**2.5**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289595**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2514596**	**Inst:**	**VOAC.I**	**Dilution:**	**50**
Run Date:	**10/26/2023 15:04**	**Analyst:**	**PXY1**	**Purge Vol:**	**5 mL**
Prep Date:	**10/26/2023 09:07**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**data\102623VC\CD415.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	34.1	ug/kg	34.1	103
108-88-3	Toluene	U	34.1	ug/kg	34.1	103
100-41-4	Ethylbenzene	U	34.1	ug/kg	34.1	103
1330-20-7	Xylenes (total)	U	103	ug/kg	103	308

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Toluene-d8	47.0	50.0	ug/L	94	(81%-120%)
Bromofluorobenzene	45.9	50.0	ug/L	92	(74%-128%)
1,2-Dichloroethane-d4	41.9	50.0	ug/L	84	(77%-127%)

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 12:47**	**Matrix:**	**SO**
Lab Sample ID:	**642648008**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**3.6**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289596**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2514596**	**Inst:**	**VOAC.I**	**Dilution:**	**50**
Run Date:	**10/26/2023 15:31**	**Analyst:**	**PXY1**	**Purge Vol:**	**5 mL**
Prep Date:	**10/26/2023 09:08**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**data\102623VC\CD416.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	34.6	ug/kg	34.6	104
108-88-3	Toluene	U	34.6	ug/kg	34.6	104
100-41-4	Ethylbenzene	U	34.6	ug/kg	34.6	104
1330-20-7	Xylenes (total)	U	104	ug/kg	104	311

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	42.1	50.0	ug/L	84	(77%-127%)
Bromofluorobenzene	48.1	50.0	ug/L	96	(74%-128%)
Toluene-d8	47.9	50.0	ug/L	96	(81%-120%)

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 10:15**	**Matrix:**	**SO**
Lab Sample ID:	**642648009**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**0**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-302822**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2514596**	**Inst:**	**VOAC.I**	**Dilution:**	**1**
Run Date:	**10/26/2023 11:24**	**Analyst:**	**PXY1**	**Purge Vol:**	**5 mL**
Prep Date:	**10/26/2023 09:09**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**data\102623VC\CD407.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	0.333	ug/kg	0.333	1.00
74-87-3	Chloromethane	U	0.333	ug/kg	0.333	1.00
75-01-4	Vinyl chloride	U	0.333	ug/kg	0.333	1.00
74-83-9	Bromomethane	U	0.333	ug/kg	0.333	1.00
75-00-3	Chloroethane	U	0.333	ug/kg	0.333	1.00
75-69-4	Trichlorofluoromethane	U	0.333	ug/kg	0.333	1.00
67-64-1	Acetone		10.1	ug/kg	1.67	5.00
75-35-4	1,1-Dichloroethylene	U	0.333	ug/kg	0.333	1.00
74-88-4	Iodomethane	U	1.67	ug/kg	1.67	5.00
75-15-0	Carbon disulfide	U	1.67	ug/kg	1.67	5.00
75-09-2	Methylene chloride	U	1.67	ug/kg	1.67	5.00
156-60-5	trans-1,2-Dichloroethylene	U	0.333	ug/kg	0.333	1.00
75-34-3	1,1-Dichloroethane	U	0.333	ug/kg	0.333	1.00
78-93-3	2-Butanone	U	1.67	ug/kg	1.67	5.00
156-59-2	cis-1,2-Dichloroethylene	U	0.333	ug/kg	0.333	1.00
594-20-7	2,2-Dichloropropane	U	0.333	ug/kg	0.333	1.00
74-97-5	Bromochloromethane	U	0.333	ug/kg	0.333	1.00
67-66-3	Chloroform	U	0.333	ug/kg	0.333	1.00
71-55-6	1,1,1-Trichloroethane	U	0.333	ug/kg	0.333	1.00
563-58-6	1,1-Dichloropropene	U	0.333	ug/kg	0.333	1.00
56-23-5	Carbon tetrachloride	U	0.333	ug/kg	0.333	1.00
107-06-2	1,2-Dichloroethane	U	0.333	ug/kg	0.333	1.00
71-43-2	Benzene	U	0.333	ug/kg	0.333	1.00
79-01-6	Trichloroethylene	U	0.333	ug/kg	0.333	1.00
78-87-5	1,2-Dichloropropane	U	0.333	ug/kg	0.333	1.00
74-95-3	Dibromomethane	U	0.333	ug/kg	0.333	1.00
75-27-4	Bromodichloromethane	U	0.333	ug/kg	0.333	1.00
10061-01-5	cis-1,3-Dichloropropylene	U	0.333	ug/kg	0.333	1.00
108-10-1	4-Methyl-2-pentanone	U	1.67	ug/kg	1.67	5.00
108-88-3	Toluene	U	0.333	ug/kg	0.333	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	0.333	ug/kg	0.333	1.00
79-00-5	1,1,2-Trichloroethane	U	0.333	ug/kg	0.333	1.00
591-78-6	2-Hexanone	U	1.67	ug/kg	1.67	5.00
142-28-9	1,3-Dichloropropane	U	0.333	ug/kg	0.333	1.00
127-18-4	Tetrachloroethylene	U	0.333	ug/kg	0.333	1.00
124-48-1	Dibromochloromethane	U	0.333	ug/kg	0.333	1.00
106-93-4	1,2-Dibromoethane	U	0.333	ug/kg	0.333	1.00
108-90-7	Chlorobenzene	U	0.333	ug/kg	0.333	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 10:15**	**Matrix:**	**SO**
Lab Sample ID:	**642648009**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**0**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-302822**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2514596**	**Inst:**	**VOAC.I**	**Dilution:**	**1**
Run Date:	**10/26/2023 11:24**	**Analyst:**	**PXY1**	**Purge Vol:**	**5 mL**
Prep Date:	**10/26/2023 09:09**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**data\102623VC\CD407.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	0.333	ug/kg	0.333	1.00
179601-23-1	m,p-Xylenes	U	0.667	ug/kg	0.667	2.00
95-47-6	o-Xylene	U	0.333	ug/kg	0.333	1.00
100-42-5	Styrene	U	0.333	ug/kg	0.333	1.00
75-25-2	Bromoform	U	0.333	ug/kg	0.333	1.00
98-82-8	Isopropylbenzene	U	0.333	ug/kg	0.333	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	0.333	ug/kg	0.333	1.00
96-18-4	1,2,3-Trichloropropane	U	0.333	ug/kg	0.333	1.00
108-86-1	Bromobenzene	U	0.333	ug/kg	0.333	1.00
103-65-1	n-Propylbenzene	U	0.333	ug/kg	0.333	1.00
108-67-8	1,3,5-Trimethylbenzene	U	0.333	ug/kg	0.333	1.00
95-49-8	2-Chlorotoluene	U	0.333	ug/kg	0.333	1.00
106-43-4	4-Chlorotoluene	U	0.333	ug/kg	0.333	1.00
98-06-6	tert-Butylbenzene	U	0.333	ug/kg	0.333	1.00
95-63-6	1,2,4-Trimethylbenzene	U	0.333	ug/kg	0.333	1.00
135-98-8	sec-Butylbenzene	U	0.333	ug/kg	0.333	1.00
99-87-6	4-Isopropyltoluene	U	0.333	ug/kg	0.333	1.00
541-73-1	1,3-Dichlorobenzene	U	0.333	ug/kg	0.333	1.00
106-46-7	1,4-Dichlorobenzene	U	0.333	ug/kg	0.333	1.00
104-51-8	n-Butylbenzene	U	0.333	ug/kg	0.333	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	0.500	ug/kg	0.500	1.00
76-13-1	Trichlorotrifluoroethane	U	1.67	ug/kg	1.67	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	0.333	ug/kg	0.333	1.00
95-50-1	1,2-Dichlorobenzene	U	0.333	ug/kg	0.333	1.00

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Toluene-d8	46.4	50.0	ug/L	93	(81%-120%)
1,2-Dichloroethane-d4	43.5	50.0	ug/L	87	(77%-127%)
Bromofluorobenzene	46.7	50.0	ug/L	93	(74%-128%)

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Concentration	Units	Fit	Qual
No Tentatively Identified Compounds Found				ug/kg		

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 14:04**	**Matrix:**	**W**
Lab Sample ID:	**642648010**	**Date Received:**	**10/25/2023 11:10**		
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-302827**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2514703**	**Inst:**	**VOA3.I**	**Dilution:**	**1**
Run Date:	**10/26/2023 14:24**	**Analyst:**	**JM6**	**Purge Vol:**	**5 mL**
Prep Date:	**10/26/2023 14:24**				
Data File:	**102623V3\3P417.D**	**Column:**	**Serial Number: AB001**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	0.355	ug/L	0.355	1.00
74-87-3	Chloromethane	U	0.333	ug/L	0.333	1.00
75-01-4	Vinyl chloride	U	0.333	ug/L	0.333	1.00
74-83-9	Bromomethane	U	0.337	ug/L	0.337	1.00
75-00-3	Chloroethane	U	0.333	ug/L	0.333	1.00
75-69-4	Trichlorofluoromethane	U	0.333	ug/L	0.333	1.00
60-29-7	Ethyl ether	U	0.333	ug/L	0.333	1.00
67-64-1	Acetone	U	1.74	ug/L	1.74	5.00
75-35-4	1,1-Dichloroethylene	U	0.333	ug/L	0.333	1.00
74-88-4	Iodomethane	U	1.67	ug/L	1.67	5.00
75-05-8	Acetonitrile	U	8.33	ug/L	8.33	25.0
75-15-0	Carbon disulfide	U	1.67	ug/L	1.67	5.00
75-09-2	Methylene chloride	J	0.610	ug/L	0.500	5.00
1634-04-4	tert-Butyl methyl ether	U	0.333	ug/L	0.333	1.00
156-60-5	trans-1,2-Dichloroethylene	U	0.333	ug/L	0.333	1.00
108-05-4	Vinyl acetate	U	1.67	ug/L	1.67	5.00
75-34-3	1,1-Dichloroethane	U	0.333	ug/L	0.333	1.00
78-93-3	2-Butanone	U	1.67	ug/L	1.67	5.00
156-59-2	cis-1,2-Dichloroethylene	U	0.333	ug/L	0.333	1.00
594-20-7	2,2-Dichloropropane	U	0.333	ug/L	0.333	1.00
74-97-5	Bromochloromethane	U	0.333	ug/L	0.333	1.00
67-66-3	Chloroform		2.95	ug/L	0.333	1.00
71-55-6	1,1,1-Trichloroethane	U	0.333	ug/L	0.333	1.00
563-58-6	1,1-Dichloropropene	U	0.333	ug/L	0.333	1.00
56-23-5	Carbon tetrachloride	U	0.333	ug/L	0.333	1.00
107-06-2	1,2-Dichloroethane	U	0.333	ug/L	0.333	1.00
71-43-2	Benzene	U	0.333	ug/L	0.333	1.00
71-36-3	n-Butyl alcohol	U	21.1	ug/L	21.1	50.0
79-01-6	Trichloroethylene	U	0.333	ug/L	0.333	1.00
78-87-5	1,2-Dichloropropane	U	0.333	ug/L	0.333	1.00
74-95-3	Dibromomethane	U	0.333	ug/L	0.333	1.00
75-27-4	Bromodichloromethane		2.03	ug/L	0.333	1.00
10061-01-5	cis-1,3-Dichloropropylene	U	0.333	ug/L	0.333	1.00
108-10-1	4-Methyl-2-pentanone	U	1.67	ug/L	1.67	5.00
108-88-3	Toluene	U	0.333	ug/L	0.333	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	0.333	ug/L	0.333	1.00
79-00-5	1,1,2-Trichloroethane	U	0.333	ug/L	0.333	1.00
591-78-6	2-Hexanone	U	1.67	ug/L	1.67	5.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 14:04**	**Matrix:**	**W**
Lab Sample ID:	**642648010**	**Date Received:**	**10/25/2023 11:10**		
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-302827**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2514703**	**Inst:**	**VOA3.I**	**Dilution:**	**1**
Run Date:	**10/26/2023 14:24**	**Analyst:**	**JM6**	**Purge Vol:**	**5 mL**
Prep Date:	**10/26/2023 14:24**				
Data File:	**102623V3\3P417.D**	**Column:**	**Serial Number: AB001**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
142-28-9	1,3-Dichloropropane	U	0.333	ug/L	0.333	1.00
127-18-4	Tetrachloroethylene	U	0.333	ug/L	0.333	1.00
124-48-1	Dibromochloromethane		1.02	ug/L	0.333	1.00
106-93-4	1,2-Dibromoethane	U	0.333	ug/L	0.333	1.00
108-90-7	Chlorobenzene	U	0.333	ug/L	0.333	1.00
100-41-4	Ethylbenzene	U	0.333	ug/L	0.333	1.00
179601-23-1	m,p-Xylenes	U	0.500	ug/L	0.500	2.00
95-47-6	o-Xylene	U	0.333	ug/L	0.333	1.00
100-42-5	Styrene	U	0.333	ug/L	0.333	1.00
75-25-2	Bromoform	U	0.333	ug/L	0.333	1.00
98-82-8	Isopropylbenzene	U	0.333	ug/L	0.333	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	0.333	ug/L	0.333	1.00
96-18-4	1,2,3-Trichloropropane	U	0.333	ug/L	0.333	1.00
108-86-1	Bromobenzene	U	0.333	ug/L	0.333	1.00
103-65-1	n-Propylbenzene	U	0.333	ug/L	0.333	1.00
108-67-8	1,3,5-Trimethylbenzene	U	0.500	ug/L	0.500	2.00
95-49-8	2-Chlorotoluene	U	0.333	ug/L	0.333	1.00
106-43-4	4-Chlorotoluene	U	0.333	ug/L	0.333	1.00
98-06-6	tert-Butylbenzene	U	0.333	ug/L	0.333	1.00
95-63-6	1,2,4-Trimethylbenzene	U	0.333	ug/L	0.333	1.00
135-98-8	sec-Butylbenzene	U	0.333	ug/L	0.333	1.00
99-87-6	4-Isopropyltoluene	U	0.333	ug/L	0.333	1.00
541-73-1	1,3-Dichlorobenzene	U	0.333	ug/L	0.333	1.00
106-46-7	1,4-Dichlorobenzene	U	0.333	ug/L	0.333	1.00
104-51-8	n-Butylbenzene	U	0.333	ug/L	0.333	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	0.333	ug/L	0.333	1.00
87-68-3	Hexachlorobutadiene	U	0.333	ug/L	0.333	1.00
91-20-3	Naphthalene	U	0.333	ug/L	0.333	1.00
87-61-6	1,2,3-Trichlorobenzene	U	0.333	ug/L	0.333	1.00
107-02-8	Acrolein	U	1.67	ug/L	1.67	5.00
76-13-1	Trichlorotrifluoroethane	U	2.98	ug/L	2.98	5.00
107-05-1	Allyl chloride	U	1.67	ug/L	1.67	5.00
107-13-1	Acrylonitrile	U	1.67	ug/L	1.67	5.00
126-99-8	2-Chloro-1,3-butadiene	U	0.333	ug/L	0.333	1.00
107-12-0	Propionitrile	U	1.67	ug/L	1.67	5.00
126-98-7	Methacrylonitrile	U	1.67	ug/L	1.67	5.00
78-83-1	Isobutyl alcohol	U	16.7	ug/L	16.7	50.0
80-62-6	Methyl methacrylate	U	1.67	ug/L	1.67	5.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 14:04**	**Matrix:**	**W**
Lab Sample ID:	**642648010**	**Date Received:**	**10/25/2023 11:10**		
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-302827**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2514703**	**Inst:**	**VOA3.I**	**Dilution:**	**1**
Run Date:	**10/26/2023 14:24**	**Analyst:**	**JM6**	**Purge Vol:**	**5 mL**
Prep Date:	**10/26/2023 14:24**				
Data File:	**102623V3\3P417.D**	**Column:**	**Serial Number: AB001**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
97-63-2	Ethyl methacrylate	U	1.67	ug/L	1.67	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	0.333	ug/L	0.333	1.00
120-82-1	1,2,4-Trichlorobenzene	U	0.333	ug/L	0.333	1.00
95-50-1	1,2-Dichlorobenzene	U	0.333	ug/L	0.333	1.00

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	47.2	50.0	ug/L	94	(74%-123%)
1,2-Dichloroethane-d4	49.5	50.0	ug/L	99	(76%-127%)
Toluene-d8	48.3	50.0	ug/L	97	(77%-121%)

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Concentration	Units	Fit	Qual
	unknown	3.913	5.81	ug/L	0	J

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 14:16**	**Matrix:**	**W**
Lab Sample ID:	**642648011**	**Date Received:**	**10/25/2023 11:10**		
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-302828**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2514703**	**Inst:**	**VOA3.I**	**Dilution:**	**1**
Run Date:	**10/26/2023 14:51**	**Analyst:**	**JM6**	**Purge Vol:**	**5 mL**
Prep Date:	**10/26/2023 14:51**				
Data File:	**102623V3\3P418.D**	**Column:**	**Serial Number: AB001**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	0.355	ug/L	0.355	1.00
74-87-3	Chloromethane	U	0.333	ug/L	0.333	1.00
75-01-4	Vinyl chloride	U	0.333	ug/L	0.333	1.00
74-83-9	Bromomethane	U	0.337	ug/L	0.337	1.00
75-00-3	Chloroethane	U	0.333	ug/L	0.333	1.00
75-69-4	Trichlorofluoromethane	U	0.333	ug/L	0.333	1.00
60-29-7	Ethyl ether	U	0.333	ug/L	0.333	1.00
67-64-1	Acetone	U	1.74	ug/L	1.74	5.00
75-35-4	1,1-Dichloroethylene	U	0.333	ug/L	0.333	1.00
74-88-4	Iodomethane	U	1.67	ug/L	1.67	5.00
75-05-8	Acetonitrile	U	8.33	ug/L	8.33	25.0
75-15-0	Carbon disulfide	U	1.67	ug/L	1.67	5.00
75-09-2	Methylene chloride	J	0.570	ug/L	0.500	5.00
1634-04-4	tert-Butyl methyl ether	U	0.333	ug/L	0.333	1.00
156-60-5	trans-1,2-Dichloroethylene	U	0.333	ug/L	0.333	1.00
108-05-4	Vinyl acetate	U	1.67	ug/L	1.67	5.00
75-34-3	1,1-Dichloroethane	U	0.333	ug/L	0.333	1.00
78-93-3	2-Butanone	U	1.67	ug/L	1.67	5.00
156-59-2	cis-1,2-Dichloroethylene	U	0.333	ug/L	0.333	1.00
594-20-7	2,2-Dichloropropane	U	0.333	ug/L	0.333	1.00
74-97-5	Bromochloromethane	U	0.333	ug/L	0.333	1.00
67-66-3	Chloroform		3.92	ug/L	0.333	1.00
71-55-6	1,1,1-Trichloroethane	U	0.333	ug/L	0.333	1.00
563-58-6	1,1-Dichloropropene	U	0.333	ug/L	0.333	1.00
56-23-5	Carbon tetrachloride	U	0.333	ug/L	0.333	1.00
107-06-2	1,2-Dichloroethane	U	0.333	ug/L	0.333	1.00
71-43-2	Benzene	U	0.333	ug/L	0.333	1.00
71-36-3	n-Butyl alcohol	U	21.1	ug/L	21.1	50.0
79-01-6	Trichloroethylene	U	0.333	ug/L	0.333	1.00
78-87-5	1,2-Dichloropropane	U	0.333	ug/L	0.333	1.00
74-95-3	Dibromomethane	U	0.333	ug/L	0.333	1.00
75-27-4	Bromodichloromethane		2.88	ug/L	0.333	1.00
10061-01-5	cis-1,3-Dichloropropylene	U	0.333	ug/L	0.333	1.00
108-10-1	4-Methyl-2-pentanone	U	1.67	ug/L	1.67	5.00
108-88-3	Toluene	U	0.333	ug/L	0.333	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	0.333	ug/L	0.333	1.00
79-00-5	1,1,2-Trichloroethane	U	0.333	ug/L	0.333	1.00
591-78-6	2-Hexanone	U	1.67	ug/L	1.67	5.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 14:16**	**Matrix:**	**W**
Lab Sample ID:	**642648011**	**Date Received:**	**10/25/2023 11:10**		
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-302828**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2514703**	**Inst:**	**VOA3.I**	**Dilution:**	**1**
Run Date:	**10/26/2023 14:51**	**Analyst:**	**JM6**	**Purge Vol:**	**5 mL**
Prep Date:	**10/26/2023 14:51**				
Data File:	**102623V3\3P418.D**	**Column:**	**Serial Number: AB001**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
142-28-9	1,3-Dichloropropane	U	0.333	ug/L	0.333	1.00
127-18-4	Tetrachloroethylene	U	0.333	ug/L	0.333	1.00
124-48-1	Dibromochloromethane		1.34	ug/L	0.333	1.00
106-93-4	1,2-Dibromoethane	U	0.333	ug/L	0.333	1.00
108-90-7	Chlorobenzene	U	0.333	ug/L	0.333	1.00
100-41-4	Ethylbenzene	U	0.333	ug/L	0.333	1.00
179601-23-1	m,p-Xylenes	U	0.500	ug/L	0.500	2.00
95-47-6	o-Xylene	U	0.333	ug/L	0.333	1.00
100-42-5	Styrene	U	0.333	ug/L	0.333	1.00
75-25-2	Bromoform	U	0.333	ug/L	0.333	1.00
98-82-8	Isopropylbenzene	U	0.333	ug/L	0.333	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	0.333	ug/L	0.333	1.00
96-18-4	1,2,3-Trichloropropane	U	0.333	ug/L	0.333	1.00
108-86-1	Bromobenzene	U	0.333	ug/L	0.333	1.00
103-65-1	n-Propylbenzene	U	0.333	ug/L	0.333	1.00
108-67-8	1,3,5-Trimethylbenzene	U	0.500	ug/L	0.500	2.00
95-49-8	2-Chlorotoluene	U	0.333	ug/L	0.333	1.00
106-43-4	4-Chlorotoluene	U	0.333	ug/L	0.333	1.00
98-06-6	tert-Butylbenzene	U	0.333	ug/L	0.333	1.00
95-63-6	1,2,4-Trimethylbenzene	U	0.333	ug/L	0.333	1.00
135-98-8	sec-Butylbenzene	U	0.333	ug/L	0.333	1.00
99-87-6	4-Isopropyltoluene	U	0.333	ug/L	0.333	1.00
541-73-1	1,3-Dichlorobenzene	U	0.333	ug/L	0.333	1.00
106-46-7	1,4-Dichlorobenzene	U	0.333	ug/L	0.333	1.00
104-51-8	n-Butylbenzene	U	0.333	ug/L	0.333	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	0.333	ug/L	0.333	1.00
87-68-3	Hexachlorobutadiene	U	0.333	ug/L	0.333	1.00
91-20-3	Naphthalene	U	0.333	ug/L	0.333	1.00
87-61-6	1,2,3-Trichlorobenzene	U	0.333	ug/L	0.333	1.00
107-02-8	Acrolein	U	1.67	ug/L	1.67	5.00
76-13-1	Trichlorotrifluoroethane	U	2.98	ug/L	2.98	5.00
107-05-1	Allyl chloride	U	1.67	ug/L	1.67	5.00
107-13-1	Acrylonitrile	U	1.67	ug/L	1.67	5.00
126-99-8	2-Chloro-1,3-butadiene	U	0.333	ug/L	0.333	1.00
107-12-0	Propionitrile	U	1.67	ug/L	1.67	5.00
126-98-7	Methacrylonitrile	U	1.67	ug/L	1.67	5.00
78-83-1	Isobutyl alcohol	U	16.7	ug/L	16.7	50.0
80-62-6	Methyl methacrylate	U	1.67	ug/L	1.67	5.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 14:16**	**Matrix:**	**W**
Lab Sample ID:	**642648011**	**Date Received:**	**10/25/2023 11:10**		
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-302828**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2514703**	**Inst:**	**VOA3.I**	**Dilution:**	**1**
Run Date:	**10/26/2023 14:51**	**Analyst:**	**JM6**	**Purge Vol:**	**5 mL**
Prep Date:	**10/26/2023 14:51**				
Data File:	**102623V3\3P418.D**	**Column:**	**Serial Number: AB001**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
97-63-2	Ethyl methacrylate	U	1.67	ug/L	1.67	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	0.333	ug/L	0.333	1.00
120-82-1	1,2,4-Trichlorobenzene	U	0.333	ug/L	0.333	1.00
95-50-1	1,2-Dichlorobenzene	U	0.333	ug/L	0.333	1.00

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	48.1	50.0	ug/L	96	(74%-123%)
1,2-Dichloroethane-d4	48.9	50.0	ug/L	98	(76%-127%)
Toluene-d8	47.4	50.0	ug/L	95	(77%-121%)

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Concentration	Units	Fit	Qual
	unknown	3.913	5.11	ug/L	0	J

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 10:52**	**Matrix:**	**SO**
Lab Sample ID:	**642648012**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**4.8**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289591 DUP**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2514596**	**Inst:**	**VOAC.I**	**Dilution:**	**50**
Run Date:	**10/26/2023 15:59**	**Analyst:**	**PXY1**	**Purge Vol:**	**5 mL**
Prep Date:	**10/26/2023 09:10**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**data\102623VC\CD417.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	35.0	ug/kg	35.0	105
108-88-3	Toluene	U	35.0	ug/kg	35.0	105
100-41-4	Ethylbenzene	U	35.0	ug/kg	35.0	105
1330-20-7	Xylenes (total)	U	105	ug/kg	105	315

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	48.3	50.0	ug/L	97	(74%-128%)
1,2-Dichloroethane-d4	42.4	50.0	ug/L	85	(77%-127%)
Toluene-d8	45.8	50.0	ug/L	92	(81%-120%)

Quality Control Summary

Volatile

Surrogate Recovery Report

SDG Number: 2024-76

Matrix Type: LIQUID

Sample ID	Client ID	DCED4 %REC	TOL %REC	BFB %REC
1205557763	LCS for batch 2514703	96	94	93
1205557764	LCS for batch 2514703	95	95	97
1205557765	MB for batch 2514703	95	98	95
642648010	RLUOB-23-302827	99	97	94
642648011	RLUOB-23-302828	98	95	96
1205557766	RLUOB-23-302827PS	98	93	93
1205557768	RLUOB-23-302827PSD	99	96	96
1205557767	RLUOB-23-302827PS	97	92	96
1205557769	RLUOB-23-302827PSD	96	90	97

Surrogate		Acceptance Limits
DCED4	= 1,2-Dichloroethane-d4	(76%-127%)
TOL	= Toluene-d8	(77%-121%)
BFB	= Bromofluorobenzene	(74%-123%)

* Recovery outside Acceptance Limits
# Column to be used to flag recovery values
D Sample Diluted

Surrogate Recovery Report

SDG Number: 2024-76

Matrix Type: SOLID

Sample ID	Client ID	DCED4 %REC		TOL %REC		BFB %REC	
1205557485	LCS for batch 2514593	84		91		95	
1205557613	LCS for batch 2514593	84		91		97	
1205557486	MB for batch 2514593	84		92		89	
642648009	RLUOB-23-302822	87		93		93	
1205557487	HB for batch 2514593	83	D	94	D	91	D
642648001	RLUOB-23-289589	83	D	93	D	91	D
642648002	RLUOB-23-289590	81	D	94	D	92	D
642648003	RLUOB-23-289591	84	D	93	D	91	D
642648004	RLUOB-23-289592	82	D	94	D	93	D
642648005	RLUOB-23-289593	86	D	94	D	95	D
642648006	RLUOB-23-289594	84	D	95	D	96	D
642648007	RLUOB-23-289595	84	D	94	D	92	D
642648008	RLUOB-23-289596	84	D	96	D	96	D
642648012	RLUOB-23-289591 DUP	85	D	92	D	97	D
1205557488	RLUOB-23-289589PS	82	D	92	D	96	D
1205557489	RLUOB-23-289589PSD	82	D	93	D	98	D
1205557614	RLUOB-23-289589PS	83	D	95	D	104	D
1205557615	RLUOB-23-289589PSD	83	D	94	D	99	D

Surrogate		Acceptance Limits
DCED4	= 1,2-Dichloroethane-d4	(77%-127%)
TOL	= Toluene-d8	(81%-120%)
BFB	= Bromofluorobenzene	(74%-128%)

* Recovery outside Acceptance Limits
# Column to be used to flag recovery values
D Sample Diluted

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-76
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 2514593
Matrix: SOIL
Lab Sample ID: 1205557485
Instrument: VOAC.I
Analysis Date: 10/26/2023 09:34
Dilution: 1
Analyst: PXY1
Prep Batch ID: 2514593
Purge Vol: 5 mL
Batch ID: 2514596

CAS No.		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
179601-23-1	LCS	m,p-Xylenes	100	0.0	107	107	68-122
1330-20-7	LCS	Xylenes (total)	150	0.0	156	104	70-121
67-64-1	LCS	Acetone	250	0.0	234	93	62-136
74-88-4	LCS	Iodomethane	250	0.0	229	91	67-124
75-15-0	LCS	Carbon disulfide	250	0.0	263	105	64-135
78-93-3	LCS	2-Butanone	250	0.0	259	104	64-131
108-10-1	LCS	4-Methyl-2-pentanone	250	0.0	259	104	64-126
591-78-6	LCS	2-Hexanone	250	0.0	282	113	60-143
75-71-8	LCS	Dichlorodifluoromethane	50.0	0.0	46.0	92	53-153
74-87-3	LCS	Chloromethane	50.0	0.0	48.0	96	56-138
75-01-4	LCS	Vinyl chloride	50.0	0.0	46.4	93	61-138
74-83-9	LCS	Bromomethane	50.0	0.0	44.9	90	63-140
75-00-3	LCS	Chloroethane	50.0	0.0	47.8	96	70-132
75-69-4	LCS	Trichlorofluoromethane	50.0	0.0	47.0	94	64-133
75-35-4	LCS	1,1-Dichloroethylene	50.0	0.0	52.4	105	70-132
75-09-2	LCS	Methylene chloride	50.0	0.0	45.7	91	65-118
156-60-5	LCS	trans-1,2-Dichloroethylene	50.0	0.0	50.8	102	71-125
75-34-3	LCS	1,1-Dichloroethane	50.0	0.0	51.1	102	74-124
156-59-2	LCS	cis-1,2-Dichloroethylene	50.0	0.0	49.2	98	71-122
594-20-7	LCS	2,2-Dichloropropane	50.0	0.0	50.3	101	67-133
74-97-5	LCS	Bromochloromethane	50.0	0.0	47.8	96	68-125
67-66-3	LCS	Chloroform	50.0	0.0	48.6	97	72-122

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-76
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 2514593
Matrix: SOIL
Lab Sample ID: 1205557485
Instrument: VOAC.I
Analysis Date: 10/26/2023 09:34
Dilution: 1
Analyst: PXY1
Prep Batch ID: 2514593
Purge Vol: 5 mL
Batch ID: 2514596

CAS No.		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
71-55-6	LCS	1,1,1-Trichloroethane	50.0	0.0	50.1	100	67-132
563-58-6	LCS	1,1-Dichloropropene	50.0	0.0	51.4	103	68-123
56-23-5	LCS	Carbon tetrachloride	50.0	0.0	52.1	104	66-134
107-06-2	LCS	1,2-Dichloroethane	50.0	0.0	44.6	89	62-128
71-43-2	LCS	Benzene	50.0	0.0	52.5	105	73-126
79-01-6	LCS	Trichloroethylene	50.0	0.0	54.2	108	72-123
78-87-5	LCS	1,2-Dichloropropane	50.0	0.0	53.8	108	72-120
74-95-3	LCS	Dibromomethane	50.0	0.0	50.3	101	73-119
75-27-4	LCS	Bromodichloromethane	50.0	0.0	50.7	101	71-126
10061-01-5	LCS	cis-1,3-Dichloropropylene	50.0	0.0	51.2	102	70-124
108-88-3	LCS	Toluene	50.0	0.0	51.7	103	70-120
10061-02-6	LCS	trans-1,3-Dichloropropylene	50.0	0.0	48.4	97	69-120
79-00-5	LCS	1,1,2-Trichloroethane	50.0	0.0	50.6	101	70-115
142-28-9	LCS	1,3-Dichloropropane	50.0	0.0	51.4	103	69-119
127-18-4	LCS	Tetrachloroethylene	50.0	0.0	54.4	109	68-126
124-48-1	LCS	Dibromochloromethane	50.0	0.0	48.7	97	69-128
106-93-4	LCS	1,2-Dibromoethane	50.0	0.0	49.7	99	73-119
108-90-7	LCS	Chlorobenzene	50.0	0.0	52.3	105	74-116
100-41-4	LCS	Ethylbenzene	50.0	0.0	52.7	105	67-120
95-47-6	LCS	o-Xylene	50.0	0.0	49.4	99	71-120
100-42-5	LCS	Styrene	50.0	0.0	51.1	102	70-122
75-25-2	LCS	Bromoform	50.0	0.0	53.7	107	62-132

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-76
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 2514593
Matrix: SOIL
Lab Sample ID: 1205557485
Instrument: VOAC.I
Analysis Date: 10/26/2023 09:34
Dilution: 1
Analyst: PXY1
Prep Batch ID: 2514593
Purge Vol: 5 mL
Batch ID: 2514596

CAS No.		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
98-82-8	LCS	Isopropylbenzene	50.0	0.0	50.8	102	67-121
79-34-5	LCS	1,1,2,2-Tetrachloroethane	50.0	0.0	47.6	95	66-120
96-18-4	LCS	1,2,3-Trichloropropane	50.0	0.0	50.6	101	69-119
108-86-1	LCS	Bromobenzene	50.0	0.0	51.5	103	70-117
103-65-1	LCS	n-Propylbenzene	50.0	0.0	55.1	110	69-125
108-67-8	LCS	1,3,5-Trimethylbenzene	50.0	0.0	51.3	103	67-125
95-49-8	LCS	2-Chlorotoluene	50.0	0.0	53.0	106	72-120
106-43-4	LCS	4-Chlorotoluene	50.0	0.0	53.1	106	70-122
98-06-6	LCS	tert-Butylbenzene	50.0	0.0	54.0	108	68-126
95-63-6	LCS	1,2,4-Trimethylbenzene	50.0	0.0	49.6	99	67-120
135-98-8	LCS	sec-Butylbenzene	50.0	0.0	53.7	107	69-126
99-87-6	LCS	4-Isopropyltoluene	50.0	0.0	53.0	106	67-125
541-73-1	LCS	1,3-Dichlorobenzene	50.0	0.0	52.2	104	72-119
106-46-7	LCS	1,4-Dichlorobenzene	50.0	0.0	52.2	104	73-116
104-51-8	LCS	n-Butylbenzene	50.0	0.0	53.8	108	68-127
96-12-8	LCS	1,2-Dibromo-3-chloropropane	50.0	0.0	47.8	96	57-133
630-20-6	LCS	1,1,1,2-Tetrachloroethane	50.0	0.0	45.8	92	71-123
95-50-1	LCS	1,2-Dichlorobenzene	50.0	0.0	49.8	100	72-118

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-76
Client ID: RLUOB-23-289589PS
Lab Sample ID: 1205557488
Instrument: VOAC.I
Analyst: PXY1
Purge Vol: 5 mL

Sample Type: Post Spike
Matrix: SO
%Moisture: 4
Analysis Date: 10/26/2023 16:26
Prep Batch ID: 2514593
Batch ID: 2514596
Dilution: 50

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits
179601-23-1	PS	m,p-Xylenes	100	0.000	U	91.2	91	43-125
1330-20-7	PS	Xylenes (total)	150	0.000	U	135	90	45-128
67-64-1	PS	Acetone	250	0.000	U	221	88	37-145
74-88-4	PS	Iodomethane	250	0.000	U	206	83	44-131
75-15-0	PS	Carbon disulfide	250	0.000	U	232	93	48-136
78-93-3	PS	2-Butanone	250	0.000	U	227	91	42-135
108-10-1	PS	4-Methyl-2-pentanone	250	0.000	U	228	91	51-131
591-78-6	PS	2-Hexanone	250	0.000	U	231	92	34-142
75-71-8	PS	Dichlorodifluoromethane	50.0	0.000	U	41.4	83	39-162
74-87-3	PS	Chloromethane	50.0	0.000	U	47.4	95	41-150
75-01-4	PS	Vinyl chloride	50.0	0.000	U	42.9	86	46-150
74-83-9	PS	Bromomethane	50.0	0.000	U	38.7	77	37-166
75-00-3	PS	Chloroethane	50.0	0.000	U	44.3	89	51-133
75-69-4	PS	Trichlorofluoromethane	50.0	0.000	U	42.9	86	47-134
75-35-4	PS	1,1-Dichloroethylene	50.0	0.000	U	47.3	95	50-139
75-09-2	PS	Methylene chloride	50.0	0.000	U	44.3	89	54-122
156-60-5	PS	trans-1,2-Dichloroethylene	50.0	0.000	U	47.3	95	52-130
75-34-3	PS	1,1-Dichloroethane	50.0	0.000	U	48.4	97	59-127
156-59-2	PS	cis-1,2-Dichloroethylene	50.0	0.000	U	46.6	93	54-123
594-20-7	PS	2,2-Dichloropropane	50.0	0.000	U	44.5	89	49-133
74-97-5	PS	Bromochloromethane	50.0	0.000	U	44.8	90	54-125
67-66-3	PS	Chloroform	50.0	0.000	U	45.2	90	58-125

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-76
Client ID: RLUOB-23-289589PS
Lab Sample ID: 1205557488
Instrument: VOAC.I
Analyst: PXY1
Purge Vol: 5 mL

Sample Type: Post Spike
Matrix: SO
%Moisture: 4
Analysis Date: 10/26/2023 16:26
Prep Batch ID: 2514593
Batch ID: 2514596
Dilution: 50

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits
71-55-6	PS	1,1,1-Trichloroethane	50.0	0.000	U	43.9	88	54-136
563-58-6	PS	1,1-Dichloropropene	50.0	0.000	U	44.9	90	48-124
56-23-5	PS	Carbon tetrachloride	50.0	0.000	U	44.0	88	46-136
107-06-2	PS	1,2-Dichloroethane	50.0	0.000	U	41.4	83	54-128
71-43-2	PS	Benzene	50.0	0.000	U	47.8	96	57-131
79-01-6	PS	Trichloroethylene	50.0	0.000	U	47.1	94	48-134
78-87-5	PS	1,2-Dichloropropane	50.0	0.000	U	49.6	99	55-122
74-95-3	PS	Dibromomethane	50.0	0.000	U	44.9	90	57-122
75-27-4	PS	Bromodichloromethane	50.0	0.000	U	46.1	92	52-128
10061-01-5	PS	cis-1,3-Dichloropropylene	50.0	0.000	U	45.1	90	46-125
108-88-3	PS	Toluene	50.0	0.000	U	46.5	93	52-124
10061-02-6	PS	trans-1,3-Dichloropropylene	50.0	0.000	U	44.0	88	45-131
79-00-5	PS	1,1,2-Trichloroethane	50.0	0.000	U	46.5	93	55-127
142-28-9	PS	1,3-Dichloropropane	50.0	0.000	U	47.7	95	44-123
127-18-4	PS	Tetrachloroethylene	50.0	0.000	U	45.7	91	43-131
124-48-1	PS	Dibromochloromethane	50.0	0.000	U	43.0	86	51-128
106-93-4	PS	1,2-Dibromoethane	50.0	0.000	U	44.4	89	53-126
108-90-7	PS	Chlorobenzene	50.0	0.000	U	45.9	92	47-124
100-41-4	PS	Ethylbenzene	50.0	0.000	U	45.4	91	44-124
95-47-6	PS	o-Xylene	50.0	0.000	U	43.8	88	46-126
100-42-5	PS	Styrene	50.0	0.000	U	43.7	87	40-127
75-25-2	PS	Bromoform	50.0	0.000	U	45.3	91	48-132

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-76
Client ID: RLUOB-23-289589PS
Lab Sample ID: 1205557488
Instrument: VOAC.I
Analyst: PXY1
Purge Vol: 5 mL

Sample Type: Post Spike
Matrix: SO
%Moisture: 4
Analysis Date: 10/26/2023 16:26
Prep Batch ID: 2514593
Batch ID: 2514596
Dilution: 50

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits
98-82-8	PS	Isopropylbenzene	50.0	0.000	U	44.7	89	42-139
79-34-5	PS	1,1,2,2-Tetrachloroethane	50.0	0.000	U	43.2	86	48-128
96-18-4	PS	1,2,3-Trichloropropane	50.0	0.000	U	44.2	88	56-130
108-86-1	PS	Bromobenzene	50.0	0.000	U	45.7	91	46-125
103-65-1	PS	n-Propylbenzene	50.0	0.000	U	46.3	93	40-132
108-67-8	PS	1,3,5-Trimethylbenzene	50.0	0.000	U	45.2	90	40-133
95-49-8	PS	2-Chlorotoluene	50.0	0.000	U	46.4	93	39-129
106-43-4	PS	4-Chlorotoluene	50.0	0.000	U	45.9	92	38-129
98-06-6	PS	tert-Butylbenzene	50.0	0.000	U	45.7	91	39-137
95-63-6	PS	1,2,4-Trimethylbenzene	50.0	0.000	U	43.7	87	39-128
135-98-8	PS	sec-Butylbenzene	50.0	0.000	U	45.5	91	38-134
99-87-6	PS	4-Isopropyltoluene	50.0	0.000	U	44.4	89	31-136
541-73-1	PS	1,3-Dichlorobenzene	50.0	0.000	U	44.5	89	39-127
106-46-7	PS	1,4-Dichlorobenzene	50.0	0.000	U	44.2	88	37-123
104-51-8	PS	n-Butylbenzene	50.0	0.000	U	43.9	88	32-134
96-12-8	PS	1,2-Dibromo-3-chloropropane	50.0	0.000	U	39.8	80	38-138
630-20-6	PS	1,1,1,2-Tetrachloroethane	50.0	0.000	U	42.5	85	50-126
95-50-1	PS	1,2-Dichlorobenzene	50.0	0.000	U	44.3	89	37-126

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-76
Client ID: RLUOB-23-289589PSD
Lab Sample ID: 1205557489
Instrument: VOAC.I
Analyst: PXY1
Purge Vol: 5 mL

Sample Type: Post Spike Duplicate
Matrix: SO
%Moisture: 4
Analysis Date: 10/26/2023 16:54
Prep Batch ID: 2514593
Batch ID: 2514596
Dilution: 50

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
179601-23-1	PSD	m,p-Xylenes	100	0.000	U	88.8	89	43-125	3	0-20
1330-20-7	PSD	Xylenes (total)	150	0.000	U	132	88	45-128	2	0-20
67-64-1	PSD	Acetone	250	0.000	U	226	90	37-145	2	0-20
74-88-4	PSD	Iodomethane	250	0.000	U	204	81	44-131	1	0-20
75-15-0	PSD	Carbon disulfide	250	0.000	U	229	92	48-136	1	0-20
78-93-3	PSD	2-Butanone	250	0.000	U	234	94	42-135	3	0-20
108-10-1	PSD	4-Methyl-2-pentanone	250	0.000	U	236	95	51-131	4	0-20
591-78-6	PSD	2-Hexanone	250	0.000	U	239	96	34-142	4	0-20
75-71-8	PSD	Dichlorodifluoromethane	50.0	0.000	U	32.8	66	39-162	23 *	0-20
74-87-3	PSD	Chloromethane	50.0	0.000	U	43.3	87	41-150	9	0-20
75-01-4	PSD	Vinyl chloride	50.0	0.000	U	36.2	72	46-150	17	0-20
74-83-9	PSD	Bromomethane	50.0	0.000	U	34.7	69	37-166	11	0-20
75-00-3	PSD	Chloroethane	50.0	0.000	U	40.0	80	51-133	10	0-20
75-69-4	PSD	Trichlorofluoromethane	50.0	0.000	U	33.2	66	47-134	25 *	0-20
75-35-4	PSD	1,1-Dichloroethylene	50.0	0.000	U	46.9	94	50-139	1	0-20
75-09-2	PSD	Methylene chloride	50.0	0.000	U	44.1	88	54-122	1	0-20
156-60-5	PSD	trans-1,2-Dichloroethylene	50.0	0.000	U	47.1	94	52-130	0	0-20
75-34-3	PSD	1,1-Dichloroethane	50.0	0.000	U	48.2	96	59-127	0	0-20
156-59-2	PSD	cis-1,2-Dichloroethylene	50.0	0.000	U	46.6	93	54-123	0	0-20
594-20-7	PSD	2,2-Dichloropropane	50.0	0.000	U	43.5	87	49-133	2	0-20
74-97-5	PSD	Bromochloromethane	50.0	0.000	U	44.4	89	54-125	1	0-20
67-66-3	PSD	Chloroform	50.0	0.000	U	45.3	91	58-125	0	0-20

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-76
Client ID: RLUOB-23-289589PSD
Lab Sample ID: 1205557489
Instrument: VOAC.I
Analyst: PXY1
Purge Vol: 5 mL

Sample Type: Post Spike Duplicate
Matrix: SO
%Moisture: 4
Analysis Date: 10/26/2023 16:54
Prep Batch ID: 2514593
Batch ID: 2514596
Dilution: 50

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
71-55-6	PSD	1,1,1-Trichloroethane	50.0	0.000	U	44.1	88	54-136	0	0-20
563-58-6	PSD	1,1-Dichloropropene	50.0	0.000	U	44.4	89	48-124	1	0-20
56-23-5	PSD	Carbon tetrachloride	50.0	0.000	U	44.2	88	46-136	1	0-20
107-06-2	PSD	1,2-Dichloroethane	50.0	0.000	U	41.5	83	54-128	0	0-20
71-43-2	PSD	Benzene	50.0	0.000	U	47.7	95	57-131	0	0-20
79-01-6	PSD	Trichloroethylene	50.0	0.000	U	46.7	93	48-134	1	0-20
78-87-5	PSD	1,2-Dichloropropane	50.0	0.000	U	49.1	98	55-122	1	0-20
74-95-3	PSD	Dibromomethane	50.0	0.000	U	45.2	90	57-122	1	0-20
75-27-4	PSD	Bromodichloromethane	50.0	0.000	U	46.0	92	52-128	0	0-20
10061-01-5	PSD	cis-1,3-Dichloropropylene	50.0	0.000	U	44.8	90	46-125	1	0-20
108-88-3	PSD	Toluene	50.0	0.000	U	46.1	92	52-124	1	0-20
10061-02-6	PSD	trans-1,3-Dichloropropylene	50.0	0.000	U	44.6	89	45-131	1	0-20
79-00-5	PSD	1,1,2-Trichloroethane	50.0	0.000	U	46.6	93	55-127	0	0-20
142-28-9	PSD	1,3-Dichloropropane	50.0	0.000	U	48.0	96	44-123	1	0-20
127-18-4	PSD	Tetrachloroethylene	50.0	0.000	U	44.7	89	43-131	2	0-20
124-48-1	PSD	Dibromochloromethane	50.0	0.000	U	43.5	87	51-128	1	0-20
106-93-4	PSD	1,2-Dibromoethane	50.0	0.000	U	44.7	89	53-126	1	0-20
108-90-7	PSD	Chlorobenzene	50.0	0.000	U	45.1	90	47-124	2	0-20
100-41-4	PSD	Ethylbenzene	50.0	0.000	U	44.4	89	44-124	2	0-20
95-47-6	PSD	o-Xylene	50.0	0.000	U	43.4	87	46-126	1	0-20
100-42-5	PSD	Styrene	50.0	0.000	U	42.8	86	40-127	2	0-20
75-25-2	PSD	Bromoform	50.0	0.000	U	47.0	94	48-132	4	0-20

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-76
Client ID: RLUOB-23-289589PSD
Lab Sample ID: 1205557489
Instrument: VOAC.I
Analyst: PXY1
Purge Vol: 5 mL

Sample Type: Post Spike Duplicate
Matrix: SO
%Moisture: 4
Analysis Date: 10/26/2023 16:54
Prep Batch ID: 2514593
Batch ID: 2514596
Dilution: 50

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
98-82-8	PSD	Isopropylbenzene	50.0	0.000	U	44.4	89	42-139	1	0-20
79-34-5	PSD	1,1,2,2-Tetrachloroethane	50.0	0.000	U	44.2	88	48-128	2	0-20
96-18-4	PSD	1,2,3-Trichloropropane	50.0	0.000	U	45.8	92	56-130	4	0-20
108-86-1	PSD	Bromobenzene	50.0	0.000	U	45.3	91	46-125	1	0-20
103-65-1	PSD	n-Propylbenzene	50.0	0.000	U	45.2	90	40-132	2	0-20
108-67-8	PSD	1,3,5-Trimethylbenzene	50.0	0.000	U	44.6	89	40-133	1	0-20
95-49-8	PSD	2-Chlorotoluene	50.0	0.000	U	45.5	91	39-129	2	0-20
106-43-4	PSD	4-Chlorotoluene	50.0	0.000	U	44.8	90	38-129	3	0-20
98-06-6	PSD	tert-Butylbenzene	50.0	0.000	U	45.7	91	39-137	0	0-20
95-63-6	PSD	1,2,4-Trimethylbenzene	50.0	0.000	U	42.8	86	39-128	2	0-20
135-98-8	PSD	sec-Butylbenzene	50.0	0.000	U	44.8	90	38-134	2	0-20
99-87-6	PSD	4-Isopropyltoluene	50.0	0.000	U	43.4	87	31-136	2	0-20
541-73-1	PSD	1,3-Dichlorobenzene	50.0	0.000	U	43.7	87	39-127	2	0-20
106-46-7	PSD	1,4-Dichlorobenzene	50.0	0.000	U	43.3	87	37-123	2	0-20
104-51-8	PSD	n-Butylbenzene	50.0	0.000	U	42.5	85	32-134	3	0-20
96-12-8	PSD	1,2-Dibromo-3-chloropropane	50.0	0.000	U	41.2	82	38-138	3	0-20
630-20-6	PSD	1,1,1,2-Tetrachloroethane	50.0	0.000	U	42.5	85	50-126	0	0-20
95-50-1	PSD	1,2-Dichlorobenzene	50.0	0.000	U	43.8	88	37-126	1	0-20

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-76
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 2514593
Matrix: SOIL
Lab Sample ID: 1205557613
Instrument: VOAC.I
Analysis Date: 10/26/2023 10:01
Dilution: 1
Analyst: PXY1
Prep Batch ID: 2514593
Purge Vol: 5 mL
Batch ID: 2514596

CAS No.		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
76-13-1	LCS	Trichlorotrifluoroethane	250	0.0	250	100	61-131

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-76
Client ID: RLUOB-23-289589PS
Lab Sample ID: 1205557614
Instrument: VOAC.I
Analyst: PXY1
Purge Vol: 5 mL

Sample Type: Post Spike
Matrix: SO
%Moisture: 4
Analysis Date: 10/26/2023 17:21
Prep Batch ID: 2514593
Batch ID: 2514596

Dilution: 50

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits
76-13-1	PS	Trichlorotrifluoroethane	250	0.000	U	235	94	45-133

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-76
Client ID: RLUOB-23-289589PSD
Lab Sample ID: 1205557615
Instrument: VOAC.I
Analyst: PXY1
Purge Vol: 5 mL

Sample Type: Post Spike Duplicate
Matrix: SO
%Moisture: 4
Analysis Date: 10/26/2023 17:49
Prep Batch ID: 2514593
Batch ID: 2514596
Dilution: 50

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
76-13-1	PSD	Trichlorotrifluoroethane	250	0.000	U	227	91	45-133	3	0-20

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-76 **Sample Type:** Laboratory Control Sample

Client ID: LCS for batch 2514703 **Matrix:** WATER

Lab Sample ID: 1205557763

Instrument: VOA3.I **Analysis Date:** 10/26/2023 08:03 **Dilution:** 1

Analyst: JM6

Purge Vol: 5 mL **Batch ID:** 2514703

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L	Spike Conc. ug/L	Recovery %	Acceptance Limits
179601-23-1	LCS	m,p-Xylenes	100	0.0	97.8	98	70-123
75-05-8	LCS	Acetonitrile	1250	0.0	1250	100	56-135
67-64-1	LCS	Acetone	250	0.0	230	92	56-149
74-88-4	LCS	Iodomethane	250	0.0	266	106	69-128
75-15-0	LCS	Carbon disulfide	250	0.0	251	100	63-133
108-05-4	LCS	Vinyl acetate	250	0.0	232	93	65-133
78-93-3	LCS	2-Butanone	250	0.0	241	96	63-134
108-10-1	LCS	4-Methyl-2-pentanone	250	0.0	236	94	65-125
591-78-6	LCS	2-Hexanone	250	0.0	237	95	58-143
75-71-8	LCS	Dichlorodifluoromethane	50.0	0.0	49.7	99	58-151
74-87-3	LCS	Chloromethane	50.0	0.0	43.0	86	56-142
75-01-4	LCS	Vinyl chloride	50.0	0.0	42.3	85	63-144
74-83-9	LCS	Bromomethane	50.0	0.0	46.5	93	64-142
75-00-3	LCS	Chloroethane	50.0	0.0	50.6	101	66-140
75-69-4	LCS	Trichlorofluoromethane	50.0	0.0	57.1	114	63-136
60-29-7	LCS	Ethyl ether	50.0	0.0	46.3	93	64-123
75-35-4	LCS	1,1-Dichloroethylene	50.0	0.0	53.6	107	72-136
75-09-2	LCS	Methylene chloride	50.0	0.0	54.0	108	65-121
1634-04-4	LCS	tert-Butyl methyl ether	50.0	0.0	44.5	89	63-124
156-60-5	LCS	trans-1,2-Dichloroethylene	50.0	0.0	52.5	105	73-129
75-34-3	LCS	1,1-Dichloroethane	50.0	0.0	51.0	102	75-126
156-59-2	LCS	cis-1,2-Dichloroethylene	50.0	0.0	51.6	103	73-122

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-76
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 2514703
Matrix: WATER
Lab Sample ID: 1205557763
Instrument: VOA3.I
Analysis Date: 10/26/2023 08:03
Dilution: 1
Analyst: JM6
Purge Vol: 5 mL
Batch ID: 2514703

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L	Spike Conc. ug/L	Recovery %	Acceptance Limits
594-20-7	LCS	2,2-Dichloropropane	50.0	0.0	51.6	103	70-135
74-97-5	LCS	Bromochloromethane	50.0	0.0	51.0	102	68-125
67-66-3	LCS	Chloroform	50.0	0.0	51.8	104	74-122
71-55-6	LCS	1,1,1-Trichloroethane	50.0	0.0	54.7	109	70-130
563-58-6	LCS	1,1-Dichloropropene	50.0	0.0	50.3	101	68-120
56-23-5	LCS	Carbon tetrachloride	50.0	0.0	57.3	115	70-135
107-06-2	LCS	1,2-Dichloroethane	50.0	0.0	51.4	103	64-129
71-43-2	LCS	Benzene	50.0	0.0	50.5	101	74-128
79-01-6	LCS	Trichloroethylene	50.0	0.0	53.2	106	76-126
78-87-5	LCS	1,2-Dichloropropane	50.0	0.0	48.2	96	72-121
74-95-3	LCS	Dibromomethane	50.0	0.0	53.0	106	72-120
75-27-4	LCS	Bromodichloromethane	50.0	0.0	50.9	102	72-126
10061-01-5	LCS	cis-1,3-Dichloropropylene	50.0	0.0	46.7	93	73-125
108-88-3	LCS	Toluene	50.0	0.0	49.8	100	73-121
10061-02-6	LCS	trans-1,3-Dichloropropylene	50.0	0.0	46.8	94	70-126
79-00-5	LCS	1,1,2-Trichloroethane	50.0	0.0	48.5	97	70-120
142-28-9	LCS	1,3-Dichloropropane	50.0	0.0	48.8	98	69-121
127-18-4	LCS	Tetrachloroethylene	50.0	0.0	52.6	105	70-130
124-48-1	LCS	Dibromochloromethane	50.0	0.0	50.7	101	70-130
106-93-4	LCS	1,2-Dibromoethane	50.0	0.0	50.0	100	71-120
108-90-7	LCS	Chlorobenzene	50.0	0.0	50.4	101	74-120
100-41-4	LCS	Ethylbenzene	50.0	0.0	47.9	96	71-121

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-76
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 2514703
Matrix: WATER
Lab Sample ID: 1205557763
Instrument: VOA3.I
Analysis Date: 10/26/2023 08:03
Dilution: 1
Analyst: JM6
Purge Vol: 5 mL
Batch ID: 2514703

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L	Spike Conc. ug/L	Recovery %	Acceptance Limits
95-47-6	LCS	o-Xylene	50.0	0.0	47.3	95	73-121
100-42-5	LCS	Styrene	50.0	0.0	45.0	90	70-125
75-25-2	LCS	Bromoform	50.0	0.0	46.0	92	70-130
98-82-8	LCS	Isopropylbenzene	50.0	0.0	46.8	94	69-122
79-34-5	LCS	1,1,2,2-Tetrachloroethane	50.0	0.0	44.5	89	66-123
96-18-4	LCS	1,2,3-Trichloropropane	50.0	0.0	50.9	102	69-120
108-86-1	LCS	Bromobenzene	50.0	0.0	49.3	99	73-120
103-65-1	LCS	n-Propylbenzene	50.0	0.0	48.2	96	71-127
108-67-8	LCS	1,3,5-Trimethylbenzene	50.0	0.0	48.1	96	70-127
95-49-8	LCS	2-Chlorotoluene	50.0	0.0	50.3	101	72-123
106-43-4	LCS	4-Chlorotoluene	50.0	0.0	51.0	102	71-121
98-06-6	LCS	tert-Butylbenzene	50.0	0.0	49.8	100	71-126
95-63-6	LCS	1,2,4-Trimethylbenzene	50.0	0.0	48.0	96	70-121
135-98-8	LCS	sec-Butylbenzene	50.0	0.0	49.1	98	72-128
99-87-6	LCS	4-Isopropyltoluene	50.0	0.0	49.9	100	71-127
541-73-1	LCS	1,3-Dichlorobenzene	50.0	0.0	50.5	101	72-120
106-46-7	LCS	1,4-Dichlorobenzene	50.0	0.0	50.7	101	72-120
104-51-8	LCS	n-Butylbenzene	50.0	0.0	49.6	99	71-129
96-12-8	LCS	1,2-Dibromo-3-chloropropane	50.0	0.0	44.4	89	58-130
87-68-3	LCS	Hexachlorobutadiene	50.0	0.0	45.6	91	64-134
91-20-3	LCS	Naphthalene	50.0	0.0	50.4	101	68-126
87-61-6	LCS	1,2,3-Trichlorobenzene	50.0	0.0	52.6	105	69-127

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-76
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 2514703
Matrix: WATER
Lab Sample ID: 1205557763
Instrument: VOA3.I
Analysis Date: 10/26/2023 08:03
Dilution: 1
Analyst: JM6
Purge Vol: 5 mL
Batch ID: 2514703

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L	Spike Conc. ug/L	Recovery %	Acceptance Limits
120-82-1	LCS	1,2,4-Trichlorobenzene	50.0	0.0	51.7	103	68-126
630-20-6	LCS	1,1,1,2-Tetrachloroethane	50.0	0.0	49.7	99	73-122
95-50-1	LCS	1,2-Dichlorobenzene	50.0	0.0	50.8	102	72-120
71-36-3	LCS	n-Butyl alcohol	5000	0.0	4640	93	63-134

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-76
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 2514703
Matrix: WATER
Lab Sample ID: 1205557764
Instrument: VOA3.I
Analysis Date: 10/26/2023 08:57
Dilution: 1
Analyst: JM6
Purge Vol: 5 mL
Batch ID: 2514703

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L	Spike Conc. ug/L	Recovery %	Acceptance Limits
107-02-8	LCS	Acrolein	250	0.0	193	77	60-140
76-13-1	LCS	Trichlorotrifluoroethane	250	0.0	212	85	65-132
107-05-1	LCS	Allyl chloride	250	0.0	211	84	66-128
107-13-1	LCS	Acrylonitrile	250	0.0	198	79	68-127
107-12-0	LCS	Propionitrile	250	0.0	189	76	64-127
126-98-7	LCS	Methacrylonitrile	250	0.0	207	83	65-126
80-62-6	LCS	Methyl methacrylate	250	0.0	193	77	68-122
97-63-2	LCS	Ethyl methacrylate	250	0.0	197	79	66-125
78-83-1	LCS	Isobutyl alcohol	2500	0.0	1890	76	65-137
126-99-8	LCS	2-Chloro-1,3-butadiene	50.0	0.0	45.7	91	64-131

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-76 **Sample Type:** Post Spike

Client ID: RLUOB-23-302827PS **Matrix:** W

Lab Sample ID: 1205557766

Instrument: VOA3.I **Analysis Date:** 10/26/2023 15:18 **Dilution:** 1

Analyst: JM6

Purge Vol: 5 mL **Batch ID:** 2514703

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits
179601-23-1	PS	m,p-Xylenes	100	0.000	U	96.6	97	56-125
75-05-8	PS	Acetonitrile	1250	0.000	U	1310	105	49-140
67-64-1	PS	Acetone	250	0.000	U	252	101	50-139
74-88-4	PS	Iodomethane	250	0.000	U	273	109	61-130
75-15-0	PS	Carbon disulfide	250	0.000	U	259	103	55-131
108-05-4	PS	Vinyl acetate	250	0.000	U	240	96	55-137
78-93-3	PS	2-Butanone	250	0.000	U	262	105	47-134
108-10-1	PS	4-Methyl-2-pentanone	250	0.000	U	257	103	60-132
591-78-6	PS	2-Hexanone	250	0.000	U	259	104	55-140
75-09-2	PS	Methylene chloride	50.0	0.610	J	56.3	111	58-123
75-71-8	PS	Dichlorodifluoromethane	50.0	0.000	U	46.7	93	37-162
74-87-3	PS	Chloromethane	50.0	0.000	U	42.4	85	42-152
75-01-4	PS	Vinyl chloride	50.0	0.000	U	40.6	81	49-153
74-83-9	PS	Bromomethane	50.0	0.000	U	46.6	93	55-149
75-00-3	PS	Chloroethane	50.0	0.000	U	48.2	96	56-143
75-69-4	PS	Trichlorofluoromethane	50.0	0.000	U	55.7	111	48-137
60-29-7	PS	Ethyl ether	50.0	0.000	U	47.6	95	58-125
75-35-4	PS	1,1-Dichloroethylene	50.0	0.000	U	54.5	109	57-137
1634-04-4	PS	tert-Butyl methyl ether	50.0	0.000	U	45.1	90	58-128
156-60-5	PS	trans-1,2-Dichloroethylene	50.0	0.000	U	53.3	107	63-129
75-34-3	PS	1,1-Dichloroethane	50.0	0.000	U	52.2	104	67-128
156-59-2	PS	cis-1,2-Dichloroethylene	50.0	0.000	U	51.5	103	65-128

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-76 **Sample Type:** Post Spike

Client ID: RLUOB-23-302827PS **Matrix:** W

Lab Sample ID: 1205557766

Instrument: VOA3.I **Analysis Date:** 10/26/2023 15:18 **Dilution:** 1

Analyst: JM6

Purge Vol: 5 mL **Batch ID:** 2514703

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits
594-20-7	PS	2,2-Dichloropropane	50.0	0.000	U	48.3	97	53-132
74-97-5	PS	Bromochloromethane	50.0	0.000	U	54.0	108	63-128
71-55-6	PS	1,1,1-Trichloroethane	50.0	0.000	U	54.4	109	56-133
563-58-6	PS	1,1-Dichloropropene	50.0	0.000	U	49.7	99	62-128
56-23-5	PS	Carbon tetrachloride	50.0	0.000	U	57.6	115	58-141
107-06-2	PS	1,2-Dichloroethane	50.0	0.000	U	55.5	111	60-134
71-43-2	PS	Benzene	50.0	0.000	U	50.7	101	67-128
79-01-6	PS	Trichloroethylene	50.0	0.000	U	53.0	106	61-130
78-87-5	PS	1,2-Dichloropropane	50.0	0.000	U	49.6	99	67-125
74-95-3	PS	Dibromomethane	50.0	0.000	U	53.8	108	67-126
10061-01-5	PS	cis-1,3-Dichloropropylene	50.0	0.000	U	46.8	94	63-129
108-88-3	PS	Toluene	50.0	0.000	U	50.0	100	63-121
10061-02-6	PS	trans-1,3-Dichloropropylene	50.0	0.000	U	47.7	95	65-130
79-00-5	PS	1,1,2-Trichloroethane	50.0	0.000	U	50.8	102	68-123
142-28-9	PS	1,3-Dichloropropane	50.0	0.000	U	51.0	102	65-125
127-18-4	PS	Tetrachloroethylene	50.0	0.000	U	51.1	102	56-126
106-93-4	PS	1,2-Dibromoethane	50.0	0.000	U	51.4	103	65-124
108-90-7	PS	Chlorobenzene	50.0	0.000	U	50.8	102	63-121
100-41-4	PS	Ethylbenzene	50.0	0.000	U	48.1	96	58-123
95-47-6	PS	o-Xylene	50.0	0.000	U	47.0	94	60-125
100-42-5	PS	Styrene	50.0	0.000	U	44.3	89	58-129
75-25-2	PS	Bromoform	50.0	0.000	U	47.6	95	58-134

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-76 **Sample Type:** Post Spike

Client ID: RLUOB-23-302827PS **Matrix:** W

Lab Sample ID: 1205557766

Instrument: VOA3.I **Analysis Date:** 10/26/2023 15:18 **Dilution:** 1

Analyst: JM6

Purge Vol: 5 mL **Batch ID:** 2514703

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits
98-82-8	PS	Isopropylbenzene	50.0	0.000	U	47.3	95	53-128
79-34-5	PS	1,1,2,2-Tetrachloroethane	50.0	0.000	U	46.8	94	59-136
96-18-4	PS	1,2,3-Trichloropropane	50.0	0.000	U	54.4	109	67-126
108-86-1	PS	Bromobenzene	50.0	0.000	U	49.4	99	61-122
103-65-1	PS	n-Propylbenzene	50.0	0.000	U	48.8	98	54-129
108-67-8	PS	1,3,5-Trimethylbenzene	50.0	0.000	U	49.4	99	54-129
95-49-8	PS	2-Chlorotoluene	50.0	0.000	U	51.8	104	57-126
106-43-4	PS	4-Chlorotoluene	50.0	0.000	U	51.7	103	56-125
98-06-6	PS	tert-Butylbenzene	50.0	0.000	U	50.6	101	53-128
95-63-6	PS	1,2,4-Trimethylbenzene	50.0	0.000	U	49.0	98	54-123
135-98-8	PS	sec-Butylbenzene	50.0	0.000	U	50.1	100	54-130
99-87-6	PS	4-Isopropyltoluene	50.0	0.000	U	50.6	101	53-129
541-73-1	PS	1,3-Dichlorobenzene	50.0	0.000	U	50.9	102	57-124
106-46-7	PS	1,4-Dichlorobenzene	50.0	0.000	U	51.4	103	54-123
104-51-8	PS	n-Butylbenzene	50.0	0.000	U	49.8	100	49-136
96-12-8	PS	1,2-Dibromo-3-chloropropane	50.0	0.000	U	46.3	93	49-137
87-68-3	PS	Hexachlorobutadiene	50.0	0.000	U	43.4	87	44-138
91-20-3	PS	Naphthalene	50.0	0.000	U	53.0	106	58-131
87-61-6	PS	1,2,3-Trichlorobenzene	50.0	0.000	U	53.1	106	54-132
120-82-1	PS	1,2,4-Trichlorobenzene	50.0	0.000	U	50.2	100	51-129
630-20-6	PS	1,1,1,2-Tetrachloroethane	50.0	0.000	U	50.9	102	67-130
95-50-1	PS	1,2-Dichlorobenzene	50.0	0.000	U	51.8	104	59-125

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-76 **Sample Type:** Post Spike

Client ID: RLUOB-23-302827PS **Matrix:** W

Lab Sample ID: 1205557766

Instrument: VOA3.I **Analysis Date:** 10/26/2023 15:18 **Dilution:** 1

Analyst: JM6

Purge Vol: 5 mL **Batch ID:** 2514703

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits
67-66-3	PS	Chloroform	50.0	2.95		57.9	110	65-128
75-27-4	PS	Bromodichloromethane	50.0	2.03		56.3	108	64-130
124-48-1	PS	Dibromochloromethane	50.0	1.02		53.7	105	63-137
71-36-3	PS	n-Butyl alcohol	5000	0.000	U	4760	95	58-141

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-76 **Sample Type:** Post Spike Duplicate

Client ID: RLUOB-23-302827PSD **Matrix:** W

Lab Sample ID: 1205557768

Instrument: VOA3.I **Analysis Date:** 10/26/2023 15:45 **Dilution:** 1

Analyst: JM6

Purge Vol: 5 mL **Batch ID:** 2514703

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
179601-23-1	PSD	m,p-Xylenes	100	0.000	U	93.3	93	56-125	3	0-20
75-05-8	PSD	Acetonitrile	1250	0.000	U	1150	92	49-140	13	0-20
67-64-1	PSD	Acetone	250	0.000	U	245	98	50-139	3	0-20
74-88-4	PSD	Iodomethane	250	0.000	U	258	103	61-130	6	0-20
75-15-0	PSD	Carbon disulfide	250	0.000	U	239	96	55-131	8	0-20
108-05-4	PSD	Vinyl acetate	250	0.000	U	236	95	55-137	1	0-20
78-93-3	PSD	2-Butanone	250	0.000	U	258	103	47-134	2	0-20
108-10-1	PSD	4-Methyl-2-pentanone	250	0.000	U	257	103	60-132	0	0-20
591-78-6	PSD	2-Hexanone	250	0.000	U	258	103	55-140	1	0-20
75-09-2	PSD	Methylene chloride	50.0	0.610	J	55.5	110	58-123	2	0-20
75-71-8	PSD	Dichlorodifluoromethane	50.0	0.000	U	40.1	80	37-162	15	0-20
74-87-3	PSD	Chloromethane	50.0	0.000	U	36.8	74	42-152	14	0-20
75-01-4	PSD	Vinyl chloride	50.0	0.000	U	35.1	70	49-153	15	0-20
74-83-9	PSD	Bromomethane	50.0	0.000	U	40.9	82	55-149	13	0-20
75-00-3	PSD	Chloroethane	50.0	0.000	U	43.3	87	56-143	11	0-20
75-69-4	PSD	Trichlorofluoromethane	50.0	0.000	U	49.3	99	48-137	12	0-20
60-29-7	PSD	Ethyl ether	50.0	0.000	U	51.8	104	58-125	8	0-20
75-35-4	PSD	1,1-Dichloroethylene	50.0	0.000	U	51.6	103	57-137	5	0-20
1634-04-4	PSD	tert-Butyl methyl ether	50.0	0.000	U	44.9	90	58-128	0	0-20
156-60-5	PSD	trans-1,2-Dichloroethylene	50.0	0.000	U	52.3	105	63-129	2	0-20
75-34-3	PSD	1,1-Dichloroethane	50.0	0.000	U	52.1	104	67-128	0	0-20
156-59-2	PSD	cis-1,2-Dichloroethylene	50.0	0.000	U	51.7	103	65-128	0	0-20

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-76 **Sample Type:** Post Spike Duplicate

Client ID: RLUOB-23-302827PSD **Matrix:** W

Lab Sample ID: 1205557768

Instrument: VOA3.I **Analysis Date:** 10/26/2023 15:45 **Dilution:** 1

Analyst: JM6

Purge Vol: 5 mL **Batch ID:** 2514703

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
594-20-7	PSD	2,2-Dichloropropane	50.0	0.000	U	45.5	91	53-132	6	0-20
74-97-5	PSD	Bromochloromethane	50.0	0.000	U	53.6	107	63-128	1	0-20
71-55-6	PSD	1,1,1-Trichloroethane	50.0	0.000	U	51.9	104	56-133	5	0-20
563-58-6	PSD	1,1-Dichloropropene	50.0	0.000	U	47.9	96	62-128	4	0-20
56-23-5	PSD	Carbon tetrachloride	50.0	0.000	U	54.2	108	58-141	6	0-20
107-06-2	PSD	1,2-Dichloroethane	50.0	0.000	U	54.8	110	60-134	1	0-20
71-43-2	PSD	Benzene	50.0	0.000	U	49.0	98	67-128	3	0-20
79-01-6	PSD	Trichloroethylene	50.0	0.000	U	51.6	103	61-130	3	0-20
78-87-5	PSD	1,2-Dichloropropane	50.0	0.000	U	49.4	99	67-125	0	0-20
74-95-3	PSD	Dibromomethane	50.0	0.000	U	53.7	107	67-126	0	0-20
10061-01-5	PSD	cis-1,3-Dichloropropylene	50.0	0.000	U	45.6	91	63-129	3	0-20
108-88-3	PSD	Toluene	50.0	0.000	U	50.8	102	63-121	2	0-20
10061-02-6	PSD	trans-1,3-Dichloropropylene	50.0	0.000	U	49.7	99	65-130	4	0-20
79-00-5	PSD	1,1,2-Trichloroethane	50.0	0.000	U	52.0	104	68-123	3	0-20
142-28-9	PSD	1,3-Dichloropropane	50.0	0.000	U	52.1	104	65-125	2	0-20
127-18-4	PSD	Tetrachloroethylene	50.0	0.000	U	50.8	102	56-126	1	0-20
106-93-4	PSD	1,2-Dibromoethane	50.0	0.000	U	51.9	104	65-124	1	0-20
108-90-7	PSD	Chlorobenzene	50.0	0.000	U	50.0	100	63-121	2	0-20
100-41-4	PSD	Ethylbenzene	50.0	0.000	U	46.6	93	58-123	3	0-20
95-47-6	PSD	o-Xylene	50.0	0.000	U	44.7	89	60-125	5	0-20
100-42-5	PSD	Styrene	50.0	0.000	U	42.8	86	58-129	3	0-20
75-25-2	PSD	Bromoform	50.0	0.000	U	50.7	101	58-134	6	0-20

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-76
Sample Type: Post Spike Duplicate
Client ID: RLUOB-23-302827PSD
Matrix: W
Lab Sample ID: 1205557768
Instrument: VOA3.I
Analysis Date: 10/26/2023 15:45
Dilution: 1
Analyst: JM6
Purge Vol: 5 mL
Batch ID: 2514703

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
98-82-8	PSD	Isopropylbenzene	50.0	0.000	U	47.3	95	53-128	0	0-20
79-34-5	PSD	1,1,2,2-Tetrachloroethane	50.0	0.000	U	47.8	96	59-136	2	0-20
96-18-4	PSD	1,2,3-Trichloropropane	50.0	0.000	U	55.8	112	67-126	3	0-20
108-86-1	PSD	Bromobenzene	50.0	0.000	U	50.4	101	61-122	2	0-20
103-65-1	PSD	n-Propylbenzene	50.0	0.000	U	48.6	97	54-129	0	0-20
108-67-8	PSD	1,3,5-Trimethylbenzene	50.0	0.000	U	48.4	97	54-129	2	0-20
95-49-8	PSD	2-Chlorotoluene	50.0	0.000	U	51.6	103	57-126	0	0-20
106-43-4	PSD	4-Chlorotoluene	50.0	0.000	U	51.5	103	56-125	0	0-20
98-06-6	PSD	tert-Butylbenzene	50.0	0.000	U	49.0	98	53-128	3	0-20
95-63-6	PSD	1,2,4-Trimethylbenzene	50.0	0.000	U	47.8	96	54-123	2	0-20
135-98-8	PSD	sec-Butylbenzene	50.0	0.000	U	48.8	98	54-130	3	0-20
99-87-6	PSD	4-Isopropyltoluene	50.0	0.000	U	49.1	98	53-129	3	0-20
541-73-1	PSD	1,3-Dichlorobenzene	50.0	0.000	U	50.5	101	57-124	1	0-20
106-46-7	PSD	1,4-Dichlorobenzene	50.0	0.000	U	51.0	102	54-123	1	0-20
104-51-8	PSD	n-Butylbenzene	50.0	0.000	U	48.4	97	49-136	3	0-20
96-12-8	PSD	1,2-Dibromo-3-chloropropane	50.0	0.000	U	46.0	92	49-137	1	0-20
87-68-3	PSD	Hexachlorobutadiene	50.0	0.000	U	44.2	88	44-138	2	0-20
91-20-3	PSD	Naphthalene	50.0	0.000	U	54.8	110	58-131	3	0-20
87-61-6	PSD	1,2,3-Trichlorobenzene	50.0	0.000	U	55.2	110	54-132	4	0-20
120-82-1	PSD	1,2,4-Trichlorobenzene	50.0	0.000	U	51.7	103	51-129	3	0-20
630-20-6	PSD	1,1,1,2-Tetrachloroethane	50.0	0.000	U	50.0	100	67-130	2	0-20
95-50-1	PSD	1,2-Dichlorobenzene	50.0	0.000	U	51.2	102	59-125	1	0-20

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-76 **Sample Type:** Post Spike Duplicate

Client ID: RLUOB-23-302827PSD **Matrix:** W

Lab Sample ID: 1205557768

Instrument: VOA3.I **Analysis Date:** 10/26/2023 15:45 **Dilution:** 1

Analyst: JM6

Purge Vol: 5 mL **Batch ID:** 2514703

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
67-66-3	PSD	Chloroform	50.0	2.95		56.7	108	65-128	2	0-20
75-27-4	PSD	Bromodichloromethane	50.0	2.03		55.6	107	64-130	1	0-20
124-48-1	PSD	Dibromochloromethane	50.0	1.02		55.6	109	63-137	3	0-20
71-36-3	PSD	n-Butyl alcohol	5000	0.000	U	4400	88	58-141	8	0-20

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-76
Sample Type: Post Spike
Client ID: RLUOB-23-302827PS
Matrix: W
Lab Sample ID: 1205557767
Instrument: VOA3.I
Analysis Date: 10/26/2023 16:12
Dilution: 1
Analyst: JM6
Purge Vol: 5 mL
Batch ID: 2514703

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits
107-02-8	PS	Acrolein	250	0.000	U	200	80	37-143
76-13-1	PS	Trichlorotrifluoroethane	250	0.000	U	229	92	51-136
107-05-1	PS	Allyl chloride	250	0.000	U	206	83	58-136
107-13-1	PS	Acrylonitrile	250	0.000	U	218	87	62-133
107-12-0	PS	Propionitrile	250	0.000	U	215	86	61-134
126-98-7	PS	Methacrylonitrile	250	0.000	U	227	91	61-135
80-62-6	PS	Methyl methacrylate	250	0.000	U	215	86	61-136
97-63-2	PS	Ethyl methacrylate	250	0.000	U	212	85	56-133
78-83-1	PS	Isobutyl alcohol	2500	0.000	U	2320	93	58-144
126-99-8	PS	2-Chloro-1,3-butadiene	50.0	0.000	U	44.7	89	56-137

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-76 **Sample Type:** Post Spike Duplicate

Client ID: RLUOB-23-302827PSD **Matrix:** W

Lab Sample ID: 1205557769

Instrument: VOA3.I **Analysis Date:** 10/26/2023 16:39 **Dilution:** 1

Analyst: JM6

Purge Vol: 5 mL **Batch ID:** 2514703

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
107-02-8	PSD	Acrolein	250	0.000	U	200	80	37-143	0	0-20
76-13-1	PSD	Trichlorotrifluoroethane	250	0.000	U	219	88	51-136	4	0-20
107-05-1	PSD	Allyl chloride	250	0.000	U	197	79	58-136	5	0-20
107-13-1	PSD	Acrylonitrile	250	0.000	U	208	83	62-133	4	0-20
107-12-0	PSD	Propionitrile	250	0.000	U	213	85	61-134	1	0-20
126-98-7	PSD	Methacrylonitrile	250	0.000	U	213	85	61-135	6	0-20
80-62-6	PSD	Methyl methacrylate	250	0.000	U	207	83	61-136	4	0-20
97-63-2	PSD	Ethyl methacrylate	250	0.000	U	196	78	56-133	8	0-20
78-83-1	PSD	Isobutyl alcohol	2500	0.000	U	2290	91	58-144	2	0-20
126-99-8	PSD	2-Chloro-1,3-butadiene	50.0	0.000	U	42.8	86	56-137	4	0-20

Method Blank Summary

SDG Number:	**2024-76**	**Client:**	**TNSL001**	**Matrix:**	**SOIL**
Client ID:	**MB for batch 2514593**	**Instrument ID:**	**VOAC.I**	**Data File:**	**data\102623VC\CD406T.D**
Lab Sample ID:	**1205557486**	**Prep Date:**	**10/26/2023 08:02**	**Analyzed:**	**10/26/23 10:56**
Column:	**DB-624**				

This method blank applies to the following samples and quality control samples:

	Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01	LCS for batch 2514593	1205557485	data\102623VC\CD403T.D	10/26/23	0934
02	LCS for batch 2514593	1205557613	data\102623VC\CD404T.D	10/26/23	1001
03	RLUOB-23-302822	642648009	data\102623VC\CD407.D	10/26/23	1124
04	HB for batch 2514593	1205557487	data\102623VC\CD408.D	10/26/23	1151
05	RLUOB-23-289589	642648001	data\102623VC\CD409.D	10/26/23	1219
06	RLUOB-23-289590	642648002	data\102623VC\CD410.D	10/26/23	1246
07	RLUOB-23-289591	642648003	data\102623VC\CD411.D	10/26/23	1314
08	RLUOB-23-289592	642648004	data\102623VC\CD412.D	10/26/23	1341
09	RLUOB-23-289593	642648005	data\102623VC\CD413.D	10/26/23	1409
10	RLUOB-23-289594	642648006	data\102623VC\CD414.D	10/26/23	1436
11	RLUOB-23-289595	642648007	data\102623VC\CD415.D	10/26/23	1504
12	RLUOB-23-289596	642648008	data\102623VC\CD416.D	10/26/23	1531
13	RLUOB-23-289591 DUP	642648012	data\102623VC\CD417.D	10/26/23	1559
14	RLUOB-23-289589PS	1205557488	data\102623VC\CD418.D	10/26/23	1626
15	RLUOB-23-289589PSD	1205557489	data\102623VC\CD419.D	10/26/23	1654
16	RLUOB-23-289589PS	1205557614	data\102623VC\CD420.D	10/26/23	1721
17	RLUOB-23-289589PSD	1205557615	data\102623VC\CD421.D	10/26/23	1749

Method Blank Summary

SDG Number:	**2024-76**	**Client:**	**TNSL001**	**Matrix:**	**WATER**
Client ID:	**MB for batch 2514703**	**Instrument ID:**	**VOA3.I**	**Data File:**	**102623V3\3P406T.D**
Lab Sample ID:	**1205557765**	**Prep Date:**	**10/26/2023 09:25**	**Analyzed:**	**10/26/23 09:25**
Column:	**Serial Number: AB001**				

This method blank applies to the following samples and quality control samples:

	Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01	LCS for batch 2514703	1205557763	102623V3\3P403T.D	10/26/23	0803
02	LCS for batch 2514703	1205557764	102623V3\3P405T.D	10/26/23	0857
03	RLUOB-23-302827	642648010	102623V3\3P417.D	10/26/23	1424
04	RLUOB-23-302828	642648011	102623V3\3P418.D	10/26/23	1451
05	RLUOB-23-302827PS	1205557766	102623V3\3P419.D	10/26/23	1518
06	RLUOB-23-302827PSD	1205557768	102623V3\3P420.D	10/26/23	1545
07	RLUOB-23-302827PS	1205557767	102623V3\3P421.D	10/26/23	1612
08	RLUOB-23-302827PSD	1205557769	102623V3\3P422.D	10/26/23	1639

Instrument Performance Check

BROMOFLUOROBENZENE

Lab Name GEL Laboratories LLC **Client SDG:** 2024-76

Instrument ID: VOA3.I **Injection Date/Time:** 29-SEP-23 07:25

Column Description: Serial Number: AB001 **Lab File ID** 092923V3_ICAL\3L501.D

m/e	Ion Abundance Criteria	% Relative Abundance
95	50 - 200% of mass 174	118.8
96	5.0 - 9.0% of mass 95	6.4
173	Less than 2.0% of mass 174	0.6
174	50 - 200% of mass 95	84.2
175	5.0 -9.0% of mass 174	6.6
176	95.0 - 105.0% of mass 174	95
177	5.0 - 10.0% of mass 176	6.9

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
ICALMIX[A]	W3VM230929-01	092923V3_ICAL\3L502.D	29-SEP-23 07:50
ICALMIX[A]	W3VM230929-02	092923V3_ICAL\3L503.D	29-SEP-23 08:17
ICALMIX[A]	W3VM230929-03	092923V3_ICAL\3L504.D	29-SEP-23 08:45
ICALMIX[A]	W3VM230929-04	092923V3_ICAL\3L505.D	29-SEP-23 09:12
ICALMIX[A]	W3VM230929-05	092923V3_ICAL\3L506.D	29-SEP-23 09:40
ICALMIX[A]	W3VM230929-06	092923V3_ICAL\3L507.D	29-SEP-23 10:07
ICALMIX[A]	W3VM230929-07	092923V3_ICAL\3L508.D	29-SEP-23 10:35
ICALMIX[A]	W3VM230929-08	092923V3_ICAL\3L509.D	29-SEP-23 11:02
ICALMIX[A]	W3VM230929-09	092923V3_ICAL\3L510.D	29-SEP-23 11:30
ICVMIX[A]01	W3VM230929-10	092923V3_ICAL\3L512.D	29-SEP-23 12:25
ICALMIX[B]	W3VM230929-11	092923V3_ICAL\3L513.D	29-SEP-23 12:52
ICALMIX[B]	W3VM230929-12	092923V3_ICAL\3L514.D	29-SEP-23 13:20
ICALMIX[B]	W3VM230929-13	092923V3_ICAL\3L515.D	29-SEP-23 13:47
ICALMIX[B]	W3VM230929-14	092923V3_ICAL\3L516.D	29-SEP-23 14:14
ICALMIX[B]	W3VM230929-15	092923V3_ICAL\3L517.D	29-SEP-23 14:41
ICALMIX[B]	W3VM230929-16	092923V3_ICAL\3L518.D	29-SEP-23 15:08
ICALMIX[B]	W3VM230929-17	092923V3_ICAL\3L519.D	29-SEP-23 15:36
ICALMIX[B]	W3VM230929-18	092923V3_ICAL\3L520.D	29-SEP-23 16:03
ICVMIX[B]02	W3VM230929-19	092923V3_ICAL\3L522.D	29-SEP-23 16:57
CCVMIX[A]01	W3VM231026-01	102623V3\3P402.D	26-OCT-23 07:35

Instrument Performance Check

BROMOFLUOROBENZENE

Lab Name GEL Laboratories LLC **Client SDG:** 2024-76

Instrument ID: VOA3.I **Injection Date/Time:** 29-SEP-23 07:25

Column Description: Serial Number: AB001 **Lab File ID** 092923V3_ICAL\3L501.D

m/e	Ion Abundance Criteria	% Relative Abundance
95	50 - 200% of mass 174	118.8
96	5.0 - 9.0% of mass 95	6.4
173	Less than 2.0% of mass 174	0.6
174	50 - 200% of mass 95	84.2
175	5.0 -9.0% of mass 174	6.6
176	95.0 - 105.0% of mass 174	95
177	5.0 - 10.0% of mass 176	6.9

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
BLK01LCS	1205557763	102623V3\3P403T.D	26-OCT-23 08:03
CCVMIX[B]02	W3VM231026-03	102623V3\3P404.D	26-OCT-23 08:30
BLK01SLCS	1205557764	102623V3\3P405T.D	26-OCT-23 08:57
BLK01	1205557765	102623V3\3P406T.D	26-OCT-23 09:25
RLUOB-23-302827	642648010	102623V3\3P417.D	26-OCT-23 14:24
RLUOB-23-302828	642648011	102623V3\3P418.D	26-OCT-23 14:51
RLUOB-23-302827MS	1205557766	102623V3\3P419.D	26-OCT-23 15:18
RLUOB-23-302827MSD	1205557768	102623V3\3P420.D	26-OCT-23 15:45
RLUOB-23-302827MS	1205557767	102623V3\3P421.D	26-OCT-23 16:12
RLUOB-23-302827MSD	1205557769	102623V3\3P422.D	26-OCT-23 16:39

Instrument Performance Check

BROMOFLUOROBENZENE

Lab Name GEL Laboratories LLC **Client SDG:** 2024-76

Instrument ID: VOAC.I **Injection Date/Time:** 01-OCT-23 13:06

Column Description: DB-624 **Lab File ID** data\100123VC_ICAL\CZ701.D

m/e	Ion Abundance Criteria	% Relative Abundance
95	50 - 200% of mass 174	86.4
96	5.0 - 9.0% of mass 95	7
173	Less than 2.0% of mass 174	0
174	50 - 200% of mass 95	115.7
175	5.0 -9.0% of mass 174	5.7
176	95.0 - 105.0% of mass 174	101.6
177	5.0 - 10.0% of mass 176	9.5

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
ICALMIX[A]	WCVM231001-01	data\100123VC_ICAL\CZ702.D	01-OCT-23 13:31
ICALMIX[A]	WCVM231001-02	data\100123VC_ICAL\CZ703.D	01-OCT-23 13:59
ICALMIX[A]	WCVM231001-03	data\100123VC_ICAL\CZ704.D	01-OCT-23 14:26
ICALMIX[A]	WCVM231001-04	data\100123VC_ICAL\CZ705.D	01-OCT-23 14:53
ICALMIX[A]	WCVM231001-05	data\100123VC_ICAL\CZ706.D	01-OCT-23 15:21
ICALMIX[A]	WCVM231001-06	data\100123VC_ICAL\CZ707.D	01-OCT-23 15:48
ICALMIX[A]	WCVM231001-07	data\100123VC_ICAL\CZ708.D	01-OCT-23 16:16
ICALMIX[A]	WCVM231001-08	data\100123VC_ICAL\CZ709.D	01-OCT-23 16:43
ICALMIX[A]	WCVM231001-09	data\100123VC_ICAL\CZ710.D	01-OCT-23 17:11
ICVMIX[A]01	WCVM231001-10	data\100123VC_ICAL\CZ712.D	01-OCT-23 18:06
ICALMIX[B]	WCVM231001-11	data\100123VC_ICAL\CZ713.D	01-OCT-23 18:33
ICALMIX[B]	WCVM231001-12	data\100123VC_ICAL\CZ714.D	01-OCT-23 19:01
ICALMIX[B]	WCVM231001-13	data\100123VC_ICAL\CZ715.D	01-OCT-23 19:28
ICALMIX[B]	WCVM231001-14	data\100123VC_ICAL\CZ716.D	01-OCT-23 19:56
ICALMIX[B]	WCVM231001-15	data\100123VC_ICAL\CZ717.D	01-OCT-23 20:23
ICALMIX[B]	WCVM231001-16	data\100123VC_ICAL\CZ718.D	01-OCT-23 20:51
ICALMIX[B]	WCVM231001-17	data\100123VC_ICAL\CZ719.D	01-OCT-23 21:18
ICALMIX[B]	WCVM231001-18	data\100123VC_ICAL\CZ720.D	01-OCT-23 21:46
ICVMIX[B]02	WCVM231001-19	data\100123VC_ICAL\CZ722.D	01-OCT-23 22:41
CCVMIX[A]01	WCVM231026-01	data\102623VC\CD402.D	26-OCT-23 09:06

Instrument Performance Check

BROMOFLUOROBENZENE

Lab Name GEL Laboratories LLC **Client SDG:** 2024-76

Instrument ID: VOAC.I **Injection Date/Time:** 01-OCT-23 13:06

Column Description: DB-624 **Lab File ID** data\100123VC_ICAL\CZ701.D

m/e	Ion Abundance Criteria	% Relative Abundance
95	50 - 200% of mass 174	86.4
96	5.0 - 9.0% of mass 95	7
173	Less than 2.0% of mass 174	0
174	50 - 200% of mass 95	115.7
175	5.0 -9.0% of mass 174	5.7
176	95.0 - 105.0% of mass 174	101.6
177	5.0 - 10.0% of mass 176	9.5

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
BLK02LCS	1205557485	data\102623VC\CD403T.D	26-OCT-23 09:34
CCVMIX[B]02	WCVM231026-03	data\102623VC\CD404.D	26-OCT-23 10:01
BLK02SLCS	1205557613	data\102623VC\CD404T.D	26-OCT-23 10:01
BLK02	1205557486	data\102623VC\CD406T.D	26-OCT-23 10:56
RLUOB-23-302822	642648009	data\102623VC\CD407.D	26-OCT-23 11:24
HBLK01	1205557487	data\102623VC\CD408.D	26-OCT-23 11:51
RLUOB-23-289589	642648001	data\102623VC\CD409.D	26-OCT-23 12:19
RLUOB-23-289590	642648002	data\102623VC\CD410.D	26-OCT-23 12:46
RLUOB-23-289591	642648003	data\102623VC\CD411.D	26-OCT-23 13:14
RLUOB-23-289592	642648004	data\102623VC\CD412.D	26-OCT-23 13:41
RLUOB-23-289593	642648005	data\102623VC\CD413.D	26-OCT-23 14:09
RLUOB-23-289594	642648006	data\102623VC\CD414.D	26-OCT-23 14:36
RLUOB-23-289595	642648007	data\102623VC\CD415.D	26-OCT-23 15:04
RLUOB-23-289596	642648008	data\102623VC\CD416.D	26-OCT-23 15:31
RLUOB-23-289591 DUP	642648012	data\102623VC\CD417.D	26-OCT-23 15:59
RLUOB-23-289589MS	1205557488	data\102623VC\CD418.D	26-OCT-23 16:26
RLUOB-23-289589MSD	1205557489	data\102623VC\CD419.D	26-OCT-23 16:54
RLUOB-23-289589MS	1205557614	data\102623VC\CD420.D	26-OCT-23 17:21
RLUOB-23-289589MSD	1205557615	data\102623VC\CD421.D	26-OCT-23 17:49

Internal Standard
Area and RT Summary

Lab Name : GEL Laboratories LLC

Client SDG: 2024-76

Instrument: VOA3.I

STD Analysis Time: 26-OCT-23 07:35

GC Column: DB-624

Data File: 102623V3\3P402.D

	Fluorobenzene		Chlorobenzene-d5		1,4-Dichlorobenzene-d4	
	Area #	RT #	Area #	RT #	Area #	RT #
12 Hour STD	2004524	9.88	1331478	13.06	781933	15.47
Upper Limit	4009048	10.38	2662956	13.56	1563866	15.97
Lower Limit	1002262	9.38	665739	12.56	390967	14.97
Sample ID						
BLK01LCS	1909869	9.88	1366535	13.1	900292	15.5
BLK01SLCS	2093707	9.89	1429923	13.1	877410	15.5
BLK01	2155995	9.89	1397892	13.1	829299	15.5
RLUOB-23-302827	1564337	9.89	1076952	13.1	655061	15.5
RLUOB-23-302828	1569558	9.89	1080106	13.1	649135	15.5
RLUOB-23-302827MS	1566066	9.89	1125588	13.1	722995	15.5
RLUOB-23-302827MSD	1837789	9.89	1240495	13.1	739220	15.5
RLUOB-23-302827MS	1710595	9.89	1242622	13.1	787563	15.5
RLUOB-23-302827MSD	1780017	9.88	1374165	13.1	880959	15.5

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Value outside of QC Limits

Internal Standard
Area and RT Summary

Lab Name : GEL Laboratories LLC

Client SDG: 2024-76

Instrument: VOAC.I

STD Analysis Time: 26-OCT-23 09:06

GC Column: DB-624

Data File: data\102623VC\CD402.D

	Fluorobenzene		Chlorobenzene-d5		1,4-Dichlorobenzene-d4	
	Area #	RT #	Area #	RT #	Area #	RT #
12 Hour STD	1058196	10.88	866524	14.31	480914	16.88
Upper Limit	2116392	11.38	1733048	14.81	961828	17.38
Lower Limit	529098	10.38	433262	13.81	240457	16.38
Sample ID						
BLK02LCS	1089436	10.9	871392	14.3	488278	16.9
BLK02SLCS	1109834	10.9	845865	14.3	467907	16.9
BLK02	1089219	10.9	812526	14.3	478589	16.9
RLUOB-23-302822	1113106	10.9	841445	14.3	486599	16.9
HBLK01	1126571	10.9	824075	14.3	470918	16.9
RLUOB-23-289589	1102830	10.9	811064	14.3	468119	16.9
RLUOB-23-289590	1141058	10.9	828282	14.3	470536	16.9
RLUOB-23-289591	1151694	10.9	850350	14.3	479953	16.9
RLUOB-23-289592	1151930	10.9	833972	14.3	472682	16.9
RLUOB-23-289593	1107098	10.9	813492	14.3	457558	16.9
RLUOB-23-289594	1168051	10.9	841942	14.3	468705	16.9
RLUOB-23-289595	1162349	10.9	845442	14.3	485287	16.9
RLUOB-23-289596	1160256	10.9	834310	14.3	471611	16.9
RLUOB-23-289591 DUP	1209075	10.9	969989	14.3	560339	16.9
RLUOB-23-289589MS	1155069	10.9	869681	14.3	473198	16.9
RLUOB-23-289589MSD	1150145	10.9	862643	14.3	462797	16.9
RLUOB-23-289589MS	1178467	10.9	866084	14.3	458317	16.9
RLUOB-23-289589MSD	1155736	10.9	853491	14.3	462771	16.9

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Value outside of QC Limits

Sample Data

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 10:15**	**Matrix:**	**SO**
Lab Sample ID:	**642648001**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**4**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289589**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2514596**	**Inst:**	**VOAC.I**	**Dilution:**	**50**
Run Date:	**10/26/2023 12:19**	**Analyst:**	**PXY1**	**Purge Vol:**	**5 mL**
Prep Date:	**10/26/2023 09:01**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**data\102623VC\CD409.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	34.7	ug/kg	34.7	104
108-88-3	Toluene	U	34.7	ug/kg	34.7	104
100-41-4	Ethylbenzene	U	34.7	ug/kg	34.7	104
1330-20-7	Xylenes (total)	U	104	ug/kg	104	312

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Toluene-d8	46.7	50.0	ug/L	93	(81%-120%)
Bromofluorobenzene	45.4	50.0	ug/L	91	(74%-128%)
1,2-Dichloroethane-d4	41.4	50.0	ug/L	83	(77%-127%)

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102623VC\
Data File : CD409.D
Acq On : 26 Oct 2023 12:19
Operator : PXY1
InstName : VOAC
Sample : |642648001|2514596|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Oct 26 12:48:15 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards								Dev(Min)
1) Fluorobenzene	96	10.873	10.879	1.000	1102830	50.00	ug/L	0.00
43) Chlorobenzene-d5	117	14.305	14.305	1.000	811064	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	16.878	16.884	1.000	468119	50.00	ug/L	0.00
84) B Fluorobenzene	96	10.873	10.879	1.000	1102830	50.00	ug/L	0.00
103) B Chlorobenzene-d5	117	14.305	14.305	1.000	811064	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	16.878	16.884	1.000	468554	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	65	10.489	10.495	0.965	323387	41.41	ug/L	0.00
45) Toluene-d8	98	12.659	12.665	0.885	977198	46.65	ug/L	0.00
63) Bromofluorobenzene	95	15.567	15.573	0.922	347033	45.43	ug/L	0.00

Compound	Amount	Range	Recovery
30) 1,2-Dichloroethane-d4	50.000	77 - 127	83%
45) Toluene-d8	50.000	81 - 120	93%
63) Bromofluorobenzene	50.000	74 - 128	91%

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.752	0.000	0	N.D.		
3) Chloromethane		0.000	5.185	0.000	0	N.D.		
4) Vinyl chloride		0.000	5.398	0.000	0	N.D.		
5) Bromomethane		0.000	6.038	0.000	0	N.D.		
6) Chloroethane		0.000	6.160	0.000	0	N.D.		
7) Trichlorofluoromethane		0.000	6.550	0.000	0	N.D.		
8) Ethyl ether		0.000	6.922	0.000	0	N.D.		
9) Acetone	43	7.312	7.318	0.673	1453	Below Cal		63
10) 1,1-Dichloroethylene		0.000	7.343	0.000	0	N.D.		
11) Iodomethane		0.000	7.611	0.000	0	N.D.		
12) Acetonitrile	41	7.696	7.690	0.708	354	N.D.		
13) Methyl acetate	43	7.757	7.745	0.713	867	N.D.		
14) Carbon disulfide		0.000	7.769	0.000	0	N.D.		
15) Methylene chloride	84	7.946	7.946	0.731	7111	N.D.		
16) tert-Butyl methyl ether		0.000	8.275	0.000	0	N.D.		
17) trans-1,2-Dichloroethy...		0.000	8.324	0.000	0	N.D.		
18) Hexane	57	8.629	8.635	0.794	1227	N.D.		
19) Vinyl acetate		0.000	8.794	0.000	0	N.D.		
20) 1,1-Dichloroethane		0.000	8.842	0.000	0	N.D.		
21) 2-Butanone	43	9.470	9.476	0.871	923	N.D.		
22) cis-1,2-Dichloroethylene		0.000	9.531	0.000	0	N.D.		
23) 2,2-Dichloropropane		0.000	9.568	0.000	0	N.D.		
24) Bromochloromethane		0.000	9.830	0.000	0	N.D.		
25) Chloroform		0.000	9.867	0.000	0	N.D.		
26) 1,1,1-Trichloroethane		0.000	10.178	0.000	0	N.D.		
27) Cyclohexane		0.000	10.287	0.000	0	N.D.		
28) 1,1-Dichloropropene		0.000	10.348	0.000	0	N.D.		
29) Carbon tetrachloride		0.000	10.391	0.000	0	N.D.		
31) 1,2-Dichloroethane	62	10.482	10.580	0.964	133	N.D.		
32) Benzene	78	10.610	10.610	0.976	176	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102623VC\
Data File : CD409.D
Acq On : 26 Oct 2023 12:19
Operator : PXY1
InstName : VOAC
Sample : |642648001|2514596|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Oct 26 12:48:15 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
33) Cyclohexene	67	10.647	10.738	0.979	173	N.D.	
34) n-Butyl alcohol		0.000	10.976	0.000	0	N.D.	
35) Trichloroethylene		0.000	11.305	0.000	0	N.D.	
36) 2-Pentanone	43	11.391	11.385	1.048	276	N.D.	
37) 1,2-Dichloropropane		0.000	11.568	0.000	0	N.D.	
38) Methylcyclohexane		0.000	11.580	0.000	0	N.D.	
39) Dibromomethane		0.000	11.708	0.000	0	N.D.	
40) Bromodichloromethane		0.000	11.830	0.000	0	N.D.	
41) 2-Chloroethylvinyl ether		0.000	12.074	0.000	0	N.D.	
42) cis-1,3-Dichloropropylene		0.000	12.317	0.000	0	N.D.	
44) 4-Methyl-2-pentanone		0.000	12.421	0.000	0	N.D.	
46) Toluene	91	12.738	12.744	0.890	140	N.D.	
47) trans-1,3-Dichloroprop...		0.000	12.903	0.000	0	N.D.	
48) 1,1,2-Trichloroethane		0.000	13.140	0.000	0	N.D.	
49) 2-Hexanone		0.000	13.336	0.000	0	N.D.	
50) 1,3-Dichloropropane		0.000	13.348	0.000	0	N.D.	
51) Tetrachloroethylene		0.000	13.390	0.000	0	N.D.	
52) Dibromochloromethane		0.000	13.634	0.000	0	N.D.	
53) 1,2-Dibromoethane		0.000	13.817	0.000	0	N.D.	
54) Chlorobenzene		0.000	14.341	0.000	0	N.D.	
55) 1,1,1,2-Tetrachloroethane		0.000	14.396	0.000	0	N.D.	
56) Ethylbenzene	91	14.409	14.409	1.007	201	N.D.	
57) m,p-Xylenes		0.000	14.524	0.000	0	N.D.	
58) o-Xylene		0.000	14.988	0.000	0	N.D.	
59) Styrene		0.000	14.988	0.000	0	N.D.	
61) Bromoform		0.000	15.262	0.000	0	N.D.	
62) Isopropylbenzene	105	15.439	15.366	0.915	177	N.D.	
64) 1,1,2,2-Tetrachloroethane	83	15.567	15.646	0.922	333	N.D.	
65) 1,2,3-Trichloropropane		0.000	15.744	0.000	0	N.D.	
66) Bromobenzene		0.000	15.799	0.000	0	N.D.	
67) n-Propylbenzene		0.000	15.817	0.000	0	N.D.	
68) 1,3,5-Trimethylbenzene		0.000	15.975	0.000	0	N.D.	
69) 2-Chlorotoluene		0.000	15.975	0.000	0	N.D.	
70) 4-Chlorotoluene	91	16.091	16.079	0.953	481	N.D.	
71) tert-Butylbenzene		0.000	16.372	0.000	0	N.D.	
72) 1,2,4-Trimethylbenzene	105	16.408	16.414	0.972	421	N.D.	
73) sec-Butylbenzene		0.000	16.615	0.000	0	N.D.	
74) 4-Isopropyltoluene	119	16.737	16.743	0.992	326	N.D.	
75) 1,3-Dichlorobenzene	146	16.811	16.817	0.996	132	N.D.	
76) 1,4-Dichlorobenzene	146	16.908	16.908	1.002	464	N.D.	
77) n-Butylbenzene	91	17.219	17.231	1.020	337	N.D.	
78) 1,2-Dichlorobenzene	146	17.378	17.378	1.030	224	N.D.	
79) 1,2-Dibromo-3-chloropr...		0.000	18.335	0.000	0	N.D.	
80) 1,2,4-Trichlorobenzene	180	19.517	19.523	1.156	748	N.D.	
81) Hexachlorobutadiene		0.000	19.719	0.000	0	N.D.	
82) Naphthalene	128	19.956	19.956	1.182	2849	N.D.	
83) 1,2,3-Trichlorobenzene	180	20.340	20.340	1.205	1197	N.D.	
85) Acrolein		0.000	7.117	0.000	0	N.D.	
86) Trichlorotrifluoroethane		0.000	7.312	0.000	0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102623VC\
Data File : CD409.D
Acq On : 26 Oct 2023 12:19
Operator : PXY1
InstName : VOAC
Sample : |642648001|2514596|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Oct 26 12:48:15 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE

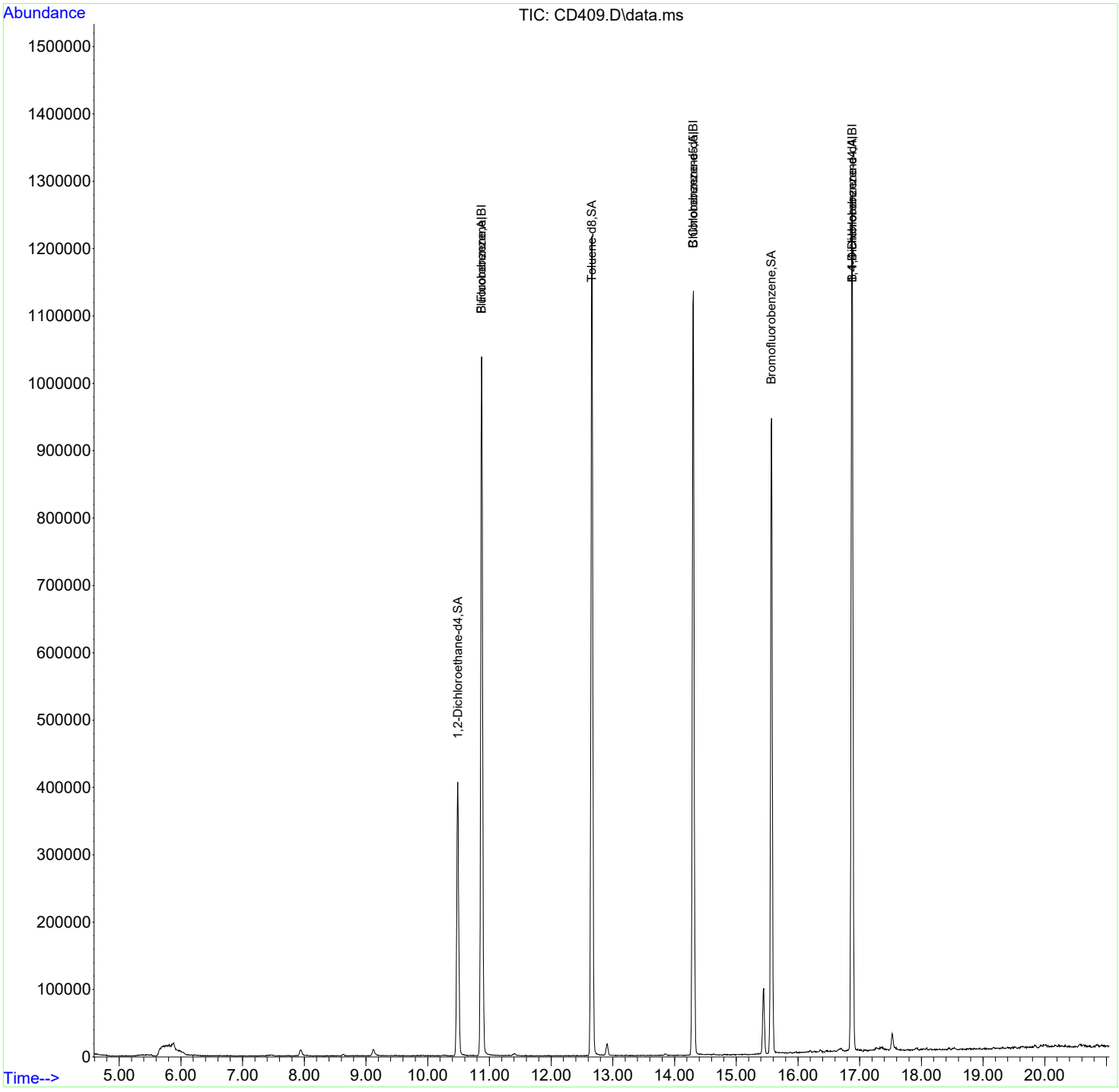
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
87) Isopropyl Alcohol	45	7.422	7.416	0.683	4183	N.D.	
88) Allyl chloride	41	7.696	7.794	0.708	354	N.D.	
89) tert-Butyl Alcohol	59	8.019	7.946	0.738	670	N.D.	
90) Acrylonitrile		0.000	8.208	0.000	0	N.D.	
91) Isopropyl ether		0.000	8.824	0.000	0	N.D.	
92) 2-Chloro-1,3-butadiene		0.000	8.958	0.000	0	N.D.	
93) Ethyl tert-butyl ether		0.000	9.263	0.000	0	N.D.	
94) Ethyl acetate	43	9.470	9.482	0.871	923	N.D.	
95) Propionitrile		0.000	9.543	0.000	0	N.D.	
96) Methacrylonitrile		0.000	9.745	0.000	0	N.D.	
97) Tetrahydrofuran	42	9.903	9.891	0.911	245	N.D.	
98) Isobutyl alcohol		0.000	10.220	0.000	0	N.D.	
99) Methyl tert-amyl ether		0.000	10.629	0.000	0	N.D.	
100) Methyl methacrylate		0.000	11.531	0.000	0	N.D.	
101) 1,4-Dioxane		0.000	11.665	0.000	0	N.D.	
102) 2-Nitropropane		0.000	12.043	0.000	0	N.D.	
104) Ethyl methacrylate		0.000	12.903	0.000	0	N.D.	
106) 1-Chlorohexane		0.000	14.195	0.000	0	N.D.	
107) cis-1,4-Dichloro-2-butene		0.000	15.396	0.000	0	N.D.	
108) Cyclohexanone		0.000	15.530	0.000	0	N.D.	
109) trans-1,4-Dichloro-2-b...		0.000	15.701	0.000	0	N.D.	
110) Pentachloroethane		0.000	16.445	0.000	0	N.D.	
111) Benzyl chloride	91	17.024	17.030	1.009	804	N.D.	
112) bis(2-Chloroisopropyl)...	45	17.463	17.463	1.035	233	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102623VC\
Data File : CD409.D
Acq On : 26 Oct 2023 12:19
Operator : PXY1
InstName : VOAC
Sample : |642648001|2514596|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Oct 26 12:48:15 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE



Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 10:32**	**Matrix:**	**SO**
Lab Sample ID:	**642648002**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**1**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289590**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2514596**	**Inst:**	**VOAC.I**	**Dilution:**	**50**
Run Date:	**10/26/2023 12:46**	**Analyst:**	**PXY1**	**Purge Vol:**	**5 mL**
Prep Date:	**10/26/2023 09:02**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**data\102623VC\CD410.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	33.6	ug/kg	33.6	101
108-88-3	Toluene	U	33.6	ug/kg	33.6	101
100-41-4	Ethylbenzene	U	33.6	ug/kg	33.6	101
1330-20-7	Xylenes (total)	U	101	ug/kg	101	303

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	46.2	50.0	ug/L	92	(74%-128%)
Toluene-d8	46.9	50.0	ug/L	94	(81%-120%)
1,2-Dichloroethane-d4	40.4	50.0	ug/L	81	(77%-127%)

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102623VC\
Data File : CD410.D
Acq On : 26 Oct 2023 12:46
Operator : PXY1
InstName : VOAC
Sample : |642648002|2514596|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 10 Sample Multiplier: 1

10/27/2023

10/27/2023

Quant Time: Oct 26 13:13:26 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards								Dev(Min)
1) Fluorobenzene	96	10.873	10.879	1.000	1141058	50.00	ug/L	0.00
43) Chlorobenzene-d5	117	14.305	14.305	1.000	828282	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	16.878	16.884	1.000	470536	50.00	ug/L	0.00
84) B Fluorobenzene	96	10.873	10.879	1.000	1141058	50.00	ug/L	0.00
103) B Chlorobenzene-d5	117	14.305	14.305	1.000	828282	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	16.878	16.884	1.000	471145	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	65	10.482	10.495	0.964	326600	40.42	ug/L	-0.01
45) Toluene-d8	98	12.659	12.665	0.885	1002682	46.87	ug/L	0.00
63) Bromofluorobenzene	95	15.567	15.573	0.922	354343	46.15	ug/L	0.00

Compound	Amount	Range	Recovery
30) 1,2-Dichloroethane-d4	50.000	77 - 127	81%
45) Toluene-d8	50.000	81 - 120	94%
63) Bromofluorobenzene	50.000	74 - 128	92%

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.752	0.000	0	N.D.		
3) Chloromethane		0.000	5.185	0.000	0	N.D.		
4) Vinyl chloride		0.000	5.398	0.000	0	N.D.		
5) Bromomethane		0.000	6.038	0.000	0	N.D.		
6) Chloroethane		0.000	6.160	0.000	0	N.D.		
7) Trichlorofluoromethane		0.000	6.550	0.000	0	N.D.		
8) Ethyl ether		0.000	6.922	0.000	0	N.D.		
9) Acetone	43	7.312	7.318	0.673	1509	Below Cal		89
10) 1,1-Dichloroethylene	61	7.465	7.343	0.687	134	N.D.		
11) Iodomethane		0.000	7.611	0.000	0	N.D.		
12) Acetonitrile	41	7.690	7.690	0.707	128	N.D.		
13) Methyl acetate	43	7.733	7.745	0.711	844	N.D.		
14) Carbon disulfide		0.000	7.769	0.000	0	N.D.		
15) Methylene chloride	84	7.940	7.946	0.730	6712	N.D.		
16) tert-Butyl methyl ether		0.000	8.275	0.000	0	N.D.		
17) trans-1,2-Dichloroethy...		0.000	8.324	0.000	0	N.D.		
18) Hexane	57	8.623	8.635	0.793	1080	N.D.		
19) Vinyl acetate		0.000	8.794	0.000	0	N.D.		
20) 1,1-Dichloroethane		0.000	8.842	0.000	0	N.D.		
21) 2-Butanone	43	9.483	9.476	0.872	737	N.D.		
22) cis-1,2-Dichloroethylene		0.000	9.531	0.000	0	N.D.		
23) 2,2-Dichloropropane		0.000	9.568	0.000	0	N.D.		
24) Bromochloromethane		0.000	9.830	0.000	0	N.D.		
25) Chloroform		0.000	9.867	0.000	0	N.D.		
26) 1,1,1-Trichloroethane		0.000	10.178	0.000	0	N.D.		
27) Cyclohexane		0.000	10.287	0.000	0	N.D.		
28) 1,1-Dichloropropene		0.000	10.348	0.000	0	N.D.		
29) Carbon tetrachloride		0.000	10.391	0.000	0	N.D.		
31) 1,2-Dichloroethane	62	10.488	10.580	0.965	123	N.D.		
32) Benzene	78	10.604	10.610	0.975	159	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102623VC\
Data File : CD410.D
Acq On : 26 Oct 2023 12:46
Operator : PXY1
InstName : VOAC
Sample : |642648002|2514596|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Oct 26 13:13:26 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
33) Cyclohexene		0.000	10.738	0.000	0	N.D.	
34) n-Butyl alcohol		0.000	10.976	0.000	0	N.D.	
35) Trichloroethylene	95	11.263	11.305	1.036	122	N.D.	
36) 2-Pentanone	43	11.379	11.385	1.047	147	N.D.	
37) 1,2-Dichloropropane		0.000	11.568	0.000	0	N.D.	
38) Methylcyclohexane		0.000	11.580	0.000	0	N.D.	
39) Dibromomethane		0.000	11.708	0.000	0	N.D.	
40) Bromodichloromethane		0.000	11.830	0.000	0	N.D.	
41) 2-Chloroethylvinyl ether		0.000	12.074	0.000	0	N.D.	
42) cis-1,3-Dichloropropylene		0.000	12.317	0.000	0	N.D.	
44) 4-Methyl-2-pentanone		0.000	12.421	0.000	0	N.D.	
46) Toluene	91	12.732	12.744	0.890	287	N.D.	
47) trans-1,3-Dichloroprop...		0.000	12.903	0.000	0	N.D.	
48) 1,1,2-Trichloroethane		0.000	13.140	0.000	0	N.D.	
49) 2-Hexanone	43	13.335	13.336	0.932	186	N.D.	
50) 1,3-Dichloropropane		0.000	13.348	0.000	0	N.D.	
51) Tetrachloroethylene		0.000	13.390	0.000	0	N.D.	
52) Dibromochloromethane		0.000	13.634	0.000	0	N.D.	
53) 1,2-Dibromoethane		0.000	13.817	0.000	0	N.D.	
54) Chlorobenzene		0.000	14.341	0.000	0	N.D.	
55) 1,1,1,2-Tetrachloroethane		0.000	14.396	0.000	0	N.D.	
56) Ethylbenzene	91	14.408	14.409	1.007	308	N.D.	
57) m,p-Xylenes		0.000	14.524	0.000	0	N.D.	
58) o-Xylene	91	14.988	14.988	1.048	298	N.D.	
59) Styrene		0.000	14.988	0.000	0	N.D.	
61) Bromoform		0.000	15.262	0.000	0	N.D.	
62) Isopropylbenzene	105	15.439	15.366	0.915	330	N.D.	
64) 1,1,2,2-Tetrachloroethane	83	15.579	15.646	0.923	644	N.D.	
65) 1,2,3-Trichloropropane		0.000	15.744	0.000	0	N.D.	
66) Bromobenzene		0.000	15.799	0.000	0	N.D.	
67) n-Propylbenzene	91	15.786	15.817	0.935	211	N.D.	
68) 1,3,5-Trimethylbenzene	105	15.939	15.975	0.944	188	N.D.	
69) 2-Chlorotoluene		0.000	15.975	0.000	0	N.D.	
70) 4-Chlorotoluene	91	16.073	16.079	0.952	484	N.D.	
71) tert-Butylbenzene		0.000	16.372	0.000	0	N.D.	
72) 1,2,4-Trimethylbenzene	105	16.475	16.414	0.976	945	N.D.	
73) sec-Butylbenzene	105	16.603	16.615	0.984	276	N.D.	
74) 4-Isopropyltoluene	119	16.731	16.743	0.991	316	N.D.	
75) 1,3-Dichlorobenzene	146	16.871	16.817	1.000	128	N.D.	
76) 1,4-Dichlorobenzene	146	16.896	16.908	1.001	324	N.D.	
77) n-Butylbenzene	91	17.262	17.231	1.023	144	N.D.	
78) 1,2-Dichlorobenzene	146	17.377	17.378	1.030	217	N.D.	
79) 1,2-Dibromo-3-chloropr...		0.000	18.335	0.000	0	N.D.	
80) 1,2,4-Trichlorobenzene	180	19.529	19.523	1.157	585	N.D.	
81) Hexachlorobutadiene		0.000	19.719	0.000	0	N.D.	
82) Naphthalene	128	19.950	19.956	1.182	2319	N.D.	
83) 1,2,3-Trichlorobenzene	180	20.328	20.340	1.204	868	N.D.	
85) Acrolein		0.000	7.117	0.000	0	N.D.	
86) Trichlorotrifluoroethane		0.000	7.312	0.000	0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102623VC\
Data File : CD410.D
Acq On : 26 Oct 2023 12:46
Operator : PXY1
InstName : VOAC
Sample : |642648002|2514596|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Oct 26 13:13:26 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE

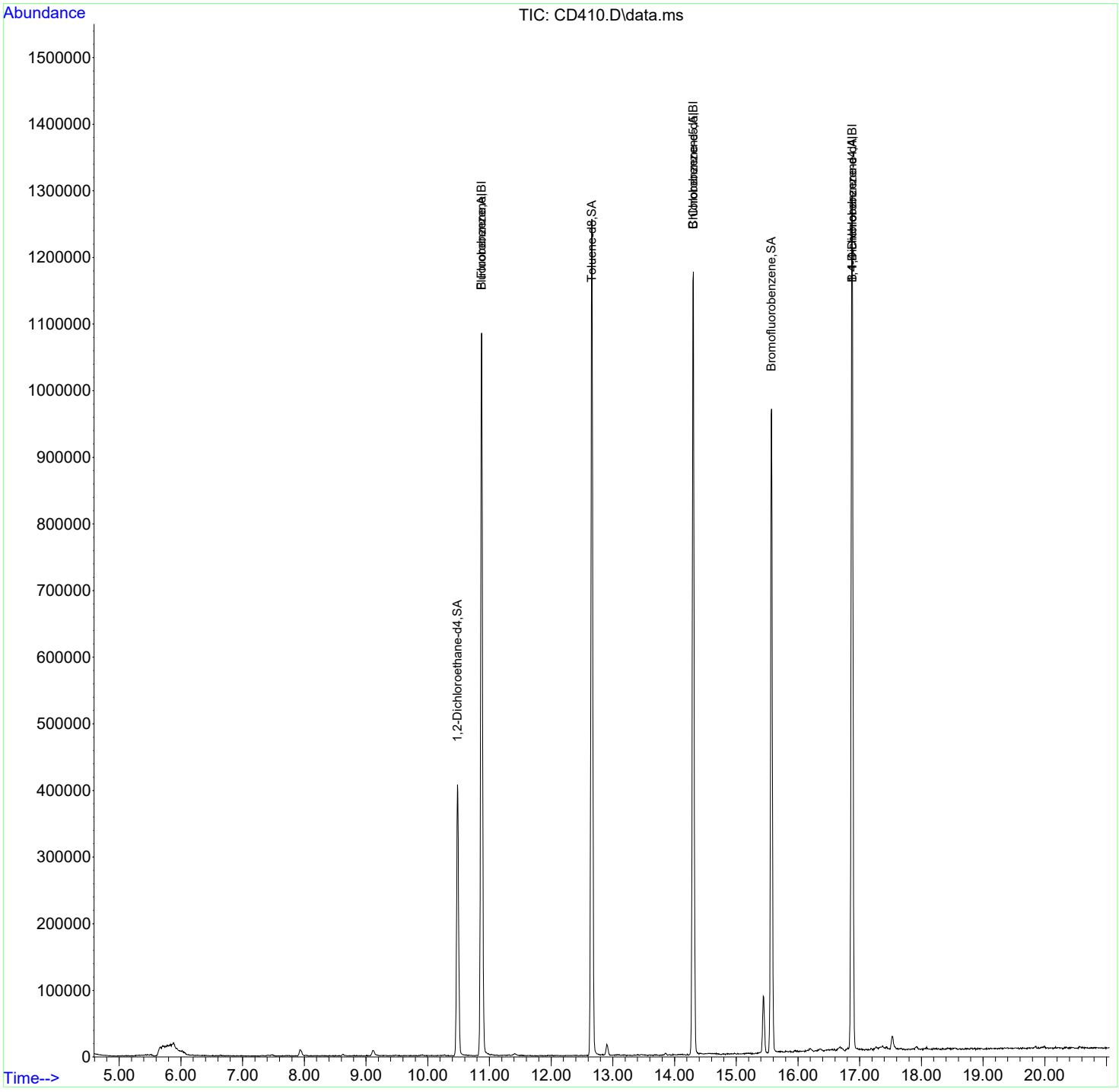
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
87) Isopropyl Alcohol	45	7.422	7.416	0.683	3996	N.D.	
88) Allyl chloride	41	7.922	7.794	0.729	411	N.D.	
89) tert-Butyl Alcohol	59	7.995	7.946	0.735	128	N.D.	
90) Acrylonitrile		0.000	8.208	0.000	0	N.D.	
91) Isopropyl ether		0.000	8.824	0.000	0	N.D.	
92) 2-Chloro-1,3-butadiene		0.000	8.958	0.000	0	N.D.	
93) Ethyl tert-butyl ether		0.000	9.263	0.000	0	N.D.	
94) Ethyl acetate	43	9.483	9.482	0.872	737	N.D.	
95) Propionitrile		0.000	9.543	0.000	0	N.D.	
96) Methacrylonitrile	41	9.684	9.745	0.891	235	N.D.	
97) Tetrahydrofuran	42	9.897	9.891	0.910	462	N.D.	
98) Isobutyl alcohol	41	10.324	10.220	0.950	125	N.D.	
99) Methyl tert-amyl ether		0.000	10.629	0.000	0	N.D.	
100) Methyl methacrylate		0.000	11.531	0.000	0	N.D.	
101) 1,4-Dioxane		0.000	11.665	0.000	0	N.D.	
102) 2-Nitropropane	43	11.994	12.043	1.103	205	N.D.	
104) Ethyl methacrylate		0.000	12.903	0.000	0	N.D.	
106) 1-Chlorohexane	55	14.207	14.195	0.842	217	N.D.	
107) cis-1,4-Dichloro-2-butene		0.000	15.396	0.000	0	N.D.	
108) Cyclohexanone		0.000	15.530	0.000	0	N.D.	
109) trans-1,4-Dichloro-2-b...		0.000	15.701	0.000	0	N.D.	
110) Pentachloroethane		0.000	16.445	0.000	0	N.D.	
111) Benzyl chloride	91	17.036	17.030	1.009	929	N.D.	
112) bis(2-Chloroisopropyl)...	45	17.524	17.463	1.038	930	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102623VC\
Data File : CD410.D
Acq On : 26 Oct 2023 12:46
Operator : PXY1
InstName : VOAC
Sample : |642648002|2514596|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Oct 26 13:13:26 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE



Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 10:52**	**Matrix:**	**SO**
Lab Sample ID:	**642648003**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**4.8**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289591**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2514596**	**Inst:**	**VOAC.I**	**Dilution:**	**50**
Run Date:	**10/26/2023 13:14**	**Analyst:**	**PXY1**	**Purge Vol:**	**5 mL**
Prep Date:	**10/26/2023 09:03**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**data\102623VC\CD411.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	35.0	ug/kg	35.0	105
108-88-3	Toluene	U	35.0	ug/kg	35.0	105
100-41-4	Ethylbenzene	U	35.0	ug/kg	35.0	105
1330-20-7	Xylenes (total)	U	105	ug/kg	105	315

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Toluene-d8	46.5	50.0	ug/L	93	(81%-120%)
Bromofluorobenzene	45.6	50.0	ug/L	91	(74%-128%)
1,2-Dichloroethane-d4	42.0	50.0	ug/L	84	(77%-127%)

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102623VC\
Data File : CD411.D
Acq On : 26 Oct 2023 13:14
Operator : PXY1
InstName : VOAC
Sample : |642648003|2514596|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 11 Sample Multiplier: 1

10/27/2023

10/27/2023

Quant Time: Oct 26 13:38:19 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards								Dev(Min)
1) Fluorobenzene	96	10.872	10.879	1.000	1151694	50.00	ug/L	0.00
43) Chlorobenzene-d5	117	14.305	14.305	1.000	850350	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	16.877	16.884	1.000	479953	50.00	ug/L	0.00
84) B Fluorobenzene	96	10.872	10.879	1.000	1151694	50.00	ug/L	0.00
103) B Chlorobenzene-d5	117	14.305	14.305	1.000	850350	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	16.877	16.884	1.000	480797	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	65	10.488	10.495	0.965	342488	42.00	ug/L	0.00
45) Toluene-d8	98	12.659	12.665	0.885	1021503	46.51	ug/L	0.00
63) Bromofluorobenzene	95	15.573	15.573	0.923	356766	45.55	ug/L	0.00

Compound	Amount	Range	Recovery
30) 1,2-Dichloroethane-d4	50.000	77 - 127	84%
45) Toluene-d8	50.000	81 - 120	93%
63) Bromofluorobenzene	50.000	74 - 128	91%

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.752	0.000	0	N.D.		
3) Chloromethane		0.000	5.185	0.000	0	N.D.		
4) Vinyl chloride		0.000	5.398	0.000	0	N.D.		
5) Bromomethane		0.000	6.038	0.000	0	N.D.		
6) Chloroethane		0.000	6.160	0.000	0	N.D.		
7) Trichlorofluoromethane		0.000	6.550	0.000	0	N.D.		
8) Ethyl ether		0.000	6.922	0.000	0	N.D.		
9) Acetone	43	7.324	7.318	0.674	1579	Below Cal	#	46
10) 1,1-Dichloroethylene		0.000	7.343	0.000	0	N.D.		
11) Iodomethane		0.000	7.611	0.000	0	N.D.		
12) Acetonitrile	41	7.702	7.690	0.708	488	N.D.		
13) Methyl acetate	43	7.745	7.745	0.712	1074	N.D.		
14) Carbon disulfide		0.000	7.769	0.000	0	N.D.		
15) Methylene chloride	84	7.940	7.946	0.730	6506	N.D.		
16) tert-Butyl methyl ether		0.000	8.275	0.000	0	N.D.		
17) trans-1,2-Dichloroethy...		0.000	8.324	0.000	0	N.D.		
18) Hexane	57	8.629	8.635	0.794	1119	N.D.		
19) Vinyl acetate		0.000	8.794	0.000	0	N.D.		
20) 1,1-Dichloroethane		0.000	8.842	0.000	0	N.D.		
21) 2-Butanone	43	9.476	9.476	0.872	882	N.D.		
22) cis-1,2-Dichloroethylene		0.000	9.531	0.000	0	N.D.		
23) 2,2-Dichloropropane		0.000	9.568	0.000	0	N.D.		
24) Bromochloromethane		0.000	9.830	0.000	0	N.D.		
25) Chloroform		0.000	9.867	0.000	0	N.D.		
26) 1,1,1-Trichloroethane		0.000	10.178	0.000	0	N.D.		
27) Cyclohexane		0.000	10.287	0.000	0	N.D.		
28) 1,1-Dichloropropene		0.000	10.348	0.000	0	N.D.		
29) Carbon tetrachloride		0.000	10.391	0.000	0	N.D.		
31) 1,2-Dichloroethane		0.000	10.580	0.000	0	N.D.		
32) Benzene	78	10.598	10.610	0.975	280	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102623VC\
Data File : CD411.D
Acq On : 26 Oct 2023 13:14
Operator : PXY1
InstName : VOAC
Sample : |642648003|2514596|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Oct 26 13:38:19 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
33) Cyclohexene		0.000	10.738	0.000	0	N.D.	
34) n-Butyl alcohol		0.000	10.976	0.000	0	N.D.	
35) Trichloroethylene		0.000	11.305	0.000	0	N.D.	
36) 2-Pentanone	43	11.378	11.385	1.047	278	N.D.	
37) 1,2-Dichloropropane		0.000	11.568	0.000	0	N.D.	
38) Methylcyclohexane		0.000	11.580	0.000	0	N.D.	
39) Dibromomethane		0.000	11.708	0.000	0	N.D.	
40) Bromodichloromethane		0.000	11.830	0.000	0	N.D.	
41) 2-Chloroethylvinyl ether		0.000	12.074	0.000	0	N.D.	
42) cis-1,3-Dichloropropylene		0.000	12.317	0.000	0	N.D.	
44) 4-Methyl-2-pentanone		0.000	12.421	0.000	0	N.D.	
46) Toluene	91	12.744	12.744	0.891	282	N.D.	
47) trans-1,3-Dichloroprop...		0.000	12.903	0.000	0	N.D.	
48) 1,1,2-Trichloroethane		0.000	13.140	0.000	0	N.D.	
49) 2-Hexanone	43	13.348	13.336	0.933	125	N.D.	
50) 1,3-Dichloropropane		0.000	13.348	0.000	0	N.D.	
51) Tetrachloroethylene		0.000	13.390	0.000	0	N.D.	
52) Dibromochloromethane		0.000	13.634	0.000	0	N.D.	
53) 1,2-Dibromoethane		0.000	13.817	0.000	0	N.D.	
54) Chlorobenzene	112	14.347	14.341	1.003	134	N.D.	
55) 1,1,1,2-Tetrachloroethane		0.000	14.396	0.000	0	N.D.	
56) Ethylbenzene	91	14.415	14.409	1.008	219	N.D.	
57) m,p-Xylenes		0.000	14.524	0.000	0	N.D.	
58) o-Xylene		0.000	14.988	0.000	0	N.D.	
59) Styrene		0.000	14.988	0.000	0	N.D.	
61) Bromoform		0.000	15.262	0.000	0	N.D.	
62) Isopropylbenzene	105	15.372	15.366	0.911	192	N.D.	
64) 1,1,2,2-Tetrachloroethane	83	15.567	15.646	0.922	307	N.D.	
65) 1,2,3-Trichloropropane		0.000	15.744	0.000	0	N.D.	
66) Bromobenzene		0.000	15.799	0.000	0	N.D.	
67) n-Propylbenzene	91	15.835	15.817	0.938	193	N.D.	
68) 1,3,5-Trimethylbenzene	105	15.975	15.975	0.947	162	N.D.	
69) 2-Chlorotoluene		0.000	15.975	0.000	0	N.D.	
70) 4-Chlorotoluene	91	16.061	16.079	0.952	143	N.D.	
71) tert-Butylbenzene		0.000	16.372	0.000	0	N.D.	
72) 1,2,4-Trimethylbenzene	105	16.426	16.414	0.973	421	N.D.	
73) sec-Butylbenzene		0.000	16.615	0.000	0	N.D.	
74) 4-Isopropyltoluene	119	16.725	16.743	0.991	110	N.D.	
75) 1,3-Dichlorobenzene		0.000	16.817	0.000	0	N.D.	
76) 1,4-Dichlorobenzene	146	16.902	16.908	1.001	354	N.D.	
77) n-Butylbenzene		0.000	17.231	0.000	0	N.D.	
78) 1,2-Dichlorobenzene		0.000	17.378	0.000	0	N.D.	
79) 1,2-Dibromo-3-chloropr...		0.000	18.335	0.000	0	N.D.	
80) 1,2,4-Trichlorobenzene	180	19.536	19.523	1.157	563	N.D.	
81) Hexachlorobutadiene		0.000	19.719	0.000	0	N.D.	
82) Naphthalene	128	19.962	19.956	1.183	2446	N.D.	
83) 1,2,3-Trichlorobenzene	180	20.328	20.340	1.204	477	N.D.	
85) Acrolein		0.000	7.117	0.000	0	N.D.	
86) Trichlorotrifluoroethane		0.000	7.312	0.000	0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102623VC\
Data File : CD411.D
Acq On : 26 Oct 2023 13:14
Operator : PXY1
InstName : VOAC
Sample : |642648003|2514596|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Oct 26 13:38:19 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE

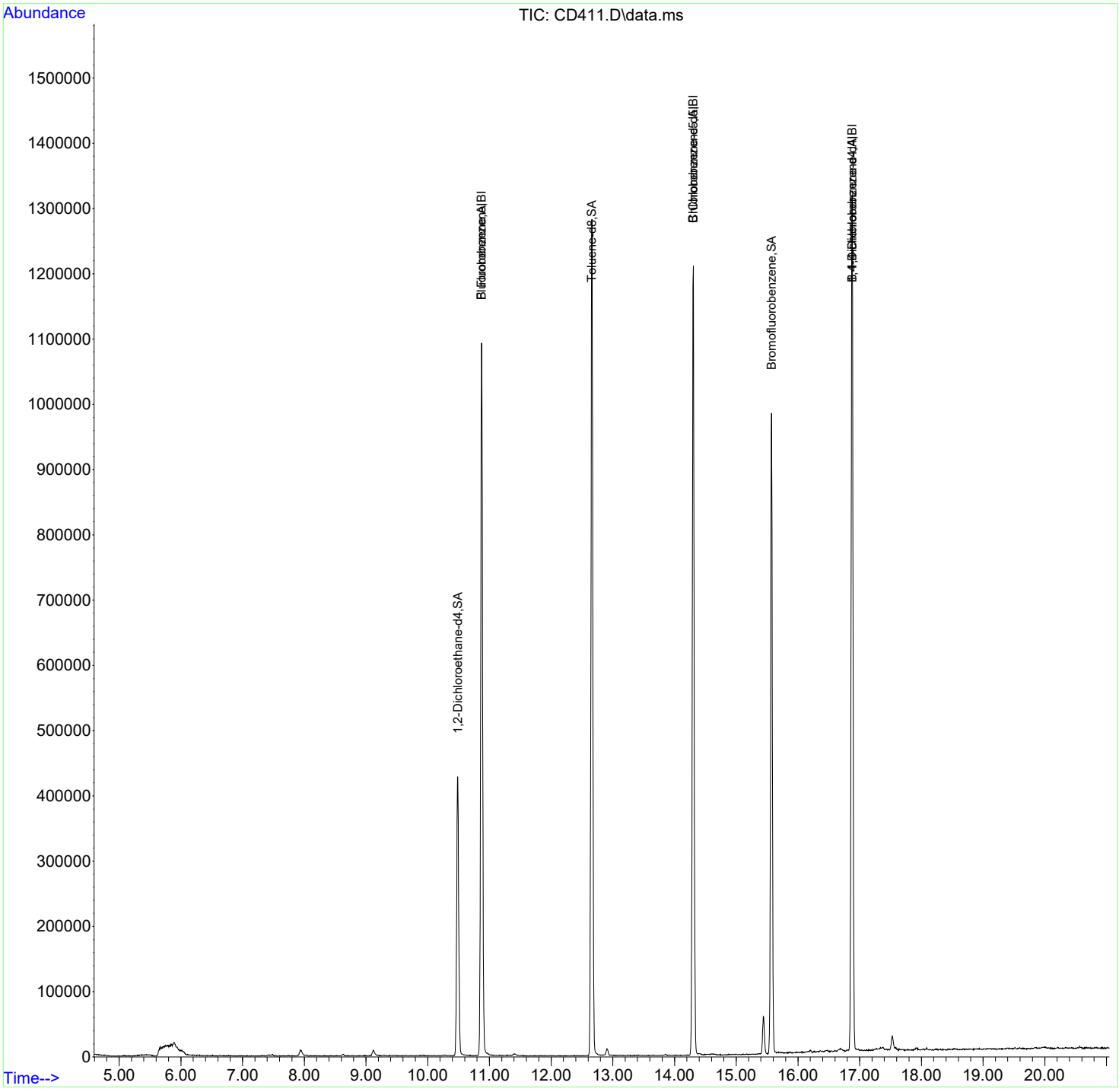
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
87) Isopropyl Alcohol	45	7.434	7.416	0.684	3201	N.D.	
88) Allyl chloride	41	7.873	7.794	0.724	131	N.D.	
89) tert-Butyl Alcohol	59	8.038	7.946	0.739	941	N.D.	
90) Acrylonitrile		0.000	8.208	0.000	0	N.D.	
91) Isopropyl ether		0.000	8.824	0.000	0	N.D.	
92) 2-Chloro-1,3-butadiene		0.000	8.958	0.000	0	N.D.	
93) Ethyl tert-butyl ether		0.000	9.263	0.000	0	N.D.	
94) Ethyl acetate	43	9.476	9.482	0.872	882	N.D.	
95) Propionitrile		0.000	9.543	0.000	0	N.D.	
96) Methacrylonitrile		0.000	9.745	0.000	0	N.D.	
97) Tetrahydrofuran	42	9.909	9.891	0.911	437	N.D.	
98) Isobutyl alcohol		0.000	10.220	0.000	0	N.D.	
99) Methyl tert-amyl ether		0.000	10.629	0.000	0	N.D.	
100) Methyl methacrylate		0.000	11.531	0.000	0	N.D.	
101) 1,4-Dioxane		0.000	11.665	0.000	0	N.D.	
102) 2-Nitropropane	43	12.019	12.043	1.105	119	N.D.	
104) Ethyl methacrylate		0.000	12.903	0.000	0	N.D.	
106) 1-Chlorohexane		0.000	14.195	0.000	0	N.D.	
107) cis-1,4-Dichloro-2-butene		0.000	15.396	0.000	0	N.D.	
108) Cyclohexanone		0.000	15.530	0.000	0	N.D.	
109) trans-1,4-Dichloro-2-b...		0.000	15.701	0.000	0	N.D.	
110) Pentachloroethane		0.000	16.445	0.000	0	N.D.	
111) Benzyl chloride	91	17.042	17.030	1.010	385	N.D.	
112) bis(2-Chloroisopropyl)...	45	17.524	17.463	1.038	1089	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102623VC\
Data File : CD411.D
Acq On : 26 Oct 2023 13:14
Operator : PXY1
InstName : VOAC
Sample : |642648003|2514596|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Oct 26 13:38:19 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE



Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 11:09**	**Matrix:**	**SO**
Lab Sample ID:	**642648004**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**2**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289592**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2514596**	**Inst:**	**VOAC.I**	**Dilution:**	**50**
Run Date:	**10/26/2023 13:41**	**Analyst:**	**PXY1**	**Purge Vol:**	**5 mL**
Prep Date:	**10/26/2023 09:04**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**data\102623VC\CD412.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	34.0	ug/kg	34.0	102
108-88-3	Toluene	U	34.0	ug/kg	34.0	102
100-41-4	Ethylbenzene	U	34.0	ug/kg	34.0	102
1330-20-7	Xylenes (total)	U	102	ug/kg	102	306

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Toluene-d8	47.1	50.0	ug/L	94	(81%-120%)
Bromofluorobenzene	46.4	50.0	ug/L	93	(74%-128%)
1,2-Dichloroethane-d4	41.2	50.0	ug/L	82	(77%-127%)

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102623VC\
Data File : CD412.D
Acq On : 26 Oct 2023 13:41
Operator : PXY1
InstName : VOAC
Sample : |642648004|2514596|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 12 Sample Multiplier: 1

10/27/2023

10/27/2023

Quant Time: Oct 26 14:25:19 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards								Dev(Min)
1) Fluorobenzene	96	10.873	10.879	1.000	1151930	50.00	ug/L	0.00
43) Chlorobenzene-d5	117	14.305	14.305	1.000	833972	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	16.878	16.884	1.000	472682	50.00	ug/L	0.00
84) B Fluorobenzene	96	10.873	10.879	1.000	1151930	50.00	ug/L	0.00
103) B Chlorobenzene-d5	117	14.305	14.305	1.000	833972	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	16.878	16.884	1.000	472682	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	65	10.482	10.495	0.964	336028	41.20	ug/L	-0.01
45) Toluene-d8	98	12.659	12.665	0.885	1015436	47.14	ug/L	0.00
63) Bromofluorobenzene	95	15.573	15.573	0.923	357914	46.40	ug/L	0.00

Compound	Amount	Range	Recovery
30) 1,2-Dichloroethane-d4	50.000	77 - 127	82%
45) Toluene-d8	50.000	81 - 120	94%
63) Bromofluorobenzene	50.000	74 - 128	93%

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.752	0.000	0	N.D.		
3) Chloromethane		0.000	5.185	0.000	0	N.D.		
4) Vinyl chloride		0.000	5.398	0.000	0	N.D.		
5) Bromomethane		0.000	6.038	0.000	0	N.D.		
6) Chloroethane		0.000	6.160	0.000	0	N.D.		
7) Trichlorofluoromethane		0.000	6.550	0.000	0	N.D.		
8) Ethyl ether		0.000	6.922	0.000	0	N.D.		
9) Acetone	43	7.318	7.318	0.673	1185	Below Cal		65
10) 1,1-Dichloroethylene	61	7.477	7.343	0.688	119	N.D.		
11) Iodomethane		0.000	7.611	0.000	0	N.D.		
12) Acetonitrile	41	7.684	7.690	0.707	252	N.D.		
13) Methyl acetate	43	7.727	7.745	0.711	943	N.D.		
14) Carbon disulfide		0.000	7.769	0.000	0	N.D.		
15) Methylene chloride	84	7.940	7.946	0.730	7146	N.D.		
16) tert-Butyl methyl ether		0.000	8.275	0.000	0	N.D.		
17) trans-1,2-Dichloroethy...		0.000	8.324	0.000	0	N.D.		
18) Hexane	57	8.635	8.635	0.794	1060	N.D.		
19) Vinyl acetate		0.000	8.794	0.000	0	N.D.		
20) 1,1-Dichloroethane		0.000	8.842	0.000	0	N.D.		
21) 2-Butanone	43	9.477	9.476	0.872	878	N.D.		
22) cis-1,2-Dichloroethylene		0.000	9.531	0.000	0	N.D.		
23) 2,2-Dichloropropane		0.000	9.568	0.000	0	N.D.		
24) Bromochloromethane		0.000	9.830	0.000	0	N.D.		
25) Chloroform		0.000	9.867	0.000	0	N.D.		
26) 1,1,1-Trichloroethane		0.000	10.178	0.000	0	N.D.		
27) Cyclohexane		0.000	10.287	0.000	0	N.D.		
28) 1,1-Dichloropropene		0.000	10.348	0.000	0	N.D.		
29) Carbon tetrachloride		0.000	10.391	0.000	0	N.D.		
31) 1,2-Dichloroethane		0.000	10.580	0.000	0	N.D.		
32) Benzene		0.000	10.610	0.000	0	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102623VC\
Data File : CD412.D
Acq On : 26 Oct 2023 13:41
Operator : PXY1
InstName : VOAC
Sample : |642648004|2514596|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Oct 26 14:25:19 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
33) Cyclohexene		0.000	10.738	0.000	0	N.D.	
34) n-Butyl alcohol		0.000	10.976	0.000	0	N.D.	
35) Trichloroethylene		0.000	11.305	0.000	0	N.D.	
36) 2-Pentanone	43	11.391	11.385	1.048	158	N.D.	
37) 1,2-Dichloropropane		0.000	11.568	0.000	0	N.D.	
38) Methylcyclohexane		0.000	11.580	0.000	0	N.D.	
39) Dibromomethane		0.000	11.708	0.000	0	N.D.	
40) Bromodichloromethane		0.000	11.830	0.000	0	N.D.	
41) 2-Chloroethylvinyl ether		0.000	12.074	0.000	0	N.D.	
42) cis-1,3-Dichloropropylene		0.000	12.317	0.000	0	N.D.	
44) 4-Methyl-2-pentanone		0.000	12.421	0.000	0	N.D.	
46) Toluene	91	12.738	12.744	0.890	279	N.D.	
47) trans-1,3-Dichloroprop...	75	12.915	12.903	0.903	185	N.D.	
48) 1,1,2-Trichloroethane		0.000	13.140	0.000	0	N.D.	
49) 2-Hexanone	43	13.409	13.336	0.937	150	N.D.	
50) 1,3-Dichloropropane		0.000	13.348	0.000	0	N.D.	
51) Tetrachloroethylene		0.000	13.390	0.000	0	N.D.	
52) Dibromochloromethane		0.000	13.634	0.000	0	N.D.	
53) 1,2-Dibromoethane		0.000	13.817	0.000	0	N.D.	
54) Chlorobenzene		0.000	14.341	0.000	0	N.D.	
55) 1,1,1,2-Tetrachloroethane		0.000	14.396	0.000	0	N.D.	
56) Ethylbenzene	91	14.409	14.409	1.007	351	N.D.	
57) m,p-Xylenes		0.000	14.524	0.000	0	N.D.	
58) o-Xylene		0.000	14.988	0.000	0	N.D.	
59) Styrene		0.000	14.988	0.000	0	N.D.	
61) Bromoform		0.000	15.262	0.000	0	N.D.	
62) Isopropylbenzene	105	15.360	15.366	0.910	147	N.D.	
64) 1,1,2,2-Tetrachloroethane	83	15.573	15.646	0.923	408	N.D.	
65) 1,2,3-Trichloropropane		0.000	15.744	0.000	0	N.D.	
66) Bromobenzene		0.000	15.799	0.000	0	N.D.	
67) n-Propylbenzene		0.000	15.817	0.000	0	N.D.	
68) 1,3,5-Trimethylbenzene		0.000	15.975	0.000	0	N.D.	
69) 2-Chlorotoluene		0.000	15.975	0.000	0	N.D.	
70) 4-Chlorotoluene	91	16.079	16.079	0.953	285	N.D.	
71) tert-Butylbenzene		0.000	16.372	0.000	0	N.D.	
72) 1,2,4-Trimethylbenzene	105	16.408	16.414	0.972	311	N.D.	
73) sec-Butylbenzene		0.000	16.615	0.000	0	N.D.	
74) 4-Isopropyltoluene	119	16.719	16.743	0.991	120	N.D.	
75) 1,3-Dichlorobenzene	146	16.823	16.817	0.997	129	N.D.	
76) 1,4-Dichlorobenzene	146	16.902	16.908	1.001	244	N.D.	
77) n-Butylbenzene	91	17.231	17.231	1.021	340	N.D.	
78) 1,2-Dichlorobenzene		0.000	17.378	0.000	0	N.D.	
79) 1,2-Dibromo-3-chloropr...		0.000	18.335	0.000	0	N.D.	
80) 1,2,4-Trichlorobenzene	180	19.524	19.523	1.157	648	N.D.	
81) Hexachlorobutadiene		0.000	19.719	0.000	0	N.D.	
82) Naphthalene	128	19.950	19.956	1.182	1967	N.D.	
83) 1,2,3-Trichlorobenzene	180	20.322	20.340	1.204	366	N.D.	
85) Acrolein		0.000	7.117	0.000	0	N.D.	
86) Trichlorotrifluoroethane		0.000	7.312	0.000	0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102623VC\
Data File : CD412.D
Acq On : 26 Oct 2023 13:41
Operator : PXY1
InstName : VOAC
Sample : |642648004|2514596|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Oct 26 14:25:19 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE

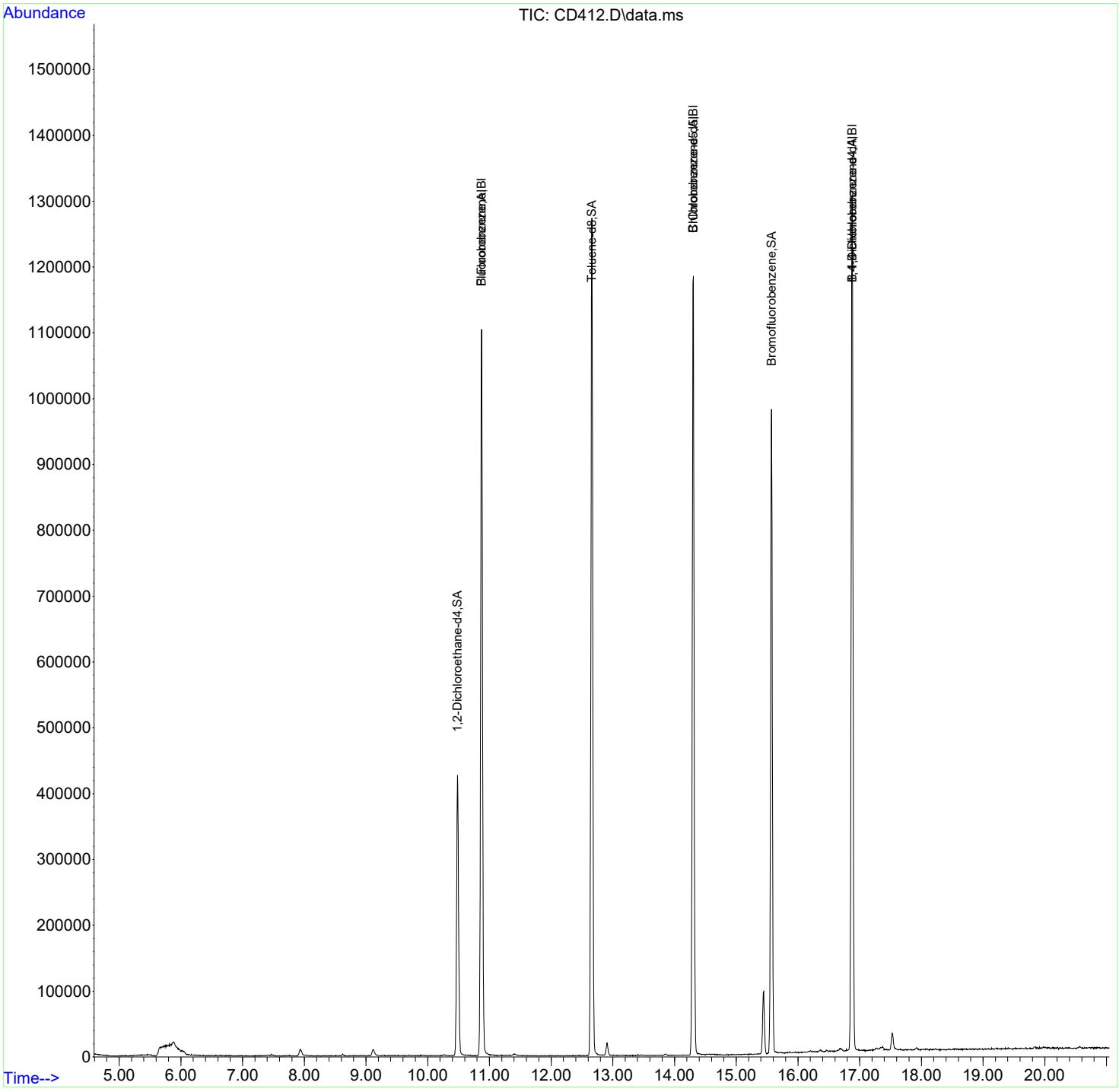
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
87) Isopropyl Alcohol	45	7.416	7.416	0.682	4487	N.D.	
88) Allyl chloride	41	7.922	7.794	0.729	614	N.D.	
89) tert-Butyl Alcohol	59	8.019	7.946	0.738	1049	N.D.	
90) Acrylonitrile		0.000	8.208	0.000	0	N.D.	
91) Isopropyl ether		0.000	8.824	0.000	0	N.D.	
92) 2-Chloro-1,3-butadiene		0.000	8.958	0.000	0	N.D.	
93) Ethyl tert-butyl ether		0.000	9.263	0.000	0	N.D.	
94) Ethyl acetate	43	9.477	9.482	0.872	878	N.D.	
95) Propionitrile		0.000	9.543	0.000	0	N.D.	
96) Methacrylonitrile		0.000	9.745	0.000	0	N.D.	
97) Tetrahydrofuran	42	9.897	9.891	0.910	295	N.D.	
98) Isobutyl alcohol		0.000	10.220	0.000	0	N.D.	
99) Methyl tert-amyl ether		0.000	10.629	0.000	0	N.D.	
100) Methyl methacrylate		0.000	11.531	0.000	0	N.D.	
101) 1,4-Dioxane		0.000	11.665	0.000	0	N.D.	
102) 2-Nitropropane		0.000	12.043	0.000	0	N.D.	
104) Ethyl methacrylate		0.000	12.903	0.000	0	N.D.	
106) 1-Chlorohexane		0.000	14.195	0.000	0	N.D.	
107) cis-1,4-Dichloro-2-butene		0.000	15.396	0.000	0	N.D.	
108) Cyclohexanone		0.000	15.530	0.000	0	N.D.	
109) trans-1,4-Dichloro-2-b...		0.000	15.701	0.000	0	N.D.	
110) Pentachloroethane		0.000	16.445	0.000	0	N.D.	
111) Benzyl chloride	91	17.042	17.030	1.010	449	N.D.	
112) bis(2-Chloroisopropyl)...	45	17.530	17.463	1.039	1181	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102623VC\
Data File : CD412.D
Acq On : 26 Oct 2023 13:41
Operator : PXY1
InstName : VOAC
Sample : |642648004|2514596|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Oct 26 14:25:19 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE



Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 11:45**	**Matrix:**	**SO**
Lab Sample ID:	**642648005**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**1.7**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289593**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2514596**	**Inst:**	**VOAC.I**	**Dilution:**	**50**
Run Date:	**10/26/2023 14:09**	**Analyst:**	**PXY1**	**Purge Vol:**	**5 mL**
Prep Date:	**10/26/2023 09:05**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**data\102623VC\CD413.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	33.9	ug/kg	33.9	102
108-88-3	Toluene	U	33.9	ug/kg	33.9	102
100-41-4	Ethylbenzene	U	33.9	ug/kg	33.9	102
1330-20-7	Xylenes (total)	U	102	ug/kg	102	305

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	43.0	50.0	ug/L	86	(77%-127%)
Toluene-d8	47.2	50.0	ug/L	94	(81%-120%)
Bromofluorobenzene	47.7	50.0	ug/L	95	(74%-128%)

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102623VC\
Data File : CD413.D
Acq On : 26 Oct 2023 14:09
Operator : PXY1
InstName : VOAC
Sample : |642648005|2514596|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 13 Sample Multiplier: 1

10/27/2023

10/27/2023

Quant Time: Oct 26 14:31:08 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards								Dev(Min)
1) Fluorobenzene	96	10.872	10.879	1.000	1107098	50.00	ug/L	0.00
43) Chlorobenzene-d5	117	14.305	14.305	1.000	813492	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	16.878	16.884	1.000	457558	50.00	ug/L	0.00
84) B Fluorobenzene	96	10.872	10.879	1.000	1107098	50.00	ug/L	0.00
103) B Chlorobenzene-d5	117	14.305	14.305	1.000	813492	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	16.878	16.884	1.000	457558	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	65	10.488	10.495	0.965	337073	43.00	ug/L	0.00
45) Toluene-d8	98	12.659	12.665	0.885	992554	47.24	ug/L	0.00
63) Bromofluorobenzene	95	15.573	15.573	0.923	355856	47.66	ug/L	0.00

Compound	Amount	Range	Recovery
30) 1,2-Dichloroethane-d4	50.000	77 - 127	86%
45) Toluene-d8	50.000	81 - 120	94%
63) Bromofluorobenzene	50.000	74 - 128	95%

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.752	0.000	0	N.D.		
3) Chloromethane		0.000	5.185	0.000	0	N.D.		
4) Vinyl chloride		0.000	5.398	0.000	0	N.D.		
5) Bromomethane		0.000	6.038	0.000	0	N.D.		
6) Chloroethane		0.000	6.160	0.000	0	N.D.		
7) Trichlorofluoromethane		0.000	6.550	0.000	0	N.D.		
8) Ethyl ether		0.000	6.922	0.000	0	N.D.		
9) Acetone	43	7.330	7.318	0.674	1564	Below Cal		74
10) 1,1-Dichloroethylene	61	7.483	7.343	0.688	220	N.D.		
11) Iodomethane		0.000	7.611	0.000	0	N.D.		
12) Acetonitrile	41	7.696	7.690	0.708	124	N.D.		
13) Methyl acetate	43	7.739	7.745	0.712	733	N.D.		
14) Carbon disulfide		0.000	7.769	0.000	0	N.D.		
15) Methylene chloride	84	7.946	7.946	0.731	6796	N.D.		
16) tert-Butyl methyl ether		0.000	8.275	0.000	0	N.D.		
17) trans-1,2-Dichloroethy...		0.000	8.324	0.000	0	N.D.		
18) Hexane	57	8.629	8.635	0.794	1217	N.D.		
19) Vinyl acetate		0.000	8.794	0.000	0	N.D.		
20) 1,1-Dichloroethane		0.000	8.842	0.000	0	N.D.		
21) 2-Butanone	43	9.470	9.476	0.871	877	N.D.		
22) cis-1,2-Dichloroethylene		0.000	9.531	0.000	0	N.D.		
23) 2,2-Dichloropropane		0.000	9.568	0.000	0	N.D.		
24) Bromochloromethane		0.000	9.830	0.000	0	N.D.		
25) Chloroform		0.000	9.867	0.000	0	N.D.		
26) 1,1,1-Trichloroethane		0.000	10.178	0.000	0	N.D.		
27) Cyclohexane		0.000	10.287	0.000	0	N.D.		
28) 1,1-Dichloropropene		0.000	10.348	0.000	0	N.D.		
29) Carbon tetrachloride		0.000	10.391	0.000	0	N.D.		
31) 1,2-Dichloroethane	62	10.482	10.580	0.964	312	N.D.		
32) Benzene	78	10.610	10.610	0.976	122	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102623VC\
Data File : CD413.D
Acq On : 26 Oct 2023 14:09
Operator : PXY1
InstName : VOAC
Sample : |642648005|2514596|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Oct 26 14:31:08 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
33) Cyclohexene		0.000	10.738	0.000	0	N.D.	
34) n-Butyl alcohol		0.000	10.976	0.000	0	N.D.	
35) Trichloroethylene		0.000	11.305	0.000	0	N.D.	
36) 2-Pentanone	43	11.391	11.385	1.048	336	N.D.	
37) 1,2-Dichloropropane		0.000	11.568	0.000	0	N.D.	
38) Methylcyclohexane		0.000	11.580	0.000	0	N.D.	
39) Dibromomethane		0.000	11.708	0.000	0	N.D.	
40) Bromodichloromethane		0.000	11.830	0.000	0	N.D.	
41) 2-Chloroethylvinyl ether		0.000	12.074	0.000	0	N.D.	
42) cis-1,3-Dichloropropylene		0.000	12.317	0.000	0	N.D.	
44) 4-Methyl-2-pentanone		0.000	12.421	0.000	0	N.D.	
46) Toluene	91	12.738	12.744	0.890	313	N.D.	
47) trans-1,3-Dichloroprop...		0.000	12.903	0.000	0	N.D.	
48) 1,1,2-Trichloroethane		0.000	13.140	0.000	0	N.D.	
49) 2-Hexanone	43	13.342	13.336	0.933	139	N.D.	
50) 1,3-Dichloropropane		0.000	13.348	0.000	0	N.D.	
51) Tetrachloroethylene		0.000	13.390	0.000	0	N.D.	
52) Dibromochloromethane		0.000	13.634	0.000	0	N.D.	
53) 1,2-Dibromoethane		0.000	13.817	0.000	0	N.D.	
54) Chlorobenzene		0.000	14.341	0.000	0	N.D.	
55) 1,1,1,2-Tetrachloroethane		0.000	14.396	0.000	0	N.D.	
56) Ethylbenzene		0.000	14.409	0.000	0	N.D.	
57) m,p-Xylenes		0.000	14.524	0.000	0	N.D.	
58) o-Xylene		0.000	14.988	0.000	0	N.D.	
59) Styrene		0.000	14.988	0.000	0	N.D.	
61) Bromoform		0.000	15.262	0.000	0	N.D.	
62) Isopropylbenzene		0.000	15.366	0.000	0	N.D.	
64) 1,1,2,2-Tetrachloroethane	83	15.573	15.646	0.923	334	N.D.	
65) 1,2,3-Trichloropropane		0.000	15.744	0.000	0	N.D.	
66) Bromobenzene		0.000	15.799	0.000	0	N.D.	
67) n-Propylbenzene		0.000	15.817	0.000	0	N.D.	
68) 1,3,5-Trimethylbenzene		0.000	15.975	0.000	0	N.D.	
69) 2-Chlorotoluene		0.000	15.975	0.000	0	N.D.	
70) 4-Chlorotoluene		0.000	16.079	0.000	0	N.D.	
71) tert-Butylbenzene		0.000	16.372	0.000	0	N.D.	
72) 1,2,4-Trimethylbenzene	105	16.475	16.414	0.976	812	N.D.	
73) sec-Butylbenzene	105	16.628	16.615	0.985	229	N.D.	
74) 4-Isopropyltoluene	119	16.829	16.743	0.997	114	N.D.	
75) 1,3-Dichlorobenzene		0.000	16.817	0.000	0	N.D.	
76) 1,4-Dichlorobenzene	146	16.902	16.908	1.001	439	N.D.	
77) n-Butylbenzene	91	17.237	17.231	1.021	149	N.D.	
78) 1,2-Dichlorobenzene		0.000	17.378	0.000	0	N.D.	
79) 1,2-Dibromo-3-chloropr...		0.000	18.335	0.000	0	N.D.	
80) 1,2,4-Trichlorobenzene	180	19.517	19.523	1.156	591	N.D.	
81) Hexachlorobutadiene		0.000	19.719	0.000	0	N.D.	
82) Naphthalene	128	19.950	19.956	1.182	2032	N.D.	
83) 1,2,3-Trichlorobenzene	180	20.328	20.340	1.204	258	N.D.	
85) Acrolein		0.000	7.117	0.000	0	N.D.	
86) Trichlorotrifluoroethane		0.000	7.312	0.000	0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102623VC\
Data File : CD413.D
Acq On : 26 Oct 2023 14:09
Operator : PXY1
InstName : VOAC
Sample : |642648005|2514596|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Oct 26 14:31:08 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE

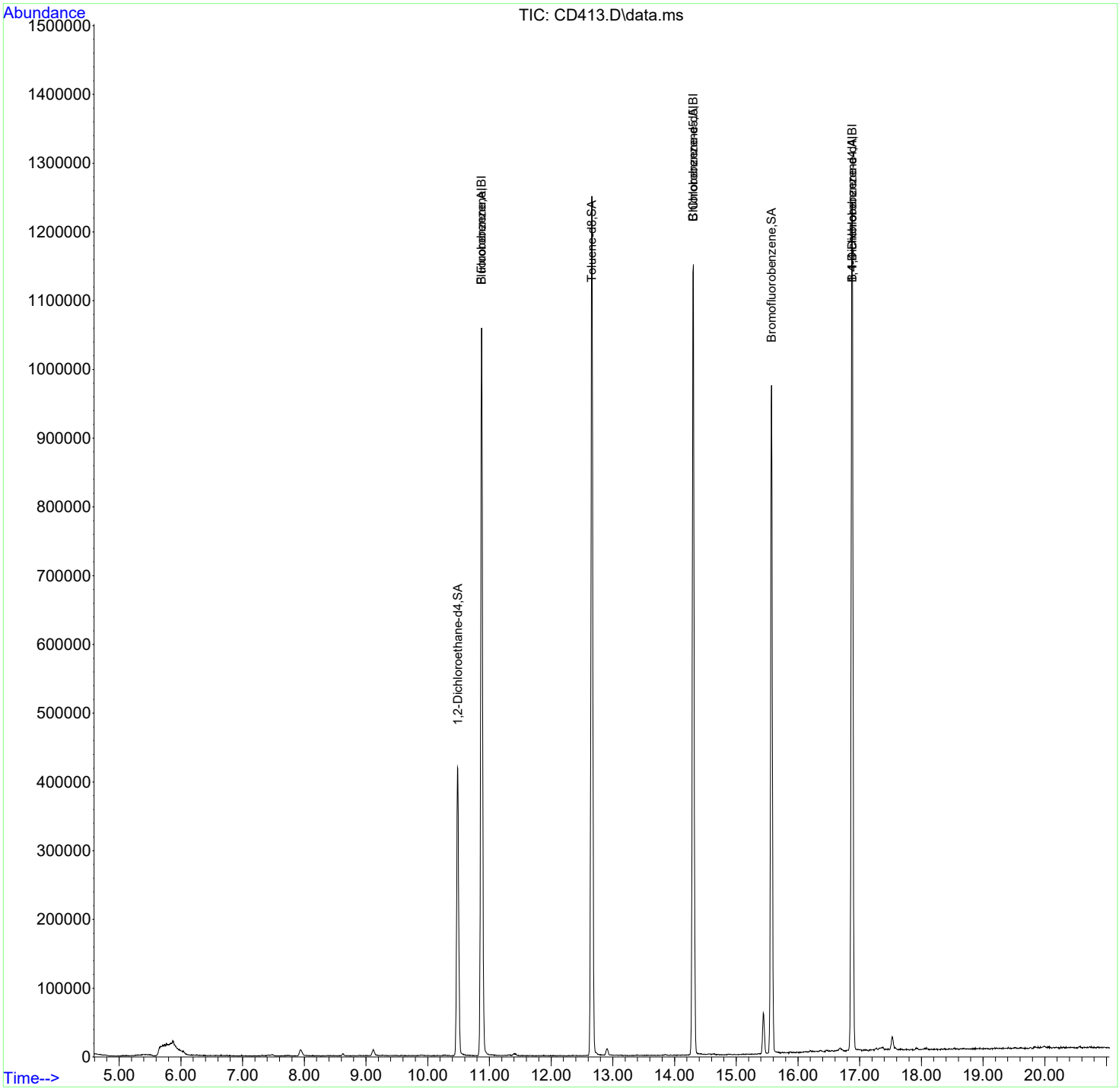
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
87) Isopropyl Alcohol	45	7.422	7.416	0.683	4144	N.D.	
88) Allyl chloride	41	7.696	7.794	0.708	124	N.D.	
89) tert-Butyl Alcohol	59	8.007	7.946	0.736	165	N.D.	
90) Acrylonitrile		0.000	8.208	0.000	0	N.D.	
91) Isopropyl ether		0.000	8.824	0.000	0	N.D.	
92) 2-Chloro-1,3-butadiene		0.000	8.958	0.000	0	N.D.	
93) Ethyl tert-butyl ether		0.000	9.263	0.000	0	N.D.	
94) Ethyl acetate	43	9.470	9.482	0.871	877	N.D.	
95) Propionitrile		0.000	9.543	0.000	0	N.D.	
96) Methacrylonitrile		0.000	9.745	0.000	0	N.D.	
97) Tetrahydrofuran	42	9.891	9.891	0.910	261	N.D.	
98) Isobutyl alcohol		0.000	10.220	0.000	0	N.D.	
99) Methyl tert-amyl ether		0.000	10.629	0.000	0	N.D.	
100) Methyl methacrylate		0.000	11.531	0.000	0	N.D.	
101) 1,4-Dioxane		0.000	11.665	0.000	0	N.D.	
102) 2-Nitropropane		0.000	12.043	0.000	0	N.D.	
104) Ethyl methacrylate		0.000	12.903	0.000	0	N.D.	
106) 1-Chlorohexane		0.000	14.195	0.000	0	N.D.	
107) cis-1,4-Dichloro-2-butene		0.000	15.396	0.000	0	N.D.	
108) Cyclohexanone		0.000	15.530	0.000	0	N.D.	
109) trans-1,4-Dichloro-2-b...		0.000	15.701	0.000	0	N.D.	
110) Pentachloroethane		0.000	16.445	0.000	0	N.D.	
111) Benzyl chloride	91	17.006	17.030	1.008	289	N.D.	
112) bis(2-Chloroisopropyl)...	45	17.530	17.463	1.039	817	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102623VC\
Data File : CD413.D
Acq On : 26 Oct 2023 14:09
Operator : PXY1
InstName : VOAC
Sample : |642648005|2514596|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Oct 26 14:31:08 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE



Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 12:00**	**Matrix:**	**SO**
Lab Sample ID:	**642648006**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**5.1**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289594**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2514596**	**Inst:**	**VOAC.I**	**Dilution:**	**50**
Run Date:	**10/26/2023 14:36**	**Analyst:**	**PXY1**	**Purge Vol:**	**5 mL**
Prep Date:	**10/26/2023 09:06**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**data\102623VC\CD414.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	35.1	ug/kg	35.1	105
108-88-3	Toluene	U	35.1	ug/kg	35.1	105
100-41-4	Ethylbenzene	U	35.1	ug/kg	35.1	105
1330-20-7	Xylenes (total)	U	105	ug/kg	105	316

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Toluene-d8	47.4	50.0	ug/L	95	(81%-120%)
Bromofluorobenzene	48.2	50.0	ug/L	96	(74%-128%)
1,2-Dichloroethane-d4	41.9	50.0	ug/L	84	(77%-127%)

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102623VC\
Data File : CD414.D
Acq On : 26 Oct 2023 14:36
Operator : PXY1
InstName : VOAC
Sample : |642648006|2514596|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 14 Sample Multiplier: 1

10/27/2023

10/27/2023

Quant Time: Oct 27 09:00:08 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards								Dev(Min)
1) Fluorobenzene	96	10.872	10.879	1.000	1168051	50.00	ug/L	0.00
43) Chlorobenzene-d5	117	14.305	14.305	1.000	841942	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	16.877	16.884	1.000	468705	50.00	ug/L	0.00
84) B Fluorobenzene	96	10.872	10.879	1.000	1168051	50.00	ug/L	0.00
103) B Chlorobenzene-d5	117	14.305	14.305	1.000	841942	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	16.877	16.884	1.000	469114	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	65	10.482	10.495	0.964	346118	41.85	ug/L	-0.01
45) Toluene-d8	98	12.659	12.665	0.885	1029886	47.36	ug/L	0.00
63) Bromofluorobenzene	95	15.567	15.573	0.922	368985	48.24	ug/L	0.00

Compound	Amount	Range	Recovery
30) 1,2-Dichloroethane-d4	50.000	77 - 127	84%
45) Toluene-d8	50.000	81 - 120	95%
63) Bromofluorobenzene	50.000	74 - 128	96%

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.752	0.000	0	N.D.		
3) Chloromethane	50	5.294	5.185	0.487	132	N.D.		
4) Vinyl chloride		0.000	5.398	0.000	0	N.D.		
5) Bromomethane		0.000	6.038	0.000	0	N.D.		
6) Chloroethane		0.000	6.160	0.000	0	N.D.		
7) Trichlorofluoromethane		0.000	6.550	0.000	0	N.D.		
8) Ethyl ether		0.000	6.922	0.000	0	N.D.		
9) Acetone	43	7.324	7.318	0.674	1766	Below Cal		72
10) 1,1-Dichloroethylene	61	7.471	7.343	0.687	123	N.D.		
11) Iodomethane		0.000	7.611	0.000	0	N.D.		
12) Acetonitrile	41	7.922	7.690	0.729	141	N.D.		
13) Methyl acetate	43	7.733	7.745	0.711	1115	N.D.		
14) Carbon disulfide		0.000	7.769	0.000	0	N.D.		
15) Methylene chloride	84	7.934	7.946	0.730	7474	N.D.		
16) tert-Butyl methyl ether		0.000	8.275	0.000	0	N.D.		
17) trans-1,2-Dichloroethy...		0.000	8.324	0.000	0	N.D.		
18) Hexane	57	8.629	8.635	0.794	1180	N.D.		
19) Vinyl acetate		0.000	8.794	0.000	0	N.D.		
20) 1,1-Dichloroethane		0.000	8.842	0.000	0	N.D.		
21) 2-Butanone	43	9.482	9.476	0.872	839	N.D.		
22) cis-1,2-Dichloroethylene		0.000	9.531	0.000	0	N.D.		
23) 2,2-Dichloropropane		0.000	9.568	0.000	0	N.D.		
24) Bromochloromethane		0.000	9.830	0.000	0	N.D.		
25) Chloroform		0.000	9.867	0.000	0	N.D.		
26) 1,1,1-Trichloroethane		0.000	10.178	0.000	0	N.D.		
27) Cyclohexane		0.000	10.287	0.000	0	N.D.		
28) 1,1-Dichloropropene		0.000	10.348	0.000	0	N.D.		
29) Carbon tetrachloride		0.000	10.391	0.000	0	N.D.		
31) 1,2-Dichloroethane		0.000	10.580	0.000	0	N.D.		
32) Benzene		0.000	10.610	0.000	0	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102623VC\
Data File : CD414.D
Acq On : 26 Oct 2023 14:36
Operator : PXY1
InstName : VOAC
Sample : |642648006|2514596|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Oct 27 09:00:08 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
33) Cyclohexene		0.000	10.738	0.000	0	N.D.	
34) n-Butyl alcohol		0.000	10.976	0.000	0	N.D.	
35) Trichloroethylene		0.000	11.305	0.000	0	N.D.	
36) 2-Pentanone	43	11.378	11.385	1.047	164	N.D.	
37) 1,2-Dichloropropane		0.000	11.568	0.000	0	N.D.	
38) Methylcyclohexane		0.000	11.580	0.000	0	N.D.	
39) Dibromomethane		0.000	11.708	0.000	0	N.D.	
40) Bromodichloromethane		0.000	11.830	0.000	0	N.D.	
41) 2-Chloroethylvinyl ether		0.000	12.074	0.000	0	N.D.	
42) cis-1,3-Dichloropropylene		0.000	12.317	0.000	0	N.D.	
44) 4-Methyl-2-pentanone		0.000	12.421	0.000	0	N.D.	
46) Toluene	91	12.744	12.744	0.891	454	N.D.	
47) trans-1,3-Dichloroprop...		0.000	12.903	0.000	0	N.D.	
48) 1,1,2-Trichloroethane		0.000	13.140	0.000	0	N.D.	
49) 2-Hexanone	43	13.342	13.336	0.933	119	N.D.	
50) 1,3-Dichloropropane		0.000	13.348	0.000	0	N.D.	
51) Tetrachloroethylene		0.000	13.390	0.000	0	N.D.	
52) Dibromochloromethane		0.000	13.634	0.000	0	N.D.	
53) 1,2-Dibromoethane		0.000	13.817	0.000	0	N.D.	
54) Chlorobenzene		0.000	14.341	0.000	0	N.D.	
55) 1,1,1,2-Tetrachloroethane		0.000	14.396	0.000	0	N.D.	
56) Ethylbenzene	91	14.402	14.409	1.007	135	N.D.	
57) m,p-Xylenes		0.000	14.524	0.000	0	N.D.	
58) o-Xylene		0.000	14.988	0.000	0	N.D.	
59) Styrene		0.000	14.988	0.000	0	N.D.	
61) Bromoform		0.000	15.262	0.000	0	N.D.	
62) Isopropylbenzene	105	15.433	15.366	0.914	122	N.D.	
64) 1,1,2,2-Tetrachloroethane	83	15.573	15.646	0.923	313	N.D.	
65) 1,2,3-Trichloropropane		0.000	15.744	0.000	0	N.D.	
66) Bromobenzene		0.000	15.799	0.000	0	N.D.	
67) n-Propylbenzene	91	15.805	15.817	0.936	138	N.D.	
68) 1,3,5-Trimethylbenzene		0.000	15.975	0.000	0	N.D.	
69) 2-Chlorotoluene		0.000	15.975	0.000	0	N.D.	
70) 4-Chlorotoluene	91	16.085	16.079	0.953	200	N.D.	
71) tert-Butylbenzene		0.000	16.372	0.000	0	N.D.	
72) 1,2,4-Trimethylbenzene	105	16.469	16.414	0.976	731	N.D.	
73) sec-Butylbenzene		0.000	16.615	0.000	0	N.D.	
74) 4-Isopropyltoluene		0.000	16.743	0.000	0	N.D.	
75) 1,3-Dichlorobenzene		0.000	16.817	0.000	0	N.D.	
76) 1,4-Dichlorobenzene	146	16.908	16.908	1.002	148	N.D.	
77) n-Butylbenzene		0.000	17.231	0.000	0	N.D.	
78) 1,2-Dichlorobenzene		0.000	17.378	0.000	0	N.D.	
79) 1,2-Dibromo-3-chloropr...		0.000	18.335	0.000	0	N.D.	
80) 1,2,4-Trichlorobenzene	180	19.523	19.523	1.157	285	N.D.	
81) Hexachlorobutadiene		0.000	19.719	0.000	0	N.D.	
82) Naphthalene	128	19.944	19.956	1.182	1548	N.D.	
83) 1,2,3-Trichlorobenzene	180	20.334	20.340	1.205	149	N.D.	
85) Acrolein		0.000	7.117	0.000	0	N.D.	
86) Trichlorotrifluoroethane		0.000	7.312	0.000	0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102623VC\
Data File : CD414.D
Acq On : 26 Oct 2023 14:36
Operator : PXY1
InstName : VOAC
Sample : |642648006|2514596|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Oct 27 09:00:08 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE

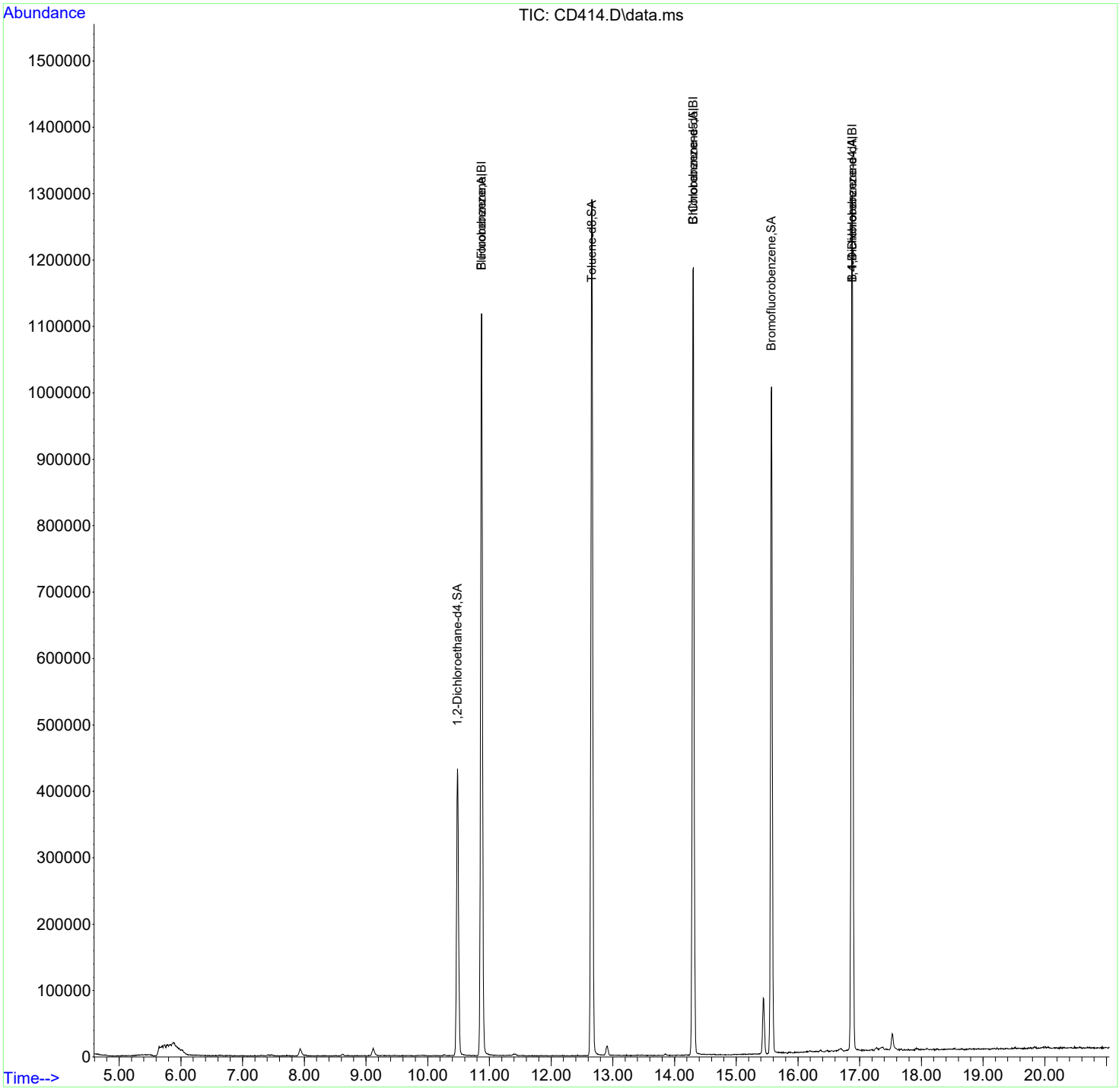
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
87) Isopropyl Alcohol	45	7.440	7.416	0.684	3864	N.D.	
88) Allyl chloride	41	7.922	7.794	0.729	141	N.D.	
89) tert-Butyl Alcohol	59	8.025	7.946	0.738	740	N.D.	
90) Acrylonitrile		0.000	8.208	0.000	0	N.D.	
91) Isopropyl ether		0.000	8.824	0.000	0	N.D.	
92) 2-Chloro-1,3-butadiene		0.000	8.958	0.000	0	N.D.	
93) Ethyl tert-butyl ether		0.000	9.263	0.000	0	N.D.	
94) Ethyl acetate	43	9.482	9.482	0.872	839	N.D.	
95) Propionitrile		0.000	9.543	0.000	0	N.D.	
96) Methacrylonitrile		0.000	9.745	0.000	0	N.D.	
97) Tetrahydrofuran	42	9.891	9.891	0.910	415	N.D.	
98) Isobutyl alcohol		0.000	10.220	0.000	0	N.D.	
99) Methyl tert-amyl ether		0.000	10.629	0.000	0	N.D.	
100) Methyl methacrylate		0.000	11.531	0.000	0	N.D.	
101) 1,4-Dioxane		0.000	11.665	0.000	0	N.D.	
102) 2-Nitropropane		0.000	12.043	0.000	0	N.D.	
104) Ethyl methacrylate		0.000	12.903	0.000	0	N.D.	
106) 1-Chlorohexane		0.000	14.195	0.000	0	N.D.	
107) cis-1,4-Dichloro-2-butene		0.000	15.396	0.000	0	N.D.	
108) Cyclohexanone		0.000	15.530	0.000	0	N.D.	
109) trans-1,4-Dichloro-2-b...		0.000	15.701	0.000	0	N.D.	
110) Pentachloroethane		0.000	16.445	0.000	0	N.D.	
111) Benzyl chloride		0.000	17.030	0.000	0	N.D.	
112) bis(2-Chloroisopropyl)...	45	17.481	17.463	1.036	209	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102623VC\
Data File : CD414.D
Acq On : 26 Oct 2023 14:36
Operator : PXY1
InstName : VOAC
Sample : |642648006|2514596|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Oct 27 09:00:08 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE



Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 12:15**	**Matrix:**	**SO**
Lab Sample ID:	**642648007**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**2.5**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289595**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2514596**	**Inst:**	**VOAC.I**	**Dilution:**	**50**
Run Date:	**10/26/2023 15:04**	**Analyst:**	**PXY1**	**Purge Vol:**	**5 mL**
Prep Date:	**10/26/2023 09:07**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**data\102623VC\CD415.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	34.1	ug/kg	34.1	103
108-88-3	Toluene	U	34.1	ug/kg	34.1	103
100-41-4	Ethylbenzene	U	34.1	ug/kg	34.1	103
1330-20-7	Xylenes (total)	U	103	ug/kg	103	308

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Toluene-d8	47.0	50.0	ug/L	94	(81%-120%)
Bromofluorobenzene	45.9	50.0	ug/L	92	(74%-128%)
1,2-Dichloroethane-d4	41.9	50.0	ug/L	84	(77%-127%)

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102623VC\
Data File : CD415.D
Acq On : 26 Oct 2023 15:04
Operator : PXY1
InstName : VOAC
Sample : |642648007|2514596|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 15 Sample Multiplier: 1

10/27/2023

10/27/2023

Quant Time: Oct 27 09:00:27 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards								Dev(Min)
1) Fluorobenzene	96	10.873	10.879	1.000	1162349	50.00	ug/L	0.00
43) Chlorobenzene-d5	117	14.305	14.305	1.000	845442	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	16.878	16.884	1.000	485287	50.00	ug/L	0.00
84) B Fluorobenzene	96	10.873	10.879	1.000	1162349	50.00	ug/L	0.00
103) B Chlorobenzene-d5	117	14.305	14.305	1.000	845442	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	16.878	16.884	1.000	486047	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	65	10.482	10.495	0.964	345217	41.94	ug/L	-0.01
45) Toluene-d8	98	12.659	12.665	0.885	1025803	46.98	ug/L	0.00
63) Bromofluorobenzene	95	15.573	15.573	0.923	363426	45.89	ug/L	0.00

Compound	Amount	Range	Recovery
30) 1,2-Dichloroethane-d4	50.000	77 - 127	84%
45) Toluene-d8	50.000	81 - 120	94%
63) Bromofluorobenzene	50.000	74 - 128	92%

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.752	0.000	0	N.D.		
3) Chloromethane		0.000	5.185	0.000	0	N.D.		
4) Vinyl chloride		0.000	5.398	0.000	0	N.D.		
5) Bromomethane		0.000	6.038	0.000	0	N.D.		
6) Chloroethane		0.000	6.160	0.000	0	N.D.		
7) Trichlorofluoromethane		0.000	6.550	0.000	0	N.D.		
8) Ethyl ether		0.000	6.922	0.000	0	N.D.		
9) Acetone	43	7.306	7.318	0.672	674	Below Cal		94
10) 1,1-Dichloroethylene	61	7.477	7.343	0.688	105	N.D.		
11) Iodomethane		0.000	7.611	0.000	0	N.D.		
12) Acetonitrile	41	7.708	7.690	0.709	146	N.D.		
13) Methyl acetate	43	7.739	7.745	0.712	1157	N.D.		
14) Carbon disulfide		0.000	7.769	0.000	0	N.D.		
15) Methylene chloride	84	7.940	7.946	0.730	7404	N.D.		
16) tert-Butyl methyl ether		0.000	8.275	0.000	0	N.D.		
17) trans-1,2-Dichloroethy...		0.000	8.324	0.000	0	N.D.		
18) Hexane	57	8.629	8.635	0.794	1362	N.D.		
19) Vinyl acetate		0.000	8.794	0.000	0	N.D.		
20) 1,1-Dichloroethane		0.000	8.842	0.000	0	N.D.		
21) 2-Butanone	43	9.482	9.476	0.872	792	N.D.		
22) cis-1,2-Dichloroethylene		0.000	9.531	0.000	0	N.D.		
23) 2,2-Dichloropropane		0.000	9.568	0.000	0	N.D.		
24) Bromochloromethane		0.000	9.830	0.000	0	N.D.		
25) Chloroform		0.000	9.867	0.000	0	N.D.		
26) 1,1,1-Trichloroethane		0.000	10.178	0.000	0	N.D.		
27) Cyclohexane		0.000	10.287	0.000	0	N.D.		
28) 1,1-Dichloropropene		0.000	10.348	0.000	0	N.D.		
29) Carbon tetrachloride		0.000	10.391	0.000	0	N.D.		
31) 1,2-Dichloroethane	62	10.495	10.580	0.965	140	N.D.		
32) Benzene		0.000	10.610	0.000	0	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102623VC\
Data File : CD415.D
Acq On : 26 Oct 2023 15:04
Operator : PXY1
InstName : VOAC
Sample : |642648007|2514596|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Oct 27 09:00:27 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
33) Cyclohexene		0.000	10.738	0.000	0		N.D.
34) n-Butyl alcohol	56	10.982	10.976	1.010	147		N.D.
35) Trichloroethylene		0.000	11.305	0.000	0		N.D.
36) 2-Pentanone	43	11.372	11.385	1.046	112		N.D.
37) 1,2-Dichloropropane		0.000	11.568	0.000	0		N.D.
38) Methylcyclohexane		0.000	11.580	0.000	0		N.D.
39) Dibromomethane		0.000	11.708	0.000	0		N.D.
40) Bromodichloromethane		0.000	11.830	0.000	0		N.D.
41) 2-Chloroethylvinyl ether		0.000	12.074	0.000	0		N.D.
42) cis-1,3-Dichloropropylene		0.000	12.317	0.000	0		N.D.
44) 4-Methyl-2-pentanone		0.000	12.421	0.000	0		N.D.
46) Toluene	91	12.738	12.744	0.890	396		N.D.
47) trans-1,3-Dichloroprop...		0.000	12.903	0.000	0		N.D.
48) 1,1,2-Trichloroethane		0.000	13.140	0.000	0		N.D.
49) 2-Hexanone		0.000	13.336	0.000	0		N.D.
50) 1,3-Dichloropropane		0.000	13.348	0.000	0		N.D.
51) Tetrachloroethylene		0.000	13.390	0.000	0		N.D.
52) Dibromochloromethane		0.000	13.634	0.000	0		N.D.
53) 1,2-Dibromoethane		0.000	13.817	0.000	0		N.D.
54) Chlorobenzene		0.000	14.341	0.000	0		N.D.
55) 1,1,1,2-Tetrachloroethane		0.000	14.396	0.000	0		N.D.
56) Ethylbenzene	91	14.402	14.409	1.007	151		N.D.
57) m,p-Xylenes		0.000	14.524	0.000	0		N.D.
58) o-Xylene		0.000	14.988	0.000	0		N.D.
59) Styrene		0.000	14.988	0.000	0		N.D.
61) Bromoform		0.000	15.262	0.000	0		N.D.
62) Isopropylbenzene		0.000	15.366	0.000	0		N.D.
64) 1,1,2,2-Tetrachloroethane	83	15.573	15.646	0.923	317		N.D.
65) 1,2,3-Trichloropropane		0.000	15.744	0.000	0		N.D.
66) Bromobenzene		0.000	15.799	0.000	0		N.D.
67) n-Propylbenzene		0.000	15.817	0.000	0		N.D.
68) 1,3,5-Trimethylbenzene		0.000	15.975	0.000	0		N.D.
69) 2-Chlorotoluene		0.000	15.975	0.000	0		N.D.
70) 4-Chlorotoluene	91	16.079	16.079	0.953	117		N.D.
71) tert-Butylbenzene		0.000	16.372	0.000	0		N.D.
72) 1,2,4-Trimethylbenzene	105	16.481	16.414	0.977	797		N.D.
73) sec-Butylbenzene		0.000	16.615	0.000	0		N.D.
74) 4-Isopropyltoluene	119	16.743	16.743	0.992	242		N.D.
75) 1,3-Dichlorobenzene		0.000	16.817	0.000	0		N.D.
76) 1,4-Dichlorobenzene	146	16.902	16.908	1.001	397		N.D.
77) n-Butylbenzene	91	17.231	17.231	1.021	189		N.D.
78) 1,2-Dichlorobenzene		0.000	17.378	0.000	0		N.D.
79) 1,2-Dibromo-3-chloropr...		0.000	18.335	0.000	0		N.D.
80) 1,2,4-Trichlorobenzene	180	19.511	19.523	1.156	293		N.D.
81) Hexachlorobutadiene		0.000	19.719	0.000	0		N.D.
82) Naphthalene	128	19.944	19.956	1.182	1607		N.D.
83) 1,2,3-Trichlorobenzene	180	20.340	20.340	1.205	207		N.D.
85) Acrolein		0.000	7.117	0.000	0		N.D.
86) Trichlorotrifluoroethane		0.000	7.312	0.000	0		N.D.

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102623VC\
Data File : CD415.D
Acq On : 26 Oct 2023 15:04
Operator : PXY1
InstName : VOAC
Sample : |642648007|2514596|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Oct 27 09:00:27 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE

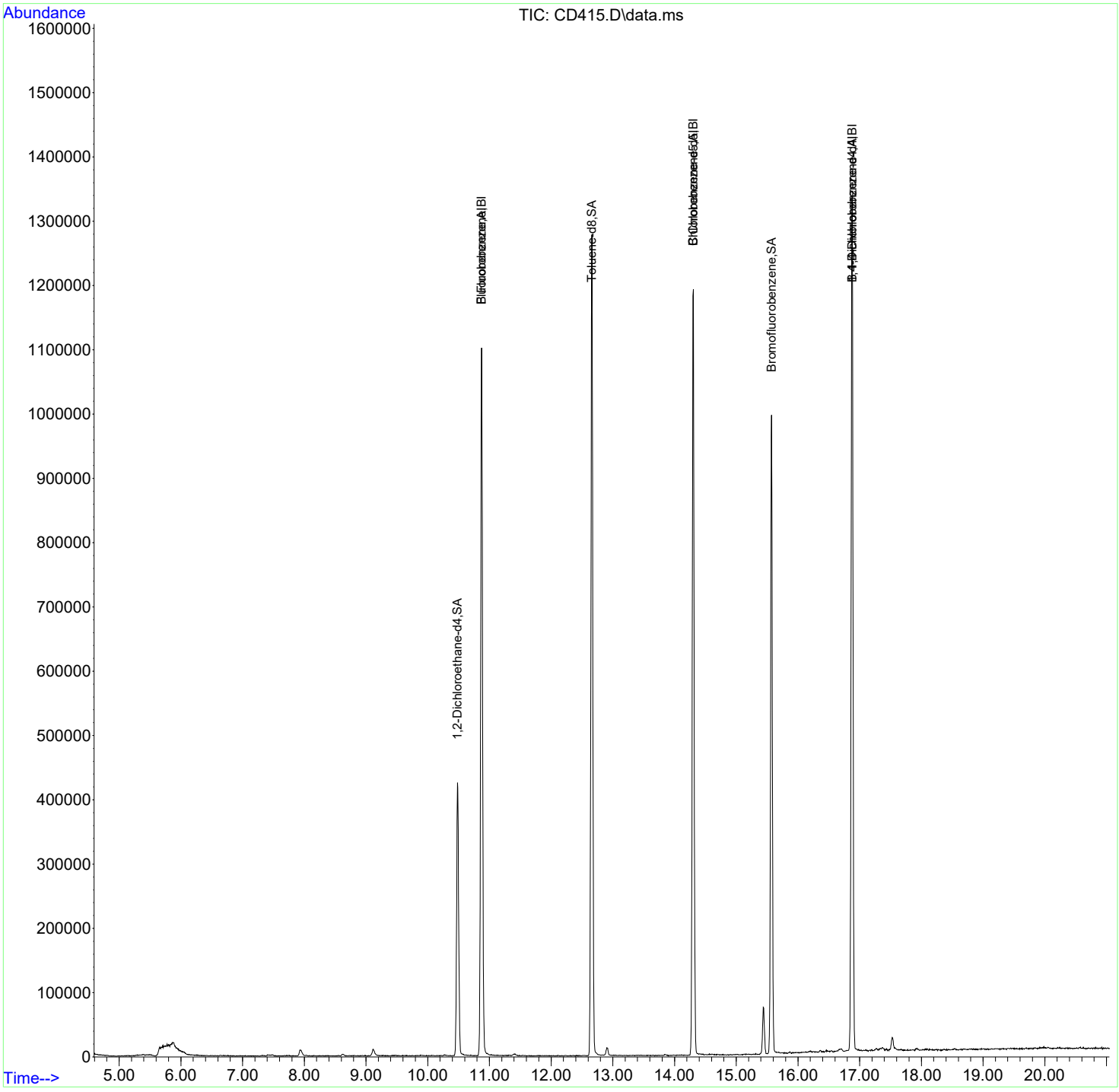
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
87) Isopropyl Alcohol	45	7.410	7.416	0.682	4386	N.D.	
88) Allyl chloride	41	7.708	7.794	0.709	146	N.D.	
89) tert-Butyl Alcohol	59	8.001	7.946	0.736	434	N.D.	
90) Acrylonitrile		0.000	8.208	0.000	0	N.D.	
91) Isopropyl ether		0.000	8.824	0.000	0	N.D.	
92) 2-Chloro-1,3-butadiene		0.000	8.958	0.000	0	N.D.	
93) Ethyl tert-butyl ether		0.000	9.263	0.000	0	N.D.	
94) Ethyl acetate	43	9.482	9.482	0.872	792	N.D.	
95) Propionitrile		0.000	9.543	0.000	0	N.D.	
96) Methacrylonitrile		0.000	9.745	0.000	0	N.D.	
97) Tetrahydrofuran	42	9.903	9.891	0.911	358	N.D.	
98) Isobutyl alcohol		0.000	10.220	0.000	0	N.D.	
99) Methyl tert-amyl ether		0.000	10.629	0.000	0	N.D.	
100) Methyl methacrylate		0.000	11.531	0.000	0	N.D.	
101) 1,4-Dioxane		0.000	11.665	0.000	0	N.D.	
102) 2-Nitropropane		0.000	12.043	0.000	0	N.D.	
104) Ethyl methacrylate		0.000	12.903	0.000	0	N.D.	
106) 1-Chlorohexane		0.000	14.195	0.000	0	N.D.	
107) cis-1,4-Dichloro-2-butene		0.000	15.396	0.000	0	N.D.	
108) Cyclohexanone		0.000	15.530	0.000	0	N.D.	
109) trans-1,4-Dichloro-2-b...		0.000	15.701	0.000	0	N.D.	
110) Pentachloroethane		0.000	16.445	0.000	0	N.D.	
111) Benzyl chloride	91	17.030	17.030	1.009	243	N.D.	
112) bis(2-Chloroisopropyl)...	45	17.524	17.463	1.038	1018	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102623VC\
Data File : CD415.D
Acq On : 26 Oct 2023 15:04
Operator : PXY1
InstName : VOAC
Sample : |642648007|2514596|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Oct 27 09:00:27 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE



Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 12:47**	**Matrix:**	**SO**
Lab Sample ID:	**642648008**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**3.6**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289596**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2514596**	**Inst:**	**VOAC.I**	**Dilution:**	**50**
Run Date:	**10/26/2023 15:31**	**Analyst:**	**PXY1**	**Purge Vol:**	**5 mL**
Prep Date:	**10/26/2023 09:08**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**data\102623VC\CD416.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	34.6	ug/kg	34.6	104
108-88-3	Toluene	U	34.6	ug/kg	34.6	104
100-41-4	Ethylbenzene	U	34.6	ug/kg	34.6	104
1330-20-7	Xylenes (total)	U	104	ug/kg	104	311

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	42.1	50.0	ug/L	84	(77%-127%)
Bromofluorobenzene	48.1	50.0	ug/L	96	(74%-128%)
Toluene-d8	47.9	50.0	ug/L	96	(81%-120%)

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102623VC\
Data File : CD416.D
Acq On : 26 Oct 2023 15:31
Operator : PXY1
InstName : VOAC
Sample : |642648008|2514596|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 16 Sample Multiplier: 1

10/27/2023

10/27/2023

Quant Time: Oct 27 09:00:43 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards								Dev(Min)
1) Fluorobenzene	96	10.873	10.879	1.000	1160256	50.00	ug/L	0.00
43) Chlorobenzene-d5	117	14.305	14.305	1.000	834310	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	16.878	16.884	1.000	471611	50.00	ug/L	0.00
84) B Fluorobenzene	96	10.873	10.879	1.000	1160256	50.00	ug/L	0.00
103) B Chlorobenzene-d5	117	14.305	14.305	1.000	834310	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	16.878	16.884	1.000	472465	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	65	10.488	10.495	0.965	345760	42.09	ug/L	0.00
45) Toluene-d8	98	12.659	12.665	0.885	1032594	47.92	ug/L	0.00
63) Bromofluorobenzene	95	15.573	15.573	0.923	370137	48.09	ug/L	0.00

Compound	Amount	Range	Recovery
30) 1,2-Dichloroethane-d4	50.000	77 - 127	84%
45) Toluene-d8	50.000	81 - 120	96%
63) Bromofluorobenzene	50.000	74 - 128	96%

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.752	0.000	0	N.D.		
3) Chloromethane		0.000	5.185	0.000	0	N.D.		
4) Vinyl chloride		0.000	5.398	0.000	0	N.D.		
5) Bromomethane		0.000	6.038	0.000	0	N.D.		
6) Chloroethane		0.000	6.160	0.000	0	N.D.		
7) Trichlorofluoromethane		0.000	6.550	0.000	0	N.D.		
8) Ethyl ether		0.000	6.922	0.000	0	N.D.		
9) Acetone	43	7.324	7.318	0.674	1800	Below Cal		68
10) 1,1-Dichloroethylene		0.000	7.343	0.000	0	N.D.		
11) Iodomethane		0.000	7.611	0.000	0	N.D.		
12) Acetonitrile	41	7.702	7.690	0.708	336	N.D.		
13) Methyl acetate	43	7.739	7.745	0.712	971	N.D.		
14) Carbon disulfide		0.000	7.769	0.000	0	N.D.		
15) Methylene chloride	84	7.934	7.946	0.730	7365	N.D.		
16) tert-Butyl methyl ether		0.000	8.275	0.000	0	N.D.		
17) trans-1,2-Dichloroethy...		0.000	8.324	0.000	0	N.D.		
18) Hexane	57	8.629	8.635	0.794	1232	N.D.		
19) Vinyl acetate		0.000	8.794	0.000	0	N.D.		
20) 1,1-Dichloroethane		0.000	8.842	0.000	0	N.D.		
21) 2-Butanone	43	9.470	9.476	0.871	798	N.D.		
22) cis-1,2-Dichloroethylene		0.000	9.531	0.000	0	N.D.		
23) 2,2-Dichloropropane		0.000	9.568	0.000	0	N.D.		
24) Bromochloromethane		0.000	9.830	0.000	0	N.D.		
25) Chloroform		0.000	9.867	0.000	0	N.D.		
26) 1,1,1-Trichloroethane		0.000	10.178	0.000	0	N.D.		
27) Cyclohexane		0.000	10.287	0.000	0	N.D.		
28) 1,1-Dichloropropene		0.000	10.348	0.000	0	N.D.		
29) Carbon tetrachloride		0.000	10.391	0.000	0	N.D.		
31) 1,2-Dichloroethane		0.000	10.580	0.000	0	N.D.		
32) Benzene		0.000	10.610	0.000	0	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102623VC\
Data File : CD416.D
Acq On : 26 Oct 2023 15:31
Operator : PXY1
InstName : VOAC
Sample : |642648008|2514596|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Oct 27 09:00:43 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
33) Cyclohexene		0.000	10.738	0.000	0	N.D.	
34) n-Butyl alcohol		0.000	10.976	0.000	0	N.D.	
35) Trichloroethylene		0.000	11.305	0.000	0	N.D.	
36) 2-Pentanone		0.000	11.385	0.000	0	N.D.	
37) 1,2-Dichloropropane		0.000	11.568	0.000	0	N.D.	
38) Methylcyclohexane		0.000	11.580	0.000	0	N.D.	
39) Dibromomethane		0.000	11.708	0.000	0	N.D.	
40) Bromodichloromethane		0.000	11.830	0.000	0	N.D.	
41) 2-Chloroethylvinyl ether		0.000	12.074	0.000	0	N.D.	
42) cis-1,3-Dichloropropylene		0.000	12.317	0.000	0	N.D.	
44) 4-Methyl-2-pentanone		0.000	12.421	0.000	0	N.D.	
46) Toluene	91	12.744	12.744	0.891	429	N.D.	
47) trans-1,3-Dichloroprop...		0.000	12.903	0.000	0	N.D.	
48) 1,1,2-Trichloroethane		0.000	13.140	0.000	0	N.D.	
49) 2-Hexanone		0.000	13.336	0.000	0	N.D.	
50) 1,3-Dichloropropane		0.000	13.348	0.000	0	N.D.	
51) Tetrachloroethylene		0.000	13.390	0.000	0	N.D.	
52) Dibromochloromethane		0.000	13.634	0.000	0	N.D.	
53) 1,2-Dibromoethane		0.000	13.817	0.000	0	N.D.	
54) Chlorobenzene		0.000	14.341	0.000	0	N.D.	
55) 1,1,1,2-Tetrachloroethane		0.000	14.396	0.000	0	N.D.	
56) Ethylbenzene		0.000	14.409	0.000	0	N.D.	
57) m,p-Xylenes		0.000	14.524	0.000	0	N.D.	
58) o-Xylene		0.000	14.988	0.000	0	N.D.	
59) Styrene		0.000	14.988	0.000	0	N.D.	
61) Bromoform		0.000	15.262	0.000	0	N.D.	
62) Isopropylbenzene		0.000	15.366	0.000	0	N.D.	
64) 1,1,2,2-Tetrachloroethane	83	15.579	15.646	0.923	347	N.D.	
65) 1,2,3-Trichloropropane		0.000	15.744	0.000	0	N.D.	
66) Bromobenzene		0.000	15.799	0.000	0	N.D.	
67) n-Propylbenzene	91	15.872	15.817	0.940	132	N.D.	
68) 1,3,5-Trimethylbenzene		0.000	15.975	0.000	0	N.D.	
69) 2-Chlorotoluene		0.000	15.975	0.000	0	N.D.	
70) 4-Chlorotoluene	91	16.073	16.079	0.952	122	N.D.	
71) tert-Butylbenzene		0.000	16.372	0.000	0	N.D.	
72) 1,2,4-Trimethylbenzene	105	16.402	16.414	0.972	210	N.D.	
73) sec-Butylbenzene		0.000	16.615	0.000	0	N.D.	
74) 4-Isopropyltoluene	119	16.737	16.743	0.992	231	N.D.	
75) 1,3-Dichlorobenzene	146	16.871	16.817	1.000	119	N.D.	
76) 1,4-Dichlorobenzene	146	16.871	16.908	1.000	241	N.D.	
77) n-Butylbenzene		0.000	17.231	0.000	0	N.D.	
78) 1,2-Dichlorobenzene		0.000	17.378	0.000	0	N.D.	
79) 1,2-Dibromo-3-chloropr...		0.000	18.335	0.000	0	N.D.	
80) 1,2,4-Trichlorobenzene	180	19.523	19.523	1.157	301	N.D.	
81) Hexachlorobutadiene		0.000	19.719	0.000	0	N.D.	
82) Naphthalene	128	19.944	19.956	1.182	1405	N.D.	
83) 1,2,3-Trichlorobenzene		0.000	20.340	0.000	0	N.D.	
85) Acrolein		0.000	7.117	0.000	0	N.D.	
86) Trichlorotrifluoroethane		0.000	7.312	0.000	0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102623VC\
Data File : CD416.D
Acq On : 26 Oct 2023 15:31
Operator : PXY1
InstName : VOAC
Sample : |642648008|2514596|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Oct 27 09:00:43 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE

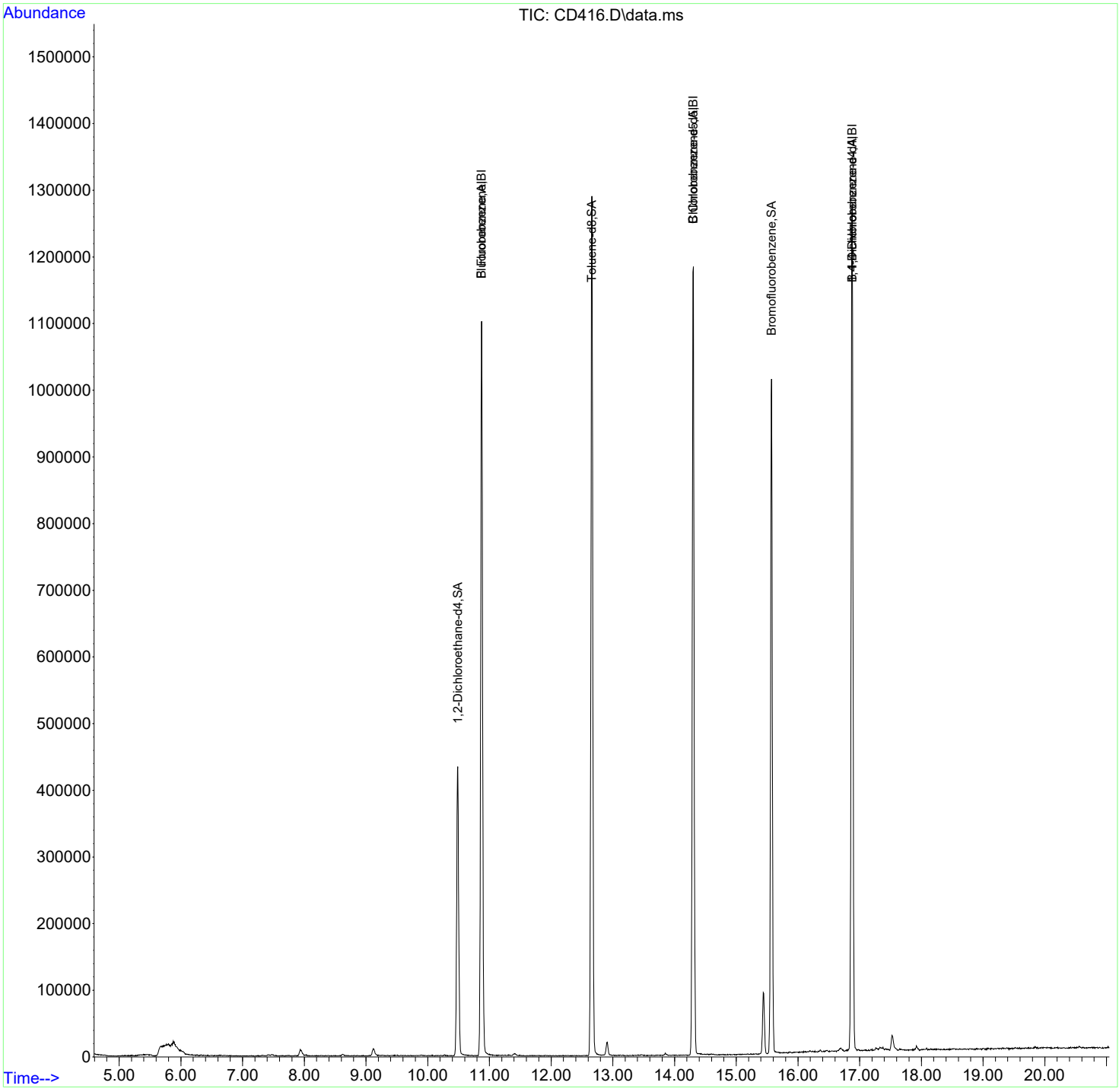
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
87) Isopropyl Alcohol	45	7.422	7.416	0.683	4578	N.D.	
88) Allyl chloride	41	7.702	7.794	0.708	336	N.D.	
89) tert-Butyl Alcohol	59	8.032	7.946	0.739	901	N.D.	
90) Acrylonitrile		0.000	8.208	0.000	0	N.D.	
91) Isopropyl ether		0.000	8.824	0.000	0	N.D.	
92) 2-Chloro-1,3-butadiene		0.000	8.958	0.000	0	N.D.	
93) Ethyl tert-butyl ether		0.000	9.263	0.000	0	N.D.	
94) Ethyl acetate	43	9.470	9.482	0.871	798	N.D.	
95) Propionitrile		0.000	9.543	0.000	0	N.D.	
96) Methacrylonitrile		0.000	9.745	0.000	0	N.D.	
97) Tetrahydrofuran	42	9.891	9.891	0.910	312	N.D.	
98) Isobutyl alcohol		0.000	10.220	0.000	0	N.D.	
99) Methyl tert-amyl ether		0.000	10.629	0.000	0	N.D.	
100) Methyl methacrylate		0.000	11.531	0.000	0	N.D.	
101) 1,4-Dioxane		0.000	11.665	0.000	0	N.D.	
102) 2-Nitropropane		0.000	12.043	0.000	0	N.D.	
104) Ethyl methacrylate		0.000	12.903	0.000	0	N.D.	
106) 1-Chlorohexane		0.000	14.195	0.000	0	N.D.	
107) cis-1,4-Dichloro-2-butene		0.000	15.396	0.000	0	N.D.	
108) Cyclohexanone		0.000	15.530	0.000	0	N.D.	
109) trans-1,4-Dichloro-2-b...		0.000	15.701	0.000	0	N.D.	
110) Pentachloroethane		0.000	16.445	0.000	0	N.D.	
111) Benzyl chloride	91	17.042	17.030	1.010	246	N.D.	
112) bis(2-Chloroisopropyl)...	45	17.524	17.463	1.038	1268	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102623VC\
Data File : CD416.D
Acq On : 26 Oct 2023 15:31
Operator : PXY1
InstName : VOAC
Sample : |642648008|2514596|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Oct 27 09:00:43 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE



Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 10:15**	**Matrix:**	**SO**
Lab Sample ID:	**642648009**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**0**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-302822**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2514596**	**Inst:**	**VOAC.I**	**Dilution:**	**1**
Run Date:	**10/26/2023 11:24**	**Analyst:**	**PXY1**	**Purge Vol:**	**5 mL**
Prep Date:	**10/26/2023 09:09**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**data\102623VC\CD407.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	0.333	ug/kg	0.333	1.00
74-87-3	Chloromethane	U	0.333	ug/kg	0.333	1.00
75-01-4	Vinyl chloride	U	0.333	ug/kg	0.333	1.00
74-83-9	Bromomethane	U	0.333	ug/kg	0.333	1.00
75-00-3	Chloroethane	U	0.333	ug/kg	0.333	1.00
75-69-4	Trichlorofluoromethane	U	0.333	ug/kg	0.333	1.00
67-64-1	Acetone		10.1	ug/kg	1.67	5.00
75-35-4	1,1-Dichloroethylene	U	0.333	ug/kg	0.333	1.00
74-88-4	Iodomethane	U	1.67	ug/kg	1.67	5.00
75-15-0	Carbon disulfide	U	1.67	ug/kg	1.67	5.00
75-09-2	Methylene chloride	U	1.67	ug/kg	1.67	5.00
156-60-5	trans-1,2-Dichloroethylene	U	0.333	ug/kg	0.333	1.00
75-34-3	1,1-Dichloroethane	U	0.333	ug/kg	0.333	1.00
78-93-3	2-Butanone	U	1.67	ug/kg	1.67	5.00
156-59-2	cis-1,2-Dichloroethylene	U	0.333	ug/kg	0.333	1.00
594-20-7	2,2-Dichloropropane	U	0.333	ug/kg	0.333	1.00
74-97-5	Bromochloromethane	U	0.333	ug/kg	0.333	1.00
67-66-3	Chloroform	U	0.333	ug/kg	0.333	1.00
71-55-6	1,1,1-Trichloroethane	U	0.333	ug/kg	0.333	1.00
563-58-6	1,1-Dichloropropene	U	0.333	ug/kg	0.333	1.00
56-23-5	Carbon tetrachloride	U	0.333	ug/kg	0.333	1.00
107-06-2	1,2-Dichloroethane	U	0.333	ug/kg	0.333	1.00
71-43-2	Benzene	U	0.333	ug/kg	0.333	1.00
79-01-6	Trichloroethylene	U	0.333	ug/kg	0.333	1.00
78-87-5	1,2-Dichloropropane	U	0.333	ug/kg	0.333	1.00
74-95-3	Dibromomethane	U	0.333	ug/kg	0.333	1.00
75-27-4	Bromodichloromethane	U	0.333	ug/kg	0.333	1.00
10061-01-5	cis-1,3-Dichloropropylene	U	0.333	ug/kg	0.333	1.00
108-10-1	4-Methyl-2-pentanone	U	1.67	ug/kg	1.67	5.00
108-88-3	Toluene	U	0.333	ug/kg	0.333	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	0.333	ug/kg	0.333	1.00
79-00-5	1,1,2-Trichloroethane	U	0.333	ug/kg	0.333	1.00
591-78-6	2-Hexanone	U	1.67	ug/kg	1.67	5.00
142-28-9	1,3-Dichloropropane	U	0.333	ug/kg	0.333	1.00
127-18-4	Tetrachloroethylene	U	0.333	ug/kg	0.333	1.00
124-48-1	Dibromochloromethane	U	0.333	ug/kg	0.333	1.00
106-93-4	1,2-Dibromoethane	U	0.333	ug/kg	0.333	1.00
108-90-7	Chlorobenzene	U	0.333	ug/kg	0.333	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 10:15**	**Matrix:**	**SO**
Lab Sample ID:	**642648009**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**0**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-302822**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2514596**	**Inst:**	**VOAC.I**	**Dilution:**	**1**
Run Date:	**10/26/2023 11:24**	**Analyst:**	**PXY1**	**Purge Vol:**	**5 mL**
Prep Date:	**10/26/2023 09:09**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**data\102623VC\CD407.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	0.333	ug/kg	0.333	1.00
179601-23-1	m,p-Xylenes	U	0.667	ug/kg	0.667	2.00
95-47-6	o-Xylene	U	0.333	ug/kg	0.333	1.00
100-42-5	Styrene	U	0.333	ug/kg	0.333	1.00
75-25-2	Bromoform	U	0.333	ug/kg	0.333	1.00
98-82-8	Isopropylbenzene	U	0.333	ug/kg	0.333	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	0.333	ug/kg	0.333	1.00
96-18-4	1,2,3-Trichloropropane	U	0.333	ug/kg	0.333	1.00
108-86-1	Bromobenzene	U	0.333	ug/kg	0.333	1.00
103-65-1	n-Propylbenzene	U	0.333	ug/kg	0.333	1.00
108-67-8	1,3,5-Trimethylbenzene	U	0.333	ug/kg	0.333	1.00
95-49-8	2-Chlorotoluene	U	0.333	ug/kg	0.333	1.00
106-43-4	4-Chlorotoluene	U	0.333	ug/kg	0.333	1.00
98-06-6	tert-Butylbenzene	U	0.333	ug/kg	0.333	1.00
95-63-6	1,2,4-Trimethylbenzene	U	0.333	ug/kg	0.333	1.00
135-98-8	sec-Butylbenzene	U	0.333	ug/kg	0.333	1.00
99-87-6	4-Isopropyltoluene	U	0.333	ug/kg	0.333	1.00
541-73-1	1,3-Dichlorobenzene	U	0.333	ug/kg	0.333	1.00
106-46-7	1,4-Dichlorobenzene	U	0.333	ug/kg	0.333	1.00
104-51-8	n-Butylbenzene	U	0.333	ug/kg	0.333	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	0.500	ug/kg	0.500	1.00
76-13-1	Trichlorotrifluoroethane	U	1.67	ug/kg	1.67	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	0.333	ug/kg	0.333	1.00
95-50-1	1,2-Dichlorobenzene	U	0.333	ug/kg	0.333	1.00

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Toluene-d8	46.4	50.0	ug/L	93	(81%-120%)
1,2-Dichloroethane-d4	43.5	50.0	ug/L	87	(77%-127%)
Bromofluorobenzene	46.7	50.0	ug/L	93	(74%-128%)

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Concentration	Units	Fit	Qual
No Tentatively Identified Compounds Found				ug/kg		

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102623VC\
Data File : CD407.D
Acq On : 26 Oct 2023 11:24
Operator : PXY1
InstName : VOAC
Sample : |642648009|2514596|1|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G N/A SOIL
ALS Vial : 7 Sample Multiplier: 1

10/27/2023

10/27/2023

Quant Time: Oct 26 12:39:24 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) Fluorobenzene	96	10.879	10.879	1.000	1113106	50.00	ug/L	0.00
43) Chlorobenzene-d5	117	14.305	14.305	1.000	841445	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	16.878	16.884	1.000	486599	50.00	ug/L	0.00
84) B Fluorobenzene	96	10.879	10.879	1.000	1113106	50.00	ug/L	0.00
103) B Chlorobenzene-d5	117	14.305	14.305	1.000	841445	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	16.878	16.884	1.000	486841	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	65	10.489	10.495	0.964	342770	43.49	ug/L	0.00
45) Toluene-d8	98	12.659	12.665	0.885	1007781	46.37	ug/L	0.00
63) Bromofluorobenzene	95	15.567	15.573	0.922	370795	46.70	ug/L	0.00

Compound	Amount	Range	Recovery
30) 1,2-Dichloroethane-d4	50.000	77 - 127	87%
45) Toluene-d8	50.000	81 - 120	93%
63) Bromofluorobenzene	50.000	74 - 128	93%

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.752	0.000	0	N.D.		
3) Chloromethane		0.000	5.185	0.000	0	N.D.		
4) Vinyl chloride		0.000	5.398	0.000	0	N.D.		
5) Bromomethane		0.000	6.038	0.000	0	N.D.		
6) Chloroethane		0.000	6.160	0.000	0	N.D.		
7) Trichlorofluoromethane		0.000	6.550	0.000	0	N.D.		
8) Ethyl ether		0.000	6.922	0.000	0	N.D.		
9) Acetone	43	7.306	7.318	0.672	20620	10.11	ug/L	99
10) 1,1-Dichloroethylene		0.000	7.343	0.000	0	N.D.		
11) Iodomethane		0.000	7.611	0.000	0	N.D.		
12) Acetonitrile	41	7.684	7.690	0.706	1761	N.D.		
13) Methyl acetate	43	7.751	7.745	0.713	864	N.D.		
14) Carbon disulfide		0.000	7.769	0.000	0	N.D.		
15) Methylene chloride	84	7.952	7.946	0.731	5766	N.D.		
16) tert-Butyl methyl ether		0.000	8.275	0.000	0	N.D.		
17) trans-1,2-Dichloroethy...		0.000	8.324	0.000	0	N.D.		
18) Hexane	57	8.635	8.635	0.794	1030	N.D.		
19) Vinyl acetate		0.000	8.794	0.000	0	N.D.		
20) 1,1-Dichloroethane		0.000	8.842	0.000	0	N.D.		
21) 2-Butanone	43	9.483	9.476	0.872	2785	N.D.		
22) cis-1,2-Dichloroethylene		0.000	9.531	0.000	0	N.D.		
23) 2,2-Dichloropropane		0.000	9.568	0.000	0	N.D.		
24) Bromochloromethane		0.000	9.830	0.000	0	N.D.		
25) Chloroform	83	9.861	9.867	0.906	558	N.D.		
26) 1,1,1-Trichloroethane		0.000	10.178	0.000	0	N.D.		
27) Cyclohexane		0.000	10.287	0.000	0	N.D.		
28) 1,1-Dichloropropene		0.000	10.348	0.000	0	N.D.		
29) Carbon tetrachloride		0.000	10.391	0.000	0	N.D.		
31) 1,2-Dichloroethane	62	10.489	10.580	0.964	193	N.D.		
32) Benzene	78	10.604	10.610	0.975	307	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102623VC\
Data File : CD407.D
Acq On : 26 Oct 2023 11:24
Operator : PXY1
InstName : VOAC
Sample : |642648009|2514596|1|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G N/A SOIL
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Oct 26 12:39:24 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
33) Cyclohexene		0.000	10.738	0.000	0	N.D.	
34) n-Butyl alcohol	56	10.970	10.976	1.008	317	N.D.	
35) Trichloroethylene		0.000	11.305	0.000	0	N.D.	
36) 2-Pentanone	43	11.391	11.385	1.047	1251	N.D.	
37) 1,2-Dichloropropane		0.000	11.568	0.000	0	N.D.	
38) Methylcyclohexane		0.000	11.580	0.000	0	N.D.	
39) Dibromomethane		0.000	11.708	0.000	0	N.D.	
40) Bromodichloromethane		0.000	11.830	0.000	0	N.D.	
41) 2-Chloroethylvinyl ether		0.000	12.074	0.000	0	N.D.	
42) cis-1,3-Dichloropropylene		0.000	12.317	0.000	0	N.D.	
44) 4-Methyl-2-pentanone	58	12.415	12.421	0.868	129	N.D.	
46) Toluene	91	12.744	12.744	0.891	1100	N.D.	
47) trans-1,3-Dichloroprop...		0.000	12.903	0.000	0	N.D.	
48) 1,1,2-Trichloroethane		0.000	13.140	0.000	0	N.D.	
49) 2-Hexanone	43	13.329	13.336	0.932	690	N.D.	
50) 1,3-Dichloropropane		0.000	13.348	0.000	0	N.D.	
51) Tetrachloroethylene		0.000	13.390	0.000	0	N.D.	
52) Dibromochloromethane		0.000	13.634	0.000	0	N.D.	
53) 1,2-Dibromoethane		0.000	13.817	0.000	0	N.D.	
54) Chlorobenzene		0.000	14.341	0.000	0	N.D.	
55) 1,1,1,2-Tetrachloroethane		0.000	14.396	0.000	0	N.D.	
56) Ethylbenzene	91	14.402	14.409	1.007	534	N.D.	
57) m,p-Xylenes	106	14.524	14.524	1.015	173	N.D.	
58) o-Xylene		0.000	14.988	0.000	0	N.D.	
59) Styrene	104	14.994	14.988	1.048	230	N.D.	
61) Bromoform		0.000	15.262	0.000	0	N.D.	
62) Isopropylbenzene		0.000	15.366	0.000	0	N.D.	
64) 1,1,2,2-Tetrachloroethane	83	15.573	15.646	0.923	505	N.D.	
65) 1,2,3-Trichloropropane		0.000	15.744	0.000	0	N.D.	
66) Bromobenzene		0.000	15.799	0.000	0	N.D.	
67) n-Propylbenzene	91	15.817	15.817	0.937	319	N.D.	
68) 1,3,5-Trimethylbenzene		0.000	15.975	0.000	0	N.D.	
69) 2-Chlorotoluene		0.000	15.975	0.000	0	N.D.	
70) 4-Chlorotoluene	91	16.079	16.079	0.953	649	N.D.	
71) tert-Butylbenzene		0.000	16.372	0.000	0	N.D.	
72) 1,2,4-Trimethylbenzene	105	16.414	16.414	0.973	576	N.D.	
73) sec-Butylbenzene	105	16.615	16.615	0.984	233	N.D.	
74) 4-Isopropyltoluene	119	16.737	16.743	0.992	1545	N.D.	
75) 1,3-Dichlorobenzene	146	16.817	16.817	0.996	588	N.D.	
76) 1,4-Dichlorobenzene	146	16.865	16.908	0.999	273	N.D.	
77) n-Butylbenzene	91	17.213	17.231	1.020	507	N.D.	
78) 1,2-Dichlorobenzene	146	17.378	17.378	1.030	473	N.D.	
79) 1,2-Dibromo-3-chloropr...		0.000	18.335	0.000	0	N.D.	
80) 1,2,4-Trichlorobenzene	180	19.523	19.523	1.157	1427	N.D.	
81) Hexachlorobutadiene	225	19.719	19.719	1.168	508	N.D.	
82) Naphthalene	128	19.950	19.956	1.182	4590	N.D.	
83) 1,2,3-Trichlorobenzene	180	20.328	20.340	1.204	1656	N.D.	
85) Acrolein		0.000	7.117	0.000	0	N.D.	
86) Trichlorotrifluoroethane		0.000	7.312	0.000	0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102623VC\
Data File : CD407.D
Acq On : 26 Oct 2023 11:24
Operator : PXY1
InstName : VOAC
Sample : |642648009|2514596|1|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G N/A SOIL
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Oct 26 12:39:24 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE

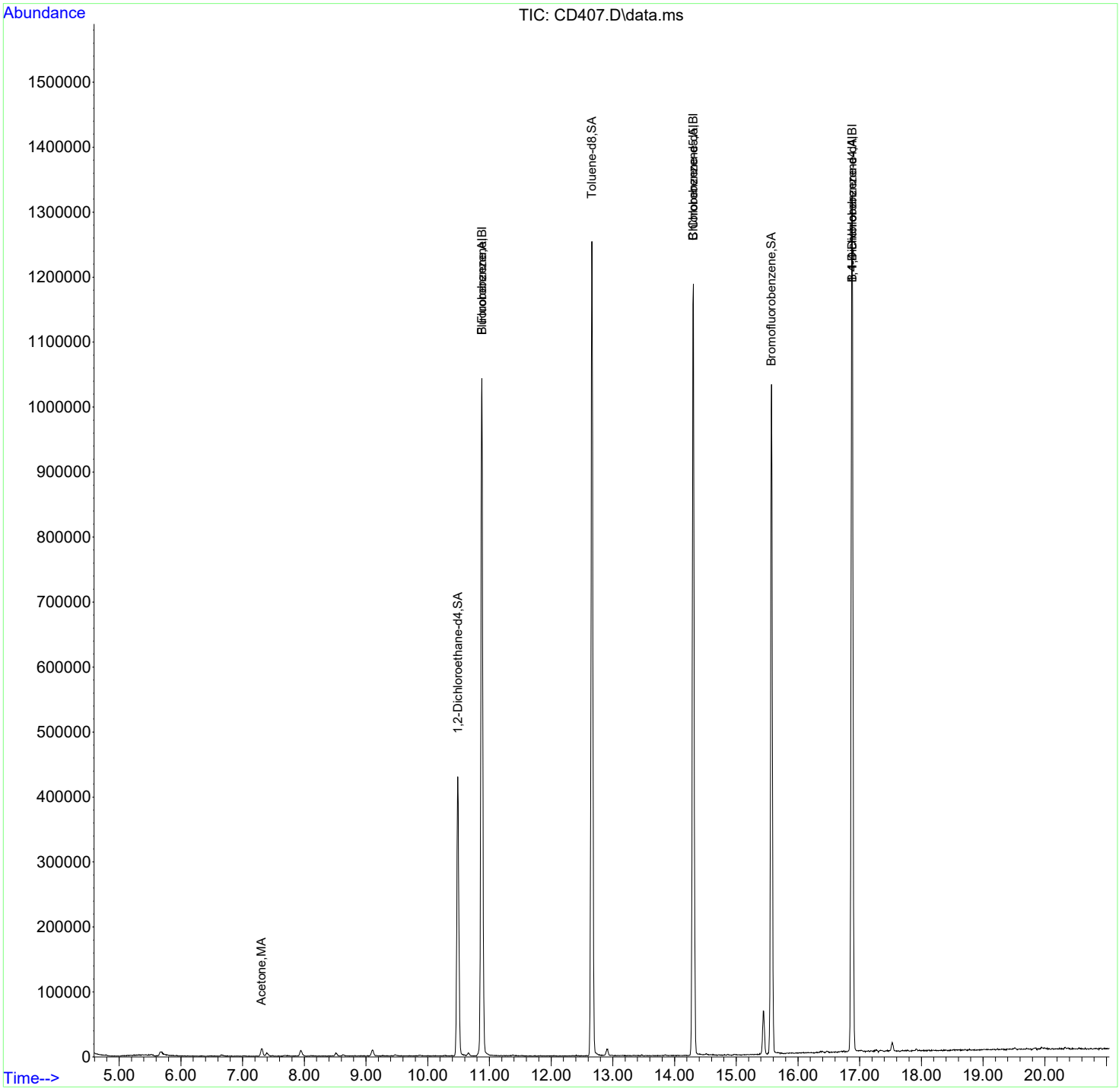
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
87) Isopropyl Alcohol		0.000	7.416	0.000	0m	N.D.	d
88) Allyl chloride	41	7.946	7.794	0.730	207	N.D.	
89) tert-Butyl Alcohol	59	7.928	7.946	0.729	252	N.D.	
90) Acrylonitrile		0.000	8.208	0.000	0	N.D.	
91) Isopropyl ether		0.000	8.824	0.000	0	N.D.	
92) 2-Chloro-1,3-butadiene		0.000	8.958	0.000	0	N.D.	
93) Ethyl tert-butyl ether		0.000	9.263	0.000	0	N.D.	
94) Ethyl acetate	43	9.483	9.482	0.872	2785	N.D.	
95) Propionitrile		0.000	9.543	0.000	0	N.D.	
96) Methacrylonitrile		0.000	9.745	0.000	0	N.D.	
97) Tetrahydrofuran	42	9.891	9.891	0.909	371	N.D.	
98) Isobutyl alcohol		0.000	10.220	0.000	0	N.D.	
99) Methyl tert-amyl ether		0.000	10.629	0.000	0	N.D.	
100) Methyl methacrylate		0.000	11.531	0.000	0	N.D.	
101) 1,4-Dioxane		0.000	11.665	0.000	0	N.D.	
102) 2-Nitropropane		0.000	12.043	0.000	0	N.D.	
104) Ethyl methacrylate		0.000	12.903	0.000	0	N.D.	
106) 1-Chlorohexane		0.000	14.195	0.000	0	N.D.	
107) cis-1,4-Dichloro-2-butene		0.000	15.396	0.000	0	N.D.	
108) Cyclohexanone		0.000	15.530	0.000	0	N.D.	
109) trans-1,4-Dichloro-2-b...		0.000	15.701	0.000	0	N.D.	
110) Pentachloroethane		0.000	16.445	0.000	0	N.D.	
111) Benzyl chloride	91	17.030	17.030	1.009	2071	N.D.	
112) bis(2-Chloroisopropyl)...	45	17.469	17.463	1.035	631	N.D.	

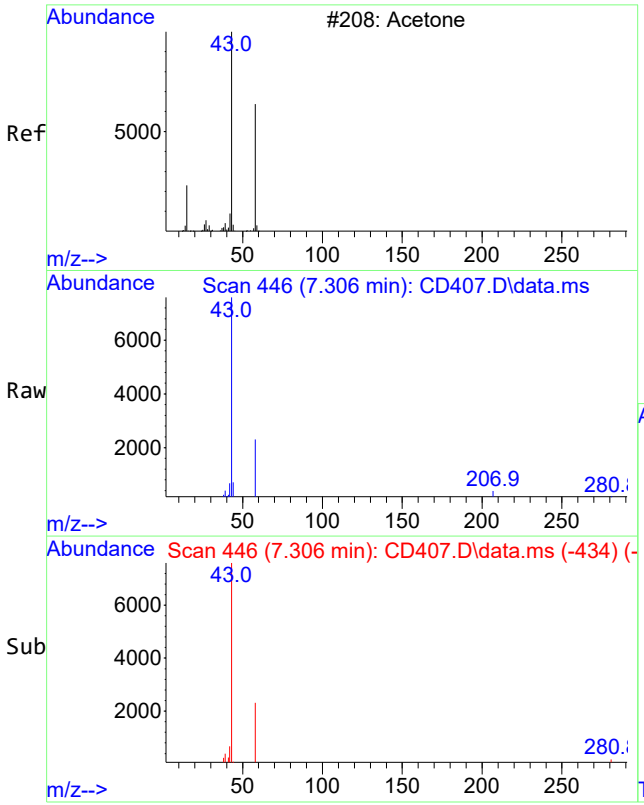
(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102623VC\
Data File : CD407.D
Acq On : 26 Oct 2023 11:24
Operator : PXY1
InstName : VOAC
Sample : |642648009|2514596|1|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G N/A SOIL
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Oct 26 12:39:24 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE

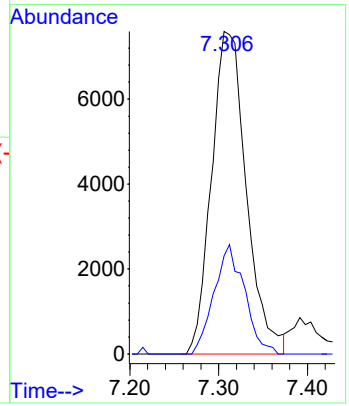


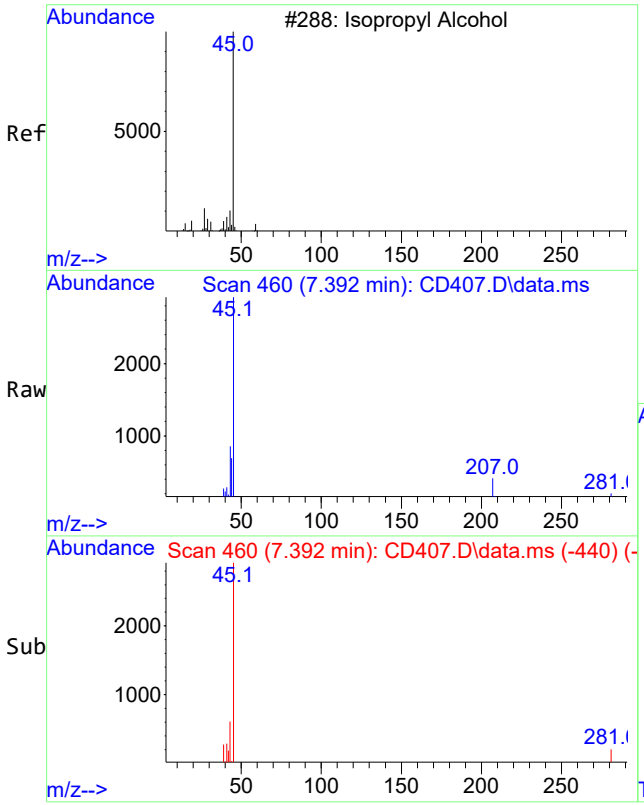


#9
Acetone
Concen: 10.11 ug/L
RT: 7.306 min Scan# 446
Delta R.T. -0.012 min
Lab File: CD407.D
Acq: 26 Oct 2023 11:24

Tgt Ion: 43 Resp: 20620

Ion	Ratio	Lower	Upper
43	100		
58	29.7	0.0	59.0

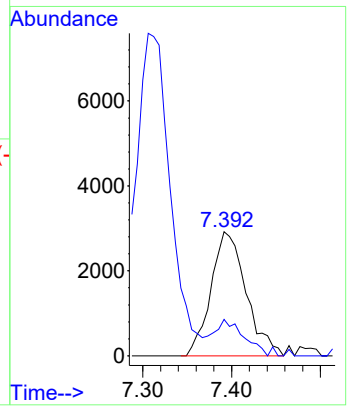




#87 BEFORE analyst DELETION
Isopropyl Alcohol
Concen: 22.81 ug/L
RT: 7.392 min Scan# 460
Delta R.T. -0.024 min
Lab File: CD407.D
Acq: 26 Oct 2023 11:24

Tgt Ion: 45 Resp: 8000

Ion	Ratio	Lower	Upper
45	100		
43	0.0	0.0	50.2



Library Search Compound Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102623VC\
Data File : CD407.D
Acq On : 26 Oct 2023 11:24
Operator : PXY1
Sample : |642648009|2514596|1|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G N/A SOIL
ALS Vial : 7 Sample Multiplier: 1

Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

No Library Search Compounds Detected
****

PG 10/27/2023
MA 10/27/2023

Tentatively Identified Compound (LSC) summary
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102623VC\
Data File : CD407.D
Acq On : 26 Oct 2023 11:24
Operator : PXY1
Sample : |642648009|2514596|1|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G N/A SOIL
ALS Vial : 7 Sample Multiplier: 1

Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

			(ug/L)		Internal Standard		
TIC Top Hit name	CAS #	RT	EstConc	Response	# RT	Resp	Conc

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 14:04**	**Matrix:**	**W**
Lab Sample ID:	**642648010**	**Date Received:**	**10/25/2023 11:10**		
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-302827**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2514703**	**Inst:**	**VOA3.I**	**Dilution:**	**1**
Run Date:	**10/26/2023 14:24**	**Analyst:**	**JM6**	**Purge Vol:**	**5 mL**
Prep Date:	**10/26/2023 14:24**				
Data File:	**102623V3\3P417.D**	**Column:**	**Serial Number: AB001**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	0.355	ug/L	0.355	1.00
74-87-3	Chloromethane	U	0.333	ug/L	0.333	1.00
75-01-4	Vinyl chloride	U	0.333	ug/L	0.333	1.00
74-83-9	Bromomethane	U	0.337	ug/L	0.337	1.00
75-00-3	Chloroethane	U	0.333	ug/L	0.333	1.00
75-69-4	Trichlorofluoromethane	U	0.333	ug/L	0.333	1.00
60-29-7	Ethyl ether	U	0.333	ug/L	0.333	1.00
67-64-1	Acetone	U	1.74	ug/L	1.74	5.00
75-35-4	1,1-Dichloroethylene	U	0.333	ug/L	0.333	1.00
74-88-4	Iodomethane	U	1.67	ug/L	1.67	5.00
75-05-8	Acetonitrile	U	8.33	ug/L	8.33	25.0
75-15-0	Carbon disulfide	U	1.67	ug/L	1.67	5.00
75-09-2	Methylene chloride	J	0.610	ug/L	0.500	5.00
1634-04-4	tert-Butyl methyl ether	U	0.333	ug/L	0.333	1.00
156-60-5	trans-1,2-Dichloroethylene	U	0.333	ug/L	0.333	1.00
108-05-4	Vinyl acetate	U	1.67	ug/L	1.67	5.00
75-34-3	1,1-Dichloroethane	U	0.333	ug/L	0.333	1.00
78-93-3	2-Butanone	U	1.67	ug/L	1.67	5.00
156-59-2	cis-1,2-Dichloroethylene	U	0.333	ug/L	0.333	1.00
594-20-7	2,2-Dichloropropane	U	0.333	ug/L	0.333	1.00
74-97-5	Bromochloromethane	U	0.333	ug/L	0.333	1.00
67-66-3	Chloroform		2.95	ug/L	0.333	1.00
71-55-6	1,1,1-Trichloroethane	U	0.333	ug/L	0.333	1.00
563-58-6	1,1-Dichloropropene	U	0.333	ug/L	0.333	1.00
56-23-5	Carbon tetrachloride	U	0.333	ug/L	0.333	1.00
107-06-2	1,2-Dichloroethane	U	0.333	ug/L	0.333	1.00
71-43-2	Benzene	U	0.333	ug/L	0.333	1.00
71-36-3	n-Butyl alcohol	U	21.1	ug/L	21.1	50.0
79-01-6	Trichloroethylene	U	0.333	ug/L	0.333	1.00
78-87-5	1,2-Dichloropropane	U	0.333	ug/L	0.333	1.00
74-95-3	Dibromomethane	U	0.333	ug/L	0.333	1.00
75-27-4	Bromodichloromethane		2.03	ug/L	0.333	1.00
10061-01-5	cis-1,3-Dichloropropylene	U	0.333	ug/L	0.333	1.00
108-10-1	4-Methyl-2-pentanone	U	1.67	ug/L	1.67	5.00
108-88-3	Toluene	U	0.333	ug/L	0.333	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	0.333	ug/L	0.333	1.00
79-00-5	1,1,2-Trichloroethane	U	0.333	ug/L	0.333	1.00
591-78-6	2-Hexanone	U	1.67	ug/L	1.67	5.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 14:04**	**Matrix:**	**W**
Lab Sample ID:	**642648010**	**Date Received:**	**10/25/2023 11:10**		
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-302827**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2514703**	**Inst:**	**VOA3.I**	**Dilution:**	**1**
Run Date:	**10/26/2023 14:24**	**Analyst:**	**JM6**	**Purge Vol:**	**5 mL**
Prep Date:	**10/26/2023 14:24**				
Data File:	**102623V3\3P417.D**	**Column:**	**Serial Number: AB001**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
142-28-9	1,3-Dichloropropane	U	0.333	ug/L	0.333	1.00
127-18-4	Tetrachloroethylene	U	0.333	ug/L	0.333	1.00
124-48-1	Dibromochloromethane		1.02	ug/L	0.333	1.00
106-93-4	1,2-Dibromoethane	U	0.333	ug/L	0.333	1.00
108-90-7	Chlorobenzene	U	0.333	ug/L	0.333	1.00
100-41-4	Ethylbenzene	U	0.333	ug/L	0.333	1.00
179601-23-1	m,p-Xylenes	U	0.500	ug/L	0.500	2.00
95-47-6	o-Xylene	U	0.333	ug/L	0.333	1.00
100-42-5	Styrene	U	0.333	ug/L	0.333	1.00
75-25-2	Bromoform	U	0.333	ug/L	0.333	1.00
98-82-8	Isopropylbenzene	U	0.333	ug/L	0.333	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	0.333	ug/L	0.333	1.00
96-18-4	1,2,3-Trichloropropane	U	0.333	ug/L	0.333	1.00
108-86-1	Bromobenzene	U	0.333	ug/L	0.333	1.00
103-65-1	n-Propylbenzene	U	0.333	ug/L	0.333	1.00
108-67-8	1,3,5-Trimethylbenzene	U	0.500	ug/L	0.500	2.00
95-49-8	2-Chlorotoluene	U	0.333	ug/L	0.333	1.00
106-43-4	4-Chlorotoluene	U	0.333	ug/L	0.333	1.00
98-06-6	tert-Butylbenzene	U	0.333	ug/L	0.333	1.00
95-63-6	1,2,4-Trimethylbenzene	U	0.333	ug/L	0.333	1.00
135-98-8	sec-Butylbenzene	U	0.333	ug/L	0.333	1.00
99-87-6	4-Isopropyltoluene	U	0.333	ug/L	0.333	1.00
541-73-1	1,3-Dichlorobenzene	U	0.333	ug/L	0.333	1.00
106-46-7	1,4-Dichlorobenzene	U	0.333	ug/L	0.333	1.00
104-51-8	n-Butylbenzene	U	0.333	ug/L	0.333	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	0.333	ug/L	0.333	1.00
87-68-3	Hexachlorobutadiene	U	0.333	ug/L	0.333	1.00
91-20-3	Naphthalene	U	0.333	ug/L	0.333	1.00
87-61-6	1,2,3-Trichlorobenzene	U	0.333	ug/L	0.333	1.00
107-02-8	Acrolein	U	1.67	ug/L	1.67	5.00
76-13-1	Trichlorotrifluoroethane	U	2.98	ug/L	2.98	5.00
107-05-1	Allyl chloride	U	1.67	ug/L	1.67	5.00
107-13-1	Acrylonitrile	U	1.67	ug/L	1.67	5.00
126-99-8	2-Chloro-1,3-butadiene	U	0.333	ug/L	0.333	1.00
107-12-0	Propionitrile	U	1.67	ug/L	1.67	5.00
126-98-7	Methacrylonitrile	U	1.67	ug/L	1.67	5.00
78-83-1	Isobutyl alcohol	U	16.7	ug/L	16.7	50.0
80-62-6	Methyl methacrylate	U	1.67	ug/L	1.67	5.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 14:04**	**Matrix:**	**W**
Lab Sample ID:	**642648010**	**Date Received:**	**10/25/2023 11:10**		
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-302827**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2514703**	**Inst:**	**VOA3.I**	**Dilution:**	**1**
Run Date:	**10/26/2023 14:24**	**Analyst:**	**JM6**	**Purge Vol:**	**5 mL**
Prep Date:	**10/26/2023 14:24**				
Data File:	**102623V3\3P417.D**	**Column:**	**Serial Number: AB001**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
97-63-2	Ethyl methacrylate	U	1.67	ug/L	1.67	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	0.333	ug/L	0.333	1.00
120-82-1	1,2,4-Trichlorobenzene	U	0.333	ug/L	0.333	1.00
95-50-1	1,2-Dichlorobenzene	U	0.333	ug/L	0.333	1.00

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	47.2	50.0	ug/L	94	(74%-123%)
1,2-Dichloroethane-d4	49.5	50.0	ug/L	99	(76%-127%)
Toluene-d8	48.3	50.0	ug/L	97	(77%-121%)

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Concentration	Units	Fit	Qual
	unknown	3.913	5.81	ug/L	0	J

Quantitation Report
GEL Laboratories, LLC

JSM 10/27/2023

Data Path : D:\MSDCHEM\1\Data\102623V3\
Data File : 3P417.D
Acq On : 26 Oct 2023 14:24
Operator : JM6
InstName : VOA3
Sample : |642648010|2514703|1|VOA|1|VOA8260D_L|
Misc : TNSL 5ML PH<2
ALS Vial : 17 Sample Multiplier: 1

MA 10/27/2023

Quant Time: Oct 26 19:24:44 2023
Quant Method : D:\MSDCHEM\1\Data\092923V3_ICAL\VOA3-8260D-092923.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:10:54 2023
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards								Dev(Min)
1) Fluorobenzene	96	9.890	9.890	1.000	1564337	50.00	ug/L	0.00
43) Chlorobenzene-d5	117	13.066	13.066	1.000	1076952	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	15.480	15.480	1.000	655061	50.00	ug/L	0.00
84) B Fluorobenzene	96	9.890	9.890	1.000	1565504	50.00	ug/L	0.00
103) B Chlorobenzene-d5	117	13.066	13.066	1.000	1076952	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	15.480	15.480	1.000	655061	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	9.549	9.549	0.965	248089	49.46	ug/L	0.00
45) Toluene-d8	98	11.530	11.530	0.882	1328692	48.30	ug/L	0.00
63) Bromofluorobenzene	95	14.261	14.261	0.921	516102	47.22	ug/L	0.00

Compound	Amount	Range	Recovery
30) 1,2-Dichloroethane-d4	50.000	76 - 127	99%
45) Toluene-d8	50.000	77 - 121	97%
63) Bromofluorobenzene	50.000	74 - 123	94%

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.278	0.000	0	N.D.		
3) Chloromethane	50	4.662	4.662	0.471	2288	N.D.		
4) Vinyl chloride		0.000	4.863	0.000	0	N.D.		
5) Bromomethane		0.000	5.447	0.000	0	N.D.		
6) Chloroethane		0.000	5.538	0.000	0	N.D.		
7) Trichlorofluoromethane		0.000	5.904	0.000	0	N.D.		
8) Ethyl ether		0.000	6.251	0.000	0	N.D.		
9) Acetone		0.000	6.653	0.000	0m	N.D.	d	
10) 1,1-Dichloroethylene		0.000	6.622	0.000	0	N.D.		
11) Iodomethane		0.000	6.872	0.000	0	N.D.		
12) Acetonitrile	41	7.031	7.019	0.711	487	N.D.		
13) Methyl acetate		0.000	7.031	0.000	0	N.D.		
14) Carbon disulfide	76	7.000	6.988	0.708	2645	N.D.		
15) Methylene chloride	84	7.214	7.208	0.729	10070	0.61	ug/L	97
16) tert-Butyl methyl ether		0.000	7.488	0.000	0	N.D.		
17) trans-1,2-Dichloroethy...		0.000	7.531	0.000	0	N.D.		
18) Hexane	57	7.805	7.799	0.789	1082	N.D.		
19) Vinyl acetate	43	7.799	7.988	0.789	826	N.D.		
20) 1,1-Dichloroethane		0.000	8.025	0.000	0	N.D.		
21) 2-Butanone	43	8.634	8.628	0.873	159	N.D.		
22) cis-1,2-Dichloroethylene		0.000	8.659	0.000	0	N.D.		
23) 2,2-Dichloropropane		0.000	8.677	0.000	0	N.D.		
24) Bromochloromethane		0.000	8.939	0.000	0m	N.D.	d	
25) Chloroform	83	8.976	8.970	0.908	38628	2.95	ug/L	98
26) 1,1,1-Trichloroethane		0.000	9.232	0.000	0	N.D.		
27) Cyclohexane		0.000	9.311	0.000	0	N.D.		
28) 1,1-Dichloropropene		0.000	9.390	0.000	0	N.D.		
29) Carbon tetrachloride		0.000	9.415	0.000	0	N.D.		
31) 1,2-Dichloroethane	62	9.543	9.628	0.965	111	N.D.		
32) Benzene	78	9.622	9.634	0.973	280	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MSDCHEM\1\Data\102623V3\
Data File : 3P417.D
Acq On : 26 Oct 2023 14:24
Operator : JM6
InstName : VOA3
Sample : |642648010|2514703|1|VOA|1|VOA8260D_L|
Misc : TNSL 5ML PH<2
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Oct 26 19:24:44 2023
Quant Method : D:\MSDCHEM\1\Data\092923V3_ICAL\VOA3-8260D-092923.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:10:54 2023
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
33) Cyclohexene	67	9.884	9.732	0.999	583	N.D.		
34) n-Butyl alcohol		0.000	10.012	0.000	0	N.D.		
35) Trichloroethylene		0.000	10.268	0.000	0	N.D.		
36) 2-Pentanone		0.000	10.378	0.000	0	N.D.		
37) 1,2-Dichloropropane		0.000	10.530	0.000	0	N.D.		
38) Methylcyclohexane		0.000	10.500	0.000	0	N.D.		
39) Dibromomethane	93	10.780	10.664	1.090	302	N.D.		
40) Bromodichloromethane	83	10.786	10.780	1.091	19633	2.03	ug/L	98
41) 2-Chloroethylvinyl ether		0.000	11.006	0.000	0	N.D.		
42) cis-1,3-Dichloropropylene		0.000	11.231	0.000	0	N.D.		
44) 4-Methyl-2-pentanone	43	11.329	11.329	0.867	108	N.D.		
46) Toluene	91	11.609	11.603	0.888	146	N.D.		
47) trans-1,3-Dichloroprop...		0.000	11.780	0.000	0	N.D.		
48) 1,1,2-Trichloroethane		0.000	11.999	0.000	0	N.D.		
49) 2-Hexanone	43	12.170	12.182	0.931	120	N.D.		
50) 1,3-Dichloropropane		0.000	12.188	0.000	0	N.D.		
51) Tetrachloroethylene		0.000	12.188	0.000	0	N.D.		
52) Dibromochloromethane	129	12.451	12.451	0.953	6335	1.02	ug/L	93
53) 1,2-Dibromoethane		0.000	12.621	0.000	0	N.D.		
54) Chlorobenzene		0.000	13.097	0.000	0	N.D.		
55) 1,1,1,2-Tetrachloroethane		0.000	13.152	0.000	0	N.D.		
56) Ethylbenzene	91	13.158	13.158	1.007	126	N.D.		
57) m,p-Xylenes		0.000	13.267	0.000	0	N.D.		
58) o-Xylene		0.000	13.700	0.000	0	N.D.		
59) Styrene	104	13.713	13.706	1.049	113	N.D.		
61) Bromoform		0.000	13.975	0.000	0	N.D.		
62) Isopropylbenzene	105	14.060	14.060	0.908	209	N.D.		
64) 1,1,2,2-Tetrachloroethane	83	14.255	14.359	0.921	139	N.D.		
65) 1,2,3-Trichloropropane		0.000	14.444	0.000	0	N.D.		
66) Bromobenzene		0.000	14.468	0.000	0	N.D.		
67) n-Propylbenzene	91	14.493	14.487	0.936	292	N.D.		
68) 1,3,5-Trimethylbenzene		0.000	14.639	0.000	0	N.D.		
69) 2-Chlorotoluene		0.000	14.639	0.000	0	N.D.		
70) 4-Chlorotoluene		0.000	14.737	0.000	0	N.D.		
71) tert-Butylbenzene		0.000	15.011	0.000	0	N.D.		
72) 1,2,4-Trimethylbenzene	105	15.139	15.054	0.978	685	N.D.		
73) sec-Butylbenzene	105	15.139	15.237	0.978	685	N.D.		
74) 4-Isopropyltoluene		0.000	15.359	0.000	0	N.D.		
75) 1,3-Dichlorobenzene	146	15.426	15.419	0.996	303	N.D.		
76) 1,4-Dichlorobenzene	146	15.505	15.505	1.002	730	N.D.		
77) n-Butylbenzene	91	15.810	15.791	1.021	158	N.D.		
78) 1,2-Dichlorobenzene	146	15.925	15.919	1.029	301	N.D.		
79) 1,2-Dibromo-3-chloropr...		0.000	16.779	0.000	0	N.D.		
80) 1,2,4-Trichlorobenzene	180	17.791	17.785	1.149	633	N.D.		
81) Hexachlorobutadiene		0.000	17.943	0.000	0	N.D.		
82) Naphthalene	128	18.169	18.163	1.174	2029	N.D.		
83) 1,2,3-Trichlorobenzene	180	18.486	18.492	1.194	431	N.D.		
85) Acrolein		0.000	6.476	0.000	0	N.D.		
86) Trichlorotrifluoroethane		0.000	6.598	0.000	0	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MSDCHEM\1\Data\102623V3\
Data File : 3P417.D
Acq On : 26 Oct 2023 14:24
Operator : JM6
InstName : VOA3
Sample : |642648010|2514703|1|VOA|1|VOA8260D_L|
Misc : TNSL 5ML PH<2
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Oct 26 19:24:44 2023
Quant Method : D:\MSDCHEM\1\Data\092923V3_ICAL\VOA3-8260D-092923.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:10:54 2023
Response via : Initial Calibration
Integrator: RTE

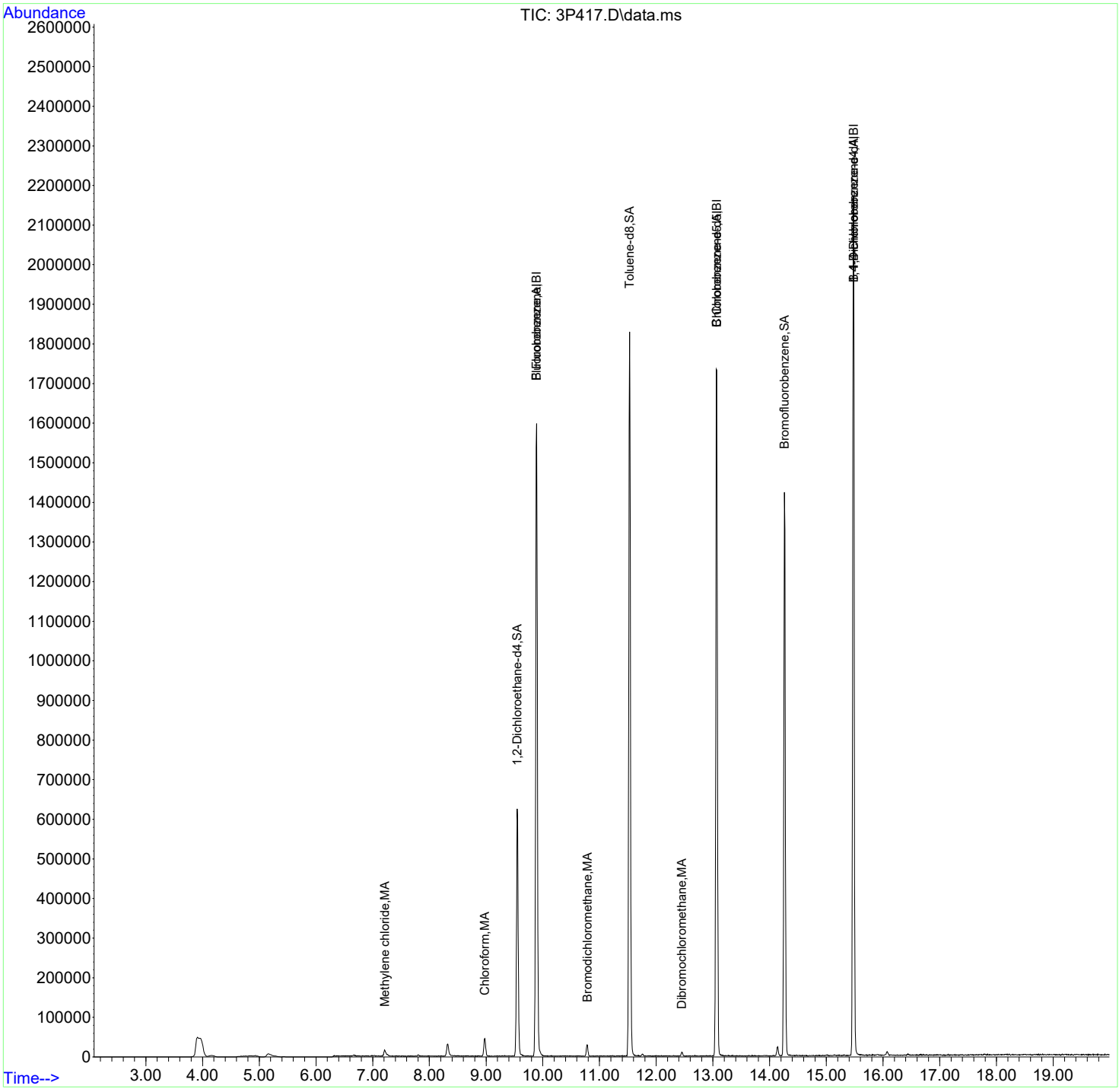
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
87) Isopropyl Alcohol		0.000	6.738	0.000	0	N.D.	
88) Allyl chloride	76	7.000	7.067	0.708	2645	N.D.	
89) tert-Butyl Alcohol	59	7.226	7.226	0.731	305	N.D.	
90) Acrylonitrile		0.000	7.488	0.000	0	N.D.	
91) Isopropyl ether		0.000	7.994	0.000	0	N.D.	
92) 2-Chloro-1,3-butadiene		0.000	8.128	0.000	0	N.D.	
93) Ethyl tert-butyl ether	59	8.329	8.396	0.842	1130	N.D.	
94) Ethyl acetate	43	8.634	8.628	0.873	159	N.D.	
95) Propionitrile		0.000	8.726	0.000	0	N.D.	
96) Methacrylonitrile		0.000	8.884	0.000	0	N.D.	
97) Tetrahydrofuran		0.000	8.982	0.000	0	N.D.	
98) Isobutyl alcohol		0.000	9.323	0.000	0	N.D.	
99) Methyl tert-amyl ether		0.000	9.646	0.000	0	N.D.	
100) Methyl methacrylate		0.000	10.506	0.000	0	N.D.	
101) 1,4-Dioxane		0.000	10.622	0.000	0	N.D.	
102) 2-Nitropropane	43	10.963	11.006	1.108	160	N.D.	
104) Ethyl methacrylate		0.000	11.774	0.000	0	N.D.	
106) 1-Chlorohexane		0.000	12.963	0.000	0	N.D.	
107) cis-1,4-Dichloro-2-butene		0.000	14.121	0.000	0	N.D.	
108) Cyclohexanone		0.000	14.237	0.000	0	N.D.	
109) trans-1,4-Dichloro-2-b...	53	14.444	14.408	0.933	108	N.D.	
110) Pentachloroethane		0.000	15.084	0.000	0	N.D.	
111) Benzyl chloride	91	15.480	15.627	1.000	1834	N.D.	
112) bis(2-Chloroisopropyl)...		0.000	16.023	0.000	0	N.D.	

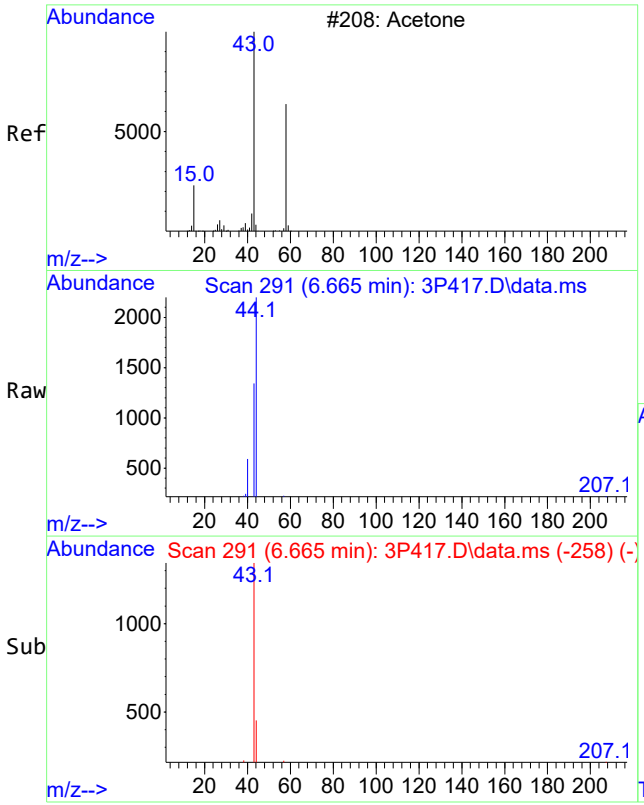
(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MSDCHEM\1\Data\102623V3\
Data File : 3P417.D
Acq On : 26 Oct 2023 14:24
Operator : JM6
InstName : VOA3
Sample : |642648010|2514703|1|VOA|1|VOA8260D_L|
Misc : TNSL 5ML PH<2
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Oct 26 19:24:44 2023
Quant Method : D:\MSDCHEM\1\Data\092923V3_ICAL\VOA3-8260D-092923.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:10:54 2023
Response via : Initial Calibration
Integrator: RTE

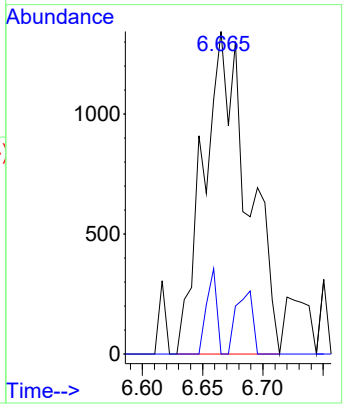


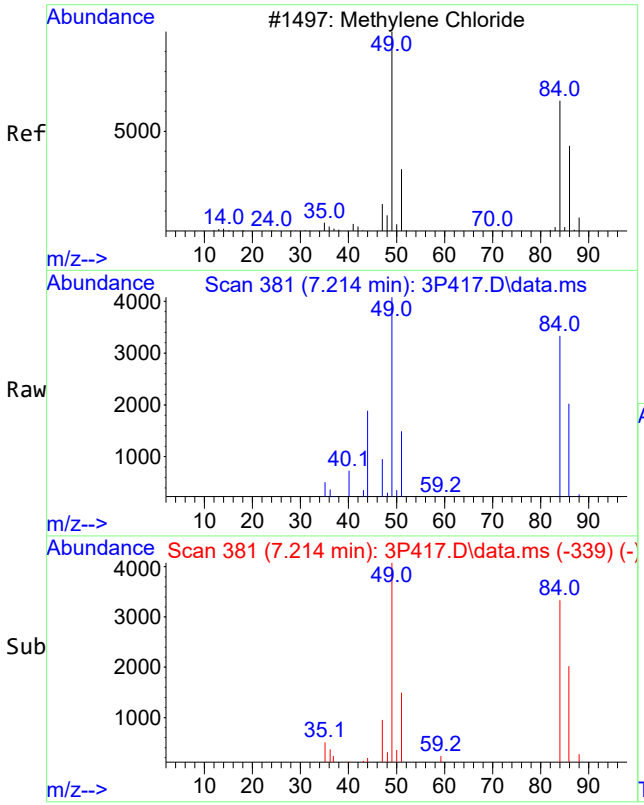


#9 BEFORE analyst DELETION
Acetone
Concen: 1.76 ug/L
RT: 6.665 min Scan# 291
Delta R.T. 0.012 min
Lab File: 3P417.D
Acq: 26 Oct 2023 14:24

Tgt Ion: 43 Resp: 3460

Ion	Ratio	Lower	Upper
43	100		
58	5.9	2.1	62.1

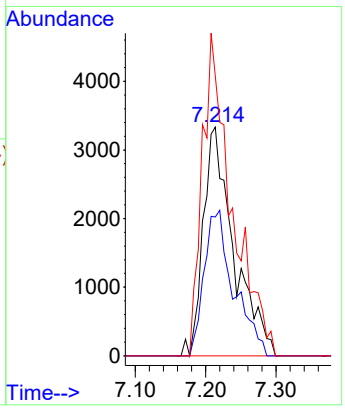


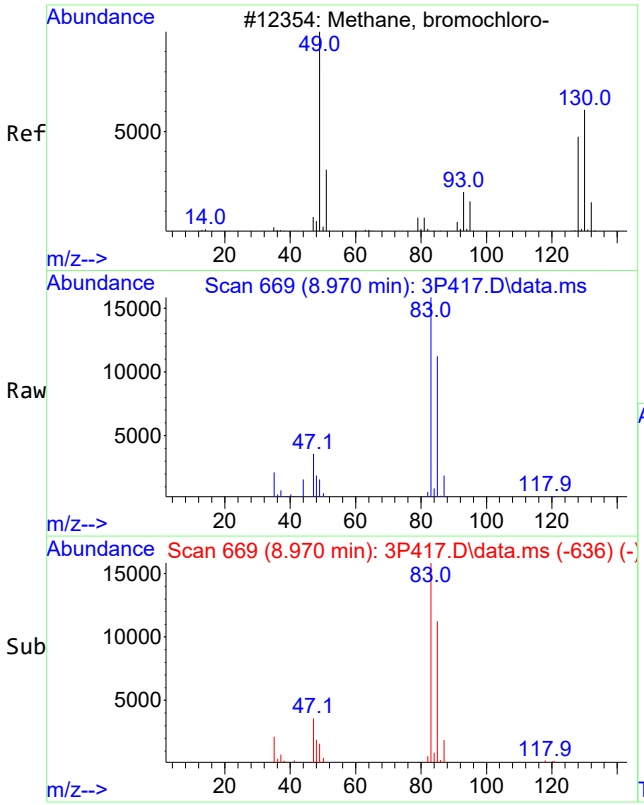


#15
Methylene chloride
Concen: 0.61 ug/L
RT: 7.214 min Scan# 381
Delta R.T. 0.006 min
Lab File: 3P417.D
Acq: 26 Oct 2023 14:24

Tgt Ion: 84 Resp: 10070

Ion	Ratio	Lower	Upper
84	100		
86	61.3	33.7	93.7
49	136.7	104.0	164.0

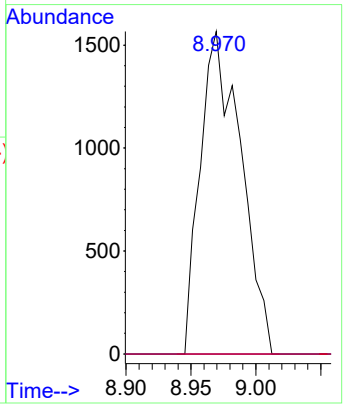


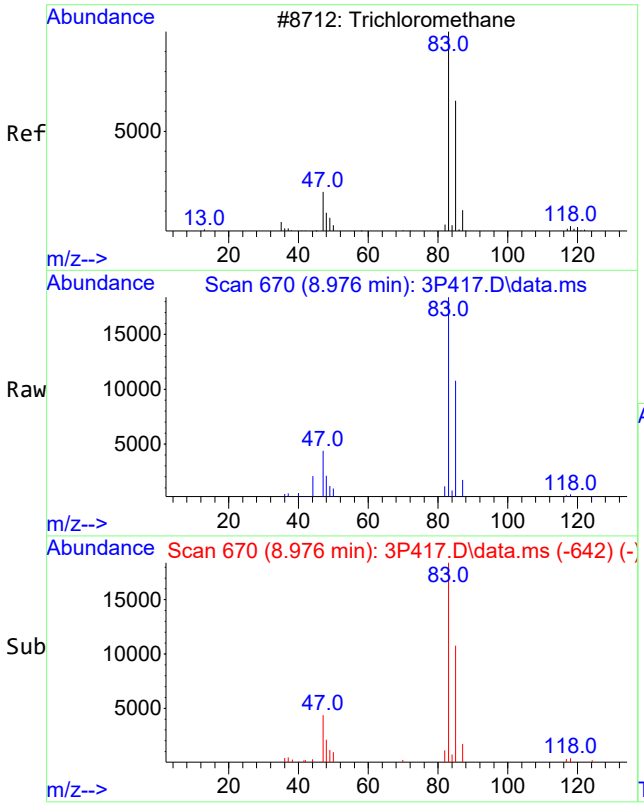


#24 BEFORE analyst DELETION
Bromochloromethane
Concen: 0.44 ug/L
RT: 8.970 min Scan# 669
Delta R.T. 0.031 min
Lab File: 3P417.D
Acq: 26 Oct 2023 14:24

Tgt Ion: 49 Resp: 3414

Ion	Ratio	Lower	Upper
49	100		
128	0.0	14.7	74.7#
130	0.0	27.4	87.4#

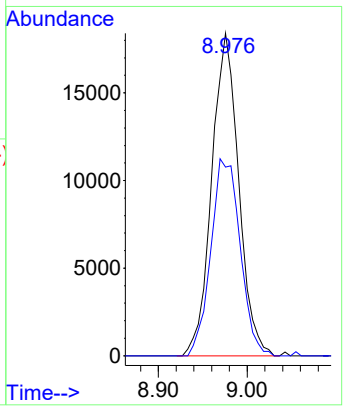


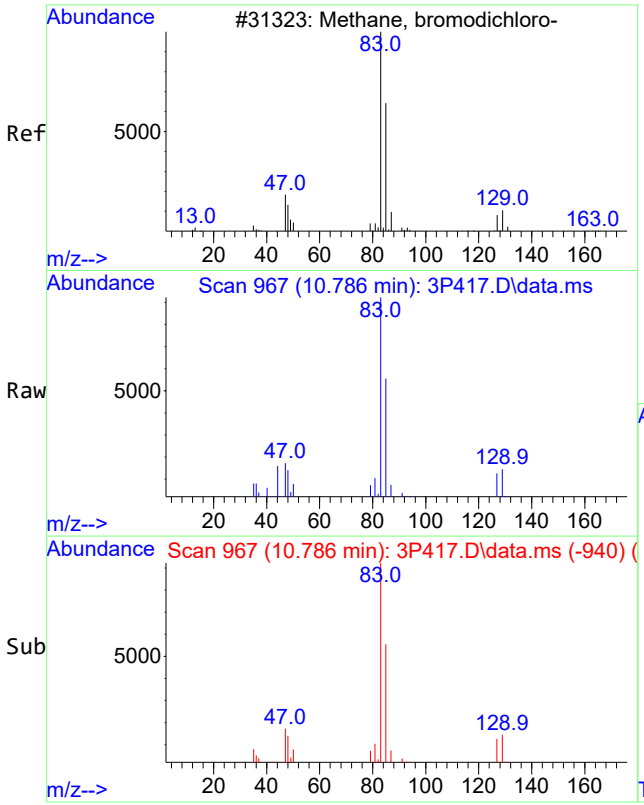


#25
Chloroform
Concen: 2.95 ug/L
RT: 8.976 min Scan# 670
Delta R.T. 0.006 min
Lab File: 3P417.D
Acq: 26 Oct 2023 14:24

Tgt Ion: 83 Resp: 38628

Ion	Ratio	Lower	Upper
83	100		
85	66.4	34.5	94.5

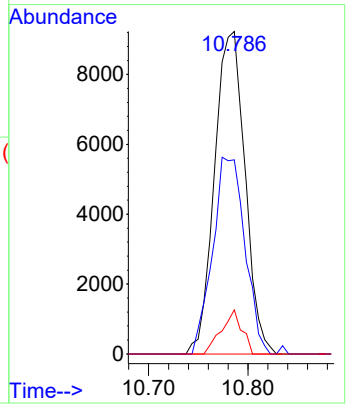


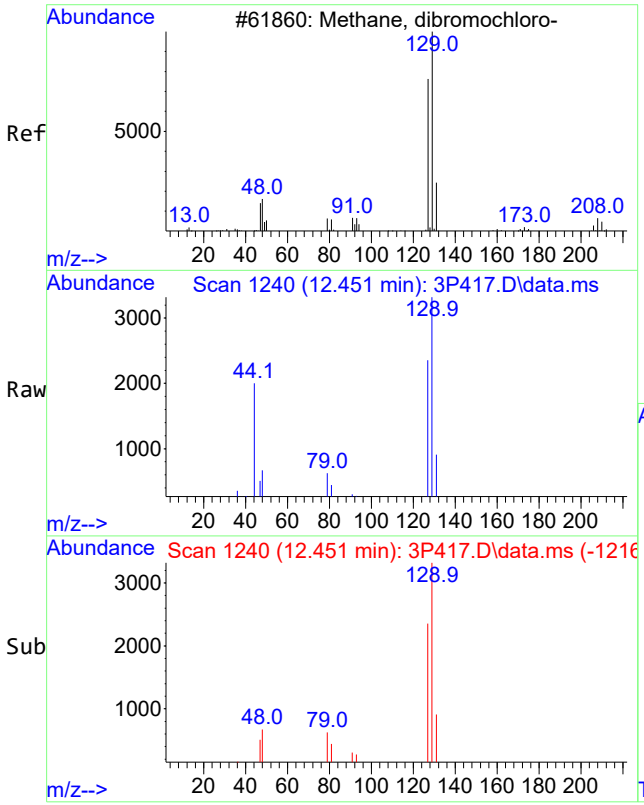


#40
Bromodichloromethane
Concen: 2.03 ug/L
RT: 10.786 min Scan# 967
Delta R.T. 0.006 min
Lab File: 3P417.D
Acq: 26 Oct 2023 14:24

Tgt Ion: 83 Resp: 19633

Ion	Ratio	Lower	Upper
83	100		
85	64.4	33.2	93.2
127	9.2	0.0	28.3

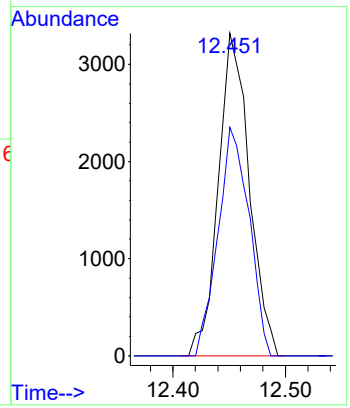




#52
Dibromochloromethane
Concen: 1.02 ug/L
RT: 12.451 min Scan# 1240
Delta R.T. -0.000 min
Lab File: 3P417.D
Acq: 26 Oct 2023 14:24

Tgt Ion:129 Resp: 6335

Ion	Ratio	Lower	Upper
129	100		
127	71.2	47.4	107.4



Library Search Compound Report
GEL Laboratories, LLC

10/27/2023

Data Path : D:\MSDCHEM\1\Data\102623V3\
Data File : 3P417.D
Acq On : 26 Oct 2023 14:24
Operator : JM6
Sample : |642648010|2514703|1|VOA|1|VOA8260D_L|
Misc : TNSL 5ML PH<2
ALS Vial : 17 Sample Multiplier: 1

10/27/2023

Quant Method : D:\MSDCHEM\1\Data\092923V3_ICAL\VOA3-8260D-092923.M
Quant Title : Volatile Organics SubList :

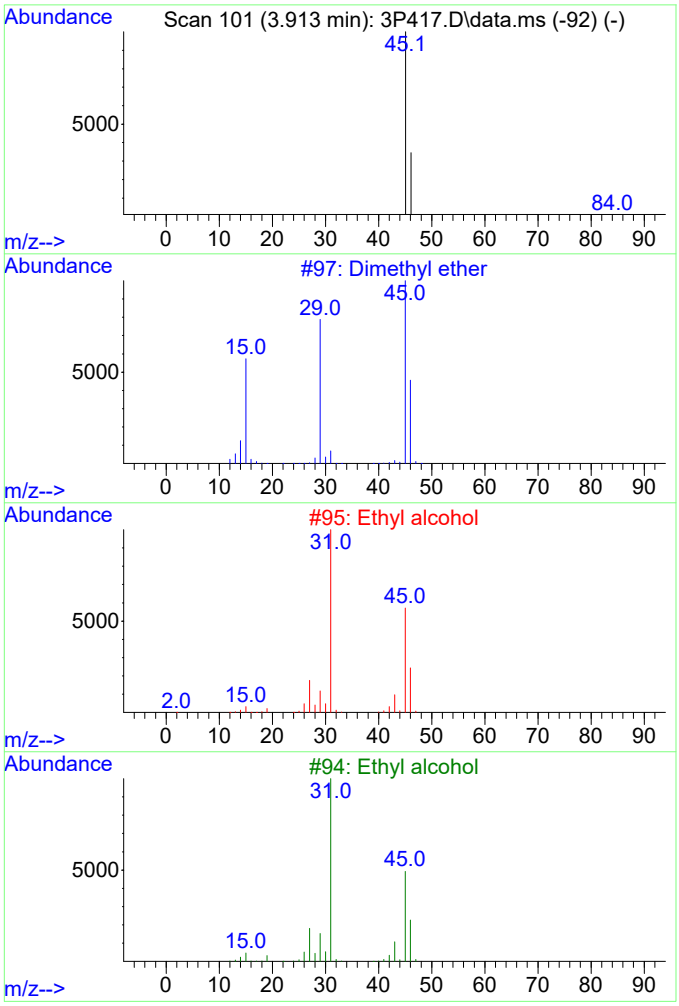
TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

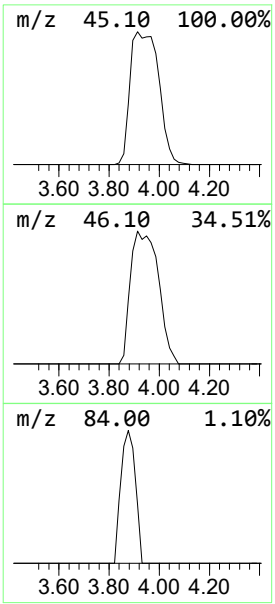
****

Peak Number 1 unknown Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.913	5.81 ug/L	398863	Fluorobenzene	9.890

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Dimethyl ether	46	C2H6O	000115-10-6	5
2	Ethyl alcohol	46	C2H6O	000064-17-5	4
3	Ethyl alcohol	46	C2H6O	000064-17-5	4
4	Ethyl alcohol	46	C2H6O	000064-17-5	4
5	Formic acid	46	CH2O2	000064-18-6	2





Tentatively Identified Compound (LSC) summary
GEL Laboratories, LLC

Data Path : D:\MSDCHEM\1\Data\102623V3\
Data File : 3P417.D
Acq On : 26 Oct 2023 14:24
Operator : JM6
Sample : |642648010|2514703|1|VOA|1|VOA8260D_L|
Misc : TNSL 5ML PH<2
ALS Vial : 17 Sample Multiplier: 1

Quant Method : D:\MSDCHEM\1\Data\092923V3_ICAL\VOA3-8260D-092923.M
Quant Title : Volatile Organics SubList :

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

			(ug/L)		Internal Standard		
TIC Top Hit name	CAS #	RT	EstConc	Response	# RT	Resp	Conc
unknown		3.913	5.8	398863	1 9.890	3431830	50.0

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 14:16**	**Matrix:**	**W**
Lab Sample ID:	**642648011**	**Date Received:**	**10/25/2023 11:10**		
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-302828**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2514703**	**Inst:**	**VOA3.I**	**Dilution:**	**1**
Run Date:	**10/26/2023 14:51**	**Analyst:**	**JM6**	**Purge Vol:**	**5 mL**
Prep Date:	**10/26/2023 14:51**				
Data File:	**102623V3\3P418.D**	**Column:**	**Serial Number: AB001**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	0.355	ug/L	0.355	1.00
74-87-3	Chloromethane	U	0.333	ug/L	0.333	1.00
75-01-4	Vinyl chloride	U	0.333	ug/L	0.333	1.00
74-83-9	Bromomethane	U	0.337	ug/L	0.337	1.00
75-00-3	Chloroethane	U	0.333	ug/L	0.333	1.00
75-69-4	Trichlorofluoromethane	U	0.333	ug/L	0.333	1.00
60-29-7	Ethyl ether	U	0.333	ug/L	0.333	1.00
67-64-1	Acetone	U	1.74	ug/L	1.74	5.00
75-35-4	1,1-Dichloroethylene	U	0.333	ug/L	0.333	1.00
74-88-4	Iodomethane	U	1.67	ug/L	1.67	5.00
75-05-8	Acetonitrile	U	8.33	ug/L	8.33	25.0
75-15-0	Carbon disulfide	U	1.67	ug/L	1.67	5.00
75-09-2	Methylene chloride	J	0.570	ug/L	0.500	5.00
1634-04-4	tert-Butyl methyl ether	U	0.333	ug/L	0.333	1.00
156-60-5	trans-1,2-Dichloroethylene	U	0.333	ug/L	0.333	1.00
108-05-4	Vinyl acetate	U	1.67	ug/L	1.67	5.00
75-34-3	1,1-Dichloroethane	U	0.333	ug/L	0.333	1.00
78-93-3	2-Butanone	U	1.67	ug/L	1.67	5.00
156-59-2	cis-1,2-Dichloroethylene	U	0.333	ug/L	0.333	1.00
594-20-7	2,2-Dichloropropane	U	0.333	ug/L	0.333	1.00
74-97-5	Bromochloromethane	U	0.333	ug/L	0.333	1.00
67-66-3	Chloroform		3.92	ug/L	0.333	1.00
71-55-6	1,1,1-Trichloroethane	U	0.333	ug/L	0.333	1.00
563-58-6	1,1-Dichloropropene	U	0.333	ug/L	0.333	1.00
56-23-5	Carbon tetrachloride	U	0.333	ug/L	0.333	1.00
107-06-2	1,2-Dichloroethane	U	0.333	ug/L	0.333	1.00
71-43-2	Benzene	U	0.333	ug/L	0.333	1.00
71-36-3	n-Butyl alcohol	U	21.1	ug/L	21.1	50.0
79-01-6	Trichloroethylene	U	0.333	ug/L	0.333	1.00
78-87-5	1,2-Dichloropropane	U	0.333	ug/L	0.333	1.00
74-95-3	Dibromomethane	U	0.333	ug/L	0.333	1.00
75-27-4	Bromodichloromethane		2.88	ug/L	0.333	1.00
10061-01-5	cis-1,3-Dichloropropylene	U	0.333	ug/L	0.333	1.00
108-10-1	4-Methyl-2-pentanone	U	1.67	ug/L	1.67	5.00
108-88-3	Toluene	U	0.333	ug/L	0.333	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	0.333	ug/L	0.333	1.00
79-00-5	1,1,2-Trichloroethane	U	0.333	ug/L	0.333	1.00
591-78-6	2-Hexanone	U	1.67	ug/L	1.67	5.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 14:16**	**Matrix:**	**W**
Lab Sample ID:	**642648011**	**Date Received:**	**10/25/2023 11:10**		
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-302828**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2514703**	**Inst:**	**VOA3.I**	**Dilution:**	**1**
Run Date:	**10/26/2023 14:51**	**Analyst:**	**JM6**	**Purge Vol:**	**5 mL**
Prep Date:	**10/26/2023 14:51**				
Data File:	**102623V3\3P418.D**	**Column:**	**Serial Number: AB001**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
142-28-9	1,3-Dichloropropane	U	0.333	ug/L	0.333	1.00
127-18-4	Tetrachloroethylene	U	0.333	ug/L	0.333	1.00
124-48-1	Dibromochloromethane		1.34	ug/L	0.333	1.00
106-93-4	1,2-Dibromoethane	U	0.333	ug/L	0.333	1.00
108-90-7	Chlorobenzene	U	0.333	ug/L	0.333	1.00
100-41-4	Ethylbenzene	U	0.333	ug/L	0.333	1.00
179601-23-1	m,p-Xylenes	U	0.500	ug/L	0.500	2.00
95-47-6	o-Xylene	U	0.333	ug/L	0.333	1.00
100-42-5	Styrene	U	0.333	ug/L	0.333	1.00
75-25-2	Bromoform	U	0.333	ug/L	0.333	1.00
98-82-8	Isopropylbenzene	U	0.333	ug/L	0.333	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	0.333	ug/L	0.333	1.00
96-18-4	1,2,3-Trichloropropane	U	0.333	ug/L	0.333	1.00
108-86-1	Bromobenzene	U	0.333	ug/L	0.333	1.00
103-65-1	n-Propylbenzene	U	0.333	ug/L	0.333	1.00
108-67-8	1,3,5-Trimethylbenzene	U	0.500	ug/L	0.500	2.00
95-49-8	2-Chlorotoluene	U	0.333	ug/L	0.333	1.00
106-43-4	4-Chlorotoluene	U	0.333	ug/L	0.333	1.00
98-06-6	tert-Butylbenzene	U	0.333	ug/L	0.333	1.00
95-63-6	1,2,4-Trimethylbenzene	U	0.333	ug/L	0.333	1.00
135-98-8	sec-Butylbenzene	U	0.333	ug/L	0.333	1.00
99-87-6	4-Isopropyltoluene	U	0.333	ug/L	0.333	1.00
541-73-1	1,3-Dichlorobenzene	U	0.333	ug/L	0.333	1.00
106-46-7	1,4-Dichlorobenzene	U	0.333	ug/L	0.333	1.00
104-51-8	n-Butylbenzene	U	0.333	ug/L	0.333	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	0.333	ug/L	0.333	1.00
87-68-3	Hexachlorobutadiene	U	0.333	ug/L	0.333	1.00
91-20-3	Naphthalene	U	0.333	ug/L	0.333	1.00
87-61-6	1,2,3-Trichlorobenzene	U	0.333	ug/L	0.333	1.00
107-02-8	Acrolein	U	1.67	ug/L	1.67	5.00
76-13-1	Trichlorotrifluoroethane	U	2.98	ug/L	2.98	5.00
107-05-1	Allyl chloride	U	1.67	ug/L	1.67	5.00
107-13-1	Acrylonitrile	U	1.67	ug/L	1.67	5.00
126-99-8	2-Chloro-1,3-butadiene	U	0.333	ug/L	0.333	1.00
107-12-0	Propionitrile	U	1.67	ug/L	1.67	5.00
126-98-7	Methacrylonitrile	U	1.67	ug/L	1.67	5.00
78-83-1	Isobutyl alcohol	U	16.7	ug/L	16.7	50.0
80-62-6	Methyl methacrylate	U	1.67	ug/L	1.67	5.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 14:16**	**Matrix:**	**W**
Lab Sample ID:	**642648011**	**Date Received:**	**10/25/2023 11:10**		
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-302828**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2514703**	**Inst:**	**VOA3.I**	**Dilution:**	**1**
Run Date:	**10/26/2023 14:51**	**Analyst:**	**JM6**	**Purge Vol:**	**5 mL**
Prep Date:	**10/26/2023 14:51**				
Data File:	**102623V3\3P418.D**	**Column:**	**Serial Number: AB001**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
97-63-2	Ethyl methacrylate	U	1.67	ug/L	1.67	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	0.333	ug/L	0.333	1.00
120-82-1	1,2,4-Trichlorobenzene	U	0.333	ug/L	0.333	1.00
95-50-1	1,2-Dichlorobenzene	U	0.333	ug/L	0.333	1.00

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	48.1	50.0	ug/L	96	(74%-123%)
1,2-Dichloroethane-d4	48.9	50.0	ug/L	98	(76%-127%)
Toluene-d8	47.4	50.0	ug/L	95	(77%-121%)

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Concentration	Units	Fit	Qual
	unknown	3.913	5.11	ug/L	0	J

Quantitation Report
GEL Laboratories, LLC

JSM 10/27/2023

Data Path : D:\MSDCHEM\1\Data\102623V3\
Data File : 3P418.D
Acq On : 26 Oct 2023 14:51
Operator : JM6
InstName : VOA3
Sample : |642648011|2514703|1|VOA|1|VOA8260D_L|
Misc : TNSL 5ML PH<2
ALS Vial : 18 Sample Multiplier: 1

MA 10/27/2023

Quant Time: Oct 26 19:24:53 2023
Quant Method : D:\MSDCHEM\1\Data\092923V3_ICAL\VOA3-8260D-092923.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:10:54 2023
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards								Dev(Min)
1) Fluorobenzene	96	9.890	9.890	1.000	1569558	50.00	ug/L	0.00
43) Chlorobenzene-d5	117	13.066	13.066	1.000	1080106	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	15.481	15.480	1.000	649135	50.00	ug/L	0.00
84) B Fluorobenzene	96	9.890	9.890	1.000	1570157	50.00	ug/L	0.00
103) B Chlorobenzene-d5	117	13.066	13.066	1.000	1080106	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	15.481	15.480	1.000	649135	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	9.549	9.549	0.965	246153	48.91	ug/L	0.00
45) Toluene-d8	98	11.530	11.530	0.882	1308390	47.42	ug/L	0.00
63) Bromofluorobenzene	95	14.261	14.261	0.921	521349	48.13	ug/L	0.00

Compound	Amount	Range	Recovery
30) 1,2-Dichloroethane-d4	50.000	76 - 127	98%
45) Toluene-d8	50.000	77 - 121	95%
63) Bromofluorobenzene	50.000	74 - 123	96%

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.278	0.000	0	N.D.		
3) Chloromethane	50	4.717	4.662	0.477	1935	N.D.		
4) Vinyl chloride		0.000	4.863	0.000	0	N.D.		
5) Bromomethane	94	5.392	5.447	0.545	300	N.D.		
6) Chloroethane		0.000	5.538	0.000	0	N.D.		
7) Trichlorofluoromethane		0.000	5.904	0.000	0	N.D.		
8) Ethyl ether		0.000	6.251	0.000	0	N.D.		
9) Acetone		0.000	6.653	0.000	0m	N.D.	d	
10) 1,1-Dichloroethylene		0.000	6.622	0.000	0	N.D.		
11) Iodomethane		0.000	6.872	0.000	0	N.D.		
12) Acetonitrile	41	7.031	7.019	0.711	129	N.D.		
13) Methyl acetate		0.000	7.031	0.000	0	N.D.		
14) Carbon disulfide	76	7.007	6.988	0.708	358	N.D.		
15) Methylene chloride	84	7.208	7.208	0.729	9779	0.57	ug/L	94
16) tert-Butyl methyl ether		0.000	7.488	0.000	0	N.D.		
17) trans-1,2-Dichloroethy...		0.000	7.531	0.000	0	N.D.		
18) Hexane	57	7.817	7.799	0.790	852	N.D.		
19) Vinyl acetate	43	7.848	7.988	0.794	103	N.D.		
20) 1,1-Dichloroethane		0.000	8.025	0.000	0	N.D.		
21) 2-Butanone	43	8.616	8.628	0.871	198	N.D.		
22) cis-1,2-Dichloroethylene		0.000	8.659	0.000	0	N.D.		
23) 2,2-Dichloropropane		0.000	8.677	0.000	0	N.D.		
24) Bromochloromethane		0.000	8.939	0.000	0m	N.D.	d	
25) Chloroform	83	8.976	8.970	0.908	51529	3.92	ug/L	99
26) 1,1,1-Trichloroethane		0.000	9.232	0.000	0	N.D.		
27) Cyclohexane		0.000	9.311	0.000	0	N.D.		
28) 1,1-Dichloropropene	75	9.433	9.390	0.954	173	N.D.		
29) Carbon tetrachloride		0.000	9.415	0.000	0	N.D.		
31) 1,2-Dichloroethane		0.000	9.628	0.000	0	N.D.		
32) Benzene	78	9.616	9.634	0.972	116	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MSDCHEM\1\Data\102623V3\
Data File : 3P418.D
Acq On : 26 Oct 2023 14:51
Operator : JM6
InstName : VOA3
Sample : |642648011|2514703|1|VOA|1|VOA8260D_L|
Misc : TNSL 5ML PH<2
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Oct 26 19:24:53 2023
Quant Method : D:\MSDCHEM\1\Data\092923V3_ICAL\VOA3-8260D-092923.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:10:54 2023
Response via : Initial Calibration
Integrator: RTE

	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
33)	Cyclohexene	67	9.890	9.732	1.000	819	N.D.		
34)	n-Butyl alcohol		0.000	10.012	0.000	0	N.D.		
35)	Trichloroethylene		0.000	10.268	0.000	0	N.D.		
36)	2-Pentanone	43	10.402	10.378	1.052	158	N.D.		
37)	1,2-Dichloropropane		0.000	10.530	0.000	0	N.D.		
38)	Methylcyclohexane		0.000	10.500	0.000	0	N.D.		
39)	Dibromomethane	93	10.780	10.664	1.090	586	N.D.		
40)	Bromodichloromethane	83	10.786	10.780	1.091	27870	2.88	ug/L	98
41)	2-Chloroethylvinyl ether		0.000	11.006	0.000	0	N.D.		
42)	cis-1,3-Dichloropropylene		0.000	11.231	0.000	0	N.D.		
44)	4-Methyl-2-pentanone	43	11.292	11.329	0.864	105	N.D.		
46)	Toluene	91	11.597	11.603	0.888	470	N.D.		
47)	trans-1,3-Dichloroprop...		0.000	11.780	0.000	0	N.D.		
48)	1,1,2-Trichloroethane		0.000	11.999	0.000	0	N.D.		
49)	2-Hexanone	43	12.188	12.182	0.933	178	N.D.		
50)	1,3-Dichloropropane		0.000	12.188	0.000	0	N.D.		
51)	Tetrachloroethylene		0.000	12.188	0.000	0	N.D.		
52)	Dibromochloromethane	129	12.463	12.451	0.954	8348	1.34	ug/L	88
53)	1,2-Dibromoethane		0.000	12.621	0.000	0	N.D.		
54)	Chlorobenzene		0.000	13.097	0.000	0	N.D.		
55)	1,1,1,2-Tetrachloroethane		0.000	13.152	0.000	0	N.D.		
56)	Ethylbenzene	91	13.152	13.158	1.007	254	N.D.		
57)	m,p-Xylenes	106	13.255	13.267	1.014	315	N.D.		
58)	o-Xylene		0.000	13.700	0.000	0	N.D.		
59)	Styrene		0.000	13.706	0.000	0	N.D.		
61)	Bromoform	173	13.975	13.975	0.903	360	N.D.		
62)	Isopropylbenzene		0.000	14.060	0.000	0	N.D.		
64)	1,1,2,2-Tetrachloroethane	83	14.255	14.359	0.921	355	N.D.		
65)	1,2,3-Trichloropropane		0.000	14.444	0.000	0	N.D.		
66)	Bromobenzene		0.000	14.468	0.000	0	N.D.		
67)	n-Propylbenzene	91	14.493	14.487	0.936	425	N.D.		
68)	1,3,5-Trimethylbenzene	105	14.639	14.639	0.946	120	N.D.		
69)	2-Chlorotoluene		0.000	14.639	0.000	0	N.D.		
70)	4-Chlorotoluene		0.000	14.737	0.000	0	N.D.		
71)	tert-Butylbenzene		0.000	15.011	0.000	0	N.D.		
72)	1,2,4-Trimethylbenzene	105	15.048	15.054	0.972	253	N.D.		
73)	sec-Butylbenzene	105	15.139	15.237	0.978	863	N.D.		
74)	4-Isopropyltoluene		0.000	15.359	0.000	0	N.D.		
75)	1,3-Dichlorobenzene	146	15.420	15.419	0.996	174	N.D.		
76)	1,4-Dichlorobenzene	146	15.511	15.505	1.002	948	N.D.		
77)	n-Butylbenzene		0.000	15.791	0.000	0	N.D.		
78)	1,2-Dichlorobenzene	146	15.926	15.919	1.029	414	N.D.		
79)	1,2-Dibromo-3-chloropr...		0.000	16.779	0.000	0	N.D.		
80)	1,2,4-Trichlorobenzene	180	17.791	17.785	1.149	531	N.D.		
81)	Hexachlorobutadiene		0.000	17.943	0.000	0	N.D.		
82)	Naphthalene	128	18.163	18.163	1.173	2074	N.D.		
83)	1,2,3-Trichlorobenzene	180	18.492	18.492	1.195	208	N.D.		
85)	Acrolein		0.000	6.476	0.000	0	N.D.		
86)	Trichlorotrifluoroethane		0.000	6.598	0.000	0	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MSDCHEM\1\Data\102623V3\
Data File : 3P418.D
Acq On : 26 Oct 2023 14:51
Operator : JM6
InstName : VOA3
Sample : |642648011|2514703|1|VOA|1|VOA8260D_L|
Misc : TNSL 5ML PH<2
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Oct 26 19:24:53 2023
Quant Method : D:\MSDCHEM\1\Data\092923V3_ICAL\VOA3-8260D-092923.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:10:54 2023
Response via : Initial Calibration
Integrator: RTE

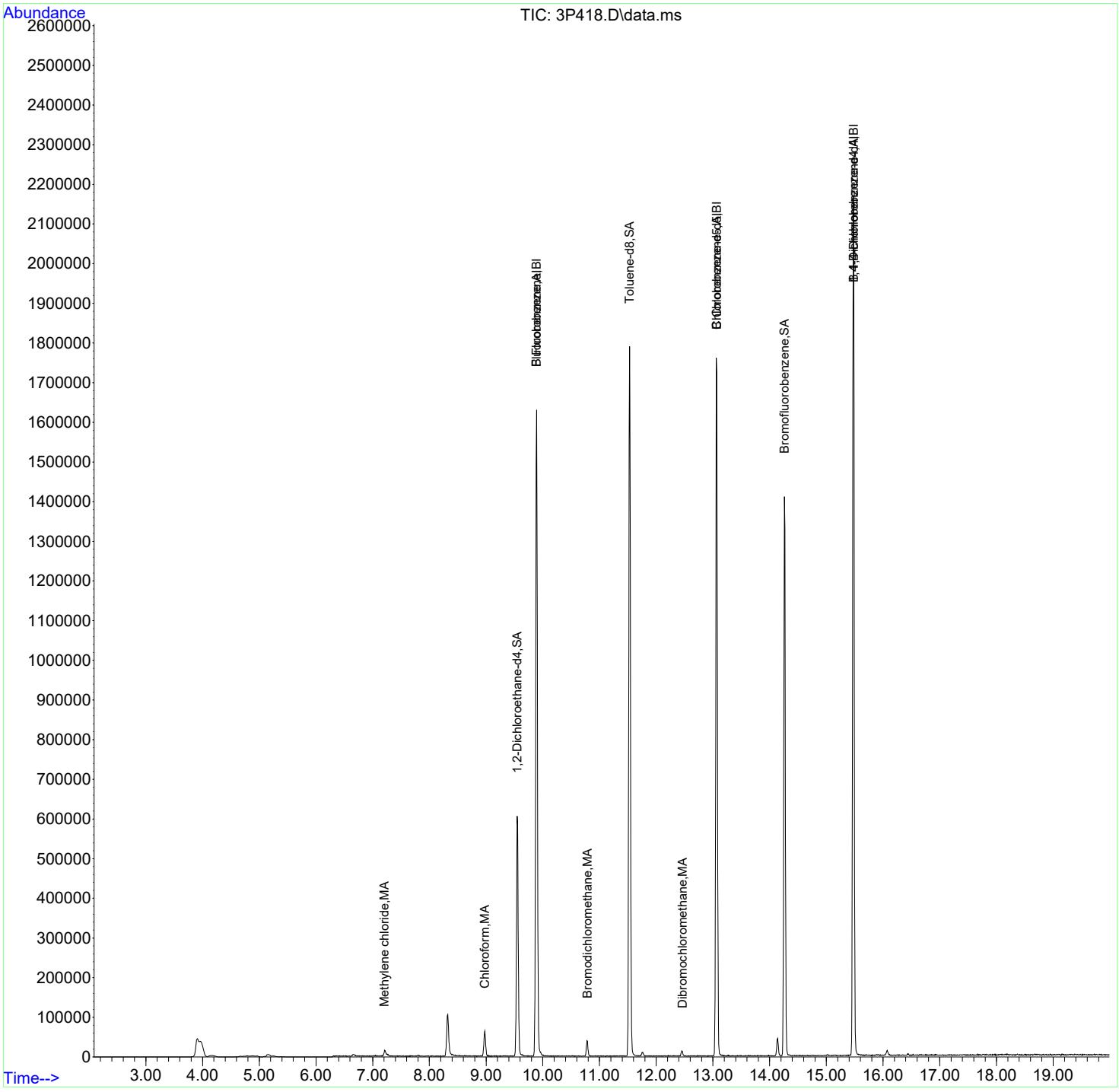
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
87) Isopropyl Alcohol	45	6.738	6.738	0.681	108	N.D.	
88) Allyl chloride		0.000	7.067	0.000	0	N.D.	
89) tert-Butyl Alcohol	59	7.226	7.226	0.731	229	N.D.	
90) Acrylonitrile		0.000	7.488	0.000	0	N.D.	
91) Isopropyl ether		0.000	7.994	0.000	0	N.D.	
92) 2-Chloro-1,3-butadiene	53	8.329	8.128	0.842	667	N.D.	
93) Ethyl tert-butyl ether	59	8.317	8.396	0.841	4317	N.D.	
94) Ethyl acetate	43	8.616	8.628	0.871	198	N.D.	
95) Propionitrile		0.000	8.726	0.000	0	N.D.	
96) Methacrylonitrile		0.000	8.884	0.000	0	N.D.	
97) Tetrahydrofuran		0.000	8.982	0.000	0	N.D.	
98) Isobutyl alcohol		0.000	9.323	0.000	0	N.D.	
99) Methyl tert-amyl ether		0.000	9.646	0.000	0	N.D.	
100) Methyl methacrylate		0.000	10.506	0.000	0	N.D.	
101) 1,4-Dioxane		0.000	10.622	0.000	0	N.D.	
102) 2-Nitropropane		0.000	11.006	0.000	0	N.D.	
104) Ethyl methacrylate		0.000	11.774	0.000	0	N.D.	
106) 1-Chlorohexane		0.000	12.963	0.000	0	N.D.	
107) cis-1,4-Dichloro-2-butene		0.000	14.121	0.000	0	N.D.	
108) Cyclohexanone		0.000	14.237	0.000	0	N.D.	
109) trans-1,4-Dichloro-2-b...		0.000	14.408	0.000	0	N.D.	
110) Pentachloroethane		0.000	15.084	0.000	0	N.D.	
111) Benzyl chloride	91	15.481	15.627	1.000	2083	N.D.	
112) bis(2-Chloroisopropyl)...		0.000	16.023	0.000	0	N.D.	

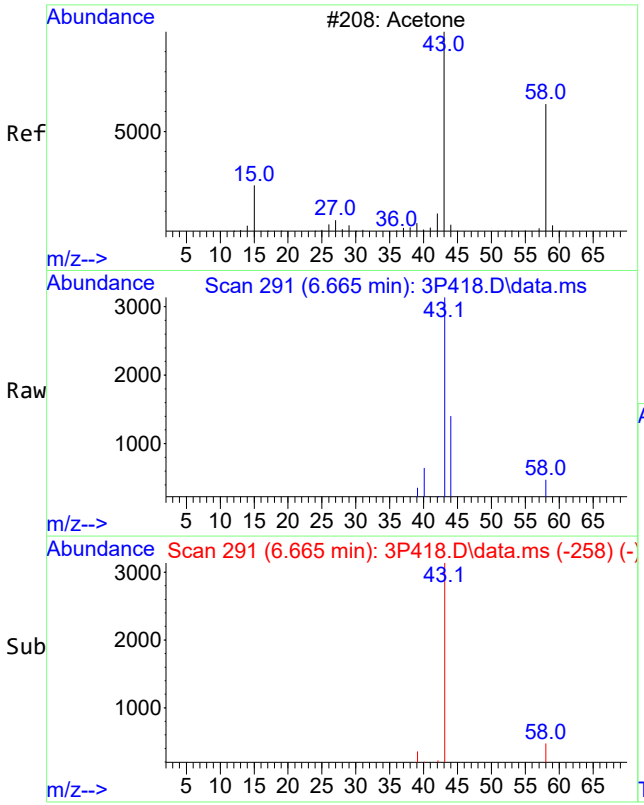
(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MSDCHEM\1\Data\102623V3\
Data File : 3P418.D
Acq On : 26 Oct 2023 14:51
Operator : JM6
InstName : VOA3
Sample : |642648011|2514703|1|VOA|1|VOA8260D_L|
Misc : TNSL 5ML PH<2
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Oct 26 19:24:53 2023
Quant Method : D:\MSDCHEM\1\Data\092923V3_ICAL\VOA3-8260D-092923.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:10:54 2023
Response via : Initial Calibration
Integrator: RTE

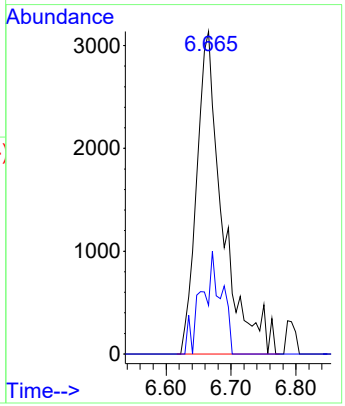


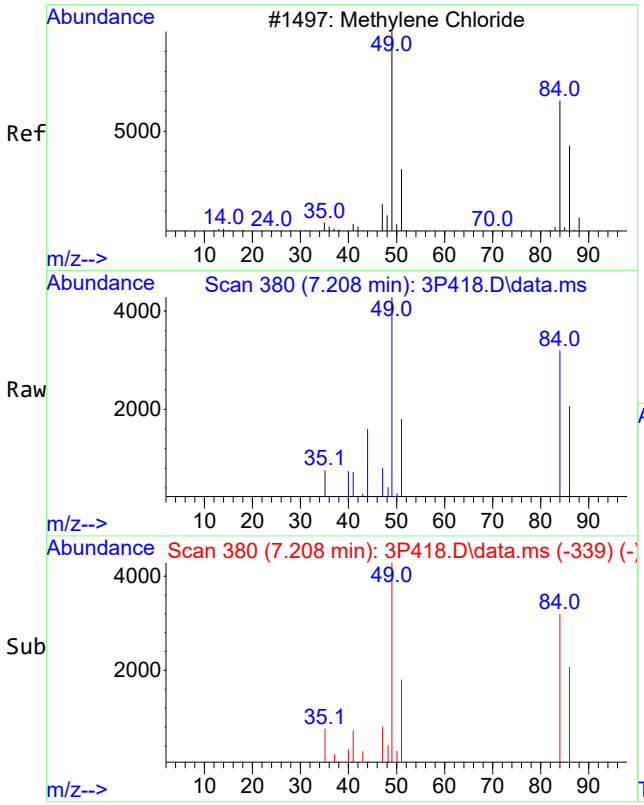


#9 BEFORE analyst DELETION
Acetone
Concen: 4.42 ug/L
RT: 6.665 min Scan# 291
Delta R.T. 0.012 min
Lab File: 3P418.D
Acq: 26 Oct 2023 14:51

Tgt Ion: 43 Resp: 8702

Ion	Ratio	Lower	Upper
43	100		
58	24.6	2.1	62.1

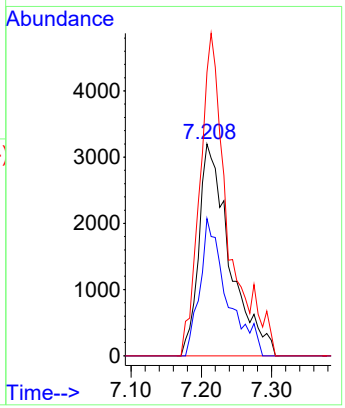


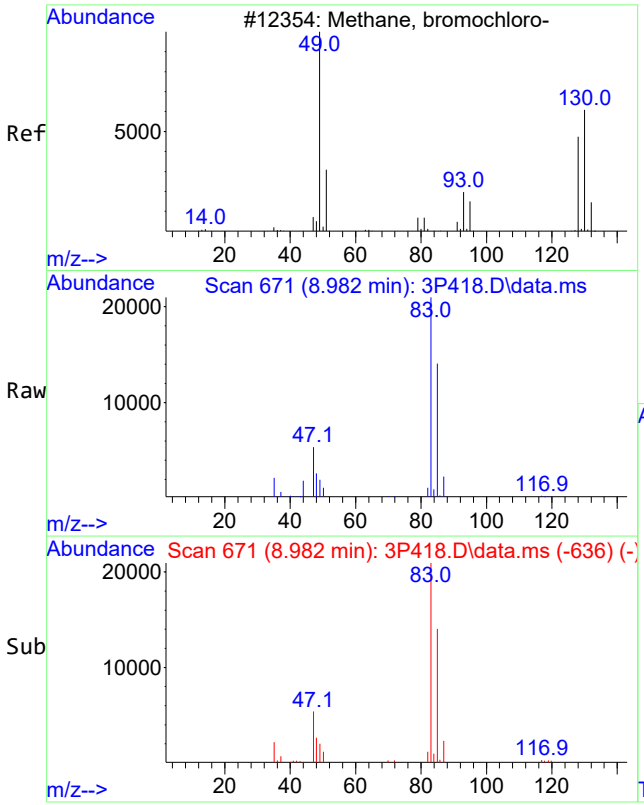


#15
Methylene chloride
Concen: 0.57 ug/L
RT: 7.208 min Scan# 380
Delta R.T. -0.000 min
Lab File: 3P418.D
Acq: 26 Oct 2023 14:51

Tgt Ion: 84 Resp: 9779

Ion	Ratio	Lower	Upper
84	100		
86	56.5	33.7	93.7
49	139.1	104.0	164.0

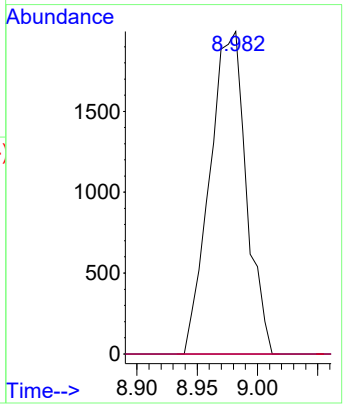


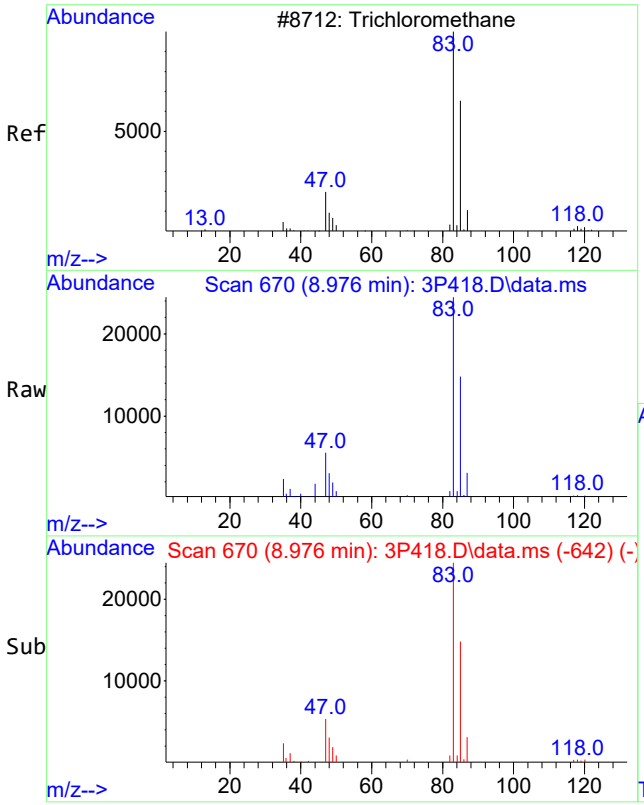


#24 BEFORE analyst DELETION
Bromochloromethane
Concen: 0.54 ug/L
RT: 8.982 min Scan# 671
Delta R.T. 0.043 min
Lab File: 3P418.D
Acq: 26 Oct 2023 14:51

Tgt Ion: 49 Resp: 4223

Ion	Ratio	Lower	Upper
49	100		
128	0.0	14.7	74.7#
130	0.0	27.4	87.4#

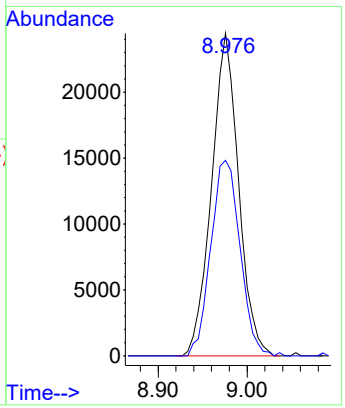


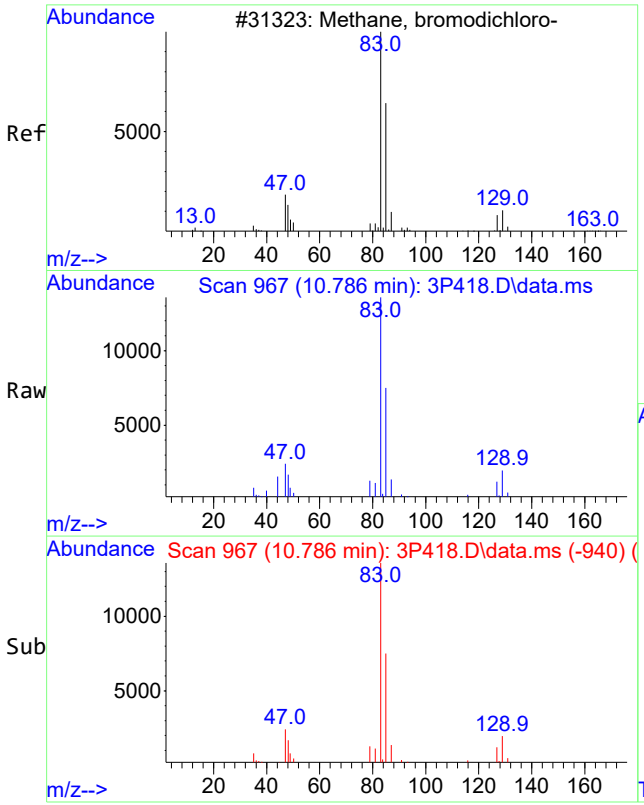


#25
Chloroform
Concen: 3.92 ug/L
RT: 8.976 min Scan# 670
Delta R.T. 0.006 min
Lab File: 3P418.D
Acq: 26 Oct 2023 14:51

Tgt Ion: 83 Resp: 51529

Ion	Ratio	Lower	Upper
83	100		
85	65.6	34.5	94.5

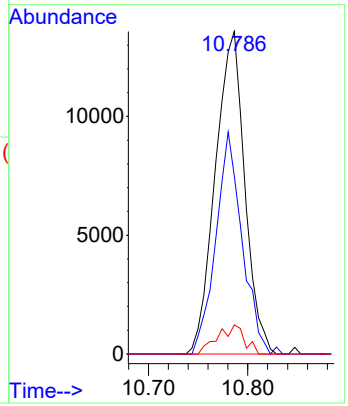


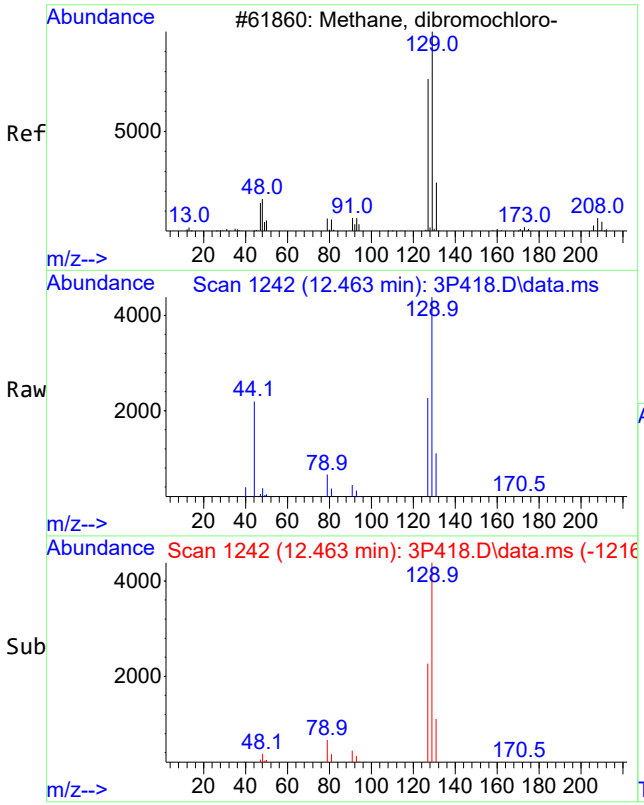


#40
Bromodichloromethane
Concen: 2.88 ug/L
RT: 10.786 min Scan# 967
Delta R.T. 0.006 min
Lab File: 3P418.D
Acq: 26 Oct 2023 14:51

Tgt Ion: 83 Resp: 27870

Ion	Ratio	Lower	Upper
83	100		
85	61.7	33.2	93.2
127	8.2	0.0	28.3

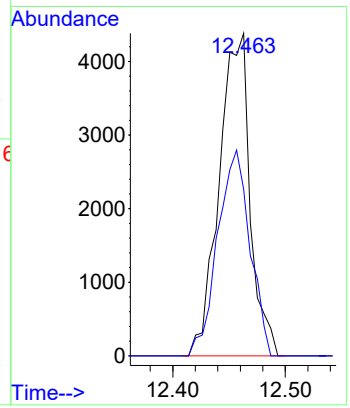




#52
Dibromochloromethane
Concen: 1.34 ug/L
RT: 12.463 min Scan# 1242
Delta R.T. 0.012 min
Lab File: 3P418.D
Acq: 26 Oct 2023 14:51

Tgt Ion:129 Resp: 8348

Ion	Ratio	Lower	Upper
129	100		
127	66.6	47.4	107.4



Library Search Compound Report
GEL Laboratories, LLC

10/27/2023

Data Path : D:\MSDCHEM\1\Data\102623V3\
Data File : 3P418.D
Acq On : 26 Oct 2023 14:51
Operator : JM6
Sample : |642648011|2514703|1|VOA|1|VOA8260D_L|
Misc : TNSL 5ML PH<2
ALS Vial : 18 Sample Multiplier: 1

10/27/2023

Quant Method : D:\MSDCHEM\1\Data\092923V3_ICAL\VOA3-8260D-092923.M
Quant Title : Volatile Organics SubList :

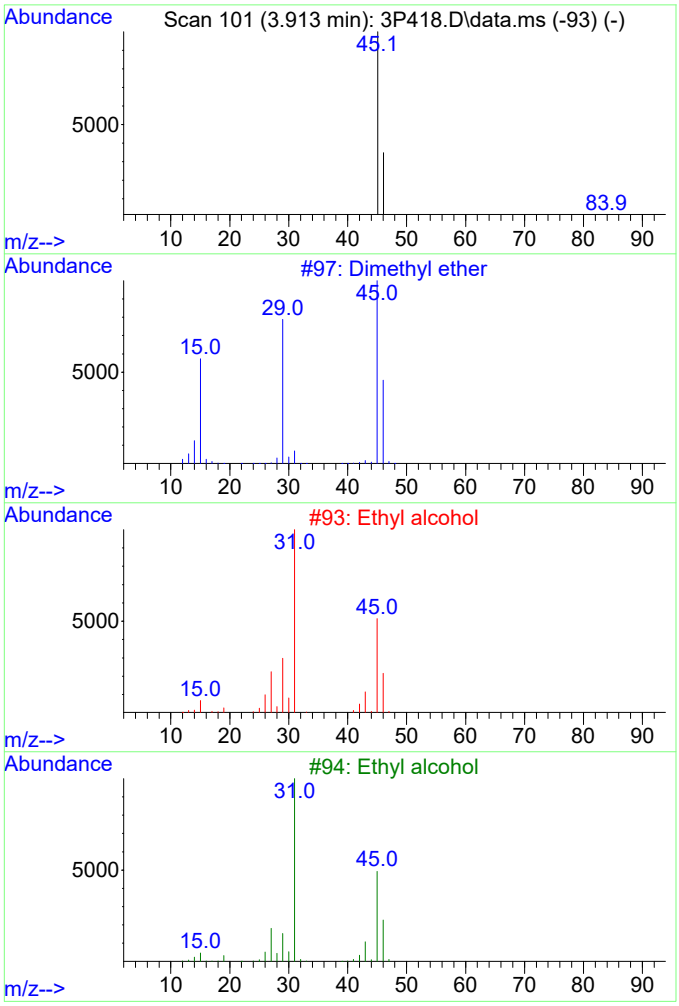
TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

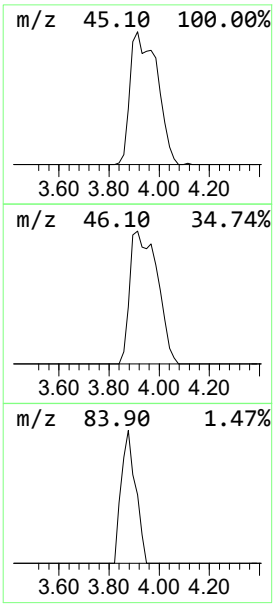
****

Peak Number 1 unknown Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.913	5.11 ug/L	350909	Fluorobenzene	9.890

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Dimethyl ether	46	C2H6O	000115-10-6	5
2	Ethyl alcohol	46	C2H6O	000064-17-5	4
3	Ethyl alcohol	46	C2H6O	000064-17-5	4
4	Ethyl alcohol	46	C2H6O	000064-17-5	4
5	Dimethyl ether	46	C2H6O	000115-10-6	2





Tentatively Identified Compound (LSC) summary
GEL Laboratories, LLC

Data Path : D:\MSDCHEM\1\Data\102623V3\
Data File : 3P418.D
Acq On : 26 Oct 2023 14:51
Operator : JM6
Sample : |642648011|2514703|1|VOA|1|VOA8260D_L|
Misc : TNSL 5ML PH<2
ALS Vial : 18 Sample Multiplier: 1

Quant Method : D:\MSDCHEM\1\Data\092923V3_ICAL\VOA3-8260D-092923.M
Quant Title : Volatile Organics SubList :

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

			(ug/L)		Internal Standard		
TIC Top Hit name	CAS #	RT	EstConc	Response	#	RT	Resp	Conc
unknown		3.913	5.1	350909	1	9.890	3432800	50.0

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 10:52**	**Matrix:**	**SO**
Lab Sample ID:	**642648012**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**4.8**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289591 DUP**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2514596**	**Inst:**	**VOAC.I**	**Dilution:**	**50**
Run Date:	**10/26/2023 15:59**	**Analyst:**	**PXY1**	**Purge Vol:**	**5 mL**
Prep Date:	**10/26/2023 09:10**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**data\102623VC\CD417.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	35.0	ug/kg	35.0	105
108-88-3	Toluene	U	35.0	ug/kg	35.0	105
100-41-4	Ethylbenzene	U	35.0	ug/kg	35.0	105
1330-20-7	Xylenes (total)	U	105	ug/kg	105	315

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	48.3	50.0	ug/L	97	(74%-128%)
1,2-Dichloroethane-d4	42.4	50.0	ug/L	85	(77%-127%)
Toluene-d8	45.8	50.0	ug/L	92	(81%-120%)

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102623VC\
Data File : CD417.D
Acq On : 26 Oct 2023 15:59
Operator : PXY1
InstName : VOAC
Sample : |642648012|2514596|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 17 Sample Multiplier: 1

10/27/2023

10/27/2023

Quant Time: Oct 27 09:01:03 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards								Dev(Min)
1) Fluorobenzene	96	10.873	10.879	1.000	1209075	50.00	ug/L	0.00
43) Chlorobenzene-d5	117	14.299	14.305	1.000	969989	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	16.878	16.884	1.000	560339	50.00	ug/L	0.00
84) B Fluorobenzene	96	10.873	10.879	1.000	1209075	50.00	ug/L	0.00
103) B Chlorobenzene-d5	117	14.299	14.305	1.000	969989	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	16.878	16.884	1.000	561141	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	65	10.482	10.495	0.964	362901	42.39	ug/L	-0.01
45) Toluene-d8	98	12.659	12.665	0.885	1148558	45.84	ug/L	0.00
63) Bromofluorobenzene	95	15.567	15.573	0.922	441332	48.26	ug/L	0.00

Compound	Amount	Range	Recovery
30) 1,2-Dichloroethane-d4	50.000	77 - 127	85%
45) Toluene-d8	50.000	81 - 120	92%
63) Bromofluorobenzene	50.000	74 - 128	97%

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.752	0.000	0	N.D.		
3) Chloromethane		0.000	5.185	0.000	0	N.D.		
4) Vinyl chloride		0.000	5.398	0.000	0	N.D.		
5) Bromomethane		0.000	6.038	0.000	0	N.D.		
6) Chloroethane		0.000	6.160	0.000	0	N.D.		
7) Trichlorofluoromethane		0.000	6.550	0.000	0	N.D.		
8) Ethyl ether		0.000	6.922	0.000	0	N.D.		
9) Acetone	43	7.306	7.318	0.672	1293	Below Cal		65
10) 1,1-Dichloroethylene	61	7.471	7.343	0.687	128	N.D.		
11) Iodomethane		0.000	7.611	0.000	0	N.D.		
12) Acetonitrile	41	7.696	7.690	0.708	137	N.D.		
13) Methyl acetate	43	7.739	7.745	0.712	1155	N.D.		
14) Carbon disulfide		0.000	7.769	0.000	0	N.D.		
15) Methylene chloride	84	7.934	7.946	0.730	7225	N.D.		
16) tert-Butyl methyl ether		0.000	8.275	0.000	0	N.D.		
17) trans-1,2-Dichloroethy...		0.000	8.324	0.000	0	N.D.		
18) Hexane	57	8.623	8.635	0.793	1339	N.D.		
19) Vinyl acetate		0.000	8.794	0.000	0	N.D.		
20) 1,1-Dichloroethane		0.000	8.842	0.000	0	N.D.		
21) 2-Butanone	43	9.476	9.476	0.872	842	N.D.		
22) cis-1,2-Dichloroethylene		0.000	9.531	0.000	0	N.D.		
23) 2,2-Dichloropropane		0.000	9.568	0.000	0	N.D.		
24) Bromochloromethane		0.000	9.830	0.000	0	N.D.		
25) Chloroform		0.000	9.867	0.000	0	N.D.		
26) 1,1,1-Trichloroethane		0.000	10.178	0.000	0	N.D.		
27) Cyclohexane		0.000	10.287	0.000	0	N.D.		
28) 1,1-Dichloropropene		0.000	10.348	0.000	0	N.D.		
29) Carbon tetrachloride		0.000	10.391	0.000	0	N.D.		
31) 1,2-Dichloroethane	62	10.476	10.580	0.964	190	N.D.		
32) Benzene	78	10.604	10.610	0.975	268	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102623VC\
Data File : CD417.D
Acq On : 26 Oct 2023 15:59
Operator : PXY1
InstName : VOAC
Sample : |642648012|2514596|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Oct 27 09:01:03 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
33) Cyclohexene		0.000	10.738	0.000	0	N.D.	
34) n-Butyl alcohol		0.000	10.976	0.000	0	N.D.	
35) Trichloroethylene		0.000	11.305	0.000	0	N.D.	
36) 2-Pentanone	43	11.366	11.385	1.045	235	N.D.	
37) 1,2-Dichloropropane		0.000	11.568	0.000	0	N.D.	
38) Methylcyclohexane		0.000	11.580	0.000	0	N.D.	
39) Dibromomethane		0.000	11.708	0.000	0	N.D.	
40) Bromodichloromethane		0.000	11.830	0.000	0	N.D.	
41) 2-Chloroethylvinyl ether		0.000	12.074	0.000	0	N.D.	
42) cis-1,3-Dichloropropylene		0.000	12.317	0.000	0	N.D.	
44) 4-Methyl-2-pentanone		0.000	12.421	0.000	0	N.D.	
46) Toluene	91	12.744	12.744	0.891	551	N.D.	
47) trans-1,3-Dichloroprop...		0.000	12.903	0.000	0	N.D.	
48) 1,1,2-Trichloroethane		0.000	13.140	0.000	0	N.D.	
49) 2-Hexanone	43	13.348	13.336	0.933	125	N.D.	
50) 1,3-Dichloropropane		0.000	13.348	0.000	0	N.D.	
51) Tetrachloroethylene		0.000	13.390	0.000	0	N.D.	
52) Dibromochloromethane		0.000	13.634	0.000	0	N.D.	
53) 1,2-Dibromoethane		0.000	13.817	0.000	0	N.D.	
54) Chlorobenzene		0.000	14.341	0.000	0	N.D.	
55) 1,1,1,2-Tetrachloroethane		0.000	14.396	0.000	0	N.D.	
56) Ethylbenzene		0.000	14.409	0.000	0	N.D.	
57) m,p-Xylenes		0.000	14.524	0.000	0	N.D.	
58) o-Xylene		0.000	14.988	0.000	0	N.D.	
59) Styrene		0.000	14.988	0.000	0	N.D.	
61) Bromoform		0.000	15.262	0.000	0	N.D.	
62) Isopropylbenzene		0.000	15.366	0.000	0	N.D.	
64) 1,1,2,2-Tetrachloroethane	83	15.567	15.646	0.922	425	N.D.	
65) 1,2,3-Trichloropropane		0.000	15.744	0.000	0	N.D.	
66) Bromobenzene		0.000	15.799	0.000	0	N.D.	
67) n-Propylbenzene		0.000	15.817	0.000	0	N.D.	
68) 1,3,5-Trimethylbenzene	105	15.975	15.975	0.947	145	N.D.	
69) 2-Chlorotoluene		0.000	15.975	0.000	0	N.D.	
70) 4-Chlorotoluene	91	16.085	16.079	0.953	135	N.D.	
71) tert-Butylbenzene		0.000	16.372	0.000	0	N.D.	
72) 1,2,4-Trimethylbenzene	105	16.469	16.414	0.976	747	N.D.	
73) sec-Butylbenzene		0.000	16.615	0.000	0	N.D.	
74) 4-Isopropyltoluene	119	16.750	16.743	0.992	157	N.D.	
75) 1,3-Dichlorobenzene		0.000	16.817	0.000	0	N.D.	
76) 1,4-Dichlorobenzene	146	16.908	16.908	1.002	157	N.D.	
77) n-Butylbenzene	91	17.237	17.231	1.021	207	N.D.	
78) 1,2-Dichlorobenzene		0.000	17.378	0.000	0	N.D.	
79) 1,2-Dibromo-3-chloropr...		0.000	18.335	0.000	0	N.D.	
80) 1,2,4-Trichlorobenzene	180	19.511	19.523	1.156	263	N.D.	
81) Hexachlorobutadiene		0.000	19.719	0.000	0	N.D.	
82) Naphthalene	128	19.944	19.956	1.182	1279	N.D.	
83) 1,2,3-Trichlorobenzene	180	20.322	20.340	1.204	133	N.D.	
85) Acrolein		0.000	7.117	0.000	0	N.D.	
86) Trichlorotrifluoroethane		0.000	7.312	0.000	0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102623VC\
Data File : CD417.D
Acq On : 26 Oct 2023 15:59
Operator : PXY1
InstName : VOAC
Sample : |642648012|2514596|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Oct 27 09:01:03 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE

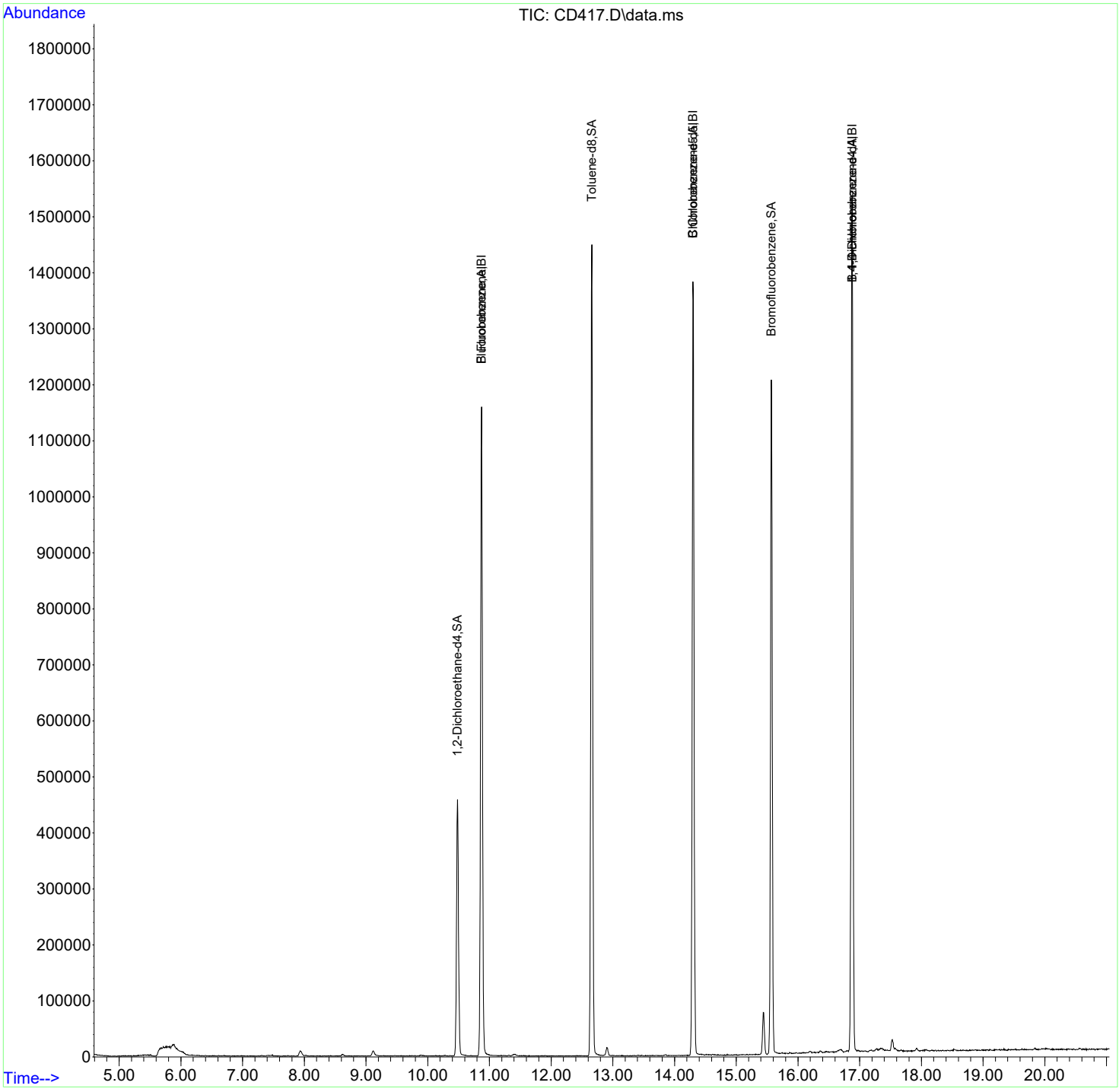
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
87) Isopropyl Alcohol	45	7.416	7.416	0.682	2785	N.D.	
88) Allyl chloride	41	7.763	7.794	0.714	125	N.D.	
89) tert-Butyl Alcohol	59	8.032	7.946	0.739	909	N.D.	
90) Acrylonitrile		0.000	8.208	0.000	0	N.D.	
91) Isopropyl ether		0.000	8.824	0.000	0	N.D.	
92) 2-Chloro-1,3-butadiene		0.000	8.958	0.000	0	N.D.	
93) Ethyl tert-butyl ether		0.000	9.263	0.000	0	N.D.	
94) Ethyl acetate	43	9.476	9.482	0.872	842	N.D.	
95) Propionitrile		0.000	9.543	0.000	0	N.D.	
96) Methacrylonitrile		0.000	9.745	0.000	0	N.D.	
97) Tetrahydrofuran	42	9.891	9.891	0.910	494	N.D.	
98) Isobutyl alcohol		0.000	10.220	0.000	0	N.D.	
99) Methyl tert-amyl ether		0.000	10.629	0.000	0	N.D.	
100) Methyl methacrylate		0.000	11.531	0.000	0	N.D.	
101) 1,4-Dioxane		0.000	11.665	0.000	0	N.D.	
102) 2-Nitropropane		0.000	12.043	0.000	0	N.D.	
104) Ethyl methacrylate		0.000	12.903	0.000	0	N.D.	
106) 1-Chlorohexane		0.000	14.195	0.000	0	N.D.	
107) cis-1,4-Dichloro-2-butene		0.000	15.396	0.000	0	N.D.	
108) Cyclohexanone		0.000	15.530	0.000	0	N.D.	
109) trans-1,4-Dichloro-2-b...		0.000	15.701	0.000	0	N.D.	
110) Pentachloroethane		0.000	16.445	0.000	0	N.D.	
111) Benzyl chloride	91	17.042	17.030	1.010	477	N.D.	
112) bis(2-Chloroisopropyl)...	45	17.518	17.463	1.038	716	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MassHunter\GCMS\1\data\102623VC\
Data File : CD417.D
Acq On : 26 Oct 2023 15:59
Operator : PXY1
InstName : VOAC
Sample : |642648012|2514596|50|VOAF|1|VOA8260D_S|
Misc : TNSL 5.0G/100UL N/A SOIL
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Oct 27 09:01:03 2023
Quant Method : D:\MassHunter\GCMS\1\data\100123VC_ICAL\VOAC-100123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Mon Oct 02 11:24:30 2023
Response via : Initial Calibration
Integrator: RTE



Miscellaneous

Prep Logbook

Volatile Organic Compounds (VOC) by Gas Chromatograph/Mass Spectrometer

Batch ID: 2514593 **Verified by:** _____
Analyst: Patrick Yib
Method: SW846 5030

Lab SOP: GL-OA-E-038 REV# 29
Instrument: VOAB-003 OH AUS Balance

Sample ID	Prep Date	Sample Wt (g)	Preservative	Final Volume (mL)	Prep Factor (mL/g)	Scanned Container
1205557485 LCS	26-OCT-2023 08:00:00	5	DI WATER	5	1	NA
1205557613 LCS	26-OCT-2023 08:01:00	5	DI WATER	5	1	NA
1205557486 MB	26-OCT-2023 08:02:00	5	DI WATER	5	1	NA
1205557487 HB	26-OCT-2023 09:00:00	5	METHANOL	10	2	NA
642648001	26-OCT-2023 09:01:00	5	METHANOL	10	2	642648001.01
1205557488 PS (642648001)	26-OCT-2023 09:01:00	5	METHANOL	10	2	NA
1205557489 PSD (642648001)	26-OCT-2023 09:01:00	5	METHANOL	10	2	NA
1205557614 PS (642648001)	26-OCT-2023 09:01:00	5	METHANOL	10	2	NA
1205557615 PSD (642648001)	26-OCT-2023 09:01:00	5	METHANOL	10	2	NA
642648002	26-OCT-2023 09:02:00	5	METHANOL	10	2	642648002.01
642648003	26-OCT-2023 09:03:00	5	METHANOL	10	2	642648003.01
642648004	26-OCT-2023 09:04:00	5	METHANOL	10	2	642648004.01
642648005	26-OCT-2023 09:05:00	5	METHANOL	10	2	642648005.01
642648006	26-OCT-2023 09:06:00	5	METHANOL	10	2	642648006.01
642648007	26-OCT-2023 09:07:00	5	METHANOL	10	2	642648007.01
642648008	26-OCT-2023 09:08:00	5	METHANOL	10	2	642648008.01
642648009	26-OCT-2023 09:09:00	5	DI WATER	5	1	642648009.01
642648012	26-OCT-2023 09:10:00	5	METHANOL	10	2	642648012.01

Type	Sample Id	Description	Serial Number	Spike Amt	Units

Comments:

ORGANIC RUN LOG - INSTRUMENT ID#VOA3

09/30/2023

10/02/2023

Date: 9/29/2023 Method 8260 Operator: JM6

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 50 Daily Instrument Readings:

Multiplier Voltage: 1506

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 9/29/2023

(See pg. _____ for ICAL Std. Ids)

Cl test lot # _____

Sequence Number: 093023V3_ICAL

Daily Standard Solution ID#		Volume Added for Purge (ul) Blk/ Smpl	CCV	MS/ LCS	BFB
CCV[A]			5		
IS	IVM230906-01	5	5	5	
SS	IVM230921-01	5	5	5	
ICV[A]	W3VM230929-10			5	
BFB	IVM230927-01				1
CCV[B]			5		
ICV[B]	W3VM230929-19			5	

Purge Amount

5ML	Water Purge Vol:
5.0G	Soil Purge Wt.
N/A	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
X	Heated Purge

Analysis Date Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable(O/X)	Comments
9/29/2023 7:25	3L501.D	IVM230927-01	GEL	BFB1	10ML	1	N/A	1	w	JM6	N/A	O	
9/29/2023 7:50	3L502.D	W3VM230929-01	VSTD0005	ICAL	5UL/5ML	1	N/A	2	w	JM6	N/A	O	MIX[A] UVM230822-01/UVM230615-01A/UVM230818-01C
9/29/2023 8:17	3L503.D	W3VM230929-02	VSTD001	ICAL	5UL/5ML	1	N/A	3	w	JM6	N/A	O	MIX[A] UVM230822-04/UVM230615-02A/UVM230818-02C 5ppm long list
9/29/2023 8:45	3L504.D	W3VM230929-03	VSTD002	ICAL	5UL/5ML	1	N/A	4	w	JM6	N/A	O	MIX[A] UVM230822-04/UVM230615-03A/UVM230818-03C 5ppm long list
9/29/2023 9:12	3L505.D	W3VM230929-04	VSTD005	ICAL	5UL/5ML	1	N/A	5	w	JM6	N/A	O	MIX[A] UVM230822-04/UVM230615-04A/UVM230818-034 5ppm long list
9/29/2023 9:40	3L506.D	W3VM230929-05	VSTD010	ICAL	5UL/5ML	1	N/A	6	w	JM6	N/A	O	MIX[A] UVM230822-05/UVM230615-05A/UVM230818-06C 20ppm hexane
9/29/2023 10:07	3L507.D	W3VM230929-06	VSTD020	ICAL	5UL/5ML	1	N/A	7	w	JM6	N/A	O	MIX[A] UVM230822-06UVM230615-06A/UVM230818-06C
9/29/2023 10:35	3L508.D	W3VM230929-07	VSTD050	ICAL	5UL/5ML	1	N/A	8	w	JM6	N/A	O	MIX[A] UVM230822-07UVM230615-07A/UVM230818-07C
9/29/2023 11:02	3L509.D	W3VM230929-08	VSTD080	ICAL	4UL/5ML	1	N/A	9	w	JM6	N/A	O	MIX[A] UVM230822-08UVM230615-08A/UVM230818-08C
9/29/2023 11:30	3L510.D	W3VM230929-09	VSTD100	ICAL	5UL/5ML	1	N/A	10	w	JM6	N/A	O	MIX[A] UVM230822-08UVM230615-08A/UVM230818-08C
9/29/2023 11:57	3L511.D	1204	GEL	BLK	5ML	1	N/A	11	w	JM6	N/A	X	RINSE
9/29/2023 12:25	3L512.D	W3VM230929-10	VSTD050	ICV	5UL/5ML	1	N/A	12	w	JM6	N/A	O	MIX[A] UVM230626-10D/UVM230519-02A/UVM230818-09B
9/29/2023 12:52	3L513.D	W3VM230929-11	VSTD005	ICAL	5UL/5ML	1	N/A	13	w	JM6	N/A	O	MIX[B] UVM230813-01B/UVM230831-01
9/29/2023 13:20	3L514.D	W3VM230929-12	VSTD010	ICAL	5UL/5ML	1	N/A	14	w	JM6	N/A	O	MIX[B] UVM230813-02B/UVM230831-02
9/29/2023 13:47	3L515.D	W3VM230929-13	VSTD025	ICAL	5UL/5ML	1	N/A	15	w	JM6	N/A	O	MIX[B] UVM230813-03B/UVM230831-03
9/29/2023 14:14	3L516.D	W3VM230929-14	VSTD050	ICAL	5UL/5ML	1	N/A	16	w	JM6	N/A	O	MIX[B] UVM230813-04B/UVM230831-04
9/29/2023 14:41	3L517.D	W3VM230929-15	VSTD100	ICAL	5UL/5ML	1	N/A	17	w	JM6	N/A	O	MIX[B] UVM230813-05B/UVM230831-05
9/29/2023 15:08	3L518.D	W3VM230929-16	VSTD250	ICAL	5UL/5ML	1	N/A	18	w	JM6	N/A	O	MIX[B] UVM230813-06B/UVM230831-06
9/29/2023 15:36	3L519.D	W3VM230929-17	VSTD300	ICAL	3UL/5ML	1	N/A	19	w	JM6	N/A	O	MIX[B] UVM230813-07B/UVM230831-07
9/29/2023 16:03	3L520.D	W3VM230929-18	VSTD500	ICAL	5UL/5ML	1	N/A	20	w	JM6	N/A	O	MIX[B] UVM230813-07B/UVM230831-07
9/29/2023 16:30	3L521.D	1204	GEL	BLK	5ML	1	N/A	21	w	JM6	N/A	X	RINSE
9/29/2023 16:57	3L522.D	W3VM230929-19	VSTD250	ICV	5UL/5ML	1	N/A	22	w	JM6	N/A	O	MIX[B] UVM230813-08E/UVM230831-08B
9/29/2023 17:24	3L523.D	1204	GEL	BLK	5ML	1	N/A	23	w	JM6	N/A	X	RINSE

ORGANIC RUN LOG - INSTRUMENT ID#VOA3

JM 10/27/2023

Date: 10/26/2023 Method 8260 Operator: JM6

LA 10/27/2023

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 50 Daily Instrument Readings:
Multiplier Voltage: 1529

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 9/29/2023

(See pg. _____ for ICAL Std. Ids)

Cl test lot # _____

Sequence Number: 102623V3

	Daily Standard Solution ID#	Volume Added for Purge (ul) Blk/ Smpl	CCV	MS/ LCS	BFB
CCV[A]	W3VM231026-01		5		
IS	IVM231010-01	5	5	5	
SS	IVM231011-01	5	5	5	
LCS[A]	W3VM231026-02			5	
BFB	IVM231016-01				1
CCV[B]	W3VM231026-03		5		
LCS[B]	W3VM231026-04			5	

Purge Amount	
5ML	Water Purge Vol:
5.0G	Soil Purge Wt.
N/A	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
X	Heated Purge

Analysis Date Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable(O/X)	Comments
10/26/2023 7:10	3P401.D	IVM231016-01	GEL	BFB	10ML	1	N/A	1	w	JM6	N/A	O	
10/26/2023 7:35	3P402.D	W3VM231026-01	GEL	CCV	5ML	1	N/A	2	w	JM6	N/A	O	MIX[A] UVM230626-07E/UVM230519-07J/UVM221106-10D
10/26/2023 8:03	3P403.D	W3VM231026-02	GEL	LCS	5ML	1	N/A	3	w	JM6	N/A	O	MIX[A] UVM230720-10B/UVM230519-02E/UVM230818-09C
10/26/2023 8:30	3P404.D	W3VM231026-03	GEL	CCV	5ML	1	N/A	4	w	JM6	N/A	O	MIX[B] UVM230608-06G/UVM230928-06C
10/26/2023 8:57	3P405.D	W3VM231026-04	GEL	LCS	5ML	1	N/A	5	w	JM6	N/A	O	MIX[B] UVM231009-08A/UVM230928-08B
10/26/2023 9:25	3P406.D	1205	GEL	BLANK	5ML	1	N/A	6	w	JM6	N/A	O	
10/26/2023 9:52	3P407.D	642103001	CPRC	2514472	5ML	1	PH<2	7	w	JM6	N	O	
10/26/2023 10:20	3P408.D	642103005	CPRC	2514472	5ML	1	PH<2	8	w	JM6	N	O	
10/26/2023 10:47	3P409.D	642103007	CPRC	2514472	5ML	1	PH<2	9	w	JM6	N	O	
10/26/2023 11:14	3P410.D	642107001	CPRC	2514472	5ML	1	PH<2	10	w	JM6	N	O	
10/26/2023 11:41	3P411.D	642107002	CPRC	2514472	5ML	1	PH<2	11	w	JM6	N	O	
10/26/2023 12:08	3P412.D	642114002	CPRC	2514472	5ML	1	PH<2	12	w	JM6	N	O	
10/26/2023 12:35	3P413.D	642138001	CPRC	2514472	5ML	1	PH<2	13	w	JM6	N	O	
10/26/2023 13:02	3P414.D	642632001	CPRC	2514472	5ML	1	PH<2	14	w	JM6	N	O	
10/26/2023 13:29	3P415.D	642632002	CPRC	2514472	5ML	1	PH<2	15	w	JM6	N	O	
10/26/2023 13:56	3P416.D	641989002	LLNL	2514703	5ML	1	PH7	16	w	JM6	N	O	
10/26/2023 14:24	3P417.D	642648010	TNSL	2514703	5ML	1	PH<2	17	w	JM6	N	O	OVER RANGE SEE FILE 3P507
10/26/2023 14:51	3P418.D	642648011	TNSL	2514703	5ML	1	PH<2	18	w	JM6	N	O	OVER RANGE SEE FILE 3P508
10/26/2023 15:18	3P419.D	1205557766	TNSL	2514703	5ML	1	PH<2	19	w	JM6	N	O	MIX[A] UVM230720-10B/UVM230519-02E 642648010PS
10/26/2023 15:45	3P420.D	1205557768	TNSL	2514703	5ML	1	PH<2	20	w	JM6	N	O	MIX[A] UVM230720-10B/UVM230519-02E 642648010PSD
10/26/2023 16:12	3P421.D	1205557767	TNSL	2514703	5ML	1	PH<2	21	w	JM6	N	O	MIX[B] UVM231009-08A/UVM230928-08B 642648010PS
10/26/2023 16:39	3P422.D	1205557769	TNSL	2514703	5ML	1	PH<2	22	w	JM6	N	O	MIX[B] UVM231009-08A/UVM230928-08B 642648010PSD
10/26/2023 17:06	3P423.D	1205557148	CPRC	2514472	5ML	1	PH<2	23	w	JM6	N	O	MIX[A] UVM230720-10B/UVM230519-02E 642107002PS
10/26/2023 17:32	3P424.D	1205557149	CPRC	2514472	5ML	1	PH<2	24	w	JM6	N	O	MIX[A] UVM230720-10B/UVM230519-02E 642107002PSD
10/26/2023 17:59	3P425.D	1205	GEL	BLANK	5ML	1	N/A	25	w	JM6	N/A	X	RINSE

ORGANIC RUN LOG - INSTRUMENT ID#VOAC

10/02/2023

10/02/2023

Date: 10/1/2023 Method 8260/624 Operator: PXY1

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 50 Daily Instrument Readings:

Multiplier Voltage: 1774

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 10/1/2023

(See pg. 001-002 for ICAL Std. Ids)

CI test lot # 034815B

Sequence Number: 100123VC

Daily Standard / Volume Added for Purge (ul)

	Solution ID#	Blk/ Smpl	CCV	MS/ LCS	BFB
BFB	IVM230927-01				1
IS	IVM230906-01	1	1	1	
SS	IVM230921-01	1	1	1	
ICV[A]	WCVM231001-10			5UL	
ICV[B]	WCVM231001-19			5UL	

Purge Amount

5ML	Water Purge Vol:
5.0G	Soil Purge Wt.
N/A	Mid level ext. MeOH Vol:
N/A	Methanol Lot #
X	Heated Purge

Analysis Date Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	CI test (Y/N)	Acceptable(O/X)	Comments
10/1/2023 13:06	CZ701.D	IVM230927-01	GEL	BFB	10ML	1	N/A	1	W	PXY1	N/A	O	
10/1/2023 13:31	CZ702.D	WCVM231001-01	VSTD0005	ICAL	5UL/5ML	1	N/A	2	w	PXY1	N/A	O	MIX[A] UVM230822-01/UVM230615-01A/UVM230818-01C
10/1/2023 13:59	CZ703.D	WCVM231001-02	VSTD001	ICAL	5UL/5ML	1	N/A	3	w	PXY1	N/A	O	MIX[A] UVM230822-04/UVM230615-02A/UVM230818-02C
10/1/2023 14:26	CZ704.D	WCVM231001-03	VSTD002	ICAL	5UL/5ML	1	N/A	4	w	PXY1	N/A	O	MIX[A] UVM230822-04/UVM230615-03A/UVM230818-03C
10/1/2023 14:53	CZ705.D	WCVM231001-04	VSTD005	ICAL	5UL/5ML	1	N/A	5	w	PXY1	N/A	O	MIX[A] UVM230822-04/UVM230615-04A/UVM230818-04C
10/1/2023 15:21	CZ706.D	WCVM231001-05	VSTD010	ICAL	5UL/5ML	1	N/A	6	w	PXY1	N/A	O	MIX[A] UVM230822-05/UVM230615-05A/UVM230818-06C
10/1/2023 15:48	CZ707.D	WCVM231001-06	VSTD020	ICAL	5UL/5ML	1	N/A	7	w	PXY1	N/A	O	MIX[A] UVM230822-06/UVM230615-06A/UVM230818-06C
10/1/2023 16:16	CZ708.D	WCVM231001-07	VSTD050	ICAL	5UL/5ML	1	N/A	8	w	PXY1	N/A	O	MIX[A] UVM230822-07/UVM230615-07A/UVM230818-07C
10/1/2023 16:43	CZ709.D	WCVM231001-08	VSTD080	ICAL	4UL/5ML	1	N/A	9	w	PXY1	N/A	O	MIX[A] UVM230822-08/UVM230615-07A/UVM230818-08C
10/1/2023 17:11	CZ710.D	WCVM231001-09	VSTD100	ICAL	5UL/5ML	1	N/A	10	w	PXY1	N/A	O	MIX[A] UVM230822-08/UVM230615-07A/UVM230818-08C
10/1/2023 17:38	CZ711.D	BLANK	GEL	IB	5ML	1	N/A	11	w	PXY1	N/A	X	RINSE
10/1/2023 18:06	CZ712.D	WCVM231001-10	GEL	ICV	5UL/5ML	1	N/A	12	w	PXY1	N/A	O	MIX[A] UVM230626-10C/UVM230519-02A/UVM230818-09B
10/1/2023 18:33	CZ713.D	WCVM231001-11	VSTD005	ICAL	5UL/5ML	1	N/A	13	w	PXY1	N/A	O	MIX[B] UVM230813-01B/UVM230831-01
10/1/2023 19:01	CZ714.D	WCVM231001-12	VSTD010	ICAL	5UL/5ML	1	N/A	14	w	PXY1	N/A	O	MIX[B] UVM230813-02B/UVM230831-02
10/1/2023 19:28	CZ715.D	WCVM231001-13	VSTD025	ICAL	5UL/5ML	1	N/A	15	w	PXY1	N/A	O	MIX[B] UVM230813-03B/UVM230831-03
10/1/2023 19:56	CZ716.D	WCVM231001-14	VSTD050	ICAL	5UL/5ML	1	N/A	16	w	PXY1	N/A	O	MIX[B] UVM230813-04B/UVM230831-04
10/1/2023 20:23	CZ717.D	WCVM231001-15	VSTD100	ICAL	5UL/5ML	1	N/A	17	w	PXY1	N/A	O	MIX[B] UVM230813-05B/UVM230831-05
10/1/2023 20:51	CZ718.D	WCVM231001-16	VSTD250	ICAL	5UL/5ML	1	N/A	18	w	PXY1	N/A	O	MIX[B] UVM230813-06B/UVM230831-06
10/1/2023 21:18	CZ719.D	WCVM231001-17	VSTD300	ICAL	3UL/5ML	1	N/A	19	w	PXY1	N/A	O	MIX[B] UVM230813-07B/UVM230831-07
10/1/2023 21:46	CZ720.D	WCVM231001-18	VSTD500	ICAL	5UL/5ML	1	N/A	20	w	PXY1	N/A	O	MIX[B] UVM230813-07B/UVM230831-07
10/1/2023 22:13	CZ721.D	BLANK	GEL	IB	5ML	1	N/A	21	w	PXY1	N/A	X	RINSE
10/1/2023 22:41	CZ722.D	WCVM231001-19	GEL	ICV	5UL/5ML	1	N/A	22	w	PXY1	N/A	O	MIX[B] UVM230813-08E/UVM230831-08B
10/1/2023 23:09	CZ723.D	BLANK	GEL	IB	5ML	1	N/A	23	w	PXY1	N/A	X	RINSE

ORGANIC RUN LOG - INSTRUMENT ID#VOAC

10/27/2023

10/27/2023

Date: 10/26/2023 Method 8260/624 Operator: PXY1

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 50 Daily Instrument Readings:

Multiplier Voltage: 1774

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 10/1/2023

(See pg. 001-002 for ICAL Std. Ids)

CI test lot # 034815B

Sequence Number: 102623VC

Daily Standard	Solution ID#	Volume Added for Purge (ul) Blk/ Smpl	CCV	MS/ LCS	BFB
BFB	IVM231016-01				1
IS	IVM230906-01	1	1	1	
SS	IVM230921-01	1	1	1	
CCV	WCVM231026-01			5UL	
LCS/MS	WCVM231026-01/-02			5UL	
SH CCV	WCVM231026-03			5UL	
SH LCS	WCVM231026-03			5UL	

Purge Amount	
5ML	Water Purge Vol:
5.0G	Soil Purge Wt.
N/A	Mid level ext. MeOH Vol:
N/A	Methanol Lot #
X	Heated Purge

Analysis Date Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	CI test (Y/N)	Acceptable(O/X)	Comments
10/26/2023 8:42	CD401.D	IVM231016-01	GEL	BFB1	10ML	1	N/A	1	W	PXY1	N/A	O	
10/26/2023 9:06	CD402.D	WCVM231026-01	GEL	CCV/LCS	5ML	1	N/A	2	W	PXY1	N/A	O	MIX[A] UVM230720-10B/UVM230519-02E/UVM230818-09C
10/26/2023 9:34	CD403.D	WCVM231026-02	GEL	LCS	5G/5ML	1	N/A	3	S	PXY1	N/A	O	SOIL MIX[A] UVM230720-10B/UVM230519-02E/UVM230818-09C
10/26/2023 10:01	CD404.D	WCVM231026-03	GEL	CCV/LCS	5ML	1	N/A	4	W	PXY1	N/A	O	MIX[B] UVM230813-08E/UVM230928-08B
10/26/2023 10:29	CD405.D	1205	GEL	BLANK	5ML	1	N/A	5	W	PXY1	N/A	O	
10/26/2023 10:56	CD406.D	1205	GEL	BLANK	5G/5ML	1	N/A	6	S	PXY1	N/A	O	SOIL
10/26/2023 11:24	CD407.D	642648009	TNSL	2514596	5.0G	1	N/A	7	S	PXY1	N/A	O	SOIL
10/26/2023 11:51	CD408.D	1205557487	GEL	2514596	5.0G/100UL	50	N/A	8	S	PXY1	N/A	O	SOIL HB
10/26/2023 12:19	CD409.D	642648001	TNSL	2514596	5.0G/100UL	50	N/A	9	S	PXY1	N/A	O	SOIL
10/26/2023 12:46	CD410.D	642648002	TNSL	2514596	5.0G/100UL	50	N/A	10	S	PXY1	N/A	O	SOIL
10/26/2023 13:14	CD411.D	642648003	TNSL	2514596	5.0G/100UL	50	N/A	11	S	PXY1	N/A	O	SOIL
10/26/2023 13:41	CD412.D	642648004	TNSL	2514596	5.0G/100UL	50	N/A	12	S	PXY1	N/A	O	SOIL
10/26/2023 14:09	CD413.D	642648005	TNSL	2514596	5.0G/100UL	50	N/A	13	S	PXY1	N/A	O	SOIL
10/26/2023 14:36	CD414.D	642648006	TNSL	2514596	5.0G/100UL	50	N/A	14	S	PXY1	N/A	O	SOIL
10/26/2023 15:04	CD415.D	642648007	TNSL	2514596	5.0G/100UL	50	N/A	15	S	PXY1	N/A	O	SOIL
10/26/2023 15:31	CD416.D	642648008	TNSL	2514596	5.0G/100UL	50	N/A	16	S	PXY1	N/A	O	SOIL
10/26/2023 15:59	CD417.D	642648012	TNSL	2514596	5.0G/100UL	50	N/A	17	S	PXY1	N/A	O	SOIL
10/26/2023 16:26	CD418.D	1205557488	TNSL	2514596	5.0G/100UL	50	N/A	18	S	PXY1	N/A	O	SOIL MIX[A] 642648001PS
10/26/2023 16:54	CD419.D	1205557489	TNSL	2514596	5.0G/100UL	50	N/A	19	S	PXY1	N/A	O	SOIL MIX[A] 642648001PSD
10/26/2023 17:21	CD420.D	1205557614	TNSL	2514596	5.0G/100UL	50	N/A	20	S	PXY1	N/A	O	SOIL MIX[B] 642648001PS
10/26/2023 17:49	CD421.D	1205557615	TNSL	2514596	5.0G/100UL	50	N/A	21	S	PXY1	N/A	O	SOIL MIX[B] 642648001PSD
10/26/2023 18:16	CD422.D	1205	GEL	BLANK	5ML	1	N/A	22	W	PXY1	N/A	X	RINSE
10/26/2023 18:44	CD423.D	1205	GEL	BLANK	5ML	1	N/A	23	W	PXY1	N/A	X	RINSE

FID Diesel Range Organics Analysis

Case Narrative

Diesel Range Organics
Technical Case Narrative
Triad National Security, LLC
SDG #: 2024-76
Work Order #: 642648

Product: **Analysis of Diesel Range Organics by Flame Ionization Detector**
Analytical Method: SW846 3541/8015D
Analytical Procedure: GL-OA-E-003 REV# 33
Analytical Batch: 2514381

Preparation Method: SW846 3541
Preparation Procedure: GL-OA-E-066 REV# 9
Preparation Batch: 2514380

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
642648001	RLUOB-23-289589
642648002	RLUOB-23-289590
642648003	RLUOB-23-289591
642648004	RLUOB-23-289592
642648005	RLUOB-23-289593
642648006	RLUOB-23-289594
642648007	RLUOB-23-289595
642648008	RLUOB-23-289596
642648012	RLUOB-23-289591 DUP
1205556892	Method Blank (MB)
1205556893	Laboratory Control Sample (LCS)
1205556894	642493001(WST15-24-303425) Matrix Spike (MS)
1205556895	642493001(WST15-24-303425) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Quality Control (QC) Information

Surrogate Recoveries
Sample (See Below) failed to meet acceptance criteria for surrogate recovery. Since the MS and MSD were performed on this sample and failed in a similar manner, the failure was attributed to sample matrix interference.

Sample	Analyte	Value
1205556894 (WST15-24-303425MS)	o-Terphenyl	121* (32%-118%)

Matrix Spike (MS/MSD) Recovery Statement
The MS and/or MSD (See Below) did not meet spike recovery acceptance limits. The associated MS or MSD did not confirm. The LCS passed spike recovery limits. The poor extraction appeared to be isolated to the MS or MSD only and the data were reported.

Sample	Analyte	Value
1205556895 (WST15-24-303425MSD)	Motor Oil	32* (46%-134%)

Technical Information

Sample Dilutions
Sample 642648001 (RLUOB-23-289589) was diluted due to the presence of over-range target analytes.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report
for

TNSL001 Triad National Security, LLC (620266)

Client SDG: 2024-76 GEL Work Order: 642648

The Qualifiers in this report are defined as follows:

* A quality control analyte recovery is outside of specified acceptance criteria
** Analyte is a surrogate compound
J Value is estimated
U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

DL Indicates that sample is diluted.
RA Indicates that sample is re-analyzed without re-extraction.
RE Indicates that sample is re-extracted.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: Cameron Bearden **Name: Cameron Bearden**

Date: 30 OCT 2023 **Title: Group Leader**

Sample Data Summary

FID Diesel Range Organics
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 10:15**	**Matrix:**	**SO**
Lab Sample ID:	**642648001**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**4**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289589**	**Method:**	**SW846 3541/8015D**	**SOP Ref:**	**GL-OA-E-003**
Batch ID:	**2514381**	**Inst:**	**FIDC.I**	**Dilution:**	**50**
Run Date:	**10/30/2023 13:08**	**Analyst:**	**RXC1**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/27/2023 07:23**	**Aliquot:**	**30.33 g**	**Final Volume:**	**1 mL**
Data File:	**103023DROMO\FCJ3006.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	Motor Oil		492	mg/kg	112	343
68334-30-5	Diesel Range Organics		3010	mg/kg	112	343

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
o-Terphenyl	0.309	0.687	mg/kg	45	(32%-118%)

FID Diesel Range Organics
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 10:32**	**Matrix:**	**SO**
Lab Sample ID:	**642648002**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**1**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289590**	**Method:**	**SW846 3541/8015D**	**SOP Ref:**	**GL-OA-E-003**
Batch ID:	**2514381**	**Inst:**	**FIDC.I**	**Dilution:**	**1**
Run Date:	**10/29/2023 03:03**	**Analyst:**	**RXC1**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/27/2023 07:23**	**Aliquot:**	**30.13 g**	**Final Volume:**	**1 mL**
Data File:	**102723DROMO\FCJ2767.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	Motor Oil	J	4.13	mg/kg	2.18	6.70
68334-30-5	Diesel Range Organics	U	2.18	mg/kg	2.18	6.70

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
o-Terphenyl	0.585	0.670	mg/kg	87	(32%-118%)

FID Diesel Range Organics
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 10:52**	**Matrix:**	**SO**
Lab Sample ID:	**642648003**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**4.8**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289591**	**Method:**	**SW846 3541/8015D**	**SOP Ref:**	**GL-OA-E-003**
Batch ID:	**2514381**	**Inst:**	**FIDC.I**	**Dilution:**	**1**
Run Date:	**10/29/2023 03:41**	**Analyst:**	**RXC1**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/27/2023 07:23**	**Aliquot:**	**30.07 g**	**Final Volume:**	**1 mL**
Data File:	**102723DROMO\FCJ2768.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	Motor Oil	U	2.27	mg/kg	2.27	6.98
68334-30-5	Diesel Range Organics	U	2.27	mg/kg	2.27	6.98

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
o-Terphenyl	0.516	0.698	mg/kg	74	(32%-118%)

FID Diesel Range Organics
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 11:09**	**Matrix:**	**SO**
Lab Sample ID:	**642648004**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**2**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289592**	**Method:**	**SW846 3541/8015D**	**SOP Ref:**	**GL-OA-E-003**
Batch ID:	**2514381**	**Inst:**	**FIDC.I**	**Dilution:**	**1**
Run Date:	**10/29/2023 04:19**	**Analyst:**	**RXC1**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/27/2023 07:23**	**Aliquot:**	**30.03 g**	**Final Volume:**	**1 mL**
Data File:	**102723DROMO\FCJ2769.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	Motor Oil	J	4.73	mg/kg	2.21	6.80
68334-30-5	Diesel Range Organics	U	2.21	mg/kg	2.21	6.80

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
o-Terphenyl	0.504	0.680	mg/kg	74	(32%-118%)

FID Diesel Range Organics
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 11:45**	**Matrix:**	**SO**
Lab Sample ID:	**642648005**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**1.7**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289593**	**Method:**	**SW846 3541/8015D**	**SOP Ref:**	**GL-OA-E-003**
Batch ID:	**2514381**	**Inst:**	**FIDC.I**	**Dilution:**	**1**
Run Date:	**10/29/2023 04:57**	**Analyst:**	**RXC1**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/27/2023 07:23**	**Aliquot:**	**30.12 g**	**Final Volume:**	**1 mL**
Data File:	**102723DROMO\FCJ2770.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	Motor Oil	U	2.19	mg/kg	2.19	6.75
68334-30-5	Diesel Range Organics	U	2.19	mg/kg	2.19	6.75

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
o-Terphenyl	0.543	0.675	mg/kg	80	(32%-118%)

FID Diesel Range Organics
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 12:00**	**Matrix:**	**SO**
Lab Sample ID:	**642648006**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**5.1**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289594**	**Method:**	**SW846 3541/8015D**	**SOP Ref:**	**GL-OA-E-003**
Batch ID:	**2514381**	**Inst:**	**FIDC.I**	**Dilution:**	**1**
Run Date:	**10/29/2023 05:36**	**Analyst:**	**RXC1**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/27/2023 07:23**	**Aliquot:**	**30.1 g**	**Final Volume:**	**1 mL**
Data File:	**102723DROMO\FCJ2771.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	Motor Oil	J	4.41	mg/kg	2.27	7.00
68334-30-5	Diesel Range Organics	U	2.27	mg/kg	2.27	7.00

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
o-Terphenyl	0.509	0.700	mg/kg	73	(32%-118%)

FID Diesel Range Organics
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 12:15**	**Matrix:**	**SO**
Lab Sample ID:	**642648007**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**2.5**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289595**	**Method:**	**SW846 3541/8015D**	**SOP Ref:**	**GL-OA-E-003**
Batch ID:	**2514381**	**Inst:**	**FIDC.I**	**Dilution:**	**1**
Run Date:	**10/29/2023 06:13**	**Analyst:**	**RXC1**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/27/2023 07:23**	**Aliquot:**	**30.01 g**	**Final Volume:**	**1 mL**
Data File:	**102723DROMO\FCJ2772.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	Motor Oil	U	2.22	mg/kg	2.22	6.83
68334-30-5	Diesel Range Organics	U	2.22	mg/kg	2.22	6.83

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
o-Terphenyl	0.579	0.683	mg/kg	85	(32%-118%)

FID Diesel Range Organics
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 12:47**	**Matrix:**	**SO**
Lab Sample ID:	**642648008**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**3.6**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289596**	**Method:**	**SW846 3541/8015D**	**SOP Ref:**	**GL-OA-E-003**
Batch ID:	**2514381**	**Inst:**	**FIDC.I**	**Dilution:**	**1**
Run Date:	**10/29/2023 06:52**	**Analyst:**	**RXC1**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/27/2023 07:23**	**Aliquot:**	**30.48 g**	**Final Volume:**	**1 mL**
Data File:	**102723DROMO\FCJ2773.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	Motor Oil	U	2.21	mg/kg	2.21	6.81
68334-30-5	Diesel Range Organics	U	2.21	mg/kg	2.21	6.81

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
o-Terphenyl	0.542	0.681	mg/kg	80	(32%-118%)

FID Diesel Range Organics
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 10:52**	**Matrix:**	**SO**
Lab Sample ID:	**642648012**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**4.8**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289591 DUP**	**Method:**	**SW846 3541/8015D**	**SOP Ref:**	**GL-OA-E-003**
Batch ID:	**2514381**	**Inst:**	**FIDC.I**	**Dilution:**	**1**
Run Date:	**10/29/2023 07:30**	**Analyst:**	**RXC1**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/27/2023 07:23**	**Aliquot:**	**30.49 g**	**Final Volume:**	**1 mL**
Data File:	**102723DROMO\FCJ2774.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	Motor Oil	J	2.32	mg/kg	2.24	6.89
68334-30-5	Diesel Range Organics	U	2.24	mg/kg	2.24	6.89

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
o-Terphenyl	0.489	0.689	mg/kg	71	(32%-118%)

Quality Control Summary

FID Diesel Range Organics

Surrogate Recovery Report

SDG Number: 2024-76

Matrix Type: SOLID

Sample ID	Client ID	OTP %REC	
1205556892	MB for batch 2514380	80	
1205556893	LCS for batch 2514380	101	
1205556894	WST15-24-303425MS	121 *	D
1205556895	WST15-24-303425MSD	117	D
642648002	RLUOB-23-289590	87	
642648003	RLUOB-23-289591	74	
642648004	RLUOB-23-289592	74	
642648005	RLUOB-23-289593	80	
642648006	RLUOB-23-289594	73	
642648007	RLUOB-23-289595	85	
642648008	RLUOB-23-289596	80	
642648012	RLUOB-23-289591 DUP	71	
642648001	RLUOB-23-289589	45	D

Surrogate		Acceptance Limits
OTP	= o-Terphenyl	(32%-118%)

* Recovery outside Acceptance Limits

Column to be used to flag recovery values

D Sample Diluted

FID Diesel Range Organics

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-76
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 2514380
Matrix: SOIL
Lab Sample ID: 1205556893
Instrument: FIDC.I
Analysis Date: 10/28/2023 20:05
Dilution: 1
Analyst: RXC1
Prep Batch ID: 2514380
Inj. Vol: 1 uL
Batch ID: 2514381

CAS No.		Parmname	Amount Added mg/kg	Sample Conc. mg/kg	Spike Conc. mg/kg	Recovery %	Acceptance Limits
68334-30-5	LCS	Diesel Range Organics	65.4	0.0	54.4	83	47-128
	LCS	Motor Oil	65.4	0.0	57.1	87	62-133

FID Diesel Range Organics

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-76
Client ID: WST15-24-303425MS
Lab Sample ID: 1205556894
Instrument: FIDC.I
Analyst: RXC1
Inj. Vol: 1 uL

Sample Type: Matrix Spike
Matrix: SO
%Moisture: 1.7
Analysis Date: 10/28/2023 21:59
Prep Batch ID: 2514380
Batch ID: 2514381
Dilution: 5

CAS No.		Parmname	Amount Added mg/kg	Sample Conc. mg/kg	Spike Conc. mg/kg	Recovery %	Acceptance Limits
68334-30-5	MS	Diesel Range Organics	67.0	229	288	88	23-131
	MS	Motor Oil	67.0	200	247	71	46-134

FID Diesel Range Organics

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-76
Client ID: WST15-24-303425MSD
Lab Sample ID: 1205556895
Instrument: FIDC.I
Analyst: RXC1
Inj. Vol: 1 uL

Sample Type: Matrix Spike Duplicate
Matrix: SO
%Moisture: 1.7
Analysis Date: 10/28/2023 22:37
Dilution: 5
Prep Batch ID: 2514380
Batch ID: 2514381

CAS No.		Parmname	Amount Added mg/kg	Sample Conc. mg/kg	Spike Conc. mg/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
68334-30-5	MSD	Diesel Range Organics	67.2	229	253	36	23-131	13	0-72
	MSD	Motor Oil	67.2	200	221	32 *	46-134	11	0-30

Method Blank Summary

SDG Number:	**2024-76**	**Client:**	**TNSL001**	**Matrix:**	**SOIL**
Client ID:	**MB for batch 2514380**	**Instrument ID:**	**FIDC.I**	**Data File:**	**102723DROMO\FCJ2755.D**
Lab Sample ID:	**1205556892**	**Prep Date:**	**10/27/2023 07:23**	**Analyzed:**	**10/28/23 19:27**
Column:	**DB-5ms**				

This method blank applies to the following samples and quality control samples:

	Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01	LCS for batch 2514380	1205556893	102723DROMO\FCJ2756.D	10/28/23	2005
02	WST15-24-303425MS	1205556894	102723DROMO\FCJ2759.D	10/28/23	2159
03	WST15-24-303425MSD	1205556895	102723DROMO\FCJ2760.D	10/28/23	2237
04	RLUOB-23-289590	642648002	102723DROMO\FCJ2767.D	10/29/23	0303
05	RLUOB-23-289591	642648003	102723DROMO\FCJ2768.D	10/29/23	0341
06	RLUOB-23-289592	642648004	102723DROMO\FCJ2769.D	10/29/23	0419
07	RLUOB-23-289593	642648005	102723DROMO\FCJ2770.D	10/29/23	0457
08	RLUOB-23-289594	642648006	102723DROMO\FCJ2771.D	10/29/23	0536
09	RLUOB-23-289595	642648007	102723DROMO\FCJ2772.D	10/29/23	0613
10	RLUOB-23-289596	642648008	102723DROMO\FCJ2773.D	10/29/23	0652
11	RLUOB-23-289591 DUP	642648012	102723DROMO\FCJ2774.D	10/29/23	0730
12	RLUOB-23-289589	642648001	103023DROMO\FCJ3006.D	10/30/23	1308

Sample Data

FID Diesel Range Organics
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 10:32**	**Matrix:**	**SO**
Lab Sample ID:	**642648002**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**1**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289590**	**Method:**	**SW846 3541/8015D**	**SOP Ref:**	**GL-OA-E-003**
Batch ID:	**2514381**	**Inst:**	**FIDC.I**	**Dilution:**	**1**
Run Date:	**10/29/2023 03:03**	**Analyst:**	**RXC1**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/27/2023 07:23**	**Aliquot:**	**30.13 g**	**Final Volume:**	**1 mL**
Data File:	**102723DROMO\FCJ2767.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	Motor Oil	J	4.13	mg/kg	2.18	6.70
68334-30-5	Diesel Range Organics	U	2.18	mg/kg	2.18	6.70

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
o-Terphenyl	0.585	0.670	mg/kg	87	(32%-118%)

Quantitation Report
GEL Laboratories, LLC

10/29/2023

Data Path : D:\MSDCHEM\1\Data\102723DROMO\
Data File : FCJ2767.D
Signal(s) : FID1A.ch
Acq On : 29 Oct 2023 03:03
Operator : RXC1 InstName : FIDC
Sample : |642648002|2514381|1|DROQ|1|TNSL|||
Misc : |FIDD415D_S|SOIL|RLUOB-23-289590|MIX[A,D]||
ALS Vial : 70 Sample Multiplier: 1

10/30/2023

Integration File: autoint1.e
Quant Time: Oct 29 11:30:51 2023
Quant Method : D:\MSDCHEM\1\Data\102723DROMO\FIDCNW_102723.m
Quant Title : DRO TPH SubList :
QLast Update : Sat Oct 28 11:09:33 2023
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : DB-5MS
Signal Info : 30m x 250um x 0.25um

Compound	Exp	R.T.	Delta	Response	Conc	Units
System Monitoring Compounds						
4) SD o-Terphenyl	14.400	14.396	-0.004	31672145	17.446	mg/L

Compound	Amount	Range	Recovery
4) o-Terphenyl	20.000	No Limits	87%

Target Compounds					
1) HA Diesel Range Organics	Range	8.240 - 14.865	46740162	<MDL	mg/L
2) HA Motor Oil	Range	14.865 - 23.074	211891249	123.278	mg/L

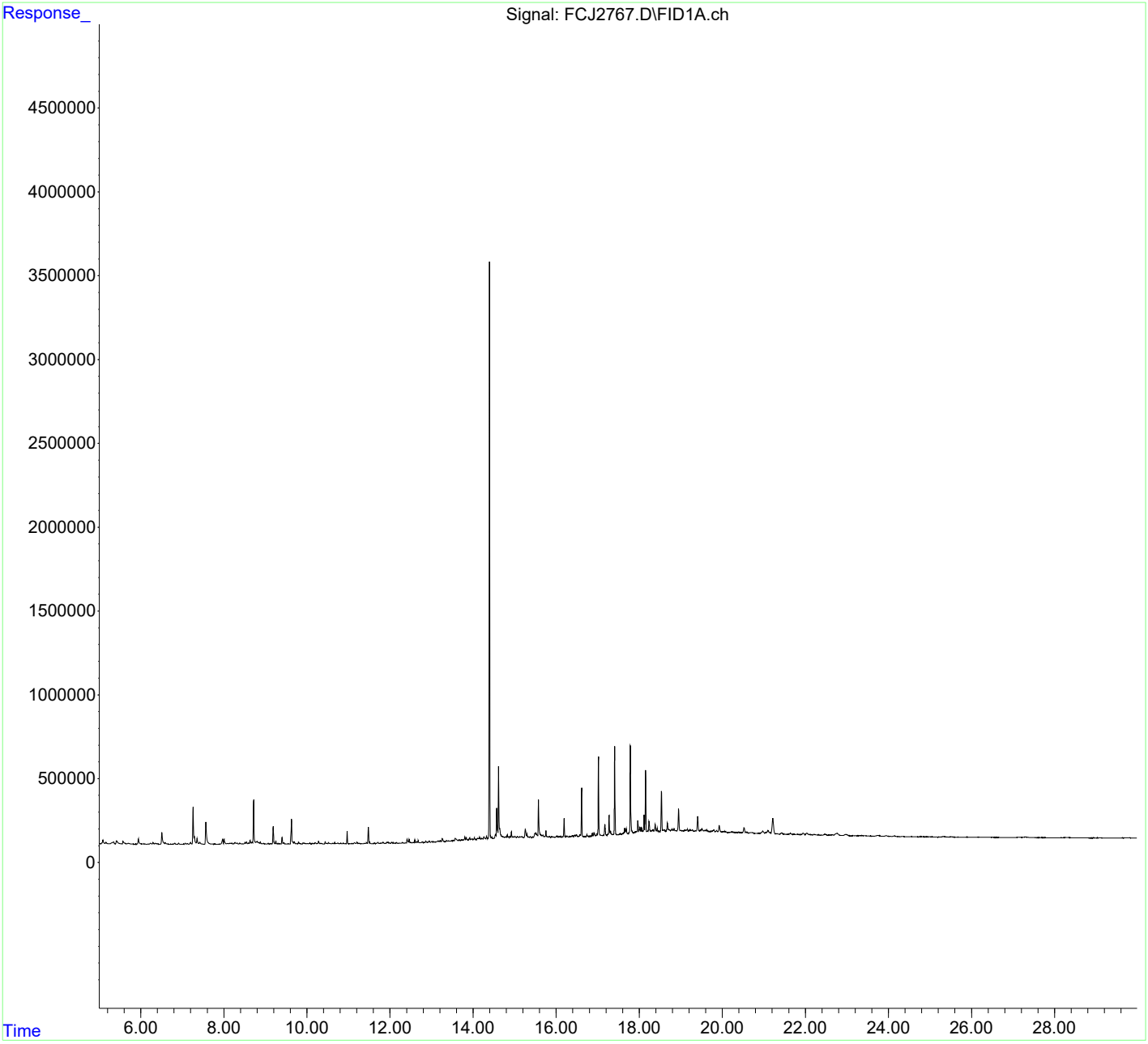
(f)=RT Delta > 1/2 Window (A) = Over the calibration range (d) = deleted (m)=manual int.

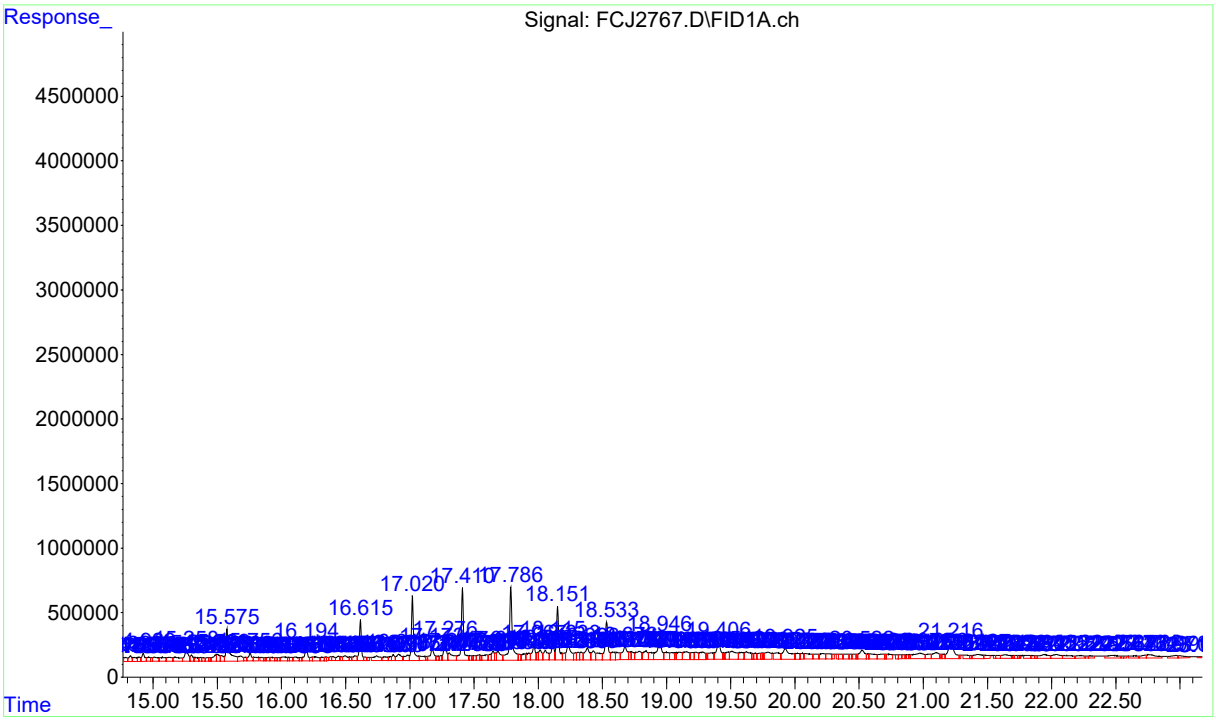
Quantitation Report
GEL Laboratories, LLC

DaData Path : D:\MSDCHEM\1\Data\102723DROMO\
DaData File : FCJ2767.D
Signal(s) : FID1A.ch
Acq On : 29 Oct 2023 03:03
Operator : RXC1 InstName : FIDC
Sample : |642648002|2514381|1|DROQ|1|TNSL|||
Misc : |FIDD415D_S|SOIL|RLUOB-23-289590|MIX[A,D]||
ALS Vial : 70 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Oct 29 11:30:51 2023
Quant Method : D:\MSDCHEM\1\Data\102723DROMO\FIDCNW_102723.m
Quant Title : DRO TPH SubList :
QLast Update : Sat Oct 28 11:09:33 2023
Response via : Initial Calibration
Integrator: ChemStation

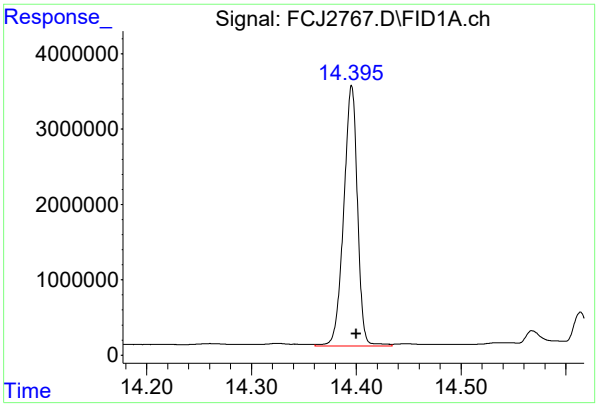
Volume Inj. : 1 ul
Signal Phase : DB-5MS
Signal Info : 30m x 250um x 0.25um





Compound: Motor Oil

RT Range: 14.865: 23.074
Total TPH Resp: 211891249
Total SMC/ISTD Resp: 0
Final Resp: 211891249



#4
o-Terphenyl
R.T.: 14.396 min
Delta R.T.: -0.004 min
Response: 31672145
Conc: 17.45 mg/L

FID Diesel Range Organics
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 10:52**	**Matrix:**	**SO**
Lab Sample ID:	**642648003**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**4.8**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289591**	**Method:**	**SW846 3541/8015D**	**SOP Ref:**	**GL-OA-E-003**
Batch ID:	**2514381**	**Inst:**	**FIDC.I**	**Dilution:**	**1**
Run Date:	**10/29/2023 03:41**	**Analyst:**	**RXC1**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/27/2023 07:23**	**Aliquot:**	**30.07 g**	**Final Volume:**	**1 mL**
Data File:	**102723DROMO\FCJ2768.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	Motor Oil	U	2.27	mg/kg	2.27	6.98
68334-30-5	Diesel Range Organics	U	2.27	mg/kg	2.27	6.98

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
o-Terphenyl	0.516	0.698	mg/kg	74	(32%-118%)

Quantitation Report
GEL Laboratories, LLC

10/29/2023

Data Path : D:\MSDCHEM\1\Data\102723DROMO\
Data File : FCJ2768.D
Signal(s) : FID1A.ch
Acq On : 29 Oct 2023 03:41
Operator : RXC1 InstName : FIDC
Sample : |642648003|2514381|1|DROQ|1|TNSL|||
Misc : |FIDD415D_S|SOIL|RLUOB-23-289591|MIX[A,D]||
ALS Vial : 71 Sample Multiplier: 1

10/30/2023

Integration File: autoint1.e
Quant Time: Oct 29 11:31:11 2023
Quant Method : D:\MSDCHEM\1\Data\102723DROMO\FIDCNW_102723.m
Quant Title : DRO TPH SubList :
QLast Update : Sat Oct 28 11:09:33 2023
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : DB-5MS
Signal Info : 30m x 250um x 0.25um

Compound	Exp	R.T.	Delta	Response	Conc	Units
System Monitoring Compounds						
4) SD o-Terphenyl	14.400	14.395	-0.005	26853387	14.792	mg/L

Compound	Amount	Range	Recovery
4) o-Terphenyl	20.000	No Limits	74%

Target Compounds					
1) HA Diesel Range Organics	Range	8.240 - 14.865	20400164	<MDL	mg/L
2) HA Motor Oil	Range	14.865 - 23.074	105198595	<MDL	mg/L

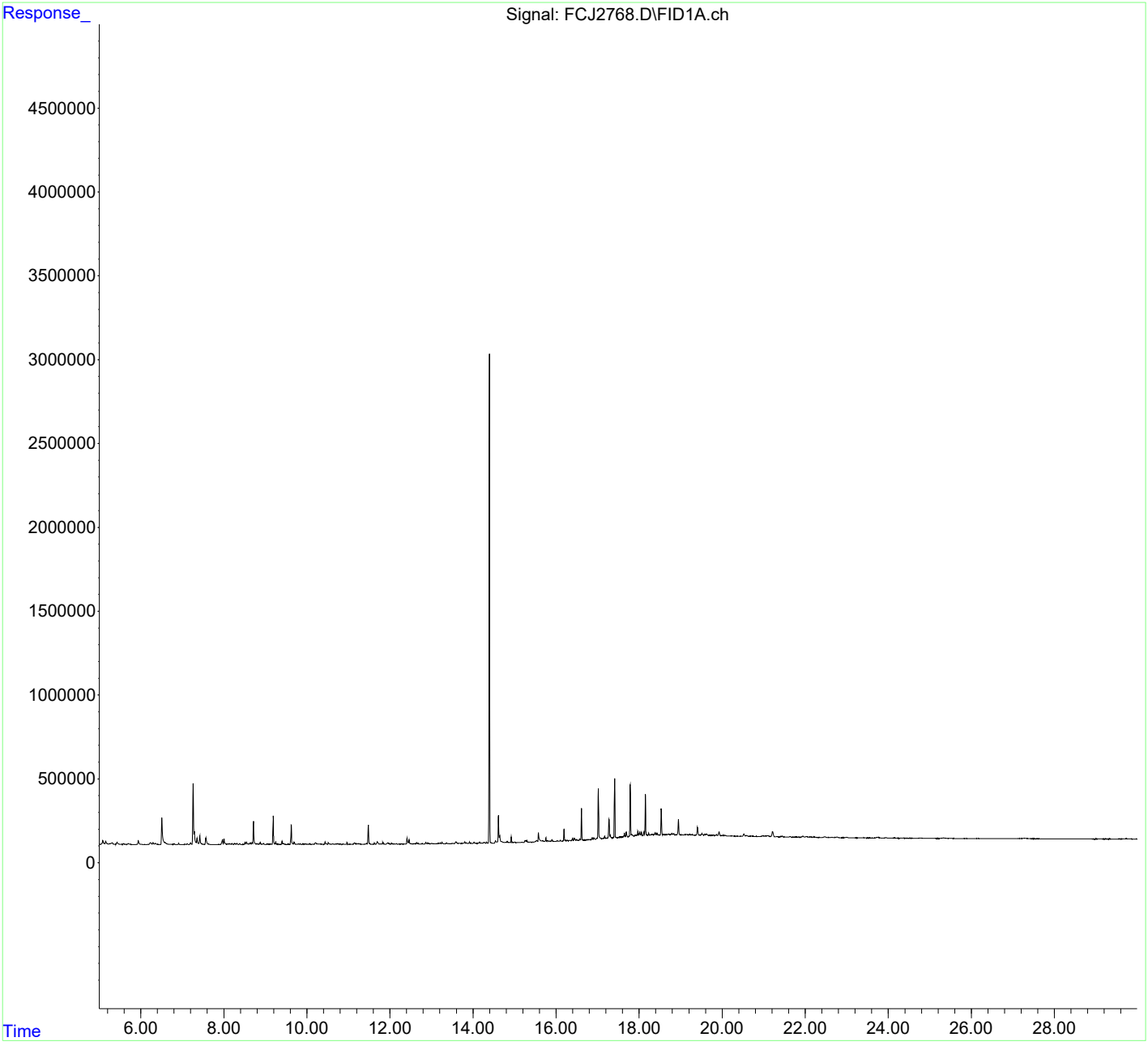
(f)=RT Delta > 1/2 Window (A) = Over the calibration range (d) = deleted (m)=manual int.

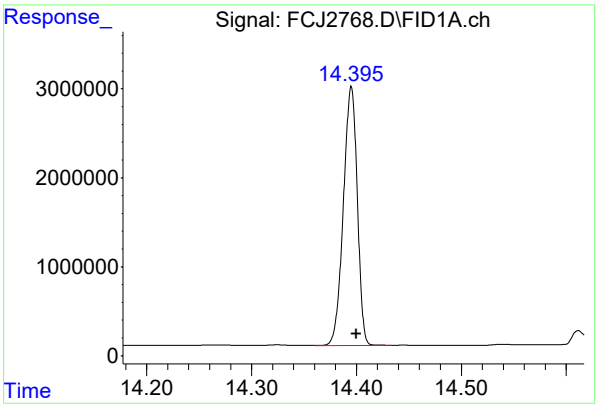
Quantitation Report
GEL Laboratories, LLC

DaData Path : D:\MSDCHEM\1\Data\102723DROMO\
DaData File : FCJ2768.D
Signal(s) : FID1A.ch
Acq On : 29 Oct 2023 03:41
Operator : RXC1 InstName : FIDC
Sample : |642648003|2514381|1|DROQ|1|TNSL|||
Misc : |FIDD415D_S|SOIL|RLUOB-23-289591|MIX[A,D]||
ALS Vial : 71 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Oct 29 11:31:11 2023
Quant Method : D:\MSDCHEM\1\Data\102723DROMO\FIDCNW_102723.m
Quant Title : DRO TPH SubList :
QLast Update : Sat Oct 28 11:09:33 2023
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : DB-5MS
Signal Info : 30m x 250um x 0.25um





#4
o-Terphenyl
R.T.: 14.395 min
Delta R.T.: -0.005 min
Response: 26853387
Conc: 14.79 mg/L

FID Diesel Range Organics
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 11:09**	**Matrix:**	**SO**
Lab Sample ID:	**642648004**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**2**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289592**	**Method:**	**SW846 3541/8015D**	**SOP Ref:**	**GL-OA-E-003**
Batch ID:	**2514381**	**Inst:**	**FIDC.I**	**Dilution:**	**1**
Run Date:	**10/29/2023 04:19**	**Analyst:**	**RXC1**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/27/2023 07:23**	**Aliquot:**	**30.03 g**	**Final Volume:**	**1 mL**
Data File:	**102723DROMO\FCJ2769.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	Motor Oil	J	4.73	mg/kg	2.21	6.80
68334-30-5	Diesel Range Organics	U	2.21	mg/kg	2.21	6.80

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
o-Terphenyl	0.504	0.680	mg/kg	74	(32%-118%)

Quantitation Report
GEL Laboratories, LLC

10/29/2023

Data Path : D:\MSDCHEM\1\Data\102723DROMO\
Data File : FCJ2769.D
Signal(s) : FID1A.ch
Acq On : 29 Oct 2023 04:19
Operator : RXC1 InstName : FIDC
Sample : |642648004|2514381|1|DROQ|1|TNSL|||
Misc : |FIDD415D_S|SOIL|RLUOB-23-289592|MIX[A,D]||
ALS Vial : 72 Sample Multiplier: 1

10/30/2023

Integration File: autoint1.e
Quant Time: Oct 29 11:31:16 2023
Quant Method : D:\MSDCHEM\1\Data\102723DROMO\FIDCNW_102723.m
Quant Title : DRO TPH SubList :
QLast Update : Sat Oct 28 11:09:33 2023
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : DB-5MS
Signal Info : 30m x 250um x 0.25um

Compound	Exp	R.T.	Delta	Response	Conc	Units
System Monitoring Compounds						
4) SD o-Terphenyl	14.400	14.395	-0.005	26923842	14.831	mg/L

Compound	Amount	Range	Recovery
4) o-Terphenyl	20.000	No Limits	74%

Target Compounds					
1) HA Diesel Range Organics	Range	8.240 - 14.865	37974850	<MDL	mg/L
2) HA Motor Oil	Range	14.865 - 23.074	239393666	139.278	mg/L

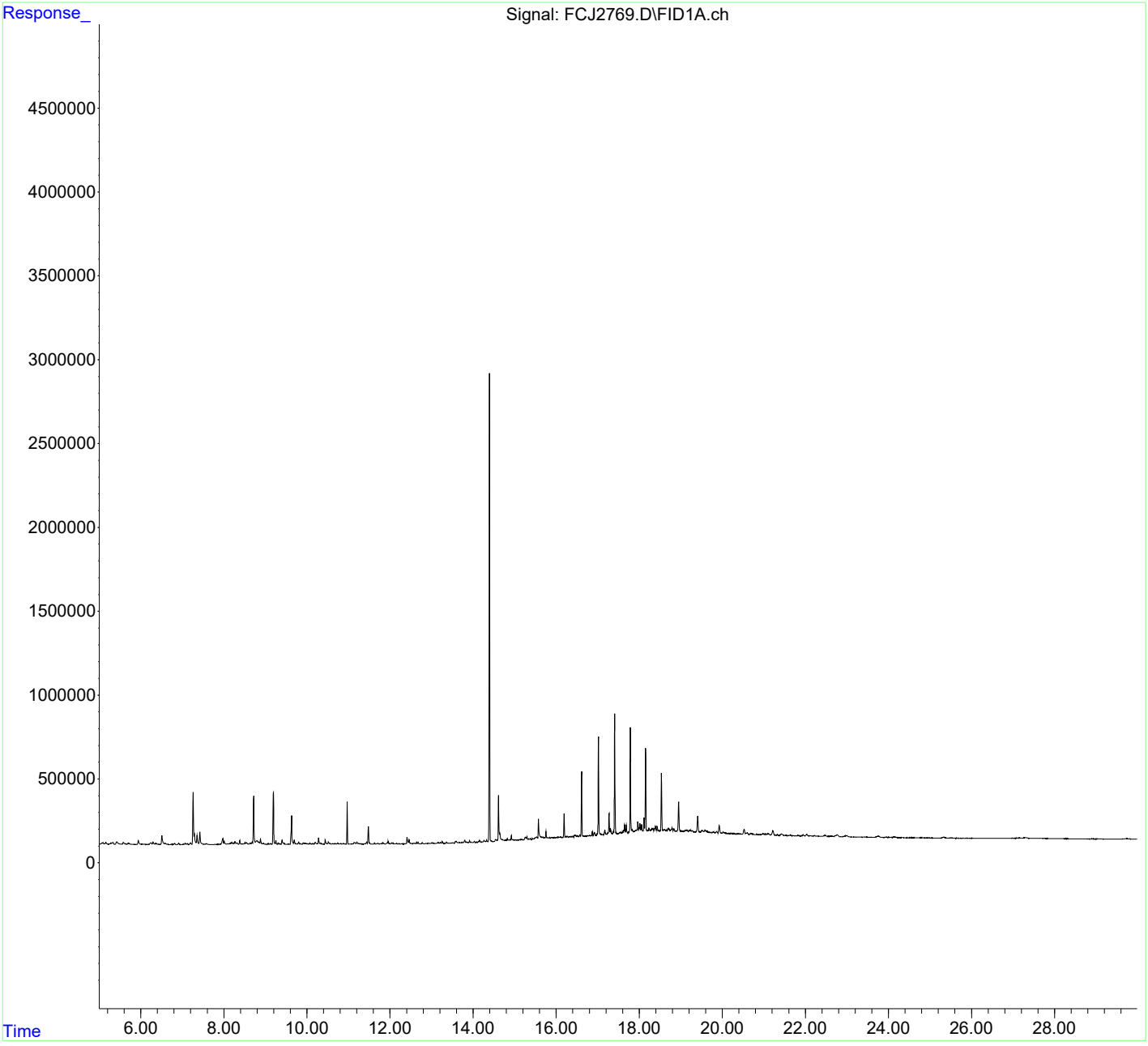
(f)=RT Delta > 1/2 Window (A) = Over the calibration range (d) = deleted (m)=manual int.

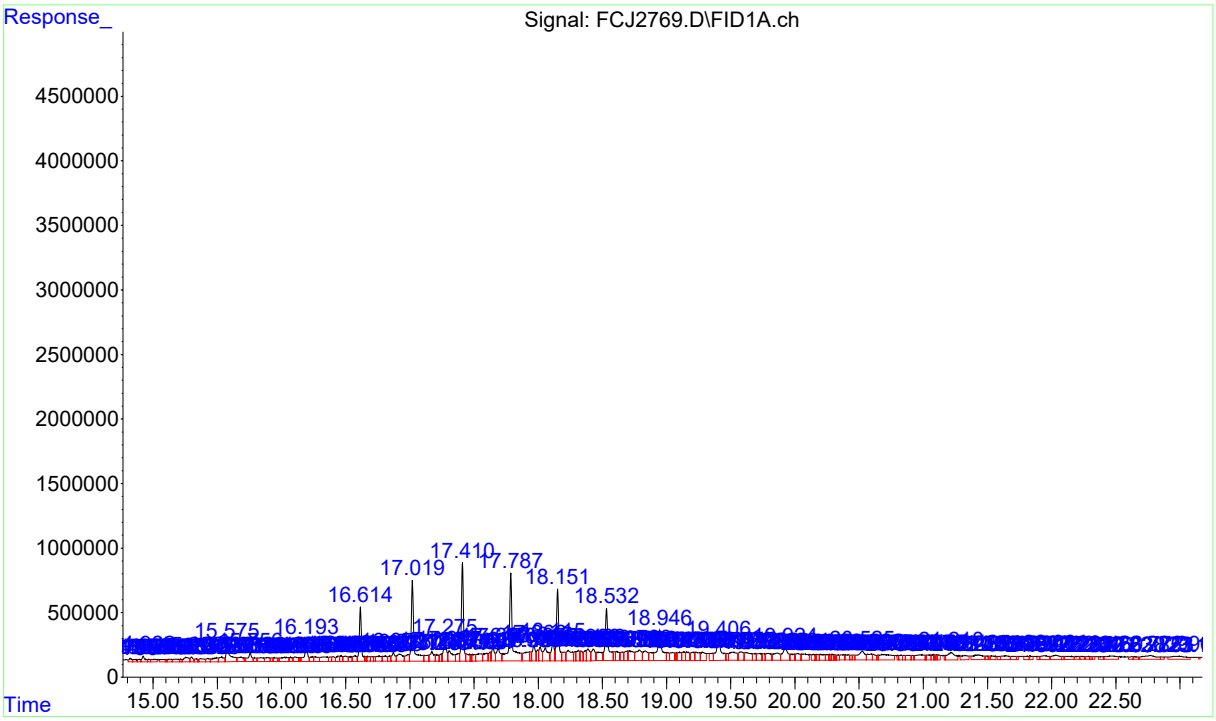
Quantitation Report
GEL Laboratories, LLC

DaData Path : D:\MSDCHEM\1\Data\102723DROMO\
DaData File : FCJ2769.D
Signal(s) : FID1A.ch
Acq On : 29 Oct 2023 04:19
Operator : RXC1 InstName : FIDC
Sample : |642648004|2514381|1|DROQ|1|TNSL|||
Misc : |FIDD415D_S|SOIL|RLUOB-23-289592|MIX[A,D]||
ALS Vial : 72 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Oct 29 11:31:16 2023
Quant Method : D:\MSDCHEM\1\Data\102723DROMO\FIDCNW_102723.m
Quant Title : DRO TPH SubList :
QLast Update : Sat Oct 28 11:09:33 2023
Response via : Initial Calibration
Integrator: ChemStation

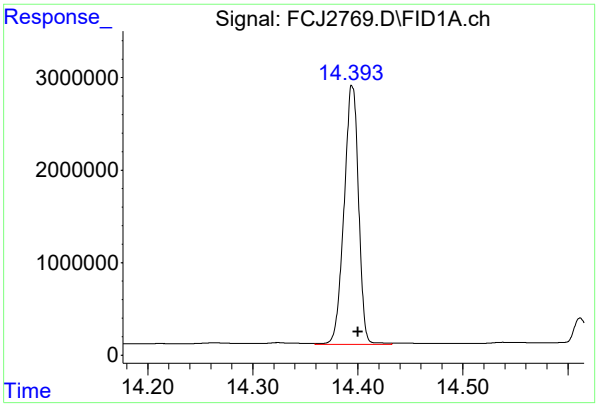
Volume Inj. : 1 ul
Signal Phase : DB-5MS
Signal Info : 30m x 250um x 0.25um





Compound: Motor Oil

RT Range: 14.865: 23.074
Total TPH Resp: 239393666
Total SMC/ISTD Resp: 0
Final Resp: 239393666



#4
o-Terphenyl
R.T.: 14.395 min
Delta R.T.: -0.005 min
Response: 26923842
Conc: 14.83 mg/L

FID Diesel Range Organics
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 11:45**	**Matrix:**	**SO**
Lab Sample ID:	**642648005**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**1.7**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289593**	**Method:**	**SW846 3541/8015D**	**SOP Ref:**	**GL-OA-E-003**
Batch ID:	**2514381**	**Inst:**	**FIDC.I**	**Dilution:**	**1**
Run Date:	**10/29/2023 04:57**	**Analyst:**	**RXC1**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/27/2023 07:23**	**Aliquot:**	**30.12 g**	**Final Volume:**	**1 mL**
Data File:	**102723DROMO\FCJ2770.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	Motor Oil	U	2.19	mg/kg	2.19	6.75
68334-30-5	Diesel Range Organics	U	2.19	mg/kg	2.19	6.75

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
o-Terphenyl	0.543	0.675	mg/kg	80	(32%-118%)

Quantitation Report
GEL Laboratories, LLC

10/29/2023

Data Path : D:\MSDCHEM\1\Data\102723DROMO\
Data File : FCJ2770.D
Signal(s) : FID1A.ch
Acq On : 29 Oct 2023 04:57
Operator : RXC1 InstName : FIDC
Sample : |642648005|2514381|1|DROQ|1|TNSL|||
Misc : |FIDD415D_S|SOIL|RLUOB-23-289593|MIX[A,D]||
ALS Vial : 73 Sample Multiplier: 1

10/30/2023

Integration File: autoint1.e
Quant Time: Oct 29 11:31:21 2023
Quant Method : D:\MSDCHEM\1\Data\102723DROMO\FIDCNW_102723.m
Quant Title : DRO TPH SubList :
QLast Update : Sat Oct 28 11:09:33 2023
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : DB-5MS
Signal Info : 30m x 250um x 0.25um

Compound	Exp	R.T.	Delta	Response	Conc	Units
System Monitoring Compounds						
4) SD o-Terphenyl	14.400	14.395	-0.005	29198355	16.084	mg/L

Compound	Amount	Range	Recovery
4) o-Terphenyl	20.000	No Limits	80%

Target Compounds					
1) HA Diesel Range Organics	Range	8.240 - 14.865	28241046	<MDL	mg/L
2) HA Motor Oil	Range	14.865 - 23.074	74783597	<MDL	mg/L

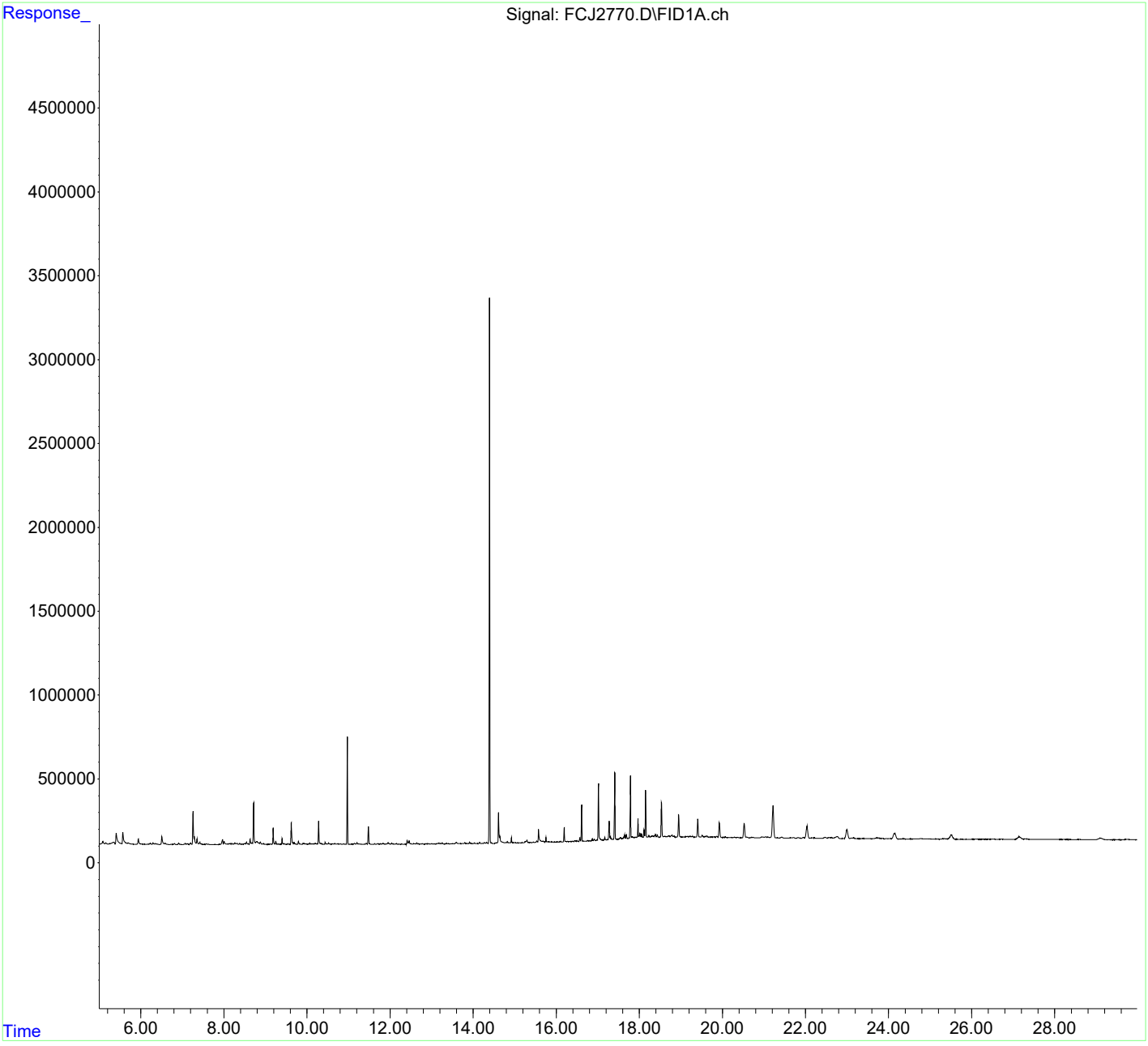
(f)=RT Delta > 1/2 Window (A) = Over the calibration range (d) = deleted (m)=manual int.

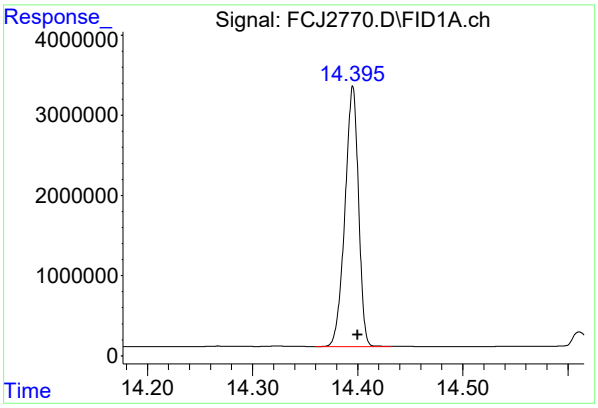
Quantitation Report
GEL Laboratories, LLC

DaData Path : D:\MSDCHEM\1\Data\102723DROMO\
DaData File : FCJ2770.D
Signal(s) : FID1A.ch
Acq On : 29 Oct 2023 04:57
Operator : RXC1 InstName : FIDC
Sample : |642648005|2514381|1|DROQ|1|TNSL|||
Misc : |FIDD415D_S|SOIL|RLUOB-23-289593|MIX[A,D]||
ALS Vial : 73 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Oct 29 11:31:21 2023
Quant Method : D:\MSDCHEM\1\Data\102723DROMO\FIDCNW_102723.m
Quant Title : DRO TPH SubList :
QLast Update : Sat Oct 28 11:09:33 2023
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : DB-5MS
Signal Info : 30m x 250um x 0.25um





#4
o-Terphenyl
R.T.: 14.395 min
Delta R.T.: -0.005 min
Response: 29198355
Conc: 16.08 mg/L

FID Diesel Range Organics
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 12:00**	**Matrix:**	**SO**
Lab Sample ID:	**642648006**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**5.1**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289594**	**Method:**	**SW846 3541/8015D**	**SOP Ref:**	**GL-OA-E-003**
Batch ID:	**2514381**	**Inst:**	**FIDC.I**	**Dilution:**	**1**
Run Date:	**10/29/2023 05:36**	**Analyst:**	**RXC1**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/27/2023 07:23**	**Aliquot:**	**30.1 g**	**Final Volume:**	**1 mL**
Data File:	**102723DROMO\FCJ2771.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	Motor Oil	J	4.41	mg/kg	2.27	7.00
68334-30-5	Diesel Range Organics	U	2.27	mg/kg	2.27	7.00

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
o-Terphenyl	0.509	0.700	mg/kg	73	(32%-118%)

Quantitation Report
GEL Laboratories, LLC

10/29/2023

Data Path : D:\MSDCHEM\1\Data\102723DROMO\
Data File : FCJ2771.D
Signal(s) : FID1A.ch
Acq On : 29 Oct 2023 05:36
Operator : RXC1 InstName : FIDC
Sample : |642648006|2514381|1|DROQ|1|TNSL|||
Misc : |FIDD415D_S|SOIL|RLUOB-23-289594|MIX[A,D]||
ALS Vial : 74 Sample Multiplier: 1

10/30/2023

Integration File: autoint1.e
Quant Time: Oct 29 11:31:25 2023
Quant Method : D:\MSDCHEM\1\Data\102723DROMO\FIDCNW_102723.m
Quant Title : DRO TPH SubList :
QLast Update : Sat Oct 28 11:09:33 2023
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : DB-5MS
Signal Info : 30m x 250um x 0.25um

Compound	Exp	R.T.	Delta	Response	Conc	Units
System Monitoring Compounds						
4) SD o-Terphenyl	14.400	14.395	-0.005	26374740	14.528	mg/L

Compound	Amount	Range	Recovery
4) o-Terphenyl	20.000	No Limits	73%

Target Compounds					
1) HA Diesel Range Organics	Range	8.240 - 14.865	47451404	<MDL	mg/L
2) HA Motor Oil	Range	14.865 - 23.074	216482457	125.949	mg/L

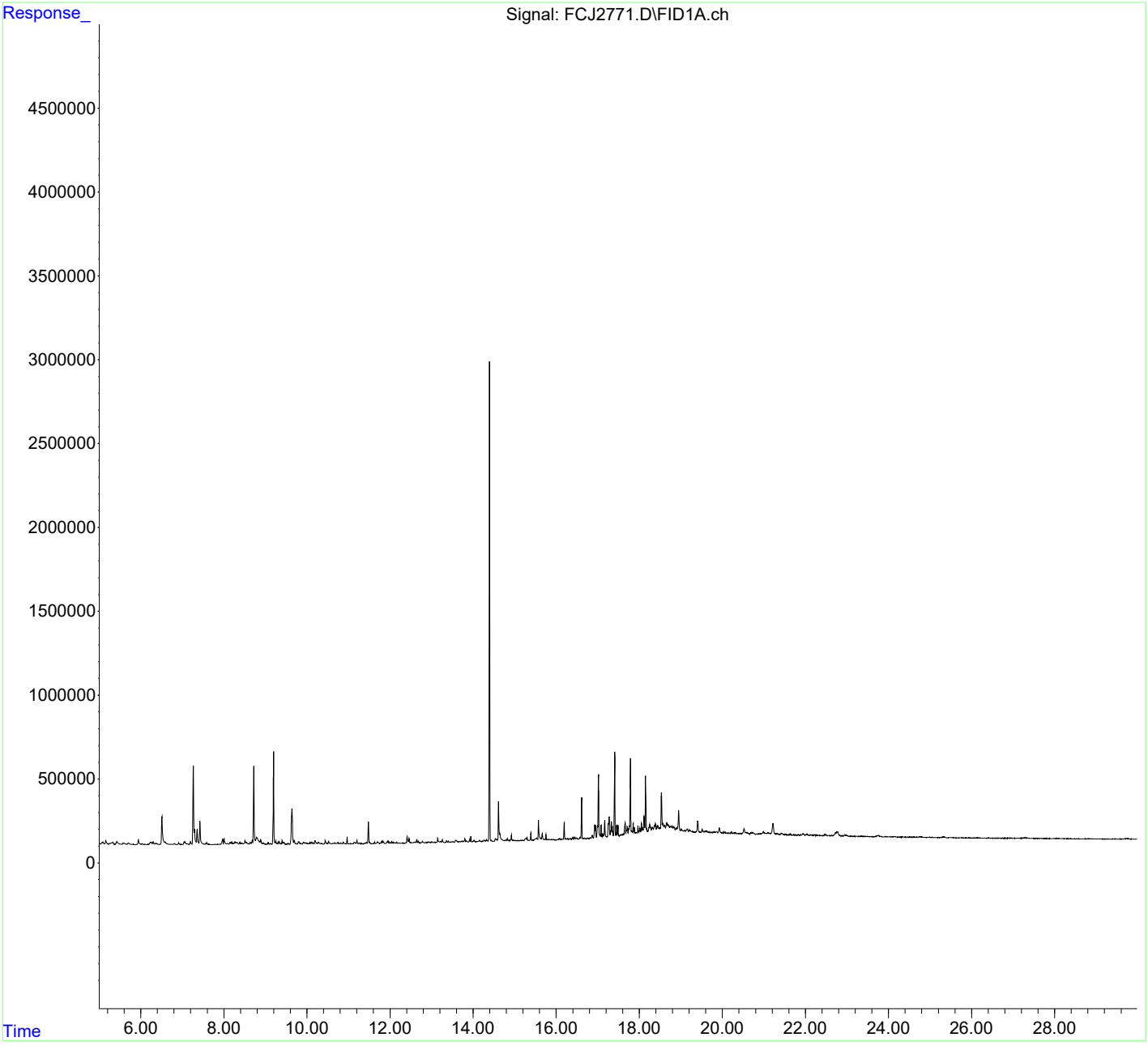
(f)=RT Delta > 1/2 Window (A) = Over the calibration range (d) = deleted (m)=manual int.

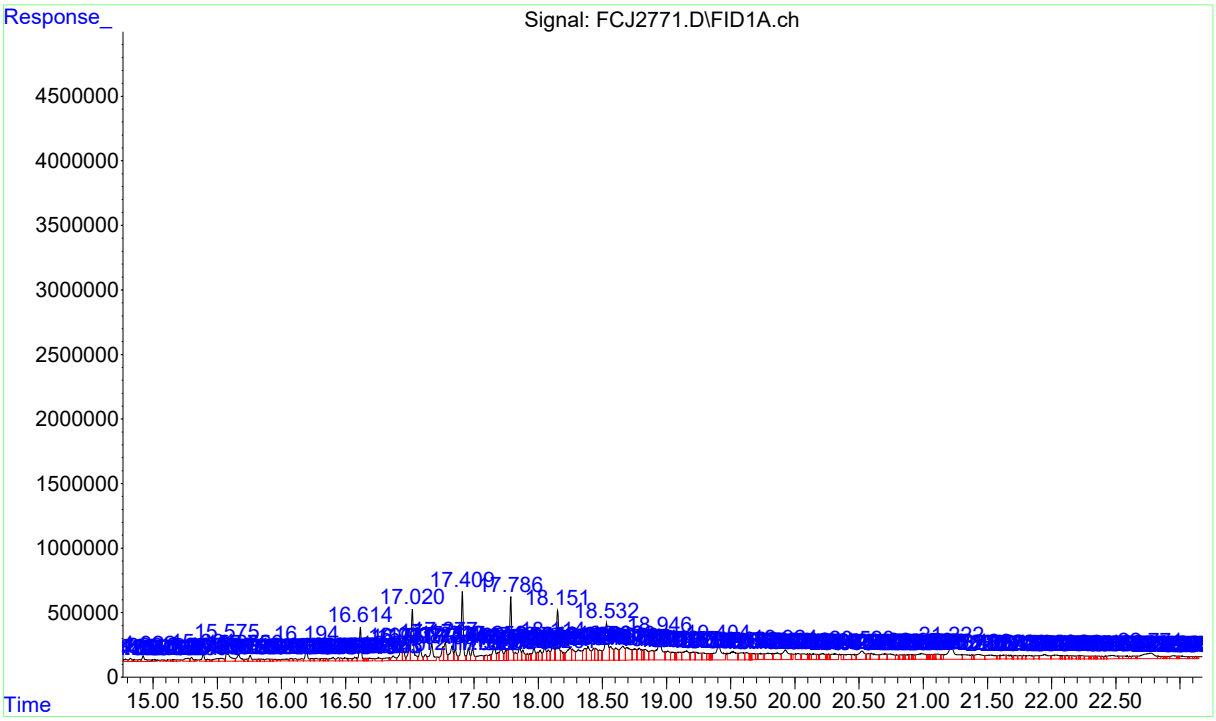
Quantitation Report
GEL Laboratories, LLC

DaData Path : D:\MSDCHEM\1\Data\102723DROMO\
DaData File : FCJ2771.D
Signal(s) : FID1A.ch
Acq On : 29 Oct 2023 05:36
Operator : RXC1 InstName : FIDC
Sample : |642648006|2514381|1|DROQ|1|TNSL|||
Misc : |FIDD415D_S|SOIL|RLUOB-23-289594|MIX[A,D]||
ALS Vial : 74 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Oct 29 11:31:25 2023
Quant Method : D:\MSDCHEM\1\Data\102723DROMO\FIDCNW_102723.m
Quant Title : DRO TPH SubList :
QLast Update : Sat Oct 28 11:09:33 2023
Response via : Initial Calibration
Integrator: ChemStation

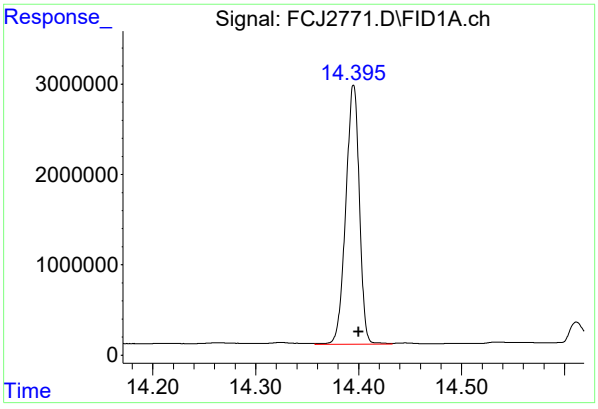
Volume Inj. : 1 ul
Signal Phase : DB-5MS
Signal Info : 30m x 250um x 0.25um





Compound: Motor Oil

RT Range: 14.865: 23.074
Total TPH Resp: 216482457
Total SMC/ISTD Resp: 0
Final Resp: 216482457



#4
o-Terphenyl
R.T.: 14.395 min
Delta R.T.: -0.005 min
Response: 26374740
Conc: 14.53 mg/L

FID Diesel Range Organics
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 12:15**	**Matrix:**	**SO**
Lab Sample ID:	**642648007**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**2.5**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289595**	**Method:**	**SW846 3541/8015D**	**SOP Ref:**	**GL-OA-E-003**
Batch ID:	**2514381**	**Inst:**	**FIDC.I**	**Dilution:**	**1**
Run Date:	**10/29/2023 06:13**	**Analyst:**	**RXC1**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/27/2023 07:23**	**Aliquot:**	**30.01 g**	**Final Volume:**	**1 mL**
Data File:	**102723DROMO\FCJ2772.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	Motor Oil	U	2.22	mg/kg	2.22	6.83
68334-30-5	Diesel Range Organics	U	2.22	mg/kg	2.22	6.83

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
o-Terphenyl	0.579	0.683	mg/kg	85	(32%-118%)

Quantitation Report
GEL Laboratories, LLC

10/29/2023

Data Path : D:\MSDCHEM\1\Data\102723DROMO\
Data File : FCJ2772.D
Signal(s) : FID1A.ch
Acq On : 29 Oct 2023 06:13
Operator : RXC1 InstName : FIDC
Sample : |642648007|2514381|1|DROQ|1|TNSL|||
Misc : |FIDD415D_S|SOIL|RLUOB-23-289595|MIX[A,D]||
ALS Vial : 75 Sample Multiplier: 1

10/30/2023

Integration File: autoint1.e
Quant Time: Oct 29 11:31:30 2023
Quant Method : D:\MSDCHEM\1\Data\102723DROMO\FIDCNW_102723.m
Quant Title : DRO TPH SubList :
QLast Update : Sat Oct 28 11:09:33 2023
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : DB-5MS
Signal Info : 30m x 250um x 0.25um

Compound	Exp	R.T.	Delta	Response	Conc	Units
System Monitoring Compounds						
4) SD o-Terphenyl	14.400	14.396	-0.004	30758920	16.943	mg/L

Compound	Amount	Range	Recovery
4) o-Terphenyl	20.000	No Limits	85%

Target Compounds					
1) HA Diesel Range Organics	Range	8.240 - 14.865	22675341	<MDL	mg/L
2) HA Motor Oil	Range	14.865 - 23.074	80143817	<MDL	mg/L

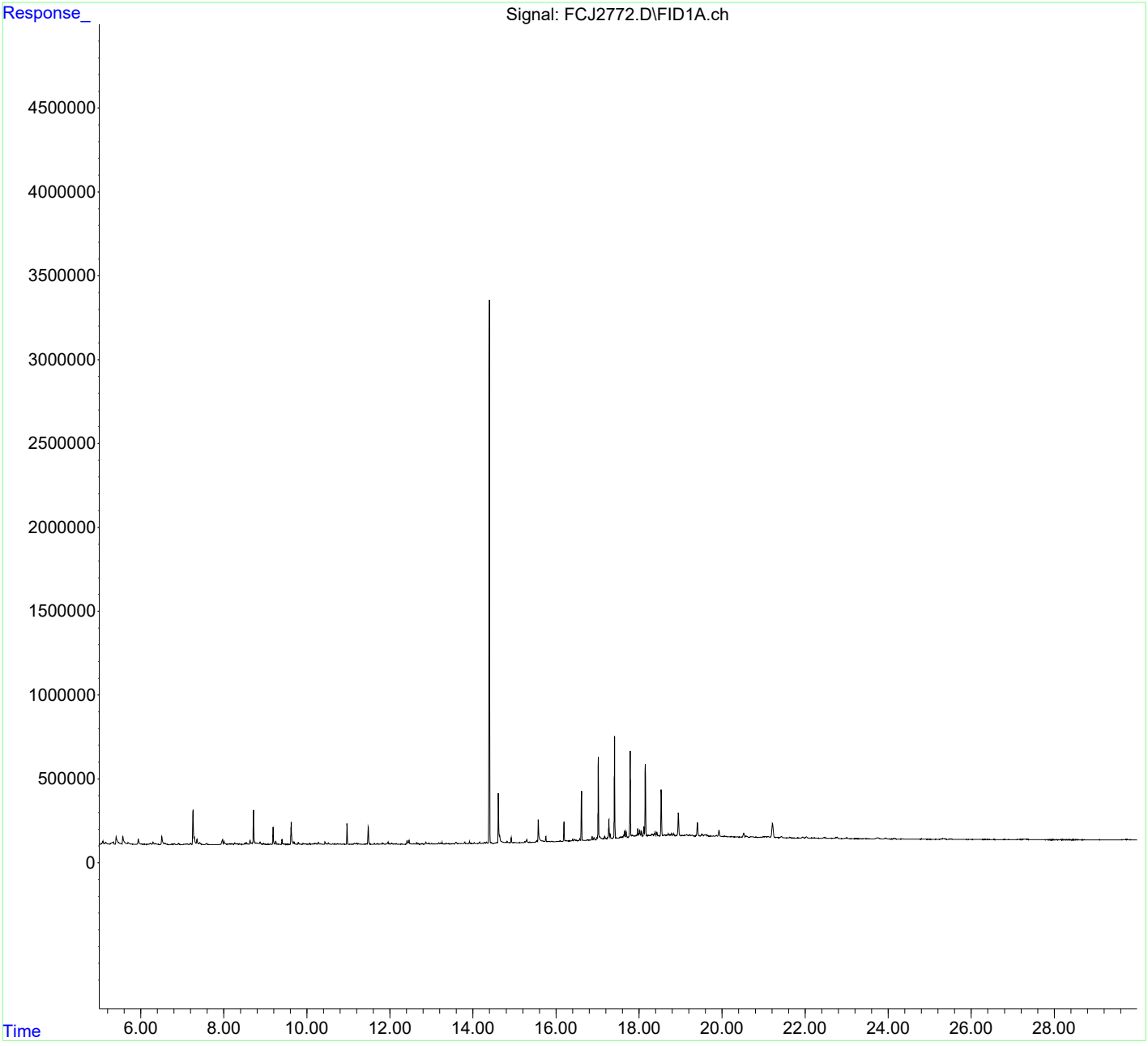
(f)=RT Delta > 1/2 Window (A) = Over the calibration range (d) = deleted (m)=manual int.

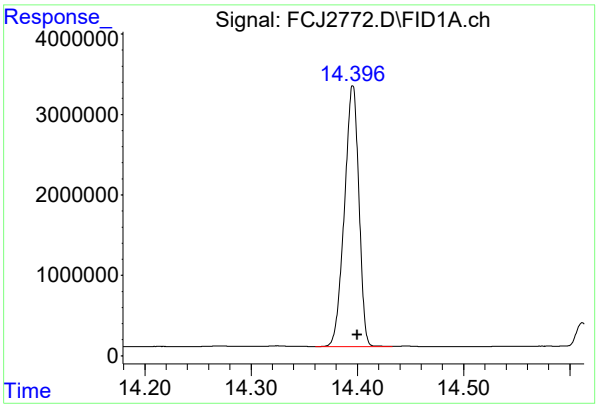
Quantitation Report
GEL Laboratories, LLC

DaData Path : D:\MSDCHEM\1\Data\102723DROMO\
DaData File : FCJ2772.D
Signal(s) : FID1A.ch
Acq On : 29 Oct 2023 06:13
Operator : RXC1 InstName : FIDC
Sample : |642648007|2514381|1|DROQ|1|TNSL|||
Misc : |FIDD415D_S|SOIL|RLUOB-23-289595|MIX[A,D]||
ALS Vial : 75 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Oct 29 11:31:30 2023
Quant Method : D:\MSDCHEM\1\Data\102723DROMO\FIDCNW_102723.m
Quant Title : DRO TPH SubList :
QLast Update : Sat Oct 28 11:09:33 2023
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : DB-5MS
Signal Info : 30m x 250um x 0.25um





#4
o-Terphenyl
R.T.: 14.396 min
Delta R.T.: -0.004 min
Response: 30758920
Conc: 16.94 mg/L

FID Diesel Range Organics
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 12:47**	**Matrix:**	**SO**
Lab Sample ID:	**642648008**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**3.6**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289596**	**Method:**	**SW846 3541/8015D**	**SOP Ref:**	**GL-OA-E-003**
Batch ID:	**2514381**	**Inst:**	**FIDC.I**	**Dilution:**	**1**
Run Date:	**10/29/2023 06:52**	**Analyst:**	**RXC1**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/27/2023 07:23**	**Aliquot:**	**30.48 g**	**Final Volume:**	**1 mL**
Data File:	**102723DROMO\FCJ2773.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	Motor Oil	U	2.21	mg/kg	2.21	6.81
68334-30-5	Diesel Range Organics	U	2.21	mg/kg	2.21	6.81

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
o-Terphenyl	0.542	0.681	mg/kg	80	(32%-118%)

Quantitation Report
GEL Laboratories, LLC

10/29/2023

Data Path : D:\MSDCHEM\1\Data\102723DROMO\
Data File : FCJ2773.D
Signal(s) : FID1A.ch
Acq On : 29 Oct 2023 06:52
Operator : RXC1 InstName : FIDC
Sample : |642648008|2514381|1|DROQ|1|TNSL|||
Misc : |FIDD415D_S|SOIL|RLUOB-23-289596|MIX[A,D]||
ALS Vial : 76 Sample Multiplier: 1

10/30/2023

Integration File: autoint1.e
Quant Time: Oct 29 11:31:35 2023
Quant Method : D:\MSDCHEM\1\Data\102723DROMO\FIDCNW_102723.m
Quant Title : DRO TPH SubList :
QLast Update : Sat Oct 28 11:09:33 2023
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : DB-5MS
Signal Info : 30m x 250um x 0.25um

Compound	Exp	R.T.	Delta	Response	Conc	Units
System Monitoring Compounds						
4) SD o-Terphenyl	14.400	14.396	-0.004	28924747	15.933	mg/L

Compound	Amount	Range	Recovery
4) o-Terphenyl	20.000	No Limits	80%

Target Compounds					
1) HA Diesel Range Organics	Range	8.240 - 14.865	23930260	<MDL	mg/L
2) HA Motor Oil	Range	14.865 - 23.074	78651868	<MDL	mg/L

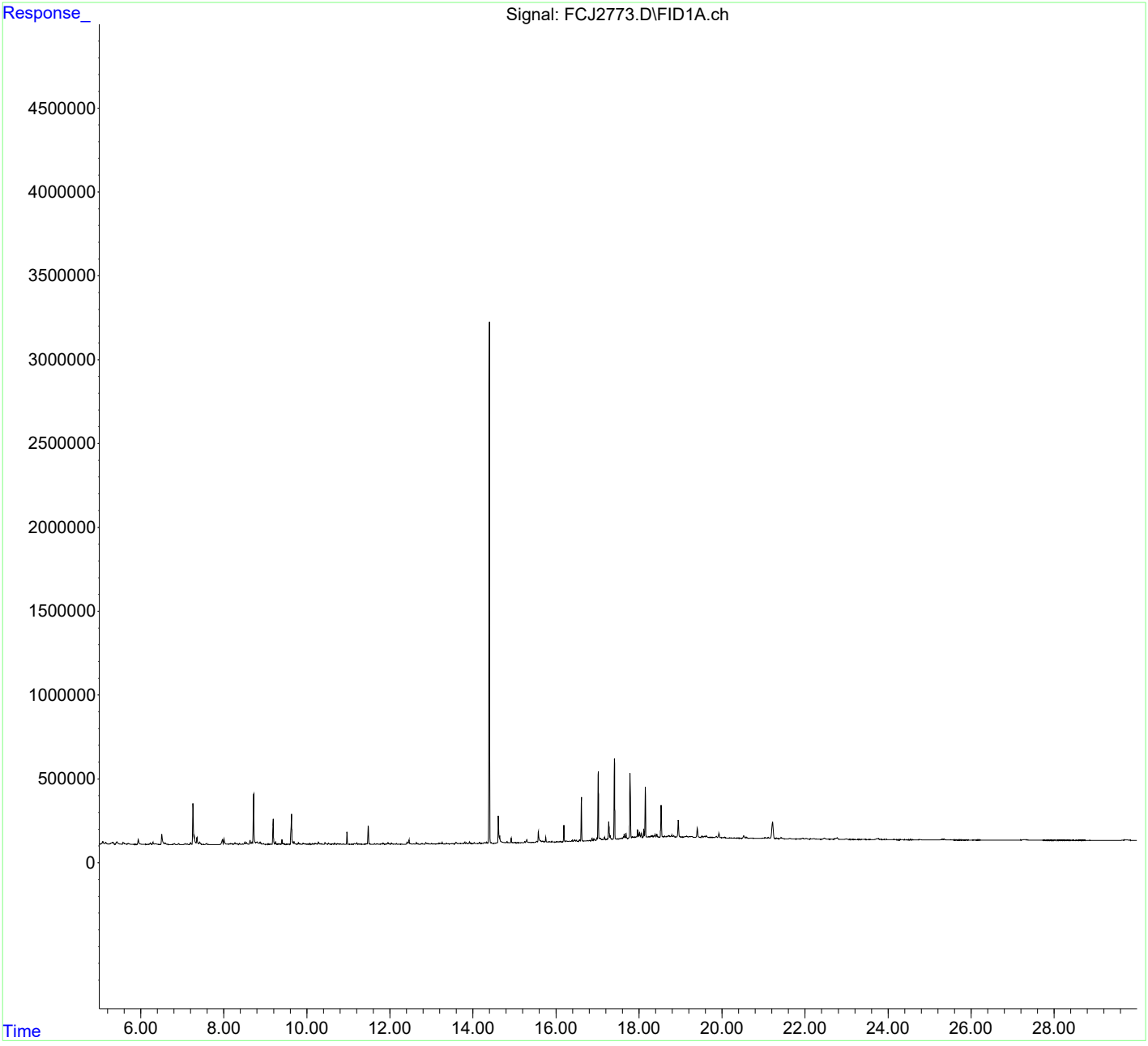
(f)=RT Delta > 1/2 Window (A) = Over the calibration range (d) = deleted (m)=manual int.

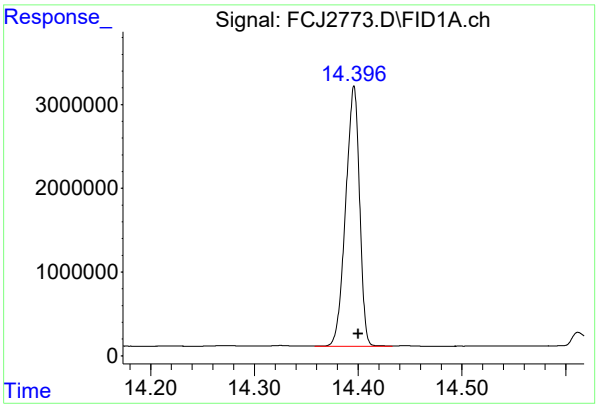
Quantitation Report
GEL Laboratories, LLC

DaData Path : D:\MSDCHEM\1\Data\102723DROMO\
DaData File : FCJ2773.D
Signal(s) : FID1A.ch
Acq On : 29 Oct 2023 06:52
Operator : RXC1 InstName : FIDC
Sample : |642648008|2514381|1|DROQ|1|TNSL|||
Misc : |FIDD415D_S|SOIL|RLUOB-23-289596|MIX[A,D]||
ALS Vial : 76 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Oct 29 11:31:35 2023
Quant Method : D:\MSDCHEM\1\Data\102723DROMO\FIDCNW_102723.m
Quant Title : DRO TPH SubList :
QLast Update : Sat Oct 28 11:09:33 2023
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : DB-5MS
Signal Info : 30m x 250um x 0.25um





#4
o-Terphenyl
R.T.: 14.396 min
Delta R.T.: -0.004 min
Response: 28924747
Conc: 15.93 mg/L

FID Diesel Range Organics
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 10:52**	**Matrix:**	**SO**
Lab Sample ID:	**642648012**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**4.8**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289591 DUP**	**Method:**	**SW846 3541/8015D**	**SOP Ref:**	**GL-OA-E-003**
Batch ID:	**2514381**	**Inst:**	**FIDC.I**	**Dilution:**	**1**
Run Date:	**10/29/2023 07:30**	**Analyst:**	**RXC1**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/27/2023 07:23**	**Aliquot:**	**30.49 g**	**Final Volume:**	**1 mL**
Data File:	**102723DROMO\FCJ2774.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	Motor Oil	J	2.32	mg/kg	2.24	6.89
68334-30-5	Diesel Range Organics	U	2.24	mg/kg	2.24	6.89

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
o-Terphenyl	0.489	0.689	mg/kg	71	(32%-118%)

Quantitation Report
GEL Laboratories, LLC

10/29/2023

Data Path : D:\MSDCHEM\1\Data\102723DROMO\
Data File : FCJ2774.D
Signal(s) : FID1A.ch
Acq On : 29 Oct 2023 07:30
Operator : RXC1 InstName : FIDC
Sample : |642648012|2514381|1|DROQ|1|TNSL|||
Misc : |FIDD415D_S|SOIL|RLUOB-23-289591 DUP|MIX[A,D]||
ALS Vial : 77 Sample Multiplier: 1

10/30/2023

Integration File: autoint1.e
Quant Time: Oct 29 11:31:39 2023
Quant Method : D:\MSDCHEM\1\Data\102723DROMO\FIDCNW_102723.m
Quant Title : DRO TPH SubList :
QLast Update : Sat Oct 28 11:09:33 2023
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : DB-5MS
Signal Info : 30m x 250um x 0.25um

Compound	Exp	R.T.	Delta	Response	Conc	Units
System Monitoring Compounds						
4) SD o-Terphenyl	14.400	14.394	-0.006	25800852	14.212	mg/L

Compound	Amount	Range	Recovery
4) o-Terphenyl	20.000	No Limits	71%

Target Compounds					
1) HA Diesel Range Organics	Range	8.240 - 14.865	23465847	<MDL	mg/L
2) HA Motor Oil	Range	14.865 - 23.074	115936678	67.452	mg/L

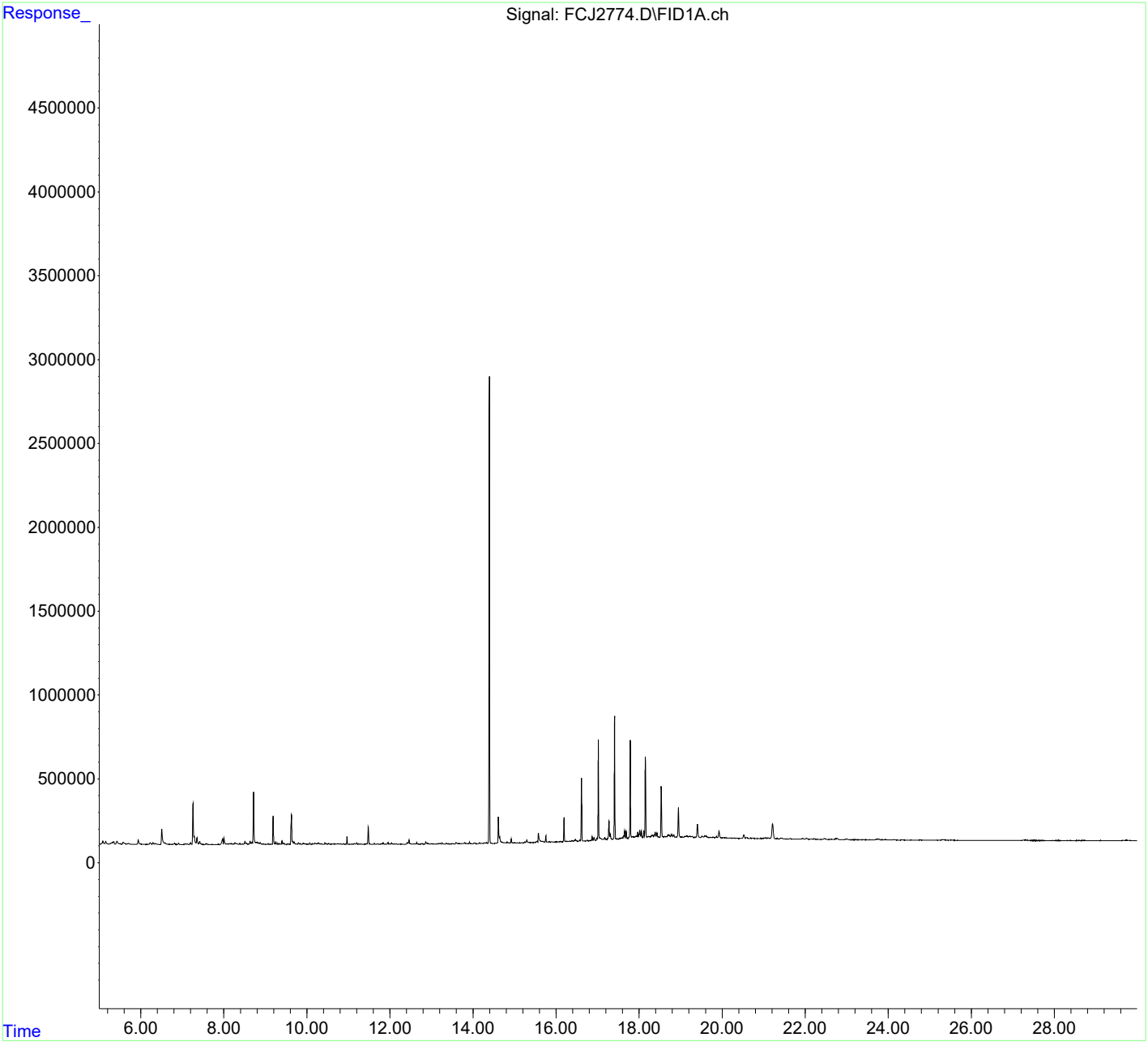
(f)=RT Delta > 1/2 Window (A) = Over the calibration range (d) = deleted (m)=manual int.

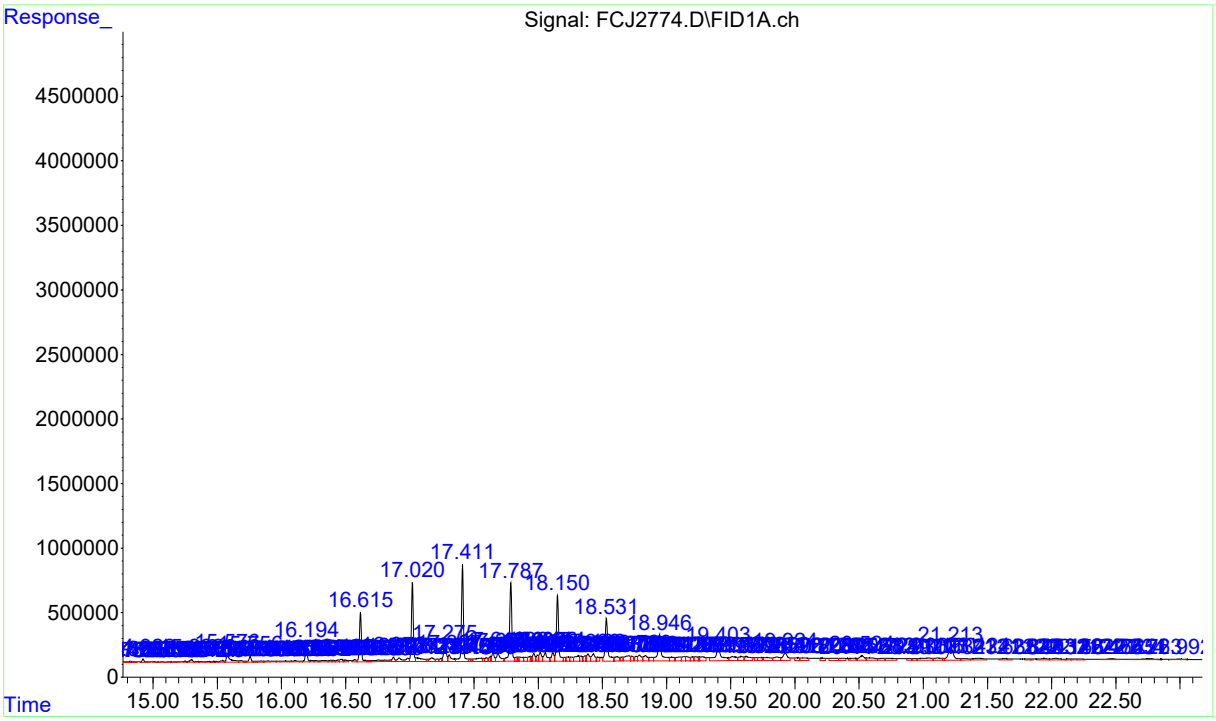
Quantitation Report
GEL Laboratories, LLC

DaData Path : D:\MSDCHEM\1\Data\102723DROMO\
DaData File : FCJ2774.D
Signal(s) : FID1A.ch
Acq On : 29 Oct 2023 07:30
Operator : RXC1 InstName : FIDC
Sample : |642648012|2514381|1|DROQ|1|TNSL|||
Misc : |FIDD415D_S|SOIL|RLUOB-23-289591 DUP|MIX[A,D]||
ALS Vial : 77 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Oct 29 11:31:39 2023
Quant Method : D:\MSDCHEM\1\Data\102723DROMO\FIDCNW_102723.m
Quant Title : DRO TPH SubList :
QLast Update : Sat Oct 28 11:09:33 2023
Response via : Initial Calibration
Integrator: ChemStation

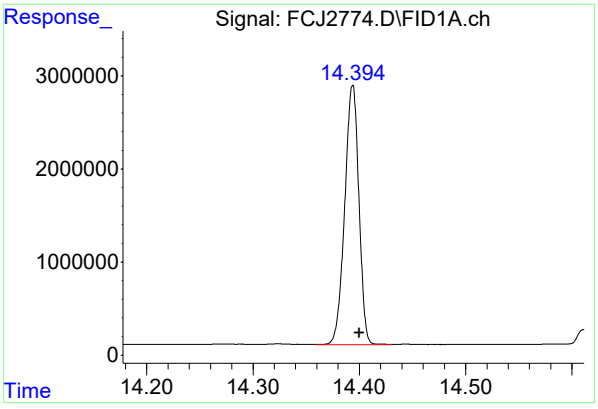
Volume Inj. : 1 ul
Signal Phase : DB-5MS
Signal Info : 30m x 250um x 0.25um





Compound: Motor Oil

RT Range:	14.865: 23.074
Total TPH Resp:	115936678
Total SMC/ISTD Resp:	0
Final Resp:	115936678



#4
o-Terphenyl

R.T.:	14.394 min
Delta R.T.:	-0.006 min
Response:	25800852
Conc:	14.21 mg/L

FID Diesel Range Organics
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 10:15**	**Matrix:**	**SO**
Lab Sample ID:	**642648001**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**4**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289589**	**Method:**	**SW846 3541/8015D**	**SOP Ref:**	**GL-OA-E-003**
Batch ID:	**2514381**	**Inst:**	**FIDC.I**	**Dilution:**	**50**
Run Date:	**10/30/2023 13:08**	**Analyst:**	**RXC1**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/27/2023 07:23**	**Aliquot:**	**30.33 g**	**Final Volume:**	**1 mL**
Data File:	**103023DROMO\FCJ3006.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	Motor Oil		492	mg/kg	112	343
68334-30-5	Diesel Range Organics		3010	mg/kg	112	343

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
o-Terphenyl	0.309	0.687	mg/kg	45	(32%-118%)

10/30/2023

10/30/2023

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MSDCHEM\1\Data\103023DROMO\
Data File : FCJ3006.D
Signal(s) : FID1A.ch
Acq On : 30 Oct 2023 13:08
Operator : RXC1 InstName : FIDC
Sample : |642648001|2514381|50|DROQ|1|TNSL|||
Misc : |FIDD415D_S|SOIL|RLUOB-23-289589|MIX[A,D]||
ALS Vial : 6 Sample Multiplier: 50

Integration File: autoint1.e
Quant Time: Oct 30 14:00:24 2023
Quant Method : D:\MSDCHEM\1\Data\103023DROMO\FIDCNW_102723.m
Quant Title : DRO TPH SubList :
QLast Update : Sat Oct 28 11:09:33 2023
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : DB-5MS
Signal Info : 30m x 250um x 0.25um

Compound	Exp	R.T.	Delta	Response	Conc	Units
System Monitoring Compounds						
4) SD o-Terphenyl	14.401	14.413	0.012	317848	8.754	mg/L m

Compound	Amount	Range	Recovery
4) o-Terphenyl	20.000	No Limits	44%

Target Compounds					
1) HA Diesel Range Organics	Range	8.240 - 14.865	2432587568	1755.662	mg/L m
2) HA Motor Oil	Range	14.865 - 23.074	493104056	286.886	mg/L

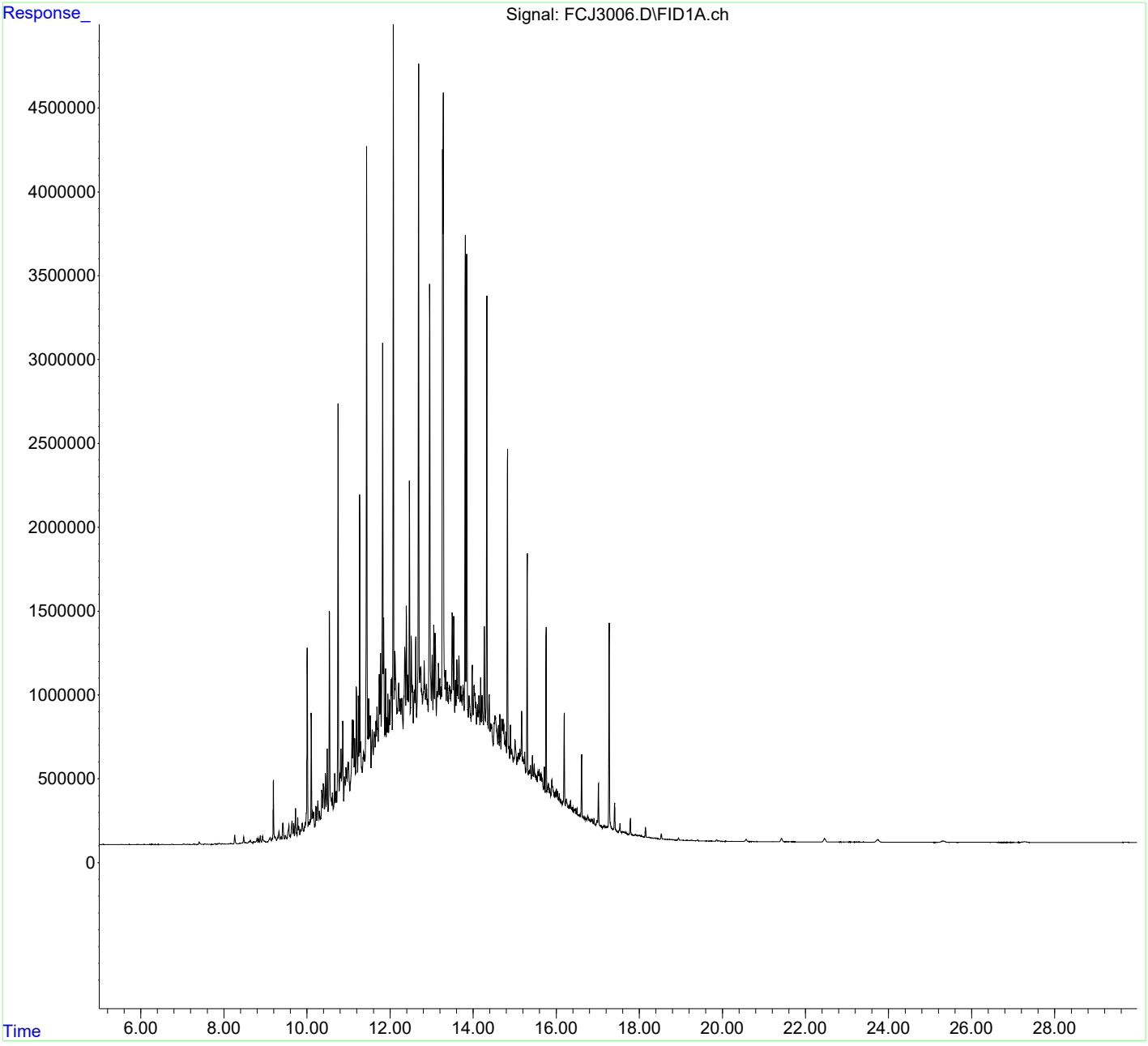
(f)=RT Delta > 1/2 Window (A) = Over the calibration range (d) = deleted (m)=manual int.

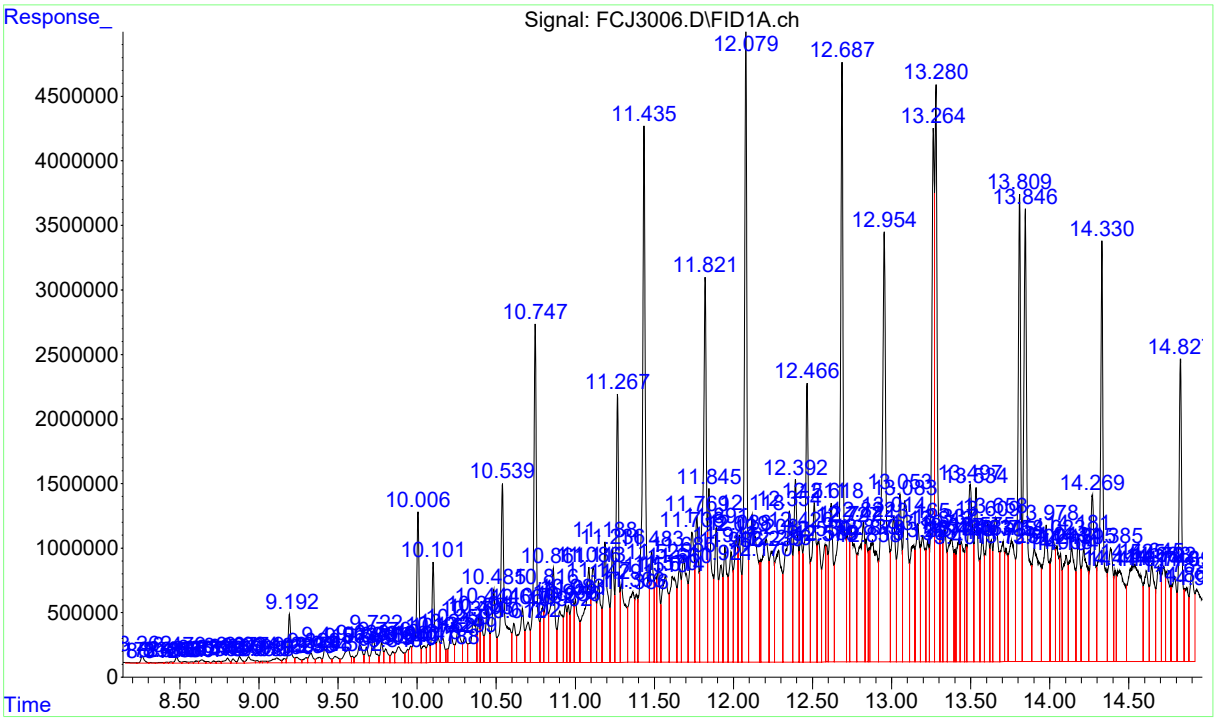
Quantitation Report
GEL Laboratories, LLC

DaData Path : D:\MSDCHEM\1\Data\103023DROMO\
DaData File : FCJ3006.D
Signal(s) : FID1A.ch
Acq On : 30 Oct 2023 13:08
Operator : RXC1 InstName : FIDC
Sample : |642648001|2514381|50|DROQ|1|TNSL|||
Misc : |FIDD415D_S|SOIL|RLUOB-23-289589|MIX[A,D]||
ALS Vial : 6 Sample Multiplier: 50

Integration File: autoint1.e
Quant Time: Oct 30 14:00:24 2023
Quant Method : D:\MSDCHEM\1\Data\103023DROMO\FIDCNW_102723.m
Quant Title : DRO TPH SubList :
QLast Update : Sat Oct 28 11:09:33 2023
Response via : Initial Calibration
Integrator: ChemStation

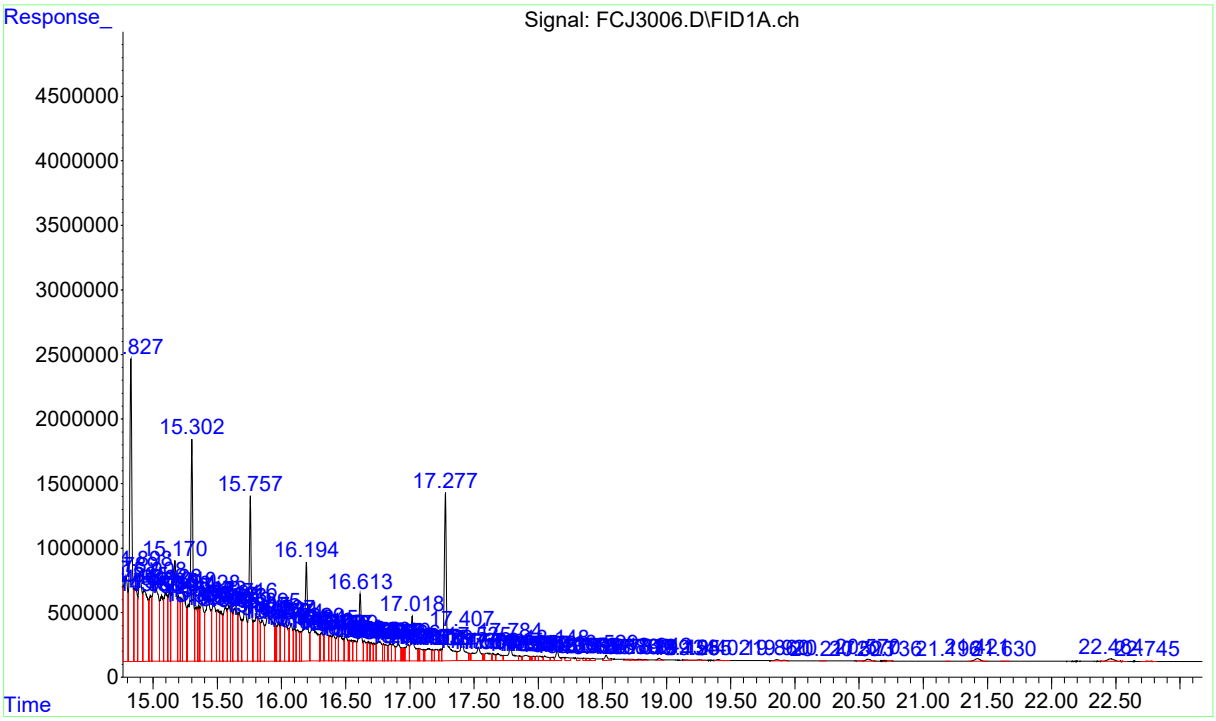
Volume Inj. : 1 ul
Signal Phase : DB-5MS
Signal Info : 30m x 250um x 0.25um





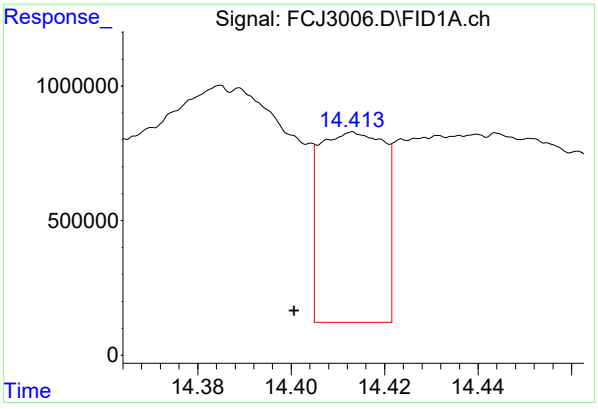
Compound: Diesel Range Organics

RT Range:	8.240: 14.865
Total TPH Resp:	2432905416
Total SMC/ISTD Resp:	317848
Final Resp:	2432587568

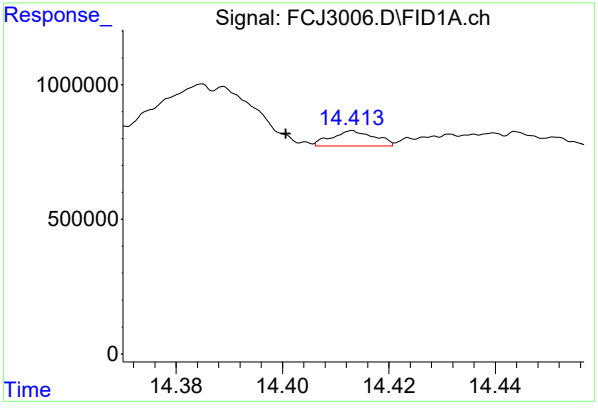


Compound: Motor Oil

RT Range: 14.865: 23.074
Total TPH Resp: 493104056
Total SMC/ISTD Resp: 0
Final Resp: 493104056



#4 BEFORE analyst INTEGRATION
o-Terphenyl
R.T.: 14.414 min
Delta R.T.: 0.013 min
Response: 6781278
Conc: 186.77 mg/L



#4 AFTER analyst INTEGRATION
o-Terphenyl AB
R.T.: 14.413 min
Delta R.T.: 0.012 min
Response: 317848
Conc: 8.75 mg/L MANUALLY INTEGRATED

Miscellaneous

Prep Logbook

Automated Soxhlet Extraction

Batch ID: 2514380 **Verified by:** _____
Analyst: Deorthia Coakley
Method: SW846 3541

Lab SOP: GL-OA-E-066 REV# 9
Instrument: Semi-Volatiles Manual

Sample ID	Prep Date	Aliquot (g)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1205556892 MB	27-OCT-2023 07:23:00	30.11	1	0.03321
1205556893 LCS	27-OCT-2023 07:23:00	30.56	1	0.03272
641989001	27-OCT-2023 07:23:00	30.23	1	0.03308
642493001	27-OCT-2023 07:23:00	30.39	1	0.03291
1205556894 MS (642493001)	27-OCT-2023 07:23:00	30.39	1	0.03291
1205556895 MSD (642493001)	27-OCT-2023 07:23:00	30.31	1	0.03299
642493002	27-OCT-2023 07:23:00	30.08	1	0.03324
642493003	27-OCT-2023 07:23:00	30.11	1	0.03321
642493004	27-OCT-2023 07:23:00	30.37	1	0.03293
642648001	27-OCT-2023 07:23:00	30.33	1	0.03297
642648002	27-OCT-2023 07:23:00	30.13	1	0.03319
642648003	27-OCT-2023 07:23:00	30.07	1	0.03326
642648004	27-OCT-2023 07:23:00	30.03	1	0.0333
642648005	27-OCT-2023 07:23:00	30.12	1	0.0332
642648006	27-OCT-2023 07:23:00	30.1	1	0.03322
642648007	27-OCT-2023 07:23:00	30.01	1	0.03332
642648008	27-OCT-2023 07:23:00	30.48	1	0.03281
642648012	27-OCT-2023 07:23:00	30.49	1	0.0328

Type	Sample Id	Description	Serial Number	Spike Amt	Units
LCS	1205556893	AZDRO SPIKE LCS STD,4000ug/ml	WE231026-06	1	mL
MS	1205556894	AZDRO SPIKE LCS STD,4000ug/ml	WE231026-06	1	mL
MSD	1205556895	AZDRO SPIKE LCS STD,4000ug/ml	WE231026-06	1	mL
SURR	All	20 ppm surrogate	WE231010-07	1	mL
REGNT	All	Sand pure 40-100 mesh	3951793-A	30	g
REGNT	All	Methylene Chloride	3969728	120	mL

Comments:

Sample 641989001 and work order 642493 samples were powder and rocks. Work order 642648 samples were damp sand.
Soxtherm Unit:: 4,5,6
Logbook Reviewer: JS
Final Solvent: Dichloromethane
Start Time:: 0737
End Time:: 0839
Verified by: CB

ORGANIC RUN LOG - INSTRUMENT ID#FIDC

GEL ORGANIC RUN LOG INSTRUMENT BATCH: 102723DROMO

DATE: 27-Oct-23 METHOD: See Data OPERATOR: RXC1 Sequence Number: 102723DRC

10/30/2023

Solvent Lot: 230706

Injection Volume: 1.0 uL

Calibration Information:
Initial Calibration Dates: See Calibration History
Initial Calibration Std ID's: See Associated Data and Run Log
FID Analysis of GEL SOP: GL-OA-E-003

Analysis Date	Time	Data File	Lab Sample ID	Client	Batch #	Dil. Factor	AS Slot #	Analyst	Comme
10/27/2023	08:49	FCJ2701.D	WFI231012-98	IBLK	BLANK	1	1	RXC1	
10/27/2023	09:27	FCJ2702.D	WFI230929-99	FID_RT	RTCHECK	1	2	RXC1	
10/27/2023	10:05	FCJ2703.D	WFI231009-30	DRO-MO-1	ICAL	1	3	RXC1	
10/27/2023	10:43	FCJ2704.D	WFI231009-31	DRO-MO-2	ICAL	1	4	RXC1	
10/27/2023	11:21	FCJ2705.D	WFI231009-32	DRO-MO-3	ICAL	1	5	RXC1	
10/27/2023	11:59	FCJ2706.D	WFI231009-33	DRO-MO-4	ICAL	1	6	RXC1	
10/27/2023	12:38	FCJ2707.D	WFI231009-34	DRO-MO-5	ICAL	1	7	RXC1	
10/27/2023	13:16	FCJ2708.D	WFI231020-36	RO-MO-IC	ICV	1	8	RXC1	
10/27/2023	13:54	FCJ2709.D	WFI230929-99	FID_RT	RTCHECK	1	9	RXC1	
10/27/2023	14:32	FCJ2710.D	WFI231012-98	IBLK	BLANK	1	10	RXC1	
10/27/2023	15:11	FCJ2711.D	UFI230629-20.3	KER-1	ICAL	1	11	RXC1	
10/27/2023	15:49	FCJ2712.D	UFI230629-21.3	KER-2	ICAL	1	12	RXC1	
10/27/2023	16:27	FCJ2713.D	UFI230629-22.3	KER-3	ICAL	1	13	RXC1	
10/27/2023	17:05	FCJ2714.D	UFI230629-23.3	KER-4	ICAL	1	14	RXC1	
10/27/2023	17:43	FCJ2715.D	UFI230629-24.3	KER-5	ICAL	1	15	RXC1	
10/27/2023	18:22	FCJ2716.D	UFI231003-25.1	KER-ICV	ICV	1	16	RXC1	
10/27/2023	19:00	FCJ2717.D	WFI230929-99	FID_RT	RTCHECK	1	17	RXC1	
10/27/2023	19:38	FCJ2718.D	WFI231012-xx	scrn	SCREEN	1	18	RXC1	
10/27/2023	20:16	FCJ2719.D	1205553087	MB	2512326	1	19	RXC1	
10/27/2023	20:54	FCJ2720.D	1205553088	LCS	2512326	1	20	RXC1	
10/27/2023	21:32	FCJ2721.D	642223001	TNSL	2512326	1	21	RXC1	
10/27/2023	22:10	FCJ2722.D	1205553089	MS	2512326	1	22	RXC1	
10/27/2023	22:48	FCJ2723.D	1205553090	MSD	2512326	1	23	RXC1	
10/27/2023	23:26	FCJ2724.D	642223002	TNSL	2512326	1	24	RXC1	
10/28/2023	00:04	FCJ2725.D	642223003	TNSL	2512326	1	25	RXC1	
10/28/2023	00:42	FCJ2726.D	642223004	TNSL	2512326	1	26	RXC1	
10/28/2023	01:20	FCJ2727.D	642223005	TNSL	2512326	5	27	RXC1	
10/28/2023	01:58	FCJ2728.D	WFI231020-36	RO-MO-CC	CCV	1	28	RXC1	
10/28/2023	02:36	FCJ2729.D	UFI231003-25.1	KER-CCV	CCV	1	29	RXC1	
10/28/2023	03:14	FCJ2730.D	WFI231012-98	IBLK	BLANK	1	30	RXC1	
10/28/2023	03:52	FCJ2731.D	1205553091	MB	2512328	1	31	RXC1	
10/28/2023	04:30	FCJ2732.D	1205553092	LCS	2512328	1	32	RXC1	

GEL ORGANIC RUN LOG INSTRUMENT BATCH: 102723DROMO

10/28/2023 05:08	FCJ2733.D	1205553093	LCS	2512328	1	33	RXC1	
10/28/2023 05:46	FCJ2734.D	1205553094	LCSD	2512328	1	34	RXC1	
10/28/2023 06:24	FCJ2735.D	1205553095	LCSD	2512328	1	35	RXC1	
10/28/2023 07:02	FCJ2736.D	641944001	HAND	2512328	1	36	RXC1	
10/28/2023 07:40	FCJ2737.D	WFI231020-36	RO-MO-CC	CCV	1	37	RXC1	
10/28/2023 08:18	FCJ2738.D	UFI231003-25.1	KER-CCV	CCV	1	38	RXC1	
10/28/2023 08:56	FCJ2739.D	WFI231012-98	IBLK	BLANK	1	39	RXC1	
10/28/2023 09:34	FCJ2740.D	1205550996	MB	2510991	1	40	RXC1	
10/28/2023 10:12	FCJ2741.D	639713002	QCQA	2510991	1	41	RXC1	
10/28/2023 10:51	FCJ2742.D	639713003	QCQA	2510991	1	42	RXC1	
10/28/2023 11:50	FCJ2743.D	WFI231020-36	RO-MO-CC	CCV	1	43	RXC1	
10/28/2023 12:28	FCJ2744.D	UFI231003-25.1	KER-CCV	CCV	1	44	RXC1	
10/28/2023 13:06	FCJ2745.D	WFI231012-98	IBLK	BLANK	1	45	RXC1	
10/28/2023 13:44	FCJ2746.D	642223001	TNSL	2512326	50	21	RXC1	
10/28/2023 14:22	FCJ2747.D	1205553089	MS	2512326	50	22	RXC1	
10/28/2023 15:01	FCJ2748.D	1205553090	MSD	2512326	50	23	RXC1	
10/28/2023 15:39	FCJ2749.D	642223002	TNSL	2512326	1	24	RXC1	
10/28/2023 16:17	FCJ2750.D	642223003	TNSL	2512326	10	25	RXC1	
10/28/2023 16:55	FCJ2751.D	642223004	TNSL	2512326	1	26	RXC1	
10/28/2023 17:33	FCJ2752.D	WFI231020-36	RO-MO-CC	CCV	1	55	RXC1	
10/28/2023 18:11	FCJ2753.D	UFI231003-25.1	KER-CCV	CCV	1	56	RXC1	
10/28/2023 18:49	FCJ2754.D	WFI231012-98	IBLK	BLANK	1	57	RXC1	
10/28/2023 19:27	FCJ2755.D	1205556892	MB	2514381	1	58	RXC1	
10/28/2023 20:05	FCJ2756.D	1205556893	LCS	2514381	1	59	RXC1	
10/28/2023 20:43	FCJ2757.D	641989001	LLNL	2514381	1	60	RXC1	
10/28/2023 21:21	FCJ2758.D	642493001	TNSL	2514381	5	61	RXC1	
10/28/2023 21:59	FCJ2759.D	1205556894	MS	2514381	5	62	RXC1	
10/28/2023 22:37	FCJ2760.D	1205556895	MSD	2514381	5	63	RXC1	
10/28/2023 23:15	FCJ2761.D	642493002	TNSL	2514381	1	64	RXC1	
10/28/2023 23:53	FCJ2762.D	642493003	TNSL	2514381	1	65	RXC1	
10/29/2023 00:31	FCJ2763.D	642493004	TNSL	2514381	1	66	RXC1	
10/29/2023 01:09	FCJ2764.D	642648001	TNSL	2514381	1	67	RXC1	
10/29/2023 01:47	FCJ2765.D	WFI231020-36	RO-MO-CC	CCV	1	68	RXC1	
10/29/2023 02:25	FCJ2766.D	WFI231012-98	IBLK	BLANK	1	69	RXC1	
10/29/2023 03:03	FCJ2767.D	642648002	TNSL	2514381	1	70	RXC1	
10/29/2023 03:41	FCJ2768.D	642648003	TNSL	2514381	1	71	RXC1	
10/29/2023 04:19	FCJ2769.D	642648004	TNSL	2514381	1	72	RXC1	
10/29/2023 04:57	FCJ2770.D	642648005	TNSL	2514381	1	73	RXC1	
10/29/2023 05:36	FCJ2771.D	642648006	TNSL	2514381	1	74	RXC1	
10/29/2023 06:13	FCJ2772.D	642648007	TNSL	2514381	1	75	RXC1	
10/29/2023 06:52	FCJ2773.D	642648008	TNSL	2514381	1	76	RXC1	

ORGANIC RUN LOG - INSTRUMENT ID#FIDC

GEL ORGANIC RUN LOG INSTRUMENT BATCH: 102723DROMO

10/29/2023 07:30	FCJ2774.D	642648012	TNSL	2514381	1	77	RXC1	
10/29/2023 08:08	FCJ2775.D	WFI231020-36	RO-MO-CC	CCV	1	78	RXC1	
10/29/2023 08:46	FCJ2776.D	UFI231003-25.1	KER-CCV	CCV	1	79	RXC1	
10/29/2023 09:24	FCJ2777.D	WFI231012-98	IBLK	BLANK	1	80	RXC1	
10/29/2023 10:02	FCJ2778.D	1205556012	MB	2513751	1	46	RXC1	
10/29/2023 10:40	FCJ2779.D	1205556013	LCS	2513751	1	47	RXC1	
10/29/2023 11:18	FCJ2780.D	1205556016	LCS	2513751	1	48	RXC1	
10/29/2023 11:56	FCJ2781.D	1205556017	LCSD	2513751	1	49	RXC1	

ORGANIC RUN LOG - INSTRUMENT ID#FIDC

GEL ORGANIC RUN LOG INSTRUMENT BATCH: 103023DROMO

DATE: 30-Oct-23 METHOD: See Data OPERATOR: RXC1 Sequence Number: 103023DROMO

Solvent Lot: 230706

Injection Volume: 1.0 uL

Calibration Information:
Initial Calibration Dates: See Calibration History
Initial Calibration Std ID's: See Associated Data and Run Log
FID Analysis of GEL SOP: GL-OA-E-003

Analysis Date	Time	Data File	Lab Sample ID	Client	Batch #	Dil. Factor	AS Slot #	Analyst	Comme
10/30/2023	09:57	FCJ3001.D	WFI231012-98	IBLK	BLANK	1	1	RXC1	
10/30/2023	10:35	FCJ3002.D	WFI230929-99	FID_RT	RTCHECK	1	2	RXC1	
10/30/2023	11:13	FCJ3003.D	WFI231020-36	RO-MO-CC	CCV	1	3	RXC1	
10/30/2023	11:51	FCJ3004.D	UFI231003-25.2	KER-CCV	CCV	1	4	RXC1	
10/30/2023	12:30	FCJ3005.D	UFI230206-26.6	DRO-CCV	CCV	1	5	RXC1	
10/30/2023	13:08	FCJ3006.D	642648001	TNSL	2514381	50	6	RXC1	
10/30/2023	13:46	FCJ3007.D	WFI231020-36	RO-MO-CC	CCV	1	7	RXC1	

GC Volatiles (GRO) Analysis

Case Narrative

GC Volatiles (GRO)
Technical Case Narrative
Triad National Security, LLC
SDG #: 2024-76
Work Order #: 642648

Product: **Volatile Total Petroleum Hydrocarbons by Flame Ionization Detector**
Analytical Method: SW846 8015D
Analytical Procedure: GL-OA-E-004 REV# 31
Analytical Batch: 2514414

Preparation Method: SW846 5035A
Preparation Procedure: GL-OA-E-004 REV# 31
Preparation Batch: 2514413

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
642648001	RLUOB-23-289589
642648002	RLUOB-23-289590
642648003	RLUOB-23-289591
642648004	RLUOB-23-289592
642648005	RLUOB-23-289593
642648006	RLUOB-23-289594
642648007	RLUOB-23-289595
642648008	RLUOB-23-289596
642648012	RLUOB-23-289591 DUP
1205556974	Laboratory Control Sample (LCS)
1205556975	Method Blank (MB)
1205556976	642648001(RLUOB-23-289589) Post Spike (PS)
1205556977	642648001(RLUOB-23-289589) Post Spike Duplicate (PSD)
1205556978	High Blank (HB)

The samples in this SDG were analyzed on a "dry weight" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Sample Dilutions
Samples were analyzed using a methanol extraction procedure at 1:50 dilution. The samples were analyzed at the lowest dilution possible when using a methanol extraction procedure.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report
for

TNSL001 Triad National Security, LLC (620266)

Client SDG: 2024-76 GEL Work Order: 642648

The Qualifiers in this report are defined as follows:

* A quality control analyte recovery is outside of specified acceptance criteria
** Analyte is a surrogate compound
U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

DL Indicates that sample is diluted.
RA Indicates that sample is re-analyzed without re-extraction.
RE Indicates that sample is re-extracted.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: Erin Haubert **Name: Erin Haubert**

Date: 27 OCT 2023 **Title: Data Validator**

Sample Data Summary

GC Volatiles (GRO)
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 10:15**	**Matrix:**	**SO**
Lab Sample ID:	**642648001**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**4**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289589**	**Method:**	**SW846 8015D**	**SOP Ref:**	**GL-OA-E-004**
Batch ID:	**2514414**	**Inst:**	**VOC4A.I**	**Dilution:**	**50**
Run Date:	**10/26/2023 12:12**	**Analyst:**	**JEB**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/26/2023 08:11**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**102623\4C412.D**	**Column:**	**DB-MTBE**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
8006-61-9	Gasoline Range Organics	U	1740	ug/kg	1740	10400

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	4500	50.0	ug/kg	86	(51%-131%)

GC Volatiles (GRO)
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 10:32**	**Matrix:**	**SO**
Lab Sample ID:	**642648002**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**1**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289590**	**Method:**	**SW846 8015D**	**SOP Ref:**	**GL-OA-E-004**
Batch ID:	**2514414**	**Inst:**	**VOC4A.I**	**Dilution:**	**50**
Run Date:	**10/26/2023 12:37**	**Analyst:**	**JEB**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/26/2023 08:12**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**102623\4C413.D**	**Column:**	**DB-MTBE**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
8006-61-9	Gasoline Range Organics	U	1680	ug/kg	1680	10100

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	3930	50.0	ug/kg	78	(51%-131%)

GC Volatiles (GRO)
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 10:52**	**Matrix:**	**SO**
Lab Sample ID:	**642648003**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**4.8**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289591**	**Method:**	**SW846 8015D**	**SOP Ref:**	**GL-OA-E-004**
Batch ID:	**2514414**	**Inst:**	**VOC4A.I**	**Dilution:**	**50**
Run Date:	**10/26/2023 13:02**	**Analyst:**	**JEB**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/26/2023 08:13**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**102623\4C414.D**	**Column:**	**DB-MTBE**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
8006-61-9	Gasoline Range Organics	U	1750	ug/kg	1750	10500

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	4160	50.0	ug/kg	79	(51%-131%)

GC Volatiles (GRO)
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 11:09**	**Matrix:**	**SO**
Lab Sample ID:	**642648004**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**2**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289592**	**Method:**	**SW846 8015D**	**SOP Ref:**	**GL-OA-E-004**
Batch ID:	**2514414**	**Inst:**	**VOC4A.I**	**Dilution:**	**50**
Run Date:	**10/26/2023 13:27**	**Analyst:**	**JEB**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/26/2023 08:14**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**102623\4C415.D**	**Column:**	**DB-MTBE**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
8006-61-9	Gasoline Range Organics	U	1700	ug/kg	1700	10200

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	4050	50.0	ug/kg	79	(51%-131%)

GC Volatiles (GRO)
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 11:45**	**Matrix:**	**SO**
Lab Sample ID:	**642648005**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**1.7**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289593**	**Method:**	**SW846 8015D**	**SOP Ref:**	**GL-OA-E-004**
Batch ID:	**2514414**	**Inst:**	**VOC4A.I**	**Dilution:**	**50**
Run Date:	**10/26/2023 14:17**	**Analyst:**	**JEB**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/26/2023 08:15**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**102623\4C417.D**	**Column:**	**DB-MTBE**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
8006-61-9	Gasoline Range Organics	U	1700	ug/kg	1700	10200

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	4820	50.0	ug/kg	95	(51%-131%)

GC Volatiles (GRO)
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 12:00**	**Matrix:**	**SO**
Lab Sample ID:	**642648006**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**5.1**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289594**	**Method:**	**SW846 8015D**	**SOP Ref:**	**GL-OA-E-004**
Batch ID:	**2514414**	**Inst:**	**VOC4A.I**	**Dilution:**	**50**
Run Date:	**10/26/2023 14:42**	**Analyst:**	**JEB**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/26/2023 08:16**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**102623\4C418.D**	**Column:**	**DB-MTBE**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
8006-61-9	Gasoline Range Organics	U	1760	ug/kg	1760	10500

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	5000	50.0	ug/kg	95	(51%-131%)

GC Volatiles (GRO)
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 12:15**	**Matrix:**	**SO**
Lab Sample ID:	**642648007**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**2.5**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289595**	**Method:**	**SW846 8015D**	**SOP Ref:**	**GL-OA-E-004**
Batch ID:	**2514414**	**Inst:**	**VOC4A.I**	**Dilution:**	**50**
Run Date:	**10/26/2023 15:07**	**Analyst:**	**JEB**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/26/2023 08:17**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**102623\4C419.D**	**Column:**	**DB-MTBE**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
8006-61-9	Gasoline Range Organics	U	1710	ug/kg	1710	10300

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	3990	50.0	ug/kg	78	(51%-131%)

GC Volatiles (GRO)
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 12:47**	**Matrix:**	**SO**
Lab Sample ID:	**642648008**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**3.6**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289596**	**Method:**	**SW846 8015D**	**SOP Ref:**	**GL-OA-E-004**
Batch ID:	**2514414**	**Inst:**	**VOC4A.I**	**Dilution:**	**50**
Run Date:	**10/26/2023 15:32**	**Analyst:**	**JEB**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/26/2023 08:18**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**102623\4C420.D**	**Column:**	**DB-MTBE**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
8006-61-9	Gasoline Range Organics	U	1730	ug/kg	1730	10400

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	4020	50.0	ug/kg	77	(51%-131%)

GC Volatiles (GRO)
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 10:52**	**Matrix:**	**SO**
Lab Sample ID:	**642648012**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**4.8**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289591 DUP**	**Method:**	**SW846 8015D**	**SOP Ref:**	**GL-OA-E-004**
Batch ID:	**2514414**	**Inst:**	**VOC4A.I**	**Dilution:**	**50**
Run Date:	**10/26/2023 15:57**	**Analyst:**	**JEB**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/26/2023 08:19**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**102623\4C421.D**	**Column:**	**DB-MTBE**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
8006-61-9	Gasoline Range Organics	U	1750	ug/kg	1750	10500

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	4460	50.0	ug/kg	85	(51%-131%)

Quality Control Summary

GC Volatiles (GRO)

Surrogate Recovery Report

SDG Number: 2024-76

Matrix Type: SOLID

Sample ID	Client ID	BFB %REC	
1205556974	LCS for batch 2514413	89	
1205556975	MB for batch 2514413	93	
1205556978	HB for batch 2514413	85	D
642648001	RLUOB-23-289589	86	D
642648002	RLUOB-23-289590	78	D
642648003	RLUOB-23-289591	79	D
642648004	RLUOB-23-289592	79	D
642648005	RLUOB-23-289593	95	D
642648006	RLUOB-23-289594	95	D
642648007	RLUOB-23-289595	78	D
642648008	RLUOB-23-289596	77	D
642648012	RLUOB-23-289591 DUP	85	D
1205556976	RLUOB-23-289589PS	77	D
1205556977	RLUOB-23-289589PSD	86	D

Surrogate		Acceptance Limits
BFB	= Bromofluorobenzene	(51%-131%)

* Recovery outside Acceptance Limits

Column to be used to flag recovery values

D Sample Diluted

GC Volatiles (GRO)

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-76
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 2514413
Matrix: SOIL
Lab Sample ID: 1205556974
Instrument: VOC4A.I
Analysis Date: 10/26/2023 08:52
Dilution: 1
Analyst: JEB
Prep Batch ID: 2514413
Inj. Vol: 1 uL
Batch ID: 2514414

CAS No.		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
8006-61-9	LCS	Gasoline Range Organics	500	0.0	467	93	70-130

GC Volatiles (GRO)

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-76
Client ID: RLUOB-23-289589PS
Lab Sample ID: 1205556976
Instrument: VOC4A.I
Analyst: JEB
Inj. Vol: 1 uL

Sample Type: Post Spike
Matrix: SO
%Moisture: 4
Analysis Date: 10/26/2023 16:22
Prep Batch ID: 2514413
Batch ID: 2514414
Dilution: 50

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits
8006-61-9	PS	Gasoline Range Organics	500	0.000	U	506	101	37-135

GC Volatiles (GRO)

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-76
Client ID: RLUOB-23-289589PSD
Lab Sample ID: 1205556977
Instrument: VOC4A.I
Analyst: JEB
Inj. Vol: 1 uL

Sample Type: Post Spike Duplicate
Matrix: SO
%Moisture: 4
Analysis Date: 10/26/2023 16:47
Prep Batch ID: 2514413
Batch ID: 2514414
Dilution: 50

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
8006-61-9	PSD	Gasoline Range Organics	500	0.000	U	514	103	37-135	2	0-32

Method Blank Summary

SDG Number:	**2024-76**	**Client:**	**TNSL001**	**Matrix:**	**SOIL**
Client ID:	**MB for batch 2514413**	**Instrument ID:**	**VOC4A.I**	**Data File:**	**102623\4C406TN.D**
Lab Sample ID:	**1205556975**	**Prep Date:**	**10/26/2023 07:16**	**Analyzed:**	**10/26/23 09:42**
Column:	**DB-MTBE**				

This method blank applies to the following samples and quality control samples:

	Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01	LCS for batch 2514413	1205556974	102623\4C404TN.D	10/26/23	0852
02	HB for batch 2514413	1205556978	102623\4C411.D	10/26/23	1147
03	RLUOB-23-289589	642648001	102623\4C412.D	10/26/23	1212
04	RLUOB-23-289590	642648002	102623\4C413.D	10/26/23	1237
05	RLUOB-23-289591	642648003	102623\4C414.D	10/26/23	1302
06	RLUOB-23-289592	642648004	102623\4C415.D	10/26/23	1327
07	RLUOB-23-289593	642648005	102623\4C417.D	10/26/23	1417
08	RLUOB-23-289594	642648006	102623\4C418.D	10/26/23	1442
09	RLUOB-23-289595	642648007	102623\4C419.D	10/26/23	1507
10	RLUOB-23-289596	642648008	102623\4C420.D	10/26/23	1532
11	RLUOB-23-289591 DUP	642648012	102623\4C421.D	10/26/23	1557
12	RLUOB-23-289589PS	1205556976	102623\4C422.D	10/26/23	1622
13	RLUOB-23-289589PSD	1205556977	102623\4C423.D	10/26/23	1647

Sample Data

GC Volatiles (GRO)
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 10:15**	**Matrix:**	**SO**
Lab Sample ID:	**642648001**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**4**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289589**	**Method:**	**SW846 8015D**	**SOP Ref:**	**GL-OA-E-004**
Batch ID:	**2514414**	**Inst:**	**VOC4A.I**	**Dilution:**	**50**
Run Date:	**10/26/2023 12:12**	**Analyst:**	**JEB**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/26/2023 08:11**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**102623\4C412.D**	**Column:**	**DB-MTBE**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
8006-61-9	Gasoline Range Organics	U	1740	ug/kg	1740	10400

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	4500	50.0	ug/kg	86	(51%-131%)

JEB 10/27/2023

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\102623\
Data File : 4C412.D
Signal(s) : FID1A.CH
Acq On : 26 Oct 2023 12:12
Operator : JEB InstName : VOC4A
Sample : |642648001|2514414|50|GROF|1|VOC8015D_S|
Misc : TNSL 100UL N/A SOIL 5G/10ML
ALS Vial : 12 Sample Multiplier: 1

GEL 10/27/2023

Integration File: events.e
Quant Time: Oct 26 15:03:03 2023
Quant Method : C:\msdchem\1\data\102623\VOC8015C060723.m
Quant Title : GRO TPH SubList :
QLast Update : Fri Jun 09 12:38:36 2023
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 5 mL Purge Volume
Signal Phase : Durabond 30m x 0.53 ID x 3 um
Signal Info : DB-MTBE

Compound	Exp	R.T.	Delta	Response	Conc	Units
System Monitoring Compounds						
4) S Bromofluorobenzene	10.218	10.216	-0.002	15917777	43.196	ug/L

Compound	Amount	Range	Recovery
4) Bromofluorobenzene	50.000	51 - 131	86%

Target Compounds						
3) H Gasoline Range Organics	Range	3.418 - 11.634		2658042	<MDL	ug/L
SemiQuant Compounds - Not Calibrated on this Instrument						
1) 2-Methylpentane	3.470	0.000	-3.470	0	N.D.	ug/L
2) 1,2,4-Trimethylbenzene	11.621	11.651	0.030f	133253	NoCal	ug/L

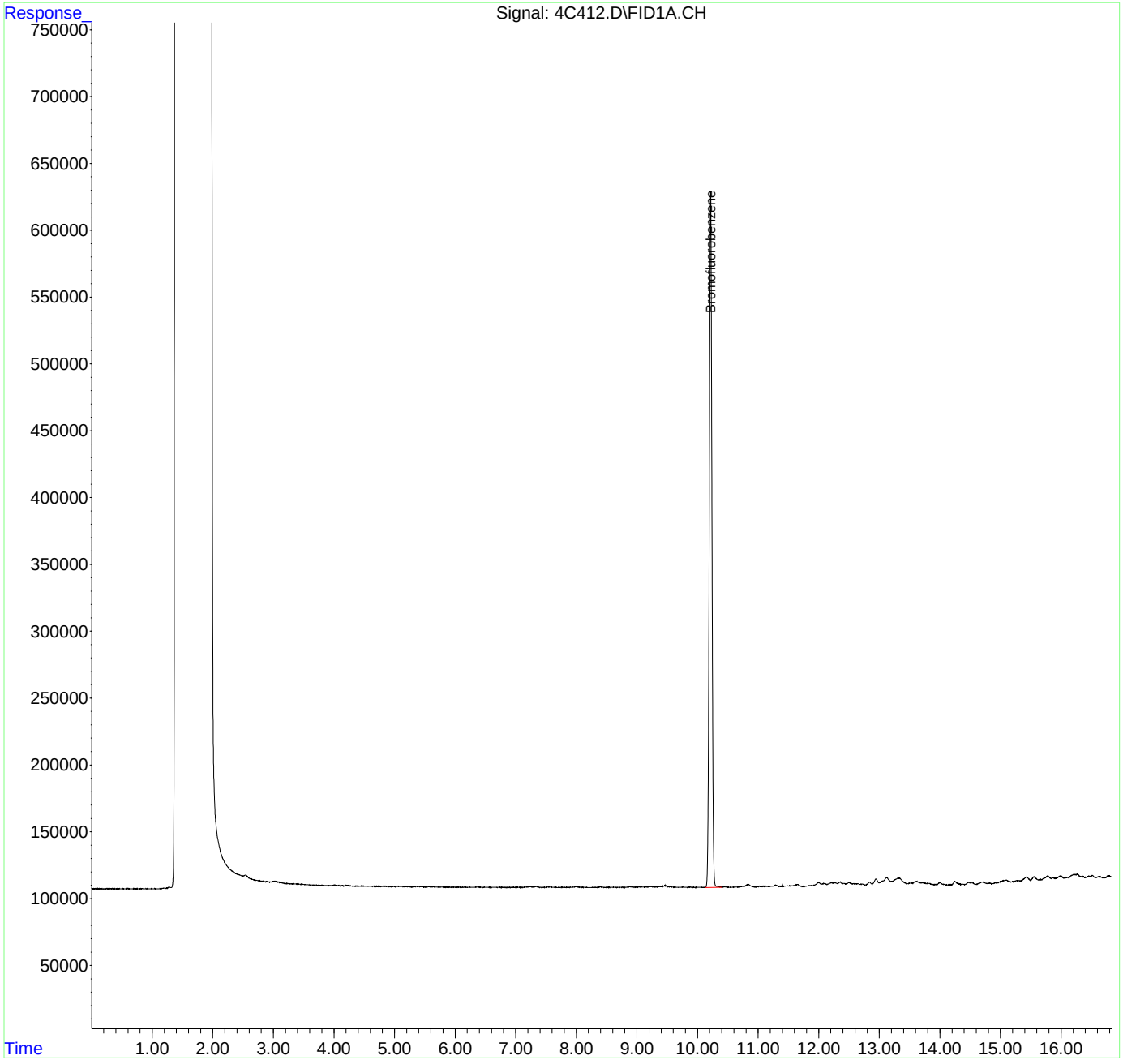
(f)=RT Delta > 1/2 Window (A) = Over the calibration range (d) = deleted (m)=manual int.

Quantitation Report
GEL Laboratories, LLC

DaData Path : C:\msdchem\1\data\102623\
DaData File : 4C412.D
Signal(s) : FID1A.CH
Acq On : 26 Oct 2023 12:12
Operator : JEB InstName : VOC4A
Sample : |642648001|2514414|50|GROF|1|VOC8015D_S|
Misc : TNSL 100UL N/A SOIL 5G/10ML
ALS Vial : 12 Sample Multiplier: 1

Integration File: events.e
Quant Time: Oct 26 15:03:03 2023
Quant Method : C:\msdchem\1\data\102623\VOC8015C060723.m
Quant Title : GRO TPH SubList :
QLast Update : Fri Jun 09 12:38:36 2023
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 5 mL Purge Volume
Signal Phase : Durabond 30m x 0.53 ID x 3 um
Signal Info : DB-MTBE



GC Volatiles (GRO)
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 10:32**	**Matrix:**	**SO**
Lab Sample ID:	**642648002**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**1**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289590**	**Method:**	**SW846 8015D**	**SOP Ref:**	**GL-OA-E-004**
Batch ID:	**2514414**	**Inst:**	**VOC4A.I**	**Dilution:**	**50**
Run Date:	**10/26/2023 12:37**	**Analyst:**	**JEB**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/26/2023 08:12**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**102623\4C413.D**	**Column:**	**DB-MTBE**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
8006-61-9	Gasoline Range Organics	U	1680	ug/kg	1680	10100

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	3930	50.0	ug/kg	78	(51%-131%)

JEB 10/27/2023

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\102623\
Data File : 4C413.D
Signal(s) : FID1A.CH
Acq On : 26 Oct 2023 12:37
Operator : JEB InstName : VOC4A
Sample : |642648002|2514414|50|GROF|1|VOC8015D_S|
Misc : TNSL 100UL N/A SOIL 5G/10ML
ALS Vial : 13 Sample Multiplier: 1

GEL 10/27/2023

Integration File: events.e
Quant Time: Oct 26 15:03:25 2023
Quant Method : C:\msdchem\1\data\102623\VOC8015C060723.m
Quant Title : GRO TPH SubList :
QLast Update : Fri Jun 09 12:38:36 2023
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 5 mL Purge Volume
Signal Phase : Durabond 30m x 0.53 ID x 3 um
Signal Info : DB-MTBE

Compound	Exp	R.T.	Delta	Response	Conc	Units
System Monitoring Compounds						
4) S Bromofluorobenzene	10.218	10.217	-0.001	14348107	38.936	ug/L

Compound	Amount	Range	Recovery
4) Bromofluorobenzene	50.000	51 - 131	78%

Target Compounds						
3) H Gasoline Range Organics	Range	3.418 - 11.634		2249527	<MDL	ug/L
SemiQuant Compounds - Not Calibrated on this Instrument						
1) 2-Methylpentane	3.470	0.000	-3.470	0	N.D.	ug/L
2) 1,2,4-Trimethylbenzene	11.621	0.000	-11.621	0	N.D.	ug/L

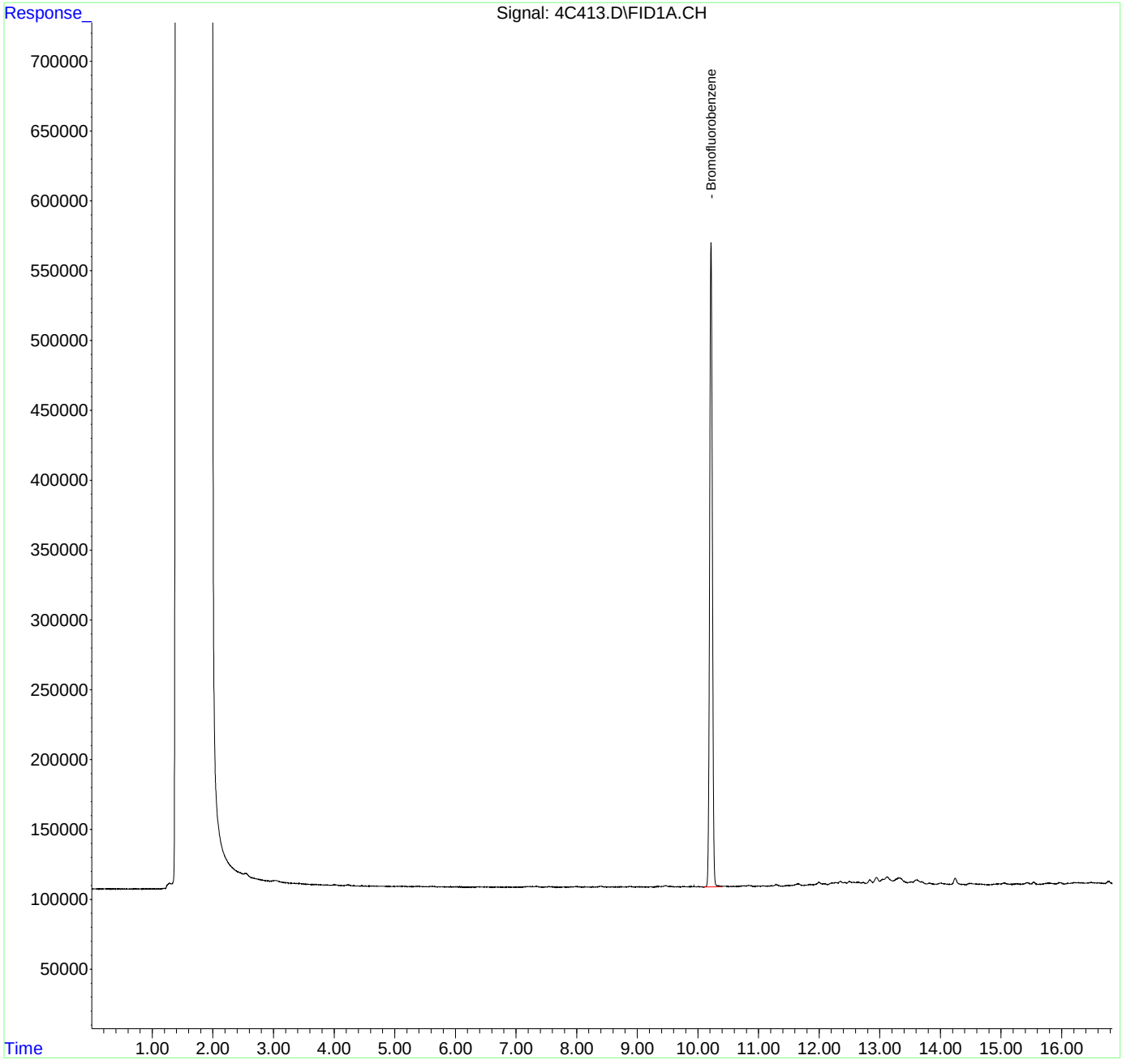
(f)=RT Delta > 1/2 Window (A) = Over the calibration range (d) = deleted (m)=manual int.

Quantitation Report
GEL Laboratories, LLC

DaData Path : C:\msdchem\1\data\102623\
DaData File : 4C413.D
Signal(s) : FID1A.CH
Acq On : 26 Oct 2023 12:37
Operator : JEB InstName : VOC4A
Sample : |642648002|2514414|50|GROF|1|VOC8015D_S|
Misc : TNSL 100UL N/A SOIL 5G/10ML
ALS Vial : 13 Sample Multiplier: 1

Integration File: events.e
Quant Time: Oct 26 15:03:25 2023
Quant Method : C:\msdchem\1\data\102623\VOC8015C060723.m
Quant Title : GRO TPH SubList :
QLast Update : Fri Jun 09 12:38:36 2023
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 5 mL Purge Volume
Signal Phase : Durabond 30m x 0.53 ID x 3 um
Signal Info : DB-MTBE



GC Volatiles (GRO)
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 10:52**	**Matrix:**	**SO**
Lab Sample ID:	**642648003**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**4.8**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289591**	**Method:**	**SW846 8015D**	**SOP Ref:**	**GL-OA-E-004**
Batch ID:	**2514414**	**Inst:**	**VOC4A.I**	**Dilution:**	**50**
Run Date:	**10/26/2023 13:02**	**Analyst:**	**JEB**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/26/2023 08:13**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**102623\4C414.D**	**Column:**	**DB-MTBE**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
8006-61-9	Gasoline Range Organics	U	1750	ug/kg	1750	10500

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	4160	50.0	ug/kg	79	(51%-131%)

JEB 10/27/2023

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\102623\
Data File : 4C414.D
Signal(s) : FID1A.CH
Acq On : 26 Oct 2023 13:02
Operator : JEB InstName : VOC4A
Sample : |642648003|2514414|50|GROF|1|VOC8015D_S|
Misc : TNSL 100UL N/A SOIL 5G/10ML
ALS Vial : 14 Sample Multiplier: 1

GEL 10/27/2023

Integration File: events.e
Quant Time: Oct 26 15:03:41 2023
Quant Method : C:\msdchem\1\data\102623\VOC8015C060723.m
Quant Title : GRO TPH SubList :
QLast Update : Fri Jun 09 12:38:36 2023
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 5 mL Purge Volume
Signal Phase : Durabond 30m x 0.53 ID x 3 um
Signal Info : DB-MTBE

Compound	Exp	R.T.	Delta	Response	Conc	Units
System Monitoring Compounds						
4) S Bromofluorobenzene	10.218	10.218	0.000	14596560	39.610	ug/L

Compound	Amount	Range	Recovery
4) Bromofluorobenzene	50.000	51 - 131	79%

Target Compounds						
3) H Gasoline Range Organics	Range	3.418 - 11.634		2263364	<MDL	ug/L
SemiQuant Compounds - Not Calibrated on this Instrument						
1) 2-Methylpentane	3.470	0.000	-3.470	0	N.D.	ug/L
2) 1,2,4-Trimethylbenzene	11.621	0.000	-11.621	0	N.D.	ug/L

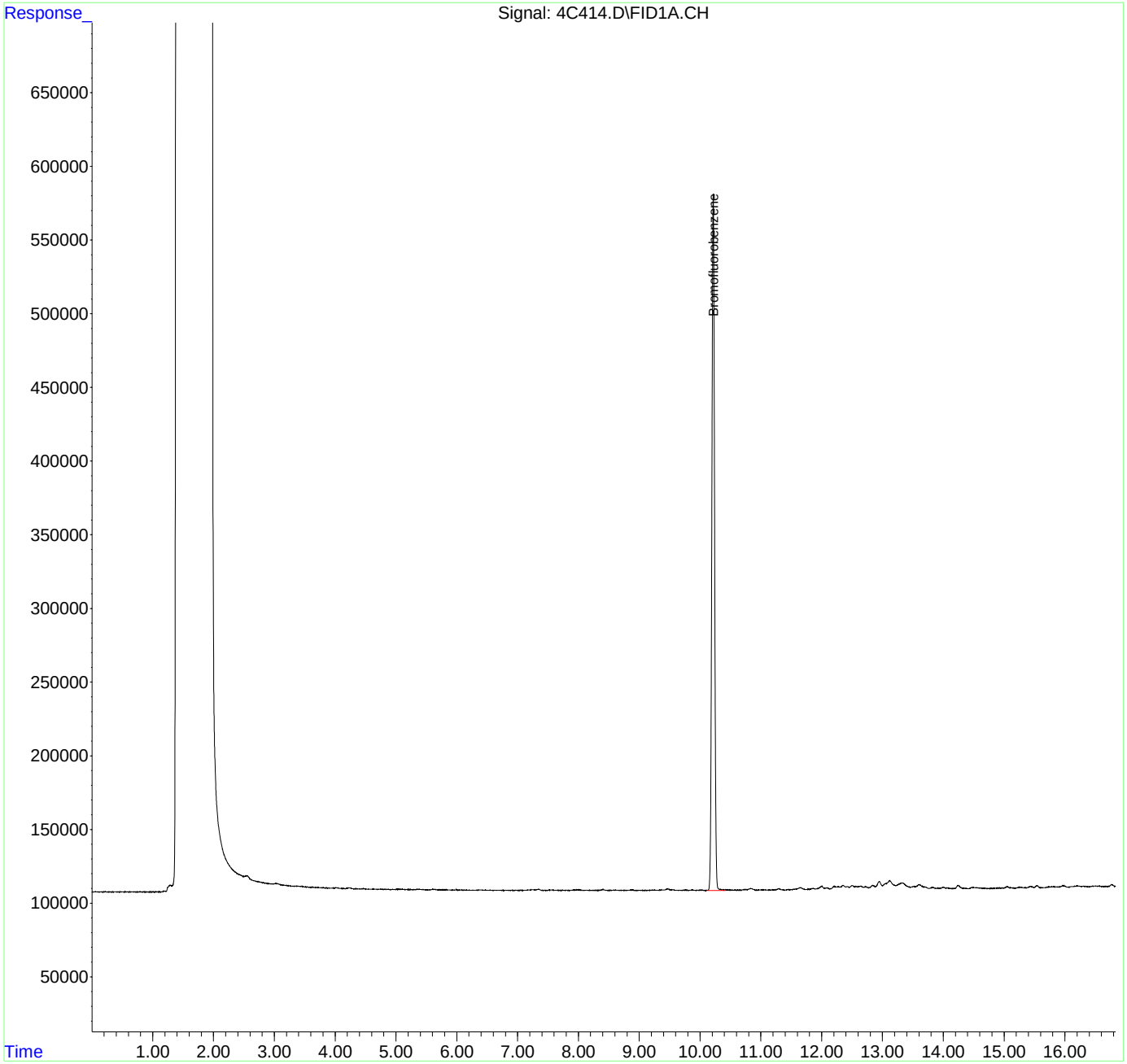
(f)=RT Delta > 1/2 Window (A) = Over the calibration range (d) = deleted (m)=manual int.

Quantitation Report
GEL Laboratories, LLC

DaData Path : C:\msdchem\1\data\102623\
DaData File : 4C414.D
Signal(s) : FID1A.CH
Acq On : 26 Oct 2023 13:02
Operator : JEB InstName : VOC4A
Sample : |642648003|2514414|50|GROF|1|VOC8015D_S|
Misc : TNSL 100UL N/A SOIL 5G/10ML
ALS Vial : 14 Sample Multiplier: 1

Integration File: events.e
Quant Time: Oct 26 15:03:41 2023
Quant Method : C:\msdchem\1\data\102623\VOC8015C060723.m
Quant Title : GRO TPH SubList :
QLast Update : Fri Jun 09 12:38:36 2023
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 5 mL Purge Volume
Signal Phase : Durabond 30m x 0.53 ID x 3 um
Signal Info : DB-MTBE



GC Volatiles (GRO)
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 11:09**	**Matrix:**	**SO**
Lab Sample ID:	**642648004**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**2**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289592**	**Method:**	**SW846 8015D**	**SOP Ref:**	**GL-OA-E-004**
Batch ID:	**2514414**	**Inst:**	**VOC4A.I**	**Dilution:**	**50**
Run Date:	**10/26/2023 13:27**	**Analyst:**	**JEB**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/26/2023 08:14**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**102623\4C415.D**	**Column:**	**DB-MTBE**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
8006-61-9	Gasoline Range Organics	U	1700	ug/kg	1700	10200

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	4050	50.0	ug/kg	79	(51%-131%)

JEB 10/27/2023

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\102623\
Data File : 4C415.D
Signal(s) : FID1A.CH
Acq On : 26 Oct 2023 13:27
Operator : JEB InstName : VOC4A
Sample : |642648004|2514414|50|GROF|1|VOC8015D_S|
Misc : TNSL 100UL N/A SOIL 5G/10ML
ALS Vial : 15 Sample Multiplier: 1

GEL 10/27/2023

Integration File: events.e
Quant Time: Oct 26 15:03:57 2023
Quant Method : C:\msdchem\1\data\102623\VOC8015C060723.m
Quant Title : GRO TPH SubList :
QLast Update : Fri Jun 09 12:38:36 2023
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 5 mL Purge Volume
Signal Phase : Durabond 30m x 0.53 ID x 3 um
Signal Info : DB-MTBE

Compound	Exp	R.T.	Delta	Response	Conc	Units
System Monitoring Compounds						
4) S Bromofluorobenzene	10.218	10.217	-0.001	14621191	39.677	ug/L

Compound	Amount	Range	Recovery
4) Bromofluorobenzene	50.000	51 - 131	79%

Target Compounds						
3) H Gasoline Range Organics	Range	3.418 - 11.634		2534790	<MDL	ug/L
SemiQuant Compounds - Not Calibrated on this Instrument						
1) 2-Methylpentane	3.470	0.000	-3.470	0	N.D.	ug/L
2) 1,2,4-Trimethylbenzene	11.621	0.000	-11.621	0	N.D.	ug/L

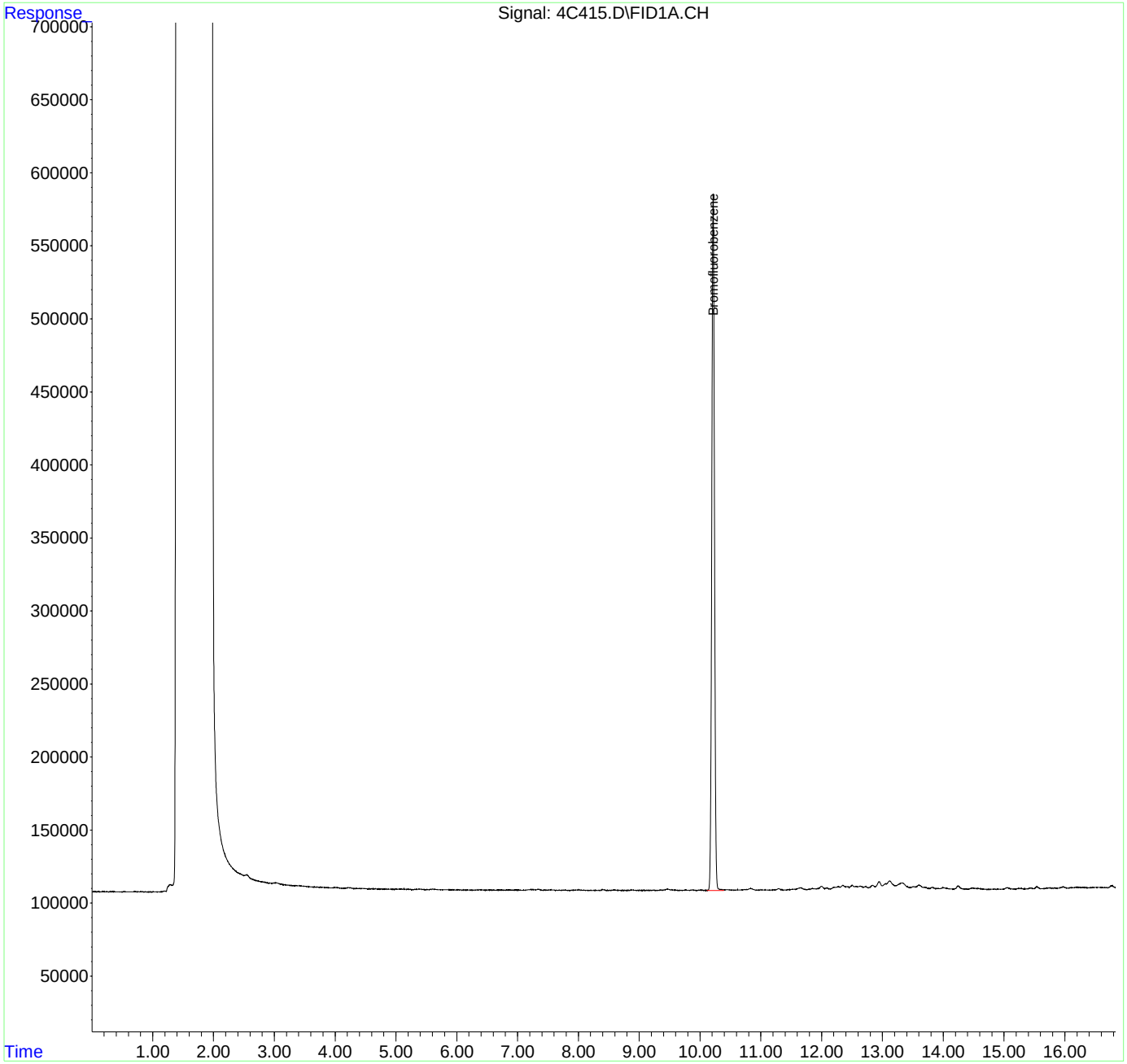
(f)=RT Delta > 1/2 Window (A) = Over the calibration range (d) = deleted (m)=manual int.

Quantitation Report
GEL Laboratories, LLC

DaData Path : C:\msdchem\1\data\102623\
DaData File : 4C415.D
Signal(s) : FID1A.CH
Acq On : 26 Oct 2023 13:27
Operator : JEB InstName : VOC4A
Sample : |642648004|2514414|50|GROF|1|VOC8015D_S|
Misc : TNSL 100UL N/A SOIL 5G/10ML
ALS Vial : 15 Sample Multiplier: 1

Integration File: events.e
Quant Time: Oct 26 15:03:57 2023
Quant Method : C:\msdchem\1\data\102623\VOC8015C060723.m
Quant Title : GRO TPH SubList :
QLast Update : Fri Jun 09 12:38:36 2023
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 5 mL Purge Volume
Signal Phase : Durabond 30m x 0.53 ID x 3 um
Signal Info : DB-MTBE



GC Volatiles (GRO)
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 11:45**	**Matrix:**	**SO**
Lab Sample ID:	**642648005**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**1.7**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289593**	**Method:**	**SW846 8015D**	**SOP Ref:**	**GL-OA-E-004**
Batch ID:	**2514414**	**Inst:**	**VOC4A.I**	**Dilution:**	**50**
Run Date:	**10/26/2023 14:17**	**Analyst:**	**JEB**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/26/2023 08:15**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**102623\4C417.D**	**Column:**	**DB-MTBE**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
8006-61-9	Gasoline Range Organics	U	1700	ug/kg	1700	10200

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	4820	50.0	ug/kg	95	(51%-131%)

JEB 10/27/2023

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\102623\
Data File : 4C417.D
Signal(s) : FID1A.CH
Acq On : 26 Oct 2023 14:17
Operator : JEB InstName : VOC4A
Sample : |642648005|2514414|50|GROF|1|VOC8015D_S|
Misc : TNSL 100UL N/A SOIL 5G/10ML
ALS Vial : 17 Sample Multiplier: 1

GEL 10/27/2023

Integration File: events.e
Quant Time: Oct 27 07:05:47 2023
Quant Method : C:\msdchem\1\data\102623\VOC8015C060723.m
Quant Title : GRO TPH SubList :
QLast Update : Fri Jun 09 12:38:36 2023
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 5 mL Purge Volume
Signal Phase : Durabond 30m x 0.53 ID x 3 um
Signal Info : DB-MTBE

Compound	Exp	R.T.	Delta	Response	Conc	Units
System Monitoring Compounds						
4) S Bromofluorobenzene	10.218	10.217	-0.001	17459939	47.381	ug/L

Compound	Amount	Range	Recovery
4) Bromofluorobenzene	50.000	51 - 131	95%

Target Compounds						
3) H Gasoline Range Organics	Range	3.418 - 11.634		4002932	<MDL	ug/L
SemiQuant Compounds - Not Calibrated on this Instrument						
1) 2-Methylpentane	3.470	0.000	-3.470	0	N.D.	ug/L
2) 1,2,4-Trimethylbenzene	11.621	11.650	0.029f	132333	NoCal	ug/L

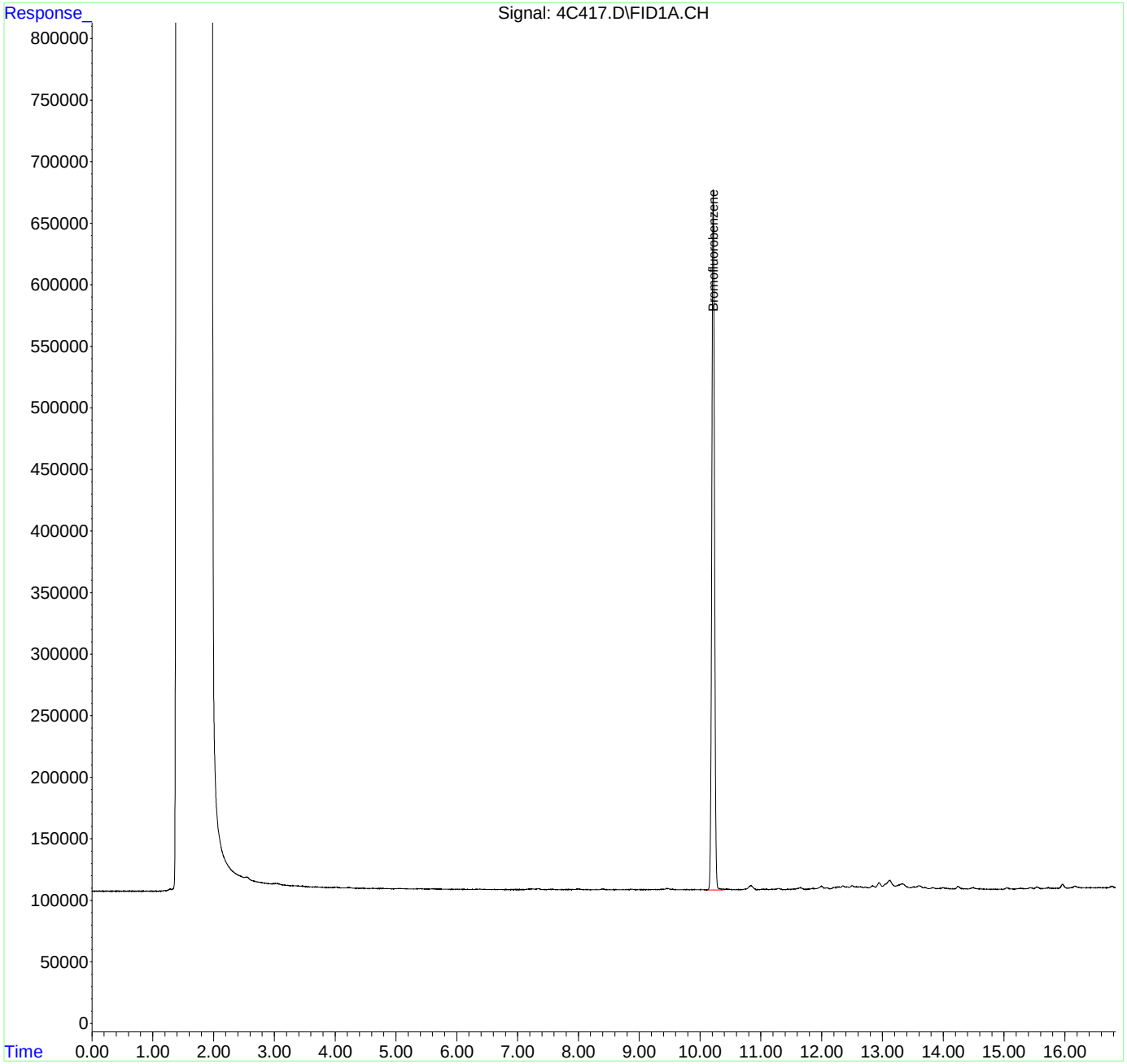
(f)=RT Delta > 1/2 Window (A) = Over the calibration range (d) = deleted (m)=manual int.

Quantitation Report
GEL Laboratories, LLC

DaData Path : C:\msdchem\1\data\102623\
DaData File : 4C417.D
Signal(s) : FID1A.CH
Acq On : 26 Oct 2023 14:17
Operator : JEB InstName : VOC4A
Sample : |642648005|2514414|50|GROF|1|VOC8015D_S|
Misc : TNSL 100UL N/A SOIL 5G/10ML
ALS Vial : 17 Sample Multiplier: 1

Integration File: events.e
Quant Time: Oct 27 07:05:47 2023
Quant Method : C:\msdchem\1\data\102623\VOC8015C060723.m
Quant Title : GRO TPH SubList :
QLast Update : Fri Jun 09 12:38:36 2023
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 5 mL Purge Volume
Signal Phase : Durabond 30m x 0.53 ID x 3 um
Signal Info : DB-MTBE



GC Volatiles (GRO)
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 12:00**	**Matrix:**	**SO**
Lab Sample ID:	**642648006**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**5.1**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289594**	**Method:**	**SW846 8015D**	**SOP Ref:**	**GL-OA-E-004**
Batch ID:	**2514414**	**Inst:**	**VOC4A.I**	**Dilution:**	**50**
Run Date:	**10/26/2023 14:42**	**Analyst:**	**JEB**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/26/2023 08:16**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**102623\4C418.D**	**Column:**	**DB-MTBE**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
8006-61-9	Gasoline Range Organics	U	1760	ug/kg	1760	10500

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	5000	50.0	ug/kg	95	(51%-131%)

JEB 10/27/2023

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\102623\
Data File : 4C418.D
Signal(s) : FID1A.CH
Acq On : 26 Oct 2023 14:42
Operator : JEB InstName : VOC4A
Sample : |642648006|2514414|50|GROF|1|VOC8015D_S|
Misc : TNSL 100UL N/A SOIL 5G/10ML
ALS Vial : 18 Sample Multiplier: 1

GEL 10/27/2023

Integration File: events.e
Quant Time: Oct 27 07:05:36 2023
Quant Method : C:\msdchem\1\data\102623\VOC8015C060723.m
Quant Title : GRO TPH SubList :
QLast Update : Fri Jun 09 12:38:36 2023
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 5 mL Purge Volume
Signal Phase : Durabond 30m x 0.53 ID x 3 um
Signal Info : DB-MTBE

Compound	Exp	R.T.	Delta	Response	Conc	Units
System Monitoring Compounds						
4) S Bromofluorobenzene	10.218	10.218	0.000	17488778	47.459	ug/L

Compound	Amount	Range	Recovery
4) Bromofluorobenzene	50.000	51 - 131	95%

Target Compounds						
3) H Gasoline Range Organics	Range	3.418 - 11.634		3837433	<MDL	ug/L
SemiQuant Compounds - Not Calibrated on this Instrument						
1) 2-Methylpentane	3.470	0.000	-3.470	0	N.D.	ug/L
2) 1,2,4-Trimethylbenzene	11.621	0.000	-11.621	0	N.D.	ug/L

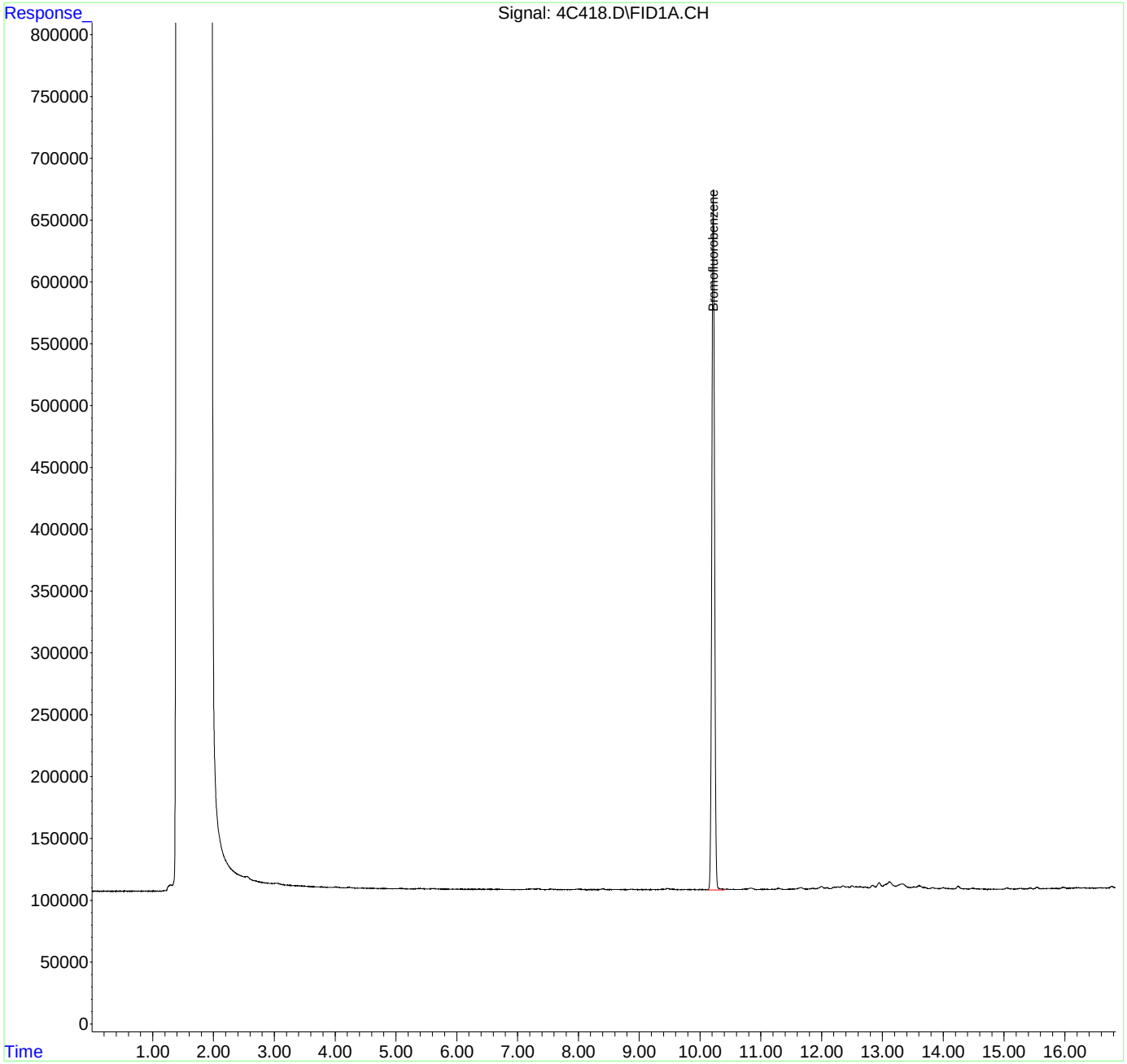
(f)=RT Delta > 1/2 Window (A) = Over the calibration range (d) = deleted (m)=manual int.

Quantitation Report
GEL Laboratories, LLC

DaData Path : C:\msdchem\1\data\102623\
DaData File : 4C418.D
Signal(s) : FID1A.CH
Acq On : 26 Oct 2023 14:42
Operator : JEB InstName : VOC4A
Sample : |642648006|2514414|50|GROF|1|VOC8015D_S|
Misc : TNSL 100UL N/A SOIL 5G/10ML
ALS Vial : 18 Sample Multiplier: 1

Integration File: events.e
Quant Time: Oct 27 07:05:36 2023
Quant Method : C:\msdchem\1\data\102623\VOC8015C060723.m
Quant Title : GRO TPH SubList :
QLast Update : Fri Jun 09 12:38:36 2023
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 5 mL Purge Volume
Signal Phase : Durabond 30m x 0.53 ID x 3 um
Signal Info : DB-MTBE



GC Volatiles (GRO)
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 12:15**	**Matrix:**	**SO**
Lab Sample ID:	**642648007**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**2.5**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289595**	**Method:**	**SW846 8015D**	**SOP Ref:**	**GL-OA-E-004**
Batch ID:	**2514414**	**Inst:**	**VOC4A.I**	**Dilution:**	**50**
Run Date:	**10/26/2023 15:07**	**Analyst:**	**JEB**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/26/2023 08:17**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**102623\4C419.D**	**Column:**	**DB-MTBE**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
8006-61-9	Gasoline Range Organics	U	1710	ug/kg	1710	10300

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	3990	50.0	ug/kg	78	(51%-131%)

JEB 10/27/2023

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\102623\
Data File : 4C419.D
Signal(s) : FID1A.CH
Acq On : 26 Oct 2023 15:07
Operator : JEB InstName : VOC4A
Sample : |642648007|2514414|50|GROF|1|VOC8015D_S|
Misc : TNSL 100UL N/A SOIL 5G/10ML
ALS Vial : 19 Sample Multiplier: 1

EL 10/27/2023

Integration File: events.e
Quant Time: Oct 27 07:05:26 2023
Quant Method : C:\msdchem\1\data\102623\VOC8015C060723.m
Quant Title : GRO TPH SubList :
QLast Update : Fri Jun 09 12:38:36 2023
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 5 mL Purge Volume
Signal Phase : Durabond 30m x 0.53 ID x 3 um
Signal Info : DB-MTBE

Compound	Exp	R.T.	Delta	Response	Conc	Units
System Monitoring Compounds						
4) S Bromofluorobenzene	10.218	10.217	-0.001	14344311	38.926	ug/L

Compound	Amount	Range	Recovery
4) Bromofluorobenzene	50.000	51 - 131	78%

Target Compounds						
3) H Gasoline Range Organics	Range	3.418 - 11.634		3041341	<MDL	ug/L
SemiQuant Compounds - Not Calibrated on this Instrument						
1) 2-Methylpentane	3.470	0.000	-3.470	0	N.D.	ug/L
2) 1,2,4-Trimethylbenzene	11.621	0.000	-11.621	0	N.D.	ug/L

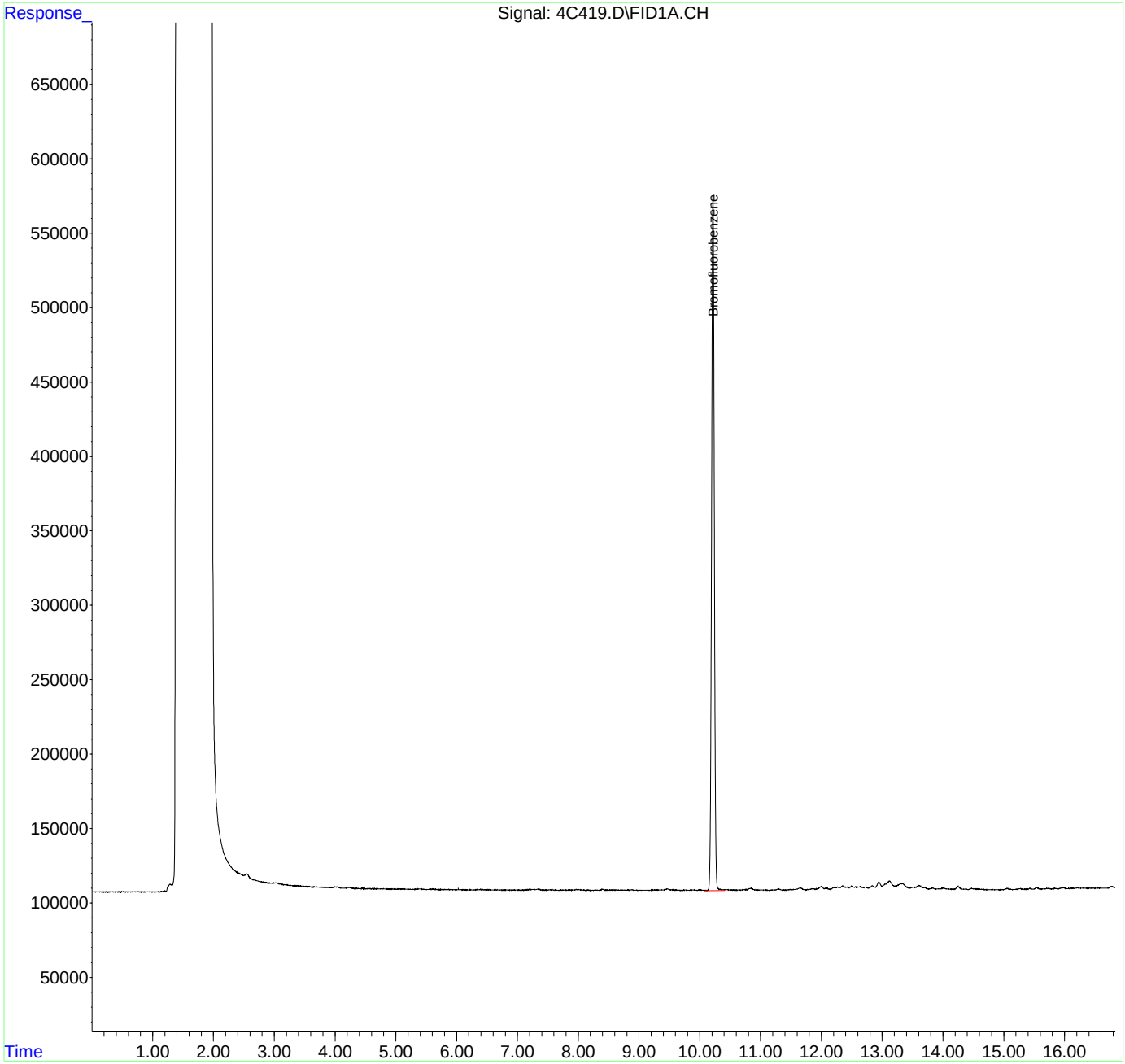
(f)=RT Delta > 1/2 Window (A) = Over the calibration range (d) = deleted (m)=manual int.

Quantitation Report
GEL Laboratories, LLC

DaData Path : C:\msdchem\1\data\102623\
DaData File : 4C419.D
Signal(s) : FID1A.CH
Acq On : 26 Oct 2023 15:07
Operator : JEB InstName : VOC4A
Sample : |642648007|2514414|50|GROF|1|VOC8015D_S|
Misc : TNSL 100UL N/A SOIL 5G/10ML
ALS Vial : 19 Sample Multiplier: 1

Integration File: events.e
Quant Time: Oct 27 07:05:26 2023
Quant Method : C:\msdchem\1\data\102623\VOC8015C060723.m
Quant Title : GRO TPH SubList :
QLast Update : Fri Jun 09 12:38:36 2023
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 5 mL Purge Volume
Signal Phase : Durabond 30m x 0.53 ID x 3 um
Signal Info : DB-MTBE



GC Volatiles (GRO)
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 12:47**	**Matrix:**	**SO**
Lab Sample ID:	**642648008**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**3.6**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289596**	**Method:**	**SW846 8015D**	**SOP Ref:**	**GL-OA-E-004**
Batch ID:	**2514414**	**Inst:**	**VOC4A.I**	**Dilution:**	**50**
Run Date:	**10/26/2023 15:32**	**Analyst:**	**JEB**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/26/2023 08:18**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**102623\4C420.D**	**Column:**	**DB-MTBE**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
8006-61-9	Gasoline Range Organics	U	1730	ug/kg	1730	10400

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	4020	50.0	ug/kg	77	(51%-131%)

JEB 10/27/2023

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\102623\
Data File : 4C420.D
Signal(s) : FID1A.CH
Acq On : 26 Oct 2023 15:32
Operator : JEB InstName : VOC4A
Sample : |642648008|2514414|50|GROF|1|VOC8015D_S|
Misc : TNSL 100UL N/A SOIL 5G/10ML
ALS Vial : 20 Sample Multiplier: 1

GEL 10/27/2023

Integration File: events.e
Quant Time: Oct 27 07:05:14 2023
Quant Method : C:\msdchem\1\data\102623\VOC8015C060723.m
Quant Title : GRO TPH SubList :
QLast Update : Fri Jun 09 12:38:36 2023
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 5 mL Purge Volume
Signal Phase : Durabond 30m x 0.53 ID x 3 um
Signal Info : DB-MTBE

Compound	Exp	R.T.	Delta	Response	Conc	Units
System Monitoring Compounds						
4) S Bromofluorobenzene	10.218	10.217	-0.001	14265040	38.711	ug/L

Compound	Amount	Range	Recovery
4) Bromofluorobenzene	50.000	51 - 131	77%

Target Compounds						
3) H Gasoline Range Organics	Range	3.418 - 11.634		2951609	<MDL	ug/L
SemiQuant Compounds - Not Calibrated on this Instrument						
1) 2-Methylpentane	3.470	0.000	-3.470	0	N.D.	ug/L
2) 1,2,4-Trimethylbenzene	11.621	0.000	-11.621	0	N.D.	ug/L

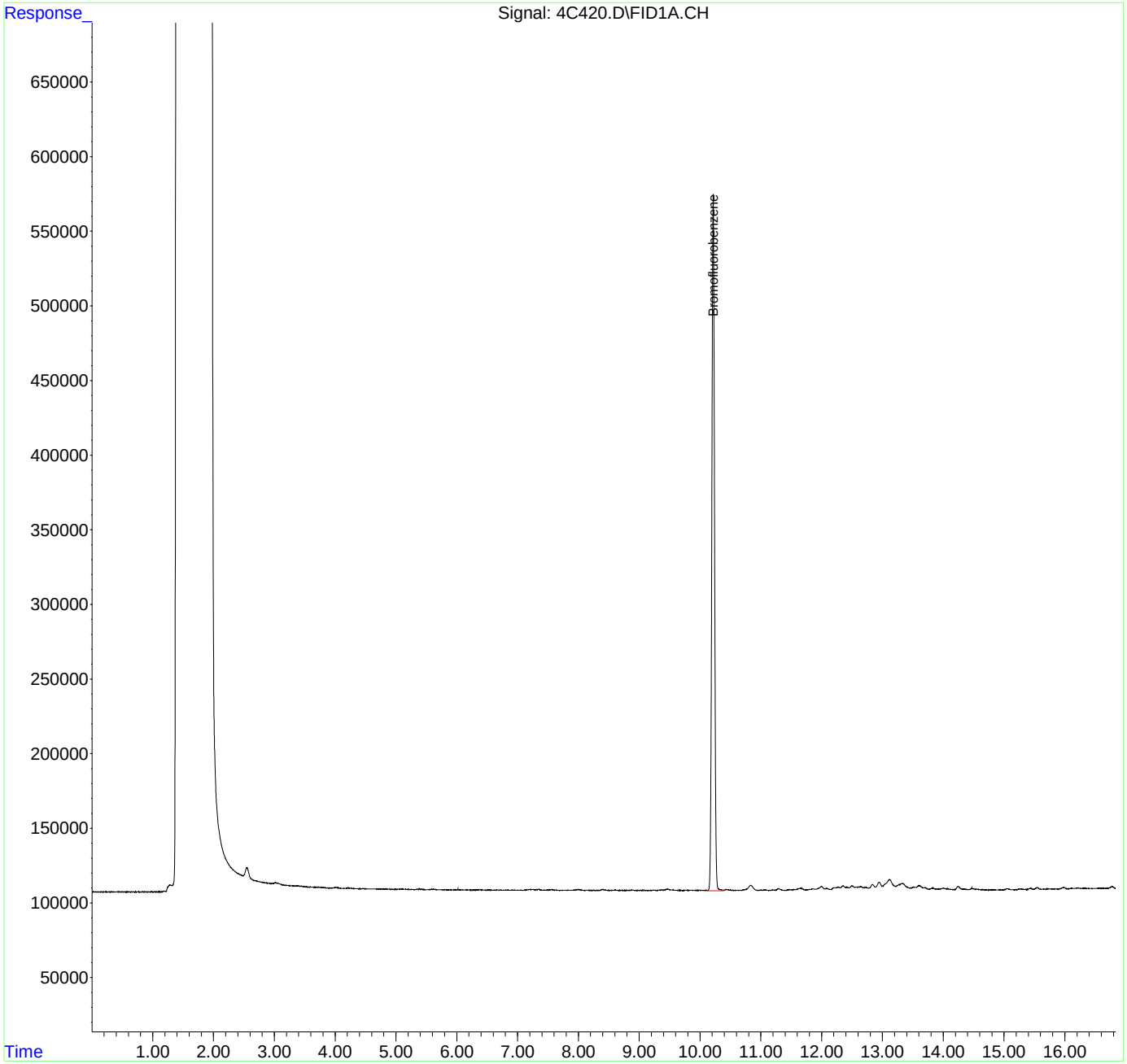
(f)=RT Delta > 1/2 Window (A) = Over the calibration range (d) = deleted (m)=manual int.

Quantitation Report
GEL Laboratories, LLC

DaData Path : C:\msdchem\1\data\102623\
DaData File : 4C420.D
Signal(s) : FID1A.CH
Acq On : 26 Oct 2023 15:32
Operator : JEB InstName : VOC4A
Sample : |642648008|2514414|50|GROF|1|VOC8015D_S|
Misc : TNSL 100UL N/A SOIL 5G/10ML
ALS Vial : 20 Sample Multiplier: 1

Integration File: events.e
Quant Time: Oct 27 07:05:14 2023
Quant Method : C:\msdchem\1\data\102623\VOC8015C060723.m
Quant Title : GRO TPH SubList :
QLast Update : Fri Jun 09 12:38:36 2023
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 5 mL Purge Volume
Signal Phase : Durabond 30m x 0.53 ID x 3 um
Signal Info : DB-MTBE



GC Volatiles (GRO)
Certificate of Analysis
Sample Summary

SDG Number:	**2024-76**	**Date Collected:**	**10/19/2023 10:52**	**Matrix:**	**SO**
Lab Sample ID:	**642648012**	**Date Received:**	**10/25/2023 11:10**	**%Moisture:**	**4.8**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289591 DUP**	**Method:**	**SW846 8015D**	**SOP Ref:**	**GL-OA-E-004**
Batch ID:	**2514414**	**Inst:**	**VOC4A.I**	**Dilution:**	**50**
Run Date:	**10/26/2023 15:57**	**Analyst:**	**JEB**	**Inj. Vol:**	**1 uL**
Prep Date:	**10/26/2023 08:19**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**102623\4C421.D**	**Column:**	**DB-MTBE**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
8006-61-9	Gasoline Range Organics	U	1750	ug/kg	1750	10500

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	4460	50.0	ug/kg	85	(51%-131%)

JEB 10/27/2023

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\102623\
Data File : 4C421.D
Signal(s) : FID1A.CH
Acq On : 26 Oct 2023 15:57
Operator : JEB InstName : VOC4A
Sample : |642648012|2514414|50|GROF|1|VOC8015D_S|
Misc : TNSL 100UL N/A SOIL 5G/10ML
ALS Vial : 21 Sample Multiplier: 1

GEL 10/27/2023

Integration File: events.e
Quant Time: Oct 27 07:05:04 2023
Quant Method : C:\msdchem\1\data\102623\VOC8015C060723.m
Quant Title : GRO TPH SubList :
QLast Update : Fri Jun 09 12:38:36 2023
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 5 mL Purge Volume
Signal Phase : Durabond 30m x 0.53 ID x 3 um
Signal Info : DB-MTBE

Compound	Exp	R.T.	Delta	Response	Conc	Units
System Monitoring Compounds						
4) S Bromofluorobenzene	10.218	10.218	0.000	15663816	42.506	ug/L

Compound	Amount	Range	Recovery
4) Bromofluorobenzene	50.000	51 - 131	85%

Target Compounds						
3) H Gasoline Range Organics	Range	3.418 - 11.634		3120418	<MDL	ug/L
SemiQuant Compounds - Not Calibrated on this Instrument						
1) 2-Methylpentane	3.470	0.000	-3.470	0	N.D.	ug/L
2) 1,2,4-Trimethylbenzene	11.621	0.000	-11.621	0	N.D.	ug/L

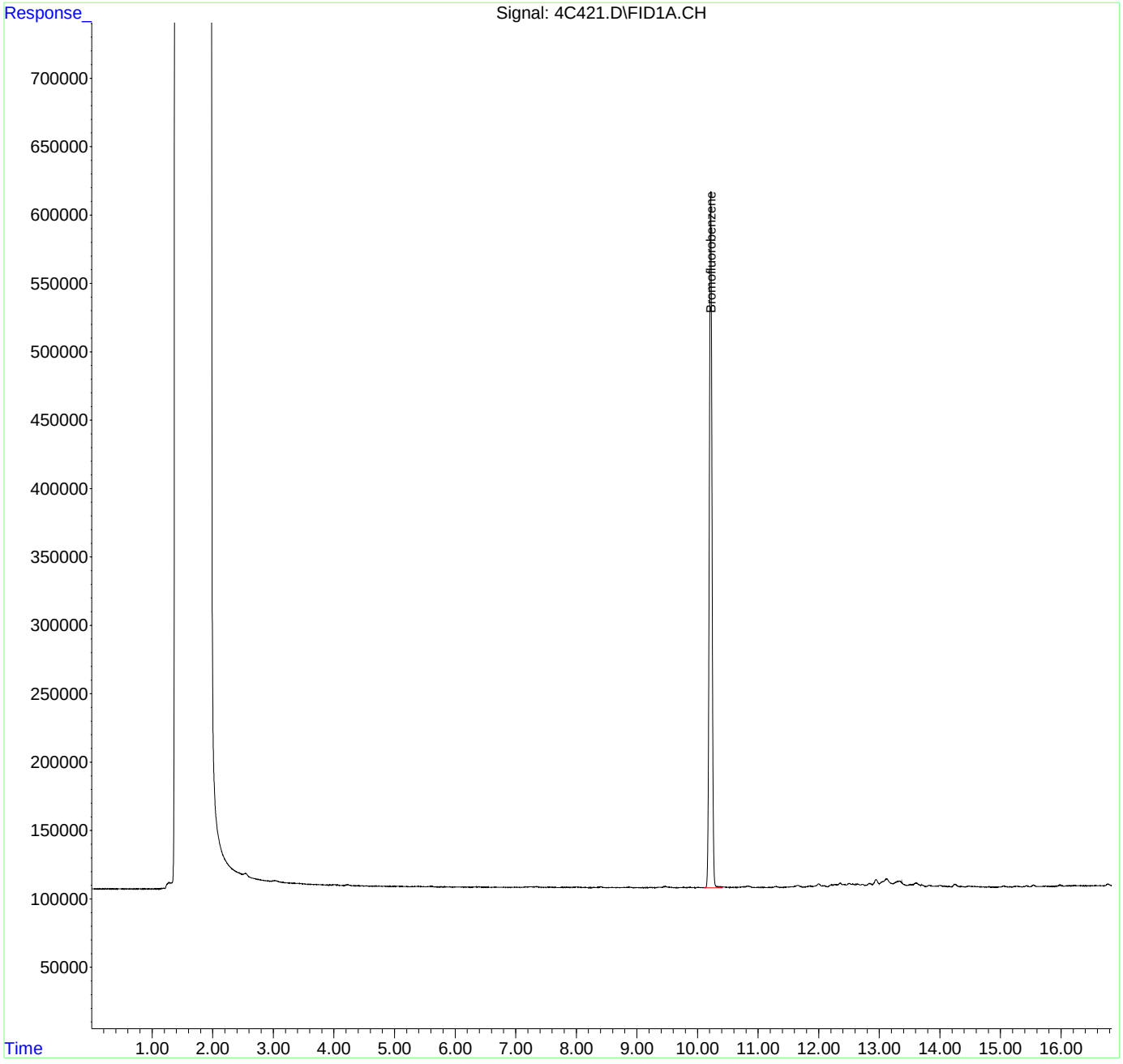
(f)=RT Delta > 1/2 Window (A) = Over the calibration range (d) = deleted (m)=manual int.

Quantitation Report
GEL Laboratories, LLC

DaData Path : C:\msdchem\1\data\102623\
DaData File : 4C421.D
Signal(s) : FID1A.CH
Acq On : 26 Oct 2023 15:57
Operator : JEB InstName : VOC4A
Sample : |642648012|2514414|50|GROF|1|VOC8015D_S|
Misc : TNSL 100UL N/A SOIL 5G/10ML
ALS Vial : 21 Sample Multiplier: 1

Integration File: events.e
Quant Time: Oct 27 07:05:04 2023
Quant Method : C:\msdchem\1\data\102623\VOC8015C060723.m
Quant Title : GRO TPH SubList :
QLast Update : Fri Jun 09 12:38:36 2023
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 5 mL Purge Volume
Signal Phase : Durabond 30m x 0.53 ID x 3 um
Signal Info : DB-MTBE



Miscellaneous

Prep Logbook

Volatile Total Petroleum Hydrocarbons by Flame Ionization Detector

Batch ID: **2514413**
Analyst: John Bell, Jr.
Method: SW846 5035A
Lab SOP: GL-OA-E-004 REV# 31
Instrument: VOAB-003 OH AUS Balance

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units

Sample ID	Prep Date	Matrix	Initial Weight (g)	Final Volume (mL)	Prep Factor (mL/g)
1205556974 LCS	26-OCT-2023 07:15:00	Soil	5	5	1
1205556975 MB	26-OCT-2023 07:16:00	Soil	5	5	1
642648001	26-OCT-2023 08:11:00	Soil	5	10	2
1205556976 PS (642648001)	26-OCT-2023 08:11:00	Soil	5	10	2
1205556977 PSD (642648001)	26-OCT-2023 08:11:00	Soil	5	10	2
642648002	26-OCT-2023 08:12:00	Soil	5	10	2
642648003	26-OCT-2023 08:13:00	Soil	5	10	2
642648004	26-OCT-2023 08:14:00	Soil	5	10	2
642648005	26-OCT-2023 08:15:00	Soil	5	10	2
642648006	26-OCT-2023 08:16:00	Soil	5	10	2
642648007	26-OCT-2023 08:17:00	Soil	5	10	2
642648008	26-OCT-2023 08:18:00	Soil	5	10	2
642648012	26-OCT-2023 08:19:00	Soil	5	10	2
1205556978 HB	26-OCT-2023 08:20:00	Soil	5	5	1

Reagent/Solvent Lot ID	Description	Amount

Comments:

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOC4A

JEB 06/09/2023

KP 06/12/2023

Date: 6/7/2023 Method 8015/TPHGx Operator: JEB

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 1 Daily Instrument Readings:

Multiplier Voltage: N/A

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 6/7/2023

(See pg. 1 for ICAL Std. Ids)

NaHSO4 lot # N/A

Cl test lot # N/A

Sequence Number: 060723VG

Daily Standard Solution ID#		Volume Added for Purge (ul) Blk/ Smpl	CCV	MS/ LCS	RT
CCV	N/A		5		
IS	N/A				
SS	UVG230317-02B	2.5	2.5	2.5	2.5
LCS/MS	N/A			5	
RTCHECK	WVG230607-01,05,10				5+5

Purge Amount	
5mL	Water Purge Vol:
N/A	Soil Purge Wt.
N/A	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
X	Heated Purge

Analysis Date Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Accepta ble(O/X)	Comments
6/7/2023 8:29	4S301.D	WVG230607-01	RT	RTCHECK	5ML	1	N/A	1	w	JEB	N/A	O	UVG230317-01A/UVG220519-01B
6/7/2023 8:55	4S302.D	WVG230607-02	VSTD100	ICAL	5ML	1	N/A	2	w	JEB	N/A	O	IVG230522-01
6/7/2023 9:20	4S303.D	WVG230607-03	VSTD250	ICAL	5ML	1	N/A	3	w	JEB	N/A	O	IVG230522-01
6/7/2023 9:45	4S304.D	WVG230607-04	VSTD500	ICAL	5ML	1	N/A	4	w	JEB	N/A	O	IVG230522-01
6/7/2023 10:10	4S305.D	WVG230607-05	RT	RTCHECK	5ML	1	N/A	5	w	JEB	N/A	O	UVG230317-01A/UVG220519-01B
6/7/2023 10:35	4S306.D	WVG230607-06	VSTD750	ICAL	5ML	1	N/A	6	w	JEB	N/A	O	IVG230522-01
6/7/2023 11:00	4S307.D	WVG230607-07	VSTD1000	ICAL	5ML	1	N/A	7	w	JEB	N/A	O	IVG230522-01
6/7/2023 11:25	4S308.D	WVG230607-08	VSTD2000	ICAL	5ML	1	N/A	8	w	JEB	N/A	O	IVG230522-01
6/7/2023 12:23	4S309.D	1205----------	blk	BLK	5ML	1	N/A	9	w	JEB	N/A	x	
6/7/2023 13:29	4S310.D	WVG230607-09	ICV500	ICV	5ML	1	N/A	10	w	JEB	N/A	O	IVG230522-02
6/7/2023 13:55	4S311.D	WVG230607-10	RT	RTCHECK	5ML	1	N/A	11	w	JEB	N/A	O	UVG230317-01A/UVG220519-01B

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOC4A

JEB 10/27/2023

10/27/2023

Date: 10/26/2023 Method 8015/TPHGx Operator: JEB

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 1 Daily Instrument Readings:

Multiplier Voltage: N/A

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 6/7/2023

(See pg. 1 for ICAL Std. Ids)

NaHSO4 lot # N/A

Cl test lot # N/A

Sequence Number: 102623vg

Daily Standard Solution ID#		Volume Added for Purge (ul) Blk/ Smpl	CCV	MS/ LCS	RT
CCV	WVG231026-02,05,06		5		
IS	N/A				
SS	UVG230829-01B	2.5	2.5	2.5	2.5
LCS/MS	WVG231026-03,04			5	
RTCHECK	WVG231026-01				5+5

Purge Amount	
5mL	Water Purge Vol:
N/A	Soil Purge Wt.
N/A	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
X	Heated Purge

Analysis Date Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable(O/X)	Comments
10/26/2023 7:37	4C401.D	WVG231026-01	GEL	RTCHECK	5ML	1	N/A	1	w	JEB	N/A	O	UVM220529-01A/UVG230317-01B
10/26/2023 8:02	4C402.D	WVG231026-02	GEL	CCV	5ML	1	N/A	2	w	JEB	N/A	O	IVG230927-02
10/26/2023 8:27	4C403.D	WVG231026-03	GEL	LCSD	5ML	1	N/A	3	w	JEB	N/A	O	IVG230927-02
10/26/2023 8:52	4C404.D	WVG231026-04	GEL	LCS	5G	1	N/A	4	s	JEB	N/A	O	IVG230927-02
10/26/2023 9:17	4C405.D	1205----------	GEL	BLK	5ML	1	N/A	5	w	JEB	N/A	O	
10/26/2023 9:42	4C406.D	1205----------	GEL	BLK	5G	1	N/A	6	s	JEB	N/A	O	SOIL
10/26/2023 10:07	4C407.D	642484001	AECM	2514415	5ML	1	PH<2	7	w	JEB	N/A	O	
10/26/2023 10:33	4C408.D	642484002	AECM	2514415	5ML	1	PH<2	8	w	JEB	N/A	O	
10/26/2023 10:58	4C409.D	1205556981	AECM	2514415	5ML	1	PH<2	9	w	JEB	N/A	O	642484001MS
10/26/2023 11:22	4C410.D	1205556982	AECM	2514415	5ML	1	PH<2	10	w	JEB	N/A	O	642484001MSD
10/26/2023 11:47	4C411.D	1205556978	GEL	2514414	100UL	50	N/A	11	s	JEB	N/A	O	SOIL
10/26/2023 12:12	4C412.D	642648001	TNSL	2514414	100UL	50	N/A	12	s	JEB	N/A	O	SOIL 5G/10ML
10/26/2023 12:37	4C413.D	642648002	TNSL	2514414	100UL	50	N/A	13	s	JEB	N/A	O	SOIL 5G/10ML
10/26/2023 13:02	4C414.D	642648003	TNSL	2514414	100UL	50	N/A	14	s	JEB	N/A	O	SOIL 5G/10ML
10/26/2023 13:27	4C415.D	642648004	TNSL	2514414	100UL	50	N/A	15	s	JEB	N/A	O	SOIL 5G/10ML
10/26/2023 13:52	4C416.D	WVG231026-05	GEL	CCV	5ML	1	N/A	16	w	JEB	N/A	O	IVG230927-02
10/26/2023 14:17	4C417.D	642648005	TNSL	2514414	100UL	50	N/A	17	s	JEB	N/A	O	SOIL 5G/10ML
10/26/2023 14:42	4C418.D	642648006	TNSL	2514414	100UL	50	N/A	18	s	JEB	N/A	O	SOIL 5G/10ML
10/26/2023 15:07	4C419.D	642648007	TNSL	2514414	100UL	50	N/A	19	s	JEB	N/A	O	SOIL 5G/10ML
10/26/2023 15:32	4C420.D	642648008	TNSL	2514414	100UL	50	N/A	20	s	JEB	N/A	O	SOIL 5G/10ML
10/26/2023 15:57	4C421.D	642648012	TNSL	2514414	100UL	50	N/A	21	s	JEB	N/A	O	SOIL 5G/10ML
10/26/2023 16:22	4C422.D	1205556976	TNSL	2514414	100UL	50	N/A	22	s	JEB	N/A	O	SOIL 5G/10ML 642648001MS
10/26/2023 16:47	4C423.D	1205556977	TNSL	2514414	100UL	50	N/A	23	s	JEB	N/A	O	SOIL 5G/10ML 642648001MSD
10/26/2023 17:12	4C424.D	WVG231026-06	GEL	CCV	5ML	1	N/A	24	w	JEB	N/A	O	IVG230927-02

The order of this data package is as follows:

1. Chain-of-Custody/Lab Request
2. Copies of field COCs
3. Shipping Classification Determination Checklist
4. Data Review Summary (generated in EIM)
5. Laboratory analysis

Comments:

General Engineering Laboratories, Inc., Charleston, SC.

Charleston SC

Chain of Custody/Analysis Request

COC/Lab Request #: 2024-182

Client Contact:

Lab Agreement #: 620266

Site Name: Los Alamos National Laboratory

Project Number: LANL

Analysis Turnaround Time:

24 Hour - ☐ Other - ☒

7 Days - ☐ Value - 5-Day

14 Days - ☐

21 Days - ☐

28 Days - ☐

Total # of bottles: 12

Event ID: 15356

Rad Screening Info: Acceptable knowledge identifies no DOT hazard classification

Lab Reporting Limit Type: Method Detection Limit

Field Sample ID	Sample Date	Sample Time	Sample Matrix	8260B	8260B Trip Blank	BTEX + TPH-GRO	TPH-DRO+Motor Oil
RLUOB-23-289597	11/21/2023	10:30	SO			1	1
RLUOB-23-289598	11/21/2023	10:45	SO			1	1
RLUOB-23-289599	11/21/2023	11:00	SO			1	1
RLUOB-23-304523	11/21/2023	11:15	SO		2		
RLUOB-23-304530	11/21/2023	11:20	W	2			
RLUOB-23-304531	11/21/2023	11:35	W	2			

Special Instructions:

Relinquished by:	Print Name:	Date/Time:	Received by:	Print Name:	Date/Time:
Relinquished by:	Print Name:	Date/Time:	Received by:	Print Name:	Date/Time:
Relinquished by:	Print Name:	Date/Time:	Received by:	Print Name:	Date/Time:

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 15356 **EVENT NAME:** RLUOB Diesel Tank Removal

SAMPLE ID: RLUOB-23-289597 **WORK ORDER:**

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYYY):	21 Nov. '23	21 Nov. '23	FIELD MATRIX:	S	SOIL / TUFF
TIME COLLECTED (HH:MM):	10:30	10:30	MEDIA:	SOIL	
SWMU/AOC:	TA-55	TA-55	SAMPLE TECH CODE:	CBS	CBS
LOCATION ID:	55-22357	3168'S	FIELD PREP:	NA	NA
LOCATION TYPE:	GENERIC	GENERIC	FIELD QC TYPE:	REG	REG
TOP DEPTH:	8'	~~8.5'~~ 8'	SAMPLE USAGE:	INV	INV
BOTTOM DEPTH:	8.5'	8.5'	EXCAVATED:		YES / NO / NA

PRIORITY	ORDER	CONTAINER	#	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
	BTEX + TPH-GRO	2"X6" SS ~~125 ML GLASS~~	1/2	ICE	Y	5-DAY T/A
	TPH-DRO+Motor Oil	2"X6" SS ~~0.25 LITER GLASS~~	1	ICE	Y	5-DAY T/A

SAMPLE COMMENTS: 5-DAY T/A. CONTAINERS: 2" X 6" STAINLESS STEEL TUBES.

LOCATION COMMENTS: 3168'S - EAST END OF 8' EXCAVATION.

FIELD PARAMETERS:

Sample Time 10:30 HH:MM

O^2 - 20.9 %
CO - 0 ppm
H_2S - 0 ppm
LEL - 0 %
VOCs - 0 ppm

COLLECTED BY (PRINT): K. VERNON & CARLTON PINE

REVIEWED BY (PRINT):

	Date/Time		Date/Time
RELINQUISHED BY (Printed Name) (Signature) K. Vernon	21 Nov. 23 11:53	RECEIVED BY (Printed Name) (Signature)	11/21/23 11:53
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

Report Date: 09/19/2023

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 15356 **EVENT NAME:** RLUOB Diesel Tank Removal

SAMPLE ID: RLUOB-23-289598 **WORK ORDER:**

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYYY):	21 Nov. 23	21 Nov. 23	FIELD MATRIX:	S	SOIL/TUFF
TIME COLLECTED (HH:MM):	10:45	10:45	MEDIA:	SOIL	" "
SWMU/AOC:	TA-55	TA-55	SAMPLE TECH CODE:	CBS	CBS
LOCATION ID:	55-22358	18(8')	FIELD PREP:	NA	NA
LOCATION TYPE:	GENERIC		FIELD QC TYPE:	REG	REG
TOP DEPTH:	8'	8'	SAMPLE USAGE:	INV	ENV
BOTTOM DEPTH:	8.5'	8.5'	EXCAVATED:		YES / NO / NA

PRIORITY	ORDER	CONTAINER	#	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
	BTEX + TPH-GRO	~~*125 ML GLASS~~	~~1~~ 2	ICE	Y	5-DAY T/A
	TPH-DRO+Motor Oil	~~*0.25 LITER GLASS~~	1	ICE	Y	"

SAMPLE COMMENTS: 5-DAY T/A. *CONTAINERS: 2" X 6" STAINLESS STEEL TUBES

LOCATION COMMENTS:

FIELD PARAMETERS:

Sample Time 10:45 HH:MM

O^2 - 21.3%
CO - 0 ppm
H_2S - 0 ppm
LEL - 0%
VOCs - 0 ppm

COLLECTED BY (PRINT): K. VERNON & C. PINE

REVIEWED BY (PRINT):

	Date/Time		Date/Time
RELINQUISHED BY (Printed Name) (Signature) K. Vernon	21 NOV. 23 11:53	RECEIVED BY (Printed Name) (Signature)	11/21/23 11:53
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

Report Date: 09/19/2023

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 15356 **EVENT NAME:** RLUOB Diesel Tank Removal

SAMPLE ID: RLUOB-23-289599 **WORK ORDER:**

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYYY):	21 Nov. '23	21 Nov. '23	FIELD MATRIX:	S	
TIME COLLECTED (HH:MM):	11:00	11:00	MEDIA:	SOIL	SOIL / TUFF
SWMU/AOC:	TA-55	TA-55	SAMPLE TECH CODE:	CBS	CBS
LOCATION ID:	55-22359	24(B)	FIELD PREP:	NA	NA
LOCATION TYPE:	GENERIC		FIELD QC TYPE:	REG	REG
TOP DEPTH:	8'	7'	SAMPLE USAGE:	INV	INV
BOTTOM DEPTH:	8.5'	7.5'	EXCAVATED:		YES / NO / NA

PRIORITY	ORDER	CONTAINER	#	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
	BTEX + TPH-GRO	~~125 ML GLASS~~	2	ICE	Y	5-DAY T/A
	TPH-DRO+Motor Oil	~~0.25 LITER GLASS~~	1	ICE	Y	"

SAMPLE COMMENTS: 5-DAY T/A. CONTAINERS: 2" x 6" STAINLESS STEEL TUBES.

LOCATION COMMENTS:

FIELD PARAMETERS:

Sample Time 11:00 HH:MM

O^2 - 21.4%
CO - 0 ppm
H_2S - 0 ppm
LEL - 0%
VOCs - 67 ppm

COLLECTED BY (PRINT): K. VERNON & C. PINE

REVIEWED BY (PRINT):

	Date/Time		Date/Time
RELINQUISHED BY (Printed Name) (Signature) K. Vernon	21 Nov 23 11:53	RECEIVED BY (Printed Name) (Signature)	11/21/23 11:53
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

Report Date: 09/19/2023

Los Alamos National Laboratory

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 15356 **EVENT NAME:** RLUOB Diesel Tank Removal Additional QC Samples

SAMPLE ID: RLUOB-23-304523 **WORK ORDER:**

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYYY):	21 Nov. 23	21 Nov 23	FIELD MATRIX:	S	S
TIME COLLECTED (HH:MM):	11:15	11:15	MEDIA:		
SWMU/AOC:	TA-55	TA-55	SAMPLE TECH CODE:	DC	DC
LOCATION ID:	UNK	RLUOB DTR	FIELD PREP:	NA	NA
LOCATION TYPE:	BHover10ft →		FIELD QC TYPE:	FTB	FTB
TOP DEPTH:	NA	NA	SAMPLE USAGE:	QC	QC
BOTTOM DEPTH:	NA	NA	EXCAVATED:		YES / NO / NA

PRIORITY	ORDER	CONTAINER	#	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
	8260B	40 ML SEPTUM AMBER GLASS	2	ICE	Y	5-DAY TIA

SAMPLE COMMENTS: FIELD TRIP BLANK

LOCATION COMMENTS: TA-55 RLUOB DTR

FIELD PARAMETERS:

Sample Time _____ HH:MM

COLLECTED BY (PRINT): K. VERNON C. PINK **REVIEWED BY (PRINT):**

RELINQUISHED BY (Printed Name) (Signature) K. Vernon	Date/Time 21 NOV. 23 11:53	RECEIVED BY (Printed Name) (Signature) Melissa	Date/Time 11/21/23 11:53
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

Report Date: 11/09/2023

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 15356 **EVENT NAME:** RLUOB Diesel Tank Removal Additional QC Samples

SAMPLE ID: RLUOB-23-304530 **WORK ORDER:**

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYYY):	21 Nov. '23	21 Nov. '23	FIELD MATRIX:	W	W
TIME COLLECTED (HH:MM):	11:20	11:20	MEDIA:		
SWMU/AOC:	TA-55	TA-55	SAMPLE TECH CODE:	DC	DC
LOCATION ID:	UNK	RLUOB DTR	FIELD PREP:	UF	UF
LOCATION TYPE:	BHover10ft →		FIELD QC TYPE:	FR	FR
TOP DEPTH:	NA	NA	SAMPLE USAGE:	QC	QC
BOTTOM DEPTH:	NA	NA	EXCAVATED:		YES / NO / NA

PRIORITY	ORDER	CONTAINER	#	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
	8260B	40 ML SEPTUM AMBER GLASS	2	HCL	Y	5-DAY TAT

SAMPLE COMMENTS: FIELD RINSATE BLANK

LOCATION COMMENTS: RLUOB DTR

FIELD PARAMETERS:

Sample Time _____ HH:MM

COLLECTED BY (PRINT): K. VERNON C. PINE

REVIEWED BY (PRINT):

RELINQUISHED BY (Printed Name) (Signature) K. Vernon	Date/Time 21 Nov. 23 11:53	RECEIVED BY (Printed Name) (Signature) Melissa Martinez	Date/Time 11/21/23 11:53
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

Report Date: 11/09/2023

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 15356 **EVENT NAME:** RLUOB Diesel Tank Removal Additional QC Samples

SAMPLE ID: RLUOB-23-304531 **WORK ORDER:**

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYYY):	21 Nov. 23	21 Nov. 23	FIELD MATRIX:	W	W
TIME COLLECTED (HH:MM):	11:25	11:25	MEDIA:		
SWMU/AOC:	TA-55	TA-55	SAMPLE TECH CODE:	DC	DC
LOCATION ID:	UNK	RLUOB DTR	FIELD PREP:	UF	UF
LOCATION TYPE:	BHover10ft →		FIELD QC TYPE:	EQB	EQB
TOP DEPTH:	NA	NA	SAMPLE USAGE:	QC	QC
BOTTOM DEPTH:	NA	NA	EXCAVATED:		YES / NO / NA

PRIORITY	ORDER	CONTAINER	#	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
	8260B	40 ML SEPTUM AMBER GLASS	2	HCL		

SAMPLE COMMENTS: EQUIPMENT BLANK

LOCATION COMMENTS: RLUOB DTR

FIELD PARAMETERS:

Sample Time _____ HH:MM

COLLECTED BY (PRINT): K. VERNON C. PINE

REVIEWED BY (PRINT):

RELINQUISHED BY (Printed Name) (Signature) K. Vernon	Date/Time 21 Nov. 23 11:53	RECEIVED BY (Printed Name) (Signature)	Date/Time 11/21/23 11:53
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

Report Date: 11/09/2023

COPY

RADIOLOGICAL SURVEY FORM - CONTAMINATION

SAMPLE DESCRIPTION

Sample Date: 11/21/2023	**Time:** 1110	**Number of Samples:** 3
TA: 55	**Bldg:** 400	**Room:** Outside Loading Dock
RCT: LeeAnn Quintana	**Z:** 345970	**Signature:** Quintana
RCT: Maxwell Gidi	**Z:** 374252	**Signature:** Maxwell Gidi
RCT: Ernesto Salazar	**Z:** 371631	**Signature:** Ernesto Salazar
Reviewed By:	**Z:**	**Date:**

INSTRUMENTATION

Instrument Type	Instrument Number	CAL Due	%Eff	CF	BKG (α)	BKG (β, βγ)	MDA/DL (α)	MDA/DL (β, βγ)
Radeye SX/43-93	18640	08/07/2024	24	-	0	760	24	991
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-

PURPOSE OF SURVEY

☐ Routine ☒ Pre-Job ☐ Post-Job ☐ Hot Job

☐ Characterization ☒ Offsite Shipment ☐ Onsite Shipment

☐ Other:

SMEAR COUNTER ☒ N/A

Instrument Type	Instrument Number	CAL Due
-	-	

Additional Results Attached (Indicate Below)

☐ Berthold /Tennelec/ Protean Printout ☐ HPAL/LSC Printout ☐ RP-PROG Form# _____

HPAL BARCODE

☒ HPAL Barcode N/A

COMMENTS

Note: Placing an * in the survey results box signifies dpm/smear instead of dpm/100cm²

Soil Samples

RWP # N/A

RPIN # N/A

Survey Point #	Item / Area Surveyed	Direct Survey Results α dpm/100cm²	Direct Survey Results β, βγ dpm/100cm²	Smears (Contamination, Tritium) α dpm/100cm²	Smears (Contamination, Tritium) β, βγ dpm/100cm²	LAS α dpm/LAS	LAS β, βγ dpm/LAS
1	Soil Sample # 55-~~2233~~ 2235a | 24 (8") LQ 11/21/23	NDA	NDA	-	-	-	-
2	Soil Sample # 55-22358 | 18 (8")	NDA	NDA	-	-	-	-
3	Soil Sample # 55-22359 | 31 (8")	NDA	NDA	-	-	-	-
-	End of Survey	-	-	-	-	-	-

Sample Management Office Shipping Classification Determination Checklist

Sampling Plan ID/Name: EVENT ID: 15356 R1 4073 DTR

TEST – Chemical Preservation	YES	NO	NA
If the samples were chemically preserved, do the chemical preservations exceed limits given in 40 CFR 136, Table II – Required Containers, Preservation Techniques and Holding Times (footnote 3)? **Note: sample preservation guidance listed on the SCL complies with CFR requirements.**	○	✓	○

TEST – DOT Hazardous Material	YES	NO	Unknown
Is the sample a detonable or reactive explosive (DOT Division 1.1 through 1.6)?	○	✓	○
Is the sample a compressed gas (DOT Division 2.1, 2.2, or 2.3)?	○	✓	○
Is the sample a flammable or combustible liquid (DOT Hazard Class 3)?	○	✓	○
Is the sample a flammable solid (DOT Division 4.1)?	○	✓	○
Is the sample a spontaneously combustible material (DOT Division 4.2)?	○	✓	○
Is the sample a dangerous when wet material (DOT Division 4.3)?	○	✓	○
Is the sample an oxidizer or organic peroxide (DOT Division 5.1 or 5.2)?	○	✓	○
Is the sample a poisonous material or infectious substance (DOT Division 6.1 or 6.2)?	○	✓	○
Is the sample a corrosive material (DOT Hazard Class 8)?	○	✓	○
Does the sample contain MORE than 1 lb of a hazardous material (DOT Hazard Class 9)?	○	✓	○

TEST – Field Screen

If the samples have field screening measurements of alpha and/or beta activity, then compare the results to the sample and shipment activities limits listed below. Mark the items YES if they equal or exceed the listed activities.

Sample Activity (dpm/100cm²)		Shipment Activity (dpm*g/100cm²)	Sampled Location	YES	NO	NA
Alpha detectable	AND	Alpha ≥ 160,000	AT TA-1 and adjacent hillsides, TA-21, Acid Canyon, MDA C, TA-54 Area G, TA-48 or TA-49	○	✓	○
Alpha ≥ 125	AND	Alpha ≥ 1,250,000	AT Other Locations	○	✓	○
Beta ≥ 1,500	AND	Beta ≥ 15,000,000	AT Any Location	○	✓	○
Alpha ≥ 16,000,000 dpm*g/100cm²?				○	✓	○
Beta ≥ 160,000,000 dpm*g/100cm²?				○	✓	○
On the external surface of the sample container, is Alpha ≥ 24 dpm/100cm²?				○	✓	○
On the external surface of the sample container, is Beta ≥ 240 dpm/100cm²?				○	✓	○
On the external surface of the sample container, is surface activity ≥ 0.5 mR/hr?				○	✓	○

TEST – Previous Analytical Results

If previous analytical measurements of radioactive isotopes are available for this sampling location, then compare those results to the sample and shipment activity limits listed below. Mark the items YES if they equal or exceed the listed activities.

Sample Activity (pCi/g)		Shipment Activity (pCi)	YES	NO	NA
Am-241 ≥ 27 pCi/g	AND	Am-241 ≥ 270,000 pCi Total	○	✓	○
Cs-137 ≥ 270 pCi/g	AND	Cs-137 ≥ 270,000 pCi Total	○	✓	○
Pu-238 ≥ 27 pCi/g	AND	Pu-238 ≥ 270,000 pCi Total	○	✓	○
Pu-239/240 ≥ 27 pCi/g	AND	Pu-239/240 ≥ 270,000 pCi Total	○	✓	○
Th-228 ≥ 27 pCi/g	AND	Th-228 ≥ 270,000 pCi Total	○	✓	○
U-234 ≥ 270 pCi/g	AND	U-234 ≥ 1,600,000,000 pCi Total	○	✓	○
U-238 ≥ 270 pCi/g	AND	U-238 unlimited	○	✓	○
H-3 ≥ 27,000,000 pCi/g	AND	H-3 ≥ 27,000,000,000 pCi Total	○	✓	○
Am-241, Pu-238, Pu-239/240, or Th228 ≥ 27,000,000 pCi			○	✓	○
Cs-137 ≥ 270,000,000,000 pCi			○	✓	○
U-234 ≥ 160,000,000 pCi			○	✓	○
H-3 ≥ 1 Ci			○	✓	○

If ANY items on this form are marked YES, SMO will not transport the samples. Contact OS-PT for guidance.

Documented Field Team Member Statement

If no items on this form are marked YES, then these samples do not meet the criteria for classification in any hazard class according to 49 CFR Part 173 and may be shipped by the ALDESHQSS SMO.

Hazard Assessment Completed By: (Printed Name) KEN VERNON (Signature)	**Date:** 21 NOV. 23 11:55	**Time:** 11:55
Hazard Assessment Reviewed By: (Printed Name) (Signature)	**Date:** 11/21/23	**Time:** 11:55

AUTOMATED DATA REVIEW SUMMARY REPORT

Chain Of Custody No. 2024-182

1. Distribution Of Samples In EDD.

SDG	Analytical Method	Regular Samples	Field Duplicates	Trip Blanks	Field Blanks	Equipment Blanks
646356	EPA:170.0	3		1		1
646356	SW-846:8015D	3				
646356	SW-846:8260D	3		1		1

SDG	Analytical Method	Analysis Lot ID	Prep Lot ID	Regular Samples	Field Duplicates	Trip Blanks	Field Blanks	Equipment Blanks	Method Blanks	Matrix Spikes	Matrix Spike Dups	Analytical Spikes	Post-Digestion Spikes	Lab Control Samples	Lab Control Sample Dups	Blank Spike	Blank Spike Dups	Lab Duplicates	Storage Blanks	Preparation Blanks	Reagent Blanks
646356	EPA:170.0	NA	NA	3		1		1													
646356	SW-846:8015D	2530993	2530991	3					2					1							
646356	SW-846:8015D	2531656	2531655	3					1	1	1			1							
646356	SW-846:8260D	2532718	2532718					1	1					2							
646356	SW-846:8260D	2533016	2533015	3		1			1					2							

2. Distribution Of Analytes In EDD.

Analytical Method	Analytical Method Category	Field Sample ID	Lab Sample ID	Sample Purpose	Target Analytes	Surrogates	Spiked Compounds	TICS
EPA:170.0	GENERAL CHEMISTRY	RLUOB-23-289597	646356001	REG	1	0	0	0
EPA:170.0	GENERAL CHEMISTRY	RLUOB-23-289598	646356002	REG	1	0	0	0
EPA:170.0	GENERAL CHEMISTRY	RLUOB-23-289599	646356003	REG	1	0	0	0
EPA:170.0	GENERAL CHEMISTRY	RLUOB-23-304523	646356004	FTB	1	0	0	0
EPA:170.0	GENERAL CHEMISTRY	RLUOB-23-304530	646356005	FR	1	0	0	0
EPA:170.0	GENERAL CHEMISTRY	RLUOB-23-304531	646356006	EQB	1	0	0	0
SW-846:8015D	TPH	HB	1205584643	MB	1	1	0	0
SW-846:8015D	TPH	LCS	1205584639	LCS	0	1	1	0
SW-846:8015D	TPH	LCS	1205585973	LCS	0	1	2	0
SW-846:8015D	TPH	MB	1205584640	MB	1	1	0	0
SW-846:8015D	TPH	MB	1205585972	MB	2	1	0	0
SW-846:8015D	TPH	RLUOB-23-289597	1205584641	PS	0	1	1	0
SW-846:8015D	TPH	RLUOB-23-289597	1205584642	PSD	0	1	1	0
SW-846:8015D	TPH	RLUOB-23-289597	1205585976	MS	0	1	2	0

Only results shown in Section 13 'Display Flagged Data' are current as of this report generation. All other sections are valid for the date the COC data was inserted into EIM, and may have changed due to data updates in the intervening time.

Analytical Method	Analytical Method Category	Field Sample ID	Lab Sample ID	Sample Purpose	Target Analytes	Surrogates	Spiked Compounds	TICS
SW-846:8015D	TPH	RLUOB-23-289597	1205585977	MSD	0	1	2	0
SW-846:8015D	TPH	RLUOB-23-289597	646356001	REG	3	2	0	0
SW-846:8015D	TPH	RLUOB-23-289598	646356002	REG	3	2	0	0
SW-846:8015D	TPH	RLUOB-23-289599	646356003	REG	3	2	0	0
SW-846:8260D	VOC	LCS	1205587954	LCS	0	3	70	0
SW-846:8260D	VOC	LCS	1205587955	LCS	0	3	10	0
SW-846:8260D	VOC	LCS	1205588319	LCS	0	3	62	0
SW-846:8260D	VOC	LCS	1205588325	LCS	0	3	1	0
SW-846:8260D	VOC	MB	1205587956	MB	80	3	0	0
SW-846:8260D	VOC	MB	1205588320	MB	63	3	0	0
SW-846:8260D	VOC	RLUOB-23-289597	646356001	REG	4	3	0	0
SW-846:8260D	VOC	RLUOB-23-289598	646356002	REG	4	3	0	0
SW-846:8260D	VOC	RLUOB-23-289599	646356003	REG	4	3	0	0
SW-846:8260D	VOC	RLUOB-23-304523	646356004	FTB	62	3	0	0
SW-846:8260D	VOC	RLUOB-23-304530	1205587957	PS	0	3	70	0
SW-846:8260D	VOC	RLUOB-23-304530	1205587958	PS	0	3	10	0
SW-846:8260D	VOC	RLUOB-23-304530	1205587959	PSD	0	3	70	0
SW-846:8260D	VOC	RLUOB-23-304530	1205587960	PSD	0	3	10	0
SW-846:8260D	VOC	RLUOB-23-304530	646356005	FR	80	3	0	0
SW-846:8260D	VOC	RLUOB-23-304531	646356006	EQB	80	3	0	0
SW-846:8260D	VOC	WST50-24-301578	1205588321	PS	0	3	62	0
SW-846:8260D	VOC	WST50-24-301578	1205588322	PSD	0	3	62	0
SW-846:8260D	VOC	WST50-24-301578	1205588323	PS	0	3	1	0
SW-846:8260D	VOC	WST50-24-301578	1205588324	PSD	0	3	1	0

3. Are any analytes missing?

No.

4. Were any holding times exceeded?

Field Sample ID	Lab Sample ID	Analytical Method	Sample Date	Extraction Date	Analysis Date	Extraction Hold Time	Max Extract Hold Time	Reject Above	Exceeds Limit	Analysis Hold Time	Max Analysis Hold Time	Reject Above	Exceeds Limit
RLUOB-23-289597	646356001	SW-846:8015D	11/21/2023	11/29/2023	11/30/2023	8	7	14	X	1	40	80	

Only results shown in Section 13 'Display Flagged Data' are current as of this report generation. All other sections are valid for the date the COC data was inserted into EIM, and may have changed due to data updates in the intervening time.

Field Sample ID	Lab Sample ID	Analytical Method	Sample Date	Extraction Date	Analysis Date	Extraction Hold Time	Max Extract Hold Time	Reject Above	Exceeds Limit	Analysis Hold Time	Max Analysis Hold Time	Reject Above	Exceeds Limit
RLUOB-23-289598	646356002	SW-846:8015D	11/21/2023	11/29/2023	11/30/2023	8	7	14	X	1	40	80	
RLUOB-23-289599	646356003	SW-846:8015D	11/21/2023	11/29/2023	11/30/2023	8	7	14	X	1	40	80	

5. Any contaminants in blanks?

No.

6. Any surrogate recoveries outside the control limits?

No.

7. Any MS/MSD recoveries or RPDs outside the control limits?

No.

8. Any LCS/LCSD or BS/BSD recoveries or RPDs outside the control limits?

No.

9. Any Field Duplicate RPDs outside the desired limits?

No.

10. Any Lab Duplicate RPDs outside the desired limits?

No.

11. Any required reporting limits exceeded?

Analytical Method	Sample Matrix	Parameter Name	Analysis Lot ID	Lowest Reported Limit	Highest Reported Limit	Number of Results	Lab Units	Reporting Limit	Reporting Limit Units	Reporting Limit Type	Dilution Factor
SW-846:8015D	SO	Total Petroleum Hydrocarbons Diesel Range Organics	2531656	12.0	12.0	1	mg/kg	6.7	mg/kg	METHOD_DETECTION_LIMIT	5.00
SW-846:8015D	SO	Total Petroleum Hydrocarbons Diesel Range Organics	2531656	121	121	1	mg/kg	6.7	mg/kg	METHOD_DETECTION_LIMIT	50.0
SW-846:8015D	SO	Total Petroleum Hydrocarbons Gasoline Range Org.	2530993	1880	1930	3	ug/kg	1000	ug/kg	METHOD_DETECTION_LIMIT	50.0
SW-846:8260D	W	Trichloro-1,2,2-trifluoroethane[1,1,2-]	2532718	2.98	2.98	2	ug/L	2	ug/L	METHOD_DETECTION_LIMIT	1.00
SW-846:8260D	SO	Xylene (Total)	2533016	1.13	1.16	3	ug/kg	1	ug/kg	METHOD_DETECTION_LIMIT	1.00

12. Additional Validator's Comments.

13. Display Flagged Data.

Location ID	COC Number	Field Sample ID	Sample Purpose	Analysis Type Code	Analytical Suite	Analytical Method	Paramter Name	Lab Qualifier	Validation Qualifier	Validation Reason Codes	Detect Flag	Lab Result	Lab Units	Report Result	Report Units	Report MDA	Report Uncertainty	Lab Matrix	Sample Date	Percent	Analysis Lot ID	Validation Status Code	Use Flag
55-22357	2024-182	RLUOB-23-289597	REG	INIT	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Motor Oil Range Organics	U	UJ	DR9	N	2.49	mg/kg	2.49	mg/kg			SD	11/21/2023		2531656	VAL	Y
55-22358	2024-182	RLUOB-23-289598	REG	INIT	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Motor Oil Range Organics	U	UJ	DR9	N	12.0	mg/kg	12.0	mg/kg			SD	11/21/2023		2531656	VAL	Y
55-22359	2024-182	RLUOB-23-289599	REG	INIT	TPH	SW-846:8015D	Total Petroleum Hydrocarbons Motor Oil Range Organics		J-	DR9	Y	581	mg/kg	581	mg/kg			SD	11/21/2023		2531656	VAL	Y

Reason Code	Description
DR9	The holding time was greater than the applicable holding time requirement and was <=2 times the applicable holding time requirement.
NQ	The analytical laboratory did not qualifiy the analyte as not detected and/or any other standard qualifire. The analyte is detected in the sample.
U_LAB	The analytical laboratory qualified the analyte as not detected.

14. Usable Result Count.

Field Sample ID	Location ID	Sample Purpose	Analytical Method	No. Unuseable Records	Total Records
RLUOB-23-289597	55-22357	REG	EPA:170.0	0	1
RLUOB-23-289597	55-22357	REG	SW-846:8015D	0	3
RLUOB-23-289597	55-22357	REG	SW-846:8260D	0	4
RLUOB-23-289598	55-22358	REG	EPA:170.0	0	1

Only results shown in Section 13 'Display Flagged Data' are current as of this report generation. All other sections are valid for the date the COC data was inserted into EIM, and may have changed due to data updates in the intervening time.

AUTOMATED DATA REVIEW SUMMARY REPORT

Field Sample ID	Location ID	Sample Purpose	Analytical Method	No. Unuseable Records	Total Records
RLUOB-23-289598	55-22358	REG	SW-846:8015D	0	3
RLUOB-23-289598	55-22358	REG	SW-846:8260D	0	4
RLUOB-23-289599	55-22359	REG	EPA:170.0	0	1
RLUOB-23-289599	55-22359	REG	SW-846:8015D	0	3
RLUOB-23-289599	55-22359	REG	SW-846:8260D	0	4
RLUOB-23-304523	UNK	FTB	EPA:170.0	0	1
RLUOB-23-304523	UNK	FTB	SW-846:8260D	0	62
RLUOB-23-304530	UNK	FR	EPA:170.0	0	1
RLUOB-23-304530	UNK	FR	SW-846:8260D	0	80
RLUOB-23-304531	UNK	EQB	EPA:170.0	0	1
RLUOB-23-304531	UNK	EQB	SW-846:8260D	0	80

Only results shown in Section 13 'Display Flagged Data' are current as of this report generation. All other sections are valid for the date the COC data was inserted into EIM, and may have changed due to data updates in the intervening time.

GEL Laboratories LLC
a member of The GEL Group INC

2040 Savage Road | Charleston, SC 29407
843.556.8171
gel.com

November 30, 2023

Mr. Stanislaw Marczak
Los Alamos National Laboratory
TA-00, SM1237, Rm104C
Los Alamos, New Mexico 87545

Re: LANL
Work Order: 646356
SDG: 2024-182

Dear Mr. Marczak:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on November 22, 2023, and analyzed for GC/MS Volatile, Diesel Range Organics and GC Volatiles (GRO). This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4485.

Sincerely,

Jessica Ward for
Valerie Davis
Project Manager

Chain of Custody: 2024-182
Enclosures

Triad National Security, LLC (620266)
LANL
Work Order #: 646356
SDG: 2024-182

Table of Contents

Case Narrative.....1

Chain of Custody and Supporting Documentation.4

Data Review Qualifier Flag Definition Sheet...9

Volatile Analysis.....13

- Case Narrative.....14
- Sample Data Summary.....18
- Quality Control Summary.....30
- Sample Data.....68
- Standards...(Provided Upon Request).....132
- Quality Control Data..(Provided Upon Request)...188
- Miscellaneous.....287

FID Diesel Range Organics Analysis.....294

- Case Narrative.....295
- Sample Data Summary.....299
- Quality Control Summary.....303
- Sample Data.....309
- Standards....(Provided Upon Request).....323
- Quality Control Data..(Provided Upon Request)...344
- Miscellaneous.....370

GC Volatiles (GRO) Analysis.....375

Case Narrative.....376

Sample Data Summary.....379

Quality Control Summary.....383

Sample Data.....389

Standards...(Provided Upon Request).....399

Quality Control Data..(Provided Upon Request)...419

Miscellaneous.....435

Case Narrative

Case Narrative for
Triad National Security, LLC (620266)
LANL
Workorder #: 646356
SDG # : 2024-182

November 30, 2023

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on November 22, 2023 for analysis. The samples were delivered with proper chain of custody documentation and signatures. The samples were screened according to GEL Standard Operating Procedure. All sample containers arrived without any visible signs of tampering or breakage. Containers were checked for pH, where appropriate, and matched the preservative as documented on the accompanying chain of custody. Shipping container temperatures were checked, documented, and within specifications. Shipping container temperature was within specification (0 - 6C). There are no additional comments concerning sample receipt.

Sample Identification The laboratory received the following samples:

Laboratory ID	Client ID
646356001	RLUOB-23-289597
646356002	RLUOB-23-289598
646356003	RLUOB-23-289599
646356004	RLUOB-23-304523
646356005	RLUOB-23-304530
646356006	RLUOB-23-304531

Case Narrative

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Data Package

The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: GC/MS Volatile, Diesel Range Organics and GC Volatiles (GRO).

I certify that this data report is in compliance with the terms and conditions of the subcontract and task order, both technically and for completeness, for other than the conditions detailed in the attached case narrative.

Valerie Davis
Project Manager

Chain of Custody and Supporting Documentation

6416352

General Engineering Laboratories, Inc., Charleston, SC.
Charleston SC

Chain of Custody/Analysis Request

COC/Lab Request #: 2024-182
Page 1 of 1

Client Contact:

Lab Agreement #: 620266

Project Number: LANL

Site Name: Los Alamos National Laboratory

Analysis Turnaround Time:
24 Hour - ☐ Other - ☒
7 Days - ☐ Value - 5-Day
14 Days - ☐
21 Days - ☐
28 Days - ☐

Total # of bottles: 12

Event ID: 15356

Rad Screening Info: Acceptable knowledge identifies no DOT hazard classification

Lab Reporting Limit Type: Method Detection Limit

Field Sample ID	Sample Date	Sample Time	Sample Matrix	8260B	8260B Trip Blank	BTEX + TPH-GRO	TPH-DRO+Motor Oil
RLUOB-23-289597	11/21/2023	10:30	SO			1	1
RLUOB-23-289598	11/21/2023	10:45	SO			1	1
RLUOB-23-289599	11/21/2023	11:00	SO			1	1
RLUOB-23-304523	11/21/2023	11:15	SO		2		
RLUOB-23-304530	11/21/2023	11:20	W	2			
RLUOB-23-304531	11/21/2023	11:35	W	2			

Special Instructions:

Relinquished by:	Print Name: Melissa Martin	Date/Time: 11/21/23 1520	Received by: CMcMahon	Print Name: CMcMahon	Date/Time: 11/22/23 915
Relinquished by:	Print Name:	Date/Time:	Received by:	Print Name:	Date/Time:
Relinquished by:	Print Name:	Date/Time:	Received by:	Print Name:	Date/Time:

COPY

RADIOLOGICAL SURVEY FORM - CONTAMINATION

SAMPLE DESCRIPTION

Sample Date: 11/21/2023	**Time:** 1110	**Number of Samples:** 3
TA: 55	**Bldg:** 400	**Room:** Outside Loading Dock
RCT: LeeAnn Quintana	Z: 345970	**Signature:** Lquintana
RCT: Maxwell Gidi	Z: 374252	**Signature:** Mgidi
RCT: Ernesto Salazar	Z: 371631	**Signature:** ESalazar
Reviewed By:	Z:	**Date:**

INSTRUMENTATION

Instrument Type	Instrument Number	CAL Due	%Eff	CF	BKG (α)	BKG (β, βγ)	MDA/DL (α)	MDA/DL (β, βγ)
Radeye SX/43-93	18640	08/07/2024	24	-	0	760	24	991
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-

PURPOSE OF SURVEY

☐ Routine ☒ Pre-Job ☐ Post-Job ☐ Hot Job

☐ Characterization ☒ Offsite Shipment ☐ Onsite Shipment

☐ Other:

SMEAR COUNTER ☒ N/A

Instrument Type	Instrument Number	CAL Due
-	-	

Additional Results Attached (Indicate Below)

☐ Berthold /Tennelec/ Protean Printout ☐ HPAL/LSC Printout ☐ RP-PROG Form# _____

HPAL BARCODE

☒ HPAL Barcode N/A

COMMENTS

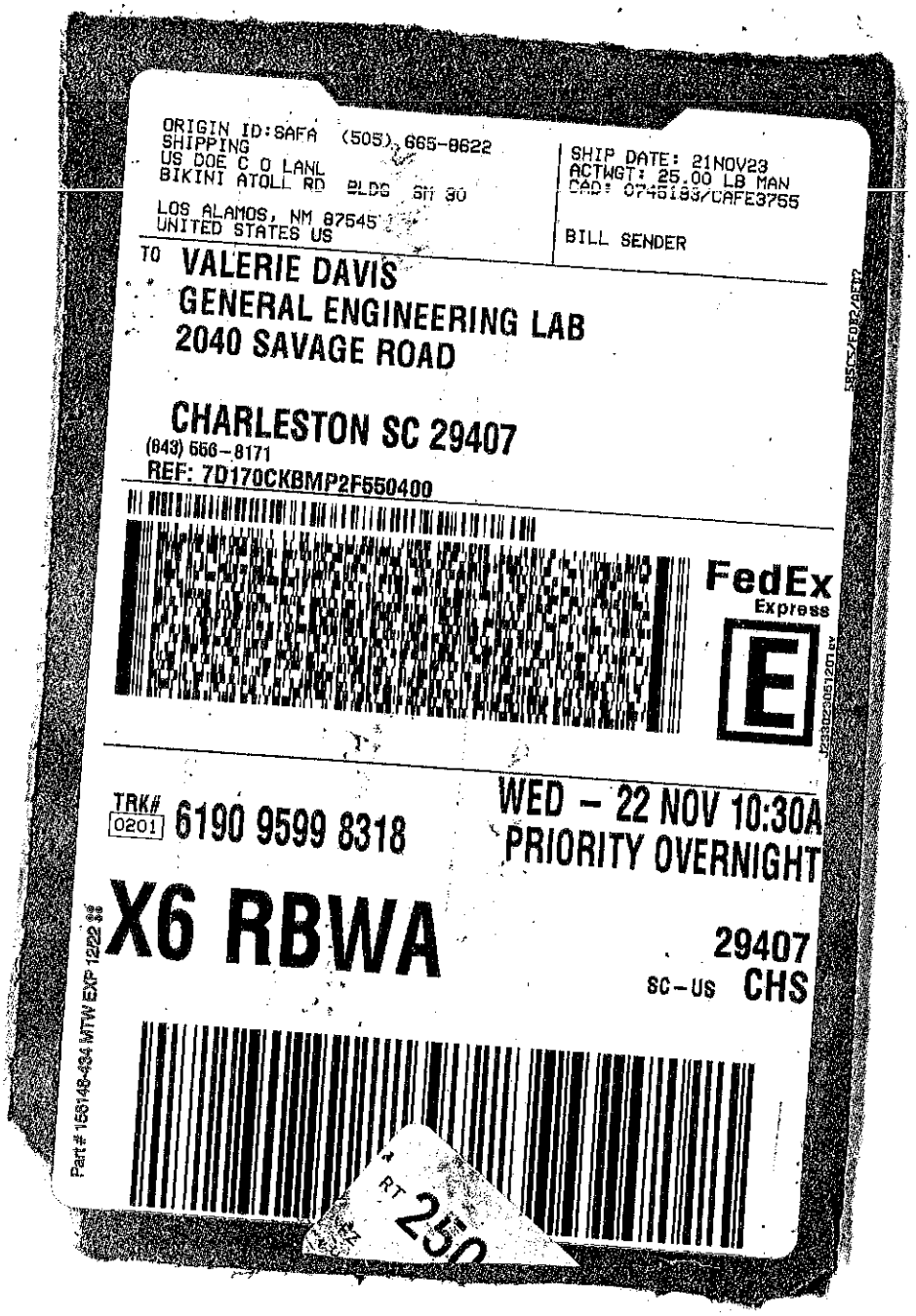
Soil Samples

Note: Placing an * in the survey results box signifies dpm/smear instead of dpm/100cm²

RWP # N/A

RPIN # N/A

Survey Point #	Item / Area Surveyed (W 11/21/23)	Direct Survey Results α dpm/100cm²	Direct Survey Results β, βγ dpm/100cm²	Smears (Contamination, Tritium) α dpm/100cm²	Smears (Contamination, Tritium) β, βγ dpm/100cm²	LAS α dpm/LAS	LAS β, βγ dpm/LAS
1	Soil Sample # 55-~~2233~~ 2235a | 24 (8")	NDA	NDA	-	-	-	-
2	Soil Sample # 55-22358 | 18 (8")	NDA	NDA	-	-	-	-
3	Soil Sample # 55-22359 | 31 (8")	NDA	NDA	-	-	-	-
-	End of Survey	-	-	-	-	-	-


ORIGIN ID:SAFA (505) 665-8622
SHIPPING
US DOE C O LANL
BIKINI ATOLL RD BLDG SM 30
LOS ALAMOS, NM 87545
UNITED STATES US
SHIP DATE: 21NOV23
ACTWGT: 25.00 LB MAN
CAD: 0745183/CAFE3755
BILL SENDER
TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE ROAD
CHARLESTON SC 29407
(843) 566-8171
REF: 7D170CKBMP2F550400
FedEx
Express
TRK# 0201 6190 9599 8318
WED - 22 NOV 10:30A
PRIORITY OVERNIGHT
X6 RBWA
29407
SC-US CHS
Part # 158148-434 MTW EXP 12/22 ##
RT 250

VD

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: TNSL	SDG/AR/COC/Work Order: 446356
Received By: CLM	Date Received: 11/22/23
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other 619095998318

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A)Shipped as a DOT Hazardous?		✓	Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes___ No___
B) Did the client designate the samples are to be received as radioactive?		✓	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		✓	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): 0 CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?		✓	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		✓	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	✓			Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	✓			Preservation Method: Wet Ice Ice Packs Dry Ice None Other: *all temperatures are recorded in Celsius TEMP: 4
4	Daily check performed and passed on IR temperature gun?	✓			Temperature Device Serial #: IR8-23 Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?			✓	Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?	✓			If Yes, are Encores or Soil Kits present for solids? Yes___ No✓ NA___(If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes✓ No___ NA___(If unknown, select No) Are liquid VOA vials free of headspace? Yes___ No___ NA___ Sample ID's and containers affected:
8	Samples received within holding time?	✓			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	✓			ID's and containers affected:
10	Date & time on COC match date & time on bottles?			✓	Circle Applicable: No dates on containers No times on containers COC missing info Other (describe) Time on samples RLW0B-23-30453 1 say 11:35 instead of
11	Number of containers received match number indicated on COC?	✓			Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided by use of GEL labels?			✓	
13	COC form is properly signed in relinquished/received sections?	✓			Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):
10) 11:35

PM (or PMA) review: Initials JL Date 11/24/23 Page 1 of 1

GL-CHL-SR-001 Rev 7

Data Review Qualifier Flag Definition Sheet

Data Review Qualifier Definitions

Qualifier	Explanation
*	A quality control analyte recovery is outside of specified acceptance criteria
**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
A	The TIC is a suspected aldol-condensation product
B	Target analyte was detected in the associated blank
B	Metals-Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
d	5-day BOD-The 2:1 depletion requirement was not met for this sample
E	Organics-Concentration of the target analyte exceeds the instrument calibration range
E	Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
H	Analytical holding time was exceeded
h	Preparation or preservation holding time was exceeded
J	Value is estimated
N	Metals-The Matrix spike sample recovery is not within specified control limits
N	Organics-Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND	Analyte concentration is not detected above the reporting limit
UI	Gamma Spectroscopy-Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

P Organics-The concentrations between the primary and confirmation columns/detectors is >40% difference. For HPLC, the difference is >70%.

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

List of current GEL Certifications as of 30 November 2023

State	Certification
Alabama	42200
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-00651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	KY90129
Kentucky Wastewater	KY90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2023019
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122024-05
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2023-152
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-23-21
Utah NELAP	SC000122023-38
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

Volatile Analysis

Case Narrative

GC/MS Volatile
Technical Case Narrative
Triad National Security, LLC
SDG #: 2024-182
Work Order #: 646356

Product: **Volatile Organic Compounds (VOC) by Gas Chromatograph/Mass Spectrometer**
Analytical Method: SW846 8260D
Analytical Procedure: GL-OA-E-038 REV# 29
Analytical Batches: 2532718 and 2533016

Preparation Method: SW846 5030
Preparation Procedure: GL-OA-E-038 REV# 29
Preparation Batch: 2533015

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
646356001	RLUOB-23-289597
646356002	RLUOB-23-289598
646356003	RLUOB-23-289599
646356004	RLUOB-23-304523
646356005	RLUOB-23-304530
646356006	RLUOB-23-304531
1205587954	Laboratory Control Sample (LCS)
1205587955	Laboratory Control Sample (LCS)
1205587956	Method Blank (MB)
1205587957	646356005(RLUOB-23-304530) Post Spike (PS)
1205587958	646356005(RLUOB-23-304530) Post Spike (PS)
1205587959	646356005(RLUOB-23-304530) Post Spike Duplicate (PSD)
1205587960	646356005(RLUOB-23-304530) Post Spike Duplicate (PSD)
1205588319	Laboratory Control Sample (LCS)
1205588320	Method Blank (MB)
1205588321	646456002(WST50-24-301578) Post Spike (PS)
1205588322	646456002(WST50-24-301578) Post Spike Duplicate (PSD)
1205588323	646456002(WST50-24-301578) Post Spike (PS)
1205588324	646456002(WST50-24-301578) Post Spike Duplicate (PSD)
1205588325	Laboratory Control Sample (LCS)

Samples 646356001, 002, 003 and 004 in this SDG were analyzed on a "dry weight corrected" basis. Samples 646356005 and 006 in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Calibration Information

Continuing Calibration Verification Requirements
All Calibration Verification Standards (CCV) did not meet the acceptance criteria as outlined in Method 8260D for samples and the associated QC. However, the method allows for a designated number of outliers dependent on the requested analyte list. This SDG satisfied the 8260D outlier acceptance criteria. The results are reported.

Quality Control (QC) Information

Blank (MB) Statement
Target analytes were detected in the blank 1205587956 (MB) below the reporting limit. The associated data are qualified accordingly and reported.

Matrix Spike/Matrix Spike Duplicate Recovery Statement
The spike and/or spike duplicate (See Below) recoveries were not all within the acceptance limits. The recoveries were similar. It is believed possible matrix interference has been demonstrated.

Sample	Analyte	Value
1205588321 (WST50-24-301578PS)	Bromomethane	15* (37%-166%)
1205588322 (WST50-24-301578PSD)	Bromomethane	17* (37%-166%)

Miscellaneous Information

TIC Comment
Tentatively identified compounds (TIC) were requested for samples and 646356004 (RLUOB-23-304523) in this delivery group/work order. Please note that non-requested calibrated analytes detected in a client sample may be reported on the Form 1/Certificate of Analysis as TICs. TIC data, if requested, were included on the Sample Data Summary (Form 1) and included with the sample raw data.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report
for

TNSL001 Triad National Security, LLC (620266)

Client SDG: 2024-182 GEL Work Order: 646356

The Qualifiers in this report are defined as follows:

* A quality control analyte recovery is outside of specified acceptance criteria
** Analyte is a surrogate compound
B The target analyte was detected in the associated blank.
E Concentration of the target analyte exceeds the instrument calibration range
J Value is estimated
Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

DL Indicates that sample is diluted.
RA Indicates that sample is re-analyzed without re-extraction.
RE Indicates that sample is re-extracted.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: Erin Haubert **Name: Erin Haubert**

Date: 30 NOV 2023 **Title: Data Validator**

Sample Data Summary

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-182**	**Date Collected:**	**11/21/2023 10:30**	**Matrix:**	**SO**
Lab Sample ID:	**646356001**	**Date Received:**	**11/22/2023 09:15**	**%Moisture:**	**13.5**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289597**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2533016**	**Inst:**	**VOAA.I**	**Dilution:**	**1**
Run Date:	**11/30/2023 10:34**	**Analyst:**	**JEB**	**Purge Vol:**	**5 mL**
Prep Date:	**11/30/2023 08:03**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**113023VA\AP408.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	0.385	ug/kg	0.385	1.16
108-88-3	Toluene	U	0.385	ug/kg	0.385	1.16
100-41-4	Ethylbenzene	U	0.385	ug/kg	0.385	1.16
1330-20-7	Xylenes (total)	U	1.16	ug/kg	1.16	3.47

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	49.7	50.0	ug/L	99	(74%-128%)
Toluene-d8	50.4	50.0	ug/L	101	(81%-120%)
1,2-Dichloroethane-d4	53.1	50.0	ug/L	106	(77%-127%)

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-182**	**Date Collected:**	**11/21/2023 10:45**	**Matrix:**	**SO**
Lab Sample ID:	**646356002**	**Date Received:**	**11/22/2023 09:15**	**%Moisture:**	**11.3**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289598**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2533016**	**Inst:**	**VOAA.I**	**Dilution:**	**1**
Run Date:	**11/30/2023 10:58**	**Analyst:**	**JEB**	**Purge Vol:**	**5 mL**
Prep Date:	**11/30/2023 08:04**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**113023VA\AP409.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	0.375	ug/kg	0.375	1.13
108-88-3	Toluene	U	0.375	ug/kg	0.375	1.13
100-41-4	Ethylbenzene	U	0.375	ug/kg	0.375	1.13
1330-20-7	Xylenes (total)	U	1.13	ug/kg	1.13	3.38

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	48.7	50.0	ug/L	97	(74%-128%)
Toluene-d8	50.9	50.0	ug/L	102	(81%-120%)
1,2-Dichloroethane-d4	53.1	50.0	ug/L	106	(77%-127%)

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-182**	**Date Collected:**	**11/21/2023 11:00**	**Matrix:**	**SO**
Lab Sample ID:	**646356003**	**Date Received:**	**11/22/2023 09:15**	**%Moisture:**	**11.3**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289599**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2533016**	**Inst:**	**VOAA.I**	**Dilution:**	**1**
Run Date:	**11/30/2023 11:23**	**Analyst:**	**JEB**	**Purge Vol:**	**5 mL**
Prep Date:	**11/30/2023 08:05**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**113023VA\AP410.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	0.375	ug/kg	0.375	1.13
108-88-3	Toluene		1.65	ug/kg	0.375	1.13
100-41-4	Ethylbenzene		1.68	ug/kg	0.375	1.13
1330-20-7	Xylenes (total)		99.2	ug/kg	1.13	3.38

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Toluene-d8	56.2	50.0	ug/L	112	(81%-120%)
1,2-Dichloroethane-d4	53.5	50.0	ug/L	107	(77%-127%)
Bromofluorobenzene	50.0	50.0	ug/L	100	(74%-128%)

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-182**	**Date Collected:**	**11/21/2023 11:15**	**Matrix:**	**SO**
Lab Sample ID:	**646356004**	**Date Received:**	**11/22/2023 09:15**	**%Moisture:**	**.1**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-304523**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2533016**	**Inst:**	**VOAA.I**	**Dilution:**	**1**
Run Date:	**11/30/2023 12:11**	**Analyst:**	**JEB**	**Purge Vol:**	**5 mL**
Prep Date:	**11/30/2023 08:06**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**113023VA\AP412.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	0.333	ug/kg	0.333	1.00
74-87-3	Chloromethane	U	0.333	ug/kg	0.333	1.00
75-01-4	Vinyl chloride	U	0.333	ug/kg	0.333	1.00
74-83-9	Bromomethane	U	0.333	ug/kg	0.333	1.00
75-00-3	Chloroethane	U	0.333	ug/kg	0.333	1.00
75-69-4	Trichlorofluoromethane	U	0.333	ug/kg	0.333	1.00
67-64-1	Acetone	U	1.67	ug/kg	1.67	5.00
75-35-4	1,1-Dichloroethylene	U	0.333	ug/kg	0.333	1.00
74-88-4	Iodomethane	U	1.67	ug/kg	1.67	5.00
75-15-0	Carbon disulfide	U	1.67	ug/kg	1.67	5.00
75-09-2	Methylene chloride	U	1.67	ug/kg	1.67	5.00
156-60-5	trans-1,2-Dichloroethylene	U	0.333	ug/kg	0.333	1.00
75-34-3	1,1-Dichloroethane	U	0.333	ug/kg	0.333	1.00
78-93-3	2-Butanone	U	1.67	ug/kg	1.67	5.00
156-59-2	cis-1,2-Dichloroethylene	U	0.333	ug/kg	0.333	1.00
594-20-7	2,2-Dichloropropane	U	0.333	ug/kg	0.333	1.00
74-97-5	Bromochloromethane	U	0.333	ug/kg	0.333	1.00
67-66-3	Chloroform	U	0.333	ug/kg	0.333	1.00
71-55-6	1,1,1-Trichloroethane	U	0.333	ug/kg	0.333	1.00
563-58-6	1,1-Dichloropropene	U	0.333	ug/kg	0.333	1.00
56-23-5	Carbon tetrachloride	U	0.333	ug/kg	0.333	1.00
107-06-2	1,2-Dichloroethane	U	0.333	ug/kg	0.333	1.00
71-43-2	Benzene	U	0.333	ug/kg	0.333	1.00
79-01-6	Trichloroethylene	U	0.333	ug/kg	0.333	1.00
78-87-5	1,2-Dichloropropane	U	0.333	ug/kg	0.333	1.00
74-95-3	Dibromomethane	U	0.333	ug/kg	0.333	1.00
75-27-4	Bromodichloromethane	U	0.333	ug/kg	0.333	1.00
10061-01-5	cis-1,3-Dichloropropylene	U	0.333	ug/kg	0.333	1.00
108-10-1	4-Methyl-2-pentanone	U	1.67	ug/kg	1.67	5.00
108-88-3	Toluene	U	0.333	ug/kg	0.333	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	0.333	ug/kg	0.333	1.00
79-00-5	1,1,2-Trichloroethane	U	0.333	ug/kg	0.333	1.00
591-78-6	2-Hexanone	U	1.67	ug/kg	1.67	5.00
142-28-9	1,3-Dichloropropane	U	0.333	ug/kg	0.333	1.00
127-18-4	Tetrachloroethylene	U	0.333	ug/kg	0.333	1.00
124-48-1	Dibromochloromethane	U	0.333	ug/kg	0.333	1.00
106-93-4	1,2-Dibromoethane	U	0.333	ug/kg	0.333	1.00
108-90-7	Chlorobenzene	U	0.333	ug/kg	0.333	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-182**	**Date Collected:**	**11/21/2023 11:15**	**Matrix:**	**SO**
Lab Sample ID:	**646356004**	**Date Received:**	**11/22/2023 09:15**	**%Moisture:**	**.1**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-304523**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2533016**	**Inst:**	**VOAA.I**	**Dilution:**	**1**
Run Date:	**11/30/2023 12:11**	**Analyst:**	**JEB**	**Purge Vol:**	**5 mL**
Prep Date:	**11/30/2023 08:06**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**113023VA\AP412.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	0.333	ug/kg	0.333	1.00
179601-23-1	m,p-Xylenes	U	0.667	ug/kg	0.667	2.00
95-47-6	o-Xylene	U	0.333	ug/kg	0.333	1.00
100-42-5	Styrene	U	0.333	ug/kg	0.333	1.00
75-25-2	Bromoform	U	0.333	ug/kg	0.333	1.00
98-82-8	Isopropylbenzene	U	0.333	ug/kg	0.333	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	0.333	ug/kg	0.333	1.00
96-18-4	1,2,3-Trichloropropane	U	0.333	ug/kg	0.333	1.00
108-86-1	Bromobenzene	U	0.333	ug/kg	0.333	1.00
103-65-1	n-Propylbenzene	U	0.333	ug/kg	0.333	1.00
108-67-8	1,3,5-Trimethylbenzene	U	0.333	ug/kg	0.333	1.00
95-49-8	2-Chlorotoluene	U	0.333	ug/kg	0.333	1.00
106-43-4	4-Chlorotoluene	U	0.333	ug/kg	0.333	1.00
98-06-6	tert-Butylbenzene	U	0.333	ug/kg	0.333	1.00
95-63-6	1,2,4-Trimethylbenzene	U	0.333	ug/kg	0.333	1.00
135-98-8	sec-Butylbenzene	U	0.333	ug/kg	0.333	1.00
99-87-6	4-Isopropyltoluene	U	0.333	ug/kg	0.333	1.00
541-73-1	1,3-Dichlorobenzene	U	0.333	ug/kg	0.333	1.00
106-46-7	1,4-Dichlorobenzene	U	0.333	ug/kg	0.333	1.00
104-51-8	n-Butylbenzene	U	0.333	ug/kg	0.333	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	0.500	ug/kg	0.500	1.00
76-13-1	Trichlorotrifluoroethane	U	1.67	ug/kg	1.67	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	0.333	ug/kg	0.333	1.00
95-50-1	1,2-Dichlorobenzene	U	0.333	ug/kg	0.333	1.00

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	52.9	50.0	ug/L	106	(74%-128%)
Toluene-d8	53.6	50.0	ug/L	107	(81%-120%)
1,2-Dichloroethane-d4	47.8	50.0	ug/L	96	(77%-127%)

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Concentration	Units	Fit	Qual
No Tentatively Identified Compounds Found				ug/kg		

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-182**	**Date Collected:**	**11/21/2023 11:20**	**Matrix:**	**W**
Lab Sample ID:	**646356005**	**Date Received:**	**11/22/2023 09:15**		
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-304530**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2532718**	**Inst:**	**VOA8.I**	**Dilution:**	**1**
Run Date:	**11/29/2023 18:51**	**Analyst:**	**KP2**	**Purge Vol:**	**5 mL**
Prep Date:	**11/29/2023 18:51**				
Data File:	**112923V8\8N316.D**	**Column:**	**Serial Number: 1**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	0.355	ug/L	0.355	1.00
74-87-3	Chloromethane	U	0.333	ug/L	0.333	1.00
75-01-4	Vinyl chloride	U	0.333	ug/L	0.333	1.00
74-83-9	Bromomethane	U	0.337	ug/L	0.337	1.00
75-00-3	Chloroethane	U	0.333	ug/L	0.333	1.00
75-69-4	Trichlorofluoromethane	U	0.333	ug/L	0.333	1.00
60-29-7	Ethyl ether	U	0.333	ug/L	0.333	1.00
67-64-1	Acetone		67.7	ug/L	1.74	5.00
75-35-4	1,1-Dichloroethylene	U	0.333	ug/L	0.333	1.00
74-88-4	Iodomethane	U	1.67	ug/L	1.67	5.00
75-05-8	Acetonitrile	U	8.33	ug/L	8.33	25.0
75-15-0	Carbon disulfide	U	1.67	ug/L	1.67	5.00
75-09-2	Methylene chloride	U	0.500	ug/L	0.500	5.00
1634-04-4	tert-Butyl methyl ether	U	0.333	ug/L	0.333	1.00
156-60-5	trans-1,2-Dichloroethylene	U	0.333	ug/L	0.333	1.00
108-05-4	Vinyl acetate	U	1.67	ug/L	1.67	5.00
75-34-3	1,1-Dichloroethane	U	0.333	ug/L	0.333	1.00
78-93-3	2-Butanone	U	1.67	ug/L	1.67	5.00
156-59-2	cis-1,2-Dichloroethylene	U	0.333	ug/L	0.333	1.00
594-20-7	2,2-Dichloropropane	U	0.333	ug/L	0.333	1.00
74-97-5	Bromochloromethane	U	0.333	ug/L	0.333	1.00
67-66-3	Chloroform		2.51	ug/L	0.333	1.00
71-55-6	1,1,1-Trichloroethane	U	0.333	ug/L	0.333	1.00
563-58-6	1,1-Dichloropropene	U	0.333	ug/L	0.333	1.00
56-23-5	Carbon tetrachloride	U	0.333	ug/L	0.333	1.00
107-06-2	1,2-Dichloroethane	U	0.333	ug/L	0.333	1.00
71-43-2	Benzene	U	0.333	ug/L	0.333	1.00
71-36-3	n-Butyl alcohol	U	21.1	ug/L	21.1	50.0
79-01-6	Trichloroethylene	U	0.333	ug/L	0.333	1.00
78-87-5	1,2-Dichloropropane	U	0.333	ug/L	0.333	1.00
74-95-3	Dibromomethane	U	0.333	ug/L	0.333	1.00
75-27-4	Bromodichloromethane	U	0.333	ug/L	0.333	1.00
10061-01-5	cis-1,3-Dichloropropylene	U	0.333	ug/L	0.333	1.00
108-10-1	4-Methyl-2-pentanone	U	1.67	ug/L	1.67	5.00
108-88-3	Toluene	U	0.333	ug/L	0.333	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	0.333	ug/L	0.333	1.00
79-00-5	1,1,2-Trichloroethane	U	0.333	ug/L	0.333	1.00
591-78-6	2-Hexanone	U	1.67	ug/L	1.67	5.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-182**	**Date Collected:**	**11/21/2023 11:20**	**Matrix:**	**W**
Lab Sample ID:	**646356005**	**Date Received:**	**11/22/2023 09:15**		
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-304530**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2532718**	**Inst:**	**VOA8.I**	**Dilution:**	**1**
Run Date:	**11/29/2023 18:51**	**Analyst:**	**KP2**	**Purge Vol:**	**5 mL**
Prep Date:	**11/29/2023 18:51**				
Data File:	**112923V8\8N316.D**	**Column:**	**Serial Number: 1**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
142-28-9	1,3-Dichloropropane	U	0.333	ug/L	0.333	1.00
127-18-4	Tetrachloroethylene	U	0.333	ug/L	0.333	1.00
124-48-1	Dibromochloromethane	U	0.333	ug/L	0.333	1.00
106-93-4	1,2-Dibromoethane	U	0.333	ug/L	0.333	1.00
108-90-7	Chlorobenzene	U	0.333	ug/L	0.333	1.00
100-41-4	Ethylbenzene	U	0.333	ug/L	0.333	1.00
179601-23-1	m,p-Xylenes	U	0.500	ug/L	0.500	2.00
95-47-6	o-Xylene	U	0.333	ug/L	0.333	1.00
100-42-5	Styrene	U	0.333	ug/L	0.333	1.00
75-25-2	Bromoform	U	0.333	ug/L	0.333	1.00
98-82-8	Isopropylbenzene	U	0.333	ug/L	0.333	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	0.333	ug/L	0.333	1.00
96-18-4	1,2,3-Trichloropropane	U	0.333	ug/L	0.333	1.00
108-86-1	Bromobenzene	U	0.333	ug/L	0.333	1.00
103-65-1	n-Propylbenzene	U	0.333	ug/L	0.333	1.00
108-67-8	1,3,5-Trimethylbenzene	U	0.500	ug/L	0.500	2.00
95-49-8	2-Chlorotoluene	U	0.333	ug/L	0.333	1.00
106-43-4	4-Chlorotoluene	U	0.333	ug/L	0.333	1.00
98-06-6	tert-Butylbenzene	U	0.333	ug/L	0.333	1.00
95-63-6	1,2,4-Trimethylbenzene	U	0.333	ug/L	0.333	1.00
135-98-8	sec-Butylbenzene	U	0.333	ug/L	0.333	1.00
99-87-6	4-Isopropyltoluene	U	0.333	ug/L	0.333	1.00
541-73-1	1,3-Dichlorobenzene	U	0.333	ug/L	0.333	1.00
106-46-7	1,4-Dichlorobenzene	U	0.333	ug/L	0.333	1.00
104-51-8	n-Butylbenzene	U	0.333	ug/L	0.333	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	0.333	ug/L	0.333	1.00
87-68-3	Hexachlorobutadiene	U	0.333	ug/L	0.333	1.00
91-20-3	Naphthalene	U	0.333	ug/L	0.333	1.00
87-61-6	1,2,3-Trichlorobenzene	U	0.333	ug/L	0.333	1.00
107-02-8	Acrolein	UQ	1.67	ug/L	1.67	5.00
76-13-1	Trichlorotrifluoroethane	U	2.98	ug/L	2.98	5.00
107-05-1	Allyl chloride	U	1.67	ug/L	1.67	5.00
107-13-1	Acrylonitrile	U	1.67	ug/L	1.67	5.00
126-99-8	2-Chloro-1,3-butadiene	U	0.333	ug/L	0.333	1.00
107-12-0	Propionitrile	U	1.67	ug/L	1.67	5.00
126-98-7	Methacrylonitrile	U	1.67	ug/L	1.67	5.00
78-83-1	Isobutyl alcohol	U	16.7	ug/L	16.7	50.0
80-62-6	Methyl methacrylate	U	1.67	ug/L	1.67	5.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-182**	**Date Collected:**	**11/21/2023 11:20**	**Matrix:**	**W**
Lab Sample ID:	**646356005**	**Date Received:**	**11/22/2023 09:15**		
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-304530**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2532718**	**Inst:**	**VOA8.I**	**Dilution:**	**1**
Run Date:	**11/29/2023 18:51**	**Analyst:**	**KP2**	**Purge Vol:**	**5 mL**
Prep Date:	**11/29/2023 18:51**				
Data File:	**112923V8\8N316.D**	**Column:**	**Serial Number: 1**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
97-63-2	Ethyl methacrylate	U	1.67	ug/L	1.67	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	0.333	ug/L	0.333	1.00
120-82-1	1,2,4-Trichlorobenzene	U	0.333	ug/L	0.333	1.00
95-50-1	1,2-Dichlorobenzene	U	0.333	ug/L	0.333	1.00

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	49.2	50.0	ug/L	98	(76%-127%)
Toluene-d8	47.6	50.0	ug/L	95	(77%-121%)
Bromofluorobenzene	46.9	50.0	ug/L	94	(74%-123%)

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Concentration	Units	Fit	Qual
	No Tentatively Identified Compounds Found			ug/L		

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-182**	**Date Collected:**	**11/21/2023 11:35**	**Matrix:**	**W**
Lab Sample ID:	**646356006**	**Date Received:**	**11/22/2023 09:15**		
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-304531**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2532718**	**Inst:**	**VOA8.I**	**Dilution:**	**1**
Run Date:	**11/29/2023 19:17**	**Analyst:**	**KP2**	**Purge Vol:**	**5 mL**
Prep Date:	**11/29/2023 19:17**				
Data File:	**112923V8\8N317.D**	**Column:**	**Serial Number: 1**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	0.355	ug/L	0.355	1.00
74-87-3	Chloromethane	U	0.333	ug/L	0.333	1.00
75-01-4	Vinyl chloride	U	0.333	ug/L	0.333	1.00
74-83-9	Bromomethane	U	0.337	ug/L	0.337	1.00
75-00-3	Chloroethane	U	0.333	ug/L	0.333	1.00
75-69-4	Trichlorofluoromethane	U	0.333	ug/L	0.333	1.00
60-29-7	Ethyl ether	U	0.333	ug/L	0.333	1.00
67-64-1	Acetone		74.5	ug/L	1.74	5.00
75-35-4	1,1-Dichloroethylene	U	0.333	ug/L	0.333	1.00
74-88-4	Iodomethane	U	1.67	ug/L	1.67	5.00
75-05-8	Acetonitrile	U	8.33	ug/L	8.33	25.0
75-15-0	Carbon disulfide	U	1.67	ug/L	1.67	5.00
75-09-2	Methylene chloride	U	0.500	ug/L	0.500	5.00
1634-04-4	tert-Butyl methyl ether	U	0.333	ug/L	0.333	1.00
156-60-5	trans-1,2-Dichloroethylene	U	0.333	ug/L	0.333	1.00
108-05-4	Vinyl acetate	U	1.67	ug/L	1.67	5.00
75-34-3	1,1-Dichloroethane	U	0.333	ug/L	0.333	1.00
78-93-3	2-Butanone	U	1.67	ug/L	1.67	5.00
156-59-2	cis-1,2-Dichloroethylene	U	0.333	ug/L	0.333	1.00
594-20-7	2,2-Dichloropropane	U	0.333	ug/L	0.333	1.00
74-97-5	Bromochloromethane	U	0.333	ug/L	0.333	1.00
67-66-3	Chloroform		2.57	ug/L	0.333	1.00
71-55-6	1,1,1-Trichloroethane	U	0.333	ug/L	0.333	1.00
563-58-6	1,1-Dichloropropene	U	0.333	ug/L	0.333	1.00
56-23-5	Carbon tetrachloride	U	0.333	ug/L	0.333	1.00
107-06-2	1,2-Dichloroethane	U	0.333	ug/L	0.333	1.00
71-43-2	Benzene	U	0.333	ug/L	0.333	1.00
71-36-3	n-Butyl alcohol	U	21.1	ug/L	21.1	50.0
79-01-6	Trichloroethylene	U	0.333	ug/L	0.333	1.00
78-87-5	1,2-Dichloropropane	U	0.333	ug/L	0.333	1.00
74-95-3	Dibromomethane	U	0.333	ug/L	0.333	1.00
75-27-4	Bromodichloromethane	U	0.333	ug/L	0.333	1.00
10061-01-5	cis-1,3-Dichloropropylene	U	0.333	ug/L	0.333	1.00
108-10-1	4-Methyl-2-pentanone	U	1.67	ug/L	1.67	5.00
108-88-3	Toluene	U	0.333	ug/L	0.333	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	0.333	ug/L	0.333	1.00
79-00-5	1,1,2-Trichloroethane	U	0.333	ug/L	0.333	1.00
591-78-6	2-Hexanone	U	1.67	ug/L	1.67	5.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-182**	**Date Collected:**	**11/21/2023 11:35**	**Matrix:**	**W**
Lab Sample ID:	**646356006**	**Date Received:**	**11/22/2023 09:15**		
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-304531**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2532718**	**Inst:**	**VOA8.I**	**Dilution:**	**1**
Run Date:	**11/29/2023 19:17**	**Analyst:**	**KP2**	**Purge Vol:**	**5 mL**
Prep Date:	**11/29/2023 19:17**				
Data File:	**112923V8\8N317.D**	**Column:**	**Serial Number: 1**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
142-28-9	1,3-Dichloropropane	U	0.333	ug/L	0.333	1.00
127-18-4	Tetrachloroethylene	U	0.333	ug/L	0.333	1.00
124-48-1	Dibromochloromethane	U	0.333	ug/L	0.333	1.00
106-93-4	1,2-Dibromoethane	U	0.333	ug/L	0.333	1.00
108-90-7	Chlorobenzene	U	0.333	ug/L	0.333	1.00
100-41-4	Ethylbenzene	U	0.333	ug/L	0.333	1.00
179601-23-1	m,p-Xylenes	U	0.500	ug/L	0.500	2.00
95-47-6	o-Xylene	U	0.333	ug/L	0.333	1.00
100-42-5	Styrene	U	0.333	ug/L	0.333	1.00
75-25-2	Bromoform	U	0.333	ug/L	0.333	1.00
98-82-8	Isopropylbenzene	U	0.333	ug/L	0.333	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	0.333	ug/L	0.333	1.00
96-18-4	1,2,3-Trichloropropane	U	0.333	ug/L	0.333	1.00
108-86-1	Bromobenzene	U	0.333	ug/L	0.333	1.00
103-65-1	n-Propylbenzene	U	0.333	ug/L	0.333	1.00
108-67-8	1,3,5-Trimethylbenzene	U	0.500	ug/L	0.500	2.00
95-49-8	2-Chlorotoluene	U	0.333	ug/L	0.333	1.00
106-43-4	4-Chlorotoluene	U	0.333	ug/L	0.333	1.00
98-06-6	tert-Butylbenzene	U	0.333	ug/L	0.333	1.00
95-63-6	1,2,4-Trimethylbenzene	U	0.333	ug/L	0.333	1.00
135-98-8	sec-Butylbenzene	U	0.333	ug/L	0.333	1.00
99-87-6	4-Isopropyltoluene	U	0.333	ug/L	0.333	1.00
541-73-1	1,3-Dichlorobenzene	U	0.333	ug/L	0.333	1.00
106-46-7	1,4-Dichlorobenzene	U	0.333	ug/L	0.333	1.00
104-51-8	n-Butylbenzene	U	0.333	ug/L	0.333	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	0.333	ug/L	0.333	1.00
87-68-3	Hexachlorobutadiene	U	0.333	ug/L	0.333	1.00
91-20-3	Naphthalene	U	0.333	ug/L	0.333	1.00
87-61-6	1,2,3-Trichlorobenzene	U	0.333	ug/L	0.333	1.00
107-02-8	Acrolein	UQ	1.67	ug/L	1.67	5.00
76-13-1	Trichlorotrifluoroethane	U	2.98	ug/L	2.98	5.00
107-05-1	Allyl chloride	U	1.67	ug/L	1.67	5.00
107-13-1	Acrylonitrile	U	1.67	ug/L	1.67	5.00
126-99-8	2-Chloro-1,3-butadiene	U	0.333	ug/L	0.333	1.00
107-12-0	Propionitrile	U	1.67	ug/L	1.67	5.00
126-98-7	Methacrylonitrile	U	1.67	ug/L	1.67	5.00
78-83-1	Isobutyl alcohol	U	16.7	ug/L	16.7	50.0
80-62-6	Methyl methacrylate	U	1.67	ug/L	1.67	5.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-182**	**Date Collected:**	**11/21/2023 11:35**	**Matrix:**	**W**
Lab Sample ID:	**646356006**	**Date Received:**	**11/22/2023 09:15**		
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-304531**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2532718**	**Inst:**	**VOA8.I**	**Dilution:**	**1**
Run Date:	**11/29/2023 19:17**	**Analyst:**	**KP2**	**Purge Vol:**	**5 mL**
Prep Date:	**11/29/2023 19:17**				
Data File:	**112923V8\8N317.D**	**Column:**	**Serial Number: 1**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
97-63-2	Ethyl methacrylate	U	1.67	ug/L	1.67	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	0.333	ug/L	0.333	1.00
120-82-1	1,2,4-Trichlorobenzene	U	0.333	ug/L	0.333	1.00
95-50-1	1,2-Dichlorobenzene	U	0.333	ug/L	0.333	1.00

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	47.4	50.0	ug/L	95	(74%-123%)
Toluene-d8	48.5	50.0	ug/L	97	(77%-121%)
1,2-Dichloroethane-d4	50.5	50.0	ug/L	101	(76%-127%)

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Concentration	Units	Fit	Qual
	unknown	4.3	5.52	ug/L	0	J
	unknown	8.766	6.57	ug/L	83	J

Quality Control Summary

Volatile

Surrogate Recovery Report

SDG Number: 2024-182

Matrix Type: LIQUID

Sample ID	Client ID	DCED4 %REC	TOL %REC	BFB %REC
1205587954	LCS for batch 2532718	100	103	100
1205587955	LCS for batch 2532718	103	104	103
1205587956	MB for batch 2532718	101	100	93
646356005	RLUOB-23-304530	98	95	94
646356006	RLUOB-23-304531	101	97	95
1205587957	RLUOB-23-304530PS	99	101	97
1205587959	RLUOB-23-304530PSD	100	101	96
1205587958	RLUOB-23-304530PS	99	99	103
1205587960	RLUOB-23-304530PSD	105	103	106

Surrogate		Acceptance Limits
DCED4	= 1,2-Dichloroethane-d4	(76%-127%)
TOL	= Toluene-d8	(77%-121%)
BFB	= Bromofluorobenzene	(74%-123%)

* Recovery outside Acceptance Limits
# Column to be used to flag recovery values
D Sample Diluted

Volatile

Surrogate Recovery Report

SDG Number: 2024-182

Matrix Type: SOLID

Sample ID	Client ID	DCED4 %REC		TOL %REC		BFB %REC	
1205588319	LCS for batch 2533016	100		101		100	
1205588325	LCS for batch 2533016	99		100		103	
1205588320	MB for batch 2533016	100		101		101	
646356001	RLUOB-23-289597	106		101		99	
646356002	RLUOB-23-289598	106		102		97	
646356003	RLUOB-23-289599	107		112		100	
646356004	RLUOB-23-304523	96		107		106	
1205588321	WST50-24-301578PS	100	D	106	D	103	D
1205588322	WST50-24-301578PSD	97	D	105	D	100	D
1205588323	WST50-24-301578PS	97	D	103	D	102	D
1205588324	WST50-24-301578PSD	96	D	101	D	100	D

Surrogate		Acceptance Limits
DCED4	= 1,2-Dichloroethane-d4	(77%-127%)
TOL	= Toluene-d8	(81%-120%)
BFB	= Bromofluorobenzene	(74%-128%)

* Recovery outside Acceptance Limits

Column to be used to flag recovery values

D Sample Diluted

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-182
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 2532718
Matrix: WATER
Lab Sample ID: 1205587954
Instrument: VOA8.I
Analysis Date: 11/29/2023 10:24
Dilution: 1
Analyst: KP2
Purge Vol: 5 mL
Batch ID: 2532718

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L	Spike Conc. ug/L	Recovery %	Acceptance Limits
179601-23-1	LCS	m,p-Xylenes	100	0.0	101	101	70-123
75-05-8	LCS	Acetonitrile	1250	0.0	1450	116	56-135
67-64-1	LCS	Acetone	250	0.0	268	107	56-149
74-88-4	LCS	Iodomethane	250	0.0	257	103	69-128
75-15-0	LCS	Carbon disulfide	250	0.0	282	113	63-133
108-05-4	LCS	Vinyl acetate	250	0.0	298	119	65-133
78-93-3	LCS	2-Butanone	250	0.0	268	107	63-134
108-10-1	LCS	4-Methyl-2-pentanone	250	0.0	255	102	65-125
591-78-6	LCS	2-Hexanone	250	0.0	256	102	58-143
75-71-8	LCS	Dichlorodifluoromethane	50.0	0.0	58.3	117	58-151
74-87-3	LCS	Chloromethane	50.0	0.0	63.7	127	56-142
75-01-4	LCS	Vinyl chloride	50.0	0.0	56.4	113	63-144
74-83-9	LCS	Bromomethane	50.0	0.0	57.5	115	64-142
75-00-3	LCS	Chloroethane	50.0	0.0	57.7	115	66-140
75-69-4	LCS	Trichlorofluoromethane	50.0	0.0	58.9	118	63-136
60-29-7	LCS	Ethyl ether	50.0	0.0	52.8	106	64-123
75-35-4	LCS	1,1-Dichloroethylene	50.0	0.0	52.4	105	72-136
75-09-2	LCS	Methylene chloride	50.0	0.0	52.9	106	65-121
1634-04-4	LCS	tert-Butyl methyl ether	50.0	0.0	43.6	87	63-124
156-60-5	LCS	trans-1,2-Dichloroethylene	50.0	0.0	53.3	107	73-129
75-34-3	LCS	1,1-Dichloroethane	50.0	0.0	55.4	111	75-126
156-59-2	LCS	cis-1,2-Dichloroethylene	50.0	0.0	54.2	108	73-122

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-182
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 2532718
Matrix: WATER
Lab Sample ID: 1205587954
Instrument: VOA8.I
Analysis Date: 11/29/2023 10:24
Dilution: 1
Analyst: KP2
Purge Vol: 5 mL
Batch ID: 2532718

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L	Spike Conc. ug/L	Recovery %	Acceptance Limits
594-20-7	LCS	2,2-Dichloropropane	50.0	0.0	57.4	115	70-135
74-97-5	LCS	Bromochloromethane	50.0	0.0	50.2	100	68-125
67-66-3	LCS	Chloroform	50.0	0.0	50.3	101	74-122
71-55-6	LCS	1,1,1-Trichloroethane	50.0	0.0	49.6	99	70-130
563-58-6	LCS	1,1-Dichloropropene	50.0	0.0	52.6	105	68-120
56-23-5	LCS	Carbon tetrachloride	50.0	0.0	51.6	103	70-135
107-06-2	LCS	1,2-Dichloroethane	50.0	0.0	50.4	101	64-129
71-43-2	LCS	Benzene	50.0	0.0	52.3	105	74-128
79-01-6	LCS	Trichloroethylene	50.0	0.0	51.0	102	76-126
78-87-5	LCS	1,2-Dichloropropane	50.0	0.0	52.7	105	72-121
74-95-3	LCS	Dibromomethane	50.0	0.0	51.9	104	72-120
75-27-4	LCS	Bromodichloromethane	50.0	0.0	50.0	100	72-126
10061-01-5	LCS	cis-1,3-Dichloropropylene	50.0	0.0	49.9	100	73-125
108-88-3	LCS	Toluene	50.0	0.0	53.3	107	73-121
10061-02-6	LCS	trans-1,3-Dichloropropylene	50.0	0.0	53.0	106	70-126
79-00-5	LCS	1,1,2-Trichloroethane	50.0	0.0	51.3	103	70-120
142-28-9	LCS	1,3-Dichloropropane	50.0	0.0	53.0	106	69-121
127-18-4	LCS	Tetrachloroethylene	50.0	0.0	51.3	103	70-130
124-48-1	LCS	Dibromochloromethane	50.0	0.0	48.0	96	70-130
106-93-4	LCS	1,2-Dibromoethane	50.0	0.0	50.4	101	71-120
108-90-7	LCS	Chlorobenzene	50.0	0.0	52.0	104	74-120
100-41-4	LCS	Ethylbenzene	50.0	0.0	51.1	102	71-121

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-182
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 2532718
Matrix: WATER
Lab Sample ID: 1205587954
Instrument: VOA8.I
Analysis Date: 11/29/2023 10:24
Dilution: 1
Analyst: KP2
Purge Vol: 5 mL
Batch ID: 2532718

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L	Spike Conc. ug/L	Recovery %	Acceptance Limits
95-47-6	LCS	o-Xylene	50.0	0.0	51.4	103	73-121
100-42-5	LCS	Styrene	50.0	0.0	46.6	93	70-125
75-25-2	LCS	Bromoform	50.0	0.0	47.9	96	70-130
98-82-8	LCS	Isopropylbenzene	50.0	0.0	53.3	107	69-122
79-34-5	LCS	1,1,2,2-Tetrachloroethane	50.0	0.0	53.0	106	66-123
96-18-4	LCS	1,2,3-Trichloropropane	50.0	0.0	46.9	94	69-120
108-86-1	LCS	Bromobenzene	50.0	0.0	49.0	98	73-120
103-65-1	LCS	n-Propylbenzene	50.0	0.0	52.9	106	71-127
108-67-8	LCS	1,3,5-Trimethylbenzene	50.0	0.0	51.5	103	70-127
95-49-8	LCS	2-Chlorotoluene	50.0	0.0	53.2	106	72-123
106-43-4	LCS	4-Chlorotoluene	50.0	0.0	50.9	102	71-121
98-06-6	LCS	tert-Butylbenzene	50.0	0.0	51.7	103	71-126
95-63-6	LCS	1,2,4-Trimethylbenzene	50.0	0.0	50.9	102	70-121
135-98-8	LCS	sec-Butylbenzene	50.0	0.0	52.7	105	72-128
99-87-6	LCS	4-Isopropyltoluene	50.0	0.0	49.8	100	71-127
541-73-1	LCS	1,3-Dichlorobenzene	50.0	0.0	50.7	101	72-120
106-46-7	LCS	1,4-Dichlorobenzene	50.0	0.0	50.5	101	72-120
104-51-8	LCS	n-Butylbenzene	50.0	0.0	52.7	105	71-129
96-12-8	LCS	1,2-Dibromo-3-chloropropane	50.0	0.0	45.9	92	58-130
87-68-3	LCS	Hexachlorobutadiene	50.0	0.0	45.1	90	64-134
91-20-3	LCS	Naphthalene	50.0	0.0	50.2	100	68-126
87-61-6	LCS	1,2,3-Trichlorobenzene	50.0	0.0	49.8	100	69-127

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-182
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 2532718
Matrix: WATER
Lab Sample ID: 1205587954
Instrument: VOA8.I
Analysis Date: 11/29/2023 10:24
Dilution: 1
Analyst: KP2
Purge Vol: 5 mL
Batch ID: 2532718

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L	Spike Conc. ug/L	Recovery %	Acceptance Limits
120-82-1	LCS	1,2,4-Trichlorobenzene	50.0	0.0	49.3	99	68-126
630-20-6	LCS	1,1,1,2-Tetrachloroethane	50.0	0.0	51.6	103	73-122
95-50-1	LCS	1,2-Dichlorobenzene	50.0	0.0	50.4	101	72-120
71-36-3	LCS	n-Butyl alcohol	5000	0.0	4910	98	63-134

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-182
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 2532718
Matrix: WATER
Lab Sample ID: 1205587955
Instrument: VOA8.I
Analysis Date: 11/29/2023 11:15
Dilution: 1
Analyst: KP2
Purge Vol: 5 mL
Batch ID: 2532718

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L	Spike Conc. ug/L	Recovery %	Acceptance Limits
107-02-8	LCS	Acrolein	250	0.0	240	96	60-140
76-13-1	LCS	Trichlorotrifluoroethane	250	0.0	263	105	65-132
107-05-1	LCS	Allyl chloride	250	0.0	258	103	66-128
107-13-1	LCS	Acrylonitrile	250	0.0	244	97	68-127
107-12-0	LCS	Propionitrile	250	0.0	235	94	64-127
126-98-7	LCS	Methacrylonitrile	250	0.0	246	98	65-126
80-62-6	LCS	Methyl methacrylate	250	0.0	211	84	68-122
97-63-2	LCS	Ethyl methacrylate	250	0.0	223	89	66-125
78-83-1	LCS	Isobutyl alcohol	2500	0.0	2630	105	65-137
126-99-8	LCS	2-Chloro-1,3-butadiene	50.0	0.0	52.0	104	64-131

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-182 **Sample Type:** Post Spike

Client ID: RLUOB-23-304530PS **Matrix:** W

Lab Sample ID: 1205587957

Instrument: VOA8.I **Analysis Date:** 11/29/2023 19:43 **Dilution:** 1

Analyst: KP2

Purge Vol: 5 mL **Batch ID:** 2532718

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits
179601-23-1	PS	m,p-Xylenes	100	0.000	U	95.8	96	56-125
75-05-8	PS	Acetonitrile	1250	0.000	U	1500	120	49-140
74-88-4	PS	Iodomethane	250	0.000	U	257	103	61-130
75-15-0	PS	Carbon disulfide	250	0.000	U	277	111	55-131
108-05-4	PS	Vinyl acetate	250	0.000	U	259	103	55-137
78-93-3	PS	2-Butanone	250	0.000	U	286	114	47-134
108-10-1	PS	4-Methyl-2-pentanone	250	0.000	U	263	105	60-132
591-78-6	PS	2-Hexanone	250	0.000	U	278	111	55-140
67-64-1	PS	Acetone	250	67.7		347	112	50-139
75-71-8	PS	Dichlorodifluoromethane	50.0	0.000	U	43.5	87	37-162
74-87-3	PS	Chloromethane	50.0	0.000	U	53.5	107	42-152
75-01-4	PS	Vinyl chloride	50.0	0.000	U	44.9	90	49-153
74-83-9	PS	Bromomethane	50.0	0.000	U	45.5	91	55-149
75-00-3	PS	Chloroethane	50.0	0.000	U	47.3	95	56-143
75-69-4	PS	Trichlorofluoromethane	50.0	0.000	U	43.8	88	48-137
60-29-7	PS	Ethyl ether	50.0	0.000	U	46.3	93	58-125
75-35-4	PS	1,1-Dichloroethylene	50.0	0.000	U	51.2	102	57-137
75-09-2	PS	Methylene chloride	50.0	0.000	U	53.0	106	58-123
1634-04-4	PS	tert-Butyl methyl ether	50.0	0.000	U	42.4	85	58-128
156-60-5	PS	trans-1,2-Dichloroethylene	50.0	0.000	U	49.5	99	63-129
75-34-3	PS	1,1-Dichloroethane	50.0	0.000	U	51.2	102	67-128
156-59-2	PS	cis-1,2-Dichloroethylene	50.0	0.000	U	50.7	101	65-128

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-182 **Sample Type:** Post Spike

Client ID: RLUOB-23-304530PS **Matrix:** W

Lab Sample ID: 1205587957

Instrument: VOA8.I **Analysis Date:** 11/29/2023 19:43 **Dilution:** 1

Analyst: KP2

Purge Vol: 5 mL **Batch ID:** 2532718

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits
594-20-7	PS	2,2-Dichloropropane	50.0	0.000	U	44.1	88	53-132
74-97-5	PS	Bromochloromethane	50.0	0.000	U	49.4	99	63-128
71-55-6	PS	1,1,1-Trichloroethane	50.0	0.000	U	45.3	91	56-133
563-58-6	PS	1,1-Dichloropropene	50.0	0.000	U	47.7	95	62-128
56-23-5	PS	Carbon tetrachloride	50.0	0.000	U	46.3	93	58-141
107-06-2	PS	1,2-Dichloroethane	50.0	0.000	U	50.3	101	60-134
71-43-2	PS	Benzene	50.0	0.000	U	49.8	100	67-128
79-01-6	PS	Trichloroethylene	50.0	0.000	U	47.2	94	61-130
78-87-5	PS	1,2-Dichloropropane	50.0	0.000	U	52.5	105	67-125
74-95-3	PS	Dibromomethane	50.0	0.000	U	50.9	102	67-126
75-27-4	PS	Bromodichloromethane	50.0	0.000	U	49.5	99	64-130
10061-01-5	PS	cis-1,3-Dichloropropylene	50.0	0.000	U	50.3	101	63-129
108-88-3	PS	Toluene	50.0	0.000	U	49.7	99	63-121
10061-02-6	PS	trans-1,3-Dichloropropylene	50.0	0.000	U	51.3	103	65-130
79-00-5	PS	1,1,2-Trichloroethane	50.0	0.000	U	51.4	103	68-123
142-28-9	PS	1,3-Dichloropropane	50.0	0.000	U	54.8	110	65-125
127-18-4	PS	Tetrachloroethylene	50.0	0.000	U	46.9	94	56-126
124-48-1	PS	Dibromochloromethane	50.0	0.000	U	48.2	96	63-137
106-93-4	PS	1,2-Dibromoethane	50.0	0.000	U	51.8	104	65-124
108-90-7	PS	Chlorobenzene	50.0	0.000	U	49.5	99	63-121
100-41-4	PS	Ethylbenzene	50.0	0.000	U	48.7	97	58-123
95-47-6	PS	o-Xylene	50.0	0.000	U	48.3	97	60-125

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-182 **Sample Type:** Post Spike

Client ID: RLUOB-23-304530PS **Matrix:** W

Lab Sample ID: 1205587957

Instrument: VOA8.I **Analysis Date:** 11/29/2023 19:43 **Dilution:** 1

Analyst: KP2

Purge Vol: 5 mL **Batch ID:** 2532718

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits
100-42-5	PS	Styrene	50.0	0.000	U	45.1	90	58-129
75-25-2	PS	Bromoform	50.0	0.000	U	46.5	93	58-134
98-82-8	PS	Isopropylbenzene	50.0	0.000	U	46.9	94	53-128
79-34-5	PS	1,1,2,2-Tetrachloroethane	50.0	0.000	U	53.0	106	59-136
96-18-4	PS	1,2,3-Trichloropropane	50.0	0.000	U	49.1	98	67-126
108-86-1	PS	Bromobenzene	50.0	0.000	U	47.5	95	61-122
103-65-1	PS	n-Propylbenzene	50.0	0.000	U	47.9	96	54-129
108-67-8	PS	1,3,5-Trimethylbenzene	50.0	0.000	U	47.1	94	54-129
95-49-8	PS	2-Chlorotoluene	50.0	0.000	U	49.4	99	57-126
106-43-4	PS	4-Chlorotoluene	50.0	0.000	U	48.4	97	56-125
98-06-6	PS	tert-Butylbenzene	50.0	0.000	U	45.7	91	53-128
95-63-6	PS	1,2,4-Trimethylbenzene	50.0	0.000	U	46.8	94	54-123
135-98-8	PS	sec-Butylbenzene	50.0	0.000	U	46.7	93	54-130
99-87-6	PS	4-Isopropyltoluene	50.0	0.000	U	45.8	92	53-129
541-73-1	PS	1,3-Dichlorobenzene	50.0	0.000	U	48.6	97	57-124
106-46-7	PS	1,4-Dichlorobenzene	50.0	0.000	U	48.3	97	54-123
104-51-8	PS	n-Butylbenzene	50.0	0.000	U	47.5	95	49-136
96-12-8	PS	1,2-Dibromo-3-chloropropane	50.0	0.000	U	47.7	95	49-137
87-68-3	PS	Hexachlorobutadiene	50.0	0.000	U	42.1	84	44-138
91-20-3	PS	Naphthalene	50.0	0.000	U	47.6	95	58-131
87-61-6	PS	1,2,3-Trichlorobenzene	50.0	0.000	U	46.7	93	54-132
120-82-1	PS	1,2,4-Trichlorobenzene	50.0	0.000	U	46.1	92	51-129

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-182 **Sample Type:** Post Spike

Client ID: RLUOB-23-304530PS **Matrix:** W

Lab Sample ID: 1205587957

Instrument: VOA8.I **Analysis Date:** 11/29/2023 19:43 **Dilution:** 1

Analyst: KP2

Purge Vol: 5 mL **Batch ID:** 2532718

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits
630-20-6	PS	1,1,1,2-Tetrachloroethane	50.0	0.000	U	50.5	101	67-130
95-50-1	PS	1,2-Dichlorobenzene	50.0	0.000	U	48.3	97	59-125
67-66-3	PS	Chloroform	50.0	2.51		50.4	96	65-128
71-36-3	PS	n-Butyl alcohol	5000	0.000	U	5290	106	58-141

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-182 **Sample Type:** Post Spike Duplicate

Client ID: RLUOB-23-304530PSD **Matrix:** W

Lab Sample ID: 1205587959

Instrument: VOA8.I **Analysis Date:** 11/29/2023 20:09 **Dilution:** 1

Analyst: KP2

Purge Vol: 5 mL **Batch ID:** 2532718

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
179601-23-1	PSD	m,p-Xylenes	100	0.000	U	99.5	100	56-125	4	0-20
75-05-8	PSD	Acetonitrile	1250	0.000	U	1490	119	49-140	0	0-20
74-88-4	PSD	Iodomethane	250	0.000	U	265	106	61-130	3	0-20
75-15-0	PSD	Carbon disulfide	250	0.000	U	279	112	55-131	1	0-20
108-05-4	PSD	Vinyl acetate	250	0.000	U	254	101	55-137	2	0-20
78-93-3	PSD	2-Butanone	250	0.000	U	281	112	47-134	2	0-20
108-10-1	PSD	4-Methyl-2-pentanone	250	0.000	U	264	106	60-132	0	0-20
591-78-6	PSD	2-Hexanone	250	0.000	U	275	110	55-140	1	0-20
67-64-1	PSD	Acetone	250	67.7		343	110	50-139	1	0-20
75-71-8	PSD	Dichlorodifluoromethane	50.0	0.000	U	46.4	93	37-162	6	0-20
74-87-3	PSD	Chloromethane	50.0	0.000	U	54.0	108	42-152	1	0-20
75-01-4	PSD	Vinyl chloride	50.0	0.000	U	46.4	93	49-153	3	0-20
74-83-9	PSD	Bromomethane	50.0	0.000	U	46.9	94	55-149	3	0-20
75-00-3	PSD	Chloroethane	50.0	0.000	U	46.3	93	56-143	2	0-20
75-69-4	PSD	Trichlorofluoromethane	50.0	0.000	U	45.5	91	48-137	4	0-20
60-29-7	PSD	Ethyl ether	50.0	0.000	U	45.9	92	58-125	1	0-20
75-35-4	PSD	1,1-Dichloroethylene	50.0	0.000	U	51.9	104	57-137	1	0-20
75-09-2	PSD	Methylene chloride	50.0	0.000	U	52.7	105	58-123	1	0-20
1634-04-4	PSD	tert-Butyl methyl ether	50.0	0.000	U	45.4	91	58-128	7	0-20
156-60-5	PSD	trans-1,2-Dichloroethylene	50.0	0.000	U	52.9	106	63-129	7	0-20
75-34-3	PSD	1,1-Dichloroethane	50.0	0.000	U	53.4	107	67-128	4	0-20
156-59-2	PSD	cis-1,2-Dichloroethylene	50.0	0.000	U	52.7	105	65-128	4	0-20

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-182 **Sample Type:** Post Spike Duplicate

Client ID: RLUOB-23-304530PSD **Matrix:** W

Lab Sample ID: 1205587959

Instrument: VOA8.I **Analysis Date:** 11/29/2023 20:09 **Dilution:** 1

Analyst: KP2

Purge Vol: 5 mL **Batch ID:** 2532718

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
594-20-7	PSD	2,2-Dichloropropane	50.0	0.000	U	48.9	98	53-132	10	0-20
74-97-5	PSD	Bromochloromethane	50.0	0.000	U	50.0	100	63-128	1	0-20
71-55-6	PSD	1,1,1-Trichloroethane	50.0	0.000	U	47.9	96	56-133	5	0-20
563-58-6	PSD	1,1-Dichloropropene	50.0	0.000	U	50.4	101	62-128	6	0-20
56-23-5	PSD	Carbon tetrachloride	50.0	0.000	U	48.8	98	58-141	5	0-20
107-06-2	PSD	1,2-Dichloroethane	50.0	0.000	U	52.8	106	60-134	5	0-20
71-43-2	PSD	Benzene	50.0	0.000	U	51.8	104	67-128	4	0-20
79-01-6	PSD	Trichloroethylene	50.0	0.000	U	49.1	98	61-130	4	0-20
78-87-5	PSD	1,2-Dichloropropane	50.0	0.000	U	53.9	108	67-125	3	0-20
74-95-3	PSD	Dibromomethane	50.0	0.000	U	53.9	108	67-126	6	0-20
75-27-4	PSD	Bromodichloromethane	50.0	0.000	U	51.0	102	64-130	3	0-20
10061-01-5	PSD	cis-1,3-Dichloropropylene	50.0	0.000	U	51.6	103	63-129	3	0-20
108-88-3	PSD	Toluene	50.0	0.000	U	52.5	105	63-121	5	0-20
10061-02-6	PSD	trans-1,3-Dichloropropylene	50.0	0.000	U	54.2	108	65-130	5	0-20
79-00-5	PSD	1,1,2-Trichloroethane	50.0	0.000	U	53.8	108	68-123	5	0-20
142-28-9	PSD	1,3-Dichloropropane	50.0	0.000	U	55.4	111	65-125	1	0-20
127-18-4	PSD	Tetrachloroethylene	50.0	0.000	U	49.6	99	56-126	6	0-20
124-48-1	PSD	Dibromochloromethane	50.0	0.000	U	51.8	104	63-137	7	0-20
106-93-4	PSD	1,2-Dibromoethane	50.0	0.000	U	52.6	105	65-124	1	0-20
108-90-7	PSD	Chlorobenzene	50.0	0.000	U	52.1	104	63-121	5	0-20
100-41-4	PSD	Ethylbenzene	50.0	0.000	U	51.2	102	58-123	5	0-20
95-47-6	PSD	o-Xylene	50.0	0.000	U	49.7	99	60-125	3	0-20

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-182 **Sample Type:** Post Spike Duplicate

Client ID: RLUOB-23-304530PSD **Matrix:** W

Lab Sample ID: 1205587959

Instrument: VOA8.I **Analysis Date:** 11/29/2023 20:09 **Dilution:** 1

Analyst: KP2

Purge Vol: 5 mL **Batch ID:** 2532718

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
100-42-5	PSD	Styrene	50.0	0.000	U	46.4	93	58-129	3	0-20
75-25-2	PSD	Bromoform	50.0	0.000	U	48.9	98	58-134	5	0-20
98-82-8	PSD	Isopropylbenzene	50.0	0.000	U	48.7	97	53-128	4	0-20
79-34-5	PSD	1,1,2,2-Tetrachloroethane	50.0	0.000	U	53.8	108	59-136	1	0-20
96-18-4	PSD	1,2,3-Trichloropropane	50.0	0.000	U	51.9	104	67-126	5	0-20
108-86-1	PSD	Bromobenzene	50.0	0.000	U	48.8	98	61-122	3	0-20
103-65-1	PSD	n-Propylbenzene	50.0	0.000	U	50.9	102	54-129	6	0-20
108-67-8	PSD	1,3,5-Trimethylbenzene	50.0	0.000	U	48.7	97	54-129	3	0-20
95-49-8	PSD	2-Chlorotoluene	50.0	0.000	U	50.7	101	57-126	3	0-20
106-43-4	PSD	4-Chlorotoluene	50.0	0.000	U	50.5	101	56-125	4	0-20
98-06-6	PSD	tert-Butylbenzene	50.0	0.000	U	48.4	97	53-128	6	0-20
95-63-6	PSD	1,2,4-Trimethylbenzene	50.0	0.000	U	48.1	96	54-123	3	0-20
135-98-8	PSD	sec-Butylbenzene	50.0	0.000	U	48.8	98	54-130	4	0-20
99-87-6	PSD	4-Isopropyltoluene	50.0	0.000	U	45.9	92	53-129	0	0-20
541-73-1	PSD	1,3-Dichlorobenzene	50.0	0.000	U	50.6	101	57-124	4	0-20
106-46-7	PSD	1,4-Dichlorobenzene	50.0	0.000	U	49.8	100	54-123	3	0-20
104-51-8	PSD	n-Butylbenzene	50.0	0.000	U	49.2	98	49-136	4	0-20
96-12-8	PSD	1,2-Dibromo-3-chloropropane	50.0	0.000	U	46.4	93	49-137	3	0-20
87-68-3	PSD	Hexachlorobutadiene	50.0	0.000	U	43.7	87	44-138	4	0-20
91-20-3	PSD	Naphthalene	50.0	0.000	U	50.9	102	58-131	7	0-20
87-61-6	PSD	1,2,3-Trichlorobenzene	50.0	0.000	U	48.0	96	54-132	3	0-20
120-82-1	PSD	1,2,4-Trichlorobenzene	50.0	0.000	U	47.3	95	51-129	2	0-20

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-182 **Sample Type:** Post Spike Duplicate

Client ID: RLUOB-23-304530PSD **Matrix:** W

Lab Sample ID: 1205587959

Instrument: VOA8.I **Analysis Date:** 11/29/2023 20:09 **Dilution:** 1

Analyst: KP2

Purge Vol: 5 mL **Batch ID:** 2532718

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
630-20-6	PSD	1,1,1,2-Tetrachloroethane	50.0	0.000	U	52.4	105	67-130	4	0-20
95-50-1	PSD	1,2-Dichlorobenzene	50.0	0.000	U	50.1	100	59-125	4	0-20
67-66-3	PSD	Chloroform	50.0	2.51		52.8	101	65-128	5	0-20
71-36-3	PSD	n-Butyl alcohol	5000	0.000	U	5220	104	58-141	1	0-20

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-182
Sample Type: Post Spike
Client ID: RLUOB-23-304530PS
Matrix: W
Lab Sample ID: 1205587958
Instrument: VOA8.I
Analysis Date: 11/29/2023 20:35
Dilution: 1
Analyst: KP2
Purge Vol: 5 mL
Batch ID: 2532718

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits
76-13-1	PS	Trichlorotrifluoroethane	250	0.000	U	238	95	51-136
107-05-1	PS	Allyl chloride	250	0.000	U	250	100	58-136
107-13-1	PS	Acrylonitrile	250	0.000	U	240	96	62-133
107-12-0	PS	Propionitrile	250	0.000	U	233	93	61-134
126-98-7	PS	Methacrylonitrile	250	0.000	U	253	101	61-135
80-62-6	PS	Methyl methacrylate	250	0.000	U	229	92	61-136
97-63-2	PS	Ethyl methacrylate	250	0.000	U	226	90	56-133
107-02-8	PS	Acrolein	250	0.000	UQ	237	95	37-143
78-83-1	PS	Isobutyl alcohol	2500	0.000	U	2560	102	58-144
126-99-8	PS	2-Chloro-1,3-butadiene	50.0	0.000	U	48.9	98	56-137

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-182
Sample Type: Post Spike Duplicate
Client ID: RLUOB-23-304530PSD
Matrix: W
Lab Sample ID: 1205587960
Instrument: VOA8.I
Analysis Date: 11/29/2023 21:01
Dilution: 1
Analyst: KP2
Purge Vol: 5 mL
Batch ID: 2532718

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
76-13-1	PSD	Trichlorotrifluoroethane	250	0.000	U	235	94	51-136	1	0-20
107-05-1	PSD	Allyl chloride	250	0.000	U	254	101	58-136	1	0-20
107-13-1	PSD	Acrylonitrile	250	0.000	U	239	96	62-133	0	0-20
107-12-0	PSD	Propionitrile	250	0.000	U	232	93	61-134	0	0-20
126-98-7	PSD	Methacrylonitrile	250	0.000	U	249	100	61-135	2	0-20
80-62-6	PSD	Methyl methacrylate	250	0.000	U	231	93	61-136	1	0-20
97-63-2	PSD	Ethyl methacrylate	250	0.000	U	229	92	56-133	2	0-20
107-02-8	PSD	Acrolein	250	0.000	UQ	231	92	37-143	3	0-20
78-83-1	PSD	Isobutyl alcohol	2500	0.000	U	2530	101	58-144	1	0-20
126-99-8	PSD	2-Chloro-1,3-butadiene	50.0	0.000	U	50.0	100	56-137	2	0-20

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-182
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 2533016
Matrix: SOLID
Lab Sample ID: 1205588319
Instrument: VOAA.I
Analysis Date: 11/30/2023 08:32
Dilution: 1
Analyst: JEB
Prep Batch ID: 2533015
Purge Vol: 5 mL
Batch ID: 2533016

CAS No.		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
179601-23-1	LCS	m,p-Xylenes	100	0.0	91.8	92	68-122
1330-20-7	LCS	Xylenes (total)	150	0.0	138	92	70-121
67-64-1	LCS	Acetone	250	0.0	247	99	62-136
74-88-4	LCS	Iodomethane	250	0.0	215	86	67-124
75-15-0	LCS	Carbon disulfide	250	0.0	212	85	64-135
78-93-3	LCS	2-Butanone	250	0.0	242	97	64-131
108-10-1	LCS	4-Methyl-2-pentanone	250	0.0	261	105	64-126
591-78-6	LCS	2-Hexanone	250	0.0	258	103	60-143
75-71-8	LCS	Dichlorodifluoromethane	50.0	0.0	47.0	94	53-153
74-87-3	LCS	Chloromethane	50.0	0.0	47.6	95	56-138
75-01-4	LCS	Vinyl chloride	50.0	0.0	49.8	100	61-138
74-83-9	LCS	Bromomethane	50.0	0.0	44.3	89	63-140
75-00-3	LCS	Chloroethane	50.0	0.0	43.3	87	70-132
75-69-4	LCS	Trichlorofluoromethane	50.0	0.0	47.2	94	64-133
75-35-4	LCS	1,1-Dichloroethylene	50.0	0.0	43.4	87	70-132
75-09-2	LCS	Methylene chloride	50.0	0.0	45.1	90	65-118
156-60-5	LCS	trans-1,2-Dichloroethylene	50.0	0.0	44.3	89	71-125
75-34-3	LCS	1,1-Dichloroethane	50.0	0.0	45.8	92	74-124
156-59-2	LCS	cis-1,2-Dichloroethylene	50.0	0.0	45.3	91	71-122
594-20-7	LCS	2,2-Dichloropropane	50.0	0.0	48.0	96	67-133
74-97-5	LCS	Bromochloromethane	50.0	0.0	44.1	88	68-125
67-66-3	LCS	Chloroform	50.0	0.0	45.7	91	72-122

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-182
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 2533016
Matrix: SOLID
Lab Sample ID: 1205588319
Instrument: VOAA.I
Analysis Date: 11/30/2023 08:32
Dilution: 1
Analyst: JEB
Prep Batch ID: 2533015
Purge Vol: 5 mL
Batch ID: 2533016

CAS No.		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
71-55-6	LCS	1,1,1-Trichloroethane	50.0	0.0	44.2	88	67-132
563-58-6	LCS	1,1-Dichloropropene	50.0	0.0	43.1	86	68-123
56-23-5	LCS	Carbon tetrachloride	50.0	0.0	44.1	88	66-134
107-06-2	LCS	1,2-Dichloroethane	50.0	0.0	46.9	94	62-128
71-43-2	LCS	Benzene	50.0	0.0	43.9	88	73-126
79-01-6	LCS	Trichloroethylene	50.0	0.0	43.1	86	72-123
78-87-5	LCS	1,2-Dichloropropane	50.0	0.0	44.6	89	72-120
74-95-3	LCS	Dibromomethane	50.0	0.0	47.4	95	73-119
75-27-4	LCS	Bromodichloromethane	50.0	0.0	46.1	92	71-126
10061-01-5	LCS	cis-1,3-Dichloropropylene	50.0	0.0	45.2	90	70-124
108-88-3	LCS	Toluene	50.0	0.0	45.5	91	70-120
10061-02-6	LCS	trans-1,3-Dichloropropylene	50.0	0.0	48.5	97	69-120
79-00-5	LCS	1,1,2-Trichloroethane	50.0	0.0	47.8	96	70-115
142-28-9	LCS	1,3-Dichloropropane	50.0	0.0	49.1	98	69-119
127-18-4	LCS	Tetrachloroethylene	50.0	0.0	43.3	87	68-126
124-48-1	LCS	Dibromochloromethane	50.0	0.0	46.4	93	69-128
106-93-4	LCS	1,2-Dibromoethane	50.0	0.0	48.2	96	73-119
108-90-7	LCS	Chlorobenzene	50.0	0.0	45.4	91	74-116
100-41-4	LCS	Ethylbenzene	50.0	0.0	46.3	93	67-120
95-47-6	LCS	o-Xylene	50.0	0.0	46.3	93	71-120
100-42-5	LCS	Styrene	50.0	0.0	44.9	90	70-122
75-25-2	LCS	Bromoform	50.0	0.0	47.1	94	62-132

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-182
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 2533016
Matrix: SOLID
Lab Sample ID: 1205588319
Instrument: VOAA.I
Analysis Date: 11/30/2023 08:32
Dilution: 1
Analyst: JEB
Prep Batch ID: 2533015
Purge Vol: 5 mL
Batch ID: 2533016

CAS No.		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
98-82-8	LCS	Isopropylbenzene	50.0	0.0	48.4	97	67-121
79-34-5	LCS	1,1,2,2-Tetrachloroethane	50.0	0.0	50.1	100	66-120
96-18-4	LCS	1,2,3-Trichloropropane	50.0	0.0	51.2	102	69-119
108-86-1	LCS	Bromobenzene	50.0	0.0	44.9	90	70-117
103-65-1	LCS	n-Propylbenzene	50.0	0.0	49.9	100	69-125
108-67-8	LCS	1,3,5-Trimethylbenzene	50.0	0.0	47.4	95	67-125
95-49-8	LCS	2-Chlorotoluene	50.0	0.0	47.2	94	72-120
106-43-4	LCS	4-Chlorotoluene	50.0	0.0	48.7	97	70-122
98-06-6	LCS	tert-Butylbenzene	50.0	0.0	44.5	89	68-126
95-63-6	LCS	1,2,4-Trimethylbenzene	50.0	0.0	47.3	95	67-120
135-98-8	LCS	sec-Butylbenzene	50.0	0.0	47.4	95	69-126
99-87-6	LCS	4-Isopropyltoluene	50.0	0.0	47.0	94	67-125
541-73-1	LCS	1,3-Dichlorobenzene	50.0	0.0	46.6	93	72-119
106-46-7	LCS	1,4-Dichlorobenzene	50.0	0.0	46.0	92	73-116
104-51-8	LCS	n-Butylbenzene	50.0	0.0	47.5	95	68-127
96-12-8	LCS	1,2-Dibromo-3-chloropropane	50.0	0.0	42.2	84	57-133
630-20-6	LCS	1,1,1,2-Tetrachloroethane	50.0	0.0	45.0	90	71-123
95-50-1	LCS	1,2-Dichlorobenzene	50.0	0.0	44.8	90	72-118

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-182
Sample Type: Post Spike
Client ID: WST50-24-301578PS
Matrix: SO
Lab Sample ID: 1205588321
Instrument: VOAA.I
Analysis Date: 11/30/2023 13:47
Dilution: 50
Analyst: JEB
Prep Batch ID: 2533015
Purge Vol: 5 mL
Batch ID: 2533016

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits
179601-23-1	PS	m,p-Xylenes	100	0.900	J	97.1	96	43-125
1330-20-7	PS	Xylenes (total)	150			147	98	45-128
67-64-1	PS	Acetone	250	0.000	U	248	99	37-145
74-88-4	PS	Iodomethane	250	0.000	U	236	94	44-131
75-15-0	PS	Carbon disulfide	250	0.000	U	249	100	48-136
78-93-3	PS	2-Butanone	250	0.000	U	242	97	42-135
108-10-1	PS	4-Methyl-2-pentanone	250	0.000	U	255	102	51-131
591-78-6	PS	2-Hexanone	250	0.000	U	240	96	34-142
108-88-3	PS	Toluene	50.0	0.840	J	49.9	98	52-124
95-47-6	PS	o-Xylene	50.0	0.590	J	49.9	99	46-126
108-67-8	PS	1,3,5-Trimethylbenzene	50.0	0.390	J	52.8	105	40-133
95-63-6	PS	1,2,4-Trimethylbenzene	50.0	0.660	J	52.3	103	39-128
75-71-8	PS	Dichlorodifluoromethane	50.0	0.000	U	53.9	108	39-162
74-87-3	PS	Chloromethane	50.0	0.000	U	56.4	113	41-150
75-01-4	PS	Vinyl chloride	50.0	0.000	U	58.5	117	46-150
74-83-9	PS	Bromomethane	50.0	0.000	U	7.69	15 *	37-166
75-00-3	PS	Chloroethane	50.0	0.000	U	42.8	86	51-133
75-69-4	PS	Trichlorofluoromethane	50.0	0.000	U	55.7	111	47-134
75-35-4	PS	1,1-Dichloroethylene	50.0	0.000	U	47.8	96	50-139
75-09-2	PS	Methylene chloride	50.0	0.000	U	47.9	96	54-122
156-60-5	PS	trans-1,2-Dichloroethylene	50.0	0.000	U	48.4	97	52-130
75-34-3	PS	1,1-Dichloroethane	50.0	0.000	U	48.9	98	59-127

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-182
Sample Type: Post Spike
Client ID: WST50-24-301578PS
Matrix: SO
Lab Sample ID: 1205588321
Instrument: VOAA.I
Analysis Date: 11/30/2023 13:47
Dilution: 50
Analyst: JEB
Prep Batch ID: 2533015
Purge Vol: 5 mL
Batch ID: 2533016

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits
156-59-2	PS	cis-1,2-Dichloroethylene	50.0	0.000	U	47.4	95	54-123
594-20-7	PS	2,2-Dichloropropane	50.0	0.000	U	47.5	95	49-133
74-97-5	PS	Bromochloromethane	50.0	0.000	U	45.4	91	54-125
67-66-3	PS	Chloroform	50.0	0.000	U	47.6	95	58-125
71-55-6	PS	1,1,1-Trichloroethane	50.0	0.000	U	46.3	93	54-136
563-58-6	PS	1,1-Dichloropropene	50.0	0.000	U	46.8	94	48-124
56-23-5	PS	Carbon tetrachloride	50.0	0.000	U	45.0	90	46-136
107-06-2	PS	1,2-Dichloroethane	50.0	0.000	U	47.6	95	54-128
71-43-2	PS	Benzene	50.0	0.000	U	46.4	93	57-131
79-01-6	PS	Trichloroethylene	50.0	0.000	U	45.5	91	48-134
78-87-5	PS	1,2-Dichloropropane	50.0	0.000	U	45.1	90	55-122
74-95-3	PS	Dibromomethane	50.0	0.000	U	46.2	92	57-122
75-27-4	PS	Bromodichloromethane	50.0	0.000	U	44.8	90	52-128
10061-01-5	PS	cis-1,3-Dichloropropylene	50.0	0.000	U	45.4	91	46-125
10061-02-6	PS	trans-1,3-Dichloropropylene	50.0	0.000	U	49.5	99	45-131
79-00-5	PS	1,1,2-Trichloroethane	50.0	0.000	U	48.6	97	55-127
142-28-9	PS	1,3-Dichloropropane	50.0	0.000	U	50.1	100	44-123
127-18-4	PS	Tetrachloroethylene	50.0	0.000	U	47.1	94	43-131
124-48-1	PS	Dibromochloromethane	50.0	0.000	U	44.2	88	51-128
106-93-4	PS	1,2-Dibromoethane	50.0	0.000	U	48.6	97	53-126
108-90-7	PS	Chlorobenzene	50.0	0.000	U	48.2	96	47-124
100-41-4	PS	Ethylbenzene	50.0	0.000	U	49.2	98	44-124

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-182
Sample Type: Post Spike
Client ID: WST50-24-301578PS
Matrix: SO
Lab Sample ID: 1205588321
Instrument: VOAA.I
Analysis Date: 11/30/2023 13:47
Dilution: 50
Analyst: JEB
Prep Batch ID: 2533015
Purge Vol: 5 mL
Batch ID: 2533016

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits
100-42-5	PS	Styrene	50.0	0.000	U	46.0	92	40-127
75-25-2	PS	Bromoform	50.0	0.000	U	43.5	87	48-132
98-82-8	PS	Isopropylbenzene	50.0	0.000	U	53.6	107	42-139
79-34-5	PS	1,1,2,2-Tetrachloroethane	50.0	0.000	U	51.1	102	48-128
96-18-4	PS	1,2,3-Trichloropropane	50.0	0.000	U	51.8	104	56-130
108-86-1	PS	Bromobenzene	50.0	0.000	U	47.2	94	46-125
103-65-1	PS	n-Propylbenzene	50.0	0.000	U	54.0	108	40-132
95-49-8	PS	2-Chlorotoluene	50.0	0.000	U	51.1	102	39-129
106-43-4	PS	4-Chlorotoluene	50.0	0.000	U	51.8	104	38-129
98-06-6	PS	tert-Butylbenzene	50.0	0.000	U	50.4	101	39-137
135-98-8	PS	sec-Butylbenzene	50.0	0.000	U	53.1	106	38-134
99-87-6	PS	4-Isopropyltoluene	50.0	0.000	U	52.2	104	31-136
541-73-1	PS	1,3-Dichlorobenzene	50.0	0.000	U	49.2	98	39-127
106-46-7	PS	1,4-Dichlorobenzene	50.0	0.000	U	49.0	98	37-123
104-51-8	PS	n-Butylbenzene	50.0	0.000	U	53.0	106	32-134
96-12-8	PS	1,2-Dibromo-3-chloropropane	50.0	0.000	U	44.6	89	38-138
630-20-6	PS	1,1,1,2-Tetrachloroethane	50.0	0.000	U	46.6	93	50-126
95-50-1	PS	1,2-Dichlorobenzene	50.0	0.000	U	48.4	97	37-126

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-182
Sample Type: Post Spike Duplicate
Client ID: WST50-24-301578PSD
Matrix: SO
Lab Sample ID: 1205588322
Instrument: VOAA.I
Analysis Date: 11/30/2023 14:11
Dilution: 50
Analyst: JEB
Prep Batch ID: 2533015
Purge Vol: 5 mL
Batch ID: 2533016

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
179601-23-1	PSD	m,p-Xylenes	100	0.900	J	107	106	43-125	10	0-20
1330-20-7	PSD	Xylenes (total)	150			162	108	45-128	10	0-20
67-64-1	PSD	Acetone	250	0.000	U	267	107	37-145	7	0-20
74-88-4	PSD	Iodomethane	250	0.000	U	262	105	44-131	11	0-20
75-15-0	PSD	Carbon disulfide	250	0.000	U	277	111	48-136	11	0-20
78-93-3	PSD	2-Butanone	250	0.000	U	258	103	42-135	6	0-20
108-10-1	PSD	4-Methyl-2-pentanone	250	0.000	U	277	111	51-131	9	0-20
591-78-6	PSD	2-Hexanone	250	0.000	U	257	103	34-142	7	0-20
108-88-3	PSD	Toluene	50.0	0.840	J	54.7	108	52-124	9	0-20
95-47-6	PSD	o-Xylene	50.0	0.590	J	54.7	108	46-126	9	0-20
108-67-8	PSD	1,3,5-Trimethylbenzene	50.0	0.390	J	57.0	113	40-133	8	0-20
95-63-6	PSD	1,2,4-Trimethylbenzene	50.0	0.660	J	56.3	111	39-128	7	0-20
75-71-8	PSD	Dichlorodifluoromethane	50.0	0.000	U	58.6	117	39-162	8	0-20
74-87-3	PSD	Chloromethane	50.0	0.000	U	58.8	118	41-150	4	0-20
75-01-4	PSD	Vinyl chloride	50.0	0.000	U	62.5	125	46-150	7	0-20
74-83-9	PSD	Bromomethane	50.0	0.000	U	8.66	17 *	37-166	12	0-20
75-00-3	PSD	Chloroethane	50.0	0.000	U	49.2	98	51-133	14	0-20
75-69-4	PSD	Trichlorofluoromethane	50.0	0.000	U	59.0	118	47-134	6	0-20
75-35-4	PSD	1,1-Dichloroethylene	50.0	0.000	U	53.3	107	50-139	11	0-20
75-09-2	PSD	Methylene chloride	50.0	0.000	U	52.1	104	54-122	8	0-20
156-60-5	PSD	trans-1,2-Dichloroethylene	50.0	0.000	U	53.2	106	52-130	9	0-20
75-34-3	PSD	1,1-Dichloroethane	50.0	0.000	U	53.7	107	59-127	9	0-20

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-182
Sample Type: Post Spike Duplicate
Client ID: WST50-24-301578PSD
Matrix: SO
Lab Sample ID: 1205588322
Instrument: VOAA.I
Analysis Date: 11/30/2023 14:11
Dilution: 50
Analyst: JEB
Prep Batch ID: 2533015
Purge Vol: 5 mL
Batch ID: 2533016

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
156-59-2	PSD	cis-1,2-Dichloroethylene	50.0	0.000	U	51.7	103	54-123	9	0-20
594-20-7	PSD	2,2-Dichloropropane	50.0	0.000	U	49.9	100	49-133	5	0-20
74-97-5	PSD	Bromochloromethane	50.0	0.000	U	50.0	100	54-125	10	0-20
67-66-3	PSD	Chloroform	50.0	0.000	U	52.0	104	58-125	9	0-20
71-55-6	PSD	1,1,1-Trichloroethane	50.0	0.000	U	51.6	103	54-136	11	0-20
563-58-6	PSD	1,1-Dichloropropene	50.0	0.000	U	51.6	103	48-124	10	0-20
56-23-5	PSD	Carbon tetrachloride	50.0	0.000	U	51.1	102	46-136	13	0-20
107-06-2	PSD	1,2-Dichloroethane	50.0	0.000	U	51.3	103	54-128	7	0-20
71-43-2	PSD	Benzene	50.0	0.000	U	51.2	102	57-131	10	0-20
79-01-6	PSD	Trichloroethylene	50.0	0.000	U	50.0	100	48-134	10	0-20
78-87-5	PSD	1,2-Dichloropropane	50.0	0.000	U	49.6	99	55-122	10	0-20
74-95-3	PSD	Dibromomethane	50.0	0.000	U	51.0	102	57-122	10	0-20
75-27-4	PSD	Bromodichloromethane	50.0	0.000	U	49.5	99	52-128	10	0-20
10061-01-5	PSD	cis-1,3-Dichloropropylene	50.0	0.000	U	49.4	99	46-125	8	0-20
10061-02-6	PSD	trans-1,3-Dichloropropylene	50.0	0.000	U	53.8	108	45-131	8	0-20
79-00-5	PSD	1,1,2-Trichloroethane	50.0	0.000	U	52.4	105	55-127	7	0-20
142-28-9	PSD	1,3-Dichloropropane	50.0	0.000	U	54.2	108	44-123	8	0-20
127-18-4	PSD	Tetrachloroethylene	50.0	0.000	U	52.2	104	43-131	10	0-20
124-48-1	PSD	Dibromochloromethane	50.0	0.000	U	49.0	98	51-128	10	0-20
106-93-4	PSD	1,2-Dibromoethane	50.0	0.000	U	52.8	106	53-126	8	0-20
108-90-7	PSD	Chlorobenzene	50.0	0.000	U	52.5	105	47-124	9	0-20
100-41-4	PSD	Ethylbenzene	50.0	0.000	U	53.6	107	44-124	9	0-20

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-182
Sample Type: Post Spike Duplicate
Client ID: WST50-24-301578PSD
Matrix: SO
Lab Sample ID: 1205588322
Instrument: VOAA.I
Analysis Date: 11/30/2023 14:11
Dilution: 50
Analyst: JEB
Prep Batch ID: 2533015
Purge Vol: 5 mL
Batch ID: 2533016

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
100-42-5	PSD	Styrene	50.0	0.000	U	50.4	101	40-127	9	0-20
75-25-2	PSD	Bromoform	50.0	0.000	U	47.8	96	48-132	9	0-20
98-82-8	PSD	Isopropylbenzene	50.0	0.000	U	57.6	115	42-139	7	0-20
79-34-5	PSD	1,1,2,2-Tetrachloroethane	50.0	0.000	U	54.7	109	48-128	7	0-20
96-18-4	PSD	1,2,3-Trichloropropane	50.0	0.000	U	54.6	109	56-130	5	0-20
108-86-1	PSD	Bromobenzene	50.0	0.000	U	50.6	101	46-125	7	0-20
103-65-1	PSD	n-Propylbenzene	50.0	0.000	U	57.8	116	40-132	7	0-20
95-49-8	PSD	2-Chlorotoluene	50.0	0.000	U	55.0	110	39-129	7	0-20
106-43-4	PSD	4-Chlorotoluene	50.0	0.000	U	55.8	112	38-129	8	0-20
98-06-6	PSD	tert-Butylbenzene	50.0	0.000	U	55.3	111	39-137	9	0-20
135-98-8	PSD	sec-Butylbenzene	50.0	0.000	U	58.4	117	38-134	10	0-20
99-87-6	PSD	4-Isopropyltoluene	50.0	0.000	U	57.7	115	31-136	10	0-20
541-73-1	PSD	1,3-Dichlorobenzene	50.0	0.000	U	53.7	107	39-127	9	0-20
106-46-7	PSD	1,4-Dichlorobenzene	50.0	0.000	U	53.0	106	37-123	8	0-20
104-51-8	PSD	n-Butylbenzene	50.0	0.000	U	58.6	117	32-134	10	0-20
96-12-8	PSD	1,2-Dibromo-3-chloropropane	50.0	0.000	U	49.1	98	38-138	10	0-20
630-20-6	PSD	1,1,1,2-Tetrachloroethane	50.0	0.000	U	51.9	104	50-126	11	0-20
95-50-1	PSD	1,2-Dichlorobenzene	50.0	0.000	U	52.4	105	37-126	8	0-20

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-182
Sample Type: Post Spike
Client ID: WST50-24-301578PS
Matrix: SO
Lab Sample ID: 1205588323
Instrument: VOAA.I
Analysis Date: 11/30/2023 14:36
Dilution: 50
Analyst: JEB
Prep Batch ID: 2533015
Purge Vol: 5 mL
Batch ID: 2533016

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits
76-13-1	PS	Trichlorotrifluoroethane	250	0.000	U	233	93	45-133

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-182
Sample Type: Post Spike Duplicate
Client ID: WST50-24-301578PSD
Matrix: SO
Lab Sample ID: 1205588324
Instrument: VOAA.I
Analysis Date: 11/30/2023 15:00
Dilution: 50
Analyst: JEB
Prep Batch ID: 2533015
Purge Vol: 5 mL
Batch ID: 2533016

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
76-13-1	PSD	Trichlorotrifluoroethane	250	0.000	U	245	98	45-133	5	0-20

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-182
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 2533016
Matrix: SOLID
Lab Sample ID: 1205588325
Instrument: VOAA.I
Analysis Date: 11/30/2023 08:57
Dilution: 1
Analyst: JEB
Prep Batch ID: 2533015
Purge Vol: 5 mL
Batch ID: 2533016

CAS No.		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
76-13-1	LCS	Trichlorotrifluoroethane	250	0.0	227	91	61-131

Method Blank Summary

SDG Number:	**2024-182**	**Client:**	**TNSL001**	**Matrix:**	**WATER**
Client ID:	**MB for batch 2532718**	**Instrument ID:**	**VOA8.I**	**Data File:**	**112923V8\8N306T.D**
Lab Sample ID:	**1205587956**	**Prep Date:**	**11/29/2023 12:06**	**Analyzed:**	**11/29/23 12:06**
Column:	**Serial Number: 1**				

This method blank applies to the following samples and quality control samples:

	Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01	LCS for batch 2532718	1205587954	112923V8\8N302T.D	11/29/23	1024
02	LCS for batch 2532718	1205587955	112923V8\8N304T.D	11/29/23	1115
03	RLUOB-23-304530	646356005	112923V8\8N316.D	11/29/23	1851
04	RLUOB-23-304531	646356006	112923V8\8N317.D	11/29/23	1917
05	RLUOB-23-304530PS	1205587957	112923V8\8N318.D	11/29/23	1943
06	RLUOB-23-304530PSD	1205587959	112923V8\8N319.D	11/29/23	2009
07	RLUOB-23-304530PS	1205587958	112923V8\8N320.D	11/29/23	2035
08	RLUOB-23-304530PSD	1205587960	112923V8\8N321.D	11/29/23	2101

Method Blank Summary

SDG Number:	**2024-182**	**Client:**	**TNSL001**	**Matrix:**	**SOLID**
Client ID:	**MB for batch 2533016**	**Instrument ID:**	**VOAA.I**	**Data File:**	**113023VA\AP406CA.D**
Lab Sample ID:	**1205588320**	**Prep Date:**	**11/30/2023 07:11**	**Analyzed:**	**11/30/23 09:45**
Column:	**DB-624**				

This method blank applies to the following samples and quality control samples:

	Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01	LCS for batch 2533016	1205588319	113023VA\AP403CA.D	11/30/23	0832
02	LCS for batch 2533016	1205588325	113023VA\AP404CA.D	11/30/23	0857
03	RLUOB-23-289597	646356001	113023VA\AP408.D	11/30/23	1034
04	RLUOB-23-289598	646356002	113023VA\AP409.D	11/30/23	1058
05	RLUOB-23-289599	646356003	113023VA\AP410.D	11/30/23	1123
06	RLUOB-23-304523	646356004	113023VA\AP412.D	11/30/23	1211
07	WST50-24-301578PS	1205588321	113023VA\AP416.D	11/30/23	1347
08	WST50-24-301578PSD	1205588322	113023VA\AP417.D	11/30/23	1411
09	WST50-24-301578PS	1205588323	113023VA\AP418.D	11/30/23	1436
10	WST50-24-301578PSD	1205588324	113023VA\AP419.D	11/30/23	1500

Instrument Performance Check

BROMOFLUOROBENZENE

Lab Name GEL Laboratories LLC **Client SDG:** 2024-182

Instrument ID: VOA8.I **Injection Date/Time:** 13-OCT-23 09:55

Column Description: Serial Number: AB001 **Lab File ID** 101323V8_ICAL\8G501.D

m/e	Ion Abundance Criteria	% Relative Abundance
95	50 - 200% of mass 174	120
96	5.0 - 9.0% of mass 95	7.9
173	Less than 2.0% of mass 174	0
174	50 - 200% of mass 95	83.4
175	5.0 -9.0% of mass 174	6.9
176	95.0 - 105.0% of mass 174	98.3
177	5.0 - 10.0% of mass 176	7.2

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
ICALMIX[A]	W8VM231013-01	101323V8_ICAL\8G502.D	13-OCT-23 10:21
ICALMIX[A]	W8VM231013-02	101323V8_ICAL\8G503.D	13-OCT-23 10:46
ICALMIX[A]	W8VM231013-03	101323V8_ICAL\8G504.D	13-OCT-23 11:12
ICALMIX[A]	W8VM231013-04	101323V8_ICAL\8G505.D	13-OCT-23 11:37
ICALMIX[A]	W8VM231013-05	101323V8_ICAL\8G506.D	13-OCT-23 12:03
ICALMIX[A]	W8VM231013-06	101323V8_ICAL\8G507.D	13-OCT-23 12:30
ICALMIX[A]	W8VM231013-07	101323V8_ICAL\8G508.D	13-OCT-23 12:56
ICALMIX[A]	W8VM231013-08	101323V8_ICAL\8G509.D	13-OCT-23 13:22
ICALMIX[A]	W8VM231013-09	101323V8_ICAL\8G510.D	13-OCT-23 13:48
ICVMIX[A]01	W8VM231013-10	101323V8_ICAL\8G513.D	13-OCT-23 15:07
ICALMIX[B]	W8VM231013-11	101323V8_ICAL\8G514.D	13-OCT-23 15:33
ICALMIX[B]	W8VM231013-12	101323V8_ICAL\8G515.D	13-OCT-23 15:59
ICALMIX[B]	W8VM231013-13	101323V8_ICAL\8G516.D	13-OCT-23 16:24
ICALMIX[B]	W8VM231013-14	101323V8_ICAL\8G517.D	13-OCT-23 16:49
ICALMIX[B]	W8VM231013-15	101323V8_ICAL\8G518.D	13-OCT-23 17:15
ICALMIX[B]	W8VM231013-16	101323V8_ICAL\8G519.D	13-OCT-23 17:41
ICALMIX[B]	W8VM231013-17	101323V8_ICAL\8G520.D	13-OCT-23 18:06
ICALMIX[B]	W8VM231013-18	101323V8_ICAL\8G521.D	13-OCT-23 18:32
ICVMIX[B]02	W8VM231013-19	101323V8_ICAL\8G524.D	13-OCT-23 19:48
CCVMIX[A]01	W8VM231129-01	112923V8\8N302.D	29-NOV-23 10:24

Instrument Performance Check

BROMOFLUOROBENZENE

Lab Name GEL Laboratories LLC **Client SDG:** 2024-182

Instrument ID: VOA8.I **Injection Date/Time:** 13-OCT-23 09:55

Column Description: Serial Number: AB001 **Lab File ID** 101323V8_ICAL\8G501.D

m/e	Ion Abundance Criteria	% Relative Abundance
95	50 - 200% of mass 174	120
96	5.0 - 9.0% of mass 95	7.9
173	Less than 2.0% of mass 174	0
174	50 - 200% of mass 95	83.4
175	5.0 -9.0% of mass 174	6.9
176	95.0 - 105.0% of mass 174	98.3
177	5.0 - 10.0% of mass 176	7.2

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
BLK01LCS	1205587954	112923V8\8N302T.D	29-NOV-23 10:24
CCVMIX[B]02	W8VM231129-03	112923V8\8N304.D	29-NOV-23 11:15
BLK01SLCS	1205587955	112923V8\8N304T.D	29-NOV-23 11:15
BLK01	1205587956	112923V8\8N306T.D	29-NOV-23 12:06
RLUOB-23-304530	646356005	112923V8\8N316.D	29-NOV-23 18:51
RLUOB-23-304531	646356006	112923V8\8N317.D	29-NOV-23 19:17
RLUOB-23-304530MS	1205587957	112923V8\8N318.D	29-NOV-23 19:43
RLUOB-23-304530MSD	1205587959	112923V8\8N319.D	29-NOV-23 20:09
RLUOB-23-304530MS	1205587958	112923V8\8N320.D	29-NOV-23 20:35
RLUOB-23-304530MSD	1205587960	112923V8\8N321.D	29-NOV-23 21:01

Instrument Performance Check

BROMOFLUOROBENZENE

Lab Name GEL Laboratories LLC **Client SDG:** 2024-182

Instrument ID: VOAA.I **Injection Date/Time:** 21-SEP-23 13:33

Column Description: DB-624 **Lab File ID** 092123VA\AG401.D

m/e	Ion Abundance Criteria	% Relative Abundance
95	50 - 200% of mass 174	130.6
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	0.5
174	50 - 200% of mass 95	76.6
175	5.0 -9.0% of mass 174	7.4
176	95.0 - 105.0% of mass 174	100.7
177	5.0 - 10.0% of mass 176	6.5

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
ICALMIX[A]	WAVM230921-01	092123VA\AG402.D	21-SEP-23 13:57
ICALMIX[A]	WAVM230921-02	092123VA\AG403.D	21-SEP-23 14:21
ICALMIX[A]	WAVM230921-03	092123VA\AG404.D	21-SEP-23 14:45
ICALMIX[A]	WAVM230921-04	092123VA\AG405.D	21-SEP-23 15:10
ICALMIX[A]	WAVM230921-05	092123VA\AG406.D	21-SEP-23 15:34
ICALMIX[A]	WAVM230921-06	092123VA\AG407.D	21-SEP-23 15:58
ICALMIX[A]	WAVM230921-07	092123VA\AG408.D	21-SEP-23 16:22
ICALMIX[A]	WAVM230921-08	092123VA\AG409.D	21-SEP-23 16:46
ICALMIX[A]	WAVM230921-09	092123VA\AG410.D	21-SEP-23 17:10
ICVMIX[A]01	WAVM230921-10	092123VA\AG412.D	21-SEP-23 17:59
ICALMIX[B]	WAVM230921-11	092123VA\AG413.D	21-SEP-23 18:22
ICALMIX[B]	WAVM230921-12	092123VA\AG414.D	21-SEP-23 18:47
ICALMIX[B]	WAVM230921-13	092123VA\AG415.D	21-SEP-23 19:11
ICALMIX[B]	WAVM230921-14	092123VA\AG416.D	21-SEP-23 19:35
ICALMIX[B]	WAVM230921-15	092123VA\AG417.D	21-SEP-23 19:59
ICALMIX[B]	WAVM230921-16	092123VA\AG418.D	21-SEP-23 20:23
ICALMIX[B]	WAVM230921-17	092123VA\AG419.D	21-SEP-23 20:48
ICALMIX[B]	WAVM230921-18	092123VA\AG420.D	21-SEP-23 21:12
ICVMIX[B]02	WAVM230921-19	092123VA\AG422.D	21-SEP-23 22:00
CCVMIX[A]01	WAVM231130-01	113023VA\AP402.D	30-NOV-23 08:08

Instrument Performance Check

BROMOFLUOROBENZENE

Lab Name GEL Laboratories LLC **Client SDG:** 2024-182

Instrument ID: VOAA.I **Injection Date/Time:** 21-SEP-23 13:33

Column Description: DB-624 **Lab File ID** 092123VA\AG401.D

m/e	Ion Abundance Criteria	% Relative Abundance
95	50 - 200% of mass 174	130.6
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	0.5
174	50 - 200% of mass 95	76.6
175	5.0 -9.0% of mass 174	7.4
176	95.0 - 105.0% of mass 174	100.7
177	5.0 - 10.0% of mass 176	6.5

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
BLK02LCS	1205588319	113023VA\AP403CA.D	30-NOV-23 08:32
CCVMIX[B]02	WAVM231130-03	113023VA\AP404.D	30-NOV-23 08:57
BLK02SLCS	1205588325	113023VA\AP404CA.D	30-NOV-23 08:57
BLK02	1205588320	113023VA\AP406CA.D	30-NOV-23 09:45
RLUOB-23-289597	646356001	113023VA\AP408.D	30-NOV-23 10:34
RLUOB-23-289598	646356002	113023VA\AP409.D	30-NOV-23 10:58
RLUOB-23-289599	646356003	113023VA\AP410.D	30-NOV-23 11:23
RLUOB-23-304523	646356004	113023VA\AP412.D	30-NOV-23 12:11
WST50-24-301578MS	1205588321	113023VA\AP416.D	30-NOV-23 13:47
WST50-24-301578MSD	1205588322	113023VA\AP417.D	30-NOV-23 14:11
WST50-24-301578MS	1205588323	113023VA\AP418.D	30-NOV-23 14:36
WST50-24-301578MSD	1205588324	113023VA\AP419.D	30-NOV-23 15:00

Internal Standard
Area and RT Summary

Lab Name : GEL Laboratories LLC

Client SDG: 2024-182

Instrument: VOA8.I

STD Analysis Time: 29-NOV-23 10:24

GC Column: DB-624

Data File: 112923V8\8N302.D

	Fluorobenzene		Chlorobenzene-d5		1,4-Dichlorobenzene-d4	
	Area #	RT #	Area #	RT #	Area #	RT #
12 Hour STD	762131	10.38	528825	13.57	315915	16
Upper Limit	1524262	10.88	1057650	14.07	631830	16.5
Lower Limit	381066	9.88	264413	13.07	157958	15.5
Sample ID						
BLK01LCS	762131	10.4	528825	13.6	315915	16
BLK01SLCS	828518	10.4	560301	13.6	328195	16
BLK01	776624	10.4	538567	13.6	350083	16
RLUOB-23-304530	719036	10.4	519890	13.6	325574	16
RLUOB-23-304531	722937	10.4	528302	13.6	324660	16
RLUOB-23-304530MS	740425	10.4	537187	13.6	330518	16
RLUOB-23-304530MSD	792920	10.4	566104	13.6	352957	16
RLUOB-23-304530MS	781550	10.4	562684	13.6	331228	16
RLUOB-23-304530MSD	817030	10.4	590934	13.6	342503	16

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Value outside of QC Limits

Internal Standard
Area and RT Summary

Lab Name : GEL Laboratories LLC

Client SDG: 2024-182

Instrument: VOAA.I

STD Analysis Time: 30-NOV-23 08:08

GC Column: DB-624

Data File: 113023VA\AP402.D

	Fluorobenzene		Chlorobenzene-d5		1,4-Dichlorobenzene-d4	
	Area #	RT #	Area #	RT #	Area #	RT #
12 Hour STD	4171803	9.54	2799601	12.71	1343940	15.15
Upper Limit	8343606	10.04	5599202	13.21	2687880	15.65
Lower Limit	2085902	9.04	1399801	12.21	671970	14.65
Sample ID						
BLK02LCS	4304973	9.53	2833503	12.7	1382429	15.2
BLK02SLCS	4238214	9.53	2811705	12.7	1315243	15.2
BLK02	3786476	9.53	2485918	12.7	1199317	15.2
RLUOB-23-289597	3408350	9.54	2264049	12.7	1104377	15.2
RLUOB-23-289598	3384758	9.54	2115963	12.7	1040250	15.2
RLUOB-23-289599	2959388	9.53	1933673	12.7	1044057	15.2
RLUOB-23-304523	3755733	9.53	2289882	12.7	1048421	15.2
WST50-24-301578MS	4033029	9.53	2526429	12.7	1204954	15.2
WST50-24-301578MSD	4035586	9.53	2527180	12.7	1245018	15.2
WST50-24-301578MS	4091151	9.53	2559536	12.7	1212388	15.2
WST50-24-301578MSD	4222014	9.53	2649726	12.7	1258257	15.2

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Value outside of QC Limits

Sample Data

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-182**	**Date Collected:**	**11/21/2023 10:30**	**Matrix:**	**SO**
Lab Sample ID:	**646356001**	**Date Received:**	**11/22/2023 09:15**	**%Moisture:**	**13.5**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289597**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2533016**	**Inst:**	**VOAA.I**	**Dilution:**	**1**
Run Date:	**11/30/2023 10:34**	**Analyst:**	**JEB**	**Purge Vol:**	**5 mL**
Prep Date:	**11/30/2023 08:03**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**113023VA\AP408.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	0.385	ug/kg	0.385	1.16
108-88-3	Toluene	U	0.385	ug/kg	0.385	1.16
100-41-4	Ethylbenzene	U	0.385	ug/kg	0.385	1.16
1330-20-7	Xylenes (total)	U	1.16	ug/kg	1.16	3.47

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	49.7	50.0	ug/L	99	(74%-128%)
Toluene-d8	50.4	50.0	ug/L	101	(81%-120%)
1,2-Dichloroethane-d4	53.1	50.0	ug/L	106	(77%-127%)

Quantitation Report
GEL Laboratories, LLC

JEB 11/30/2023

Data Path : D:\MSDCHEM\1\Data\113023VA\
Data File : AP408.D
Acq On : 30 Nov 2023 10:34
Operator : JEB
InstName : VOAA
Sample : |646356001|2533016|1|VOA|1|VOA8260D_S|
Misc : TNSL 5G N/A SOIL
ALS Vial : 8 Sample Multiplier: 1

MA 11/30/2023

Quant Time: Nov 30 10:53:06 2023
Quant Method : D:\MSDCHEM\1\Data\092123VA\VOAA-092123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Fri Sep 22 08:01:31 2023
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards								Dev(Min)
1) Fluorobenzene	96	9.539	9.540	1.000	3408350	50.00	ug/L	0.00
43) Chlorobenzene-d5	117	12.710	12.710	1.000	2264049	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	15.154	15.161	1.000	1104377	50.00	ug/L	0.00
84) B Fluorobenzene	96	9.539	9.540	1.000	3408350	50.00	ug/L	0.00
103) B Chlorobenzene-d5	117	12.710	12.710	1.000	2264049	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	15.154	15.154	1.000	1104377	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	65	9.180	9.186	0.962	1276084	53.10	ug/L	0.00
45) Toluene-d8	98	11.179	11.180	0.880	3290237	50.36	ug/L	0.00
63) Bromofluorobenzene	95	13.917	13.923	0.918	1151975	49.74	ug/L	0.00

Compound	Amount	Range	Recovery
30) 1,2-Dichloroethane-d4	50.000	77 - 127	106%
45) Toluene-d8	50.000	81 - 120	101%
63) Bromofluorobenzene	50.000	74 - 128	99%

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	3.893	0.000	0	N.D.		
3) Chloromethane	50	4.243	4.281	0.445	2233	N.D.		
4) Vinyl chloride		0.000	4.478	0.000	0	N.D.		
5) Bromomethane		0.000	5.077	0.000	0	N.D.		
6) Chloroethane		0.000	5.217	0.000	0	N.D.		
7) Trichlorofluoromethane		0.000	5.608	0.000	0	N.D.		
8) Ethyl ether	59	5.924	5.931	0.621	655	N.D.		
9) Acetone	43	6.290	6.290	0.659	6549	N.D.		
10) 1,1-Dichloroethylene		0.000	6.278	0.000	0	N.D.		
11) Iodomethane		0.000	6.540	0.000	0	N.D.		
12) Acetonitrile	41	6.625	6.632	0.695	5206	N.D.		
13) Methyl acetate	43	6.686	6.687	0.701	2622	N.D.		
14) Carbon disulfide		0.000	6.650	0.000	0	N.D.		
15) Methylene chloride	84	6.845	6.851	0.718	39095	N.D.		
16) tert-Butyl methyl ether		0.000	7.168	0.000	0	N.D.		
17) trans-1,2-Dichloroethy...		0.000	7.193	0.000	0	N.D.		
18) Hexane	57	7.497	7.491	0.786	12161	N.D.		
19) Vinyl acetate		0.000	7.656	0.000	0	N.D.		
20) 1,1-Dichloroethane		0.000	7.674	0.000	0	N.D.		
21) 2-Butanone	43	8.271	8.272	0.867	1718	N.D.		
22) cis-1,2-Dichloroethylene		0.000	8.308	0.000	0	N.D.		
23) 2,2-Dichloropropane		0.000	8.333	0.000	0	N.D.		
24) Bromochloromethane		0.000	8.576	0.000	0	N.D.		
25) Chloroform		0.000	8.619	0.000	0	N.D.		
26) 1,1,1-Trichloroethane		0.000	8.887	0.000	0	N.D.		
27) Cyclohexane		0.000	8.979	0.000	0	N.D.		
28) 1,1-Dichloropropene		0.000	9.046	0.000	0	N.D.		
29) Carbon tetrachloride		0.000	9.076	0.000	0	N.D.		
31) 1,2-Dichloroethane	62	9.192	9.265	0.964	459	N.D.		
32) Benzene	78	9.271	9.284	0.972	1096	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MSDCHEM\1\Data\113023VA\
Data File : AP408.D
Acq On : 30 Nov 2023 10:34
Operator : JEB
InstName : VOAA
Sample : |646356001|2533016|1|VOA|1|VOA8260D_S|
Misc : TNSL 5G N/A SOIL
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Nov 30 10:53:06 2023
Quant Method : D:\MSDCHEM\1\Data\092123VA\VOAA-092123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Fri Sep 22 08:01:31 2023
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
33) Cyclohexene		0.000	9.399	0.000	0	N.D.	
34) n-Butyl alcohol		0.000	9.662	0.000	0	N.D.	
35) Trichloroethylene		0.000	9.924	0.000	0	N.D.	
36) 2-Pentanone		0.000	10.021	0.000	0	N.D.	
37) 1,2-Dichloropropane		0.000	10.168	0.000	0	N.D.	
38) Methylcyclohexane		0.000	10.174	0.000	0	N.D.	
39) Dibromomethane		0.000	10.296	0.000	0	N.D.	
40) Bromodichloromethane		0.000	10.418	0.000	0	N.D.	
41) 2-Chloroethylvinyl ether		0.000	10.649	0.000	0	N.D.	
42) cis-1,3-Dichloropropylene		0.000	10.869	0.000	0	N.D.	
44) 4-Methyl-2-pentanone		0.000	10.972	0.000	0	N.D.	
46) Toluene	91	11.253	11.253	0.885	2637	N.D.	
47) trans-1,3-Dichloroprop...		0.000	11.411	0.000	0	N.D.	
48) 1,1,2-Trichloroethane		0.000	11.631	0.000	0	N.D.	
49) 2-Hexanone	43	11.826	11.826	0.930	511	N.D.	
50) 1,3-Dichloropropane		0.000	11.820	0.000	0	N.D.	
51) Tetrachloroethylene		0.000	11.850	0.000	0	N.D.	
52) Dibromochloromethane		0.000	12.088	0.000	0	N.D.	
53) 1,2-Dibromoethane		0.000	12.253	0.000	0	N.D.	
54) Chlorobenzene	112	12.734	12.746	1.002	191	N.D.	
55) 1,1,1,2-Tetrachloroethane		0.000	12.801	0.000	0	N.D.	
56) Ethylbenzene	91	12.819	12.813	1.009	221	N.D.	
57) m,p-Xylenes	106	12.923	12.929	1.017	218	N.D.	
58) o-Xylene		0.000	13.362	0.000	0	N.D.	
59) Styrene	104	13.362	13.368	1.051	186	N.D.	
61) Bromoform		0.000	13.612	0.000	0	N.D.	
62) Isopropylbenzene		0.000	13.728	0.000	0	N.D.	
64) 1,1,2,2-Tetrachloroethane	83	13.917	14.002	0.918	694	N.D.	
65) 1,2,3-Trichloropropane		0.000	14.088	0.000	0	N.D.	
66) Bromobenzene		0.000	14.130	0.000	0	N.D.	
67) n-Propylbenzene	91	14.161	14.161	0.934	597	N.D.	
68) 1,3,5-Trimethylbenzene		0.000	14.319	0.000	0	N.D.	
69) 2-Chlorotoluene		0.000	14.307	0.000	0	N.D.	
70) 4-Chlorotoluene	91	14.410	14.411	0.951	1037	N.D.	
71) tert-Butylbenzene		0.000	14.697	0.000	0	N.D.	
72) 1,2,4-Trimethylbenzene	105	14.734	14.740	0.972	624	N.D.	
73) sec-Butylbenzene		0.000	14.923	0.000	0	N.D.	
74) 4-Isopropyltoluene	119	15.051	15.051	0.993	218	N.D.	
75) 1,3-Dichlorobenzene	146	15.099	15.100	0.996	422	N.D.	
76) 1,4-Dichlorobenzene	146	15.179	15.185	1.002	1152	N.D.	
77) n-Butylbenzene	91	15.496	15.490	1.023	402	N.D.	
78) 1,2-Dichlorobenzene	146	15.605	15.599	1.030	452	N.D.	
79) 1,2-Dibromo-3-chloropr...		0.000	16.441	0.000	0	N.D.	
80) 1,2,4-Trichlorobenzene	180	17.470	17.467	1.153	1712	N.D.	
81) Hexachlorobutadiene	225	17.655	17.652	1.165	225	N.D.	
82) Naphthalene	128	17.833	17.829	1.177	4799	N.D.	
83) 1,2,3-Trichlorobenzene	180	18.172	18.161	1.199	1349	N.D.	
85) Acrolein		0.000	6.101	0.000	0	N.D.	
86) Trichlorotrifluoroethane		0.000	6.278	0.000	0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MSDCHEM\1\Data\113023VA\
Data File : AP408.D
Acq On : 30 Nov 2023 10:34
Operator : JEB
InstName : VOAA
Sample : |646356001|2533016|1|VOA|1|VOA8260D_S|
Misc : TNSL 5G N/A SOIL
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Nov 30 10:53:06 2023
Quant Method : D:\MSDCHEM\1\Data\092123VA\VOAA-092123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Fri Sep 22 08:01:31 2023
Response via : Initial Calibration
Integrator: RTE

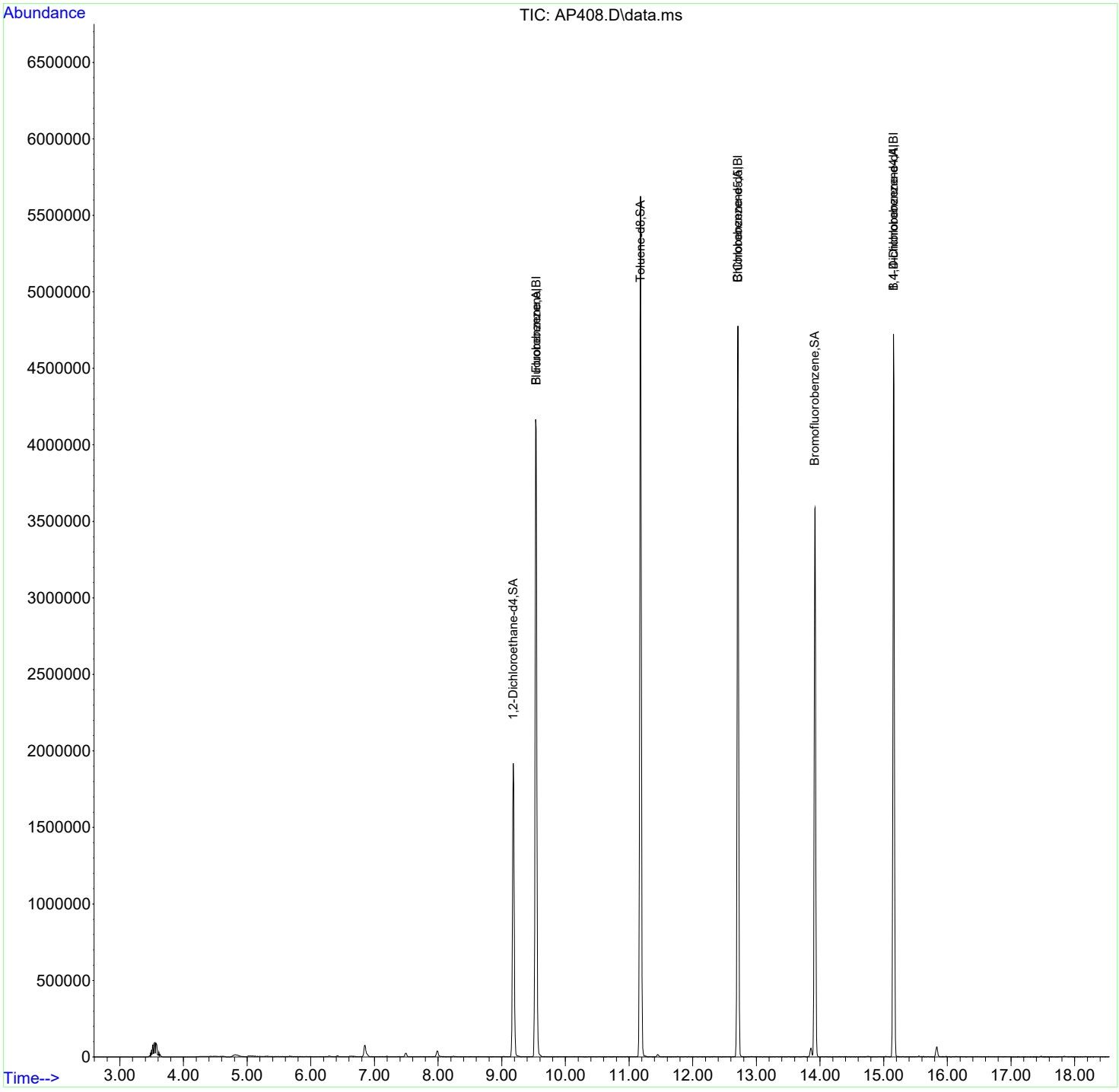
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
87) Isopropyl Alcohol	45	6.424	6.394	0.673	2928	N.D.	
88) Allyl chloride		0.000	6.705	0.000	0	N.D.	
89) tert-Butyl Alcohol		0.000	6.888	0.000	0	N.D.	
90) Acrylonitrile		0.000	7.107	0.000	0	N.D.	
91) Isopropyl ether		0.000	7.680	0.000	0	N.D.	
92) 2-Chloro-1,3-butadiene		0.000	7.778	0.000	0	N.D.	
93) Ethyl tert-butyl ether	59	7.985	8.083	0.837	1088	N.D.	
94) Ethyl acetate	43	8.271	8.290	0.867	1718	N.D.	
95) Propionitrile		0.000	8.333	0.000	0	N.D.	
96) Methacrylonitrile		0.000	8.515	0.000	0	N.D.	
97) Tetrahydrofuran	42	8.637	8.631	0.905	298	N.D.	
98) Isobutyl alcohol		0.000	8.979	0.000	0	N.D.	
99) Methyl tert-amyl ether		0.000	9.320	0.000	0	N.D.	
100) Methyl methacrylate		0.000	10.162	0.000	0	N.D.	
101) 1,4-Dioxane		0.000	10.259	0.000	0	N.D.	
102) 2-Nitropropane		0.000	10.619	0.000	0	N.D.	
104) Ethyl methacrylate		0.000	11.430	0.000	0	N.D.	
106) 1-Chlorohexane		0.000	12.624	0.000	0	N.D.	
107) cis-1,4-Dichloro-2-butene		0.000	13.764	0.000	0	N.D.	
108) Cyclohexanone		0.000	13.874	0.000	0	N.D.	
109) trans-1,4-Dichloro-2-b...		0.000	14.057	0.000	0	N.D.	
110) Pentachloroethane		0.000	14.752	0.000	0	N.D.	
111) Benzyl chloride		0.000	15.301	0.000	0	N.D.	
112) bis(2-Chloroisopropyl)...		0.000	15.703	0.000	0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MSDCHEM\1\Data\113023VA\
Data File : AP408.D
Acq On : 30 Nov 2023 10:34
Operator : JEB
InstName : VOAA
Sample : |646356001|2533016|1|VOA|1|VOA8260D_S|
Misc : TNSL 5G N/A SOIL
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Nov 30 10:53:06 2023
Quant Method : D:\MSDCHEM\1\Data\092123VA\VOAA-092123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Fri Sep 22 08:01:31 2023
Response via : Initial Calibration
Integrator: RTE



Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-182**	**Date Collected:**	**11/21/2023 10:45**	**Matrix:**	**SO**
Lab Sample ID:	**646356002**	**Date Received:**	**11/22/2023 09:15**	**%Moisture:**	**11.3**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289598**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2533016**	**Inst:**	**VOAA.I**	**Dilution:**	**1**
Run Date:	**11/30/2023 10:58**	**Analyst:**	**JEB**	**Purge Vol:**	**5 mL**
Prep Date:	**11/30/2023 08:04**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**113023VA\AP409.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	0.375	ug/kg	0.375	1.13
108-88-3	Toluene	U	0.375	ug/kg	0.375	1.13
100-41-4	Ethylbenzene	U	0.375	ug/kg	0.375	1.13
1330-20-7	Xylenes (total)	U	1.13	ug/kg	1.13	3.38

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	48.7	50.0	ug/L	97	(74%-128%)
Toluene-d8	50.9	50.0	ug/L	102	(81%-120%)
1,2-Dichloroethane-d4	53.1	50.0	ug/L	106	(77%-127%)

Quantitation Report
GEL Laboratories, LLC

JEB 11/30/2023

Data Path : D:\MSDCHEM\1\Data\113023VA\
Data File : AP409.D
Acq On : 30 Nov 2023 10:58
Operator : JEB
InstName : VOAA
Sample : |646356002|2533016|1|VOA|1|VOA8260D_S|
Misc : TNSL 5G N/A SOIL
ALS Vial : 9 Sample Multiplier: 1

MA 11/30/2023

Quant Time: Nov 30 11:31:41 2023
Quant Method : D:\MSDCHEM\1\Data\092123VA\VOAA-092123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Fri Sep 22 08:01:31 2023
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards								Dev(Min)
1) Fluorobenzene	96	9.540	9.540	1.000	3384758	50.00	ug/L	0.00
43) Chlorobenzene-d5	117	12.710	12.710	1.000	2115963	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	15.154	15.161	1.000	1040250	50.00	ug/L	0.00
84) B Fluorobenzene	96	9.540	9.540	1.000	3384758	50.00	ug/L	0.00
103) B Chlorobenzene-d5	117	12.710	12.710	1.000	2115963	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	15.154	15.154	1.000	1040250	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	65	9.180	9.186	0.962	1266693	53.08	ug/L	0.00
45) Toluene-d8	98	11.180	11.180	0.880	3105441	50.86	ug/L	0.00
63) Bromofluorobenzene	95	13.917	13.923	0.918	1061198	48.65	ug/L	0.00

Compound	Amount	Range	Recovery
30) 1,2-Dichloroethane-d4	50.000	77 - 127	106%
45) Toluene-d8	50.000	81 - 120	102%
63) Bromofluorobenzene	50.000	74 - 128	97%

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	3.893	0.000	0	N.D.		
3) Chloromethane	50	4.273	4.281	0.448	1976	N.D.		
4) Vinyl chloride		0.000	4.478	0.000	0	N.D.		
5) Bromomethane		0.000	5.077	0.000	0	N.D.		
6) Chloroethane		0.000	5.217	0.000	0	N.D.		
7) Trichlorofluoromethane		0.000	5.608	0.000	0	N.D.		
8) Ethyl ether	59	5.925	5.931	0.621	1374	N.D.		
9) Acetone	43	6.284	6.290	0.659	8699	N.D.		
10) 1,1-Dichloroethylene		0.000	6.278	0.000	0	N.D.		
11) Iodomethane		0.000	6.540	0.000	0	N.D.		
12) Acetonitrile	41	6.638	6.632	0.696	6328	N.D.		
13) Methyl acetate	43	6.680	6.687	0.700	3010	N.D.		
14) Carbon disulfide		0.000	6.650	0.000	0	N.D.		
15) Methylene chloride	84	6.851	6.851	0.718	37340	N.D.		
16) tert-Butyl methyl ether		0.000	7.168	0.000	0	N.D.		
17) trans-1,2-Dichloroethy...		0.000	7.193	0.000	0	N.D.		
18) Hexane	57	7.491	7.491	0.785	11548	N.D.		
19) Vinyl acetate		0.000	7.656	0.000	0	N.D.		
20) 1,1-Dichloroethane		0.000	7.674	0.000	0	N.D.		
21) 2-Butanone	43	8.278	8.272	0.868	2027	N.D.		
22) cis-1,2-Dichloroethylene		0.000	8.308	0.000	0	N.D.		
23) 2,2-Dichloropropane		0.000	8.333	0.000	0	N.D.		
24) Bromochloromethane		0.000	8.576	0.000	0	N.D.		
25) Chloroform		0.000	8.619	0.000	0	N.D.		
26) 1,1,1-Trichloroethane		0.000	8.887	0.000	0	N.D.		
27) Cyclohexane		0.000	8.979	0.000	0	N.D.		
28) 1,1-Dichloropropene		0.000	9.046	0.000	0	N.D.		
29) Carbon tetrachloride		0.000	9.076	0.000	0	N.D.		
31) 1,2-Dichloroethane	62	9.192	9.265	0.964	379	N.D.		
32) Benzene	78	9.271	9.284	0.972	1111	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MSDCHEM\1\Data\113023VA\
Data File : AP409.D
Acq On : 30 Nov 2023 10:58
Operator : JEB
InstName : VOAA
Sample : |646356002|2533016|1|VOA|1|VOA8260D_S|
Misc : TNSL 5G N/A SOIL
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Nov 30 11:31:41 2023
Quant Method : D:\MSDCHEM\1\Data\092123VA\VOAA-092123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Fri Sep 22 08:01:31 2023
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
33) Cyclohexene		0.000	9.399	0.000	0	N.D.	
34) n-Butyl alcohol		0.000	9.662	0.000	0	N.D.	
35) Trichloroethylene		0.000	9.924	0.000	0	N.D.	
36) 2-Pentanone		0.000	10.021	0.000	0	N.D.	
37) 1,2-Dichloropropane		0.000	10.168	0.000	0	N.D.	
38) Methylcyclohexane		0.000	10.174	0.000	0	N.D.	
39) Dibromomethane		0.000	10.296	0.000	0	N.D.	
40) Bromodichloromethane		0.000	10.418	0.000	0	N.D.	
41) 2-Chloroethylvinyl ether		0.000	10.649	0.000	0	N.D.	
42) cis-1,3-Dichloropropylene		0.000	10.869	0.000	0	N.D.	
44) 4-Methyl-2-pentanone		0.000	10.972	0.000	0	N.D.	
46) Toluene	91	11.259	11.253	0.886	1736	N.D.	
47) trans-1,3-Dichloroprop...		0.000	11.411	0.000	0	N.D.	
48) 1,1,2-Trichloroethane		0.000	11.631	0.000	0	N.D.	
49) 2-Hexanone		0.000	11.826	0.000	0	N.D.	
50) 1,3-Dichloropropane		0.000	11.820	0.000	0	N.D.	
51) Tetrachloroethylene		0.000	11.850	0.000	0	N.D.	
52) Dibromochloromethane		0.000	12.088	0.000	0	N.D.	
53) 1,2-Dibromoethane		0.000	12.253	0.000	0	N.D.	
54) Chlorobenzene		0.000	12.746	0.000	0	N.D.	
55) 1,1,1,2-Tetrachloroethane		0.000	12.801	0.000	0	N.D.	
56) Ethylbenzene	91	12.813	12.813	1.008	458	N.D.	
57) m,p-Xylenes		0.000	12.929	0.000	0	N.D.	
58) o-Xylene	91	13.362	13.362	1.051	212	N.D.	
59) Styrene		0.000	13.368	0.000	0	N.D.	
61) Bromoform		0.000	13.612	0.000	0	N.D.	
62) Isopropylbenzene		0.000	13.728	0.000	0	N.D.	
64) 1,1,2,2-Tetrachloroethane	83	13.923	14.002	0.919	457	N.D.	
65) 1,2,3-Trichloropropane		0.000	14.088	0.000	0	N.D.	
66) Bromobenzene		0.000	14.130	0.000	0	N.D.	
67) n-Propylbenzene		0.000	14.161	0.000	0	N.D.	
68) 1,3,5-Trimethylbenzene		0.000	14.319	0.000	0	N.D.	
69) 2-Chlorotoluene		0.000	14.307	0.000	0	N.D.	
70) 4-Chlorotoluene	91	14.405	14.411	0.951	463	N.D.	
71) tert-Butylbenzene		0.000	14.697	0.000	0	N.D.	
72) 1,2,4-Trimethylbenzene	105	14.740	14.740	0.973	231	N.D.	
73) sec-Butylbenzene		0.000	14.923	0.000	0	N.D.	
74) 4-Isopropyltoluene		0.000	15.051	0.000	0	N.D.	
75) 1,3-Dichlorobenzene	146	15.093	15.100	0.996	208	N.D.	
76) 1,4-Dichlorobenzene	146	15.185	15.185	1.002	757	N.D.	
77) n-Butylbenzene	91	15.490	15.490	1.022	219	N.D.	
78) 1,2-Dichlorobenzene	146	15.599	15.599	1.029	221	N.D.	
79) 1,2-Dibromo-3-chloropr...		0.000	16.441	0.000	0	N.D.	
80) 1,2,4-Trichlorobenzene	180	17.470	17.467	1.153	1332	N.D.	
81) Hexachlorobutadiene	225	17.656	17.652	1.165	155	N.D.	
82) Naphthalene	128	17.833	17.829	1.177	3780	N.D.	
83) 1,2,3-Trichlorobenzene	180	18.168	18.161	1.199	1381	N.D.	
85) Acrolein		0.000	6.101	0.000	0	N.D.	
86) Trichlorotrifluoroethane		0.000	6.278	0.000	0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MSDCHEM\1\Data\113023VA\
Data File : AP409.D
Acq On : 30 Nov 2023 10:58
Operator : JEB
InstName : VOAA
Sample : |646356002|2533016|1|VOA|1|VOA8260D_S|
Misc : TNSL 5G N/A SOIL
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Nov 30 11:31:41 2023
Quant Method : D:\MSDCHEM\1\Data\092123VA\VOAA-092123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Fri Sep 22 08:01:31 2023
Response via : Initial Calibration
Integrator: RTE

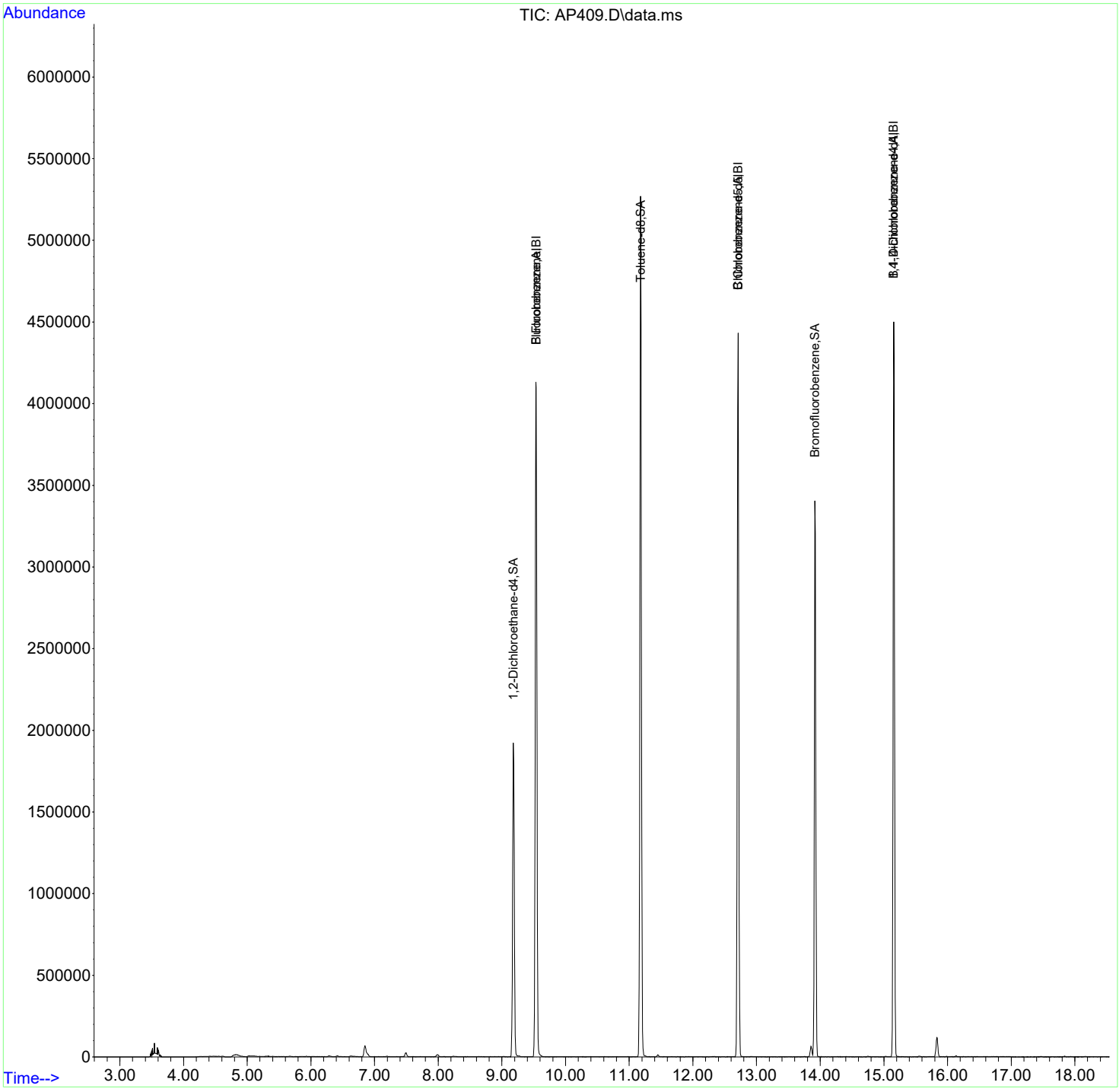
	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
87)	Isopropyl Alcohol	45	6.412	6.394	0.672	2754	N.D.	
88)	Allyl chloride		0.000	6.705	0.000	0	N.D.	
89)	tert-Butyl Alcohol		0.000	6.888	0.000	0	N.D.	
90)	Acrylonitrile		0.000	7.107	0.000	0	N.D.	
91)	Isopropyl ether		0.000	7.680	0.000	0	N.D.	
92)	2-Chloro-1,3-butadiene		0.000	7.778	0.000	0	N.D.	
93)	Ethyl tert-butyl ether		0.000	8.083	0.000	0	N.D.	
94)	Ethyl acetate	43	8.278	8.290	0.868	2027	N.D.	
95)	Propionitrile		0.000	8.333	0.000	0	N.D.	
96)	Methacrylonitrile		0.000	8.515	0.000	0	N.D.	
97)	Tetrahydrofuran	42	8.631	8.631	0.905	468	N.D.	
98)	Isobutyl alcohol		0.000	8.979	0.000	0	N.D.	
99)	Methyl tert-amyl ether		0.000	9.320	0.000	0	N.D.	
100)	Methyl methacrylate		0.000	10.162	0.000	0	N.D.	
101)	1,4-Dioxane		0.000	10.259	0.000	0	N.D.	
102)	2-Nitropropane		0.000	10.619	0.000	0	N.D.	
104)	Ethyl methacrylate		0.000	11.430	0.000	0	N.D.	
106)	1-Chlorohexane		0.000	12.624	0.000	0	N.D.	
107)	cis-1,4-Dichloro-2-butene		0.000	13.764	0.000	0	N.D.	
108)	Cyclohexanone		0.000	13.874	0.000	0	N.D.	
109)	trans-1,4-Dichloro-2-b...		0.000	14.057	0.000	0	N.D.	
110)	Pentachloroethane		0.000	14.752	0.000	0	N.D.	
111)	Benzyl chloride		0.000	15.301	0.000	0	N.D.	
112)	bis(2-Chloroisopropyl)...		0.000	15.703	0.000	0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MSDCHEM\1\Data\113023VA\
Data File : AP409.D
Acq On : 30 Nov 2023 10:58
Operator : JEB
InstName : VOAA
Sample : |646356002|2533016|1|VOA|1|VOA8260D_S|
Misc : TNSL 5G N/A SOIL
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Nov 30 11:31:41 2023
Quant Method : D:\MSDCHEM\1\Data\092123VA\VOAA-092123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Fri Sep 22 08:01:31 2023
Response via : Initial Calibration
Integrator: RTE



Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-182**	**Date Collected:**	**11/21/2023 11:00**	**Matrix:**	**SO**
Lab Sample ID:	**646356003**	**Date Received:**	**11/22/2023 09:15**	**%Moisture:**	**11.3**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289599**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2533016**	**Inst:**	**VOAA.I**	**Dilution:**	**1**
Run Date:	**11/30/2023 11:23**	**Analyst:**	**JEB**	**Purge Vol:**	**5 mL**
Prep Date:	**11/30/2023 08:05**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**113023VA\AP410.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	0.375	ug/kg	0.375	1.13
108-88-3	Toluene		1.65	ug/kg	0.375	1.13
100-41-4	Ethylbenzene		1.68	ug/kg	0.375	1.13
1330-20-7	Xylenes (total)		99.2	ug/kg	1.13	3.38

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Toluene-d8	56.2	50.0	ug/L	112	(81%-120%)
1,2-Dichloroethane-d4	53.5	50.0	ug/L	107	(77%-127%)
Bromofluorobenzene	50.0	50.0	ug/L	100	(74%-128%)

Quantitation Report
GEL Laboratories, LLC

JEB 11/30/2023

Data Path : D:\MSDCHEM\1\Data\113023VA\
Data File : AP410.D
Acq On : 30 Nov 2023 11:23
Operator : JEB
InstName : VOAA
Sample : |646356003|2533016|1|VOA|1|VOA8260D_S|
Misc : TNSL 5G N/A SOIL
ALS Vial : 10 Sample Multiplier: 1

MA 11/30/2023

Quant Time: Nov 30 11:41:57 2023
Quant Method : D:\MSDCHEM\1\Data\092123VA\VOAA-092123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Fri Sep 22 08:01:31 2023
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards								Dev(Min)
1) Fluorobenzene	96	9.534	9.540	1.000	2959388	50.00	ug/L	0.00
43) Chlorobenzene-d5	117	12.710	12.710	1.000	1933673	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	15.154	15.161	1.000	1044057	50.00	ug/L	0.00
84) B Fluorobenzene	96	9.534	9.540	1.000	2959388	50.00	ug/L	0.00
103) B Chlorobenzene-d5	117	12.710	12.710	1.000	1933673	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	15.154	15.154	1.000	1044057	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	65	9.180	9.186	0.963	1115629	53.47	ug/L	0.00
45) Toluene-d8	98	11.180	11.180	0.880	3134358	56.17	ug/L	0.00
63) Bromofluorobenzene	95	13.917	13.923	0.918	1095549	50.04	ug/L	0.00

Compound	Amount	Range	Recovery
30) 1,2-Dichloroethane-d4	50.000	77 - 127	107%
45) Toluene-d8	50.000	81 - 120	112%
63) Bromofluorobenzene	50.000	74 - 128	100%

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	3.893	0.000	0	N.D.		
3) Chloromethane	50	4.266	4.281	0.447	1940	N.D.		
4) Vinyl chloride		0.000	4.478	0.000	0	N.D.		
5) Bromomethane		0.000	5.077	0.000	0	N.D.		
6) Chloroethane		0.000	5.217	0.000	0	N.D.		
7) Trichlorofluoromethane		0.000	5.608	0.000	0	N.D.		
8) Ethyl ether	59	5.924	5.931	0.621	1190	N.D.		
9) Acetone	43	6.272	6.290	0.658	19963	3.92	ug/L	96
10) 1,1-Dichloroethylene		0.000	6.278	0.000	0	N.D.		
11) Iodomethane		0.000	6.540	0.000	0	N.D.		
12) Acetonitrile	41	6.613	6.632	0.694	3992	N.D.		
13) Methyl acetate	43	6.680	6.687	0.701	3060	N.D.		
14) Carbon disulfide		0.000	6.650	0.000	0	N.D.		
15) Methylene chloride	84	6.851	6.851	0.719	34576	N.D.		
16) tert-Butyl methyl ether		0.000	7.168	0.000	0	N.D.		
17) trans-1,2-Dichloroethy...		0.000	7.193	0.000	0	N.D.		
18) Hexane	57	7.497	7.491	0.786	8701	N.D.		
19) Vinyl acetate		0.000	7.656	0.000	0	N.D.		
20) 1,1-Dichloroethane		0.000	7.674	0.000	0	N.D.		
21) 2-Butanone	43	8.229	8.272	0.863	13348	N.D.		
22) cis-1,2-Dichloroethylene		0.000	8.308	0.000	0	N.D.		
23) 2,2-Dichloropropane		0.000	8.333	0.000	0	N.D.		
24) Bromochloromethane		0.000	8.576	0.000	0	N.D.		
25) Chloroform		0.000	8.619	0.000	0	N.D.		
26) 1,1,1-Trichloroethane		0.000	8.887	0.000	0	N.D.		
27) Cyclohexane	56	8.979	8.979	0.942	683251	20.61	ug/L	72
28) 1,1-Dichloropropene		0.000	9.046	0.000	0	N.D.		
29) Carbon tetrachloride		0.000	9.076	0.000	0	N.D.		
31) 1,2-Dichloroethane		0.000	9.265	0.000	0	N.D.		
32) Benzene	78	9.271	9.284	0.973	1645	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MSDCHEM\1\Data\113023VA\
Data File : AP410.D
Acq On : 30 Nov 2023 11:23
Operator : JEB
InstName : VOAA
Sample : |646356003|2533016|1|VOA|1|VOA8260D_S|
Misc : TNSL 5G N/A SOIL
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Nov 30 11:41:57 2023
Quant Method : D:\MSDCHEM\1\Data\092123VA\VOAA-092123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Fri Sep 22 08:01:31 2023
Response via : Initial Calibration
Integrator: RTE

	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units		
33)	Cyclohexene	67	9.381	9.399	0.984	5429	N.D.			
34)	n-Butyl alcohol		0.000	9.662	0.000	0	N.D.			
35)	Trichloroethylene		0.000	9.924	0.000	0	N.D.			
36)	2-Pentanone		0.000	10.021	0.000	0m	N.D.	d		
37)	1,2-Dichloropropane		0.000	10.168	0.000	0m	N.D.	d		
38)	Methylcyclohexane	83	10.168	10.174	1.067	2921792	105.21	ug/L	99	A
39)	Dibromomethane		0.000	10.296	0.000	0	N.D.			
40)	Bromodichloromethane		0.000	10.418	0.000	0m	N.D.	d		
41)	2-Chloroethylvinyl ether	63	10.667	10.649	1.119	616	N.D.			
42)	cis-1,3-Dichloropropylene		0.000	10.869	0.000	0	N.D.			
44)	4-Methyl-2-pentanone	58	11.015	10.972	0.867	3703	N.D.			
46)	Toluene	91	11.253	11.253	0.885	77827	1.46	ug/L	92	
47)	trans-1,3-Dichloroprop...		0.000	11.411	0.000	0	N.D.			
48)	1,1,2-Trichloroethane		0.000	11.631	0.000	0m	N.D.	d		
49)	2-Hexanone		0.000	11.826	0.000	0m	N.D.	d		
50)	1,3-Dichloropropane		0.000	11.820	0.000	0	N.D.			
51)	Tetrachloroethylene		0.000	11.850	0.000	0	N.D.			
52)	Dibromochloromethane		0.000	12.088	0.000	0	N.D.			
53)	1,2-Dibromoethane		0.000	12.253	0.000	0	N.D.			
54)	Chlorobenzene	112	12.734	12.746	1.002	2892	N.D.			
55)	1,1,1,2-Tetrachloroethane		0.000	12.801	0.000	0	N.D.			
56)	Ethylbenzene	91	12.813	12.813	1.008	85562	1.49	ug/L	84	
57)	m,p-Xylenes	106	12.929	12.929	1.017	31090	1.39	ug/L #	50	
58)	o-Xylene	91	13.362	13.362	1.051	4135708	86.58	ug/L	97	
59)	Styrene		0.000	13.368	0.000	0m	N.D.	d		
61)	Bromoform		0.000	13.612	0.000	0	N.D.			
62)	Isopropylbenzene	105	13.728	13.728	0.906	19032	N.D.			
64)	1,1,2,2-Tetrachloroethane		0.000	14.002	0.000	0m	N.D.	d		
65)	1,2,3-Trichloropropane		0.000	14.088	0.000	0m	N.D.	d		
66)	Bromobenzene		0.000	14.130	0.000	0	N.D.			
67)	n-Propylbenzene		0.000	14.161	0.000	0m	N.D.	d		
68)	1,3,5-Trimethylbenzene	105	14.319	14.319	0.945	3613451	70.49	ug/L	97	
69)	2-Chlorotoluene	126	14.289	14.307	0.943	3157	N.D.			
70)	4-Chlorotoluene	91	14.447	14.411	0.953	1393	N.D.			
71)	tert-Butylbenzene		0.000	14.697	0.000	0m	N.D.	d		
72)	1,2,4-Trimethylbenzene	105	14.734	14.740	0.972	67463	1.30	ug/L	96	
73)	sec-Butylbenzene		0.000	14.923	0.000	0m	N.D.	d		
74)	4-Isopropyltoluene	119	15.051	15.051	0.993	432041	7.98	ug/L	97	
75)	1,3-Dichlorobenzene	146	15.093	15.100	0.996	396	N.D.			
76)	1,4-Dichlorobenzene	146	15.191	15.185	1.002	1157	N.D.			
77)	n-Butylbenzene		0.000	15.490	0.000	0m	N.D.	d		
78)	1,2-Dichlorobenzene	146	15.599	15.599	1.029	488	N.D.			
79)	1,2-Dibromo-3-chloropr...		0.000	16.441	0.000	0	N.D.			
80)	1,2,4-Trichlorobenzene	180	17.424	17.467	1.150	3777	N.D.			
81)	Hexachlorobutadiene	225	17.667	17.652	1.166	130	N.D.			
82)	Naphthalene		0.000	17.829	0.000	0m	N.D.	d		
83)	1,2,3-Trichlorobenzene		0.000	18.161	0.000	0m	N.D.	d		
85)	Acrolein		0.000	6.101	0.000	0	N.D.			
86)	Trichlorotrifluoroethane		0.000	6.278	0.000	0	N.D.			

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MSDCHEM\1\Data\113023VA\
Data File : AP410.D
Acq On : 30 Nov 2023 11:23
Operator : JEB
InstName : VOAA
Sample : |646356003|2533016|1|VOA|1|VOA8260D_S|
Misc : TNSL 5G N/A SOIL
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Nov 30 11:41:57 2023
Quant Method : D:\MSDCHEM\1\Data\092123VA\VOAA-092123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Fri Sep 22 08:01:31 2023
Response via : Initial Calibration
Integrator: RTE

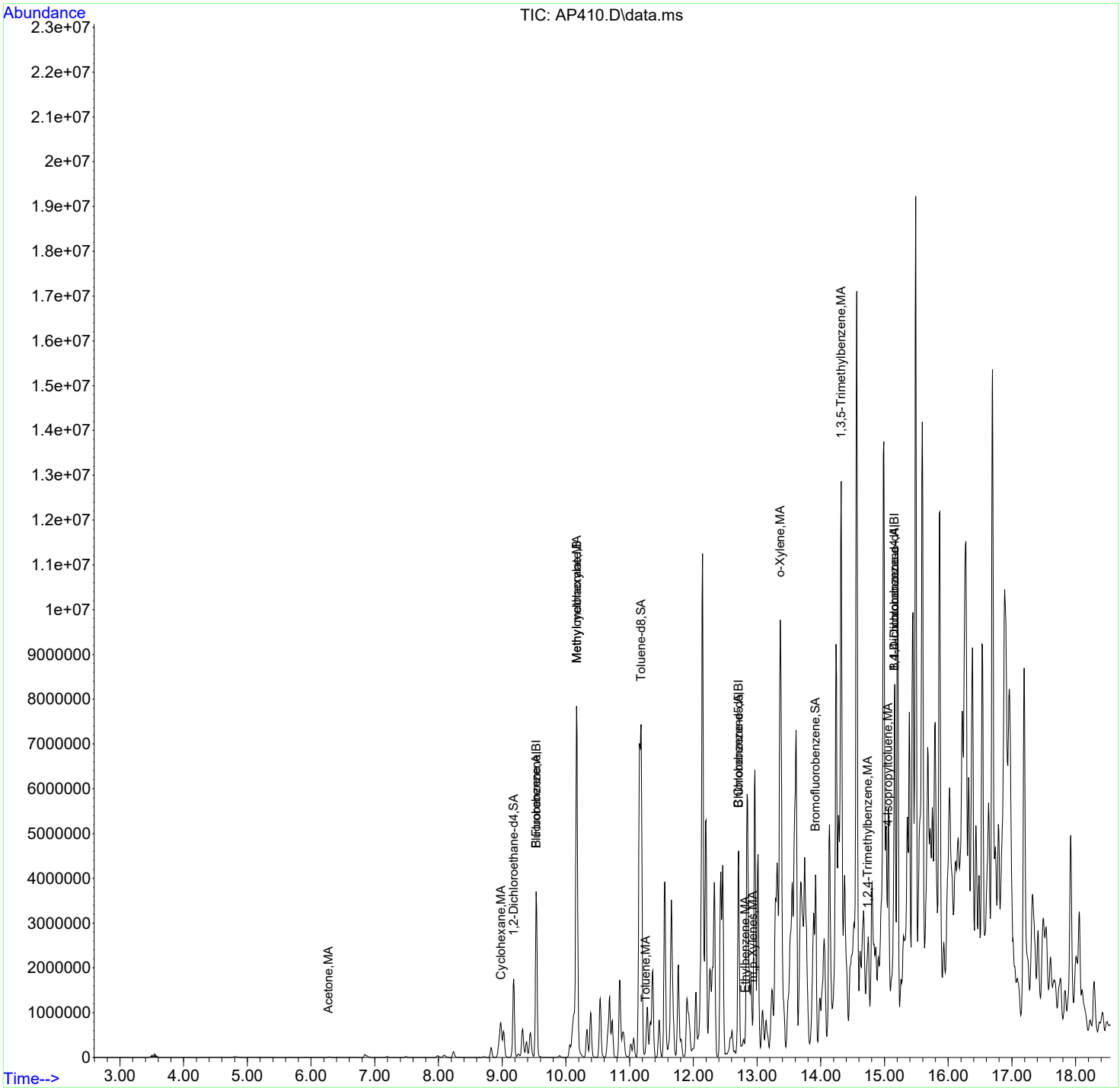
	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
87)	Isopropyl Alcohol	45	6.400	6.394	0.671	2982	N.D.		
88)	Allyl chloride		0.000	6.705	0.000	0	N.D.		
89)	tert-Butyl Alcohol	59	6.888	6.888	0.722	295	N.D.		
90)	Acrylonitrile		0.000	7.107	0.000	0	N.D.		
91)	Isopropyl ether		0.000	7.680	0.000	0	N.D.		
92)	2-Chloro-1,3-butadiene		0.000	7.778	0.000	0	N.D.		
93)	Ethyl tert-butyl ether	59	7.991	8.083	0.838	656	N.D.		
94)	Ethyl acetate	43	8.229	8.290	0.863	13348	N.D.		
95)	Propionitrile	54	8.229	8.333	0.863	3418	N.D.		
96)	Methacrylonitrile		0.000	8.515	0.000	0	N.D.		
97)	Tetrahydrofuran	42	8.631	8.631	0.905	710	N.D.		
98)	Isobutyl alcohol		0.000	8.979	0.000	0m	N.D.	d	
99)	Methyl tert-amyl ether		0.000	9.320	0.000	0	N.D.		
100)	Methyl methacrylate	69	10.168	10.162	1.067	631624	73.85	ug/L	# 19
101)	1,4-Dioxane		0.000	10.259	0.000	0	N.D.		
102)	2-Nitropropane		0.000	10.619	0.000	0m	N.D.	d	
104)	Ethyl methacrylate		0.000	11.430	0.000	0m	N.D.	d	
106)	1-Chlorohexane		0.000	12.624	0.000	0m	N.D.	d	
107)	cis-1,4-Dichloro-2-butene		0.000	13.764	0.000	0m	N.D.	d	
108)	Cyclohexanone		0.000	13.874	0.000	0m	N.D.	d	
109)	trans-1,4-Dichloro-2-b...		0.000	14.057	0.000	0m	N.D.	d	
110)	Pentachloroethane		0.000	14.752	0.000	0	N.D.		
111)	Benzyl chloride		0.000	15.301	0.000	0m	N.D.	d	
112)	bis(2-Chloroisopropyl)...	45	15.715	15.703	1.037	1913	N.D.		

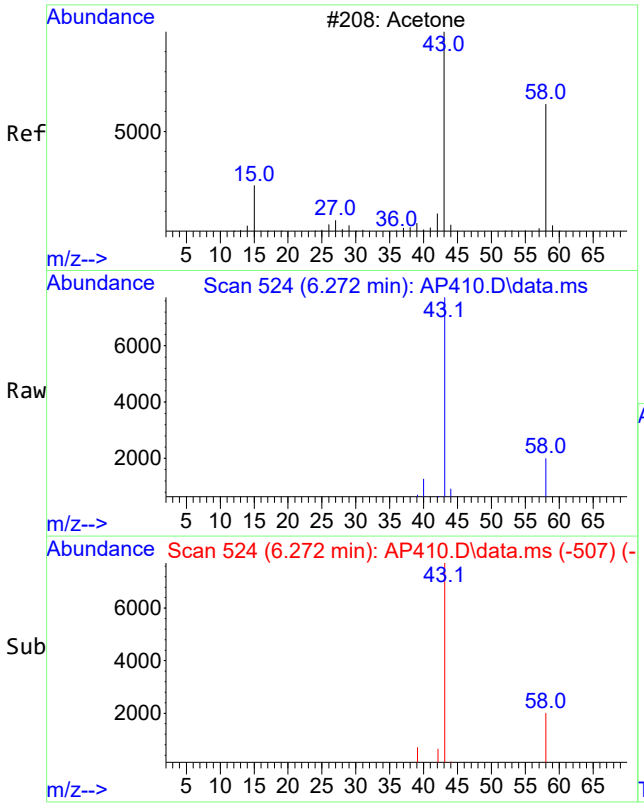
(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MSDCHEM\1\Data\113023VA\
Data File : AP410.D
Acq On : 30 Nov 2023 11:23
Operator : JEB
InstName : VOAA
Sample : |646356003|2533016|1|VOA|1|VOA8260D_S|
Misc : TNSL 5G N/A SOIL
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Nov 30 11:41:57 2023
Quant Method : D:\MSDCHEM\1\Data\092123VA\VOAA-092123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Fri Sep 22 08:01:31 2023
Response via : Initial Calibration
Integrator: RTE

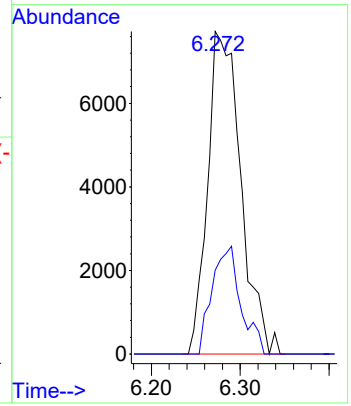


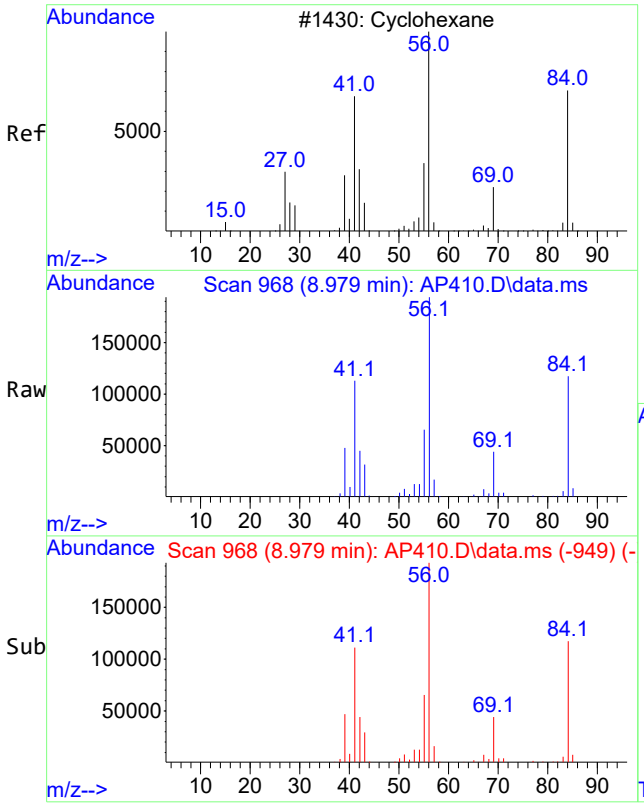


#9
Acetone
Concen: 3.92 ug/L
RT: 6.272 min Scan# 524
Delta R.T. -0.018 min
Lab File: AP410.D
Acq: 30 Nov 2023 11:23

Tgt Ion: 43 Resp: 19963

Ion	Ratio	Lower	Upper
43	100		
58	28.8	0.9	60.9

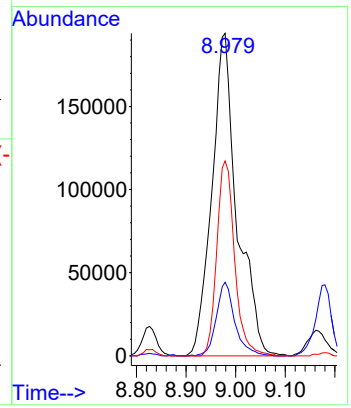


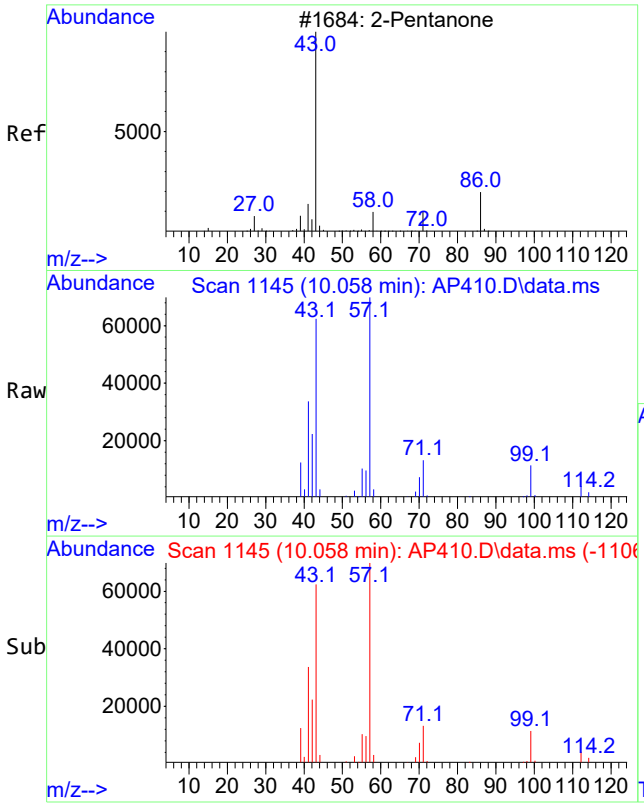


#27
Cyclohexane
Concen: 20.61 ug/L
RT: 8.979 min Scan# 968
Delta R.T. -0.000 min
Lab File: AP410.D
Acq: 30 Nov 2023 11:23

Tgt Ion: 56 Resp: 683251

Ion	Ratio	Lower	Upper
56	100		
69	16.8	0.0	55.1
84	42.8	38.8	98.8

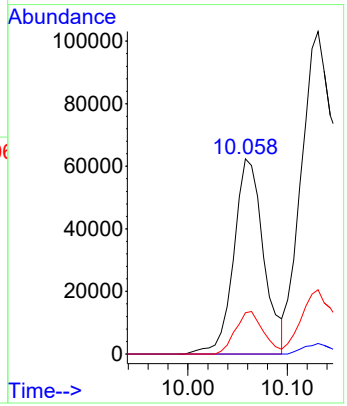


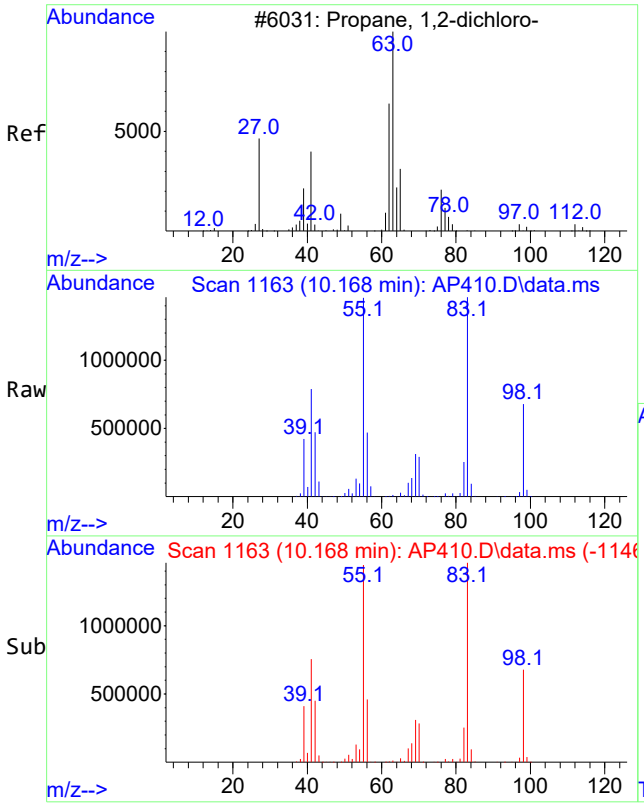


#36 BEFORE analyst DELETION
2-Pentanone
Concen: 10.11 ug/L
RT: 10.058 min Scan# 1145
Delta R.T. 0.037 min
Lab File: AP410.D
Acq: 30 Nov 2023 11:23

Tgt Ion: 43 Resp: 130370

Ion	Ratio	Lower	Upper
43	100		
86	0.0	0.0	35.6
71	20.3	0.0	27.7

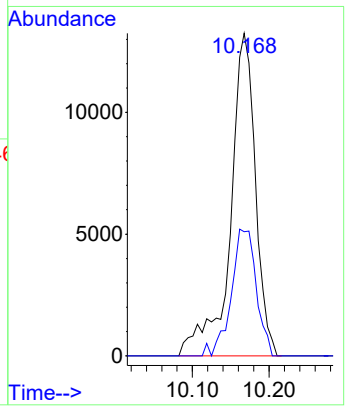


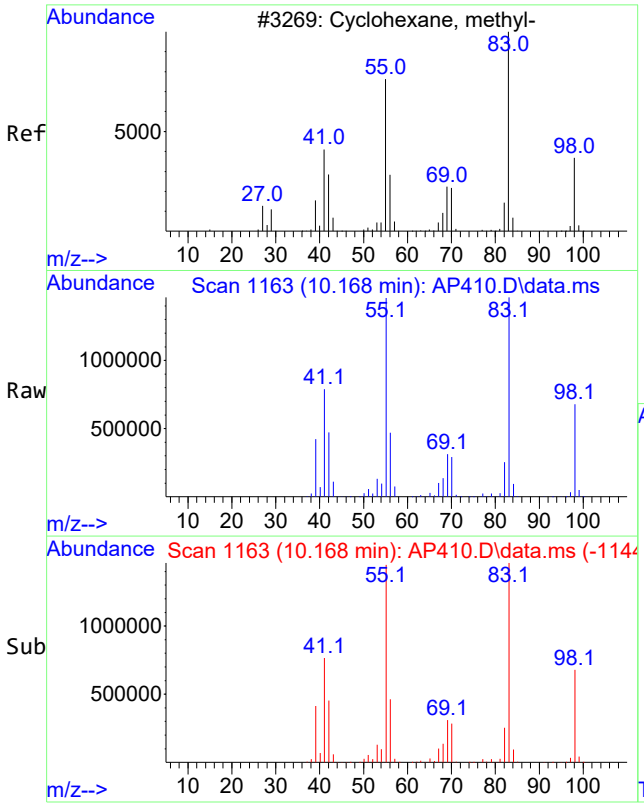


#37 BEFORE analyst DELETION
1,2-Dichloropropane
Concen: 1.79 ug/L
RT: 10.168 min Scan# 1163
Delta R.T. -0.000 min
Lab File: AP410.D
Acq: 30 Nov 2023 11:23

Tgt Ion: 63 Resp: 30143

Ion	Ratio	Lower	Upper
63	100		
62	39.1	41.6	101.6#

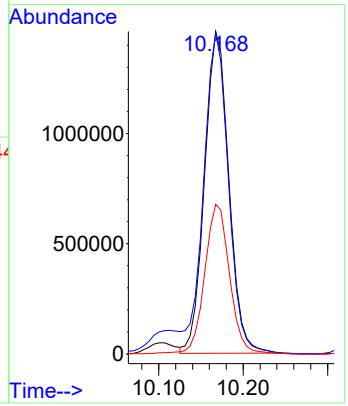


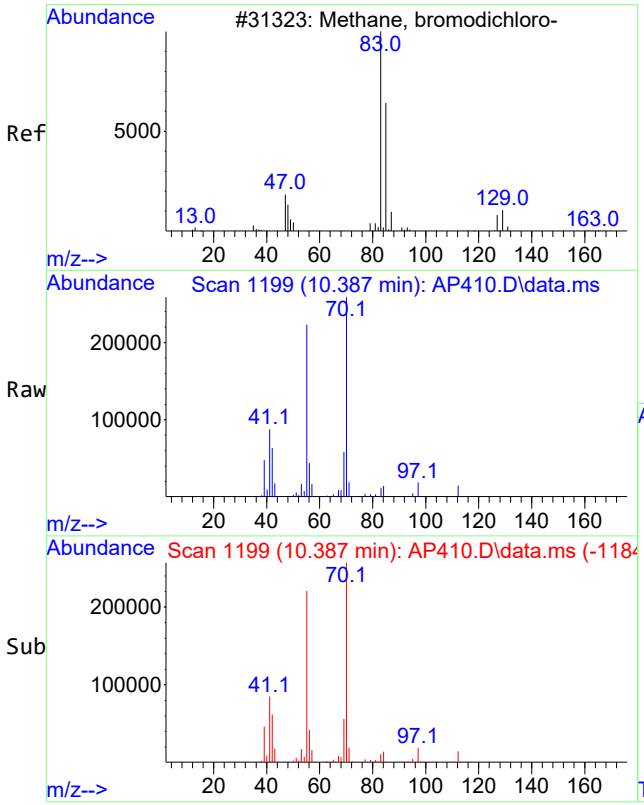


#38
Methylcyclohexane
Concen: 105.21 ug/L
RT: 10.168 min Scan# 1163
Delta R.T. -0.006 min
Lab File: AP410.D
Acq: 30 Nov 2023 11:23

Tgt Ion: 83 Resp: 2921792

Ion	Ratio	Lower	Upper
83	100		
55	100.1	70.0	130.0
98	46.7	17.9	77.9

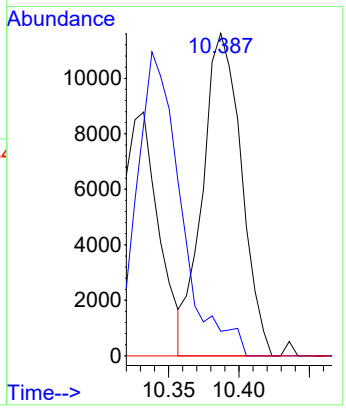


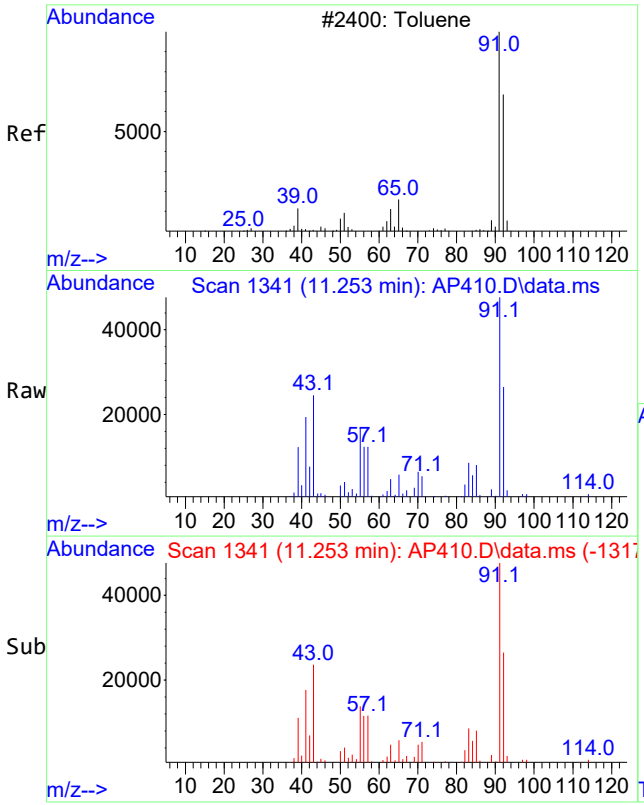


#40 BEFORE analyst DELETION
Bromodichloromethane
Concen: 1.14 ug/L
RT: 10.387 min Scan# 1199
Delta R.T. -0.031 min
Lab File: AP410.D
Acq: 30 Nov 2023 11:23

Tgt Ion: 83 Resp: 22284

Ion	Ratio	Lower	Upper
83	100		
85	0.0	33.9	93.9#
127	0.0	0.0	28.3

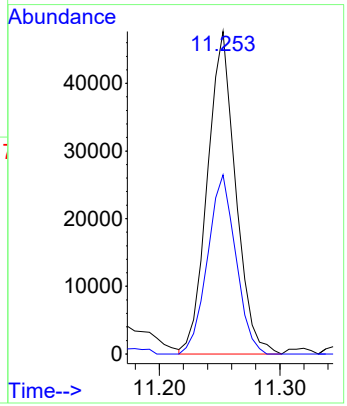


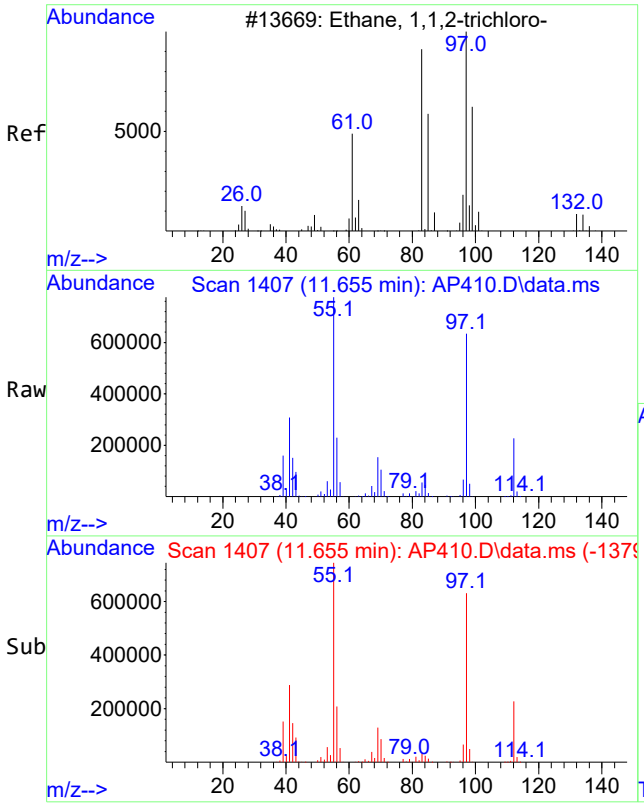


#46
Toluene
Concen: 1.46 ug/L
RT: 11.253 min Scan# 1341
Delta R.T. -0.000 min
Lab File: AP410.D
Acq: 30 Nov 2023 11:23

Tgt Ion: 91 Resp: 77827

Ion	Ratio	Lower	Upper
91	100		
92	55.7	32.2	92.2

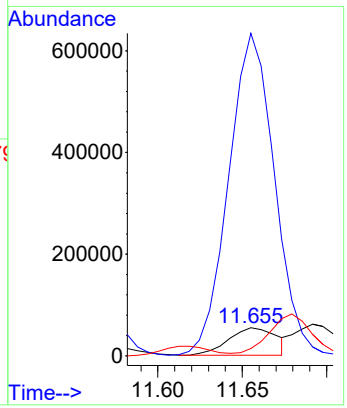


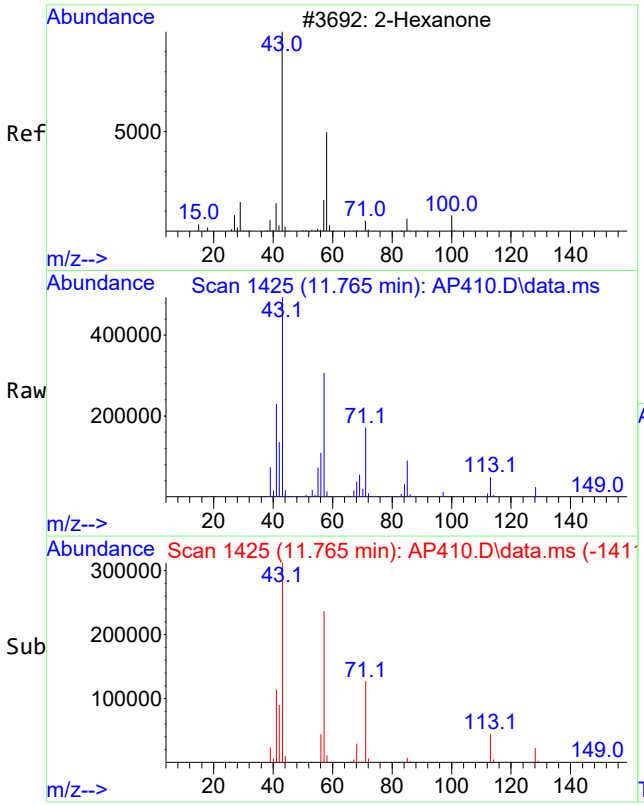


#48 BEFORE analyst DELETION
1,1,2-Trichloroethane
Concen: 10.96 ug/L
RT: 11.655 min Scan# 1407
Delta R.T. 0.024 min
Lab File: AP410.D
Acq: 30 Nov 2023 11:23

Tgt Ion: 83 Resp: 106043

Ion	Ratio	Lower	Upper
83	100		
97	1134.4	85.2	145.2#
85	36.0	34.8	94.8

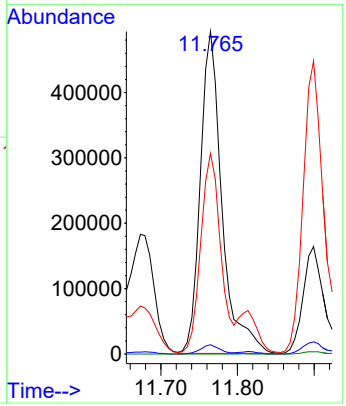


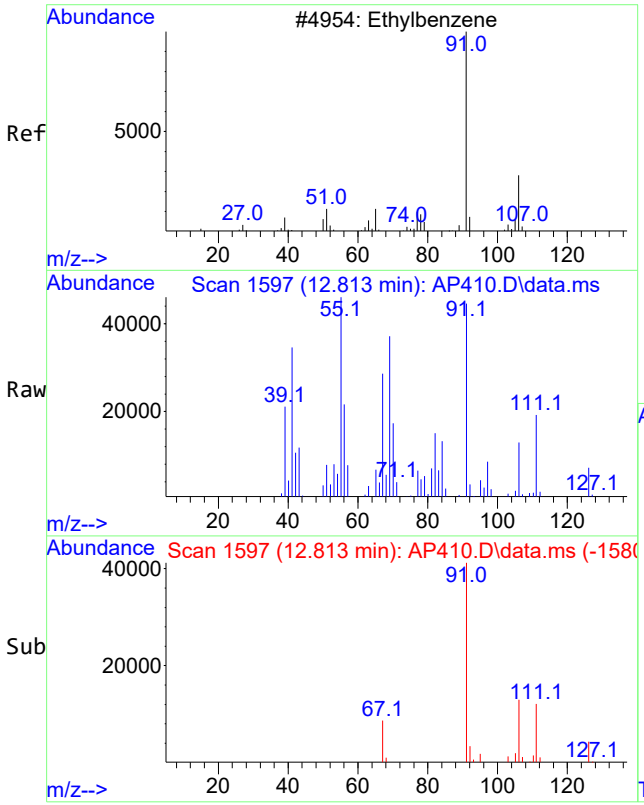


#49 BEFORE analyst DELETION
2-Hexanone
Concen: 95.86 ug/L
RT: 11.765 min Scan# 1425
Delta R.T. -0.061 min
Lab File: AP410.D
Acq: 30 Nov 2023 11:23

Tgt Ion: 43 Resp: 960547

Ion	Ratio	Lower	Upper
43	100		
58	2.5	24.3	84.3#
57	57.1	0.0	49.1#
100	0.0	0.0	39.7

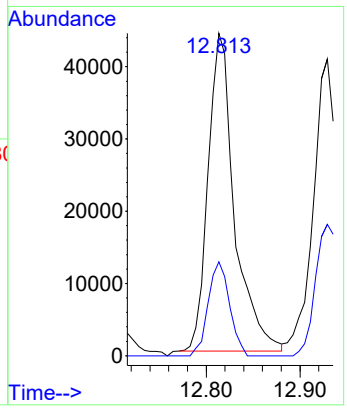


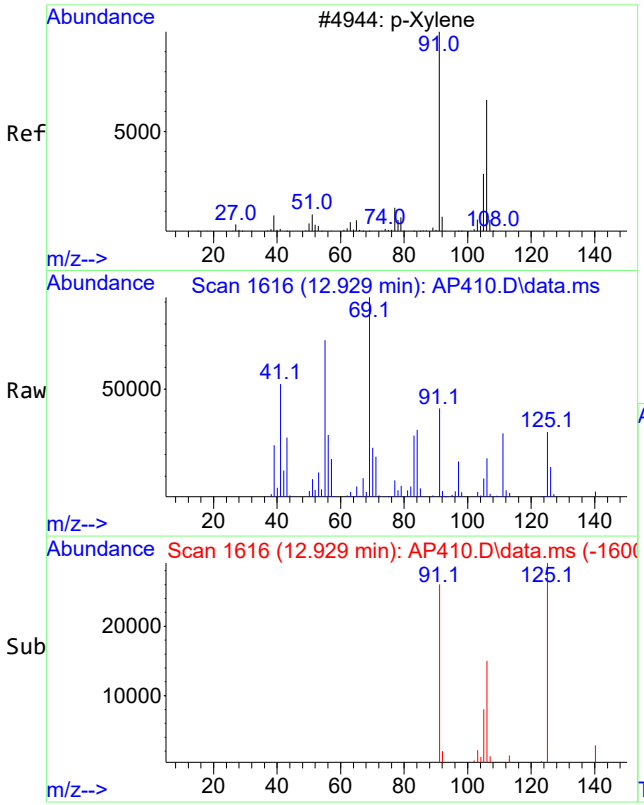


#56
Ethylbenzene
Concen: 1.49 ug/L
RT: 12.813 min Scan# 1597
Delta R.T. -0.000 min
Lab File: AP410.D
Acq: 30 Nov 2023 11:23

Tgt Ion: 91 Resp: 85562

Ion	Ratio	Lower	Upper
91	100		
106	24.0	3.1	63.1

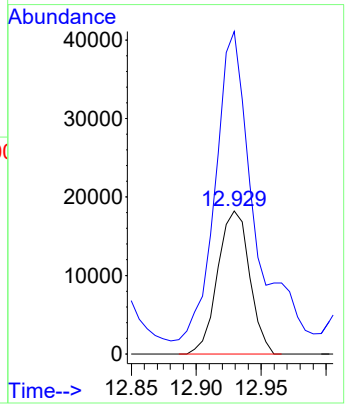


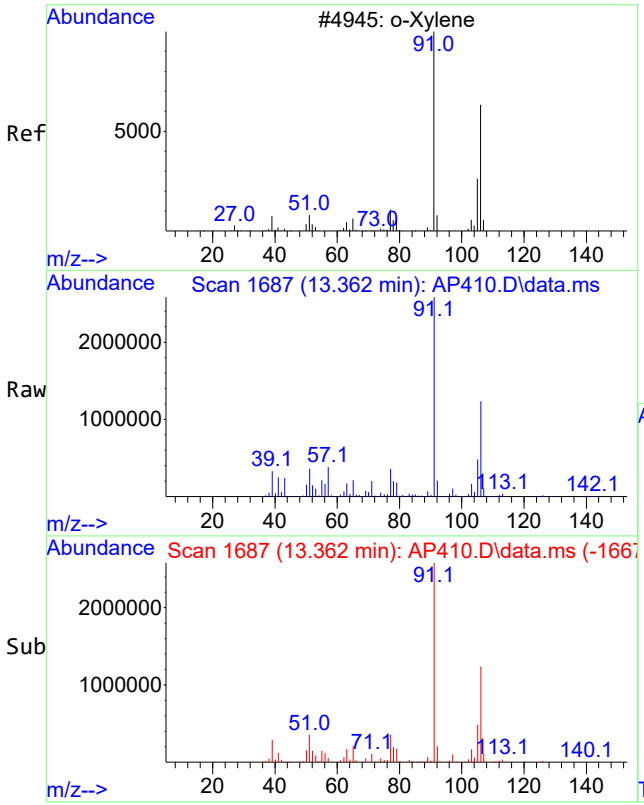


#57
m,p-Xylenes
Concen: 1.39 ug/L
RT: 12.929 min Scan# 1616
Delta R.T. -0.000 min
Lab File: AP410.D
Acq: 30 Nov 2023 11:23

Tgt Ion:106 Resp: 31090

Ion	Ratio	Lower	Upper
106	100		
91	258.2	156.4	216.4#

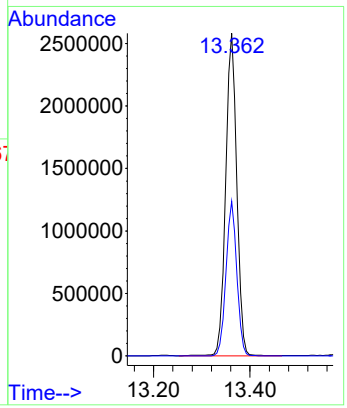


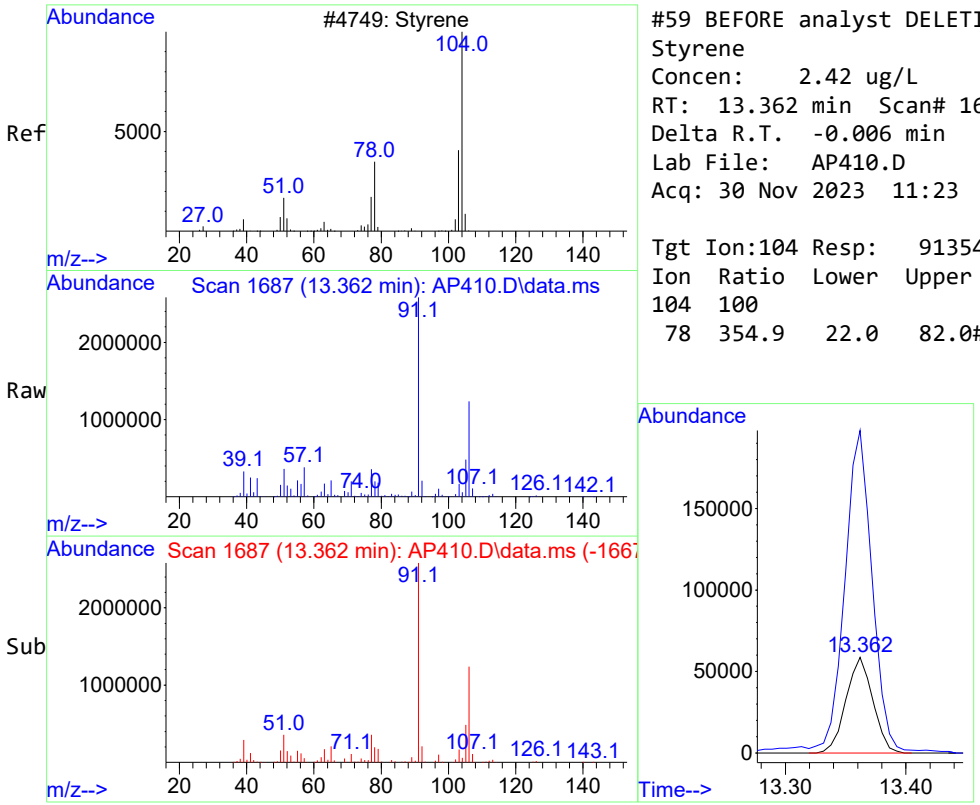


#58
o-Xylene
Concen: 86.58 ug/L
RT: 13.362 min Scan# 1687
Delta R.T. -0.000 min
Lab File: AP410.D
Acq: 30 Nov 2023 11:23

Tgt Ion: 91 Resp: 4135708

Ion	Ratio	Lower	Upper
91	100		
106	46.6	18.8	78.8

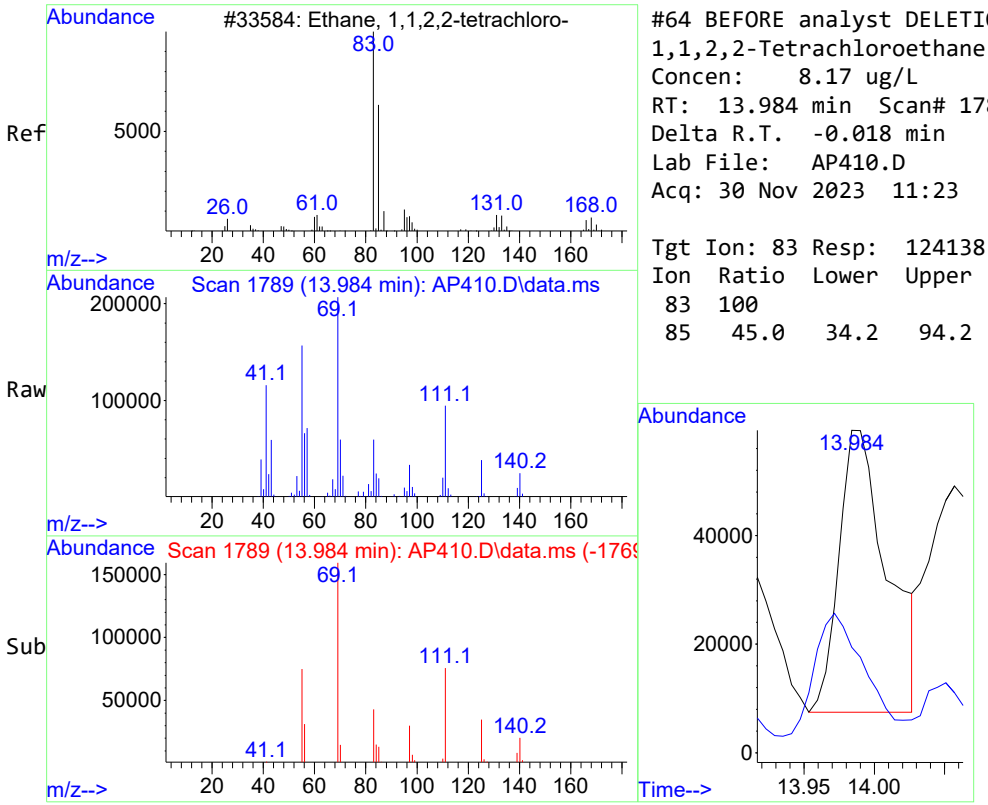




#59 BEFORE analyst DELETION
Styrene
Concen: 2.42 ug/L
RT: 13.362 min Scan# 1687
Delta R.T. -0.006 min
Lab File: AP410.D
Acq: 30 Nov 2023 11:23

Tgt Ion:104 Resp: 91354

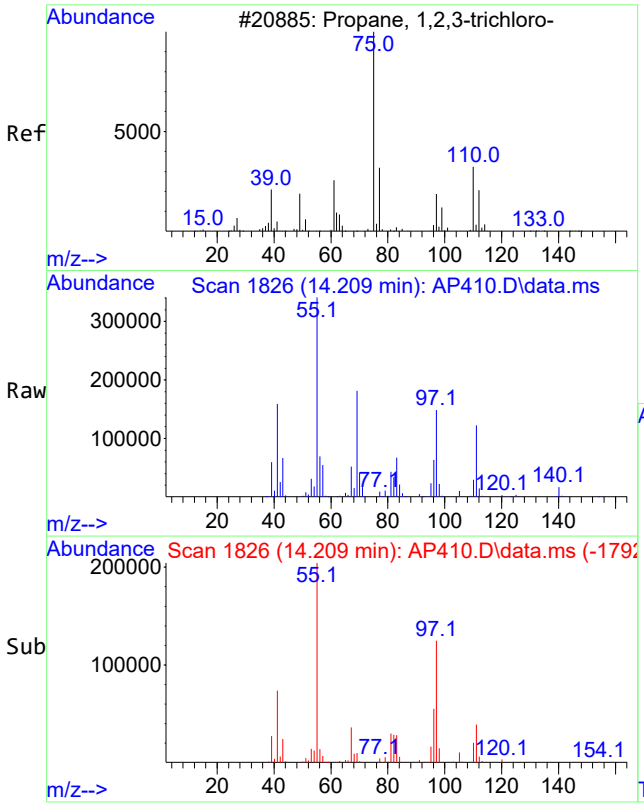
Ion	Ratio	Lower	Upper
104	100		
78	354.9	22.0	82.0#



#64 BEFORE analyst DELETION
1,1,2,2-Tetrachloroethane
Concen: 8.17 ug/L
RT: 13.984 min Scan# 1789
Delta R.T. -0.018 min
Lab File: AP410.D
Acq: 30 Nov 2023 11:23

Tgt Ion: 83 Resp: 124138

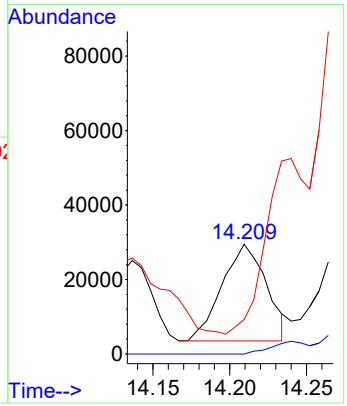
Ion	Ratio	Lower	Upper
83	100		
85	45.0	34.2	94.2

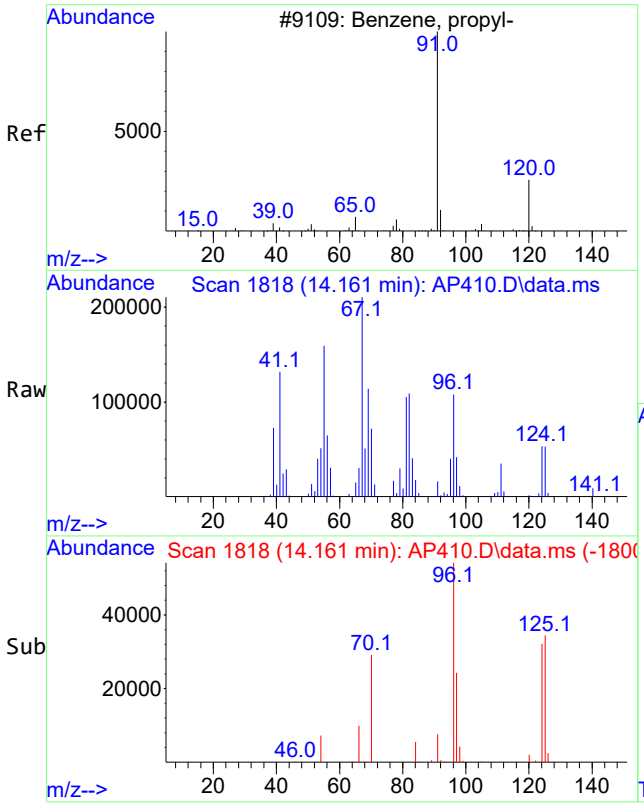


#65 BEFORE analyst DELETION
1,2,3-Trichloropropane
Concen: 11.94 ug/L
RT: 14.209 min Scan# 1826
Delta R.T. 0.122 min
Lab File: AP410.D
Acq: 30 Nov 2023 11:23

Tgt Ion:110 Resp: 52311

Ion	Ratio	Lower	Upper
110	100		
75	0.0	287.3	347.3#
77	0.0	665.2	725.2#

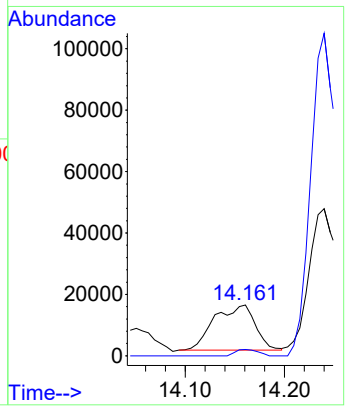


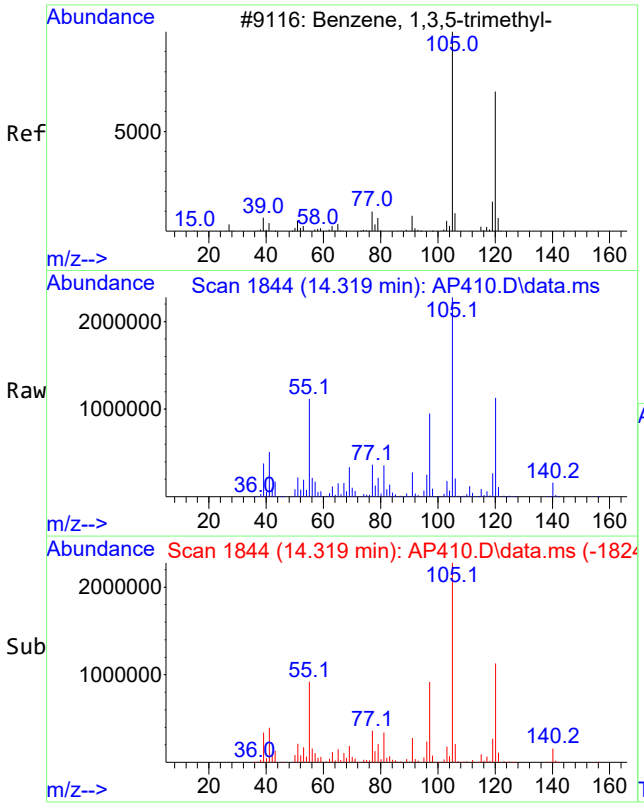


#67 BEFORE analyst DELETION
n-Propylbenzene
Concen: 0.61 ug/L
RT: 14.161 min Scan# 1818
Delta R.T. -0.000 min
Lab File: AP410.D
Acq: 30 Nov 2023 11:23

Tgt Ion: 91 Resp: 42111

Ion	Ratio	Lower	Upper
91	100		
120	7.7	0.0	54.2

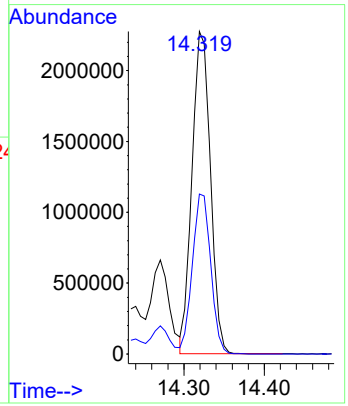


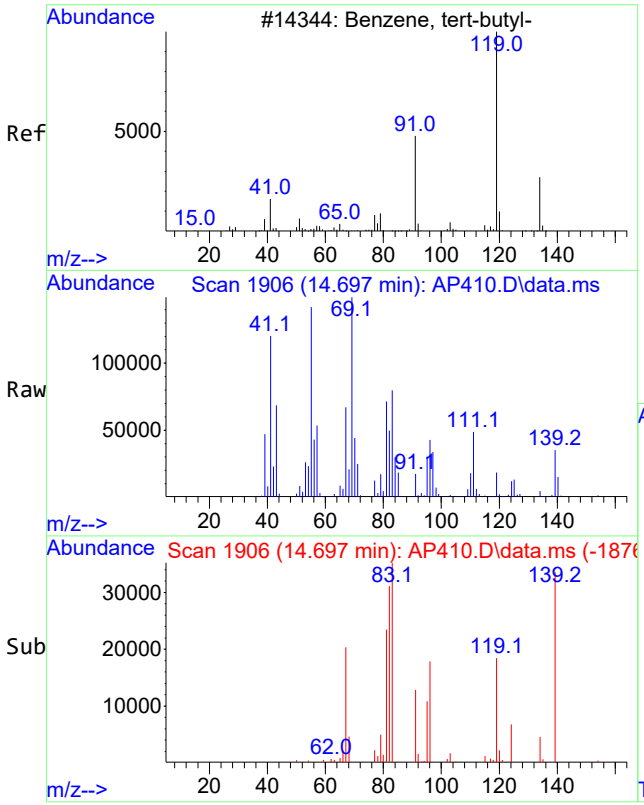


#68
1,3,5-Trimethylbenzene
Concen: 70.49 ug/L
RT: 14.319 min Scan# 1844
Delta R.T. -0.000 min
Lab File: AP410.D
Acq: 30 Nov 2023 11:23

Tgt Ion:105 Resp: 3613451

Ion	Ratio	Lower	Upper
105	100		
120	49.5	21.3	81.3

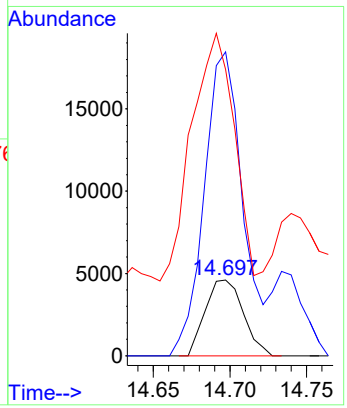


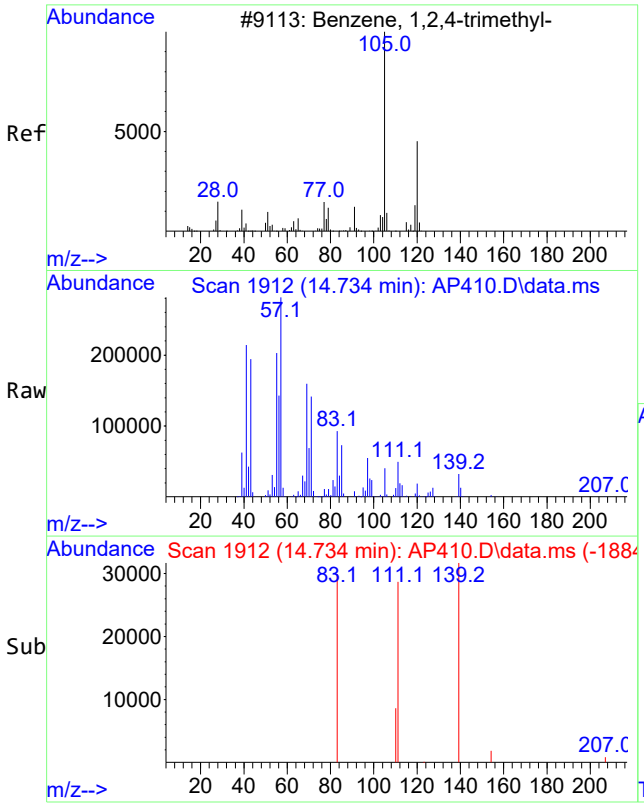


#71 BEFORE analyst DELETION
tert-Butylbenzene
Concen: 0.68 ug/L
RT: 14.697 min Scan# 1906
Delta R.T. -0.000 min
Lab File: AP410.D
Acq: 30 Nov 2023 11:23

Tgt Ion:134 Resp: 7917

Ion	Ratio	Lower	Upper
134	100		
119	404.4	348.2	408.2
91	370.6	241.1	301.1#

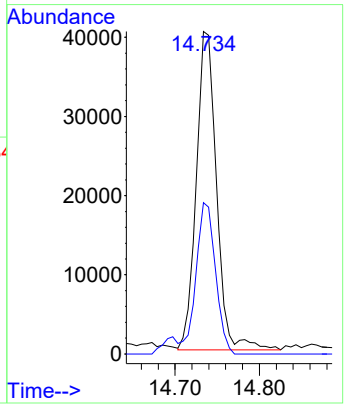


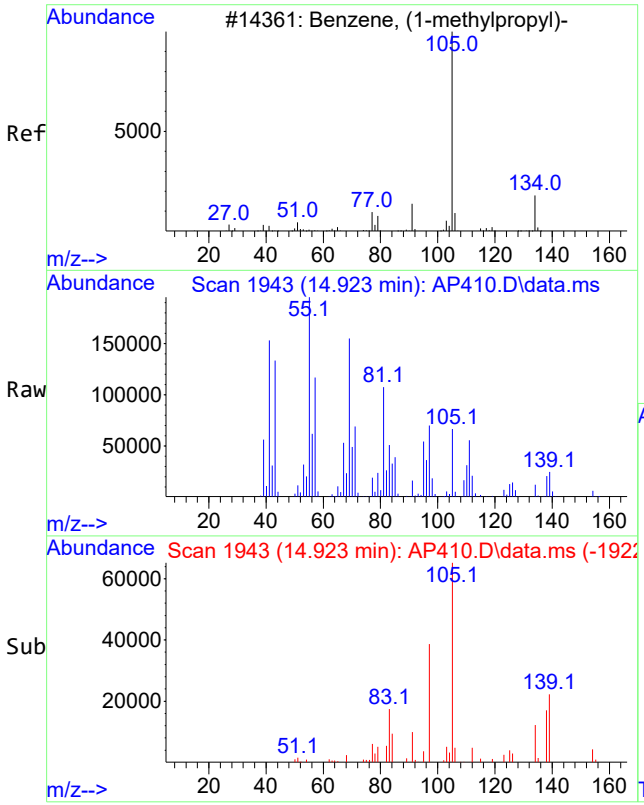


#72
1,2,4-Trimethylbenzene
Concen: 1.30 ug/L
RT: 14.734 min Scan# 1912
Delta R.T. -0.006 min
Lab File: AP410.D
Acq: 30 Nov 2023 11:23

Tgt Ion:105 Resp: 67463

Ion	Ratio	Lower	Upper
105	100		
120	44.8	17.6	77.6

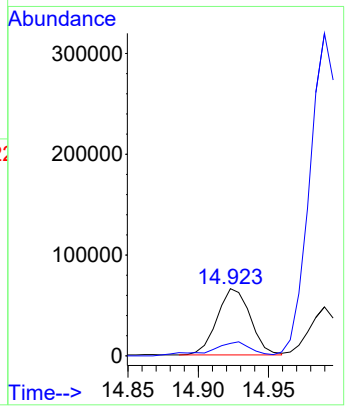


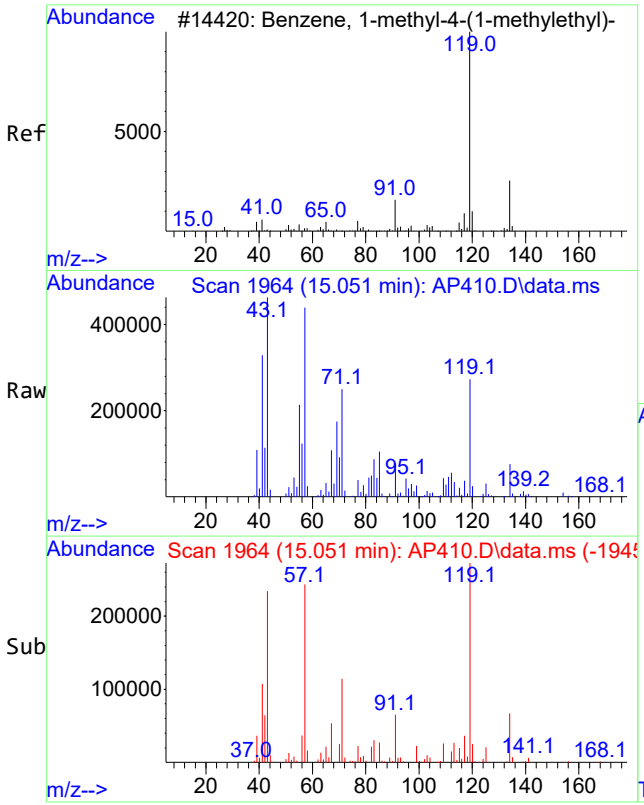


#73 BEFORE analyst DELETION
sec-Butylbenzene
Concen: 1.67 ug/L
RT: 14.923 min Scan# 1943
Delta R.T. -0.000 min
Lab File: AP410.D
Acq: 30 Nov 2023 11:23

Tgt Ion:105 Resp: 108111

Ion	Ratio	Lower	Upper
105	100		
134	25.1	0.0	52.1

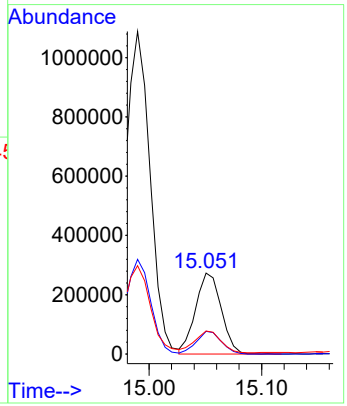


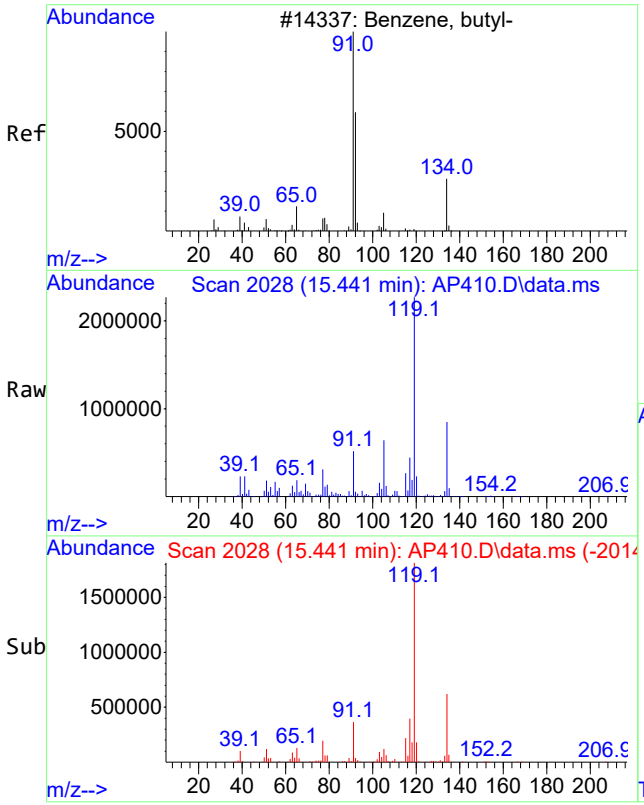


#74
4-Isopropyltoluene
Concen: 7.98 ug/L
RT: 15.051 min Scan# 1964
Delta R.T. -0.000 min
Lab File: AP410.D
Acq: 30 Nov 2023 11:23

Tgt Ion:119 Resp: 432041

Ion	Ratio	Lower	Upper
119	100		
134	27.3	0.0	59.2
91	26.8	0.0	55.8

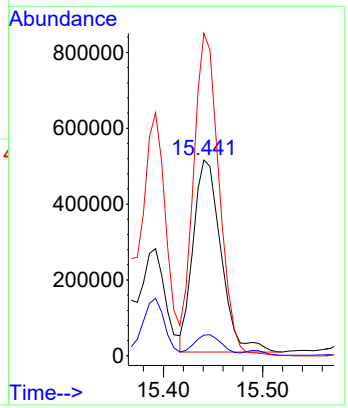


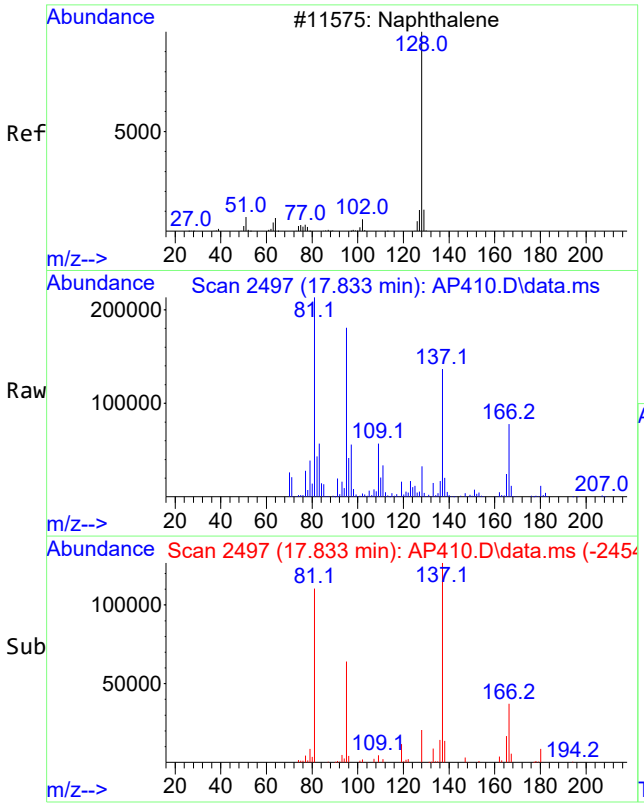


#77 BEFORE analyst DELETION
n-Butylbenzene
Concen: 18.10 ug/L
RT: 15.441 min Scan# 2028
Delta R.T. -0.049 min
Lab File: AP410.D
Acq: 30 Nov 2023 11:23

Tgt Ion: 91 Resp: 987388

Ion	Ratio	Lower	Upper
91	100		
92	8.5	27.0	87.0#
134	154.7	0.0	57.7#

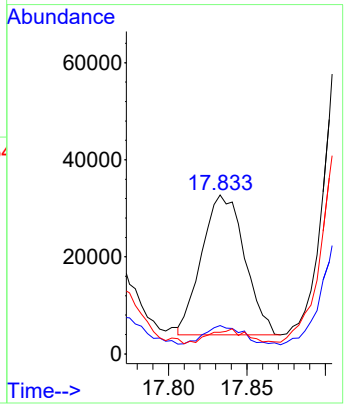


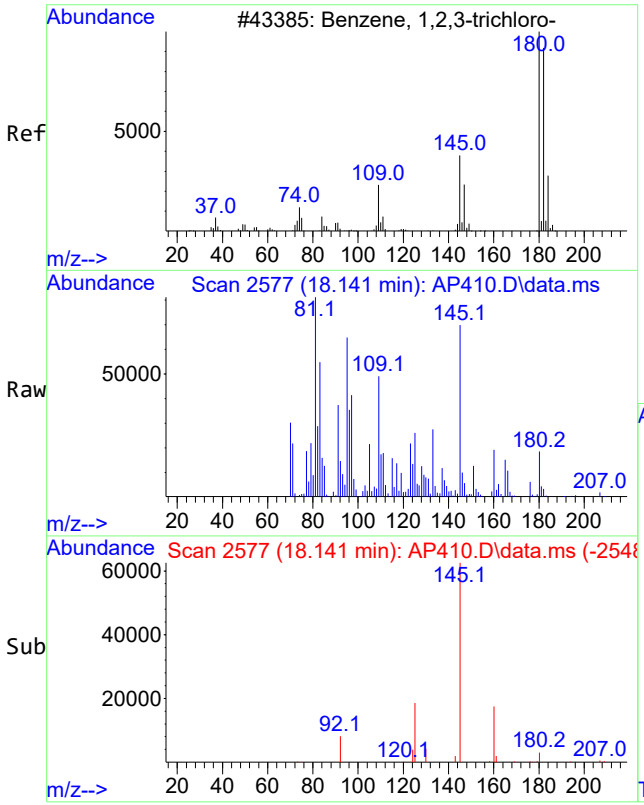


#82 BEFORE analyst DELETION
Naphthalene
Concen: 1.12 ug/L
RT: 17.833 min Scan# 2497
Delta R.T. 0.004 min
Lab File: AP410.D
Acq: 30 Nov 2023 11:23

Tgt Ion:128 Resp: 54544

Ion	Ratio	Lower	Upper
128	100		
127	12.3	0.0	42.5
129	7.7	0.0	41.2

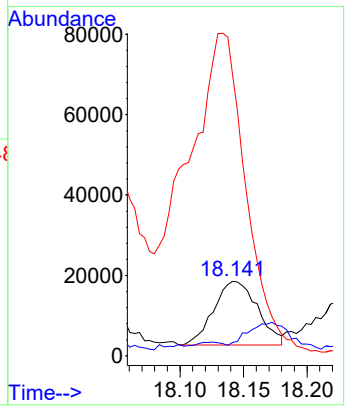


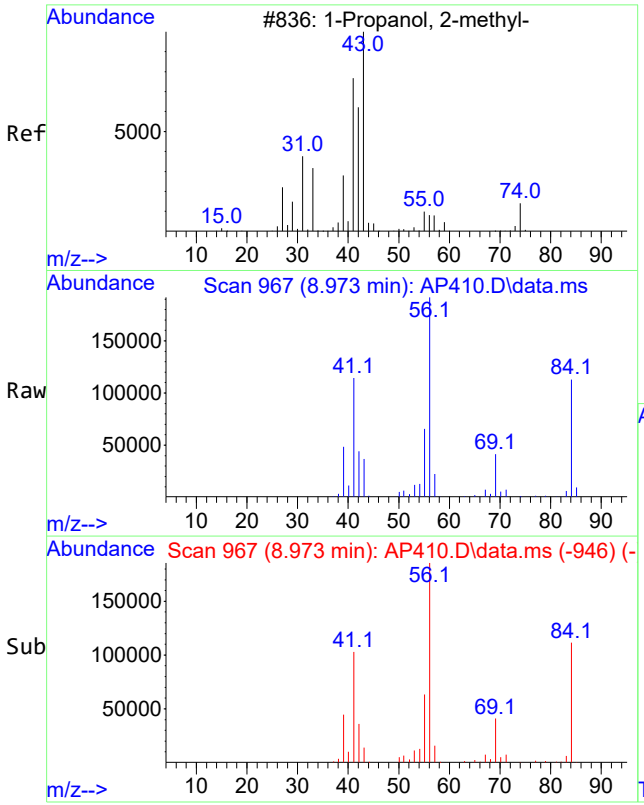


#83 BEFORE analyst DELETION
1,2,3-Trichlorobenzene
Concen: 1.84 ug/L
RT: 18.141 min Scan# 2577
Delta R.T. -0.019 min
Lab File: AP410.D
Acq: 30 Nov 2023 11:23

Tgt Ion:180 Resp: 38001

Ion	Ratio	Lower	Upper
180	100		
182	39.7	65.1	125.1#
145	0.0	0.3	60.3#

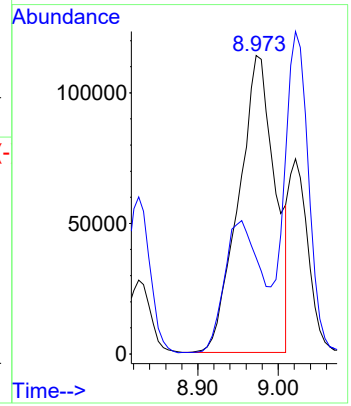


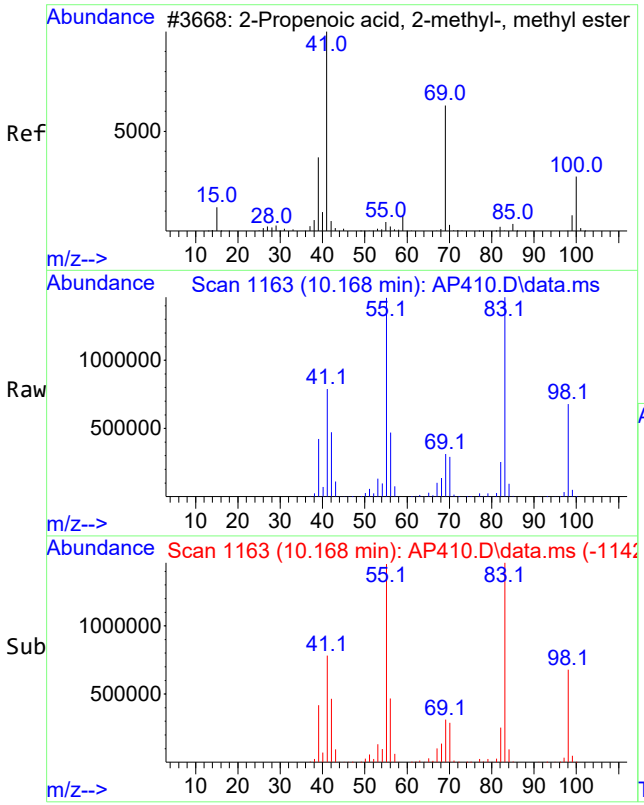


#98 BEFORE analyst DELETION
Isobutyl alcohol
Concen: 578.68 ug/L
RT: 8.973 min Scan# 967
Delta R.T. -0.006 min
Lab File: AP410.D
Acq: 30 Nov 2023 11:23

Tgt Ion: 41 Resp: 360858

Ion	Ratio	Lower	Upper
41	100		
43	43.9	116.1	176.1#

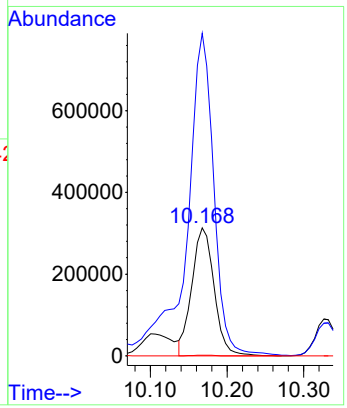


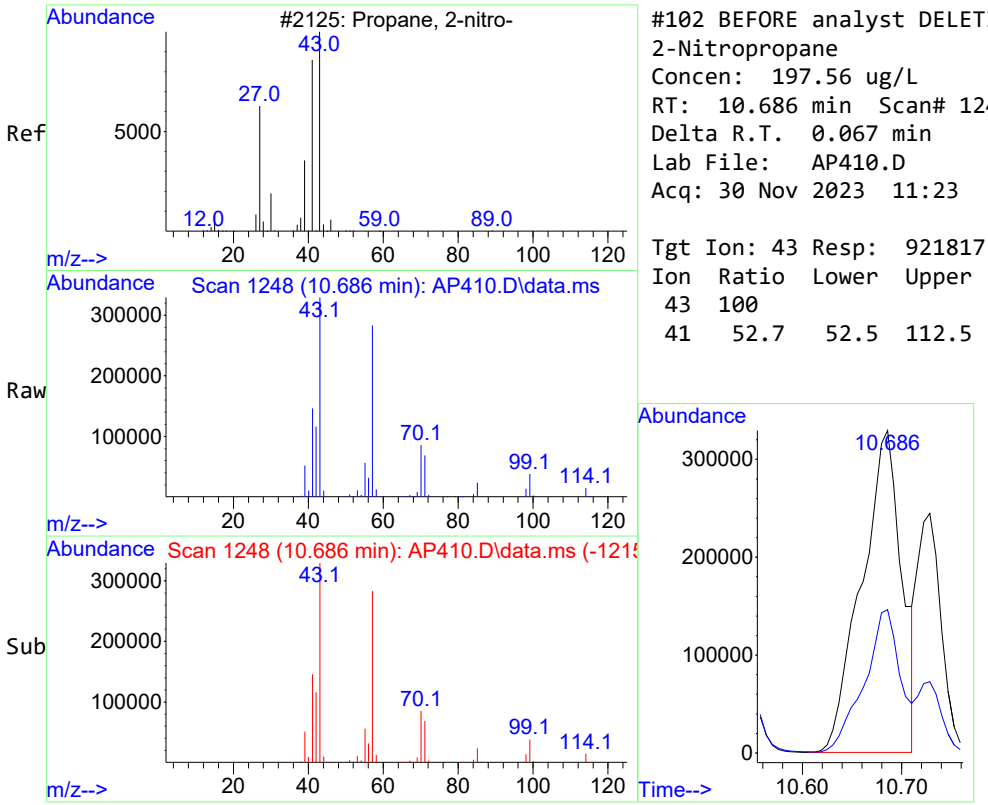


#100
Methyl methacrylate
Concen: 73.85 ug/L
RT: 10.168 min Scan# 1163
Delta R.T. 0.006 min
Lab File: AP410.D
Acq: 30 Nov 2023 11:23

Tgt Ion: 69 Resp: 631624

Ion	Ratio	Lower	Upper
69	100		
41	255.4	118.0	178.0#
100	0.5	7.9	67.9#

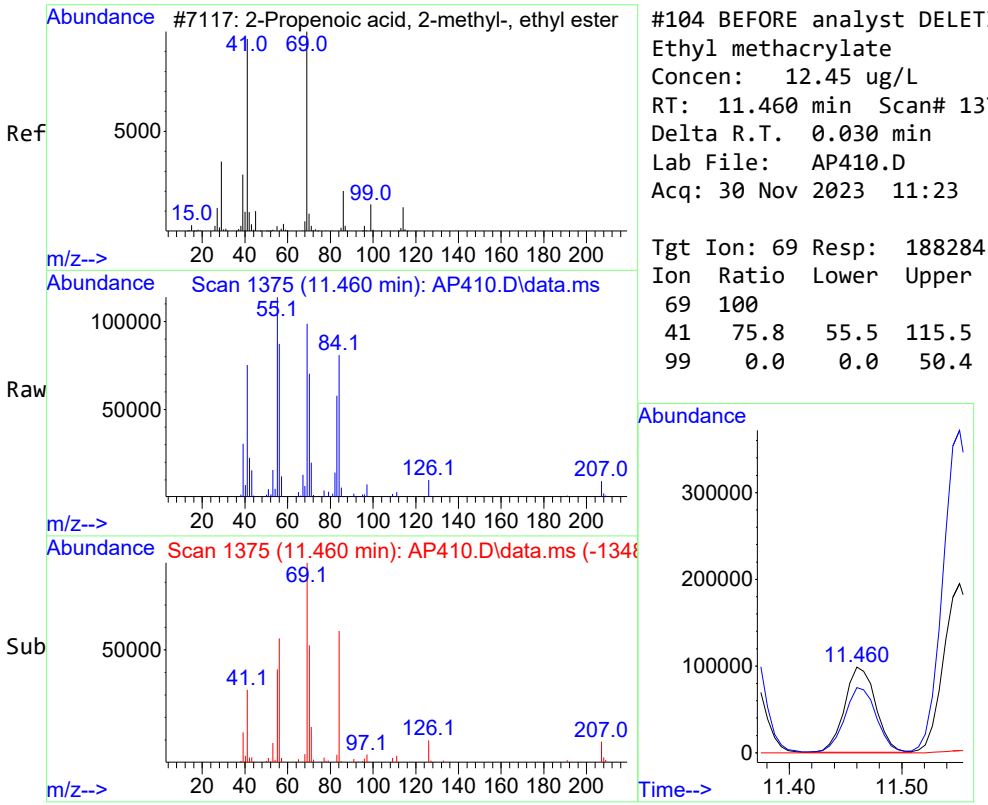




#102 BEFORE analyst DELETION
2-Nitropropane
Concen: 197.56 ug/L
RT: 10.686 min Scan# 1248
Delta R.T. 0.067 min
Lab File: AP410.D
Acq: 30 Nov 2023 11:23

Tgt Ion: 43 Resp: 921817

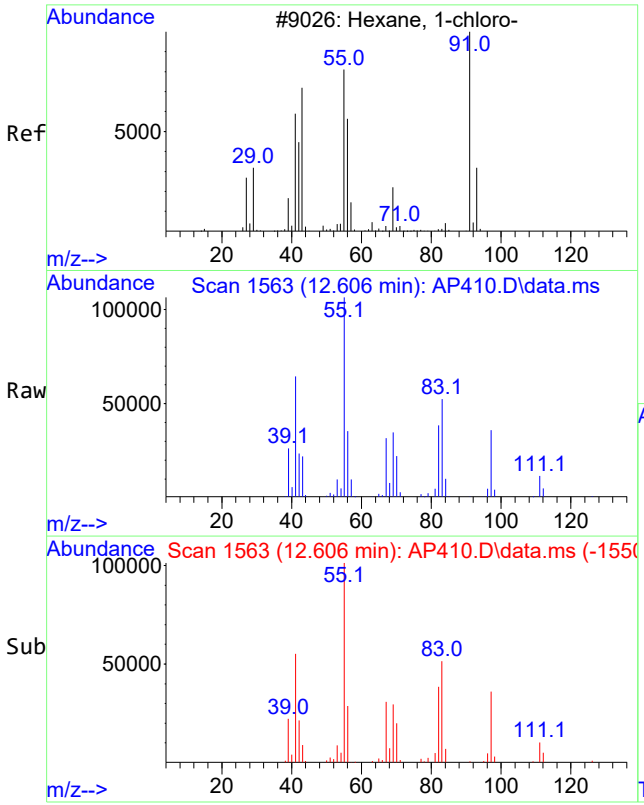
Ion	Ratio	Lower	Upper
43	100		
41	52.7	52.5	112.5



#104 BEFORE analyst DELETION
Ethyl methacrylate
Concen: 12.45 ug/L
RT: 11.460 min Scan# 1375
Delta R.T. 0.030 min
Lab File: AP410.D
Acq: 30 Nov 2023 11:23

Tgt Ion: 69 Resp: 188284

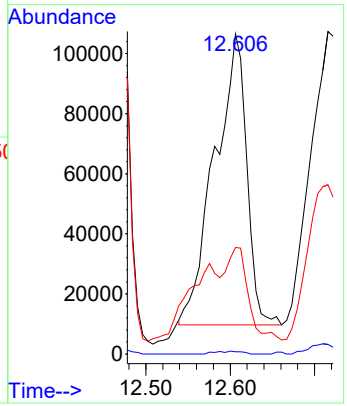
Ion	Ratio	Lower	Upper
69	100		
41	75.8	55.5	115.5
99	0.0	0.0	50.4

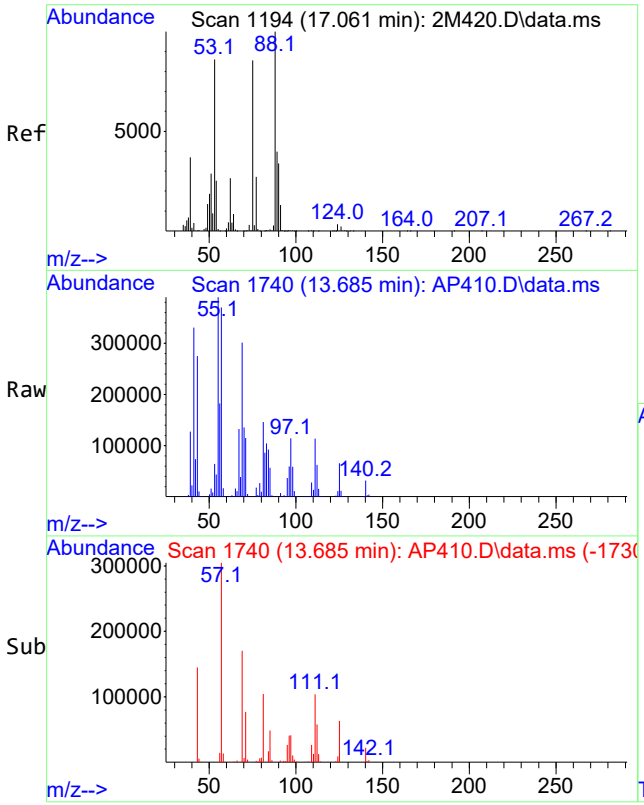


#106 BEFORE analyst DELETION
1-Chlorohexane
Concen: 14.62 ug/L
RT: 12.606 min Scan# 1563
Delta R.T. -0.018 min
Lab File: AP410.D
Acq: 30 Nov 2023 11:23

Tgt Ion: 55 Resp: 255524

Ion	Ratio	Lower	Upper
55	100		
91	0.8	86.5	146.5#
56	0.0	29.4	89.4#

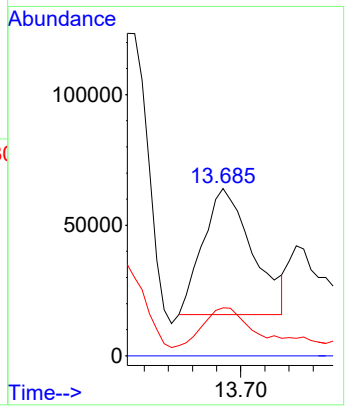


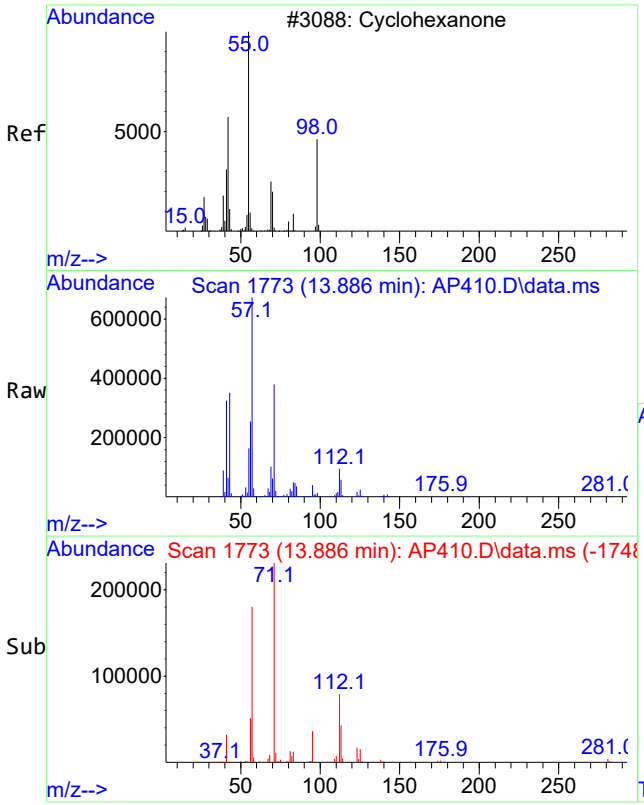


#107 BEFORE analyst DELETION
cis-1,4-Dichloro-2-butene
Concen: 25.34 ug/L
RT: 13.685 min Scan# 1740
Delta R.T. -0.079 min
Lab File: AP410.D
Acq: 30 Nov 2023 11:23

Tgt Ion: 53 Resp: 138262

Ion	Ratio	Lower	Upper
53	100		
88	0.0	65.3	125.3#
77	48.6	0.0	59.6

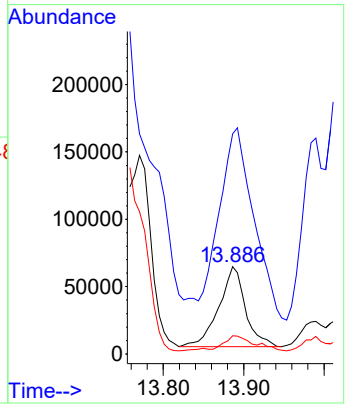


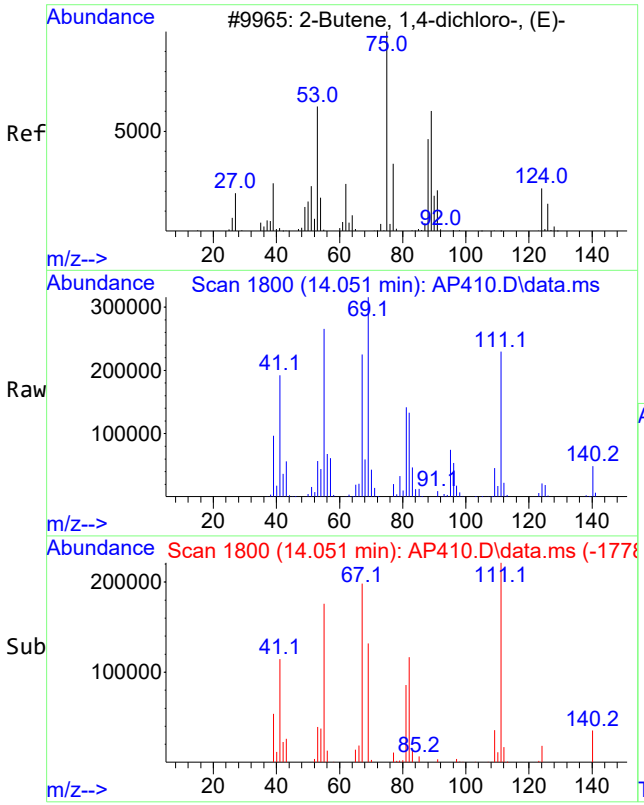


#108 BEFORE analyst DELETION
Cyclohexanone
Concen: 267.35 ug/L
RT: 13.886 min Scan# 1773
Delta R.T. 0.012 min
Lab File: AP410.D
Acq: 30 Nov 2023 11:23

Tgt Ion: 42 Resp: 136920

Ion	Ratio	Lower	Upper
42	100		
55	313.4	120.1	180.1#
98	23.6	21.7	81.7

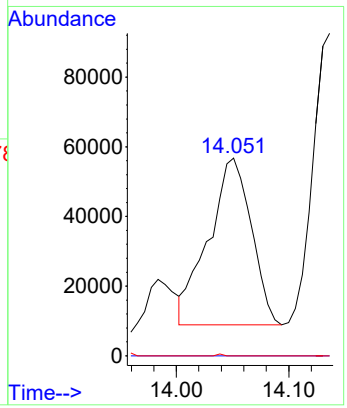


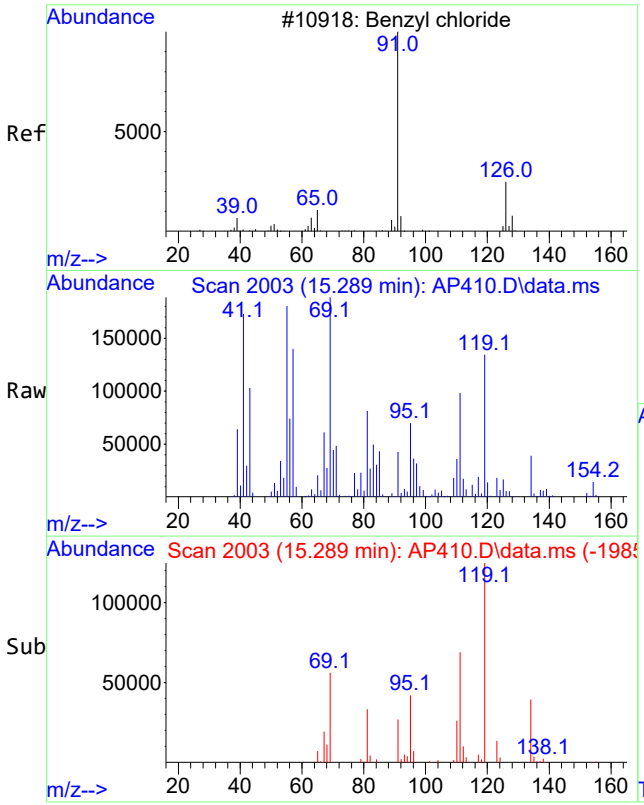


#109 BEFORE analyst DELETION
trans-1,4-Dichloro-2-butene
Concen: 24.78 ug/L
RT: 14.051 min Scan# 1800
Delta R.T. -0.006 min
Lab File: AP410.D
Acq: 30 Nov 2023 11:23

Tgt Ion: 53 Resp: 126099

Ion	Ratio	Lower	Upper
53	100		
88	0.0	15.0	75.0#
75	0.2	81.4	141.4#

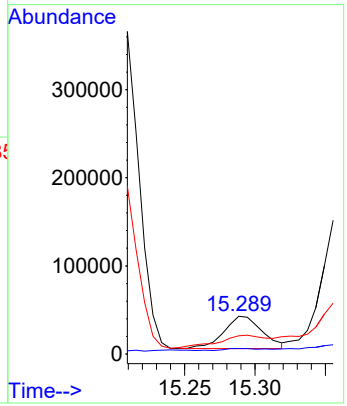




#111 BEFORE analyst DELETION
Benzyl chloride
Concen: 3.82 ug/L
RT: 15.289 min Scan# 2003
Delta R.T. -0.012 min
Lab File: AP410.D
Acq: 30 Nov 2023 11:23

Tgt Ion: 91 Resp: 69382

Ion	Ratio	Lower	Upper
91	100		
126	9.6	0.0	53.1
65	74.5	0.0	44.9#



Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-182**	**Date Collected:**	**11/21/2023 11:15**	**Matrix:**	**SO**
Lab Sample ID:	**646356004**	**Date Received:**	**11/22/2023 09:15**	**%Moisture:**	**.1**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-304523**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2533016**	**Inst:**	**VOAA.I**	**Dilution:**	**1**
Run Date:	**11/30/2023 12:11**	**Analyst:**	**JEB**	**Purge Vol:**	**5 mL**
Prep Date:	**11/30/2023 08:06**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**113023VA\AP412.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	0.333	ug/kg	0.333	1.00
74-87-3	Chloromethane	U	0.333	ug/kg	0.333	1.00
75-01-4	Vinyl chloride	U	0.333	ug/kg	0.333	1.00
74-83-9	Bromomethane	U	0.333	ug/kg	0.333	1.00
75-00-3	Chloroethane	U	0.333	ug/kg	0.333	1.00
75-69-4	Trichlorofluoromethane	U	0.333	ug/kg	0.333	1.00
67-64-1	Acetone	U	1.67	ug/kg	1.67	5.00
75-35-4	1,1-Dichloroethylene	U	0.333	ug/kg	0.333	1.00
74-88-4	Iodomethane	U	1.67	ug/kg	1.67	5.00
75-15-0	Carbon disulfide	U	1.67	ug/kg	1.67	5.00
75-09-2	Methylene chloride	U	1.67	ug/kg	1.67	5.00
156-60-5	trans-1,2-Dichloroethylene	U	0.333	ug/kg	0.333	1.00
75-34-3	1,1-Dichloroethane	U	0.333	ug/kg	0.333	1.00
78-93-3	2-Butanone	U	1.67	ug/kg	1.67	5.00
156-59-2	cis-1,2-Dichloroethylene	U	0.333	ug/kg	0.333	1.00
594-20-7	2,2-Dichloropropane	U	0.333	ug/kg	0.333	1.00
74-97-5	Bromochloromethane	U	0.333	ug/kg	0.333	1.00
67-66-3	Chloroform	U	0.333	ug/kg	0.333	1.00
71-55-6	1,1,1-Trichloroethane	U	0.333	ug/kg	0.333	1.00
563-58-6	1,1-Dichloropropene	U	0.333	ug/kg	0.333	1.00
56-23-5	Carbon tetrachloride	U	0.333	ug/kg	0.333	1.00
107-06-2	1,2-Dichloroethane	U	0.333	ug/kg	0.333	1.00
71-43-2	Benzene	U	0.333	ug/kg	0.333	1.00
79-01-6	Trichloroethylene	U	0.333	ug/kg	0.333	1.00
78-87-5	1,2-Dichloropropane	U	0.333	ug/kg	0.333	1.00
74-95-3	Dibromomethane	U	0.333	ug/kg	0.333	1.00
75-27-4	Bromodichloromethane	U	0.333	ug/kg	0.333	1.00
10061-01-5	cis-1,3-Dichloropropylene	U	0.333	ug/kg	0.333	1.00
108-10-1	4-Methyl-2-pentanone	U	1.67	ug/kg	1.67	5.00
108-88-3	Toluene	U	0.333	ug/kg	0.333	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	0.333	ug/kg	0.333	1.00
79-00-5	1,1,2-Trichloroethane	U	0.333	ug/kg	0.333	1.00
591-78-6	2-Hexanone	U	1.67	ug/kg	1.67	5.00
142-28-9	1,3-Dichloropropane	U	0.333	ug/kg	0.333	1.00
127-18-4	Tetrachloroethylene	U	0.333	ug/kg	0.333	1.00
124-48-1	Dibromochloromethane	U	0.333	ug/kg	0.333	1.00
106-93-4	1,2-Dibromoethane	U	0.333	ug/kg	0.333	1.00
108-90-7	Chlorobenzene	U	0.333	ug/kg	0.333	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-182**	**Date Collected:**	**11/21/2023 11:15**	**Matrix:**	**SO**
Lab Sample ID:	**646356004**	**Date Received:**	**11/22/2023 09:15**	**%Moisture:**	**.1**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-304523**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2533016**	**Inst:**	**VOAA.I**	**Dilution:**	**1**
Run Date:	**11/30/2023 12:11**	**Analyst:**	**JEB**	**Purge Vol:**	**5 mL**
Prep Date:	**11/30/2023 08:06**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**113023VA\AP412.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	0.333	ug/kg	0.333	1.00
179601-23-1	m,p-Xylenes	U	0.667	ug/kg	0.667	2.00
95-47-6	o-Xylene	U	0.333	ug/kg	0.333	1.00
100-42-5	Styrene	U	0.333	ug/kg	0.333	1.00
75-25-2	Bromoform	U	0.333	ug/kg	0.333	1.00
98-82-8	Isopropylbenzene	U	0.333	ug/kg	0.333	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	0.333	ug/kg	0.333	1.00
96-18-4	1,2,3-Trichloropropane	U	0.333	ug/kg	0.333	1.00
108-86-1	Bromobenzene	U	0.333	ug/kg	0.333	1.00
103-65-1	n-Propylbenzene	U	0.333	ug/kg	0.333	1.00
108-67-8	1,3,5-Trimethylbenzene	U	0.333	ug/kg	0.333	1.00
95-49-8	2-Chlorotoluene	U	0.333	ug/kg	0.333	1.00
106-43-4	4-Chlorotoluene	U	0.333	ug/kg	0.333	1.00
98-06-6	tert-Butylbenzene	U	0.333	ug/kg	0.333	1.00
95-63-6	1,2,4-Trimethylbenzene	U	0.333	ug/kg	0.333	1.00
135-98-8	sec-Butylbenzene	U	0.333	ug/kg	0.333	1.00
99-87-6	4-Isopropyltoluene	U	0.333	ug/kg	0.333	1.00
541-73-1	1,3-Dichlorobenzene	U	0.333	ug/kg	0.333	1.00
106-46-7	1,4-Dichlorobenzene	U	0.333	ug/kg	0.333	1.00
104-51-8	n-Butylbenzene	U	0.333	ug/kg	0.333	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	0.500	ug/kg	0.500	1.00
76-13-1	Trichlorotrifluoroethane	U	1.67	ug/kg	1.67	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	0.333	ug/kg	0.333	1.00
95-50-1	1,2-Dichlorobenzene	U	0.333	ug/kg	0.333	1.00

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	52.9	50.0	ug/L	106	(74%-128%)
Toluene-d8	53.6	50.0	ug/L	107	(81%-120%)
1,2-Dichloroethane-d4	47.8	50.0	ug/L	96	(77%-127%)

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Concentration	Units	Fit	Qual
No Tentatively Identified Compounds Found				ug/kg		

Quantitation Report
GEL Laboratories, LLC

JEB 11/30/2023

Data Path : D:\MSDCHEM\1\Data\113023VA\
Data File : AP412.D
Acq On : 30 Nov 2023 12:11
Operator : JEB
InstName : VOAA
Sample : |646356004|2533016|1|VOA|1|VOA8260D_S|
Misc : TNSL 5G N/A SOIL
ALS Vial : 12 Sample Multiplier: 1

MA 11/30/2023

Quant Time: Nov 30 12:30:33 2023
Quant Method : D:\MSDCHEM\1\Data\092123VA\VOAA-092123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Fri Sep 22 08:01:31 2023
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards								Dev(Min)
1) Fluorobenzene	96	9.534	9.540	1.000	3755733	50.00	ug/L	0.00
43) Chlorobenzene-d5	117	12.710	12.710	1.000	2289882	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	15.154	15.161	1.000	1048421	50.00	ug/L	0.00
84) B Fluorobenzene	96	9.534	9.540	1.000	3755733	50.00	ug/L	0.00
103) B Chlorobenzene-d5	117	12.710	12.710	1.000	2291982	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	15.154	15.154	1.000	1048421	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	65	9.180	9.186	0.963	1265324	47.78	ug/L	0.00
45) Toluene-d8	98	11.180	11.180	0.880	3541586	53.60	ug/L	0.00
63) Bromofluorobenzene	95	13.917	13.923	0.918	1162541	52.88	ug/L	0.00

Compound	Amount	Range	Recovery
30) 1,2-Dichloroethane-d4	50.000	77 - 127	96%
45) Toluene-d8	50.000	81 - 120	107%
63) Bromofluorobenzene	50.000	74 - 128	106%

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	3.893	0.000	0	N.D.		
3) Chloromethane	50	4.258	4.281	0.447	2499	N.D.		
4) Vinyl chloride		0.000	4.478	0.000	0	N.D.		
5) Bromomethane		0.000	5.077	0.000	0	N.D.		
6) Chloroethane		0.000	5.217	0.000	0	N.D.		
7) Trichlorofluoromethane		0.000	5.608	0.000	0	N.D.		
8) Ethyl ether		0.000	5.931	0.000	0	N.D.		
9) Acetone	43	6.278	6.290	0.659	7501	N.D.		
10) 1,1-Dichloroethylene		0.000	6.278	0.000	0	N.D.		
11) Iodomethane		0.000	6.540	0.000	0	N.D.		
12) Acetonitrile	41	6.613	6.632	0.694	1100	N.D.		
13) Methyl acetate	43	6.674	6.687	0.700	2542	N.D.		
14) Carbon disulfide		0.000	6.650	0.000	0	N.D.		
15) Methylene chloride	84	6.839	6.851	0.717	5402	Below Cal		87
16) tert-Butyl methyl ether		0.000	7.168	0.000	0	N.D.		
17) trans-1,2-Dichloroethy...		0.000	7.193	0.000	0	N.D.		
18) Hexane		0.000	7.491	0.000	0	N.D.		
19) Vinyl acetate	43	7.644	7.656	0.802	197	N.D.		
20) 1,1-Dichloroethane		0.000	7.674	0.000	0	N.D.		
21) 2-Butanone	43	8.278	8.272	0.868	2714	N.D.		
22) cis-1,2-Dichloroethylene		0.000	8.308	0.000	0	N.D.		
23) 2,2-Dichloropropane		0.000	8.333	0.000	0	N.D.		
24) Bromochloromethane		0.000	8.576	0.000	0	N.D.		
25) Chloroform	83	8.607	8.619	0.903	200	N.D.		
26) 1,1,1-Trichloroethane		0.000	8.887	0.000	0	N.D.		
27) Cyclohexane	56	9.021	8.979	0.946	184	N.D.		
28) 1,1-Dichloropropene		0.000	9.046	0.000	0	N.D.		
29) Carbon tetrachloride		0.000	9.076	0.000	0	N.D.		
31) 1,2-Dichloroethane	62	9.180	9.265	0.963	189	N.D.		
32) Benzene	78	9.277	9.284	0.973	251	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MSDCHEM\1\Data\113023VA\
Data File : AP412.D
Acq On : 30 Nov 2023 12:11
Operator : JEB
InstName : VOAA
Sample : |646356004|2533016|1|VOA|1|VOA8260D_S|
Misc : TNSL 5G N/A SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Nov 30 12:30:33 2023
Quant Method : D:\MSDCHEM\1\Data\092123VA\VOAA-092123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Fri Sep 22 08:01:31 2023
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
33) Cyclohexene	67	9.381	9.399	0.984	495	N.D.	
34) n-Butyl alcohol		0.000	9.662	0.000	0	N.D.	
35) Trichloroethylene	95	9.942	9.924	1.043	194	N.D.	
36) 2-Pentanone	43	9.875	10.021	1.036	939	N.D.	
37) 1,2-Dichloropropane		0.000	10.168	0.000	0	N.D.	
38) Methylcyclohexane	83	10.161	10.174	1.066	199	N.D.	
39) Dibromomethane		0.000	10.296	0.000	0	N.D.	
40) Bromodichloromethane		0.000	10.418	0.000	0	N.D.	
41) 2-Chloroethylvinyl ether		0.000	10.649	0.000	0	N.D.	
42) cis-1,3-Dichloropropylene		0.000	10.869	0.000	0	N.D.	
44) 4-Methyl-2-pentanone		0.000	10.972	0.000	0	N.D.	
46) Toluene	91	11.180	11.253	0.880	3360	N.D.	
47) trans-1,3-Dichloroprop...		0.000	11.411	0.000	0	N.D.	
48) 1,1,2-Trichloroethane		0.000	11.631	0.000	0	N.D.	
49) 2-Hexanone		0.000	11.826	0.000	0	N.D.	
50) 1,3-Dichloropropane		0.000	11.820	0.000	0	N.D.	
51) Tetrachloroethylene		0.000	11.850	0.000	0	N.D.	
52) Dibromochloromethane		0.000	12.088	0.000	0	N.D.	
53) 1,2-Dibromoethane		0.000	12.253	0.000	0	N.D.	
54) Chlorobenzene		0.000	12.746	0.000	0	N.D.	
55) 1,1,1,2-Tetrachloroethane	131	12.911	12.801	1.016	190	N.D.	
56) Ethylbenzene	91	12.807	12.813	1.008	3785	N.D.	
57) m,p-Xylenes	106	12.929	12.929	1.017	206	N.D.	
58) o-Xylene	91	13.356	13.362	1.051	2822	N.D.	
59) Styrene		0.000	13.368	0.000	0	N.D.	
61) Bromoform		0.000	13.612	0.000	0	N.D.	
62) Isopropylbenzene		0.000	13.728	0.000	0	N.D.	
64) 1,1,2,2-Tetrachloroethane	83	14.063	14.002	0.928	2186	N.D.	
65) 1,2,3-Trichloropropane		0.000	14.088	0.000	0	N.D.	
66) Bromobenzene		0.000	14.130	0.000	0	N.D.	
67) n-Propylbenzene	91	14.155	14.161	0.934	453	N.D.	
68) 1,3,5-Trimethylbenzene	105	14.234	14.319	0.939	1834	N.D.	
69) 2-Chlorotoluene		0.000	14.307	0.000	0	N.D.	
70) 4-Chlorotoluene	91	14.405	14.411	0.951	1582	N.D.	
71) tert-Butylbenzene		0.000	14.697	0.000	0	N.D.	
72) 1,2,4-Trimethylbenzene	105	14.734	14.740	0.972	1930	N.D.	
73) sec-Butylbenzene	105	14.898	14.923	0.983	422	N.D.	
74) 4-Isopropyltoluene	119	15.051	15.051	0.993	1375	N.D.	
75) 1,3-Dichlorobenzene		0.000	15.100	0.000	0	N.D.	
76) 1,4-Dichlorobenzene	146	15.179	15.185	1.002	706	N.D.	
77) n-Butylbenzene	91	15.447	15.490	1.019	2721	N.D.	
78) 1,2-Dichlorobenzene	146	15.599	15.599	1.029	241	N.D.	
79) 1,2-Dibromo-3-chloropr...		0.000	16.441	0.000	0	N.D.	
80) 1,2,4-Trichlorobenzene	180	17.470	17.467	1.153	1084	N.D.	
81) Hexachlorobutadiene		0.000	17.652	0.000	0	N.D.	
82) Naphthalene	128	17.833	17.829	1.177	5491	N.D.	
83) 1,2,3-Trichlorobenzene	180	18.172	18.161	1.199	1144	N.D.	
85) Acrolein		0.000	6.101	0.000	0	N.D.	
86) Trichlorotrifluoroethane		0.000	6.278	0.000	0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MSDCHEM\1\Data\113023VA\
Data File : AP412.D
Acq On : 30 Nov 2023 12:11
Operator : JEB
InstName : VOAA
Sample : |646356004|2533016|1|VOA|1|VOA8260D_S|
Misc : TNSL 5G N/A SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Nov 30 12:30:33 2023
Quant Method : D:\MSDCHEM\1\Data\092123VA\VOAA-092123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Fri Sep 22 08:01:31 2023
Response via : Initial Calibration
Integrator: RTE

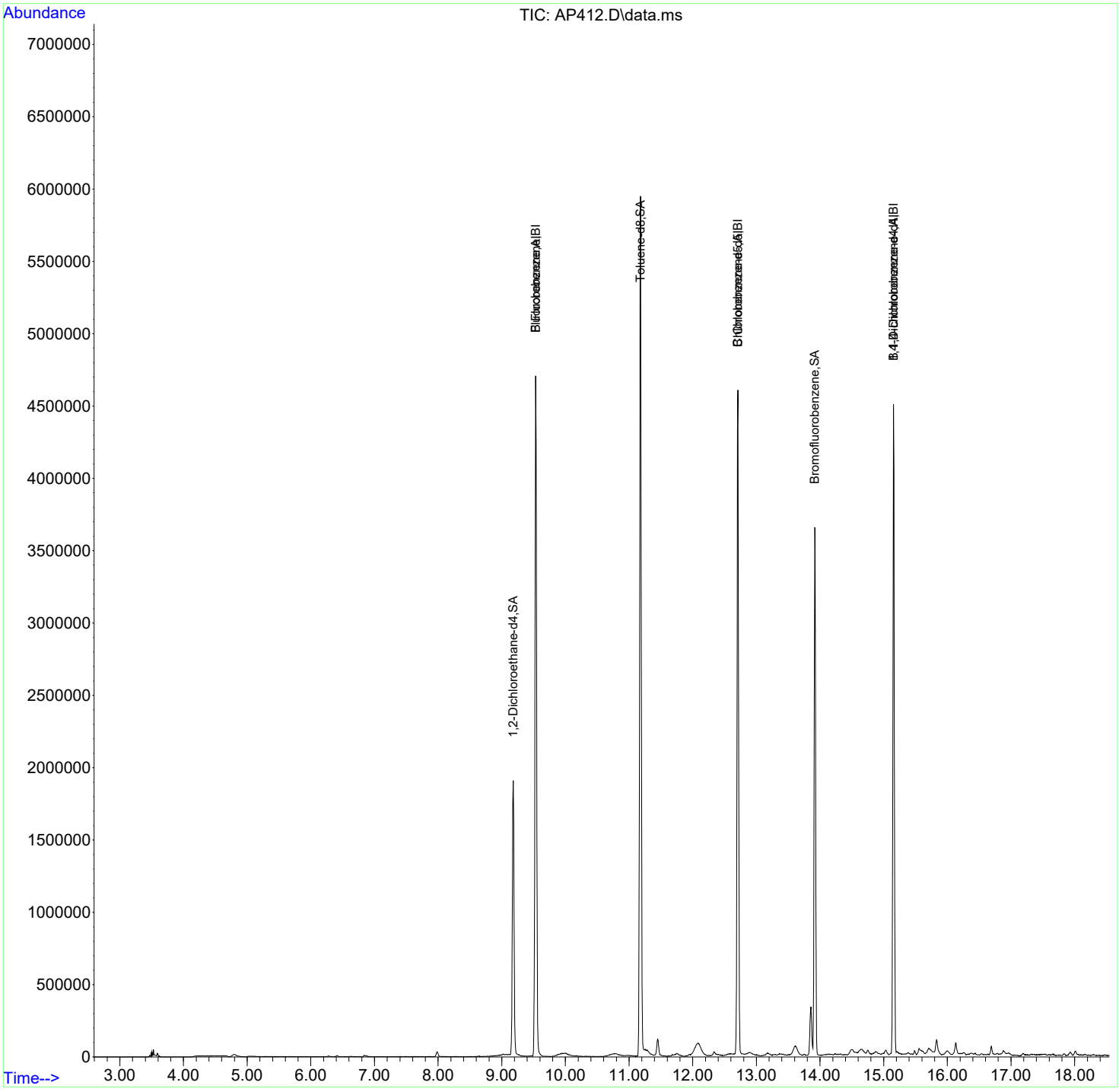
	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
87)	Isopropyl Alcohol	45	6.412	6.394	0.673	3080	N.D.	
88)	Allyl chloride		0.000	6.705	0.000	0	N.D.	
89)	tert-Butyl Alcohol	59	6.894	6.888	0.723	2773	N.D.	
90)	Acrylonitrile		0.000	7.107	0.000	0	N.D.	
91)	Isopropyl ether		0.000	7.680	0.000	0	N.D.	
92)	2-Chloro-1,3-butadiene		0.000	7.778	0.000	0	N.D.	
93)	Ethyl tert-butyl ether	59	7.985	8.083	0.838	1009	N.D.	
94)	Ethyl acetate	43	8.278	8.290	0.868	2714	N.D.	
95)	Propionitrile		0.000	8.333	0.000	0	N.D.	
96)	Methacrylonitrile	41	8.528	8.515	0.894	411	N.D.	
97)	Tetrahydrofuran	42	8.637	8.631	0.906	1311	N.D.	
98)	Isobutyl alcohol		0.000	8.979	0.000	0	N.D.	
99)	Methyl tert-amyl ether		0.000	9.320	0.000	0	N.D.	
100)	Methyl methacrylate	69	10.168	10.162	1.067	495	N.D.	
101)	1,4-Dioxane		0.000	10.259	0.000	0	N.D.	
102)	2-Nitropropane	43	10.564	10.619	1.108	212	N.D.	
104)	Ethyl methacrylate		0.000	11.430	0.000	0	N.D.	
106)	1-Chlorohexane		0.000	12.624	0.000	0	N.D.	
107)	cis-1,4-Dichloro-2-butene	53	13.758	13.764	0.908	583	N.D.	
108)	Cyclohexanone	42	13.874	13.874	0.916	184	N.D.	
109)	trans-1,4-Dichloro-2-b...		0.000	14.057	0.000	0	N.D.	
110)	Pentachloroethane		0.000	14.752	0.000	0	N.D.	
111)	Benzyl chloride		0.000	15.301	0.000	0	N.D.	
112)	bis(2-Chloroisopropyl)...		0.000	15.703	0.000	0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MSDCHEM\1\Data\113023VA\
Data File : AP412.D
Acq On : 30 Nov 2023 12:11
Operator : JEB
InstName : VOAA
Sample : |646356004|2533016|1|VOA|1|VOA8260D_S|
Misc : TNSL 5G N/A SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Nov 30 12:30:33 2023
Quant Method : D:\MSDCHEM\1\Data\092123VA\VOAA-092123-8260D.M
Quant Title : Volatile Organics SubList :
QLast Update : Fri Sep 22 08:01:31 2023
Response via : Initial Calibration
Integrator: RTE



Library Search Compound Report
GEL Laboratories, LLC

JEB 11/30/2023

Data Path : D:\MSDCHEM\1\Data\113023VA\
Data File : AP412.D
Acq On : 30 Nov 2023 12:11
Operator : JEB
Sample : |646356004|2533016|1|VOA|1|VOA8260D_S|
Misc : TNSL 5G N/A SOIL
ALS Vial : 12 Sample Multiplier: 1

MA 11/30/2023

Quant Method : D:\MSDCHEM\1\Data\092123VA\VOAA-092123-8260D.M
Quant Title : Volatile Organics SubList :

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

No Library Search Compounds Detected
****

Tentatively Identified Compound (LSC) summary
GEL Laboratories, LLC

Data Path : D:\MSDCHEM\1\Data\113023VA\
Data File : AP412.D
Acq On : 30 Nov 2023 12:11
Operator : JEB
Sample : |646356004|2533016|1|VOA|1|VOA8260D_S|
Misc : TNSL 5G N/A SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Method : D:\MSDCHEM\1\Data\092123VA\VOAA-092123-8260D.M
Quant Title : Volatile Organics SubList :

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

			(ug/L)		Internal Standard		
TIC Top Hit name	CAS #	RT	EstConc	Response	# RT	Resp	Conc

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-182**	**Date Collected:**	**11/21/2023 11:20**	**Matrix:**	**W**
Lab Sample ID:	**646356005**	**Date Received:**	**11/22/2023 09:15**		
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-304530**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2532718**	**Inst:**	**VOA8.I**	**Dilution:**	**1**
Run Date:	**11/29/2023 18:51**	**Analyst:**	**KP2**	**Purge Vol:**	**5 mL**
Prep Date:	**11/29/2023 18:51**				
Data File:	**112923V8\8N316.D**	**Column:**	**Serial Number: 1**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	0.355	ug/L	0.355	1.00
74-87-3	Chloromethane	U	0.333	ug/L	0.333	1.00
75-01-4	Vinyl chloride	U	0.333	ug/L	0.333	1.00
74-83-9	Bromomethane	U	0.337	ug/L	0.337	1.00
75-00-3	Chloroethane	U	0.333	ug/L	0.333	1.00
75-69-4	Trichlorofluoromethane	U	0.333	ug/L	0.333	1.00
60-29-7	Ethyl ether	U	0.333	ug/L	0.333	1.00
67-64-1	Acetone		67.7	ug/L	1.74	5.00
75-35-4	1,1-Dichloroethylene	U	0.333	ug/L	0.333	1.00
74-88-4	Iodomethane	U	1.67	ug/L	1.67	5.00
75-05-8	Acetonitrile	U	8.33	ug/L	8.33	25.0
75-15-0	Carbon disulfide	U	1.67	ug/L	1.67	5.00
75-09-2	Methylene chloride	U	0.500	ug/L	0.500	5.00
1634-04-4	tert-Butyl methyl ether	U	0.333	ug/L	0.333	1.00
156-60-5	trans-1,2-Dichloroethylene	U	0.333	ug/L	0.333	1.00
108-05-4	Vinyl acetate	U	1.67	ug/L	1.67	5.00
75-34-3	1,1-Dichloroethane	U	0.333	ug/L	0.333	1.00
78-93-3	2-Butanone	U	1.67	ug/L	1.67	5.00
156-59-2	cis-1,2-Dichloroethylene	U	0.333	ug/L	0.333	1.00
594-20-7	2,2-Dichloropropane	U	0.333	ug/L	0.333	1.00
74-97-5	Bromochloromethane	U	0.333	ug/L	0.333	1.00
67-66-3	Chloroform		2.51	ug/L	0.333	1.00
71-55-6	1,1,1-Trichloroethane	U	0.333	ug/L	0.333	1.00
563-58-6	1,1-Dichloropropene	U	0.333	ug/L	0.333	1.00
56-23-5	Carbon tetrachloride	U	0.333	ug/L	0.333	1.00
107-06-2	1,2-Dichloroethane	U	0.333	ug/L	0.333	1.00
71-43-2	Benzene	U	0.333	ug/L	0.333	1.00
71-36-3	n-Butyl alcohol	U	21.1	ug/L	21.1	50.0
79-01-6	Trichloroethylene	U	0.333	ug/L	0.333	1.00
78-87-5	1,2-Dichloropropane	U	0.333	ug/L	0.333	1.00
74-95-3	Dibromomethane	U	0.333	ug/L	0.333	1.00
75-27-4	Bromodichloromethane	U	0.333	ug/L	0.333	1.00
10061-01-5	cis-1,3-Dichloropropylene	U	0.333	ug/L	0.333	1.00
108-10-1	4-Methyl-2-pentanone	U	1.67	ug/L	1.67	5.00
108-88-3	Toluene	U	0.333	ug/L	0.333	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	0.333	ug/L	0.333	1.00
79-00-5	1,1,2-Trichloroethane	U	0.333	ug/L	0.333	1.00
591-78-6	2-Hexanone	U	1.67	ug/L	1.67	5.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-182**	**Date Collected:**	**11/21/2023 11:20**	**Matrix:**	**W**
Lab Sample ID:	**646356005**	**Date Received:**	**11/22/2023 09:15**		
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-304530**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2532718**	**Inst:**	**VOA8.I**	**Dilution:**	**1**
Run Date:	**11/29/2023 18:51**	**Analyst:**	**KP2**	**Purge Vol:**	**5 mL**
Prep Date:	**11/29/2023 18:51**				
Data File:	**112923V8\8N316.D**	**Column:**	**Serial Number: 1**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
142-28-9	1,3-Dichloropropane	U	0.333	ug/L	0.333	1.00
127-18-4	Tetrachloroethylene	U	0.333	ug/L	0.333	1.00
124-48-1	Dibromochloromethane	U	0.333	ug/L	0.333	1.00
106-93-4	1,2-Dibromoethane	U	0.333	ug/L	0.333	1.00
108-90-7	Chlorobenzene	U	0.333	ug/L	0.333	1.00
100-41-4	Ethylbenzene	U	0.333	ug/L	0.333	1.00
179601-23-1	m,p-Xylenes	U	0.500	ug/L	0.500	2.00
95-47-6	o-Xylene	U	0.333	ug/L	0.333	1.00
100-42-5	Styrene	U	0.333	ug/L	0.333	1.00
75-25-2	Bromoform	U	0.333	ug/L	0.333	1.00
98-82-8	Isopropylbenzene	U	0.333	ug/L	0.333	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	0.333	ug/L	0.333	1.00
96-18-4	1,2,3-Trichloropropane	U	0.333	ug/L	0.333	1.00
108-86-1	Bromobenzene	U	0.333	ug/L	0.333	1.00
103-65-1	n-Propylbenzene	U	0.333	ug/L	0.333	1.00
108-67-8	1,3,5-Trimethylbenzene	U	0.500	ug/L	0.500	2.00
95-49-8	2-Chlorotoluene	U	0.333	ug/L	0.333	1.00
106-43-4	4-Chlorotoluene	U	0.333	ug/L	0.333	1.00
98-06-6	tert-Butylbenzene	U	0.333	ug/L	0.333	1.00
95-63-6	1,2,4-Trimethylbenzene	U	0.333	ug/L	0.333	1.00
135-98-8	sec-Butylbenzene	U	0.333	ug/L	0.333	1.00
99-87-6	4-Isopropyltoluene	U	0.333	ug/L	0.333	1.00
541-73-1	1,3-Dichlorobenzene	U	0.333	ug/L	0.333	1.00
106-46-7	1,4-Dichlorobenzene	U	0.333	ug/L	0.333	1.00
104-51-8	n-Butylbenzene	U	0.333	ug/L	0.333	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	0.333	ug/L	0.333	1.00
87-68-3	Hexachlorobutadiene	U	0.333	ug/L	0.333	1.00
91-20-3	Naphthalene	U	0.333	ug/L	0.333	1.00
87-61-6	1,2,3-Trichlorobenzene	U	0.333	ug/L	0.333	1.00
107-02-8	Acrolein	UQ	1.67	ug/L	1.67	5.00
76-13-1	Trichlorotrifluoroethane	U	2.98	ug/L	2.98	5.00
107-05-1	Allyl chloride	U	1.67	ug/L	1.67	5.00
107-13-1	Acrylonitrile	U	1.67	ug/L	1.67	5.00
126-99-8	2-Chloro-1,3-butadiene	U	0.333	ug/L	0.333	1.00
107-12-0	Propionitrile	U	1.67	ug/L	1.67	5.00
126-98-7	Methacrylonitrile	U	1.67	ug/L	1.67	5.00
78-83-1	Isobutyl alcohol	U	16.7	ug/L	16.7	50.0
80-62-6	Methyl methacrylate	U	1.67	ug/L	1.67	5.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-182**	**Date Collected:**	**11/21/2023 11:20**	**Matrix:**	**W**
Lab Sample ID:	**646356005**	**Date Received:**	**11/22/2023 09:15**		
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-304530**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2532718**	**Inst:**	**VOA8.I**	**Dilution:**	**1**
Run Date:	**11/29/2023 18:51**	**Analyst:**	**KP2**	**Purge Vol:**	**5 mL**
Prep Date:	**11/29/2023 18:51**				
Data File:	**112923V8\8N316.D**	**Column:**	**Serial Number: 1**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
97-63-2	Ethyl methacrylate	U	1.67	ug/L	1.67	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	0.333	ug/L	0.333	1.00
120-82-1	1,2,4-Trichlorobenzene	U	0.333	ug/L	0.333	1.00
95-50-1	1,2-Dichlorobenzene	U	0.333	ug/L	0.333	1.00

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	49.2	50.0	ug/L	98	(76%-127%)
Toluene-d8	47.6	50.0	ug/L	95	(77%-121%)
Bromofluorobenzene	46.9	50.0	ug/L	94	(74%-123%)

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Concentration	Units	Fit	Qual
	No Tentatively Identified Compounds Found			ug/L		

KEP 11/30/2023

KP 11/30/2023

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MSDCHEM\1\Data\112923V8\
Data File : 8N316.D
Acq On : 29 Nov 2023 18:51
Operator : kp2
InstName : VOA8
Sample : |646356005|2532718|1|VOAF|1|VOA8260D_L|
Misc : TNSL 5ML PH<2
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Nov 30 09:37:48 2023
Quant Method : D:\MSDCHEM\1\Data\101323V8_ICAL\VOA8-8260D-101323.M
Quant Title : Volatile Organics SubList :
QLast Update : Wed Nov 29 11:24:17 2023
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards								Dev(Min)
1) Fluorobenzene	96	10.388	10.388	1.000	719036	50.00	ug/L	0.00
43) Chlorobenzene-d5	117	13.570	13.570	1.000	519890	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	16.003	16.003	1.000	325574	50.00	ug/L	0.00
84) B Fluorobenzene	96	10.388	10.382	1.000	719036	50.00	ug/L	0.00
103) B Chlorobenzene-d5	117	13.570	13.571	1.000	519890	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	16.003	16.003	1.000	325574	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	65	10.035	10.034	0.966	222087	49.24	ug/L	0.00
45) Toluene-d8	98	12.034	12.034	0.887	658629	47.56	ug/L	0.00
63) Bromofluorobenzene	95	14.771	14.771	0.923	266364	46.86	ug/L	0.00

Compound	Amount	Range	Recovery
30) 1,2-Dichloroethane-d4	50.000	76 - 127	98%
45) Toluene-d8	50.000	77 - 121	95%
63) Bromofluorobenzene	50.000	74 - 123	94%

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.657	0.000	0	N.D.		
3) Chloromethane		0.000	5.067	0.000	0	N.D.		
4) Vinyl chloride		0.000	5.279	0.000	0	N.D.		
5) Bromomethane	94	5.834	5.889	0.562	172	N.D.		
6) Chloroethane		0.000	6.005	0.000	0	N.D.		
7) Trichlorofluoromethane		0.000	6.371	0.000	0	N.D.		
8) Ethyl ether		0.000	6.718	0.000	0	N.D.		
9) Acetone	43	7.102	7.102	0.684	77980	67.66	ug/L	93
10) 1,1-Dichloroethylene		0.000	7.102	0.000	0	N.D.		
11) Iodomethane		0.000	7.346	0.000	0	N.D.		
12) Acetonitrile	41	7.480	7.456	0.720	3795	N.D.		
13) Methyl acetate	43	7.511	7.492	0.723	725	N.D.		
14) Carbon disulfide		0.000	7.480	0.000	0	N.D.		
15) Methylene chloride	49	7.675	7.675	0.739	1825	Below Cal		86
16) tert-Butyl methyl ether		0.000	7.974	0.000	0	N.D.		
17) trans-1,2-Dichloroethy...		0.000	8.017	0.000	0	N.D.		
18) Hexane	57	8.291	8.303	0.798	115	N.D.		
19) Vinyl acetate	43	8.468	8.462	0.815	116	N.D.		
20) 1,1-Dichloroethane		0.000	8.510	0.000	0	N.D.		
21) 2-Butanone	43	9.108	9.096	0.877	2227	N.D.		
22) cis-1,2-Dichloroethylene		0.000	9.144	0.000	0	N.D.		
23) 2,2-Dichloropropane		0.000	9.175	0.000	0	N.D.		
24) Bromochloromethane		0.000	9.425	0.000	0	N.D.		
25) Chloroform	83	9.455	9.455	0.910	15858	2.51	ug/L	95
26) 1,1,1-Trichloroethane		0.000	9.736	0.000	0	N.D.		
27) Cyclohexane		0.000	9.827	0.000	0	N.D.		
28) 1,1-Dichloropropene		0.000	9.888	0.000	0	N.D.		
29) Carbon tetrachloride		0.000	9.925	0.000	0	N.D.		
31) 1,2-Dichloroethane		0.000	10.114	0.000	0	N.D.		
32) Benzene		0.000	10.132	0.000	0	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MSDCHEM\1\Data\112923V8\
Data File : 8N316.D
Acq On : 29 Nov 2023 18:51
Operator : kp2
InstName : VOA8
Sample : |646356005|2532718|1|VOAF|1|VOA8260D_L|
Misc : TNSL 5ML PH<2
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Nov 30 09:37:48 2023
Quant Method : D:\MSDCHEM\1\Data\101323V8_ICAL\VOA8-8260D-101323.M
Quant Title : Volatile Organics SubList :
QLast Update : Wed Nov 29 11:24:17 2023
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
33) Cyclohexene	67	10.169	10.248	0.979	209	N.D.	
34) n-Butyl alcohol		0.000	10.479	0.000	0	N.D.	
35) Trichloroethylene	95	10.772	10.772	1.037	226	N.D.	
36) 2-Pentanone	43	10.858	10.857	1.045	115	N.D.	
37) 1,2-Dichloropropane		0.000	11.022	0.000	0	N.D.	
38) Methylcyclohexane		0.000	11.022	0.000	0	N.D.	
39) Dibromomethane		0.000	11.156	0.000	0	N.D.	
40) Bromodichloromethane		0.000	11.266	0.000	0	N.D.	
41) 2-Chloroethylvinyl ether		0.000	11.491	0.000	0	N.D.	
42) cis-1,3-Dichloropropylene		0.000	11.723	0.000	0	N.D.	
44) 4-Methyl-2-pentanone		0.000	11.815	0.000	0	N.D.	
46) Toluene	91	12.107	12.107	0.892	2974	N.D.	
47) trans-1,3-Dichloroprop...		0.000	12.266	0.000	0	N.D.	
48) 1,1,2-Trichloroethane		0.000	12.485	0.000	0	N.D.	
49) 2-Hexanone	43	12.747	12.668	0.939	2727	N.D.	
50) 1,3-Dichloropropane		0.000	12.680	0.000	0	N.D.	
51) Tetrachloroethylene	164	12.699	12.705	0.936	408	N.D.	
52) Dibromochloromethane		0.000	12.949	0.000	0	N.D.	
53) 1,2-Dibromoethane		0.000	13.119	0.000	0	N.D.	
54) Chlorobenzene	112	13.595	13.607	1.002	142	N.D.	
55) 1,1,1,2-Tetrachloroethane		0.000	13.656	0.000	0	N.D.	
56) Ethylbenzene	91	13.662	13.668	1.007	395	N.D.	
57) m,p-Xylenes	106	13.772	13.772	1.015	678	N.D.	
58) o-Xylene	91	14.217	14.210	1.048	851	N.D.	
59) Styrene	104	14.217	14.210	1.048	106	N.D.	
61) Bromoform		0.000	14.479	0.000	0	N.D.	
62) Isopropylbenzene		0.000	14.570	0.000	0	N.D.	
64) 1,1,2,2-Tetrachloroethane		0.000	14.844	0.000	0	N.D.	
65) 1,2,3-Trichloropropane		0.000	14.936	0.000	0	N.D.	
66) Bromobenzene		0.000	14.985	0.000	0	N.D.	
67) n-Propylbenzene	91	14.991	14.997	0.937	101	N.D.	
68) 1,3,5-Trimethylbenzene	105	15.149	15.149	0.947	761	N.D.	
69) 2-Chlorotoluene		0.000	15.149	0.000	0	N.D.	
70) 4-Chlorotoluene		0.000	15.253	0.000	0	N.D.	
71) tert-Butylbenzene		0.000	15.527	0.000	0	N.D.	
72) 1,2,4-Trimethylbenzene	105	15.570	15.564	0.973	2528	N.D.	
73) sec-Butylbenzene		0.000	15.753	0.000	0	N.D.	
74) 4-Isopropyltoluene	119	15.869	15.875	0.992	257	N.D.	
75) 1,3-Dichlorobenzene	146	15.954	15.942	0.997	204	N.D.	
76) 1,4-Dichlorobenzene		0.000	16.033	0.000	0	N.D.	
77) n-Butylbenzene		0.000	16.326	0.000	0	N.D.	
78) 1,2-Dichlorobenzene		0.000	16.466	0.000	0	N.D.	
79) 1,2-Dibromo-3-chloropr...		0.000	17.362	0.000	0	N.D.	
80) 1,2,4-Trichlorobenzene		0.000	18.454	0.000	0	N.D.	
81) Hexachlorobutadiene		0.000	18.630	0.000	0	N.D.	
82) Naphthalene	128	18.856	18.856	1.178	1396	N.D.	
83) 1,2,3-Trichlorobenzene	180	19.228	19.209	1.202	145	N.D.	
85) Acrolein		0.000	6.919	0.000	0	N.D.	
86) Trichlorotrifluoroethane		0.000	7.084	0.000	0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MSDCHEM\1\Data\112923V8\
Data File : 8N316.D
Acq On : 29 Nov 2023 18:51
Operator : kp2
InstName : VOA8
Sample : |646356005|2532718|1|VOAF|1|VOA8260D_L|
Misc : TNSL 5ML PH<2
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Nov 30 09:37:48 2023
Quant Method : D:\MSDCHEM\1\Data\101323V8_ICAL\VOA8-8260D-101323.M
Quant Title : Volatile Organics SubList :
QLast Update : Wed Nov 29 11:24:17 2023
Response via : Initial Calibration
Integrator: RTE

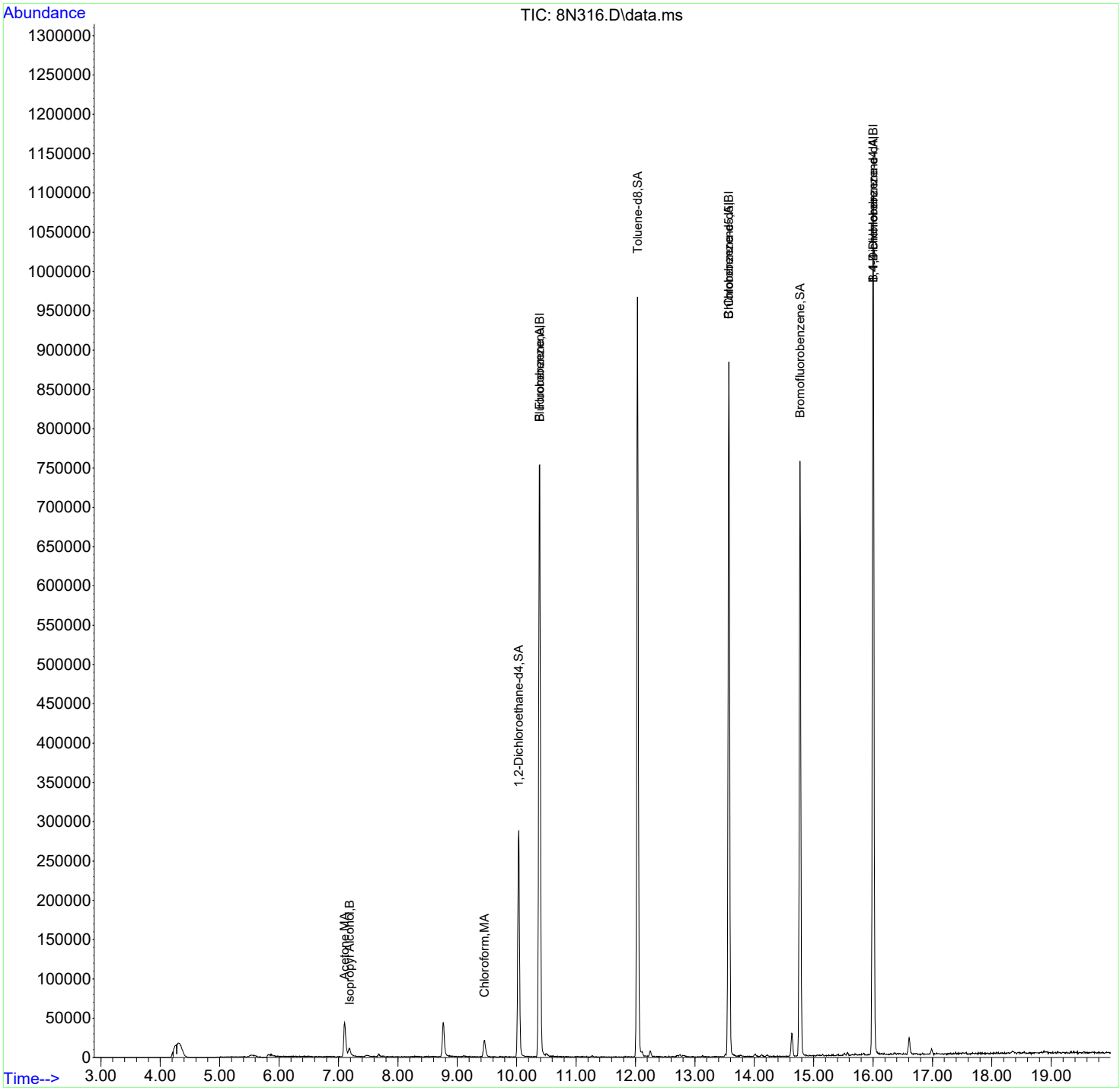
	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
87)	Isopropyl Alcohol	45	7.188	7.175	0.692	18282	52.95	ug/L #	60
88)	Allyl chloride	41	7.480	7.529	0.720	3795	N.D.		
89)	tert-Butyl Alcohol	59	7.687	7.675	0.740	678	N.D.		
90)	Acrylonitrile		0.000	7.931	0.000	0	N.D.		
91)	Isopropyl ether		0.000	8.480	0.000	0	N.D.		
92)	2-Chloro-1,3-butadiene		0.000	8.608	0.000	0	N.D.		
93)	Ethyl tert-butyl ether		0.000	8.889	0.000	0	N.D.		
94)	Ethyl acetate	43	9.108	9.102	0.877	2227	N.D.		
95)	Propionitrile		0.000	9.169	0.000	0	N.D.		
96)	Methacrylonitrile	41	9.474	9.352	0.912	2495	N.D.		
97)	Tetrahydrofuran		0.000	9.474	0.000	0m	N.D.	d	
98)	Isobutyl alcohol		0.000	9.785	0.000	0	N.D.		
99)	Methyl tert-amyl ether		0.000	10.144	0.000	0	N.D.		
100)	Methyl methacrylate		0.000	10.992	0.000	0	N.D.		
101)	1,4-Dioxane		0.000	11.108	0.000	0	N.D.		
102)	2-Nitropropane		0.000	11.473	0.000	0	N.D.		
104)	Ethyl methacrylate		0.000	12.260	0.000	0	N.D.		
106)	1-Chlorohexane		0.000	13.461	0.000	0	N.D.		
107)	cis-1,4-Dichloro-2-butene		0.000	14.613	0.000	0	N.D.		
108)	Cyclohexanone		0.000	14.735	0.000	0	N.D.		
109)	trans-1,4-Dichloro-2-b...		0.000	14.893	0.000	0	N.D.		
110)	Pentachloroethane		0.000	15.601	0.000	0	N.D.		
111)	Benzyl chloride		0.000	16.149	0.000	0	N.D.		
112)	bis(2-Chloro-1-methyle...	45	16.613	16.552	1.038	1004	N.D.		

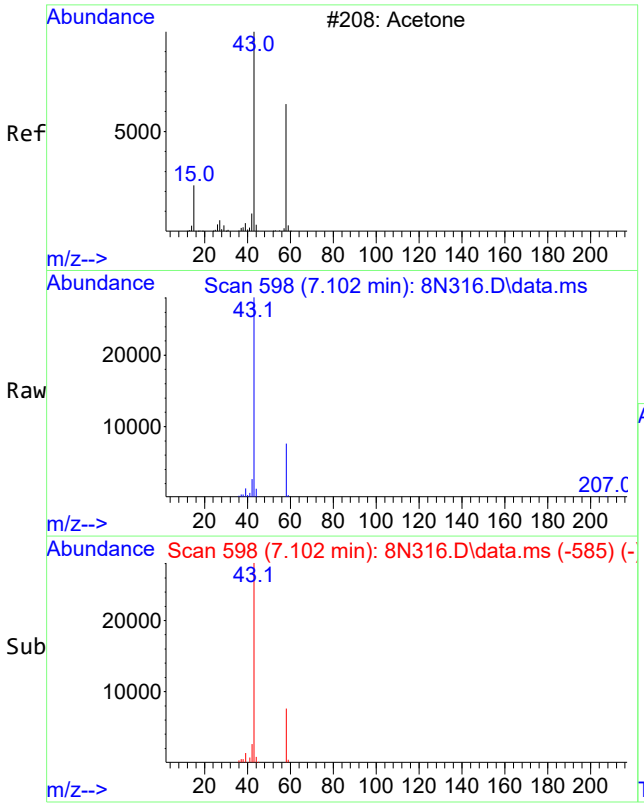
(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MSDCHEM\1\Data\112923V8\
Data File : 8N316.D
Acq On : 29 Nov 2023 18:51
Operator : kp2
InstName : VOA8
Sample : |646356005|2532718|1|VOAF|1|VOA8260D_L|
Misc : TNSL 5ML PH<2
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Nov 30 09:37:48 2023
Quant Method : D:\MSDCHEM\1\Data\101323V8_ICAL\VOA8-8260D-101323.M
Quant Title : Volatile Organics SubList :
QLast Update : Wed Nov 29 11:24:17 2023
Response via : Initial Calibration
Integrator: RTE

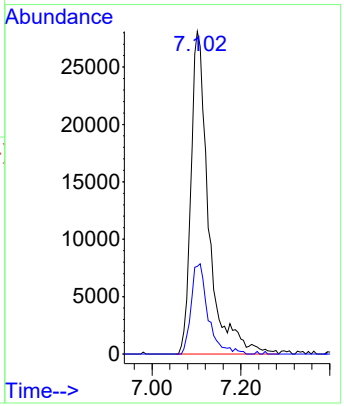


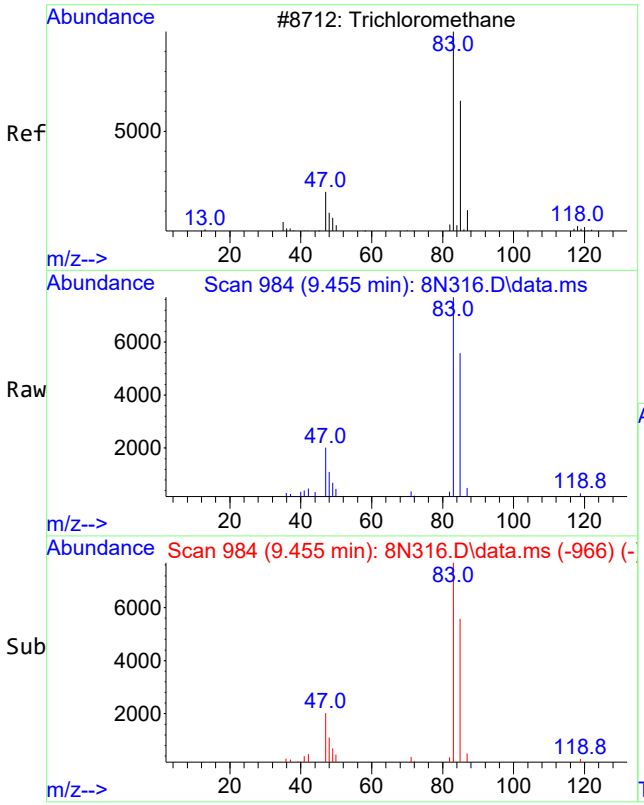


#9
Acetone
Concen: 67.66 ug/L
RT: 7.102 min Scan# 598
Delta R.T. 0.000 min
Lab File: 8N316.D
Acq: 29 Nov 2023 18:51

Tgt Ion: 43 Resp: 77980

Ion	Ratio	Lower	Upper
43	100		
58	26.7	0.7	60.7

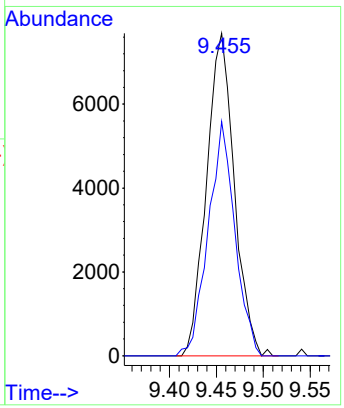


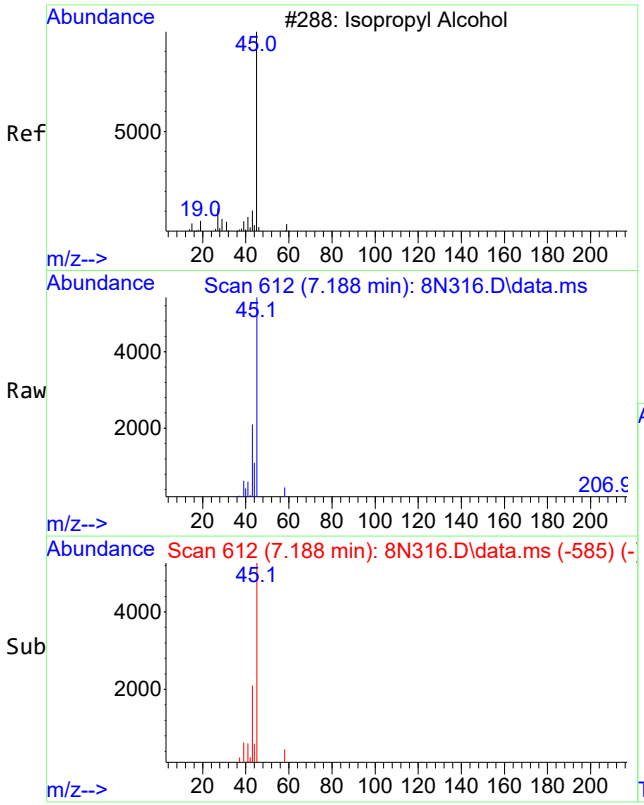


#25
Chloroform
Concen: 2.51 ug/L
RT: 9.455 min Scan# 984
Delta R.T. 0.000 min
Lab File: 8N316.D
Acq: 29 Nov 2023 18:51

Tgt Ion: 83 Resp: 15858

Ion	Ratio	Lower	Upper
83	100		
85	69.5	35.2	95.2

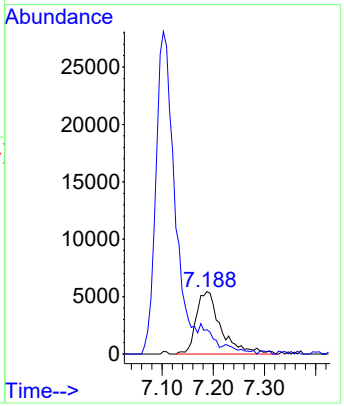


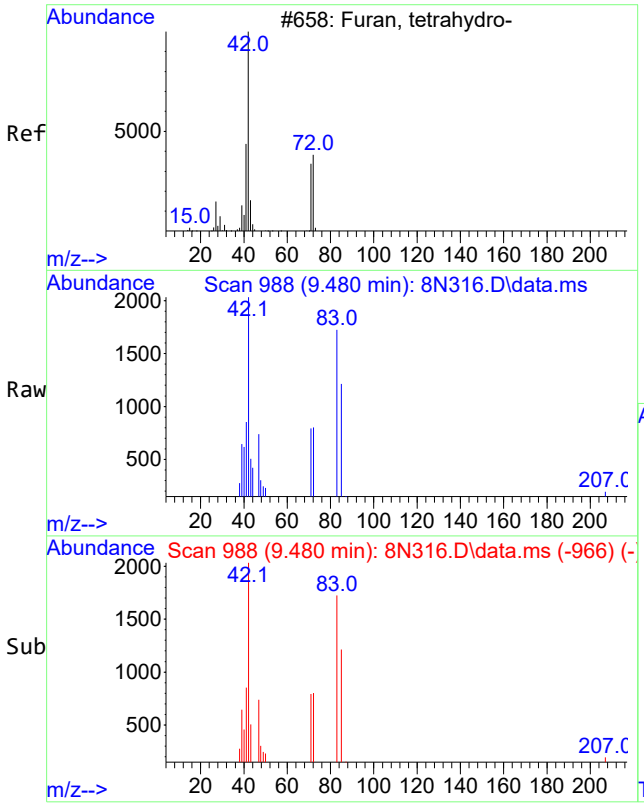


#87
Isopropyl Alcohol
Concen: 52.95 ug/L
RT: 7.188 min Scan# 612
Delta R.T. 0.013 min
Lab File: 8N316.D
Acq: 29 Nov 2023 18:51

Tgt Ion: 45 Resp: 18282

Ion	Ratio	Lower	Upper
45	100		
43	0.0	0.0	47.3

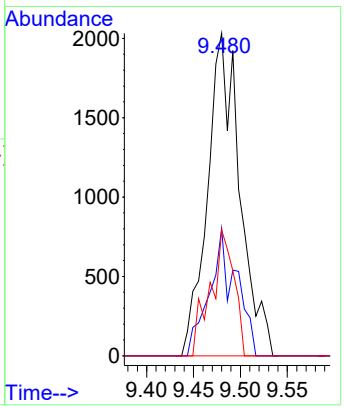




#97 BEFORE analyst DELETION
Tetrahydrofuran
Concen: 3.68 ug/L
RT: 9.480 min Scan# 988
Delta R.T. 0.006 min
Lab File: 8N316.D
Acq: 29 Nov 2023 18:51

Tgt Ion: 42 Resp: 4886

Ion	Ratio	Lower	Upper
42	100		
72	32.6	5.3	65.3
71	28.3	3.5	63.5



KEP 11/30/2023

Library Search Compound Report
GEL Laboratories, LLC

Data Path : D:\MSDCHEM\1\Data\112923V8\
Data File : 8N316.D
Acq On : 29 Nov 2023 18:51
Operator : kp2
Sample : |646356005|2532718|1|VOAF|1|VOA8260D_L|
Misc : TNSL 5ML PH<2
ALS Vial : 16 Sample Multiplier: 1

KP 11/30/2023

Quant Method : D:\MSDCHEM\1\Data\101323V8_ICAL\VOA8-8260D-101323.M
Quant Title : Volatile Organics SubList :

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

No Library Search Compounds Detected
****

Tentatively Identified Compound (LSC) summary
GEL Laboratories, LLC

Data Path : D:\MSDCHEM\1\Data\112923V8\
Data File : 8N316.D
Acq On : 29 Nov 2023 18:51
Operator : kp2
Sample : |646356005|2532718|1|VOAF|1|VOA8260D_L|
Misc : TNSL 5ML PH<2
ALS Vial : 16 Sample Multiplier: 1

Quant Method : D:\MSDCHEM\1\Data\101323V8_ICAL\VOA8-8260D-101323.M
Quant Title : Volatile Organics SubList :

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

			(ug/L)		Internal Standard		
TIC Top Hit name	CAS #	RT	EstConc	Response	# RT	Resp	Conc

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-182**	**Date Collected:**	**11/21/2023 11:35**	**Matrix:**	**W**
Lab Sample ID:	**646356006**	**Date Received:**	**11/22/2023 09:15**		
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-304531**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2532718**	**Inst:**	**VOA8.I**	**Dilution:**	**1**
Run Date:	**11/29/2023 19:17**	**Analyst:**	**KP2**	**Purge Vol:**	**5 mL**
Prep Date:	**11/29/2023 19:17**				
Data File:	**112923V8\8N317.D**	**Column:**	**Serial Number: 1**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	0.355	ug/L	0.355	1.00
74-87-3	Chloromethane	U	0.333	ug/L	0.333	1.00
75-01-4	Vinyl chloride	U	0.333	ug/L	0.333	1.00
74-83-9	Bromomethane	U	0.337	ug/L	0.337	1.00
75-00-3	Chloroethane	U	0.333	ug/L	0.333	1.00
75-69-4	Trichlorofluoromethane	U	0.333	ug/L	0.333	1.00
60-29-7	Ethyl ether	U	0.333	ug/L	0.333	1.00
67-64-1	Acetone		74.5	ug/L	1.74	5.00
75-35-4	1,1-Dichloroethylene	U	0.333	ug/L	0.333	1.00
74-88-4	Iodomethane	U	1.67	ug/L	1.67	5.00
75-05-8	Acetonitrile	U	8.33	ug/L	8.33	25.0
75-15-0	Carbon disulfide	U	1.67	ug/L	1.67	5.00
75-09-2	Methylene chloride	U	0.500	ug/L	0.500	5.00
1634-04-4	tert-Butyl methyl ether	U	0.333	ug/L	0.333	1.00
156-60-5	trans-1,2-Dichloroethylene	U	0.333	ug/L	0.333	1.00
108-05-4	Vinyl acetate	U	1.67	ug/L	1.67	5.00
75-34-3	1,1-Dichloroethane	U	0.333	ug/L	0.333	1.00
78-93-3	2-Butanone	U	1.67	ug/L	1.67	5.00
156-59-2	cis-1,2-Dichloroethylene	U	0.333	ug/L	0.333	1.00
594-20-7	2,2-Dichloropropane	U	0.333	ug/L	0.333	1.00
74-97-5	Bromochloromethane	U	0.333	ug/L	0.333	1.00
67-66-3	Chloroform		2.57	ug/L	0.333	1.00
71-55-6	1,1,1-Trichloroethane	U	0.333	ug/L	0.333	1.00
563-58-6	1,1-Dichloropropene	U	0.333	ug/L	0.333	1.00
56-23-5	Carbon tetrachloride	U	0.333	ug/L	0.333	1.00
107-06-2	1,2-Dichloroethane	U	0.333	ug/L	0.333	1.00
71-43-2	Benzene	U	0.333	ug/L	0.333	1.00
71-36-3	n-Butyl alcohol	U	21.1	ug/L	21.1	50.0
79-01-6	Trichloroethylene	U	0.333	ug/L	0.333	1.00
78-87-5	1,2-Dichloropropane	U	0.333	ug/L	0.333	1.00
74-95-3	Dibromomethane	U	0.333	ug/L	0.333	1.00
75-27-4	Bromodichloromethane	U	0.333	ug/L	0.333	1.00
10061-01-5	cis-1,3-Dichloropropylene	U	0.333	ug/L	0.333	1.00
108-10-1	4-Methyl-2-pentanone	U	1.67	ug/L	1.67	5.00
108-88-3	Toluene	U	0.333	ug/L	0.333	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	0.333	ug/L	0.333	1.00
79-00-5	1,1,2-Trichloroethane	U	0.333	ug/L	0.333	1.00
591-78-6	2-Hexanone	U	1.67	ug/L	1.67	5.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-182**	**Date Collected:**	**11/21/2023 11:35**	**Matrix:**	**W**
Lab Sample ID:	**646356006**	**Date Received:**	**11/22/2023 09:15**		
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-304531**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2532718**	**Inst:**	**VOA8.I**	**Dilution:**	**1**
Run Date:	**11/29/2023 19:17**	**Analyst:**	**KP2**	**Purge Vol:**	**5 mL**
Prep Date:	**11/29/2023 19:17**				
Data File:	**112923V8\8N317.D**	**Column:**	**Serial Number: 1**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
142-28-9	1,3-Dichloropropane	U	0.333	ug/L	0.333	1.00
127-18-4	Tetrachloroethylene	U	0.333	ug/L	0.333	1.00
124-48-1	Dibromochloromethane	U	0.333	ug/L	0.333	1.00
106-93-4	1,2-Dibromoethane	U	0.333	ug/L	0.333	1.00
108-90-7	Chlorobenzene	U	0.333	ug/L	0.333	1.00
100-41-4	Ethylbenzene	U	0.333	ug/L	0.333	1.00
179601-23-1	m,p-Xylenes	U	0.500	ug/L	0.500	2.00
95-47-6	o-Xylene	U	0.333	ug/L	0.333	1.00
100-42-5	Styrene	U	0.333	ug/L	0.333	1.00
75-25-2	Bromoform	U	0.333	ug/L	0.333	1.00
98-82-8	Isopropylbenzene	U	0.333	ug/L	0.333	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	0.333	ug/L	0.333	1.00
96-18-4	1,2,3-Trichloropropane	U	0.333	ug/L	0.333	1.00
108-86-1	Bromobenzene	U	0.333	ug/L	0.333	1.00
103-65-1	n-Propylbenzene	U	0.333	ug/L	0.333	1.00
108-67-8	1,3,5-Trimethylbenzene	U	0.500	ug/L	0.500	2.00
95-49-8	2-Chlorotoluene	U	0.333	ug/L	0.333	1.00
106-43-4	4-Chlorotoluene	U	0.333	ug/L	0.333	1.00
98-06-6	tert-Butylbenzene	U	0.333	ug/L	0.333	1.00
95-63-6	1,2,4-Trimethylbenzene	U	0.333	ug/L	0.333	1.00
135-98-8	sec-Butylbenzene	U	0.333	ug/L	0.333	1.00
99-87-6	4-Isopropyltoluene	U	0.333	ug/L	0.333	1.00
541-73-1	1,3-Dichlorobenzene	U	0.333	ug/L	0.333	1.00
106-46-7	1,4-Dichlorobenzene	U	0.333	ug/L	0.333	1.00
104-51-8	n-Butylbenzene	U	0.333	ug/L	0.333	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	0.333	ug/L	0.333	1.00
87-68-3	Hexachlorobutadiene	U	0.333	ug/L	0.333	1.00
91-20-3	Naphthalene	U	0.333	ug/L	0.333	1.00
87-61-6	1,2,3-Trichlorobenzene	U	0.333	ug/L	0.333	1.00
107-02-8	Acrolein	UQ	1.67	ug/L	1.67	5.00
76-13-1	Trichlorotrifluoroethane	U	2.98	ug/L	2.98	5.00
107-05-1	Allyl chloride	U	1.67	ug/L	1.67	5.00
107-13-1	Acrylonitrile	U	1.67	ug/L	1.67	5.00
126-99-8	2-Chloro-1,3-butadiene	U	0.333	ug/L	0.333	1.00
107-12-0	Propionitrile	U	1.67	ug/L	1.67	5.00
126-98-7	Methacrylonitrile	U	1.67	ug/L	1.67	5.00
78-83-1	Isobutyl alcohol	U	16.7	ug/L	16.7	50.0
80-62-6	Methyl methacrylate	U	1.67	ug/L	1.67	5.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-182**	**Date Collected:**	**11/21/2023 11:35**	**Matrix:**	**W**
Lab Sample ID:	**646356006**	**Date Received:**	**11/22/2023 09:15**		
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-304531**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2532718**	**Inst:**	**VOA8.I**	**Dilution:**	**1**
Run Date:	**11/29/2023 19:17**	**Analyst:**	**KP2**	**Purge Vol:**	**5 mL**
Prep Date:	**11/29/2023 19:17**				
Data File:	**112923V8\8N317.D**	**Column:**	**Serial Number: 1**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
97-63-2	Ethyl methacrylate	U	1.67	ug/L	1.67	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	0.333	ug/L	0.333	1.00
120-82-1	1,2,4-Trichlorobenzene	U	0.333	ug/L	0.333	1.00
95-50-1	1,2-Dichlorobenzene	U	0.333	ug/L	0.333	1.00

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	47.4	50.0	ug/L	95	(74%-123%)
Toluene-d8	48.5	50.0	ug/L	97	(77%-121%)
1,2-Dichloroethane-d4	50.5	50.0	ug/L	101	(76%-127%)

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Concentration	Units	Fit	Qual
	unknown	4.3	5.52	ug/L	0	J
	unknown	8.766	6.57	ug/L	83	J

KEP 11/30/2023

KP 11/30/2023

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MSDCHEM\1\Data\112923V8\
Data File : 8N317.D
Acq On : 29 Nov 2023 19:17
Operator : kp2
InstName : VOA8
Sample : |646356006|2532718|1|VOAF|1|VOA8260D_L|
Misc : TNSL 5ML PH<2
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Nov 30 09:37:50 2023
Quant Method : D:\MSDCHEM\1\Data\101323V8_ICAL\VOA8-8260D-101323.M
Quant Title : Volatile Organics SubList :
QLast Update : Wed Nov 29 11:24:17 2023
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) Fluorobenzene	96	10.382	10.388	1.000	722937	50.00	ug/L	0.00
43) Chlorobenzene-d5	117	13.570	13.570	1.000	528302	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	16.003	16.003	1.000	324660	50.00	ug/L	0.00
84) B Fluorobenzene	96	10.382	10.382	1.000	722937	50.00	ug/L	0.00
103) B Chlorobenzene-d5	117	13.570	13.571	1.000	528302	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	16.003	16.003	1.000	324660	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	65	10.035	10.034	0.967	228913	50.48	ug/L	0.00
45) Toluene-d8	98	12.034	12.034	0.887	683071	48.54	ug/L	0.00
63) Bromofluorobenzene	95	14.771	14.771	0.923	268350	47.35	ug/L	0.00

Compound	Amount	Range	Recovery
30) 1,2-Dichloroethane-d4	50.000	76 - 127	101%
45) Toluene-d8	50.000	77 - 121	97%
63) Bromofluorobenzene	50.000	74 - 123	95%

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.657	0.000	0	N.D.		
3) Chloromethane		0.000	5.067	0.000	0	N.D.		
4) Vinyl chloride		0.000	5.279	0.000	0	N.D.		
5) Bromomethane		0.000	5.889	0.000	0	N.D.		
6) Chloroethane		0.000	6.005	0.000	0	N.D.		
7) Trichlorofluoromethane		0.000	6.371	0.000	0	N.D.		
8) Ethyl ether		0.000	6.718	0.000	0	N.D.		
9) Acetone	43	7.102	7.102	0.684	86266	74.45	ug/L	92
10) 1,1-Dichloroethylene		0.000	7.102	0.000	0	N.D.		
11) Iodomethane		0.000	7.346	0.000	0	N.D.		
12) Acetonitrile	41	7.669	7.456	0.739	620	N.D.		
13) Methyl acetate	43	7.492	7.492	0.722	531	N.D.		
14) Carbon disulfide		0.000	7.480	0.000	0	N.D.		
15) Methylene chloride	49	7.675	7.675	0.739	2044	Below Cal		98
16) tert-Butyl methyl ether		0.000	7.974	0.000	0	N.D.		
17) trans-1,2-Dichloroethy...		0.000	8.017	0.000	0	N.D.		
18) Hexane		0.000	8.303	0.000	0	N.D.		
19) Vinyl acetate	43	8.443	8.462	0.813	189	N.D.		
20) 1,1-Dichloroethane		0.000	8.510	0.000	0	N.D.		
21) 2-Butanone	43	9.108	9.096	0.877	2204	N.D.		
22) cis-1,2-Dichloroethylene		0.000	9.144	0.000	0	N.D.		
23) 2,2-Dichloropropane		0.000	9.175	0.000	0	N.D.		
24) Bromochloromethane		0.000	9.425	0.000	0	N.D.		
25) Chloroform	83	9.449	9.455	0.910	16336	2.57	ug/L	98
26) 1,1,1-Trichloroethane		0.000	9.736	0.000	0	N.D.		
27) Cyclohexane		0.000	9.827	0.000	0	N.D.		
28) 1,1-Dichloropropene		0.000	9.888	0.000	0	N.D.		
29) Carbon tetrachloride		0.000	9.925	0.000	0	N.D.		
31) 1,2-Dichloroethane		0.000	10.114	0.000	0	N.D.		
32) Benzene	78	10.138	10.132	0.977	145	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MSDCHEM\1\Data\112923V8\
Data File : 8N317.D
Acq On : 29 Nov 2023 19:17
Operator : kp2
InstName : VOA8
Sample : |646356006|2532718|1|VOAF|1|VOA8260D_L|
Misc : TNSL 5ML PH<2
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Nov 30 09:37:50 2023
Quant Method : D:\MSDCHEM\1\Data\101323V8_ICAL\VOA8-8260D-101323.M
Quant Title : Volatile Organics SubList :
QLast Update : Wed Nov 29 11:24:17 2023
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
33) Cyclohexene	67	10.156	10.248	0.978	150	N.D.	
34) n-Butyl alcohol		0.000	10.479	0.000	0	N.D.	
35) Trichloroethylene		0.000	10.772	0.000	0	N.D.	
36) 2-Pentanone	43	10.882	10.857	1.048	148	N.D.	
37) 1,2-Dichloropropane		0.000	11.022	0.000	0	N.D.	
38) Methylcyclohexane		0.000	11.022	0.000	0	N.D.	
39) Dibromomethane		0.000	11.156	0.000	0	N.D.	
40) Bromodichloromethane		0.000	11.266	0.000	0	N.D.	
41) 2-Chloroethylvinyl ether		0.000	11.491	0.000	0	N.D.	
42) cis-1,3-Dichloropropylene		0.000	11.723	0.000	0	N.D.	
44) 4-Methyl-2-pentanone		0.000	11.815	0.000	0	N.D.	
46) Toluene	91	12.101	12.107	0.892	3261	N.D.	
47) trans-1,3-Dichloroprop...		0.000	12.266	0.000	0	N.D.	
48) 1,1,2-Trichloroethane		0.000	12.485	0.000	0	N.D.	
49) 2-Hexanone	43	12.747	12.668	0.939	2527	N.D.	
50) 1,3-Dichloropropane		0.000	12.680	0.000	0	N.D.	
51) Tetrachloroethylene	164	12.711	12.705	0.937	570	N.D.	
52) Dibromochloromethane		0.000	12.949	0.000	0	N.D.	
53) 1,2-Dibromoethane		0.000	13.119	0.000	0	N.D.	
54) Chlorobenzene	112	13.607	13.607	1.003	242	N.D.	
55) 1,1,1,2-Tetrachloroethane		0.000	13.656	0.000	0	N.D.	
56) Ethylbenzene	91	13.674	13.668	1.008	513	N.D.	
57) m,p-Xylenes	106	13.784	13.772	1.016	539	N.D.	
58) o-Xylene	91	14.217	14.210	1.048	836	N.D.	
59) Styrene		0.000	14.210	0.000	0	N.D.	
61) Bromoform		0.000	14.479	0.000	0	N.D.	
62) Isopropylbenzene		0.000	14.570	0.000	0	N.D.	
64) 1,1,2,2-Tetrachloroethane	83	14.771	14.844	0.923	120	N.D.	
65) 1,2,3-Trichloropropane		0.000	14.936	0.000	0	N.D.	
66) Bromobenzene		0.000	14.985	0.000	0	N.D.	
67) n-Propylbenzene	91	15.003	14.997	0.938	384	N.D.	
68) 1,3,5-Trimethylbenzene	105	15.155	15.149	0.947	554	N.D.	
69) 2-Chlorotoluene		0.000	15.149	0.000	0	N.D.	
70) 4-Chlorotoluene		0.000	15.253	0.000	0	N.D.	
71) tert-Butylbenzene		0.000	15.527	0.000	0	N.D.	
72) 1,2,4-Trimethylbenzene	105	15.570	15.564	0.973	2031	N.D.	
73) sec-Butylbenzene	105	15.747	15.753	0.984	142	N.D.	
74) 4-Isopropyltoluene	119	15.887	15.875	0.993	391	N.D.	
75) 1,3-Dichlorobenzene		0.000	15.942	0.000	0	N.D.	
76) 1,4-Dichlorobenzene	146	16.027	16.033	1.002	112	N.D.	
77) n-Butylbenzene	91	16.326	16.326	1.020	372	N.D.	
78) 1,2-Dichlorobenzene		0.000	16.466	0.000	0	N.D.	
79) 1,2-Dibromo-3-chloropr...		0.000	17.362	0.000	0	N.D.	
80) 1,2,4-Trichlorobenzene		0.000	18.454	0.000	0	N.D.	
81) Hexachlorobutadiene		0.000	18.630	0.000	0	N.D.	
82) Naphthalene	128	18.856	18.856	1.178	1330	N.D.	
83) 1,2,3-Trichlorobenzene	180	19.203	19.209	1.200	144	N.D.	
85) Acrolein	56	6.938	6.919	0.668	116	N.D.	
86) Trichlorotrifluoroethane		0.000	7.084	0.000	0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MSDCHEM\1\Data\112923V8\
Data File : 8N317.D
Acq On : 29 Nov 2023 19:17
Operator : kp2
InstName : VOA8
Sample : |646356006|2532718|1|VOAF|1|VOA8260D_L|
Misc : TNSL 5ML PH<2
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Nov 30 09:37:50 2023
Quant Method : D:\MSDCHEM\1\Data\101323V8_ICAL\VOA8-8260D-101323.M
Quant Title : Volatile Organics SubList :
QLast Update : Wed Nov 29 11:24:17 2023
Response via : Initial Calibration
Integrator: RTE

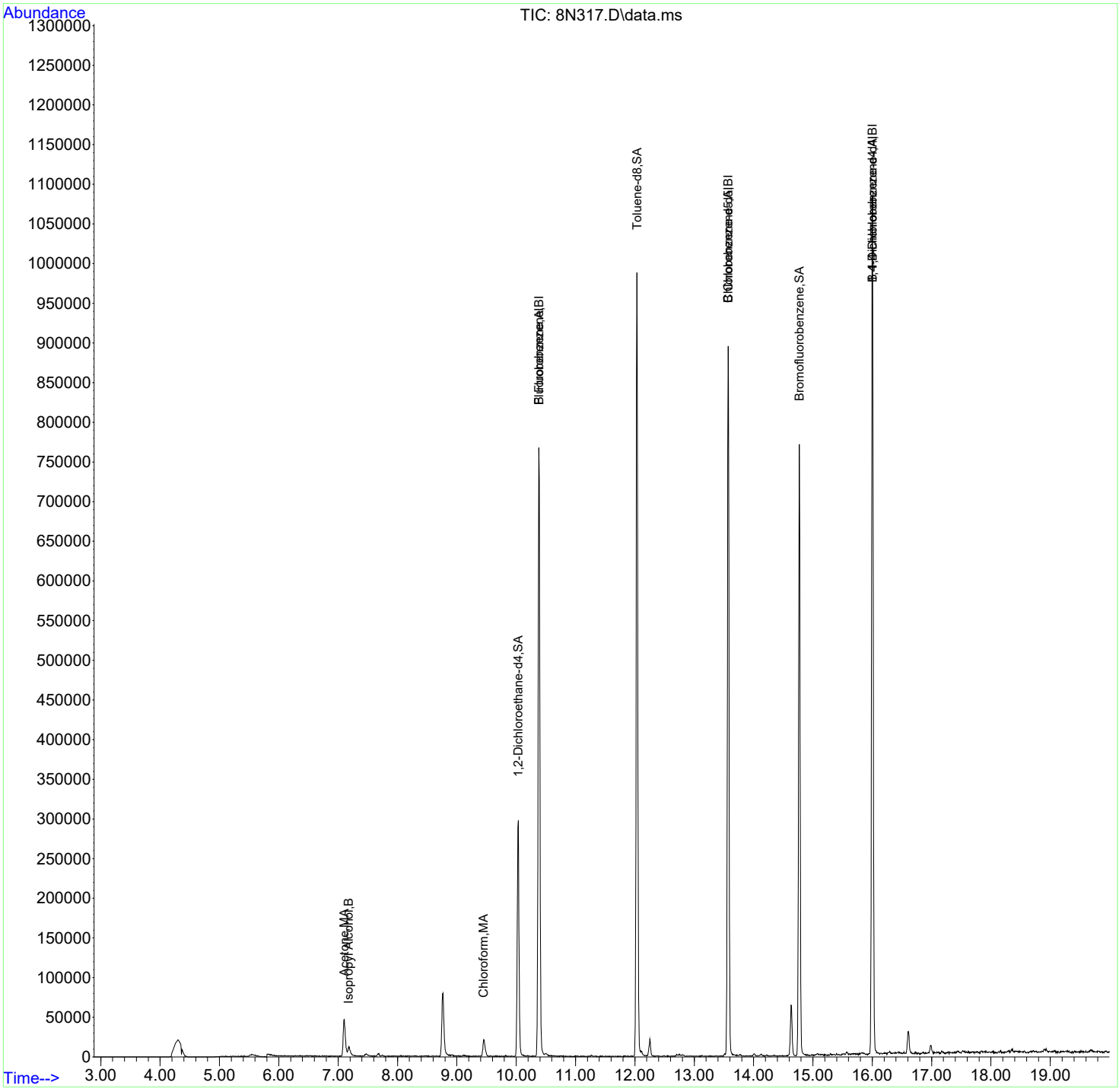
	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
87)	Isopropyl Alcohol	45	7.175	7.175	0.691	19045	54.86	ug/L #	60
88)	Allyl chloride	41	7.468	7.529	0.719	3776	N.D.		
89)	tert-Butyl Alcohol	59	7.675	7.675	0.739	1055	N.D.		
90)	Acrylonitrile		0.000	7.931	0.000	0	N.D.		
91)	Isopropyl ether	45	8.529	8.480	0.821	154	N.D.		
92)	2-Chloro-1,3-butadiene	53	8.754	8.608	0.843	209	N.D.		
93)	Ethyl tert-butyl ether	59	8.876	8.889	0.855	120	N.D.		
94)	Ethyl acetate	43	9.108	9.102	0.877	2204	N.D.		
95)	Propionitrile		0.000	9.169	0.000	0	N.D.		
96)	Methacrylonitrile	41	9.474	9.352	0.913	2874	N.D.		
97)	Tetrahydrofuran		0.000	9.474	0.000	0m	N.D.	d	
98)	Isobutyl alcohol		0.000	9.785	0.000	0	N.D.		
99)	Methyl tert-amyl ether		0.000	10.144	0.000	0	N.D.		
100)	Methyl methacrylate		0.000	10.992	0.000	0	N.D.		
101)	1,4-Dioxane		0.000	11.108	0.000	0	N.D.		
102)	2-Nitropropane		0.000	11.473	0.000	0	N.D.		
104)	Ethyl methacrylate		0.000	12.260	0.000	0	N.D.		
106)	1-Chlorohexane		0.000	13.461	0.000	0	N.D.		
107)	cis-1,4-Dichloro-2-butene		0.000	14.613	0.000	0	N.D.		
108)	Cyclohexanone		0.000	14.735	0.000	0	N.D.		
109)	trans-1,4-Dichloro-2-b...		0.000	14.893	0.000	0	N.D.		
110)	Pentachloroethane		0.000	15.601	0.000	0	N.D.		
111)	Benzyl chloride		0.000	16.149	0.000	0	N.D.		
112)	bis(2-Chloro-1-methyle...	45	16.613	16.552	1.038	1512	N.D.		

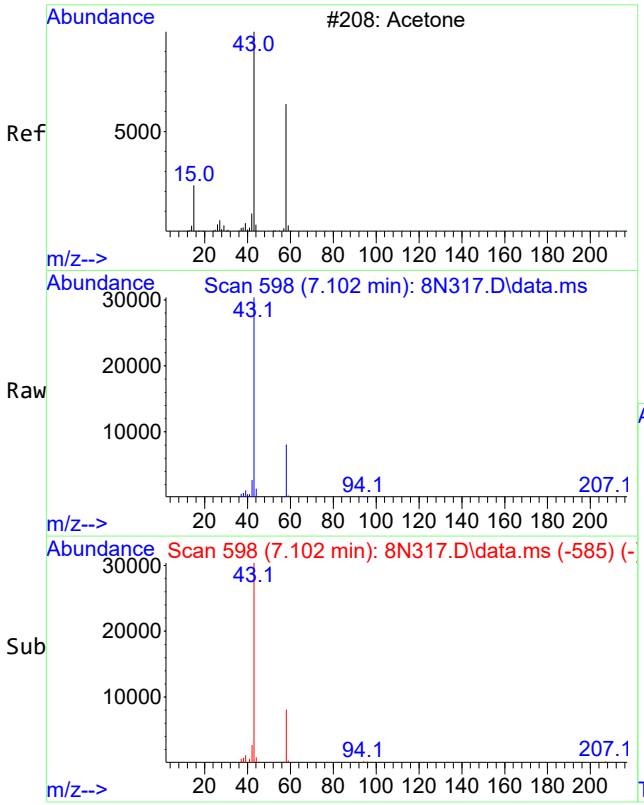
(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MSDCHEM\1\Data\112923V8\
Data File : 8N317.D
Acq On : 29 Nov 2023 19:17
Operator : kp2
InstName : VOA8
Sample : |646356006|2532718|1|VOAF|1|VOA8260D_L|
Misc : TNSL 5ML PH<2
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Nov 30 09:37:50 2023
Quant Method : D:\MSDCHEM\1\Data\101323V8_ICAL\VOA8-8260D-101323.M
Quant Title : Volatile Organics SubList :
QLast Update : Wed Nov 29 11:24:17 2023
Response via : Initial Calibration
Integrator: RTE

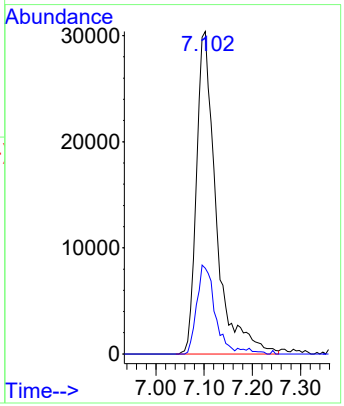


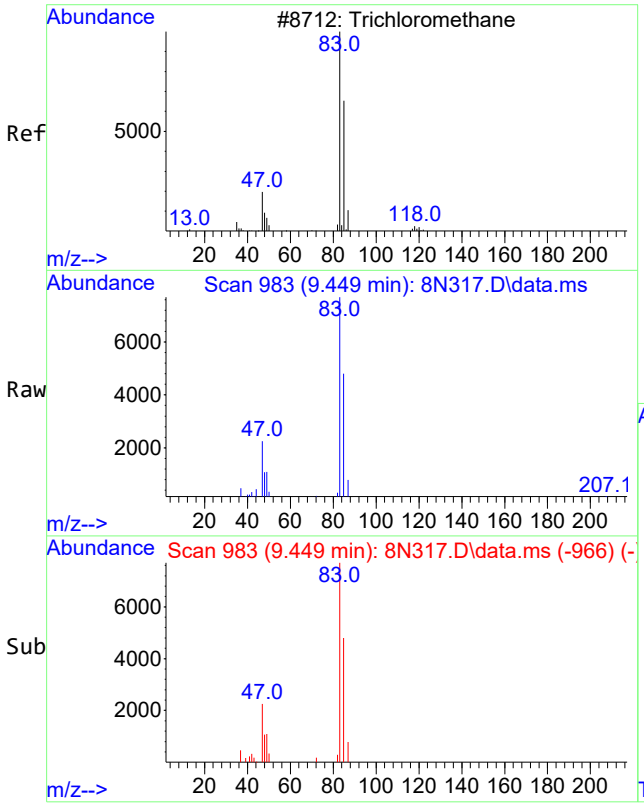


#9
Acetone
Concen: 74.45 ug/L
RT: 7.102 min Scan# 598
Delta R.T. 0.000 min
Lab File: 8N317.D
Acq: 29 Nov 2023 19:17

Tgt Ion: 43 Resp: 86266

Ion	Ratio	Lower	Upper
43	100		
58	26.4	0.7	60.7

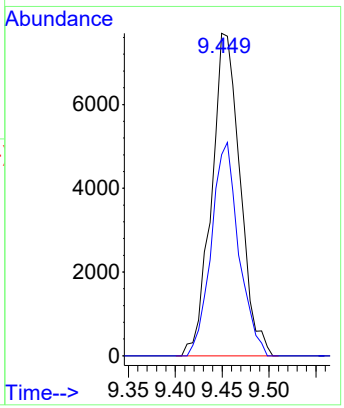


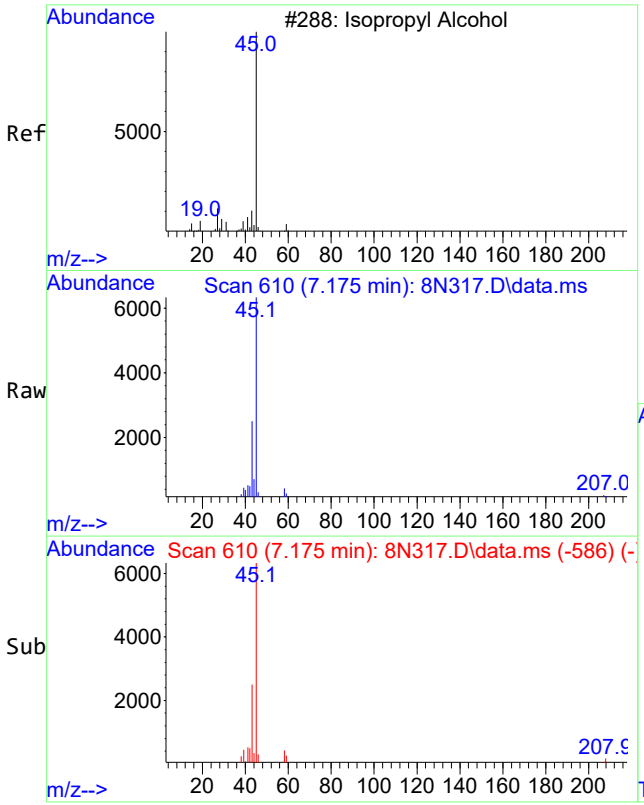


#25
Chloroform
Concen: 2.57 ug/L
RT: 9.449 min Scan# 983
Delta R.T. -0.006 min
Lab File: 8N317.D
Acq: 29 Nov 2023 19:17

Tgt Ion: 83 Resp: 16336

Ion	Ratio	Lower	Upper
83	100		
85	63.6	35.2	95.2

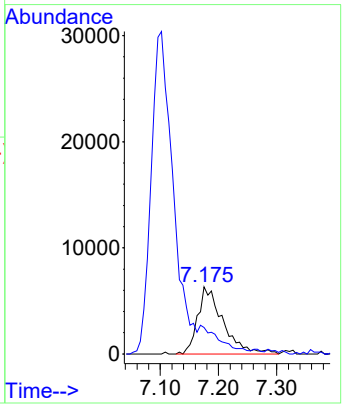


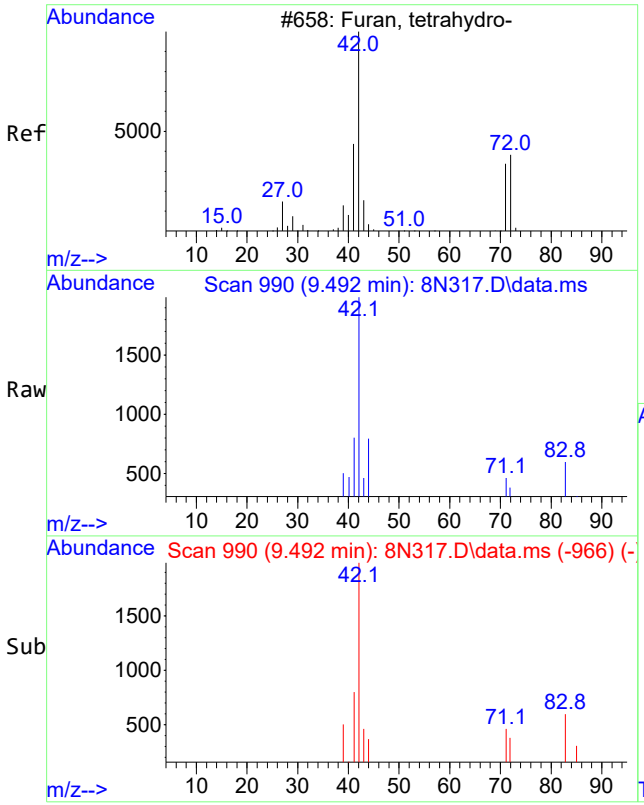


#87
Isopropyl Alcohol
Concen: 54.86 ug/L
RT: 7.175 min Scan# 610
Delta R.T. 0.000 min
Lab File: 8N317.D
Acq: 29 Nov 2023 19:17

Tgt Ion: 45 Resp: 19045

Ion	Ratio	Lower	Upper
45	100		
43	0.0	0.0	47.3

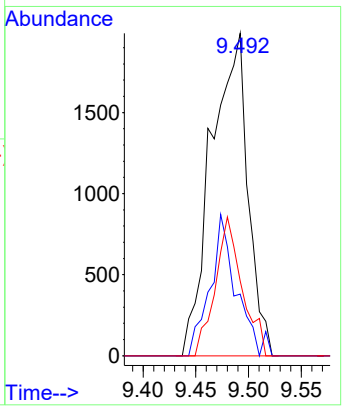




#97 BEFORE analyst DELETION
Tetrahydrofuran
Concen: 3.58 ug/L
RT: 9.492 min Scan# 990
Delta R.T. 0.018 min
Lab File: 8N317.D
Acq: 29 Nov 2023 19:17

Tgt Ion: 42 Resp: 4781

Ion	Ratio	Lower	Upper
42	100		
72	31.5	5.3	65.3
71	31.5	3.5	63.5



KEP 11/30/2023

KP 11/30/2023

Library Search Compound Report
GEL Laboratories, LLC

Data Path : D:\MSDCHEM\1\Data\112923V8\
Data File : 8N317.D
Acq On : 29 Nov 2023 19:17
Operator : kp2
Sample : |646356006|2532718|1|VOAF|1|VOA8260D_L|
Misc : TNSL 5ML PH<2
ALS Vial : 17 Sample Multiplier: 1

Quant Method : D:\MSDCHEM\1\Data\101323V8_ICAL\VOA8-8260D-101323.M
Quant Title : Volatile Organics SubList :

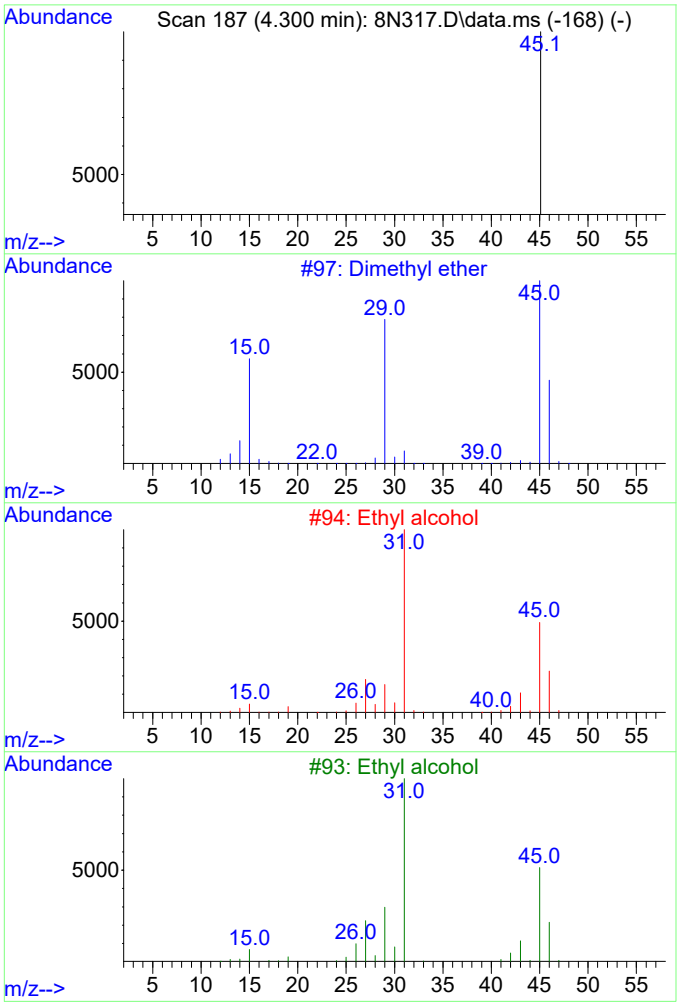
TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

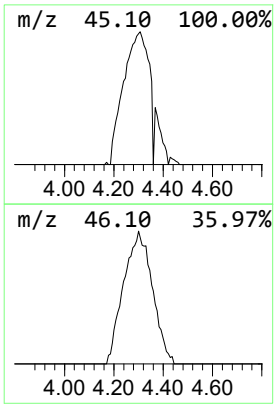
****

Peak Number 1 unknown Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.300	5.52 ug/L	173637	Fluorobenzene	10.382

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Dimethyl ether	46	C2H6O	000115-10-6	5
2	Ethyl alcohol	46	C2H6O	000064-17-5	4
3	Ethyl alcohol	46	C2H6O	000064-17-5	4
4	Ethyl alcohol	46	C2H6O	000064-17-5	4
5	Dimethyl ether	46	C2H6O	000115-10-6	2





Library Search Compound Report
GEL Laboratories, LLC

Data Path : D:\MSDCHEM\1\Data\112923V8\
Data File : 8N317.D
Acq On : 29 Nov 2023 19:17
Operator : kp2
Sample : |646356006|2532718|1|VOAF|1|VOA8260D_L|
Misc : TNSL 5ML PH<2
ALS Vial : 17 Sample Multiplier: 1

Quant Method : D:\MSDCHEM\1\Data\101323V8_ICAL\VOA8-8260D-101323.M
Quant Title : Volatile Organics SubList :

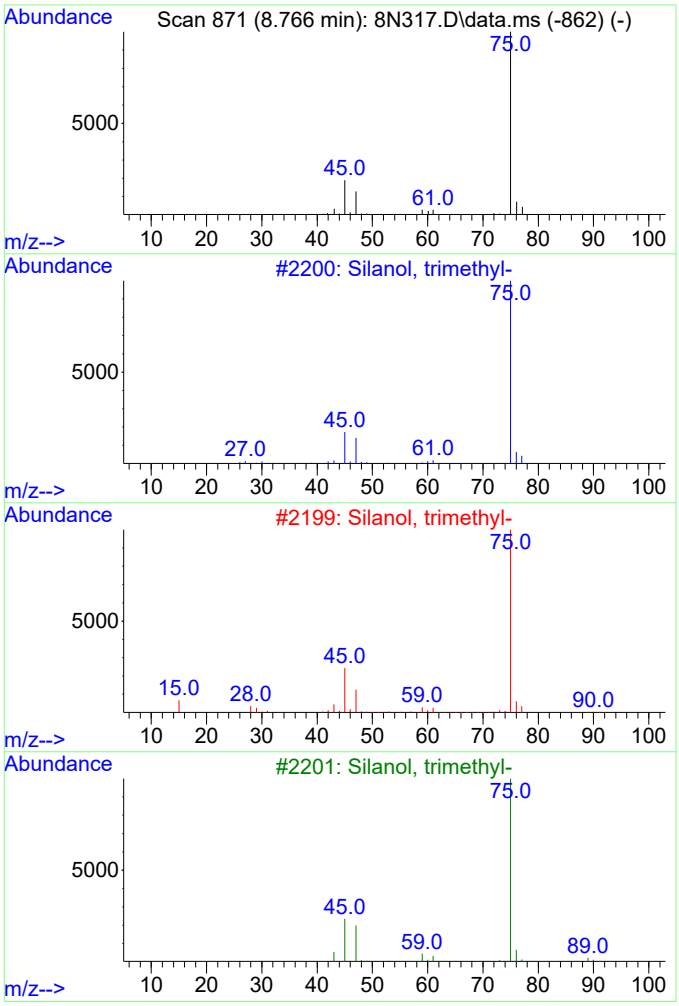
TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

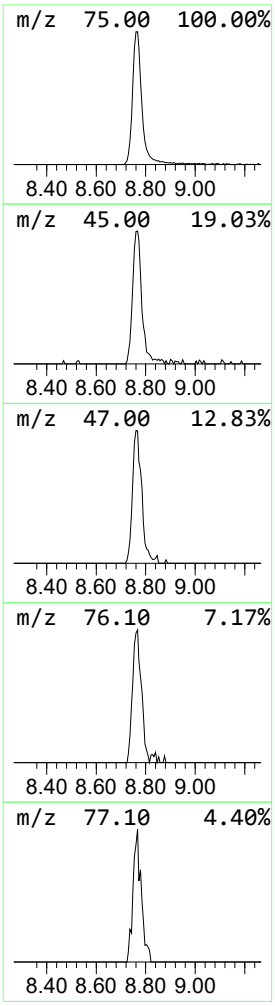
****

Peak Number 2 unknown Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.766	6.57 ug/L	206558	Fluorobenzene	10.382

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Silanol, trimethyl-	90	C3H10OSi	001066-40-6	83
2	Silanol, trimethyl-	90	C3H10OSi	001066-40-6	50
3	Silanol, trimethyl-	90	C3H10OSi	001066-40-6	50
4	tert-Butyldimethylsilanol	132	C6H16OSi	018173-64-3	43
5	Ethanethioamide	75	C2H5NS	000062-55-5	36





Tentatively Identified Compound (LSC) summary
GEL Laboratories, LLC

Data Path : D:\MSDCHEM\1\Data\112923V8\
Data File : 8N317.D
Acq On : 29 Nov 2023 19:17
Operator : kp2
Sample : |646356006|2532718|1|VOAF|1|VOA8260D_L|
Misc : TNSL 5ML PH<2
ALS Vial : 17 Sample Multiplier: 1

Quant Method : D:\MSDCHEM\1\Data\101323V8_ICAL\VOA8-8260D-101323.M
Quant Title : Volatile Organics SubList :

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

			(ug/L)		Internal Standard		
TIC Top Hit name	CAS #	RT	EstConc	Response	# RT	Resp	Conc
unknown		4.300	5.5	173637	1 10.382	1573060	50.0
unknown	001066-40-6	8.766	6.6	206558	1 10.382	1573060	50.0

Miscellaneous

Prep Logbook

Closed-System Purge-and-Trap Collection and Extraction: Volatile Organics in Soil and Waste Samples

Volatile Organic Compounds (VOC) by Gas Chromatograph/Mass Spectrometer

Batch ID: 2533015 **Verified by:** _____

Analyst: John Bell, Jr.

Method: SW846 5035A SW846 5030

Lab SOP: GL-OA-E-039 REV# 13 GL-OA-E-038 REV# 29

Instrument: VOAB-003 OH AUS Balance

Sample ID	Prep Date	Sample Wt (g)	Final Volume (mL)	Prep Factor (mL/g)	Scanned Container
1205588319 LCS	30-NOV-2023 07:11:00	5	5	1	NA
1205588325 LCS	30-NOV-2023 07:11:00	5	5	1	NA
1205588320 MB	30-NOV-2023 07:11:00	5	5	1	NA
1205588326 HB	30-NOV-2023 08:01:00	5	5	1	NA
645856001	30-NOV-2023 08:02:00	5	9	1.8	
646356001	30-NOV-2023 08:03:00	5	5	1	
646356002	30-NOV-2023 08:04:00	5	5	1	
646356003	30-NOV-2023 08:05:00	5	5	1	
646356004	30-NOV-2023 08:06:00	5	5	1	
646389001	30-NOV-2023 08:07:00	5	9	1.8	
646389002	30-NOV-2023 08:08:00	5	9	1.8	
646456001	30-NOV-2023 08:09:00	5	10	2	
1205588321 PS (646456002)	30-NOV-2023 08:09:00	4.2	10	2.38095	NA
1205588322 PSD (646456002)	30-NOV-2023 08:09:00	4.2	10	2.38095	NA
1205588323 PS (646456002)	30-NOV-2023 08:09:00	4.2	10	2.38095	NA
1205588324 PSD (646456002)	30-NOV-2023 08:09:00	4.2	10	2.38095	NA
646456002	30-NOV-2023 08:10:00	4.2	10	2.38095	
646456003	30-NOV-2023 08:11:00	4.5	10	2.22222	
646653001	30-NOV-2023 08:12:00	5	5	1	

Type	Sample Id	Description	Serial Number	Spike Amt	Units

Comments:

ORGANIC RUN LOG - INSTRUMENT ID#VOA8

KEP 10/20/2023

GEL 10/20/2023

Date: 10/13/2023 Method 8260 Operator: kp2

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 50 Daily Instrument Readings:

Multiplier Voltage: 1318

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 8/29/2023

(See pg. _____ for ICAL Std. Ids)

CI test lot # _____

Sequence Number: 101323V8

Daily Standard Solution ID#		Volume Added for Purge (ul) Blk/ Smpl	CCV	MS/ LCS	BFB
CCV[A]	W8VM231013-07		5		
IS	IVM231010-01	5	5	5	
SS	IVM230921-01	5	5	5	
ICV[A]	W8VM231013-10			5	
BFB	IVM230927-01				1
CCV[B]	W8VM231013-16		5		
ICV[B]	W8VM231013-19			5	

Purge Amount	
5ML	Water Purge Vol:
5.0G	Soil Purge Wt.
N/A	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
X	Heated Purge

Analysis Date Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	CI test (Y/N)	Acceptable(O/X)	Comments
10/13/2023 9:55	8G501.D	IVM230927-01	GEL	BFB	10ML	1	N/A	1	w	kp2	N/A	O	
10/13/2023 10:21	8G502.D	W8VM231013-01	VSTD0005	ICAL	5UL/5ML	1	N/A	2	w	kp2	N/A	O	MIX[A] UVM230822-01/UVM230615-01B
10/13/2023 10:46	8G503.D	W8VM231013-02	VSTD001	ICAL	5UL/5ML	1	N/A	3	w	kp2	N/A	O	MIX[A] UVM230822-04/UVM230615-02B
10/13/2023 11:12	8G504.D	W8VM231013-03	VSTD002	ICAL	5UL/5ML	1	N/A	4	w	kp2	N/A	O	MIX[A] UVM230822-04/UVM230615-03B/UVM230818-03B
10/13/2023 11:37	8G505.D	W8VM231013-04	VSTD005	ICAL	5UL/5ML	1	N/A	5	w	kp2	N/A	O	MIX[A] UVM230822-04/UVM230615-04B/UVM230818-04B
10/13/2023 12:03	8G506.D	W8VM231013-05	VSTD010	ICAL	5UL/5ML	1	N/A	6	w	kp2	N/A	O	MIX[A] UVM230822-05/UVM230615-05B/UVM230818-05B
10/13/2023 12:30	8G507.D	W8VM231013-06	VSTD020	ICAL	5UL/5ML	1	N/A	7	w	kp2	N/A	O	MIX[A] UVM230822-06/UVM230615-06B/UVM230818-06B
10/13/2023 12:56	8G508.D	W8VM231013-07	VSTD050	ICAL	5UL/5ML	1	N/A	8	w	kp2	N/A	O	MIX[A] UVM230822-07/UVM230615-07B/UVM230818-07B
10/13/2023 13:22	8G509.D	W8VM231013-08	VSTD080	ICAL	5UL/5ML	1	N/A	9	w	kp2	N/A	O	MIX[A] UVM230822-08/UVM230615-07B/UVM230818-08B
10/13/2023 13:48	8G510.D	W8VM231013-09	VSTD100	ICAL	5UL/5ML	1	N/A	10	w	kp2	N/A	O	MIX[A] UVM230822-08/UVM230615-07B/UVM230818-08B
10/13/2023 14:15	8G511.D	1205	BLANK	BLANK	5ML	1	N/A	11	w	kp2	N/A	O	
10/13/2023 14:41	8G512.D	1205	BLANK	BLANK	5ML	1	N/A	12	w	kp2	N/A	O	
10/13/2023 15:07	8G513.D	W8VM231013-10	VSTD050	ICV	5UL/5ML	1	N/A	13	w	kp2	N/A	O	MIX[A] UVM230720-10A/UVM230519-02C/UVM230818-09C
10/13/2023 15:33	8G514.D	W8VM231013-11	VSTD005	ICAL	5UL/5ML	1	N/A	14	w	kp2	N/A	O	MIX[B] UVM230813-01B/UVM230928-01
10/13/2023 15:59	8G515.D	W8VM231013-12	VSTD010	ICAL	5UL/5ML	1	N/A	15	w	kp2	N/A	O	MIX[B] UVM230813-02B/UVM230928-02
10/13/2023 16:24	8G516.D	W8VM231013-13	VSTD025	ICAL	5UL/5ML	1	N/A	16	w	kp2	N/A	O	MIX[B] UVM230813-03B/UVM230928-03
10/13/2023 16:49	8G517.D	W8VM231013-14	VSTD050	ICAL	5UL/5ML	1	N/A	17	w	kp2	N/A	O	MIX[B] UVM230813-04B/UVM230928-04
10/13/2023 17:15	8G518.D	W8VM231013-15	VSTD100	ICAL	5UL/5ML	1	N/A	18	w	kp2	N/A	O	MIX[B] UVM230813-05B/UVM230928-05
10/13/2023 17:41	8G519.D	W8VM231013-16	VSTD250	ICAL	5UL/5ML	1	N/A	19	w	kp2	N/A	O	MIX[B] UVM230813-06B/UVM230928-06
10/13/2023 18:06	8G520.D	W8VM231013-17	VSTD300	ICAL	5UL/5ML	1	N/A	20	w	kp2	N/A	O	MIX[B] UVM230813-07B/UVM230928-07
10/13/2023 18:32	8G521.D	W8VM231013-18	VSTD500	ICAL	5UL/5ML	1	N/A	21	w	kp2	N/A	O	MIX[B] UVM230813-07B/UVM230928-07
10/13/2023 18:57	8G522.D	1205	BLANK	BLANK	5ML	1	N/A	22	w	kp2	N/A	O	
10/13/2023 19:23	8G523.D	1205	BLANK	BLANK	5ML	1	N/A	23	w	kp2	N/A	O	
10/13/2023 19:48	8G524.D	W8VM231013-19	VSTD250	ICV	5UL/5ML	1	N/A	24	w	kp2	N/A	O	MIX[B] UVM231009-08A/UVM230928-08A
10/13/2023 20:14	8G525.D	1205	BLANK	BLANK	5ML	1	N/A	25	w	kp2	N/A	x	

ORGANIC RUN LOG - INSTRUMENT ID#VOA8

KEP
11/30/2023

Date: 11/29/2023 Method 8260 Operator: kp2

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 50

Daily Instrument Readings:
Multiplier Voltage: 1353

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 10/13/2023

(See pg. _____ for ICAL Std. Ids)

Cl test lot # _____

Sequence Number: 112923V8

Daily Standard	Solution ID#	Volume Added for Purge (ul) Blk/ Smpl	CCV	MS/ LCS	BFB
CCV[A]	W8VM231129-01			5	
IS	IVM231121-01	5	5	5	
SS	IVM231107-01	5	5	5	
LCS[A]	W8VM231129-01			5	
BFB	IVM231109-01				1
CCV[B]	W8VM231129-03			5	
LCS[B]	W8VM231129-03			5	

Purge Amount	
5ML	Water Purge Vol:
5.0G	Soil Purge Wt.
N/A	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
X	Heated Purge

Analysis Date Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable(O/X)	Comments
11/29/2023 9:58	8N301.D	IVM231109-01	GEL	BFB	10ML	1	N/A	1	w	kp2	N/A	O	
11/29/2023 10:24	8N302.D	W8VM231129-01	GEL	CCV/LCS	5ML	1	N/A	2	w	kp2	N/A	O	MIX[A] UVM230914-10D/UVM230727-10F/UVM230818-09F
11/29/2023 10:49	8N303.D	W8VM231129-02	GEL	LCSD	5ML	1	N/A	3	w	kp2	N/A	O	MIX[A] UVM230914-10D/UVM230727-10F/UVM230818-09F
11/29/2023 11:15	8N304.D	W8VM231129-03	GEL	CCV/LCS	5ML	1	N/A	4	s	kp2	N/A	O	MIX[B] UVM231009-08E/UVM231116-08A
11/29/2023 11:40	8N305.D	1205	BLANK	BLANK	5ML	1	N/A	5	w	kp2	N/A	O	
11/29/2023 12:06	8N306.D	1205	BLANK	BLANK	5ML	1	N/A	6	w	kp2	N/A	O	
11/29/2023 14:55	8N307.D	646636008	UCOR	2532572	5ML	1	PH7	7	w	kp2	n	O	
11/29/2023 15:21	8N308.D	646636001	UCOR	2532576	5.8G	1	N/A	8	s	kp2	N/A	O	SOIL
11/29/2023 15:47	8N309.D	646636002	UCOR	2532576	6.0G	1	N/A	9	s	kp2	N/A	O	SOIL
11/29/2023 16:13	8N310.D	646636003	UCOR	2532576	5.5G	1	N/A	10	s	kp2	N/A	O	SOIL
11/29/2023 16:40	8N311.D	646636004	UCOR	2532576	5.7G	1	N/A	11	s	kp2	N/A	O	TCE/PCE over range; see
11/29/2023 17:06	8N312.D	646636005	UCOR	2532576	5.7G	1	N/A	12	s	kp2	N/A	O	TCE/PCE over range; see
11/29/2023 17:32	8N313.D	646636006	UCOR	2532576	6.1G	1	N/A	13	s	kp2	N/A	x	TCE/PCE carry over; see
11/29/2023 17:58	8N314.D	646636007	UCOR	2532576	6.8G	1	N/A	14	s	kp2	N/A	x	PCE carry over; see
11/29/2023 18:24	8N315.D	1205	BLANK	BLANK	5ML	1	N/A	15	w	kp2	N/A	x	rinse
11/29/2023 18:51	8N316.D	646356005	TNSL	2532718	5ML	1	PH<2	16	w	kp2	n	O	
11/29/2023 19:17	8N317.D	646356006	TNSL	2532718	5ML	1	PH<2	17	w	kp2	n	O	
11/29/2023 19:43	8N318.D	1205587957	TNSL	2532718	5ML	1	PH<2	18	w	kp2	n	O	MIX[A] 646356005PS UVM230914-10D/UVM230727-10F/UVM230818-09F
11/29/2023 20:09	8N319.D	1205587959	TNSL	2532718	5ML	1	PH<2	19	w	kp2	n	O	MIX[A] 646356005PSD UVM230914-10D/UVM230727-10F/UVM230818-09F
11/29/2023 20:35	8N320.D	1205587958	TNSL	2532718	5ML	1	PH<2	20	w	kp2	n	O	MIX[B] 646356005PS UVM231009-08E/UVM231116-08A
11/29/2023 21:01	8N321.D	1205587960	TNSL	2532718	5ML	1	PH<2	21	w	kp2	n	O	MIX[B] 646356005PSD UVM231009-08E/UVM231116-08A
11/29/2023 21:26	8N322.D	1205	BLANK	BLANK	5ML	1	N/A	22	w	kp2	N/A	x	rinse
11/29/2023 21:52	8N323.D	1205	BLANK	BLANK	5ML	1	N/A	23	w	kp2	N/A	x	rinse
11/29/2023 22:18	8N324.D	1205	BLANK	BLANK	5ML	1	N/A	24	w	kp2	N/A	x	rinse

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOAA

JEB 09/22/2023

KP 09/22/2023

Date: 9/21/2023 Method 8260C, D Operator: JEB

6200B, 624.1

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 9

Daily Instrument Readings:

Multiplier Voltage: 1435

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 9/21/2023

Cl test lot # 85161C

Sequence Number: 092123VA

Daily Standard Solution ID#		Volume Added for Purge (ul) Blk/ Smpl	CCV	MS/ LCS	BFB
CCV	N/A		5uL ea.		
IS	IVM230816-01	5	5	5	
SS	IVM230803-01	5	5	5	
LCS/MS	N/A			5uL ea.	
BFB	IVM230913-01				1
SHORT CCV	N/A		5uL ea.		
SHORT LCS	N/A			5uL ea.	

Purge Amount	
5	Water Purge Vol:
VARIOUS	Soil Purge Wt.
N/A	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
x	Heated Purge

Analysis Date	Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable (O/X)	Comments
9/21/2023	13:33	AG401.D	IVM230913-01	GEL	BFB	5ML	1	N/A	1	w	JEB	N/A	O	
9/21/2023	13:57	AG402.D	WAVM230921-01	VSTD0005	ICAL	5ML	1	N/A	2	w	JEB	N/A	O	UVM230822-01/UVM230518-01H/UVM230818-01C
9/21/2023	14:21	AG403.D	WAVM230921-02	VSTD001	ICAL	5ML	1	N/A	3	w	JEB	N/A	O	UVM230822-02/UVM230518-02H/UVM230818-02C
9/21/2023	14:45	AG404.D	WAVM230921-03	VSTD002	ICAL	5ML	1	N/A	4	w	JEB	N/A	O	UVM230822-03/UVM230518-03H/UVM230818-03C
9/21/2023	15:10	AG405.D	WAVM230921-04	VSTD005	ICAL	5ML	1	N/A	5	w	JEB	N/A	O	UVM230822-04/UVM230518-04H/UVM230818-04C
9/21/2023	15:34	AG406.D	WAVM230921-05	VSTD010	ICAL	5ML	1	N/A	6	w	JEB	N/A	O	UVM230822-05/UVM230518-05H/UVM230818-05C
9/21/2023	15:58	AG407.D	WAVM230921-06	VSTD020	ICAL	5ML	1	N/A	7	w	JEB	N/A	O	UVM230822-06/UVM230518-06H/UVM230818-06C
9/21/2023	16:22	AG408.D	WAVM230921-07	VSTD050	ICAL	5ML	1	N/A	8	w	JEB	N/A	O	UVM230822-07/UVM230518-07H/UVM230818-07C
9/21/2023	16:46	AG409.D	WAVM230921-08	VSTD080	ICAL	5ML	1	N/A	9	w	JEB	N/A	O	UVM230822-08/UVM230518-08H/UVM230818-08C
9/21/2023	17:10	AG410.D	WAVM230921-09	VSTD100	ICAL	5ML	1	N/A	10	w	JEB	N/A	O	UVM230822-08/UVM230518-08H/UVM230818-08C
9/21/2023	17:34	AG411.D	12055----------	GEL	BLK	5ML	1	N/A	11	w	JEB	N/A	X	
9/21/2023	17:59	AG412.D	WAVM230921-10	VSTD050	ICV	5ML	1	N/A	12	w	JEB	N/A	O	UVM230626-10C/UVM230818-09A/UVM230518-104
9/21/2023	18:22	AG413.D	WAVM230921-11	VSTD005	ICAL	5ML	1	N/A	13	w	JEB	N/A	O	UVM230813-01B/UVM230831-01
9/21/2023	18:47	AG414.D	WAVM230921-12	VSTD010	ICAL	5ML	1	N/A	14	w	JEB	N/A	O	UVM230813-02B/UVM230831-02
9/21/2023	19:11	AG415.D	WAVM230921-13	VSTD025	ICAL	5ML	1	N/A	15	w	JEB	N/A	O	UVM230813-03B/UVM230831-03
9/21/2023	19:35	AG416.D	WAVM230921-14	VSTD050	ICAL	5ML	1	N/A	16	w	JEB	N/A	O	UVM230813-04B/UVM230831-04
9/21/2023	19:59	AG417.D	WAVM230921-15	VSTD100	ICAL	5ML	1	N/A	17	w	JEB	N/A	O	UVM230813-05B/UVM230831-05
9/21/2023	20:23	AG418.D	WAVM230921-16	VSTD250	ICAL	5ML	1	N/A	18	w	JEB	N/A	O	UVM230813-06B/UVM230831-06
9/21/2023	20:48	AG419.D	WAVM230921-17	VSTD300	ICAL	5ML	1	N/A	19	w	JEB	N/A	O	UVM230813-07B/UVM230831-07

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOAA

Date: 9/21/2023 Method 8260C, D Operator: JEB
6200B, 624.1

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 9

Daily Instrument Readings:
Multiplier Voltage: 1435

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 9/21/2023

Cl test lot # 85161C

Sequence Number: 092123VA

Daily Standard Solution ID#		Volume Added for Purge (ul) Blk/ Smpl	CCV	MS/ LCS	BFB
CCV	N/A		5uL ea.		
IS	IVM230816-01	5	5	5	
SS	IVM230803-01	5	5	5	
LCS/MS	N/A			5uL ea.	
BFB	IVM230913-01				1
SHORT CCV	N/A		5uL ea.		
SHORT LCS	N/A			5uL ea.	

Purge Amount	
5	Water Purge Vol:
VARIOUS	Soil Purge Wt.
N/A	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
x	Heated Purge

Analysis Date	Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable (O/X)	Comments
9/21/2023	21:12	AG420.D	WAVM230921-18	VSTD500	ICAL	5ML	1	N/A	20	w	JEB	N/A	O	UVM230813-07B/UVM230831-07
9/21/2023	21:36	AG421.D	12055----------	GEL	BLK	5ML	1	N/A	21	w	JEB	N/A	X	
9/21/2023	22:00	AG422.D	WAVM23092119	VSTD250	ICV	5ML	1	N/A	22	w	JEB	N/A	O	UVM230813-08D/UVM230831-08B

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOAA

JER 11/30/2023

Date: 11/30/2023 Method 8260C, D 6200B, 624.1 Operator: JEB

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 9

Daily Instrument Readings:

Multiplier Voltage: 1424

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 9/21/2023

Cl test lot # 85161C

Sequence Number: 113023VA

Daily Standard Solution ID#		Volume Added for Purge (ul) Blk/ Smpl	CCV	MS/ LCS	BFB
CCV	WAVM231130-01		5uL ea.		
IS	IVM231010-01	5	5	5	
SS	IVM231011-01	5	5	5	
LCS/MS	WAVM231130-02			5uL ea.	
BFB	IVM231109-01				1
SHORT CCV	WAVM231130-03		5uL ea.		
SHORT LCS	WAVM231130-03			5uL ea.	

Purge Amount	
5	Water Purge Vol:
VARIOUS	Soil Purge Wt.
N/A	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
x	Heated Purge

Analysis Date Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable (O/X)	Comments
11/30/2023 07:43	AP401.D	IVM231109-01	GEL	BFB	5ML	1	N/A	1	w	JEB	N/A	O	
11/30/2023 08:08	AP402.D	WAVM231130-01	GEL	CCV	5ML	1	N/A	2	w	JEB	N/A	O	UVM230727-10F/UVM230714010D
11/30/2023 08:32	AP403.D	WAVM231130-02	GEL	LCS	5G	1	N/A	3	s	JEB	N/A	O	UVM230727-10F/UVM230714010D
11/30/2023 08:57	AP404.D	WAVM231130-03	GEL	CCV/LCS	5ML	1	N/A	4	w	JEB	N/A	O	UVM231009-08E/UVM231116-08A
11/30/2023 09:21	AP405.D	12055----------	GEL	BLK	5ML	1	N/A	5	w	JEB	N/A	O	
11/30/2023 09:45	AP406.D	12055----------	GEL	BLK	5G	1	N/A	6	s	JEB	N/A	O	SOIL
11/30/2023 10:10	AP407.D	1205588326	GEL	2533016	100UL	50	N/A	7	s	JEB	N/A	O	SOIL
11/30/2023 10:34	AP408.D	646356001	TNSL	2533016	5G	1	N/A	8	s	JEB	N/A	O	SOIL
11/30/2023 10:58	AP409.D	646356002	TNSL	2533016	5G	1	N/A	9	s	JEB	N/A	O	SOIL
11/30/2023 11:23	AP410.D	646356003	TNSL	2533016	5G	1	N/A	10	s	JEB	N/A	O	SOIL
11/30/2023 11:47	AP411.D	646356004	TNSL	2533016	5G	1	N/A	11	s	JEB	N/A	O	SOIL
11/30/2023 12:11	AP412.D	646356004	TNSL	2533016	5G	1	N/A	12	s	JEB	N/A	O	SOIL
11/30/2023 12:35	AP413.D	646456001	TNSL	2533016	100UL	50	N/A	13	s	JEB	N/A	O	SOIL 5.0G/10ML
11/30/2023 12:59	AP414.D	646456002	TNSL	2533016	100UL	50	N/A	14	s	JEB	N/A	O	SOIL 4.2G/10ML
11/30/2023 13:23	AP415.D	646456003	TNSL	2533016	100UL	50	N/A	15	s	JEB	N/A	O	SOIL 4.5G/10ML
11/30/2023 13:47	AP416.D	1205588321	TNSL	2533016	100UL	50	N/A	16	s	JEB	N/A	O	646356002MS
11/30/2023 14:11	AP417.D	1205588322	TNSL	2533016	100UL	50	N/A	17	s	JEB	N/A	O	646356002MSD
11/30/2023 14:36	AP418.D	1205588323	TNSL	2533016	100UL	50	N/A	18	s	JEB	N/A	O	646356002MS
11/30/2023 15:00	AP419.D	1205588324	TNSL	2533016	100UL	50	N/A	19	s	JEB	N/A	O	646356002MSD

FID Diesel Range Organics Analysis

Case Narrative

Diesel Range Organics
Technical Case Narrative
Triad National Security, LLC
SDG #: 2024-182
Work Order #: 646356

Product: **Analysis of Diesel Range Organics by Flame Ionization Detector**
Analytical Method: SW846 3541/8015D
Analytical Procedure: GL-OA-E-003 REV# 33
Analytical Batch: 2531656

Preparation Method: SW846 3541
Preparation Procedure: GL-OA-E-066 REV# 9
Preparation Batch: 2531655

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
646356001	RLUOB-23-289597
646356002	RLUOB-23-289598
646356003	RLUOB-23-289599
1205585972	Method Blank (MB)
1205585973	Laboratory Control Sample (LCS)
1205585976	646356001(RLUOB-23-289597) Matrix Spike (MS)
1205585977	646356001(RLUOB-23-289597) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Quality Control (QC) Information

Surrogate Recoveries
Sample (See Below) failed to meet surrogate recovery acceptance criteria due to dilution.

Sample	Analyte	Value
646356003 (RLUOB-23-289599)	o-Terphenyl	0* (37%-123%)

Technical Information

Sample Dilutions
Sample 646356003 (RLUOB-23-289599) was diluted due to the presence of over-range target analytes. Sample 646356002 (RLUOB-23-289598) was diluted due to viscous nature of sample extract.

Miscellaneous Information

Manual Integrations
Samples 1205585973 (LCS), 1205585976 (RLUOB-23-289597MS) and 1205585977 (RLUOB-23-289597MSD) required manual integration to correctly position the baseline as set in the calibration standard injections.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report
for

TNSL001 Triad National Security, LLC (620266)

Client SDG: 2024-182 GEL Work Order: 646356

The Qualifiers in this report are defined as follows:

* A quality control analyte recovery is outside of specified acceptance criteria
** Analyte is a surrogate compound
U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

DL Indicates that sample is diluted.
RA Indicates that sample is re-analyzed without re-extraction.
RE Indicates that sample is re-extracted.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: Jimin Cao **Name: Jimin Cao**

Date: 30 NOV 2023 **Title: Data Validator**

Sample Data Summary

FID Diesel Range Organics
Certificate of Analysis
Sample Summary

SDG Number:	**2024-182**	**Date Collected:**	**11/21/2023 10:30**	**Matrix:**	**SO**
Lab Sample ID:	**646356001**	**Date Received:**	**11/22/2023 09:15**	**%Moisture:**	**13.5**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289597**	**Method:**	**SW846 3541/8015D**	**SOP Ref:**	**GL-OA-E-003**
Batch ID:	**2531656**	**Inst:**	**FIDC.I**	**Dilution:**	**1**
Run Date:	**11/30/2023 11:28**	**Analyst:**	**RXC1**	**Inj. Vol:**	**1 uL**
Prep Date:	**11/29/2023 08:29**	**Aliquot:**	**30.19 g**	**Final Volume:**	**1 mL**
Data File:	**113023DROMO\FCk3006.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	Motor Oil	U	2.49	mg/kg	2.49	7.66
68334-30-5	Diesel Range Organics	U	2.49	mg/kg	2.49	7.66

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
o-Terphenyl	0.523	0.766	mg/kg	68	(37%-123%)

FID Diesel Range Organics
Certificate of Analysis
Sample Summary

SDG Number:	**2024-182**	**Date Collected:**	**11/21/2023 10:45**	**Matrix:**	**SO**
Lab Sample ID:	**646356002**	**Date Received:**	**11/22/2023 09:15**	**%Moisture:**	**11.3**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289598**	**Method:**	**SW846 3541/8015D**	**SOP Ref:**	**GL-OA-E-003**
Batch ID:	**2531656**	**Inst:**	**FIDC.I**	**Dilution:**	**5**
Run Date:	**11/30/2023 13:22**	**Analyst:**	**RXC1**	**Inj. Vol:**	**1 uL**
Prep Date:	**11/29/2023 08:29**	**Aliquot:**	**30.49 g**	**Final Volume:**	**1 mL**
Data File:	**113023DROMO\FCk3009.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	Motor Oil	U	12.0	mg/kg	12.0	37.0
68334-30-5	Diesel Range Organics	U	12.0	mg/kg	12.0	37.0

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
o-Terphenyl	0.514	0.739	mg/kg	69	(37%-123%)

FID Diesel Range Organics
Certificate of Analysis
Sample Summary

SDG Number:	**2024-182**	**Date Collected:**	**11/21/2023 11:00**	**Matrix:**	**SO**
Lab Sample ID:	**646356003**	**Date Received:**	**11/22/2023 09:15**	**%Moisture:**	**11.3**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289599**	**Method:**	**SW846 3541/8015D**	**SOP Ref:**	**GL-OA-E-003**
Batch ID:	**2531656**	**Inst:**	**FIDC.I**	**Dilution:**	**50**
Run Date:	**11/30/2023 15:15**	**Analyst:**	**RXC1**	**Inj. Vol:**	**1 uL**
Prep Date:	**11/29/2023 08:29**	**Aliquot:**	**30.2 g**	**Final Volume:**	**1 mL**
Data File:	**113023DROMO\FCk3012.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	Motor Oil		581	mg/kg	121	373
68334-30-5	Diesel Range Organics		6380	mg/kg	121	373

Surrogate/Tracer recovery	Result	Nominal		Recovery%		Acceptable Limits
o-Terphenyl	0.000	0.747	mg/kg	0	*	(37%-123%)

Quality Control Summary

FID Diesel Range Organics

Surrogate Recovery Report

SDG Number: 2024-182

Matrix Type: SOLID

Sample ID	Client ID	OTP %REC	
1205585972	MB for batch 2531655	81	
1205585973	LCS for batch 2531655	92	
646356001	RLUOB-23-289597	68	
1205585976	RLUOB-23-289597MS	92	
1205585977	RLUOB-23-289597MSD	90	
646356002	RLUOB-23-289598	69	D
646356003	RLUOB-23-289599	0 *	D

Surrogate		Acceptance Limits
OTP	= o-Terphenyl	(37%-123%)

* Recovery outside Acceptance Limits
# Column to be used to flag recovery values
D Sample Diluted

FID Diesel Range Organics

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-182
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 2531655
Matrix: SOIL
Lab Sample ID: 1205585973
Instrument: FIDC.I
Analysis Date: 11/30/2023 10:50
Dilution: 1
Analyst: RXC1
Prep Batch ID: 2531655
Inj. Vol: 1 uL
Batch ID: 2531656

CAS No.		Parmname	Amount Added mg/kg	Sample Conc. mg/kg	Spike Conc. mg/kg	Recovery %	Acceptance Limits
68334-30-5	LCS	Diesel Range Organics	66.2	0.0	55.1	83	51-125
	LCS	Motor Oil	66.2	0.0	58.5	88	59-132

FID Diesel Range Organics

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-182
Client ID: RLUOB-23-289597MS
Lab Sample ID: 1205585976
Instrument: FIDC.I
Analyst: RXC1
Inj. Vol: 1 uL

Sample Type: Matrix Spike
Matrix: SO
%Moisture: 13.5
Analysis Date: 11/30/2023 12:06
Prep Batch ID: 2531655
Batch ID: 2531656

Dilution: 1

CAS No.		Parmname	Amount Added mg/kg	Sample Conc. mg/kg		Spike Conc. mg/kg	Recovery %	Acceptance Limits
68334-30-5	MS	Diesel Range Organics	76.2	0.000	U	65.0	85	28-129
	MS	Motor Oil	76.2	0.000	U	69.2	91	44-137

FID Diesel Range Organics

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-182
Client ID: RLUOB-23-289597MSD
Lab Sample ID: 1205585977
Instrument: FIDC.I
Analyst: RXC1
Inj. Vol: 1 uL

Sample Type: Matrix Spike Duplicate
Matrix: SO
%Moisture: 13.5
Analysis Date: 11/30/2023 12:44
Prep Batch ID: 2531655
Batch ID: 2531656
Dilution: 1

CAS No.		Parmname	Amount Added mg/kg	Sample Conc. mg/kg		Spike Conc. mg/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
68334-30-5	MSD	Diesel Range Organics	77.0	0.000	U	62.9	82	28-129	3	0-72
	MSD	Motor Oil	77.0	0.000	U	67.9	88	44-137	2	0-30

Method Blank Summary

SDG Number:	**2024-182**	**Client:**	**TNSL001**	**Matrix:**	**SOIL**
Client ID:	**MB for batch 2531655**	**Instrument ID:**	**FIDC.I**	**Data File:**	**113023DROMO\FCk3004.D**
Lab Sample ID:	**1205585972**	**Prep Date:**	**11/29/2023 08:29**	**Analyzed:**	**11/30/23 10:12**
Column:	**DB-5ms**				

This method blank applies to the following samples and quality control samples:

	Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01	LCS for batch 2531655	1205585973	113023DROMO\FCk3005.D	11/30/23	1050
02	RLUOB-23-289597	646356001	113023DROMO\FCk3006.D	11/30/23	1128
03	RLUOB-23-289597MS	1205585976	113023DROMO\FCk3007.D	11/30/23	1206
04	RLUOB-23-289597MSD	1205585977	113023DROMO\FCk3008.D	11/30/23	1244
05	RLUOB-23-289598	646356002	113023DROMO\FCk3009.D	11/30/23	1322
06	RLUOB-23-289599	646356003	113023DROMO\FCk3012.D	11/30/23	1515

Sample Data

FID Diesel Range Organics
Certificate of Analysis
Sample Summary

SDG Number:	**2024-182**	**Date Collected:**	**11/21/2023 10:30**	**Matrix:**	**SO**
Lab Sample ID:	**646356001**	**Date Received:**	**11/22/2023 09:15**	**%Moisture:**	**13.5**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289597**	**Method:**	**SW846 3541/8015D**	**SOP Ref:**	**GL-OA-E-003**
Batch ID:	**2531656**	**Inst:**	**FIDC.I**	**Dilution:**	**1**
Run Date:	**11/30/2023 11:28**	**Analyst:**	**RXC1**	**Inj. Vol:**	**1 uL**
Prep Date:	**11/29/2023 08:29**	**Aliquot:**	**30.19 g**	**Final Volume:**	**1 mL**
Data File:	**113023DROMO\FCk3006.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	Motor Oil	U	2.49	mg/kg	2.49	7.66
68334-30-5	Diesel Range Organics	U	2.49	mg/kg	2.49	7.66

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
o-Terphenyl	0.523	0.766	mg/kg	68	(37%-123%)

Quantitation Report
GEL Laboratories, LLC

11/30/2023

Data Path : D:\MSDCHEM\1\Data\113023DROMO\
Data File : FCk3006.D
Signal(s) : FID1A.ch
Acq On : 30 Nov 2023 11:28
Operator : RXC1 InstName : FIDC
Sample : |646356001|2531656|1|DROQ|1|TNSL|||
Misc : |FIDD415D_S|SOIL|RLUOB-23-289597|MIX[A,D]||
ALS Vial : 6 Sample Multiplier: 1

JC
11/30/2023

Integration File: autoint1.e
Quant Time: Nov 30 12:09:13 2023
Quant Method : D:\MSDCHEM\1\Data\113023DROMO\FIDCNW_111023.m
Quant Title : DRO TPH SubList :
QLast Update : Fri Nov 10 18:24:04 2023
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : DB-5MS
Signal Info : 30m x 250um x 0.25um

Compound	Exp	R.T.	Delta	Response	Conc	Units
System Monitoring Compounds						
4) SD o-Terphenyl	14.390	14.385	-0.005	28349413	13.664	mg/L

Compound	Amount	Range	Recovery
4) o-Terphenyl	20.000	No Limits	68%

Target Compounds					
1) HA Diesel Range Organics	Range	8.233 - 14.855	28029473	<MDL	mg/L
2) HA Motor Oil	Range	14.855 - 23.039	49634996	<MDL	mg/L

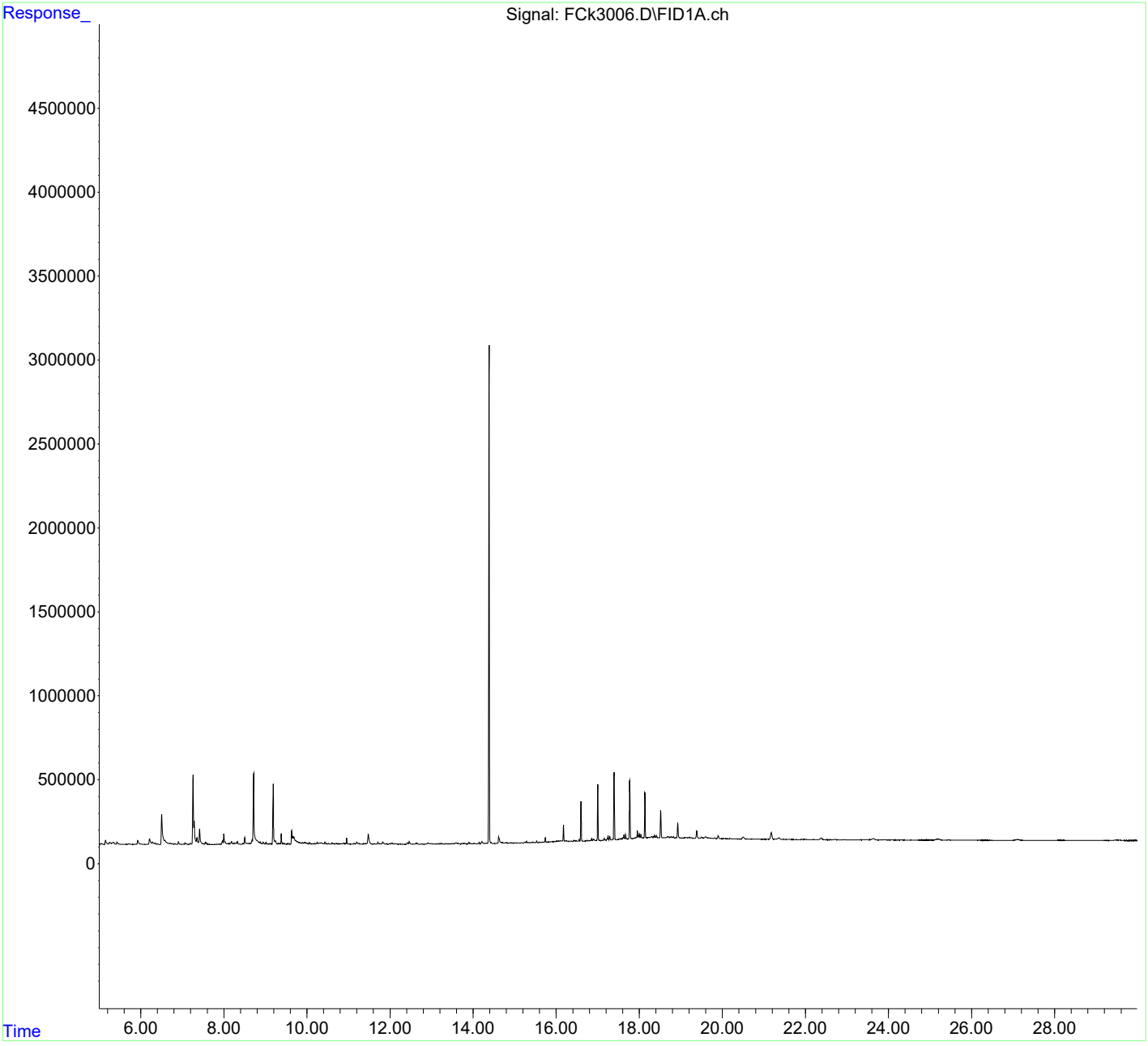
(f)=RT Delta > 1/2 Window (A) = Over the calibration range (d) = deleted (m)=manual int.

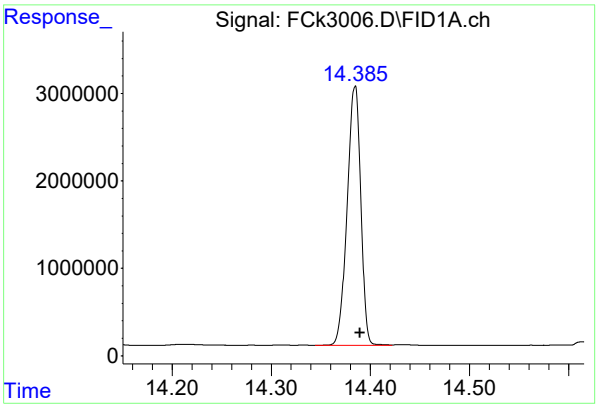
Quantitation Report
GEL Laboratories, LLC

DaData Path : D:\MSDCHEM\1\Data\113023DROMO\
DaData File : FCk3006.D
Signal(s) : FID1A.ch
Acq On : 30 Nov 2023 11:28
Operator : RXC1 InstName : FIDC
Sample : |646356001|2531656|1|DROQ|1|TNSL|||
Misc : |FIDD415D_S|SOIL|RLUOB-23-289597|MIX[A,D]||
ALS Vial : 6 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Nov 30 12:09:13 2023
Quant Method : D:\MSDCHEM\1\Data\113023DROMO\FIDCNW_111023.m
Quant Title : DRO TPH SubList :
QLast Update : Fri Nov 10 18:24:04 2023
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : DB-5MS
Signal Info : 30m x 250um x 0.25um





#4
o-Terphenyl
R.T.: 14.385 min
Delta R.T.: -0.005 min
Response: 28349413
Conc: 13.66 mg/L

FID Diesel Range Organics
Certificate of Analysis
Sample Summary

SDG Number:	**2024-182**	**Date Collected:**	**11/21/2023 10:45**	**Matrix:**	**SO**
Lab Sample ID:	**646356002**	**Date Received:**	**11/22/2023 09:15**	**%Moisture:**	**11.3**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289598**	**Method:**	**SW846 3541/8015D**	**SOP Ref:**	**GL-OA-E-003**
Batch ID:	**2531656**	**Inst:**	**FIDC.I**	**Dilution:**	**5**
Run Date:	**11/30/2023 13:22**	**Analyst:**	**RXC1**	**Inj. Vol:**	**1 uL**
Prep Date:	**11/29/2023 08:29**	**Aliquot:**	**30.49 g**	**Final Volume:**	**1 mL**
Data File:	**113023DROMO\FCk3009.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	Motor Oil	U	12.0	mg/kg	12.0	37.0
68334-30-5	Diesel Range Organics	U	12.0	mg/kg	12.0	37.0

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
o-Terphenyl	0.514	0.739	mg/kg	69	(37%-123%)

Quantitation Report
GEL Laboratories, LLC

11/30/2023

Data Path : D:\MSDCHEM\1\Data\113023DROMO\
Data File : FCk3009.D
Signal(s) : FID1A.ch
Acq On : 30 Nov 2023 13:22
Operator : RXC1 InstName : FIDC
Sample : |646356002|2531656|5|DROQ|1|TNSL|||
Misc : |FIDD415D_S|SOIL|RLUOB-23-289598|MIX[A,D]||
ALS Vial : 9 Sample Multiplier: 5

JC
11/30/2023

Integration File: autoint1.e
Quant Time: Nov 30 13:54:35 2023
Quant Method : D:\MSDCHEM\1\Data\113023DROMO\FIDCNW_111023.m
Quant Title : DRO TPH SubList :
QLast Update : Fri Nov 10 18:24:04 2023
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : DB-5MS
Signal Info : 30m x 250um x 0.25um

Compound	Exp	R.T.	Delta	Response	Conc	Units
System Monitoring Compounds						
4) SD o-Terphenyl	14.390	14.380	-0.010	5771484	13.909	mg/L

Compound	Amount	Range	Recovery
4) o-Terphenyl	20.000	No Limits	70%

Target Compounds					
1) HA Diesel Range Organics	Range 8.233 - 14.855	7527439	<MDL	mg/L
2) HA Motor Oil	Range 14.855 - 23.039	22053382	<MDL	mg/L

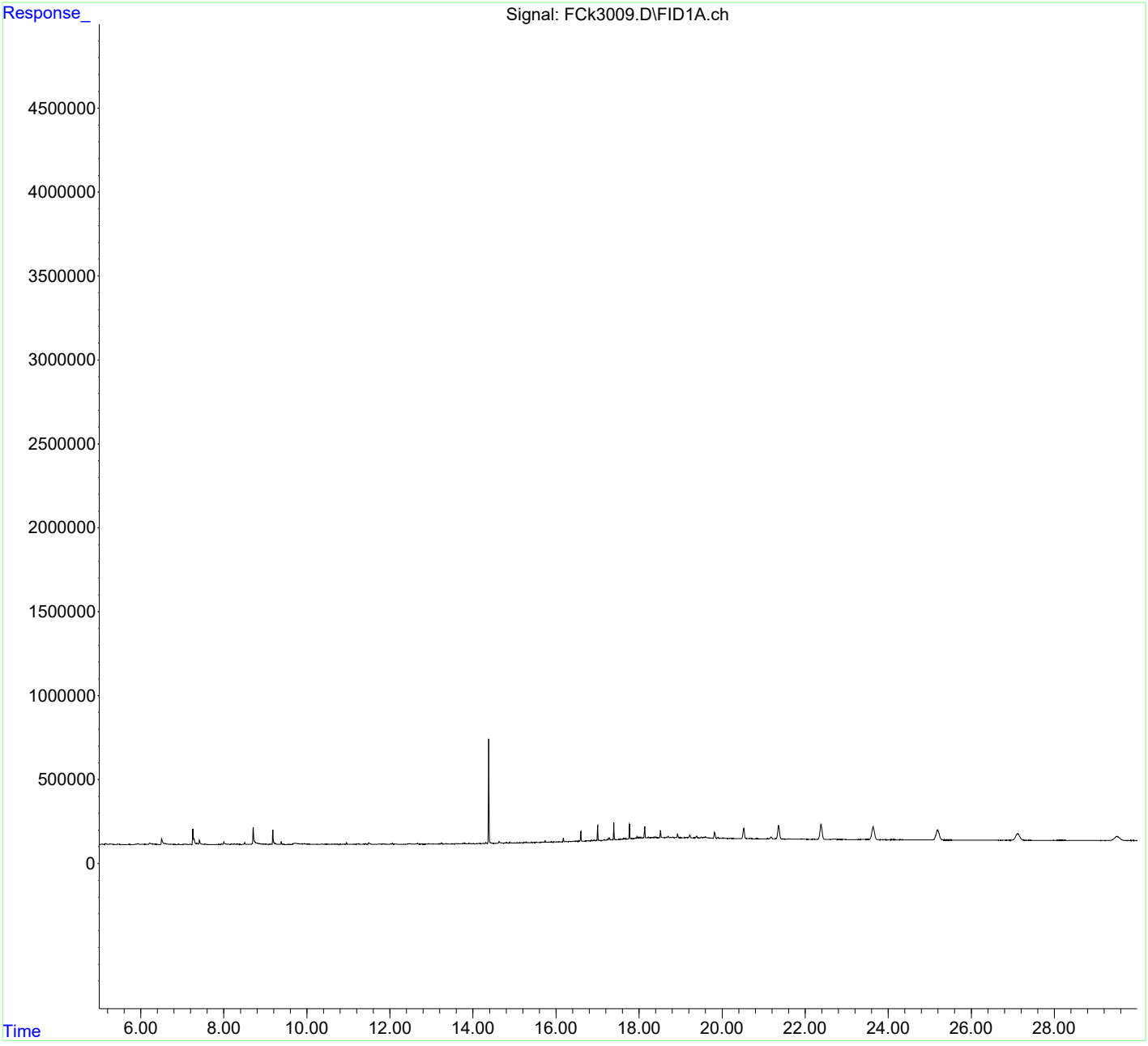
(f)=RT Delta > 1/2 Window (A) = Over the calibration range (d) = deleted (m)=manual int.

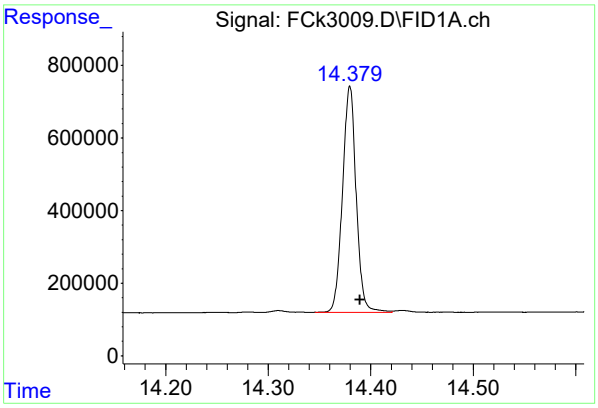
Quantitation Report
GEL Laboratories, LLC

DaData Path : D:\MSDCHEM\1\Data\113023DROMO\
DaData File : FCk3009.D
Signal(s) : FID1A.ch
Acq On : 30 Nov 2023 13:22
Operator : RXC1 InstName : FIDC
Sample : |646356002|2531656|5|DROQ|1|TNSL|||
Misc : |FIDD415D_S|SOIL|RLUOB-23-289598|MIX[A,D]||
ALS Vial : 9 Sample Multiplier: 5

Integration File: autoint1.e
Quant Time: Nov 30 13:54:35 2023
Quant Method : D:\MSDCHEM\1\Data\113023DROMO\FIDCNW_111023.m
Quant Title : DRO TPH SubList :
QLast Update : Fri Nov 10 18:24:04 2023
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : DB-5MS
Signal Info : 30m x 250um x 0.25um





#4
o-Terphenyl
R.T.: 14.380 min
Delta R.T.: -0.010 min
Response: 5771484
Conc: 13.91 mg/L

FID Diesel Range Organics
Certificate of Analysis
Sample Summary

SDG Number:	**2024-182**	**Date Collected:**	**11/21/2023 11:00**	**Matrix:**	**SO**
Lab Sample ID:	**646356003**	**Date Received:**	**11/22/2023 09:15**	**%Moisture:**	**11.3**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289599**	**Method:**	**SW846 3541/8015D**	**SOP Ref:**	**GL-OA-E-003**
Batch ID:	**2531656**	**Inst:**	**FIDC.I**	**Dilution:**	**50**
Run Date:	**11/30/2023 15:15**	**Analyst:**	**RXC1**	**Inj. Vol:**	**1 uL**
Prep Date:	**11/29/2023 08:29**	**Aliquot:**	**30.2 g**	**Final Volume:**	**1 mL**
Data File:	**113023DROMO\FCk3012.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	Motor Oil		581	mg/kg	121	373
68334-30-5	Diesel Range Organics		6380	mg/kg	121	373

Surrogate/Tracer recovery	Result	Nominal		Recovery%		Acceptable Limits
o-Terphenyl	0.000	0.747	mg/kg	0	*	(37%-123%)

Quantitation Report
GEL Laboratories, LLC

dF 11/30/2023

Data Path : D:\MSDCHEM\1\Data\113023DROMO\
Data File : FCk3012.D
Signal(s) : FID1A.ch
Acq On : 30 Nov 2023 15:15
Operator : RXC1 InstName : FIDC
Sample : |646356003|2531656|50|DROQ|1|TNSL|||
Misc : |FIDD415D_S|SOIL|RLUOB-23-289599|MIX[A,D]||
ALS Vial : 10 Sample Multiplier: 50

JC 11/30/2023

Integration File: autoint1.e
Quant Time: Nov 30 15:47:48 2023
Quant Method : D:\MSDCHEM\1\Data\113023DROMO\FIDCNW_111023.m
Quant Title : DRO TPH SubList :
QLast Update : Fri Nov 10 18:24:04 2023
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : DB-5MS
Signal Info : 30m x 250um x 0.25um

Compound	Exp	R.T.	Delta	Response	Conc	Units
System Monitoring Compounds						
4) SD o-Terphenyl	14.390	14.399	0.009	9218265	N.D.	mg/L d

Compound	Amount	Range	Recovery
4) o-Terphenyl	20.000	No Limits	0%

Target Compounds					
1) HA Diesel Range Organics	Range	8.233 - 14.855	4992739081	3415.976	mg/L m
2) HA Motor Oil	Range	14.855 - 23.039	552203260	311.229	mg/L

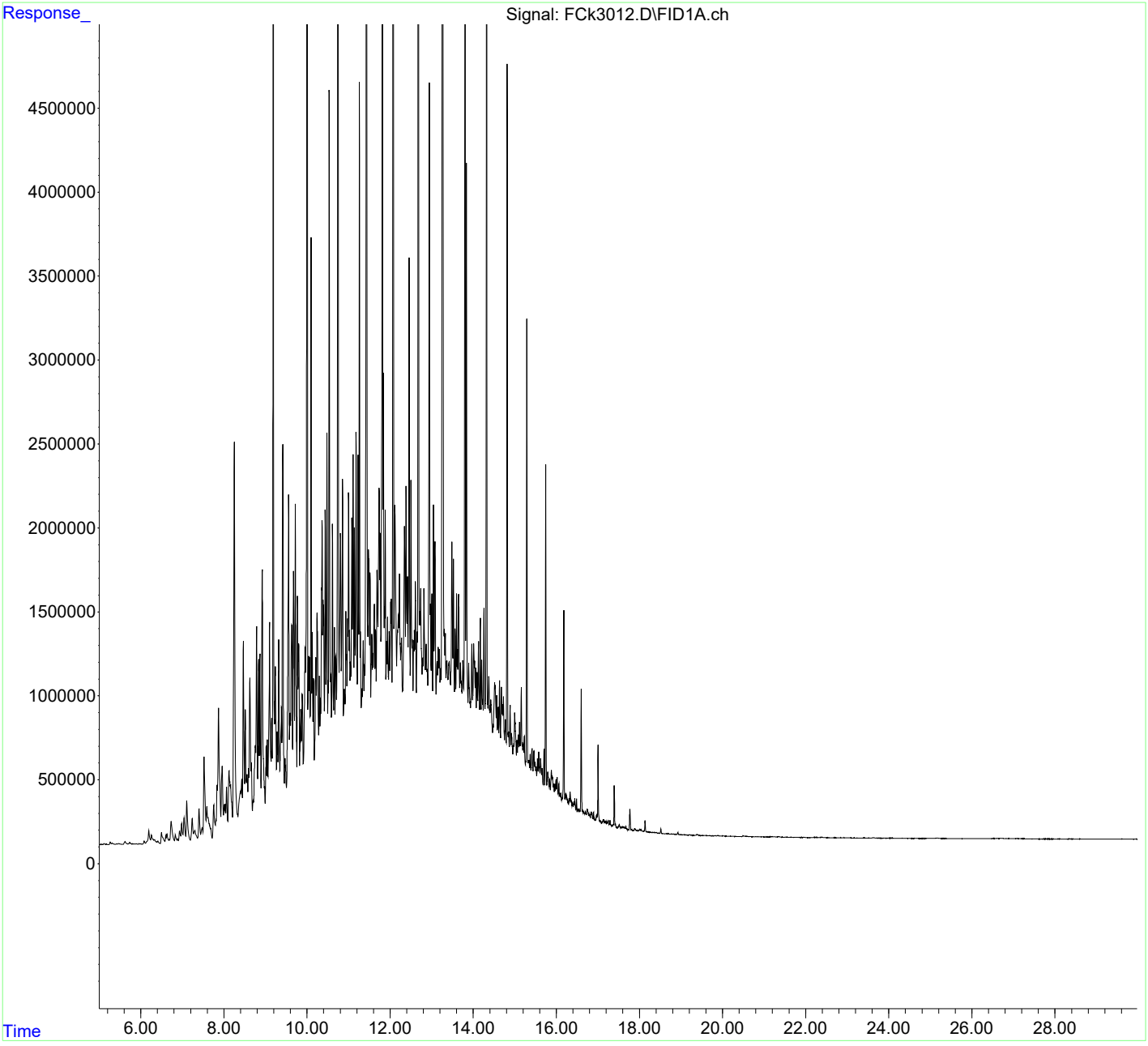
(f)=RT Delta > 1/2 Window (A) = Over the calibration range (d) = deleted (m)=manual int.

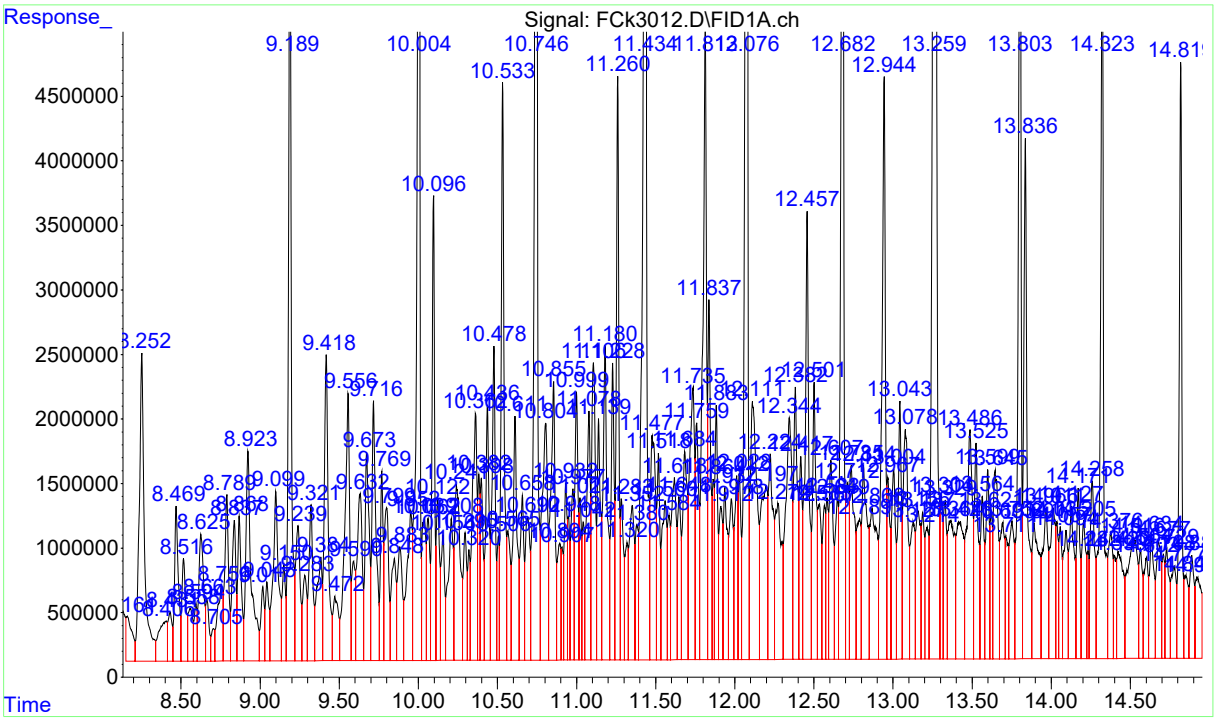
Quantitation Report
GEL Laboratories, LLC

DaData Path : D:\MSDCHEM\1\Data\113023DROMO\
DaData File : FCk3012.D
Signal(s) : FID1A.ch
Acq On : 30 Nov 2023 15:15
Operator : RXC1 InstName : FIDC
Sample : |646356003|2531656|50|DROQ|1|TNSL|||
Misc : |FIDD415D_S|SOIL|RLUOB-23-289599|MIX[A,D]||
ALS Vial : 10 Sample Multiplier: 50

Integration File: autoint1.e
Quant Time: Nov 30 15:47:48 2023
Quant Method : D:\MSDCHEM\1\Data\113023DROMO\FIDCNW_111023.m
Quant Title : DRO TPH SubList :
QLast Update : Fri Nov 10 18:24:04 2023
Response via : Initial Calibration
Integrator: ChemStation

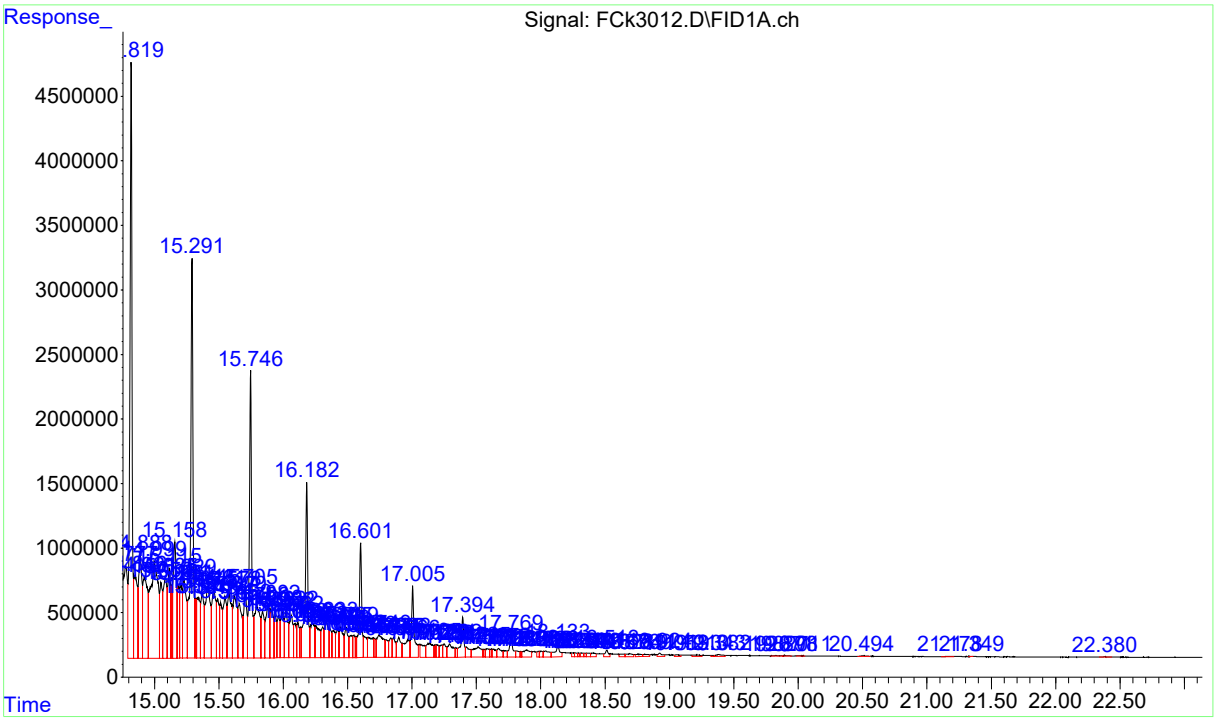
Volume Inj. : 1 ul
Signal Phase : DB-5MS
Signal Info : 30m x 250um x 0.25um





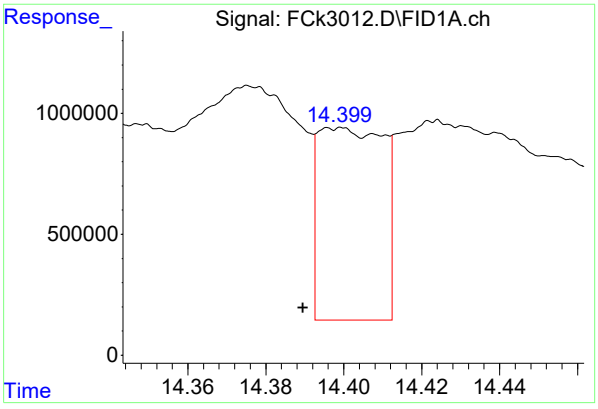
Compound: Diesel Range Organics

RT Range:	8.233: 14.855
Total TPH Resp:	4992739081
Total SMC/ISTD Resp:	0
Final Resp:	4992739081

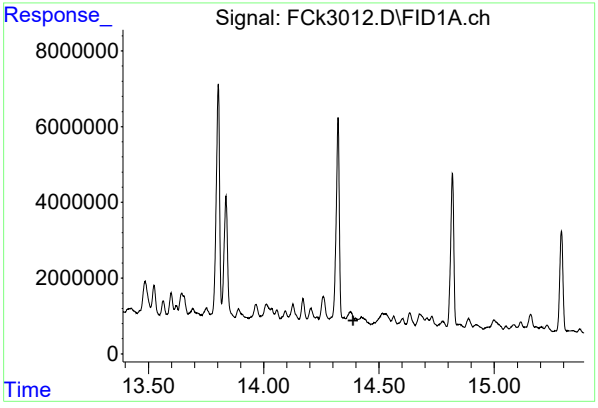


Compound: Motor Oil

RT Range: 14.855: 23.039
Total TPH Resp: 552203260
Total SMC/ISTD Resp: 0
Final Resp: 552203260



#4 BEFORE analyst DELETION
o-Terphenyl PPS
R.T.: 14.399 min
Delta R.T.: 0.009 min
Response: 9218265
Conc: 222.15 mg/L



#4 AFTER analyst DELETION
o-Terphenyl
R.T.: 0.000 min
Exp R.T. : 14.390 min
Response: 0
Conc: N.D. DELETED

Miscellaneous

Prep Logbook

Automated Soxhlet Extraction

Batch ID: 2531655 **Verified by:** _____
Analyst: Jacob Stewart
Method: SW846 3541

Lab SOP: GL-OA-E-066 REV# 9
Instrument: Semi-Volatiles Manual

Sample ID	Prep Date	Aliquot (g)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1205585972 MB	29-NOV-2023 08:29:00	30.14	1	0.03318
1205585973 LCS	29-NOV-2023 08:29:00	30.21	1	0.0331
646229001	29-NOV-2023 08:29:00	30.3	1	0.033
1205585974 MS (646229001)	29-NOV-2023 08:29:00	30.38	1	0.03292
1205585975 MSD (646229001)	29-NOV-2023 08:29:00	30.35	1	0.03295
646356001	29-NOV-2023 08:29:00	30.19	1	0.03312
1205585976 MS (646356001)	29-NOV-2023 08:29:00	30.37	1	0.03293
1205585977 MSD (646356001)	29-NOV-2023 08:29:00	30.03	1	0.0333
646356002	29-NOV-2023 08:29:00	30.49	1	0.0328
646356003	29-NOV-2023 08:29:00	30.2	1	0.03311

Type	Sample Id	Description	Serial Number	Spike Amt	Units
LCS	1205585973	AZDRO SPIKE LCS STD,4000ug/ml	WE231116-06	1	mL
MS	1205585974	AZDRO SPIKE LCS STD,4000ug/ml	WE231116-06	1	mL
MS	1205585976	AZDRO SPIKE LCS STD,4000ug/ml	WE231116-06	1	mL
MSD	1205585975	AZDRO SPIKE LCS STD,4000ug/ml	WE231116-06	1	mL
MSD	1205585977	AZDRO SPIKE LCS STD,4000ug/ml	WE231116-06	1	mL
SURR	All	20 ppm surrogate	WE231010-07	1	mL
REGNT	All	Sand pure 40-100 mesh	3951793-A	30	g
REGNT	All	Methylene Chloride	3969728	120	mL

Comments:

Sample 646299001 (and MS, MSD) was mud. Work order 646356 was powder and rocks.
Soxtherm Unit:: 4,9A
Logbook Reviewer: CB
Final Solvent: Methylene Chloride
Start Time:: 08:38, 09:59
End Time:: 09:44, 10:55
Verified by: DS

ORGANIC RUN LOG - INSTRUMENT ID#FIDC

GEL ORGANIC RUN LOG INSTRUMENT BATCH: 111023DROMO

DATE: 10-Nov-23 METHOD: See Data OPERATOR: RXC1 Sequence Number: 111023DROMO

Solvent Lot: 230706

Injection Volume: 1.0 uL

Calibration Information:
Initial Calibration Dates: See Calibration History
Initial Calibration Std ID's: See Associated Data and Run Log
FID Analysis of GEL SOP: GL-OA-E-003

Analysis Date Time	Data File	Lab Sample ID	Client	Batch #	Dil. Factor	AS Slot #	Analyst	Comme
11/10/2023 08:45	FCk1001.D	WFI231012-98	IBLK	BLANK	1	1	RXC1	
11/10/2023 09:23	FCk1002.D	WFI230929-99	FID_RT	RTCHECK	1	2	RXC1	
11/10/2023 10:01	FCk1003.D	WFI231031-30	DRO-MO-1	ICAL	1	3	RXC1	
11/10/2023 10:39	FCk1004.D	WFI231031-31	DRO-MO-2	ICAL	1	4	RXC1	
11/10/2023 11:18	FCk1005.D	WFI231031-32	DRO-MO-3	ICAL	1	5	RXC1	
11/10/2023 11:56	FCk1006.D	WFI231031-33	DRO-MO-4	ICAL	1	6	RXC1	
11/10/2023 12:34	FCk1007.D	WFI231031-34	DRO-MO-5	ICAL	1	7	RXC1	
11/10/2023 13:13	FCk1008.D	WFI231020-36	RO-MO-IC	ICV	1	8	RXC1	PASS
11/10/2023 13:51	FCk1009.D	WFI231012-98	IBLK	BLANK	1	9	RXC1	
11/10/2023 14:29	FCk1010.D	WFI230929-99	FID_RT	RTCHECK	1	10	RXC1	
11/10/2023 15:07	FCk1011.D	WFI231031-41	KER-1	ICAL	1	11	RXC1	
11/10/2023 15:46	FCk1012.D	WFI231031-42	KER-2	ICAL	1	12	RXC1	
11/10/2023 16:24	FCk1013.D	WFI231031-43	KER-3	ICAL	1	13	RXC1	
11/10/2023 17:02	FCk1014.D	WFI231031-44	KER-4	ICAL	1	14	RXC1	
11/10/2023 17:40	FCk1015.D	WFI231031-45	KER-5	ICAL	1	15	RXC1	
11/10/2023 18:19	FCk1016.D	UFI231003-25.3	KER-ICV	ICV	1	16	RXC1	PASS
11/10/2023 18:57	FCk1017.D	WFI231012-98	IBLK	BLANK	1	17	RXC1	
11/10/2023 19:35	FCk1018.D	WFI230929-99	FID_RT	RTCHECK	1	18	RXC1	
11/10/2023 20:13	FCk1019.D	1205565177	MB	2519459	1	19	RXC1	
11/10/2023 20:51	FCk1020.D	639713001	QCQA	2519459	1	20	RXC1	
11/10/2023 21:29	FCk1021.D	WFI231020-36	RO-MO-CC	CCV	1	21	RXC1	PASS
11/10/2023 22:07	FCk1022.D	UFI231003-25.3	KER-CCV	CCV	1	22	RXC1	PASS
11/10/2023 22:46	FCk1023.D	WFI231012-98	IBLK	BLANK	1	23	RXC1	
11/10/2023 23:24	FCk1024.D	1205560082	MB	2516140	1	24	RXC1	
11/11/2023 00:02	FCk1025.D	1205560083	LCS	2516140	1	25	RXC1	
11/11/2023 00:40	FCk1026.D	1205560086	LCS	2516140	1	26	RXC1	
11/11/2023 01:18	FCk1027.D	1205560087	LCSD	2516140	1	27	RXC1	
11/11/2023 01:56	FCk1028.D	642626007	CPRC	2516140	1	28	RXC1	
11/11/2023 02:34	FCk1029.D	1205560084	MS	2516140	1	29	RXC1	
11/11/2023 03:11	FCk1030.D	1205560085	MSD	2516140	1	30	RXC1	
11/11/2023 03:49	FCk1031.D	642626008	CPRC	2516140	1	31	RXC1	
11/11/2023 04:27	FCk1032.D	642776001	CPRC	2516140	1	32	RXC1	

GEL ORGANIC RUN LOG INSTRUMENT BATCH: 111023DROMO

11/11/2023 05:05	FCk1033.D	642776002	CPRC	2516140	1	33	RXC1	
11/11/2023 05:43	FCk1034.D	WFI231020-36	RO-MO-CC	CCV	1	34	RXC1	PASS
11/11/2023 06:21	FCk1035.D	UFI231003-25.3	KER-CCV	CCV	1	35	RXC1	PASS
11/11/2023 06:59	FCk1036.D	WFI231012-98	IBLK	BLANK	1	36	RXC1	
11/11/2023 07:37	FCk1037.D	1205570607	MB	2522747	1	37	RXC1	
11/11/2023 08:14	FCk1038.D	1205570608	LCS	2522747	1	38	RXC1	
11/11/2023 08:52	FCk1039.D	644457001	LLNL	2522747	5	39	RXC1	
11/11/2023 09:30	FCk1040.D	1205570609	MS	2522747	5	40	RXC1	
11/11/2023 10:08	FCk1041.D	1205570610	MSD	2522747	5	41	RXC1	
11/11/2023 10:46	FCk1042.D	WFI231020-36	RO-MO-CC	CCV	1	42	RXC1	PASS
11/11/2023 11:24	FCk1043.D	WFI231012-98	IBLK	BLANK	1	43	RXC1	

GEL ORGANIC RUN LOG INSTRUMENT BATCH: 113023DROMO

DATE: 30-Nov-23 METHOD: See Data OPERATOR: RXC1 Sequence Number: 113023DROMO

Solvent Lot: 230706

Injection Volume: 1.0 uL

Calibration Information:
Initial Calibration Dates: See Calibration History
Initial Calibration Std ID's: See Associated Data and Run Log
FID Analysis of GEL SOP: GL-OA-E-003

Analysis Date Time	Data File	Lab Sample ID	Client	Batch #	Dil. Factor	AS Slot #	Analyst	Comme
11/30/2023 08:17	FCk3001.D	WFI231116-98	IBLK	BLANK	1	1	RXC1	
11/30/2023 08:55	FCk3002.D	WFI230929-99	FID_RT	RTCHECK	1	2	RXC1	
11/30/2023 09:34	FCk3003.D	WFI231020-36	ROMO-CC	CCV	1	3	RXC1	
11/30/2023 10:12	FCk3004.D	1205585972	MB	2531656	1	4	RXC1	
11/30/2023 10:50	FCk3005.D	1205585973	LCS	2531656	1	5	RXC1	
11/30/2023 11:28	FCk3006.D	646356001	TNSL	2531656	1	6	RXC1	
11/30/2023 12:06	FCk3007.D	1205585976	MS	2531656	1	7	RXC1	
11/30/2023 12:44	FCk3008.D	1205585977	MSD	2531656	1	8	RXC1	
11/30/2023 13:22	FCk3009.D	646356002	TNSL	2531656	5	9	RXC1	
11/30/2023 14:00	FCk3010.D	646356003	TNSL	2531656	1	10	RXC1	
11/30/2023 14:38	FCk3011.D	WFI231116-98	IBLK	BLANK	1	12	RXC1	
11/30/2023 15:15	FCk3012.D	646356003	TNSL	2531656	50	10	RXC1	
11/30/2023 15:53	FCk3013.D	WFI231020-36	ROMO-CC	CCV	1	11	RXC1	

GC Volatiles (GRO) Analysis

Case Narrative

GC Volatiles (GRO)
Technical Case Narrative
Triad National Security, LLC
SDG #: 2024-182
Work Order #: 646356

Product: **Volatile Total Petroleum Hydrocarbons by Flame Ionization Detector**
Analytical Method: SW846 8015D
Analytical Procedure: GL-OA-E-004 REV# 32
Analytical Batch: 2530993

Preparation Method: SW846 5035A
Preparation Procedure: GL-OA-E-004 REV# 32
Preparation Batch: 2530991

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
646356001	RLUOB-23-289597
646356002	RLUOB-23-289598
646356003	RLUOB-23-289599
1205584639	Laboratory Control Sample (LCS)
1205584640	Method Blank (MB)
1205584641	646356001(RLUOB-23-289597) Post Spike (PS)
1205584642	646356001(RLUOB-23-289597) Post Spike Duplicate (PSD)
1205584643	High Blank (HB)

The samples in this SDG were analyzed on a "dry weight" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Sample Dilutions
Samples were analyzed using a methanol extraction procedure at 1:50 dilution. The samples were analyzed at the lowest dilution possible when using a methanol extraction procedure.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report
for

TNSL001 Triad National Security, LLC (620266)

Client SDG: 2024-182 GEL Work Order: 646356

The Qualifiers in this report are defined as follows:

* A quality control analyte recovery is outside of specified acceptance criteria
** Analyte is a surrogate compound
U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

DL Indicates that sample is diluted.
RA Indicates that sample is re-analyzed without re-extraction.
RE Indicates that sample is re-extracted.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: Erin Haubert **Name: Erin Haubert**

Date: 28 NOV 2023 **Title: Data Validator**

Sample Data Summary

GC Volatiles (GRO)
Certificate of Analysis
Sample Summary

SDG Number:	**2024-182**	**Date Collected:**	**11/21/2023 10:30**	**Matrix:**	**SO**
Lab Sample ID:	**646356001**	**Date Received:**	**11/22/2023 09:15**	**%Moisture:**	**13.5**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289597**	**Method:**	**SW846 8015D**	**SOP Ref:**	**GL-OA-E-004**
Batch ID:	**2530993**	**Inst:**	**VOC4A.I**	**Dilution:**	**50**
Run Date:	**11/27/2023 10:18**	**Analyst:**	**JEB**	**Inj. Vol:**	**1 uL**
Prep Date:	**11/27/2023 08:23**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**112723\4E107.D**	**Column:**	**DB-MTBE**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
8006-61-9	Gasoline Range Organics	U	1930	ug/kg	1930	11600

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	6960	50.0	ug/kg	120	(62%-127%)

GC Volatiles (GRO)
Certificate of Analysis
Sample Summary

SDG Number:	**2024-182**	**Date Collected:**	**11/21/2023 10:45**	**Matrix:**	**SO**
Lab Sample ID:	**646356002**	**Date Received:**	**11/22/2023 09:15**	**%Moisture:**	**11.3**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289598**	**Method:**	**SW846 8015D**	**SOP Ref:**	**GL-OA-E-004**
Batch ID:	**2530993**	**Inst:**	**VOC4A.I**	**Dilution:**	**50**
Run Date:	**11/27/2023 10:42**	**Analyst:**	**JEB**	**Inj. Vol:**	**1 uL**
Prep Date:	**11/27/2023 08:24**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**112723\4E108.D**	**Column:**	**DB-MTBE**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
8006-61-9	Gasoline Range Organics	U	1880	ug/kg	1880	11300

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	6920	50.0	ug/kg	123	(62%-127%)

GC Volatiles (GRO)
Certificate of Analysis
Sample Summary

SDG Number:	**2024-182**	**Date Collected:**	**11/21/2023 11:00**	**Matrix:**	**SO**
Lab Sample ID:	**646356003**	**Date Received:**	**11/22/2023 09:15**	**%Moisture:**	**11.3**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289599**	**Method:**	**SW846 8015D**	**SOP Ref:**	**GL-OA-E-004**
Batch ID:	**2530993**	**Inst:**	**VOC4A.I**	**Dilution:**	**50**
Run Date:	**11/27/2023 11:07**	**Analyst:**	**JEB**	**Inj. Vol:**	**1 uL**
Prep Date:	**11/27/2023 08:25**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**112723\4E109.D**	**Column:**	**DB-MTBE**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
8006-61-9	Gasoline Range Organics		47700	ug/kg	1880	11300

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	6270	50.0	ug/kg	111	(62%-127%)

Quality Control Summary

GC Volatiles (GRO)

Surrogate Recovery Report

SDG Number: 2024-182

Matrix Type: SOLID

Sample ID	Client ID	BFB %REC	
1205584639	LCS for batch 2530991	120	
1205584640	MB for batch 2530991	116	
1205584643	HB for batch 2530991	121	D
646356001	RLUOB-23-289597	120	D
646356002	RLUOB-23-289598	123	D
646356003	RLUOB-23-289599	111	D
1205584641	RLUOB-23-289597PS	113	D
1205584642	RLUOB-23-289597PSD	112	D

Surrogate		Acceptance Limits
BFB	= Bromofluorobenzene	(62%-127%)

* Recovery outside Acceptance Limits

Column to be used to flag recovery values

D Sample Diluted

GC Volatiles (GRO)

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-182
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 2530991
Matrix: SOIL
Lab Sample ID: 1205584639
Instrument: VOC4A.I
Analysis Date: 11/27/2023 08:38
Dilution: 1
Analyst: JEB
Prep Batch ID: 2530991
Inj. Vol: 1 uL
Batch ID: 2530993

CAS No.		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
8006-61-9	LCS	Gasoline Range Organics	500	0.0	502	100	77-124

GC Volatiles (GRO)

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-182
Client ID: RLUOB-23-289597PS
Lab Sample ID: 1205584641
Instrument: VOC4A.I
Analyst: JEB
Inj. Vol: 1 uL

Sample Type: Post Spike
Matrix: SO
%Moisture: 13.5
Analysis Date: 11/27/2023 11:57
Prep Batch ID: 2530991
Batch ID: 2530993
Dilution: 50

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits
8006-61-9	PS	Gasoline Range Organics	500	0.000	U	467	93	72-122

GC Volatiles (GRO)

Quality Control Summary
Spike Recovery Report

SDG Number:	**2024-182**	**Sample Type:**	**Post Spike Duplicate**
Client ID:	**RLUOB-23-289597PSD**	**Matrix:**	**SO**
Lab Sample ID:	**1205584642**	**%Moisture:**	**13.5**
Instrument:	**VOC4A.I**	**Analysis Date:**	**11/27/2023 12:23**
Analyst:	**JEB**	**Prep Batch ID:**	**2530991**
Inj. Vol:	**1 uL**	**Batch ID:**	**2530993**

Dilution: 50

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
8006-61-9	PSD	Gasoline Range Organics	500	0.000	U	487	97	72-122	4	0-32

Method Blank Summary

SDG Number:	**2024-182**	**Client:**	**TNSL001**	**Matrix:**	**SOIL**
Client ID:	**MB for batch 2530991**	**Instrument ID:**	**VOC4A.I**	**Data File:**	**112723\4E104LL.D**
Lab Sample ID:	**1205584640**	**Prep Date:**	**11/27/2023 07:22**	**Analyzed:**	**11/27/23 09:03**
Column:	**DB-MTBE**				

This method blank applies to the following samples and quality control samples:

	Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01	LCS for batch 2530991	1205584639	112723\4E103LL.D	11/27/23	0838
02	HB for batch 2530991	1205584643	112723\4E105.D	11/27/23	0928
03	RLUOB-23-289597	646356001	112723\4E107.D	11/27/23	1018
04	RLUOB-23-289598	646356002	112723\4E108.D	11/27/23	1042
05	RLUOB-23-289599	646356003	112723\4E109.D	11/27/23	1107
06	RLUOB-23-289597PS	1205584641	112723\4E111.D	11/27/23	1157
07	RLUOB-23-289597PSD	1205584642	112723\4E112.D	11/27/23	1223

Sample Data

GC Volatiles (GRO)
Certificate of Analysis
Sample Summary

SDG Number:	**2024-182**	**Date Collected:**	**11/21/2023 10:30**	**Matrix:**	**SO**
Lab Sample ID:	**646356001**	**Date Received:**	**11/22/2023 09:15**	**%Moisture:**	**13.5**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289597**	**Method:**	**SW846 8015D**	**SOP Ref:**	**GL-OA-E-004**
Batch ID:	**2530993**	**Inst:**	**VOC4A.I**	**Dilution:**	**50**
Run Date:	**11/27/2023 10:18**	**Analyst:**	**JEB**	**Inj. Vol:**	**1 uL**
Prep Date:	**11/27/2023 08:23**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**112723\4E107.D**	**Column:**	**DB-MTBE**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
8006-61-9	Gasoline Range Organics	U	1930	ug/kg	1930	11600

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	6960	50.0	ug/kg	120	(62%-127%)

JEB 11/27/2023

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\112723\
Data File : 4E107.D
Signal(s) : FID1A.CH
Acq On : 27 Nov 2023 10:18
Operator : JEB InstName : VOC4A
Sample : |646356001|2530993|50|GROF|1|VOC8015D_L|
Misc : TNSL 100UL N/A SOIL 5G/10ML
ALS Vial : 7 Sample Multiplier: 1

GEL 11/28/2023

Integration File: events.e
Quant Time: Nov 27 14:06:29 2023
Quant Method : C:\msdchem\1\data\112723\VOC8015C110823.m
Quant Title : GRO TPH SubList :
QLast Update : Wed Nov 08 12:33:08 2023
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 5 mL Purge Volume
Signal Phase : Durabond 30m x 0.53 ID x 3 um
Signal Info : DB-MTBE

Compound	Exp	R.T.	Delta	Response	Conc	Units
System Monitoring Compounds						
4) S Bromofluorobenzene	10.218	10.216	-0.002	19483458	60.146	ug/L

Compound	Amount	Range	Recovery
4) Bromofluorobenzene	50.000	62 - 127	120%

Target Compounds						
3) H Gasoline Range Organics	Range	3.418 - 11.634		4050242	<MDL	ug/L
SemiQuant Compounds - Not Calibrated on this Instrument						
1) 2-Methylpentane	3.467	3.445	-0.022f	350774	NoCal	ug/L
2) 1,2,4-Trimethylbenzene	11.621	11.646	0.025f	133963	NoCal	ug/L

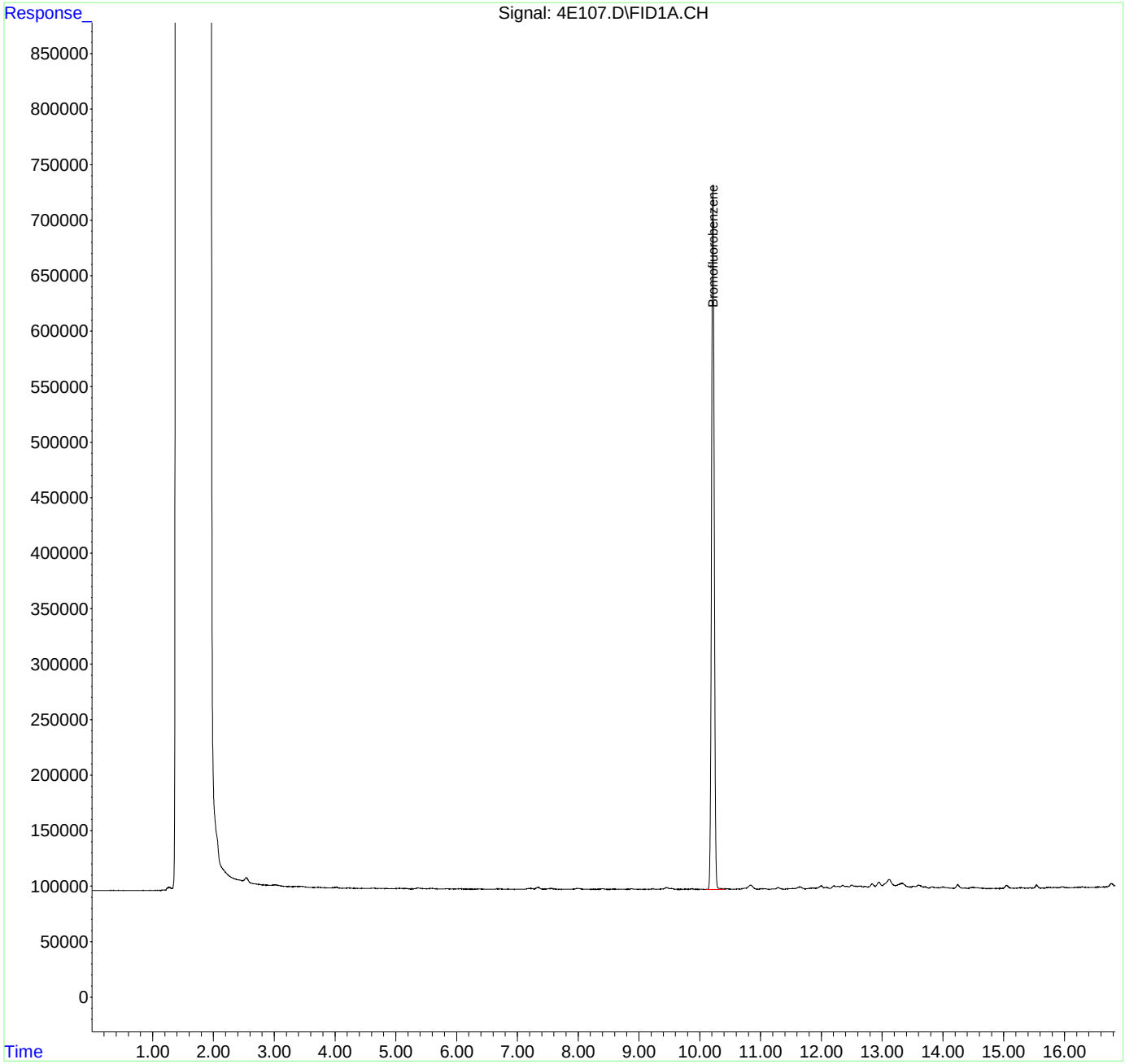
(f)=RT Delta > 1/2 Window (A) = Over the calibration range (d) = deleted (m)=manual int.

Quantitation Report
GEL Laboratories, LLC

DaData Path : C:\msdchem\1\data\112723\
DaData File : 4E107.D
Signal(s) : FID1A.CH
Acq On : 27 Nov 2023 10:18
Operator : JEB InstName : VOC4A
Sample : |646356001|2530993|50|GROF|1|VOC8015D_L|
Misc : TNSL 100UL N/A SOIL 5G/10ML
ALS Vial : 7 Sample Multiplier: 1

Integration File: events.e
Quant Time: Nov 27 14:06:29 2023
Quant Method : C:\msdchem\1\data\112723\VOC8015C110823.m
Quant Title : GRO TPH SubList :
QLast Update : Wed Nov 08 12:33:08 2023
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 5 mL Purge Volume
Signal Phase : Durabond 30m x 0.53 ID x 3 um
Signal Info : DB-MTBE



GC Volatiles (GRO)
Certificate of Analysis
Sample Summary

SDG Number:	**2024-182**	**Date Collected:**	**11/21/2023 10:45**	**Matrix:**	**SO**
Lab Sample ID:	**646356002**	**Date Received:**	**11/22/2023 09:15**	**%Moisture:**	**11.3**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289598**	**Method:**	**SW846 8015D**	**SOP Ref:**	**GL-OA-E-004**
Batch ID:	**2530993**	**Inst:**	**VOC4A.I**	**Dilution:**	**50**
Run Date:	**11/27/2023 10:42**	**Analyst:**	**JEB**	**Inj. Vol:**	**1 uL**
Prep Date:	**11/27/2023 08:24**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**112723\4E108.D**	**Column:**	**DB-MTBE**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
8006-61-9	Gasoline Range Organics	U	1880	ug/kg	1880	11300

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	6920	50.0	ug/kg	123	(62%-127%)

JEB 11/27/2023

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\112723\
Data File : 4E108.D
Signal(s) : FID1A.CH
Acq On : 27 Nov 2023 10:42
Operator : JEB InstName : VOC4A
Sample : |646356002|2530993|50|GROF|1|VOC8015D_L|
Misc : TNSL 100UL N/A SOIL 5G/10ML
ALS Vial : 8 Sample Multiplier: 1

GEL 11/28/2023

Integration File: events.e
Quant Time: Nov 27 14:06:36 2023
Quant Method : C:\msdchem\1\data\112723\VOC8015C110823.m
Quant Title : GRO TPH SubList :
QLast Update : Wed Nov 08 12:33:08 2023
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 5 mL Purge Volume
Signal Phase : Durabond 30m x 0.53 ID x 3 um
Signal Info : DB-MTBE

Compound	Exp	R.T.	Delta	Response	Conc	Units
System Monitoring Compounds						
4) S Bromofluorobenzene	10.218	10.216	-0.002	19872457	61.347	ug/L

Compound	Amount	Range	Recovery
4) Bromofluorobenzene	50.000	62 - 127	123%

Target Compounds						
3) H Gasoline Range Organics	Range	3.418 - 11.634		2363121	<MDL	ug/L
SemiQuant Compounds - Not Calibrated on this Instrument						
1) 2-Methylpentane	3.467	0.000	-3.467	0	N.D.	ug/L
2) 1,2,4-Trimethylbenzene	11.621	0.000	-11.621	0	N.D.	ug/L

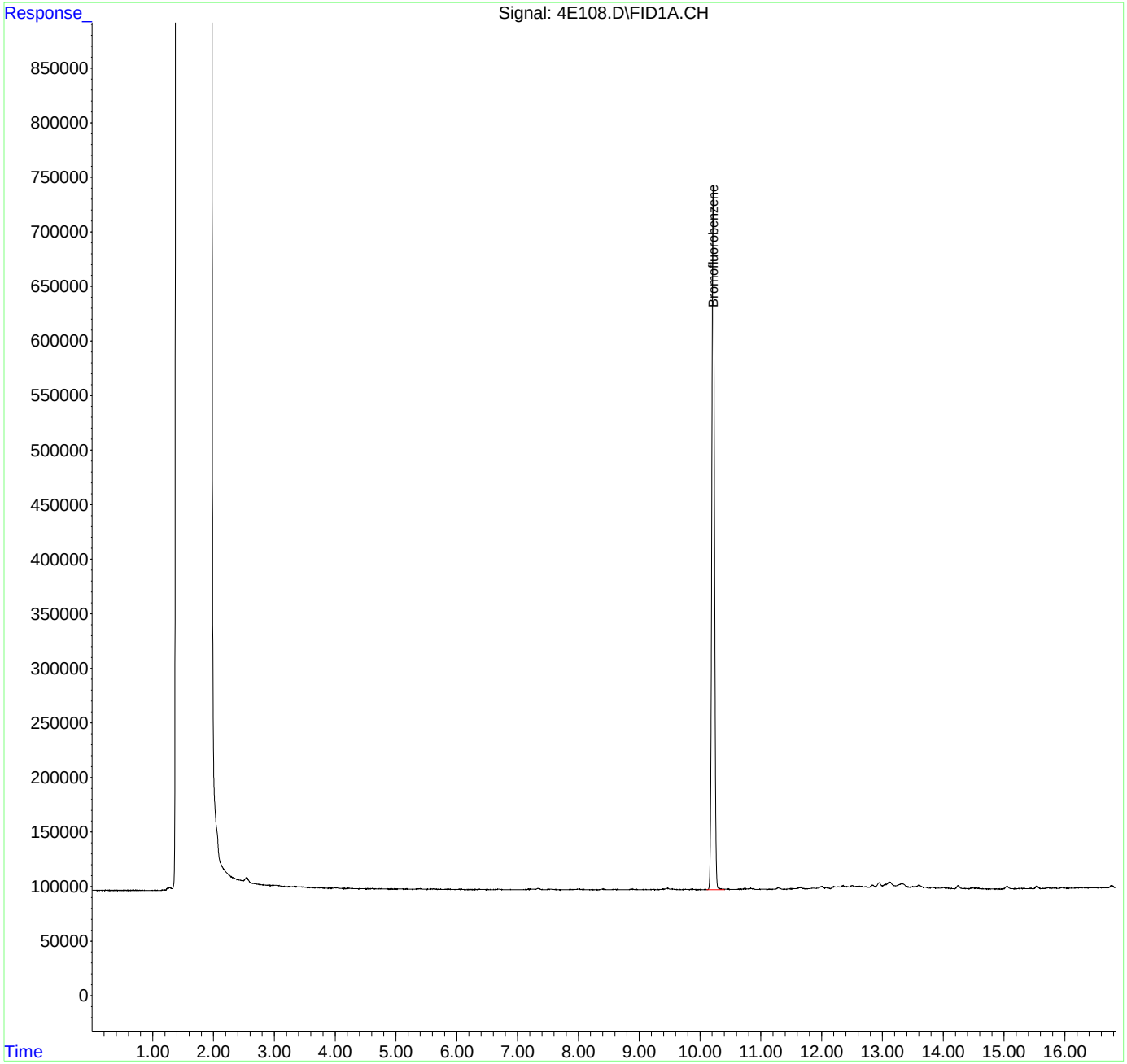
(f)=RT Delta > 1/2 Window (A) = Over the calibration range (d) = deleted (m)=manual int.

Quantitation Report
GEL Laboratories, LLC

DaData Path : C:\msdchem\1\data\112723\
DaData File : 4E108.D
Signal(s) : FID1A.CH
Acq On : 27 Nov 2023 10:42
Operator : JEB InstName : VOC4A
Sample : |646356002|2530993|50|GROF|1|VOC8015D_L|
Misc : TNSL 100UL N/A SOIL 5G/10ML
ALS Vial : 8 Sample Multiplier: 1

Integration File: events.e
Quant Time: Nov 27 14:06:36 2023
Quant Method : C:\msdchem\1\data\112723\VOC8015C110823.m
Quant Title : GRO TPH SubList :
QLast Update : Wed Nov 08 12:33:08 2023
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 5 mL Purge Volume
Signal Phase : Durabond 30m x 0.53 ID x 3 um
Signal Info : DB-MTBE



GC Volatiles (GRO)
Certificate of Analysis
Sample Summary

SDG Number:	**2024-182**	**Date Collected:**	**11/21/2023 11:00**	**Matrix:**	**SO**
Lab Sample ID:	**646356003**	**Date Received:**	**11/22/2023 09:15**	**%Moisture:**	**11.3**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289599**	**Method:**	**SW846 8015D**	**SOP Ref:**	**GL-OA-E-004**
Batch ID:	**2530993**	**Inst:**	**VOC4A.I**	**Dilution:**	**50**
Run Date:	**11/27/2023 11:07**	**Analyst:**	**JEB**	**Inj. Vol:**	**1 uL**
Prep Date:	**11/27/2023 08:25**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**112723\4E109.D**	**Column:**	**DB-MTBE**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
8006-61-9	Gasoline Range Organics		47700	ug/kg	1880	11300

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	6270	50.0	ug/kg	111	(62%-127%)

JEB 11/27/2023

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\112723\
Data File : 4E109.D
Signal(s) : FID1A.CH
Acq On : 27 Nov 2023 11:07
Operator : JEB InstName : VOC4A
Sample : |646356003|2530993|50|GROF|1|VOC8015D_L|
Misc : TNSL 100UL N/A SOIL 5G/10ML
ALS Vial : 9 Sample Multiplier: 1

GEL 11/28/2023

Integration File: events.e
Quant Time: Nov 27 14:06:47 2023
Quant Method : C:\msdchem\1\data\112723\VOC8015C110823.m
Quant Title : GRO TPH SubList :
QLast Update : Wed Nov 08 12:33:08 2023
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 5 mL Purge Volume
Signal Phase : Durabond 30m x 0.53 ID x 3 um
Signal Info : DB-MTBE

Compound	Exp	R.T.	Delta	Response	Conc	Units
System Monitoring Compounds						
4) S Bromofluorobenzene	10.218	10.216	-0.002	18018356	55.623	ug/L

Compound	Amount	Range	Recovery
4) Bromofluorobenzene	50.000	62 - 127	111%

Target Compounds						
3) H Gasoline Range Organics	Range	3.418 - 11.634		152029271	423.452	ug/L
SemiQuant Compounds - Not Calibrated on this Instrument						
1) 2-Methylpentane	3.467	3.447	-0.020f	329123	NoCal	ug/L
2) 1,2,4-Trimethylbenzene	11.621	11.642	0.021f	24205848	NoCal	ug/L

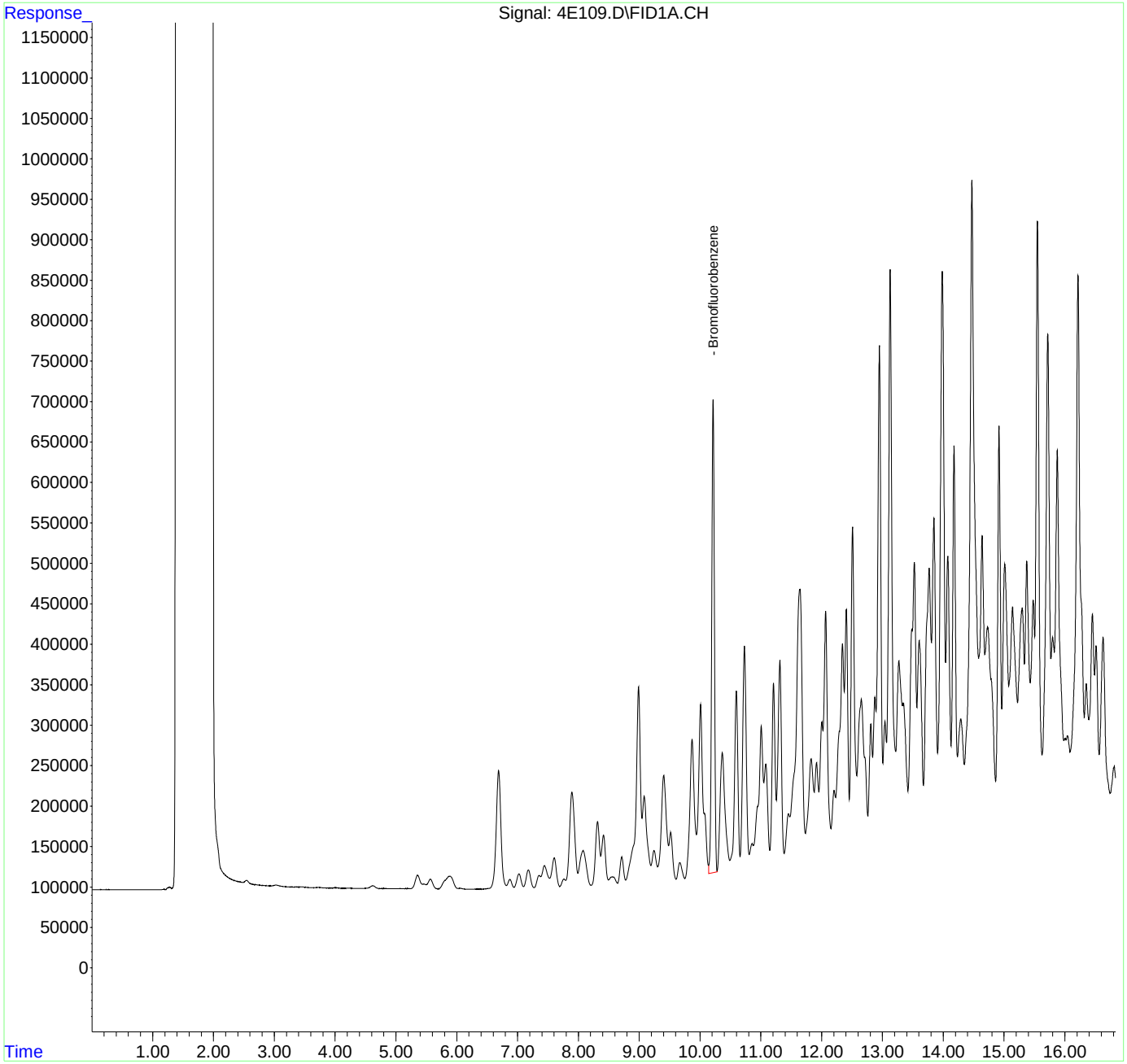
(f)=RT Delta > 1/2 Window (A) = Over the calibration range (d) = deleted (m)=manual int.

Quantitation Report
GEL Laboratories, LLC

DaData Path : C:\msdchem\1\data\112723\
DaData File : 4E109.D
Signal(s) : FID1A.CH
Acq On : 27 Nov 2023 11:07
Operator : JEB InstName : VOC4A
Sample : |646356003|2530993|50|GROF|1|VOC8015D_L|
Misc : TNSL 100UL N/A SOIL 5G/10ML
ALS Vial : 9 Sample Multiplier: 1

Integration File: events.e
Quant Time: Nov 27 14:06:47 2023
Quant Method : C:\msdchem\1\data\112723\VOC8015C110823.m
Quant Title : GRO TPH SubList :
QLast Update : Wed Nov 08 12:33:08 2023
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 5 mL Purge Volume
Signal Phase : Durabond 30m x 0.53 ID x 3 um
Signal Info : DB-MTBE



Miscellaneous

Prep Logbook

Volatile Total Petroleum Hydrocarbons by Flame Ionization Detector

Batch ID: **2530991**
Analyst: John Bell, Jr.
Method: SW846 5035A
Lab SOP: GL-OA-E-004 REV# 32
Instrument: VOAB-003 OH AUS Balance

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units

Sample ID	Prep Date	Matrix	Initial Weight (g)	Final Volume (mL)	Prep Factor (mL/g)
1205584639 LCS	27-NOV-2023 07:22:00	Soil	5	5	1
1205584640 MB	27-NOV-2023 07:22:00	Soil	5	5	1
1205584643 HB	27-NOV-2023 08:21:00	Soil	5	5	1
646229001	27-NOV-2023 08:22:00	Soil	5	10	2
646356001	27-NOV-2023 08:23:00	Soil	5	10	2
1205584641 PS (646356001)	27-NOV-2023 08:23:00	Soil	5	10	2
1205584642 PSD (646356001)	27-NOV-2023 08:23:00	Soil	5	10	2
646356002	27-NOV-2023 08:24:00	Soil	5	10	2
646356003	27-NOV-2023 08:25:00	Soil	5	10	2

Reagent/Solvent Lot ID	Description	Amount

Comments:

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOC4A

JEB 11/08/2023

KP 11/09/2023

Date: 11/8/2023 Method 8015/TPHGx Operator: JEB

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 1 Daily Instrument Readings:

Multiplier Voltage: N/A

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 11/8/2023

(See pg. 1 for ICAL Std. Ids)

NaHSO4 lot # N/A

Cl test lot # N/A

Sequence Number: 110823VG

Daily Standard Solution ID#		Volume Added for Purge (ul) Blk/ Smpl	CCV	MS/ LCS	RT
CCV	N/A		5		
IS	N/A				
SS	UVG230829-01D	2.5	2.5	2.5	2.5
LCS/MS	N/A			5	
RTCHECK	WVG231108-01,05,10				5+5

Purge Amount	
5mL	Water Purge Vol:
N/A	Soil Purge Wt.
N/A	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
X	Heated Purge

Analysis Date Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable(O/X)	Comments
11/8/2023 8:07	4D301.D	WVG231108-01	RT	RTCHECK	5ML	1	N/A	1	w	JEB	N/A	O	UVM220529-01A/UVG230317-01B
11/8/2023 8:32	4D302.D	1205----------	GEL	BLK	5ML	1	N/A	2	w	JEB	N/A	X	
11/8/2023 8:58	4D303.D	WVG231108-02	VSTD100	ICAL	5ML	1	N/A	3	w	JEB	N/A	O	IVM231030-01
11/8/2023 9:23	4D304.D	WVG231108-03	VSTD250	ICAL	5ML	1	N/A	4	w	JEB	N/A	O	IVM231030-01
11/8/2023 9:48	4D305.D	WVG231108-04	VSTD500	ICAL	5ML	1	N/A	5	w	JEB	N/A	O	IVM231030-01
11/8/2023 10:14	4D306.D	WVG231108-05	RT	RTCHECK	5ML	1	N/A	6	w	JEB	N/A	O	UVM220529-01A/UVG230317-01B
11/8/2023 10:39	4D307.D	WVG231108-06	VSTD750	ICAL	5ML	1	N/A	7	w	JEB	N/A	O	IVM231030-01
11/8/2023 11:04	4D308.D	WVG231108-07	VSTD1000	ICAL	5ML	1	N/A	8	w	JEB	N/A	O	IVM231030-01
11/8/2023 11:29	4D309.D	WVG231108-08	VSTD2000	ICAL	5ML	1	N/A	9	w	JEB	N/A	O	IVM231030-01
11/8/2023 11:55	4D310.D	1205----------	GEL	BLK	5ML	1	N/A	10	w	JEB	N/A	X	
11/8/2023 12:20	4D311.D	WVG231108-09	VSTD500	ICV	5ML	1	N/A	11	w	JEB	N/A	O	IVM231030-02
11/8/2023 12:45	4D312.D	WVG231108-10	RT	RTCHECK	5ML	1	N/A	12	w	JEB	N/A	O	UVM220529-01A/UVG230317-01B

ORGANIC RUN LOG - INSTRUMENT ID#VOC4A

JEB 11/27/2023

Date: 11/27/2023 Method 8015/TPHGx Operator: JEB

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 1

Daily Instrument Readings:
Multiplier Voltage: N/A

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 11/8/2023

(See pg. 1 for ICAL Std. Ids)

NaHSO4 lot # N/A

Cl test lot # N/A

Sequence Number: 112723VG

Daily Standard	Solution ID#	Volume Added for Purge (ul) Blk/ Smpl	CCV	MS/ LCS	RT
CCV	WVG231127-02,04		5		
IS	N/A				
SS	UVG230829-01E	2.5	2.5	2.5	2.5
LCS/MS	WVG231127-03			5	
RTCHECK	WVG231127-01				5+5

Purge Amount	
5mL	Water Purge Vol:
N/A	Soil Purge Wt.
N/A	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
X	Heated Purge

Analysis Date Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable(O/X)	Comments
11/27/2023 7:47	4E101.D	WVG231127-01	GEL	RTCHECK	5ML	1	N/A	1	w	JEB	N/A	O	UVM220529-01A/UVG230317-01B
11/27/2023 8:12	4E102.D	WVG231127-02	GEL	CCV	5ML	1	N/A	2	w	JEB	N/A	O	IVM231030-02
11/27/2023 8:38	4E103.D	WVG231127-03	GEL	LCS	5G	1	N/A	3	s	JEB	N/A	O	IVM231030-02
11/27/2023 9:03	4E104.D	1205----------	GEL	BLK	5G	1	N/A	4	s	JEB	N/A	O	
11/27/2023 9:28	4E105.D	1205584643	GEL	2530993	100UL	50	N/A	5	s	JEB	N/A	O	SOIL
11/27/2023 9:53	4E106.D	646229001	LLNL	2530993	100UL	50	N/A	6	s	JEB	N/A	O	SOIL 5G/10ML
11/27/2023 10:18	4E107.D	646356001	TNSL	2530993	100UL	50	N/A	7	s	JEB	N/A	O	SOIL 5G/10ML
11/27/2023 10:42	4E108.D	646356002	TNSL	2530993	100UL	50	N/A	8	s	JEB	N/A	O	SOIL 5G/10ML
11/27/2023 11:07	4E109.D	646356003	TNSL	2530993	100UL	50	N/A	9	s	JEB	N/A	O	SOIL 5G/10ML
11/27/2023 11:32	4E110.D	1205----------	GEL	BLK	5ML	1	N/A	10	s	JEB	N/A	O	
11/27/2023 11:57	4E111.D	1205584641	TNSL	2530993	100UL	50	N/A	11	s	JEB	N/A	O	SOIL 5G/10ML 646356001MS
11/27/2023 12:23	4E112.D	1205584642	TNSL	2530993	100UL	50	N/A	12	s	JEB	N/A	O	SOIL 5G/10ML 646356001MSD
11/27/2023 12:48	4E113.D	WVG231127-04	GEL	CCV	5ML	1	N/A	13	w	JEB	N/A	O	IVM231030-02

GEL Laboratories LLC
a member of The GEL Group INC

2040 Savage Road | Charleston, SC 29407
843.556.8171
gel.com

February 06, 2024

Mr. Stanislaw Marczak
Los Alamos National Laboratory
TA-00, SM1237, Rm104C
Los Alamos, New Mexico 87545

Re: LANL
Work Order: 652948
SDG: 2024-366

Dear Mr. Marczak:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on January 26, 2024, and analyzed for GC Volatiles (GRO), GC/MS Volatile and Diesel Range Organics. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4485.

Sincerely,

Valerie Davis
Project Manager

Chain of Custody: 2024-366
Enclosures

Triad National Security, LLC (620266)
LANL
Work Order #: 652948
SDG: 2024-366

Table of Contents

Case Narrative.....1

Chain of Custody and Supporting Documentation.3

Data Review Qualifier Flag Definition Sheet...9

Volatile Analysis.....13

- Case Narrative.....14
- Sample Data Summary.....17
- Quality Control Summary.....20
- Sample Data.....28
- Standards...(Provided Upon Request).....58
- Quality Control Data...(Provided Upon Request)...80
- Miscellaneous.....103

FID Diesel Range Organics Analysis.....107

- Case Narrative.....108
- Sample Data Summary.....112
- Quality Control Summary.....115
- Sample Data.....121
- Standards...(Provided Upon Request).....132
- Quality Control Data...(Provided Upon Request)..171
- Miscellaneous.....212

GC Volatiles (GRO) Analysis.....217

Case Narrative.....218

Sample Data Summary.....221

Quality Control Summary.....224

Sample Data.....230

Standards...(Provided Upon Request).....237

Quality Control Data...(Provided Upon Request)..264

Miscellaneous.....280

Case Narrative

Case Narrative for
Triad National Security, LLC (620266)
LANL
Workorder #: 652948
SDG # : 2024-366

February 06, 2024

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on January 26, 2024 for analysis. The samples were delivered with proper chain of custody documentation and signatures. The samples were screened according to GEL Standard Operating Procedure. All sample containers arrived without any visible signs of tampering or breakage. Containers were checked for pH, where appropriate, and matched the preservative as documented on the accompanying chain of custody. Shipping container temperatures were checked, documented, and within specifications. Shipping container temperature was within specification (0 - 6C). There are no additional comments concerning sample receipt.

Sample Identification The laboratory received the following samples:

Laboratory ID	Client ID
652948001	RLUOB-23-289602
652948002	RLUOB-23-289603

Case Narrative

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Data Package

The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: GC Volatiles (GRO), GC/MS Volatile and Diesel Range Organics.

I certify that this data report is in compliance with the terms and conditions of the subcontract and task order, both technically and for completeness, for other than the conditions detailed in the attached case narrative.

Valerie Davis
Project Manager

Chain of Custody and Supporting Documentation

652948

General Engineering Laboratories, Inc. Charleston, SC. Charleston SC	Chain of Custody/Analysis Request	COC/Lab Request #: 2024-366 Page 1 of 1

Client Contact:	Lab Agreement #: 620266	Site Name: Los Alamos National Laboratory	Rad Screening Info: Acceptable knowledge identifies no DOT hazard classification
	Project Number: LANL		
	Analysis Turnaround Time: 24 Hour - ☐ Other - ☒ 7 Days - ☐ Value - 5-Day 14 Days - ☐ 21 Days - ☐ 28 Days - ☐		Lab Reporting Limit Type: Method Detection Limit
Total # of bottles: 4			
Event ID: 15356			

Field Sample ID	Sample Date	Sample Time	Sample Matrix	BTEX + TPH-GRO	TPH-DRO+Motor Oil																			
RLUOB-23-289602	01/24/2024	09:36	SO	1	1																			
RLUOB-23-289603	01/24/2024	09:40	SO	1	1																			

Special Instructions:

Relinquished by:	Print Name:	Date/Time:	Received by:	Print Name:	Date/Time:
Relinquished by:	Print Name:	Date/Time:	Received by:	Print Name:	Date/Time:
Relinquished by:	Print Name:	Date/Time:	Received by:	Print Name:	Date/Time:

EPC-DO-24-116 SDG: 2024-366 Attachment 1 Page 845 of 970 LA-UR-24-23021

Los Alamos National Laboratory

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 15356 **EVENT NAME:** RLUOB Diesel Tank Removal

SAMPLE ID: RLUOB-23-289602 **WORK ORDER:**

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYYY):	24 JAN. 24	24 JAN. 24 KJV	FIELD MATRIX:	S	S
TIME COLLECTED (HH:MM):	09:36	09:36	MEDIA:	SOIL	SOIL
SWMU/AOC:	TA-55	TA-55	SAMPLE TECH CODE:	CBS	
LOCATION ID:	55-22362		FIELD PREP:	NA	
LOCATION TYPE:	GENERIC		FIELD QC TYPE:	REG	
TOP DEPTH:	NA	NA	SAMPLE USAGE:	INV	WAZ
BOTTOM DEPTH:	NA	NA	EXCAVATED:		YES / NO / NA

PRIORITY	ORDER	CONTAINER	#	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
5-DAY	BTEX + TPH-GRO	~~2"X6" SS 125 ML GLASS~~	1/2	ICE	Y	
5-DAY	TPH-DRO+Motor Oil	~~2"X6" SS 0.25 LITER GLASS~~	1	ICE	Y	

SAMPLE COMMENTS: 5-DAY TURNAROUND. CONTAINERS: 2"X6" STAINLESS STEEL TUBES.

LOCATION COMMENTS: TA-55: WASTE CONTAINER PT 1146

FIELD PARAMETERS:

Sample Time _____ HH:MM

COLLECTED BY (PRINT): KEN VERNON **REVIEWED BY (PRINT):**

RELINQUISHED BY (Printed Name) (Signature) Ken Vernon	Date/Time 24 JAN. 24 10:27	RECEIVED BY (Printed Name) (Signature) Melissa Murphy	Date/Time 1/24/24 10:27
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

Report Date: 09/19/2023

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 15356 **EVENT NAME:** RLUOB Diesel Tank Removal

SAMPLE ID: RLUOB-23-289603 **WORK ORDER:**

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYYY):	24 JAN '24	24 JAN. 24	FIELD MATRIX:	S	S
TIME COLLECTED (HH:MM):	09:40	09:40	MEDIA:	SOIL	Soil
SWMU/AOC:	TA-55	TA-55	SAMPLE TECH CODE:	CBS	
LOCATION ID:	55-22363		FIELD PREP:	NA	
LOCATION TYPE:	GENERIC		FIELD QC TYPE:	REG	
TOP DEPTH:	NA	NA	SAMPLE USAGE:	INV	WAZ
BOTTOM DEPTH:	NA	NA	EXCAVATED:		YES / NO / NA

PRIORITY	ORDER	CONTAINER	#	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
5-DAY	BTEX + TPH-GRO	~~2"x6" 125 ML GLASS~~ 55	1 2	ICE	Y	
5-DAY	TPH-DRO+Motor Oil	~~2"x6" 0.25 LITER GLASS~~ 55	1	ICE	Y	

SAMPLE COMMENTS: 5-DAY TURNAROUND. CONTAINERS: 2"X6" STAINLESS STEEL TUBES.

LOCATION COMMENTS: TA-55: WASTE CONTAINER: #6441

FIELD PARAMETERS:

Sample Time _____ HH:MM

COLLECTED BY (PRINT): KEN VERNON **REVIEWED BY (PRINT):**

RELINQUISHED BY (Printed Name) (Signature) Ken Vernon	Date/Time 24 JAN. 24 10:27	RECEIVED BY (Printed Name) (Signature) Melissa Martinez	Date/Time 1/24/24 10:27
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

Report Date: 09/19/2023

Do not lift using this tag.



GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: TNSL	**SDG/AR/COC/Work Order:** 652948
Received By: QG	**Date Received:** 1/24/24
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other
	7097 9698 4124 5°C

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A)Shipped as a DOT Hazardous?		✓	Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes___ No___
B) Did the client designate the samples are to be received as radioactive?		✓	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		✓	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): 0 CPM / mR/Hr. Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?		✓	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		✓	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	✓			Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	✓			Preservation Method: Wet Ice Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP: See tracking
4	Daily check performed and passed on IR temperature gun?	✓			Temperature Device Serial #: IR1-23 Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	✓			Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?			✓	If Yes, are Encores or Soil Kits present for solids? Yes___ No___ NA___(If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes___ No___ NA___(If unknown, select No) Are liquid VOA vials free of headspace? Yes___ No___ NA___ Sample ID's and containers affected:
8	Samples received within holding time?	✓			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	✓			ID's and containers affected:
10	Date & time on COC match date & time on bottles?	✓			Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
11	Number of containers received match number indicated on COC?			✓	Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided by use of GEL labels?			✓	
13	COC form is properly signed in relinquished/received sections?			✓	Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

7097 9698 4135 3°C

7097 9698 4113 7°C

PM (or PMA) review: Initials MG Date 1/29/24 Page 1 of 1

Data Review Qualifier Flag Definition Sheet

Data Review Qualifier Definitions

Qualifier	Explanation
*	A quality control analyte recovery is outside of specified acceptance criteria
**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
A	The TIC is a suspected aldol-condensation product
B	Target analyte was detected in the associated blank
B	Metals-Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
d	5-day BOD-The 2:1 depletion requirement was not met for this sample
E	Organics-Concentration of the target analyte exceeds the instrument calibration range
E	Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
H	Analytical holding time was exceeded
h	Preparation or preservation holding time was exceeded
J	Value is estimated
N	Metals-The Matrix spike sample recovery is not within specified control limits
N	Organics-Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND	Analyte concentration is not detected above the reporting limit
UI	Gamma Spectroscopy-Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.
P	Organics-The concentrations between the primary and confirmation columns/detectors is >40% difference.

For HPLC, the difference is >70%.

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

List of current GEL Certifications as of 06 February 2024

State	Certification
Alabama	42200
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-00651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	KY90129
Kentucky Wastewater	KY90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2023019
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122024-05
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2023-152
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-23-21
Utah NELAP	SC000122023-38
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

Volatile Analysis

Case Narrative

GC/MS Volatile
Technical Case Narrative
Triad National Security, LLC
SDG #: 2024-366
Work Order #: 652948

Product: **Volatile Organic Compounds (VOC) by Gas Chromatograph/Mass Spectrometer**
Analytical Method: SW846 8260D
Analytical Procedure: GL-OA-E-038 REV# 29
Analytical Batch: 2563673

Preparation Method: SW846 5030
Preparation Procedure: GL-OA-E-038 REV# 29
Preparation Batch: 2563670

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
652948001	RLUOB-23-289602
652948002	RLUOB-23-289603
1205640996	Laboratory Control Sample (LCS)
1205640997	Method Blank (MB)
1205640998	652948001(RLUOB-23-289602) Post Spike (PS)
1205640999	652948001(RLUOB-23-289602) Post Spike Duplicate (PSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Quality Control (QC) Information

Surrogate Recoveries
Surrogate recoveries, in sample (See Below) was outside the acceptance limits. The recoveries were similar. It is believed possible matrix interference has been demonstrated

Sample	Analyte	Value
1205640998 (RLUOB-23-289602PS)	Bromofluorobenzene	130* (74%-128%)

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report
for

TNSL001 Triad National Security, LLC (620266)

Client SDG: 2024-366 GEL Work Order: 652948

The Qualifiers in this report are defined as follows:

* A quality control analyte recovery is outside of specified acceptance criteria
** Analyte is a surrogate compound
E Concentration of the target analyte exceeds the instrument calibration range
U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

DL Indicates that sample is diluted.
RA Indicates that sample is re-analyzed without re-extraction.
RE Indicates that sample is re-extracted.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: Erin Haubert **Name: Erin Haubert**

Date: 06 FEB 2024 **Title: Data Validator**

Sample Data Summary

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-366**	**Date Collected:**	**01/24/2024 09:36**	**Matrix:**	**SO**
Lab Sample ID:	**652948001**	**Date Received:**	**01/26/2024 09:40**	**%Moisture:**	**7.4**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289602**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2563673**	**Inst:**	**VOA2.I**	**Dilution:**	**1**
Run Date:	**02/05/2024 16:33**	**Analyst:**	**AXH5**	**Purge Vol:**	**5 mL**
Prep Date:	**02/05/2024 12:55**	**Aliquot:**	**5.1 g**	**Final Volume:**	**5 mL**
Data File:	**020524V2\2A119.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	0.353	ug/kg	0.353	1.06
108-88-3	Toluene	U	0.353	ug/kg	0.353	1.06
100-41-4	Ethylbenzene	U	0.353	ug/kg	0.353	1.06
1330-20-7	Xylenes (total)	U	1.06	ug/kg	1.06	3.18

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	49.2	50.0	ug/L	98	(77%-127%)
Toluene-d8	53.1	50.0	ug/L	106	(81%-120%)
Bromofluorobenzene	62.4	50.0	ug/L	125	(74%-128%)

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-366**	**Date Collected:**	**01/24/2024 09:40**	**Matrix:**	**SO**
Lab Sample ID:	**652948002**	**Date Received:**	**01/26/2024 09:40**	**%Moisture:**	**6.4**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289603**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2563673**	**Inst:**	**VOA2.I**	**Dilution:**	**1**
Run Date:	**02/05/2024 16:59**	**Analyst:**	**AXH5**	**Purge Vol:**	**5 mL**
Prep Date:	**02/05/2024 12:55**	**Aliquot:**	**5.84 g**	**Final Volume:**	**5 mL**
Data File:	**020524V2\2A120.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	0.304	ug/kg	0.304	0.914
108-88-3	Toluene	U	0.304	ug/kg	0.304	0.914
100-41-4	Ethylbenzene	U	0.304	ug/kg	0.304	0.914
1330-20-7	Xylenes (total)	U	0.914	ug/kg	0.914	2.74

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	47.5	50.0	ug/L	95	(74%-128%)
Toluene-d8	47.0	50.0	ug/L	94	(81%-120%)
1,2-Dichloroethane-d4	49.6	50.0	ug/L	99	(77%-127%)

Quality Control Summary

Volatile

Surrogate Recovery Report

SDG Number: 2024-366

Matrix Type: SOLID

Sample ID	Client ID	DCED4 %REC	TOL %REC	BFB %REC
1205640996	LCS for batch 2563670	93	98	98
1205640997	MB for batch 2563670	94	98	94
652948001	RLUOB-23-289602	98	106	125
652948002	RLUOB-23-289603	99	94	95
1205640998	RLUOB-23-289602PS	100	105	130 *
1205640999	RLUOB-23-289602PSD	99	107	127

Surrogate		Acceptance Limits
DCED4	= 1,2-Dichloroethane-d4	(77%-127%)
TOL	= Toluene-d8	(81%-120%)
BFB	= Bromofluorobenzene	(74%-128%)

* Recovery outside Acceptance Limits
# Column to be used to flag recovery values
D Sample Diluted

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: **2024-366**
Sample Type: **Laboratory Control Sample**
Client ID: **LCS for batch 2563670**
Matrix: **SOIL**
Lab Sample ID: **1205640996**
Instrument: **VOA2.I**
Analysis Date: **02/05/2024 10:00**
Dilution: **1**
Analyst: **AXH5**
Prep Batch ID: **2563670**
Purge Vol: **5 mL**
Batch ID: **2563673**

CAS No.		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
1330-20-7	LCS	Xylenes (total)	150	0.0	159	106	70-121
71-43-2	LCS	Benzene	50.0	0.0	52.8	106	73-126
108-88-3	LCS	Toluene	50.0	0.0	51.6	103	70-120
100-41-4	LCS	Ethylbenzene	50.0	0.0	50.8	102	67-120

Quality Control Summary
Spike Recovery Report

SDG Number: **2024-366**
Client ID: **RLUOB-23-289602PS**
Lab Sample ID: **1205640998**
Instrument: **VOA2.I**
Analyst: **AXH5**
Purge Vol: **5 mL**

Sample Type: **Post Spike**
Matrix: **SO**
%Moisture: **7.4**
Analysis Date: **02/05/2024 18:18**
Prep Batch ID: **2563670**
Batch ID: **2563673**
Dilution: **1**

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits
1330-20-7	PS	Xylenes (total)	150	0.000	U	87.8	59	45-128
71-43-2	PS	Benzene	50.0	0.000	U	42.4	85	57-131
108-88-3	PS	Toluene	50.0	0.000	U	39.0	78	52-124
100-41-4	PS	Ethylbenzene	50.0	0.000	U	30.1	60	44-124

Quality Control Summary
Spike Recovery Report

SDG Number: **2024-366**
Client ID: **RLUOB-23-289602PSD**
Lab Sample ID: **1205640999**
Instrument: **VOA2.I**
Analyst: **AXH5**
Purge Vol: **5 mL**

Sample Type: **Post Spike Duplicate**
Matrix: **SO**
%Moisture: **7.4**
Analysis Date: **02/05/2024 18:44**
Prep Batch ID: **2563670**
Batch ID: **2563673**
Dilution: **1**

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
1330-20-7	PSD	Xylenes (total)	150	0.000	U	86.8	58	45-128	1	0-20
71-43-2	PSD	Benzene	50.0	0.000	U	41.3	83	57-131	3	0-20
108-88-3	PSD	Toluene	50.0	0.000	U	38.3	77	52-124	2	0-20
100-41-4	PSD	Ethylbenzene	50.0	0.000	U	29.9	60	44-124	1	0-20

Method Blank Summary

SDG Number:	**2024-366**	**Client:**	**TNSL001**	**Matrix:**	**SOIL**
Client ID:	**MB for batch 2563670**	**Instrument ID:**	**VOA2.I**	**Data File:**	**020524V2\2A107T.D**
Lab Sample ID:	**1205640997**	**Prep Date:**	**02/05/2024 08:00**	**Analyzed:**	**02/05/24 10:51**
Column:	**DB-624**				

This method blank applies to the following samples and quality control samples:

	Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01	LCS for batch 2563670	1205640996	020524V2\2A105T.D	02/05/24	1000
02	RLUOB-23-289602	652948001	020524V2\2A119.D	02/05/24	1633
03	RLUOB-23-289603	652948002	020524V2\2A120.D	02/05/24	1659
04	RLUOB-23-289602PS	1205640998	020524V2\2A123.D	02/05/24	1818
05	RLUOB-23-289602PSD	1205640999	020524V2\2A124.D	02/05/24	1844

Instrument Performance Check

BROMOFLUOROBENZENE

Lab Name GEL Laboratories LLC **Client SDG:** 2024-366

Instrument ID: VOA2.I **Injection Date/Time:** 15-JAN-24 08:39

Column Description: Description: DB-624 **Lab File ID** 011524V2_ICAL\2X101.D

m/e	Ion Abundance Criteria	% Relative Abundance
95	50 - 200% of mass 174	104.1
96	5.0 - 9.0% of mass 95	7
173	Less than 2.0% of mass 174	0.9
174	50 - 200% of mass 95	96
175	5.0 -9.0% of mass 174	7.2
176	95.0 - 105.0% of mass 174	95.7
177	5.0 - 10.0% of mass 176	6.3

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
ICALMIX[A]	W2VM240115-01	011524V2_ICAL\2X102.D	15-JAN-24 09:04
ICALMIX[A]	W2VM240115-02	011524V2_ICAL\2X103.D	15-JAN-24 09:30
ICALMIX[A]	W2VM240115-03	011524V2_ICAL\2X104.D	15-JAN-24 09:55
ICALMIX[A]	W2VM240115-04	011524V2_ICAL\2X105.D	15-JAN-24 10:21
ICALMIX[A]	W2VM240115-05	011524V2_ICAL\2X106.D	15-JAN-24 10:46
ICALMIX[A]	W2VM240115-06	011524V2_ICAL\2X107.D	15-JAN-24 11:12
ICALMIX[A]	W2VM240115-07	011524V2_ICAL\2X108.D	15-JAN-24 11:37
ICALMIX[A]	W2VM240115-08	011524V2_ICAL\2X109.D	15-JAN-24 12:03
ICALMIX[A]	W2VM240115-09	011524V2_ICAL\2X110.D	15-JAN-24 12:28
ICVMIX[A]01	W2VM240115-10	011524V2_ICAL\2X112.D	15-JAN-24 13:20
CCVMIX[A]01	W2VM240205-04	020524V2\2A105.D	05-FEB-24 10:00
BLK01LCS	1205640996	020524V2\2A105T.D	05-FEB-24 10:00
BLK01	1205640997	020524V2\2A107T.D	05-FEB-24 10:51
RLUOB-23-289602	652948001	020524V2\2A119.D	05-FEB-24 16:33
RLUOB-23-289603	652948002	020524V2\2A120.D	05-FEB-24 16:59
RLUOB-23-289602MS	1205640998	020524V2\2A123.D	05-FEB-24 18:18
RLUOB-23-289602MSD	1205640999	020524V2\2A124.D	05-FEB-24 18:44

Internal Standard
Area and RT Summary

Lab Name : GEL Laboratories LLC

Client SDG: 2024-366

Instrument: VOA2.I

STD Analysis Time: 05-FEB-24 10:00

GC Column: DB-624

Data File: 020524V2\2A105.D

	Fluorobenzene		Chlorobenzene-d5		1,4-Dichlorobenzene-d4	
	Area #	RT #	Area #	RT #	Area #	RT #
12 Hour STD	3317534	9.83	2834376	13.02	1674267	15.44
Upper Limit	6635068	10.33	5668752	13.52	3348534	15.94
Lower Limit	1658767	9.33	1417188	12.52	837134	14.94
Sample ID						
BLK01LCS	3317534	9.83	2834376	13.0	1674267	15.4
BLK01	2922267	9.83	2514314	13.0	1505224	15.4
RLUOB-23-289602	2770552	9.83	2171167	13.0	982662	15.4
RLUOB-23-289603	2940506	9.83	2588715	13.0	1513053	15.4
RLUOB-23-289602MS	3018930	9.83	2357506	13.0	1006012	15.4
RLUOB-23-289602MSD	2965227	9.83	2188256	13.0	939680	15.4

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Value outside of QC Limits

Sample Data

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-366**	**Date Collected:**	**01/24/2024 09:36**	**Matrix:**	**SO**
Lab Sample ID:	**652948001**	**Date Received:**	**01/26/2024 09:40**	**%Moisture:**	**7.4**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289602**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2563673**	**Inst:**	**VOA2.I**	**Dilution:**	**1**
Run Date:	**02/05/2024 16:33**	**Analyst:**	**AXH5**	**Purge Vol:**	**5 mL**
Prep Date:	**02/05/2024 12:55**	**Aliquot:**	**5.1 g**	**Final Volume:**	**5 mL**
Data File:	**020524V2\2A119.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	0.353	ug/kg	0.353	1.06
108-88-3	Toluene	U	0.353	ug/kg	0.353	1.06
100-41-4	Ethylbenzene	U	0.353	ug/kg	0.353	1.06
1330-20-7	Xylenes (total)	U	1.06	ug/kg	1.06	3.18

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	49.2	50.0	ug/L	98	(77%-127%)
Toluene-d8	53.1	50.0	ug/L	106	(81%-120%)
Bromofluorobenzene	62.4	50.0	ug/L	125	(74%-128%)

AH 02/06/2024

MA 02/06/2024

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MSDCHEM\1\Data\020524V2\
Data File : 2A119.D
Acq On : 05 Feb 2024 16:33
Operator : AXH5
InstName : VOA2
Sample : |652948001|2563673|1|VOAF|1|VOA8260D_S|
Misc : TNSL 5.1G N/A SOIL
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Feb 06 08:26:55 2024
Quant Method : D:\MSDCHEM\1\Data\011524V2_ICAL\VOA2-8260D-011524_ICAL.M
Quant Title : Volatile Organics SubList :
QLast Update : Tue Jan 16 08:55:30 2024
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards								Dev(Min)
1) Fluorobenzene	96	9.833	9.827	1.000	2770552	50.00	ug/L	0.00
43) Chlorobenzene-d5	117	13.016	13.016	1.000	2171167	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	15.436	15.436	1.000	982662	50.00	ug/L	0.00
84) B Fluorobenzene	96	9.833	9.834	1.000	2775955	50.00	ug/L	0.00
103) B Chlorobenzene-d5	117	13.016	13.016	1.000	2171167	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	15.436	15.430	1.000	982662	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	9.492	9.492	0.965	528501	49.21	ug/L	0.00
45) Toluene-d8	98	11.480	11.480	0.882	2759773	53.08	ug/L	0.00
63) Bromofluorobenzene	95	14.217	14.217	0.921	1055981	62.42	ug/L	0.00

Compound	Amount	Range	Recovery
30) 1,2-Dichloroethane-d4	50.000	77 - 127	98%
45) Toluene-d8	50.000	81 - 120	106%
63) Bromofluorobenzene	50.000	74 - 128	125%

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.224	0.000	0	N.D.		
3) Chloromethane	50	4.505	4.619	0.458	899	N.D.		
4) Vinyl chloride		0.000	4.801	0.000	0	N.D.		
5) Bromomethane	94	5.234	5.401	0.532	141	N.D.		
6) Chloroethane		0.000	5.492	0.000	0	N.D.		
7) Trichlorofluoromethane		0.000	5.828	0.000	0	N.D.		
8) Ethyl ether	59	6.188	6.182	0.629	4881	0.43	ug/L	91
9) Acetone	43	6.584	6.572	0.670	14577	3.76	ug/L	99
10) 1,1-Dichloroethylene		0.000	6.548	0.000	0	N.D.		
11) Iodomethane		0.000	6.791	0.000	0	N.D.		
12) Acetonitrile	41	6.962	6.938	0.708	12187	N.D.		
13) Methyl acetate	74	6.968	6.956	0.709	772	N.D.		
14) Carbon disulfide		0.000	6.913	0.000	0	N.D.		
15) Methylene chloride	84	7.145	7.133	0.727	46956	N.D.		
16) tert-Butyl methyl ether		0.000	7.413	0.000	0	N.D.		
17) trans-1,2-Dichloroethy...		0.000	7.462	0.000	0	N.D.		
18) Hexane	57	7.742	7.730	0.787	3283	N.D.		
19) Vinyl acetate		0.000	7.919	0.000	0	N.D.		
20) 1,1-Dichloroethane		0.000	7.956	0.000	0	N.D.		
21) 2-Butanone	72	8.565	8.559	0.871	1223	N.D.		
22) cis-1,2-Dichloroethylene		0.000	8.596	0.000	0	N.D.		
23) 2,2-Dichloropropane		0.000	8.614	0.000	0	N.D.		
24) Bromochloromethane		0.000	8.870	0.000	0	N.D.		
25) Chloroform	83	8.919	8.913	0.907	1051	N.D.		
26) 1,1,1-Trichloroethane		0.000	9.169	0.000	0	N.D.		
27) Cyclohexane		0.000	9.248	0.000	0m	N.D.	d	
28) 1,1-Dichloropropene		0.000	9.328	0.000	0	N.D.		
29) Carbon tetrachloride		0.000	9.352	0.000	0	N.D.		
31) 1,2-Dichloroethane	62	9.571	9.571	0.973	140	N.D.		
32) Benzene	78	9.571	9.571	0.973	905	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MSDCHEM\1\Data\020524V2\
Data File : 2A119.D
Acq On : 05 Feb 2024 16:33
Operator : AXH5
InstName : VOA2
Sample : |652948001|2563673|1|VOAF|1|VOA8260D_S|
Misc : TNSL 5.1G N/A SOIL
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Feb 06 08:26:55 2024
Quant Method : D:\MSDCHEM\1\Data\011524V2_ICAL\VOA2-8260D-011524_ICAL.M
Quant Title : Volatile Organics SubList :
QLast Update : Tue Jan 16 08:55:30 2024
Response via : Initial Calibration
Integrator: RTE

	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units		
33)	Cyclohexene	67	9.681	9.675	0.985	1205	N.D.			
34)	n-Butyl alcohol		0.000	9.955	0.000	0	N.D.			
35)	Trichloroethylene		0.000	10.211	0.000	0	N.D.			
36)	2-Pentanone	43	10.321	10.321	1.050	22208	N.D.			
37)	1,2-Dichloropropane		0.000	10.474	0.000	0m	N.D.	d		
38)	Methylcyclohexane	83	10.443	10.443	1.062	488139	21.11	ug/L		94
39)	Dibromomethane	93	10.656	10.608	1.084	846	N.D.			
40)	Bromodichloromethane	83	10.717	10.724	1.090	284	N.D.			
41)	2-Chloroethylvinyl ether	63	10.955	10.955	1.114	1474	N.D.			
42)	cis-1,3-Dichloropropylene		0.000	11.175	0.000	0	N.D.			
44)	4-Methyl-2-pentanone	43	11.284	11.278	0.867	50263	4.63	ug/L	#	71
46)	Toluene	91	11.559	11.553	0.888	1860	N.D.			
47)	trans-1,3-Dichloroprop...		0.000	11.730	0.000	0	N.D.			
48)	1,1,2-Trichloroethane		0.000	11.949	0.000	0m	N.D.	d		
49)	2-Hexanone		0.000	12.132	0.000	0m	N.D.	d		
50)	1,3-Dichloropropane		0.000	12.138	0.000	0	N.D.			
51)	Tetrachloroethylene		0.000	12.138	0.000	0	N.D.			
52)	Dibromochloromethane		0.000	12.406	0.000	0	N.D.			
53)	1,2-Dibromoethane	107	12.571	12.571	0.966	143	N.D.			
54)	Chlorobenzene	112	13.058	13.046	1.003	166	N.D.			
55)	1,1,1,2-Tetrachloroethane		0.000	13.107	0.000	0	N.D.			
56)	Ethylbenzene	91	13.065	13.107	1.004	645	N.D.			
57)	m,p-Xylenes	106	13.229	13.217	1.016	956	N.D.			
58)	o-Xylene		0.000	13.656	0.000	0m	N.D.	d		
59)	Styrene		0.000	13.662	0.000	0m	N.D.	d		
61)	Bromoform		0.000	13.924	0.000	0	N.D.			
62)	Isopropylbenzene	105	14.052	14.016	0.910	280	N.D.			
64)	1,1,2,2-Tetrachloroethane		0.000	14.308	0.000	0m	N.D.	d		
65)	1,2,3-Trichloropropane		0.000	14.400	0.000	0m	N.D.	d		
66)	Bromobenzene	156	14.442	14.424	0.936	2749	N.D.			
67)	n-Propylbenzene		0.000	14.442	0.000	0m	N.D.	d		
68)	1,3,5-Trimethylbenzene	105	14.601	14.595	0.946	3732955	91.43	ug/L		96
69)	2-Chlorotoluene		0.000	14.589	0.000	0m	N.D.	d		
70)	4-Chlorotoluene		0.000	14.692	0.000	0m	N.D.	d		
71)	tert-Butylbenzene		0.000	14.967	0.000	0m	N.D.	d		
72)	1,2,4-Trimethylbenzene	105	15.015	15.009	0.973	3592	N.D.			
73)	sec-Butylbenzene	105	15.125	15.186	0.980	2504	N.D.			
74)	4-Isopropyltoluene	119	15.314	15.314	0.992	733894	16.52	ug/L		95
75)	1,3-Dichlorobenzene	146	15.369	15.375	0.996	485	N.D.			
76)	1,4-Dichlorobenzene	146	15.460	15.460	1.002	2645	N.D.			
77)	n-Butylbenzene		0.000	15.741	0.000	0m	N.D.	d		
78)	1,2-Dichlorobenzene	146	15.875	15.875	1.028	603	N.D.			
79)	1,2-Dibromo-3-chloropr...		0.000	16.729	0.000	0	N.D.			
80)	1,2,4-Trichlorobenzene		0.000	17.728	0.000	0m	N.D.	d		
81)	Hexachlorobutadiene		0.000	17.887	0.000	0	N.D.			
82)	Naphthalene		0.000	18.100	0.000	0m	N.D.	d		
83)	1,2,3-Trichlorobenzene		0.000	18.423	0.000	0m	N.D.	d		
85)	Acrolein		0.000	6.401	0.000	0	N.D.			
86)	Trichlorotrifluoroethane		0.000	6.535	0.000	0	N.D.			

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MSDCHEM\1\Data\020524V2\
Data File : 2A119.D
Acq On : 05 Feb 2024 16:33
Operator : AXH5
InstName : VOA2
Sample : |652948001|2563673|1|VOAF|1|VOA8260D_S|
Misc : TNSL 5.1G N/A SOIL
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Feb 06 08:26:55 2024
Quant Method : D:\MSDCHEM\1\Data\011524V2_ICAL\VOA2-8260D-011524_ICAL.M
Quant Title : Volatile Organics SubList :
QLast Update : Tue Jan 16 08:55:30 2024
Response via : Initial Calibration
Integrator: RTE

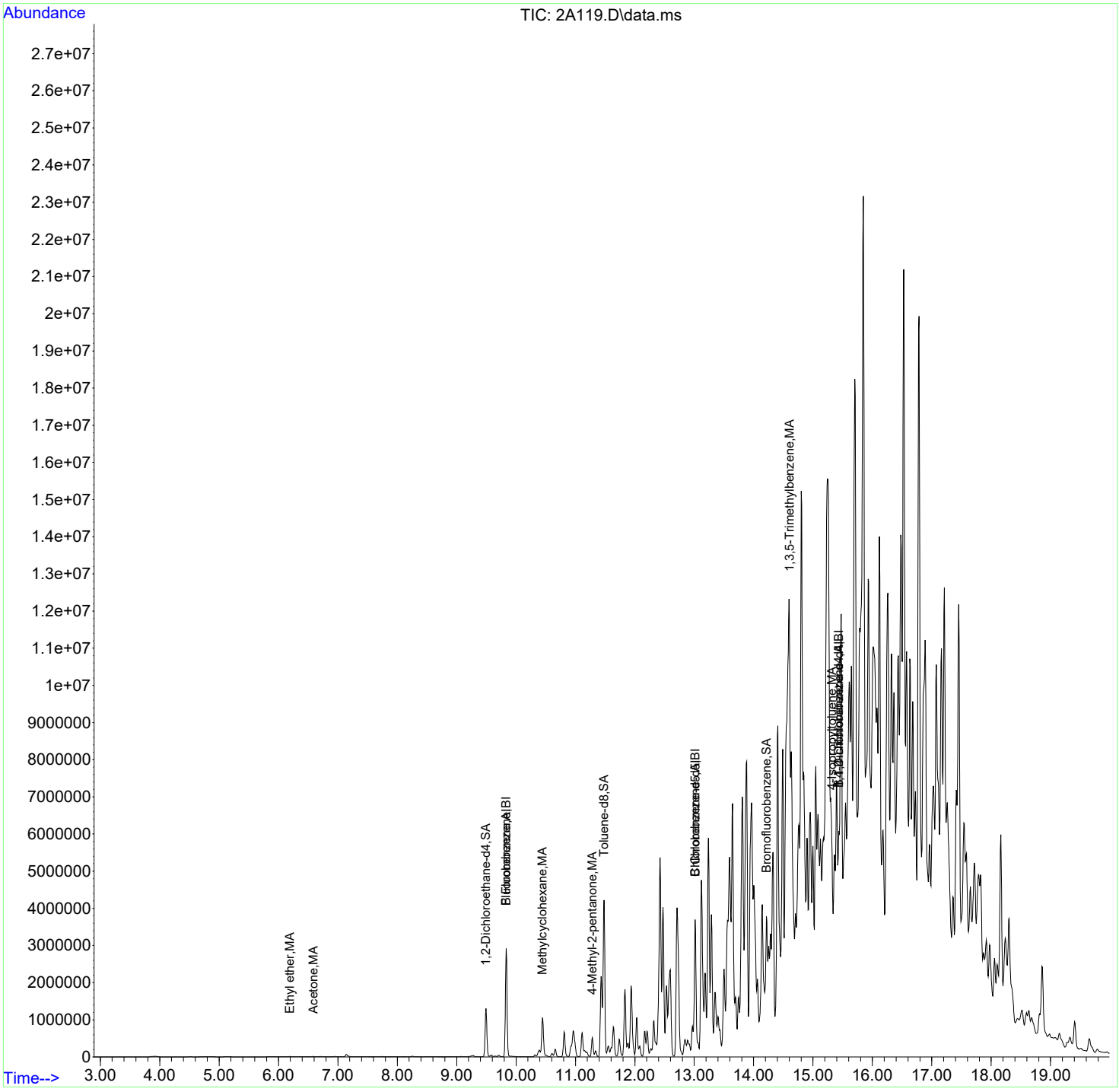
	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
87)	Isopropyl Alcohol	45	6.712	6.663	0.683	3509	N.D.	
88)	Allyl chloride		0.000	6.993	0.000	0	N.D.	
89)	tert-Butyl Alcohol	59	7.157	7.157	0.728	5347	N.D.	
90)	Acrylonitrile		0.000	7.419	0.000	0	N.D.	
91)	Isopropyl ether		0.000	7.925	0.000	0	N.D.	
92)	2-Chloro-1,3-butadiene		0.000	8.059	0.000	0	N.D.	
93)	Ethyl tert-butyl ether	59	8.261	8.334	0.840	336	N.D.	
94)	Ethyl acetate		0.000	8.566	0.000	0	N.D.	
95)	Propionitrile		0.000	8.657	0.000	0	N.D.	
96)	Methacrylonitrile		0.000	8.828	0.000	0	N.D.	
97)	Tetrahydrofuran		0.000	8.919	0.000	0	N.D.	
98)	Isobutyl alcohol		0.000	9.267	0.000	0m	N.D.	d
99)	Methyl tert-amyl ether		0.000	9.590	0.000	0	N.D.	
100)	Methyl methacrylate		0.000	10.455	0.000	0m	N.D.	d
101)	1,4-Dioxane		0.000	10.565	0.000	0	N.D.	
102)	2-Nitropropane		0.000	10.955	0.000	0m	N.D.	d
104)	Ethyl methacrylate		0.000	11.723	0.000	0m	N.D.	d
106)	1-Chlorohexane		0.000	12.912	0.000	0m	N.D.	d
107)	cis-1,4-Dichloro-2-butene		0.000	14.077	0.000	0m	N.D.	d
108)	Cyclohexanone		0.000	14.186	0.000	0m	N.D.	d
109)	trans-1,4-Dichloro-2-b...		0.000	14.363	0.000	0m	N.D.	d
110)	Pentachloroethane		0.000	15.040	0.000	0	N.D.	
111)	Benzyl chloride		0.000	15.582	0.000	0m	N.D.	d
112)	bis(2-Chloroisopropyl)...		0.000	15.979	0.000	0m	N.D.	d

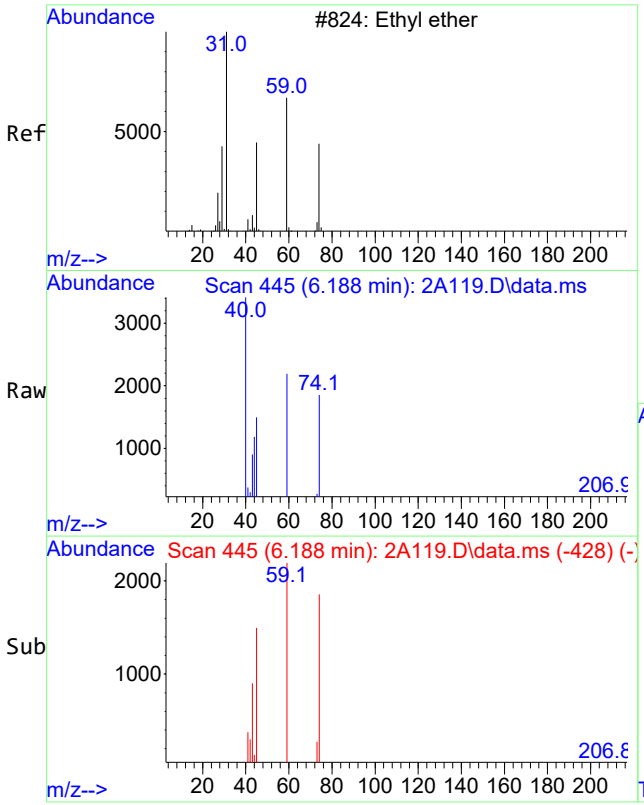
(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MSDCHEM\1\Data\020524V2\
Data File : 2A119.D
Acq On : 05 Feb 2024 16:33
Operator : AXH5
InstName : VOA2
Sample : |652948001|2563673|1|VOAF|1|VOA8260D_S|
Misc : TNSL 5.1G N/A SOIL
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Feb 06 08:26:55 2024
Quant Method : D:\MSDCHEM\1\Data\011524V2_ICAL\VOA2-8260D-011524_ICAL.M
Quant Title : Volatile Organics SubList :
QLast Update : Tue Jan 16 08:55:30 2024
Response via : Initial Calibration
Integrator: RTE

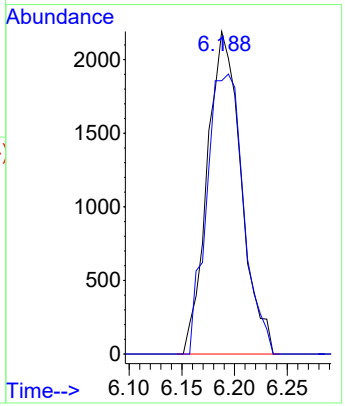


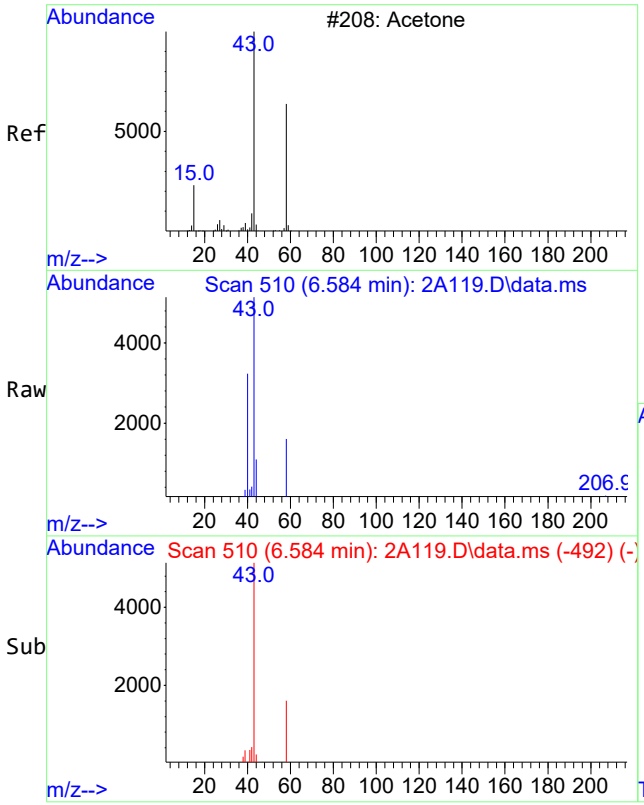


#8
Ethyl ether
Concen: 0.43 ug/L
RT: 6.188 min Scan# 445
Delta R.T. 0.006 min
Lab File: 2A119.D
Acq: 05 Feb 2024 16:33

Tgt Ion: 59 Resp: 4881

Ion	Ratio	Lower	Upper
59	100		
74	94.4	56.1	116.1

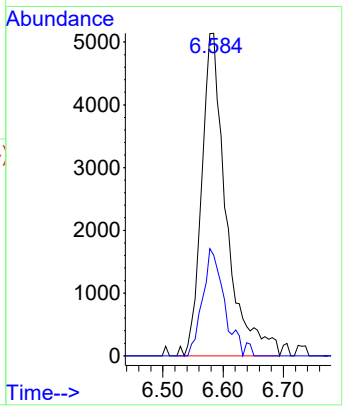


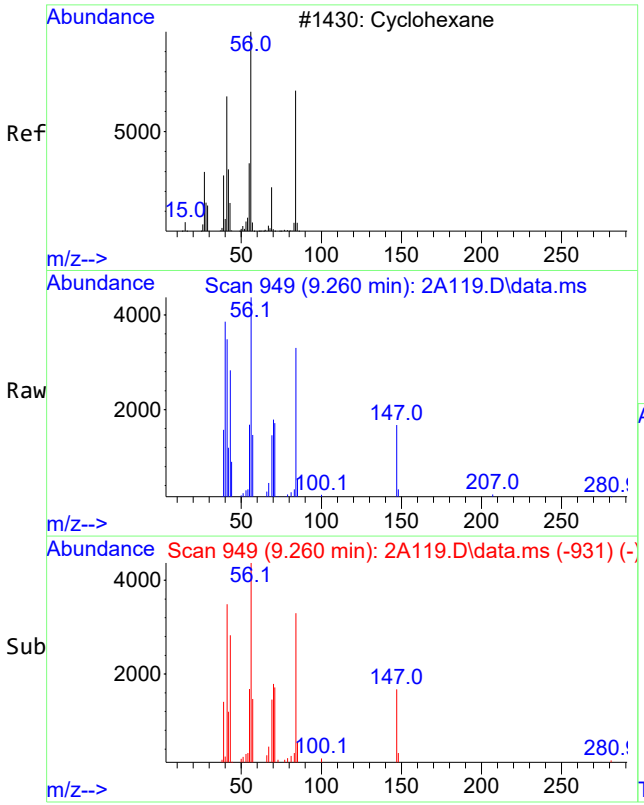


#9
Acetone
Concen: 3.76 ug/L
RT: 6.584 min Scan# 510
Delta R.T. 0.012 min
Lab File: 2A119.D
Acq: 05 Feb 2024 16:33

Tgt Ion: 43 Resp: 14577

Ion	Ratio	Lower	Upper
43	100		
58	28.6	0.0	59.2

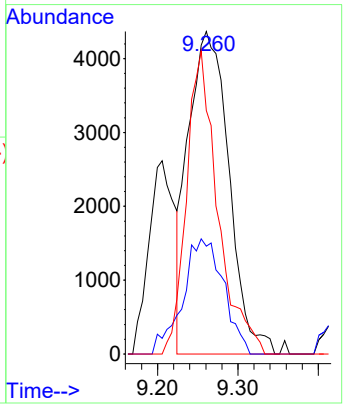


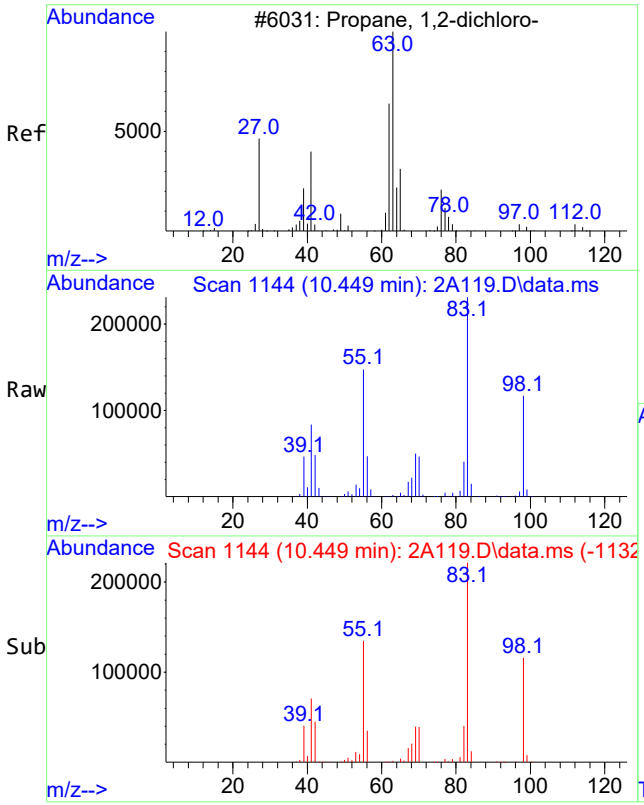


#27 BEFORE analyst DELETION
Cyclohexane
Concen: 0.81 ug/L
RT: 9.260 min Scan# 949
Delta R.T. 0.012 min
Lab File: 2A119.D
Acq: 05 Feb 2024 16:33

Tgt Ion: 56 Resp: 15392

Ion	Ratio	Lower	Upper
56	100		
69	35.6	8.5	68.5
84	71.9	65.5	125.5

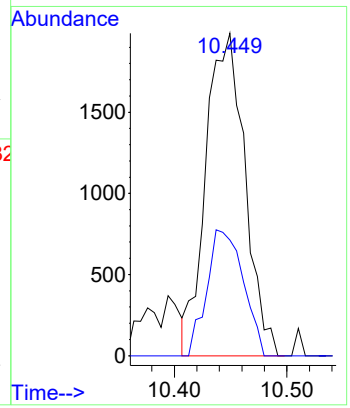


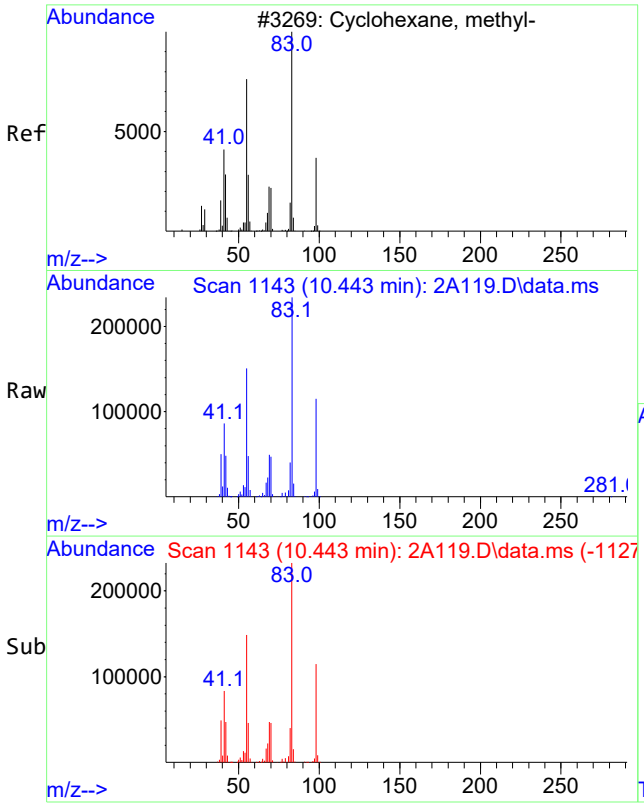


#37 BEFORE analyst DELETION
1,2-Dichloropropane
Concen: 0.37 ug/L
RT: 10.449 min Scan# 1144
Delta R.T. -0.024 min
Lab File: 2A119.D
Acq: 05 Feb 2024 16:33

Tgt Ion: 63 Resp: 4789

Ion	Ratio	Lower	Upper
63	100		
62	36.4	41.1	101.1#

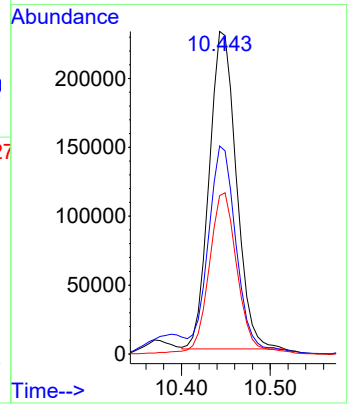


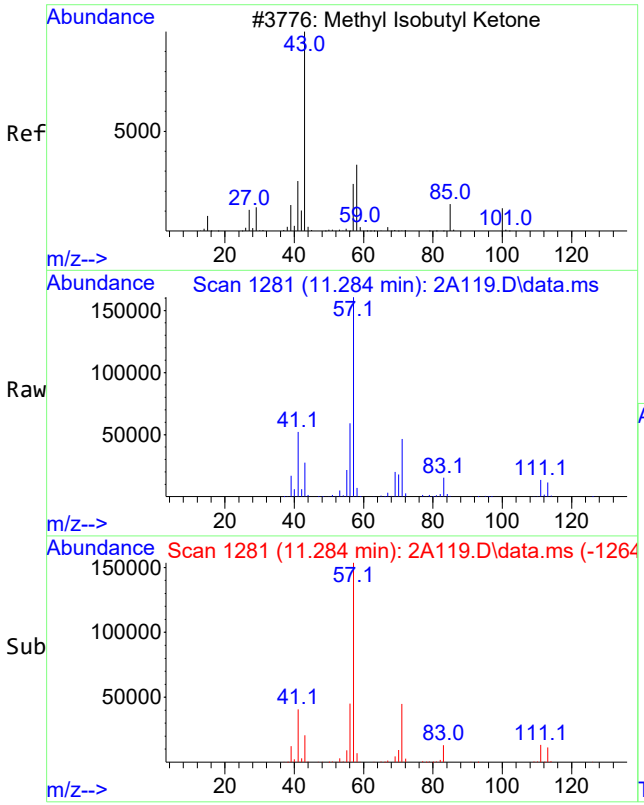


#38
Methylcyclohexane
Concen: 21.11 ug/L
RT: 10.443 min Scan# 1143
Delta R.T. -0.000 min
Lab File: 2A119.D
Acq: 05 Feb 2024 16:33

Tgt Ion: 83 Resp: 488139

Ion	Ratio	Lower	Upper
83	100		
55	64.2	39.6	99.6
98	52.3	19.0	79.0

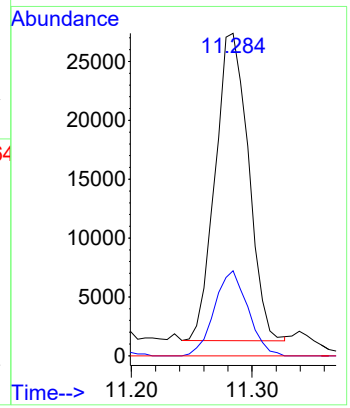


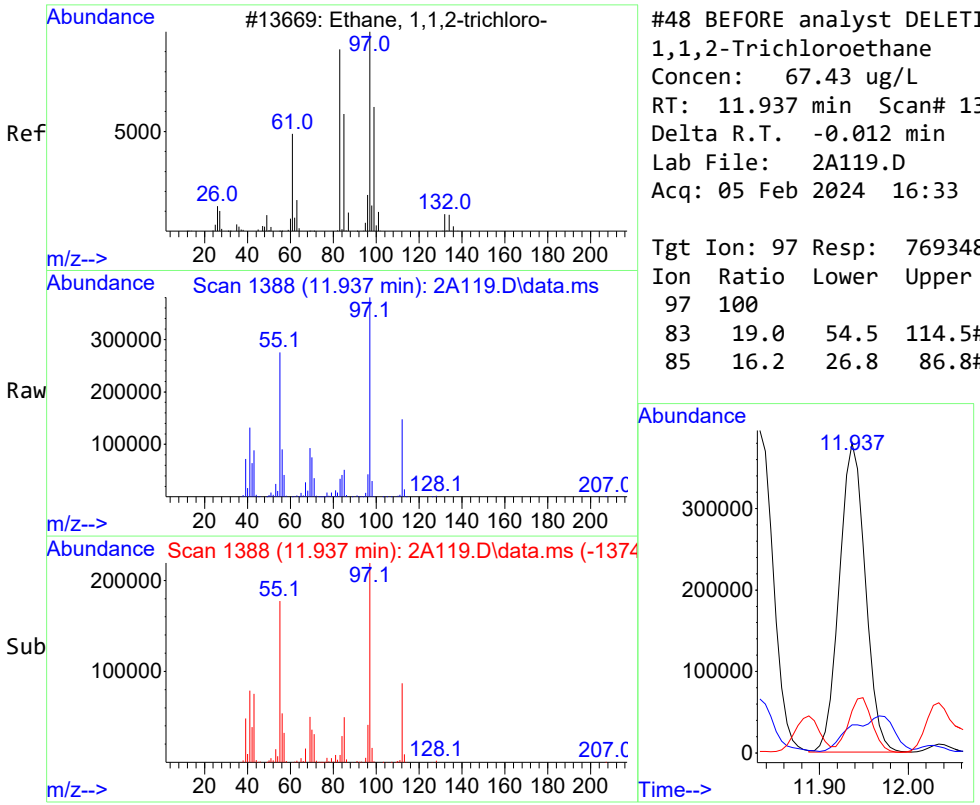


#44
4-Methyl-2-pentanone
Concen: 4.63 ug/L
RT: 11.284 min Scan# 1281
Delta R.T. 0.006 min
Lab File: 2A119.D
Acq: 05 Feb 2024 16:33

Tgt Ion: 43 Resp: 50263

Ion	Ratio	Lower	Upper
43	100		
58	28.0	11.4	71.4
100	0.0	0.0	50.2

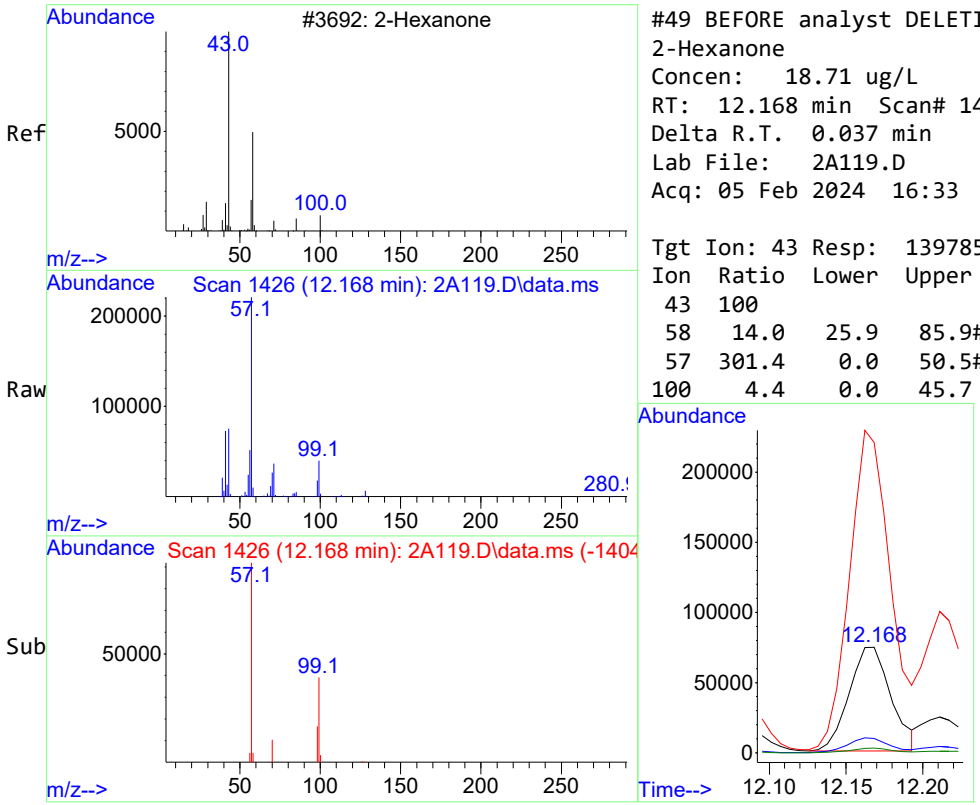




#48 BEFORE analyst DELETION
1,1,2-Trichloroethane
Concen: 67.43 ug/L
RT: 11.937 min Scan# 1388
Delta R.T. -0.012 min
Lab File: 2A119.D
Acq: 05 Feb 2024 16:33

Tgt Ion: 97 Resp: 769348

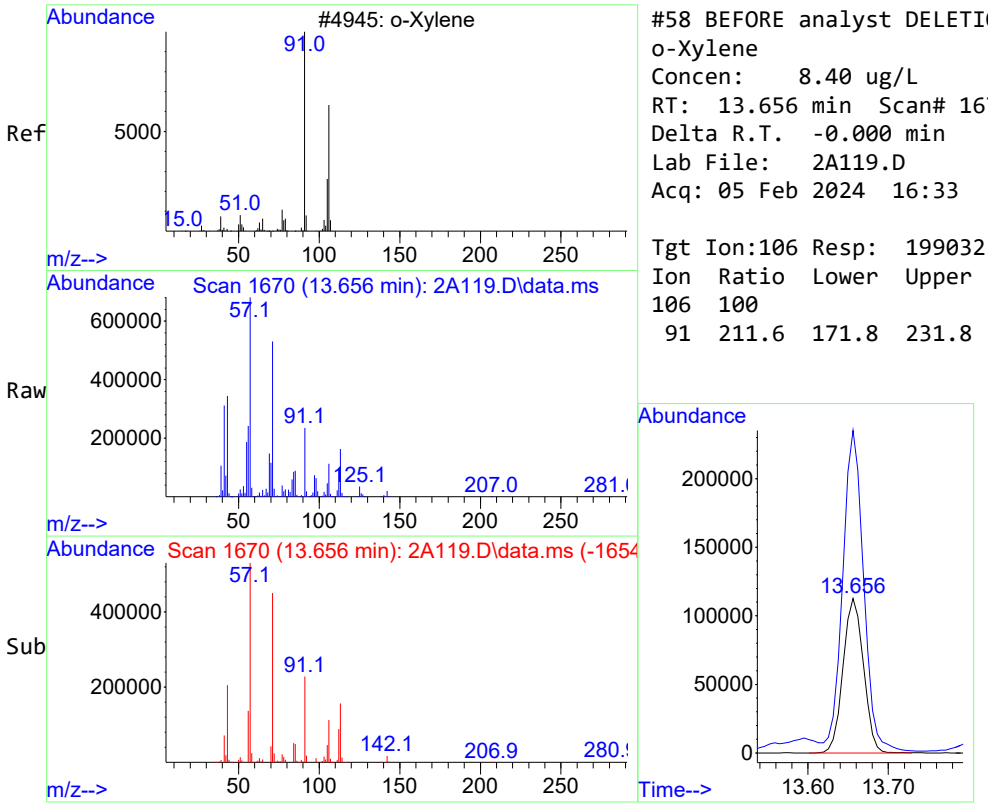
Ion	Ratio	Lower	Upper
97	100		
83	19.0	54.5	114.5#
85	16.2	26.8	86.8#



#49 BEFORE analyst DELETION
2-Hexanone
Concen: 18.71 ug/L
RT: 12.168 min Scan# 1426
Delta R.T. 0.037 min
Lab File: 2A119.D
Acq: 05 Feb 2024 16:33

Tgt Ion: 43 Resp: 139785

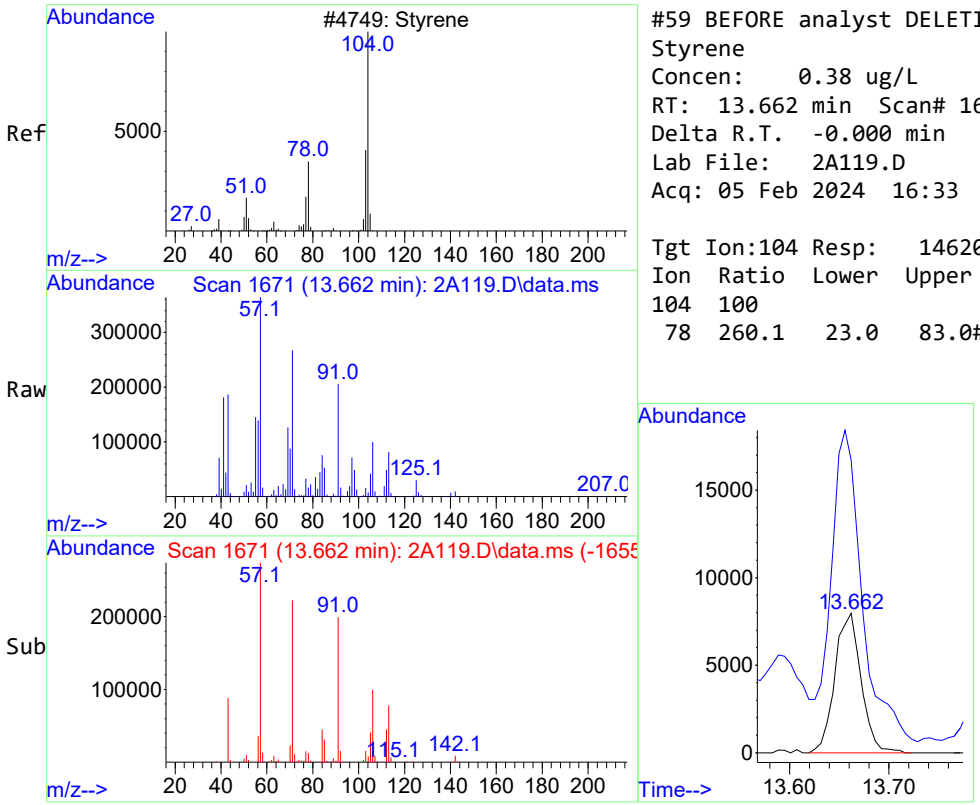
Ion	Ratio	Lower	Upper
43	100		
58	14.0	25.9	85.9#
57	301.4	0.0	50.5#
100	4.4	0.0	45.7



#58 BEFORE analyst DELETION
o-Xylene
Concen: 8.40 ug/L
RT: 13.656 min Scan# 1670
Delta R.T. -0.000 min
Lab File: 2A119.D
Acq: 05 Feb 2024 16:33

Tgt Ion:106 Resp: 199032

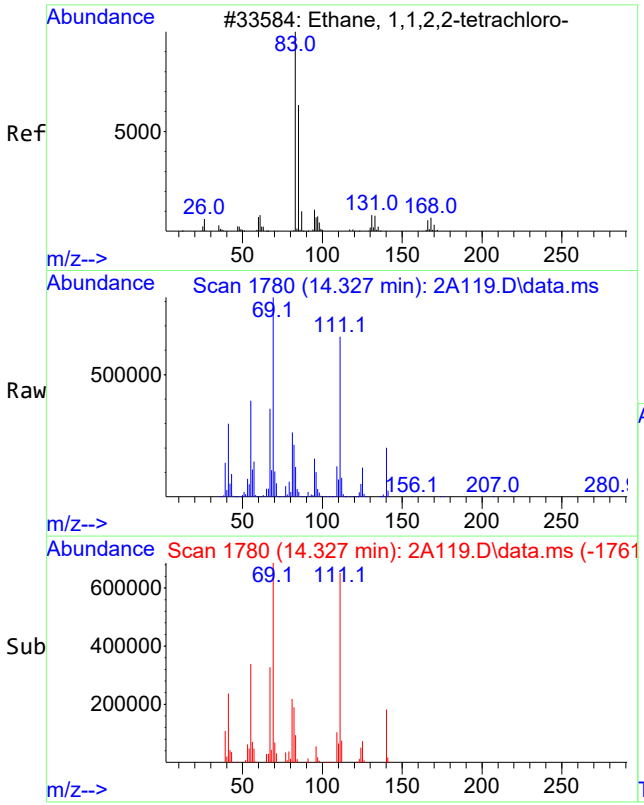
Ion	Ratio	Lower	Upper
106	100		
91	211.6	171.8	231.8



#59 BEFORE analyst DELETION
Styrene
Concen: 0.38 ug/L
RT: 13.662 min Scan# 1671
Delta R.T. -0.000 min
Lab File: 2A119.D
Acq: 05 Feb 2024 16:33

Tgt Ion:104 Resp: 14620

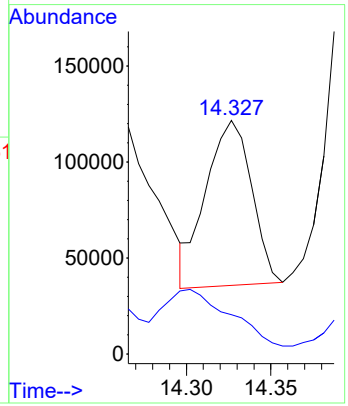
Ion	Ratio	Lower	Upper
104	100		
78	260.1	23.0	83.0#

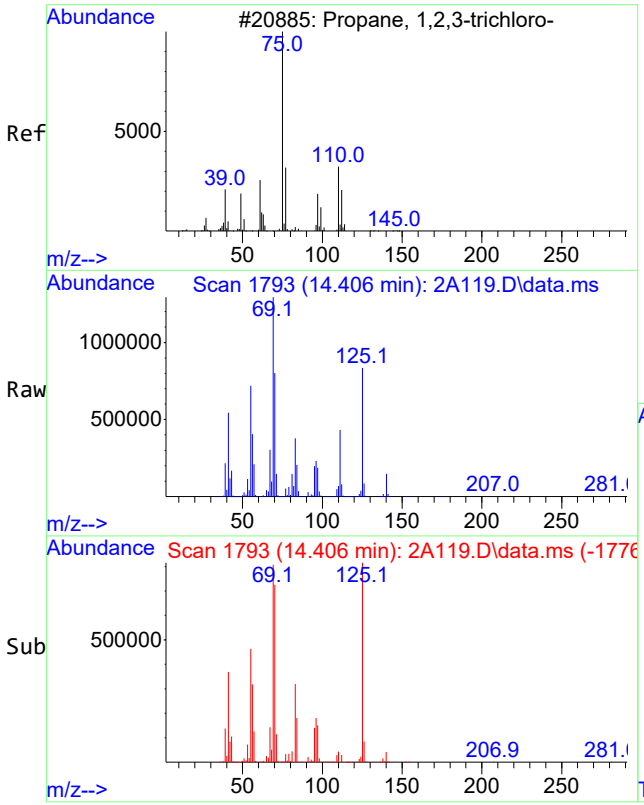


#64 BEFORE analyst DELETION
1,1,2,2-Tetrachloroethane
Concen: 14.51 ug/L
RT: 14.327 min Scan# 1780
Delta R.T. 0.018 min
Lab File: 2A119.D
Acq: 05 Feb 2024 16:33

Tgt Ion: 83 Resp: 162255

Ion	Ratio	Lower	Upper
83	100		
85	48.6	37.3	97.3

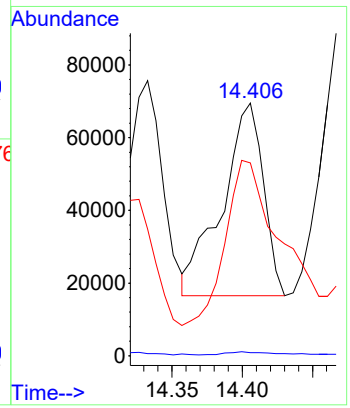


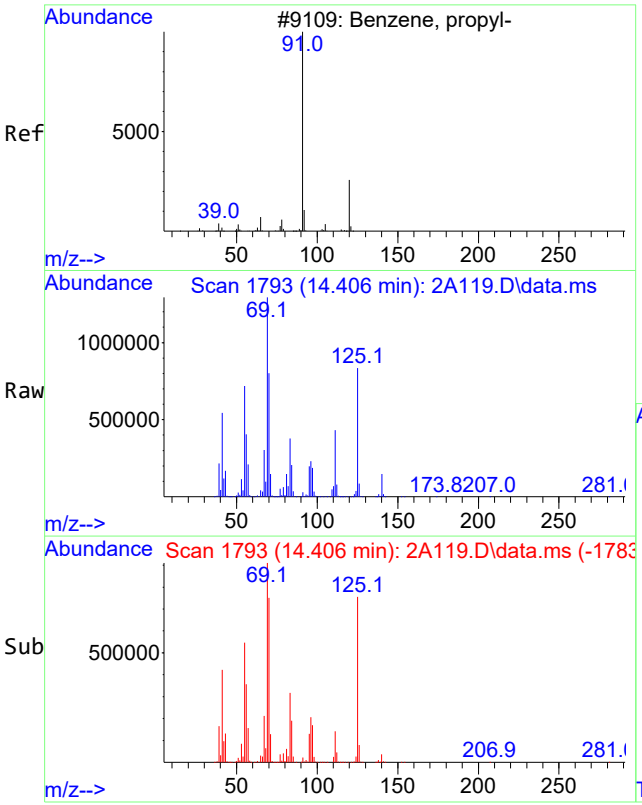


#65 BEFORE analyst DELETION
1,2,3-Trichloropropane
Concen: 29.01 ug/L
RT: 14.406 min Scan# 1793
Delta R.T. 0.006 min
Lab File: 2A119.D
Acq: 05 Feb 2024 16:33

Tgt Ion:110 Resp: 108761

Ion	Ratio	Lower	Upper
110	100		
75	2.0	280.4	340.4#
77	114.0	609.5	669.5#

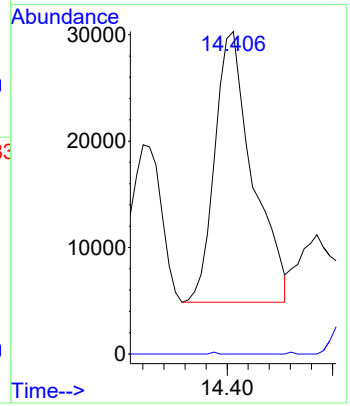


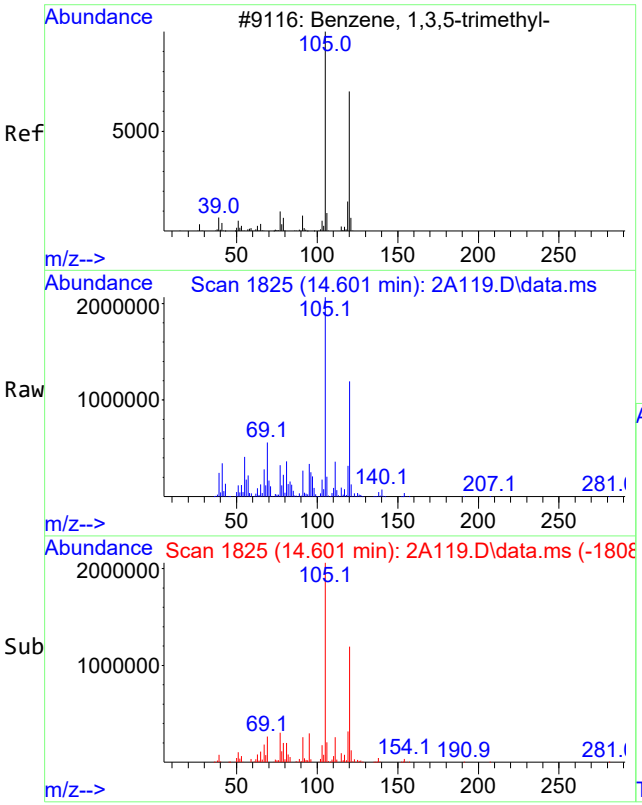


#67 BEFORE analyst DELETION
n-Propylbenzene
Concen: 1.21 ug/L
RT: 14.406 min Scan# 1793
Delta R.T. -0.037 min
Lab File: 2A119.D
Acq: 05 Feb 2024 16:33

Tgt Ion: 91 Resp: 62902

Ion	Ratio	Lower	Upper
91	100		
120	0.0	0.0	56.4

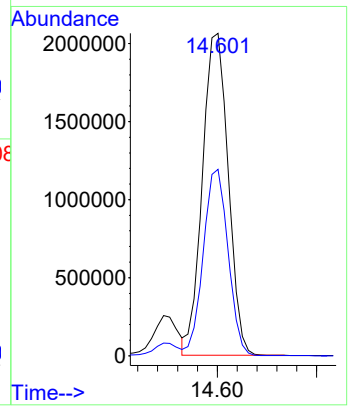


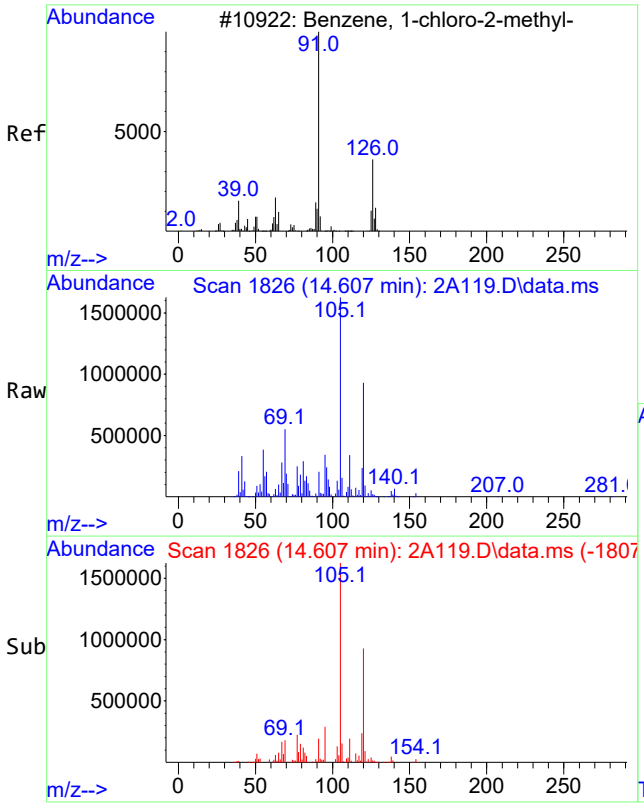


#68
1,3,5-Trimethylbenzene
Concen: 91.43 ug/L
RT: 14.601 min Scan# 1825
Delta R.T. 0.006 min
Lab File: 2A119.D
Acq: 05 Feb 2024 16:33

Tgt Ion:105 Resp: 3732955

Ion	Ratio	Lower	Upper
105	100		
120	55.5	23.0	83.0

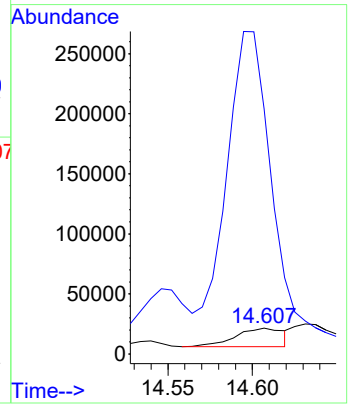


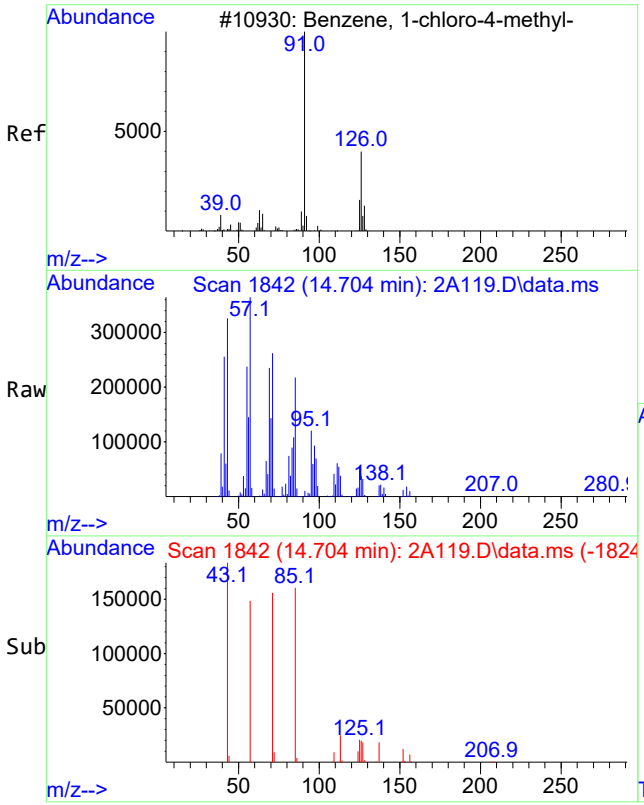


#69 BEFORE analyst DELETION
2-Chlorotoluene
Concen: 2.58 ug/L
RT: 14.607 min Scan# 1826
Delta R.T. 0.018 min
Lab File: 2A119.D
Acq: 05 Feb 2024 16:33

Tgt Ion:126 Resp: 30516

Ion	Ratio	Lower	Upper
126	100		
91	1602.1	277.3	337.3#

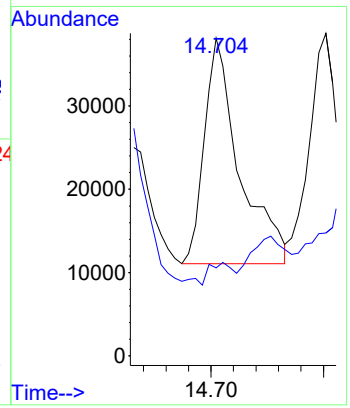


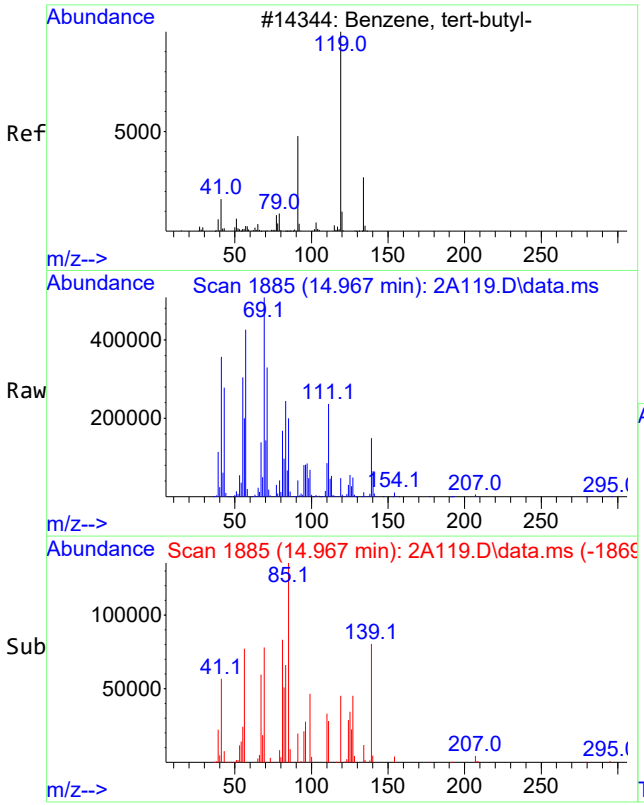


#70 BEFORE analyst DELETION
4-Chlorotoluene
Concen: 4.88 ug/L
RT: 14.704 min Scan# 1842
Delta R.T. 0.012 min
Lab File: 2A119.D
Acq: 05 Feb 2024 16:33

Tgt Ion:126 Resp: 58497

Ion	Ratio	Lower	Upper
126	100		
91	4.2	248.3	308.3#

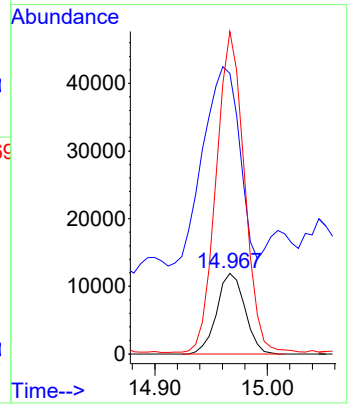


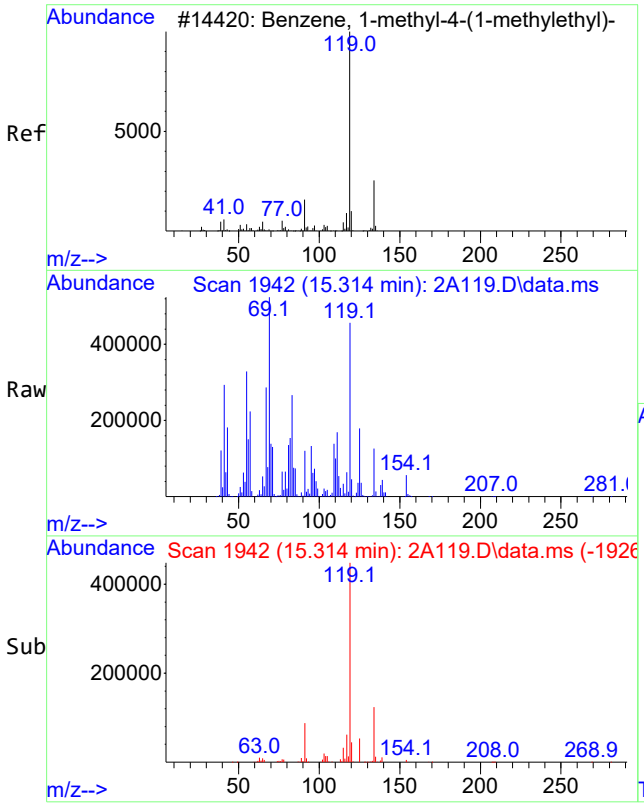


#71 BEFORE analyst DELETION
tert-Butylbenzene
Concen: 2.24 ug/L
RT: 14.967 min Scan# 1885
Delta R.T. -0.000 min
Lab File: 2A119.D
Acq: 05 Feb 2024 16:33

Tgt Ion:134 Resp: 20596

Ion	Ratio	Lower	Upper
134	100		
91	324.4	232.9	292.9#
119	398.8	357.6	417.6

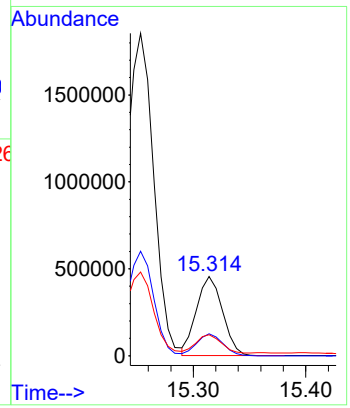


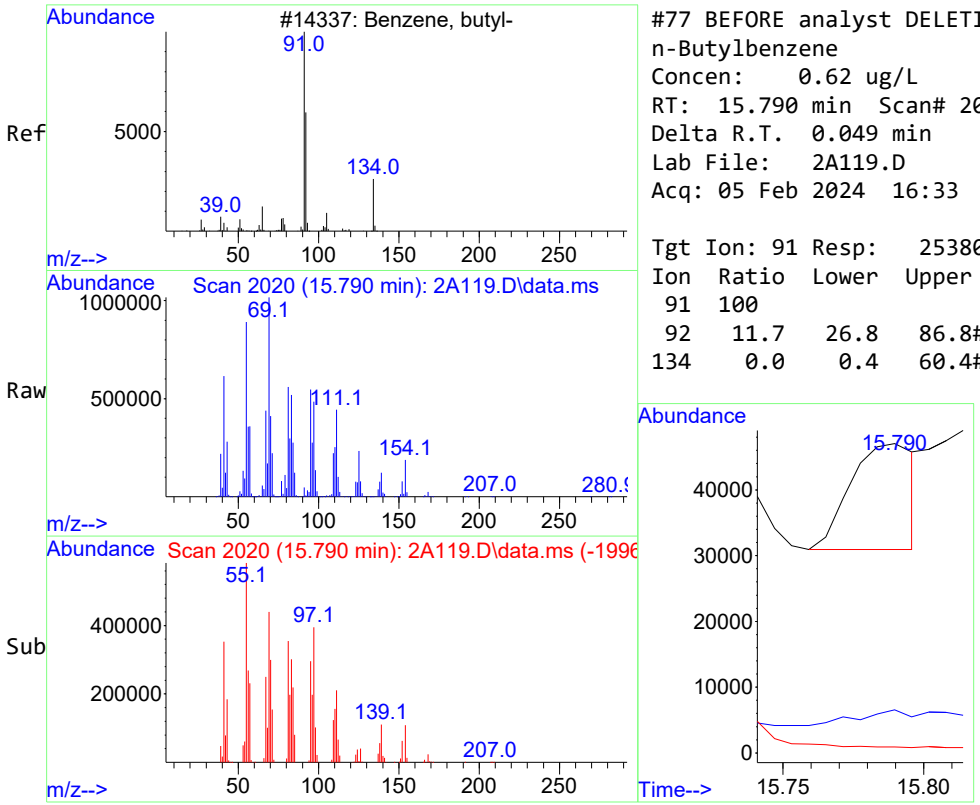


#74
4-Isopropyltoluene
Concen: 16.52 ug/L
RT: 15.314 min Scan# 1942
Delta R.T. -0.000 min
Lab File: 2A119.D
Acq: 05 Feb 2024 16:33

Tgt Ion:119 Resp: 733894

Ion	Ratio	Lower	Upper
119	100		
134	27.7	0.0	58.8
91	21.7	0.0	56.1

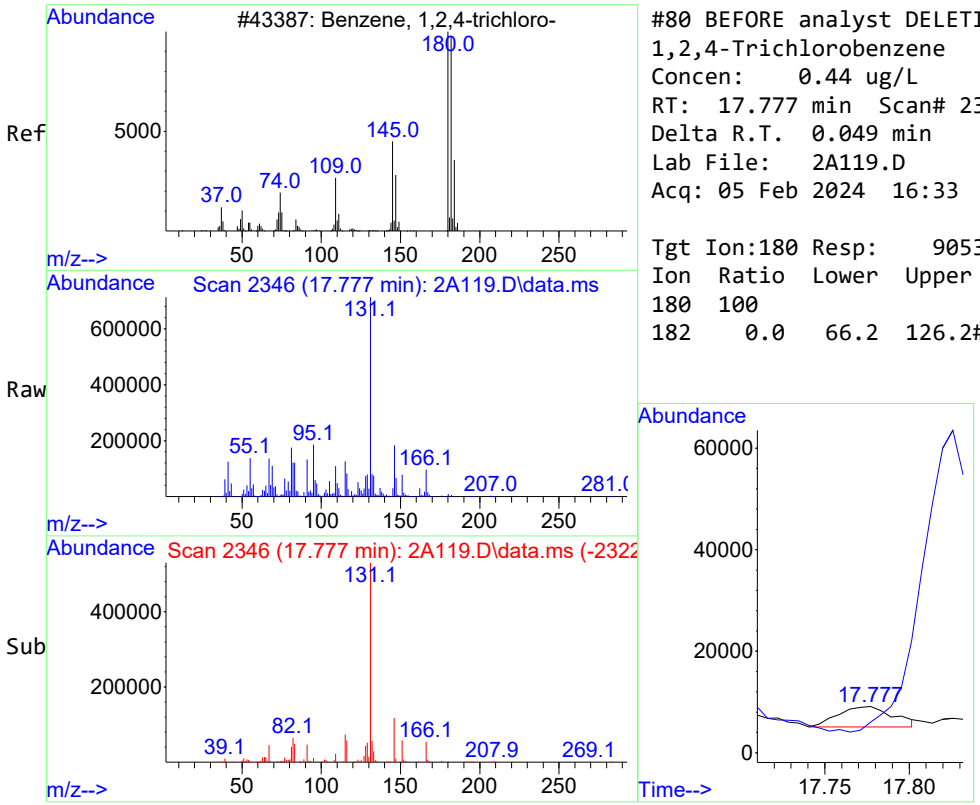




#77 BEFORE analyst DELETION
n-Butylbenzene
Concen: 0.62 ug/L
RT: 15.790 min Scan# 2020
Delta R.T. 0.049 min
Lab File: 2A119.D
Acq: 05 Feb 2024 16:33

Tgt Ion: 91 Resp: 25380

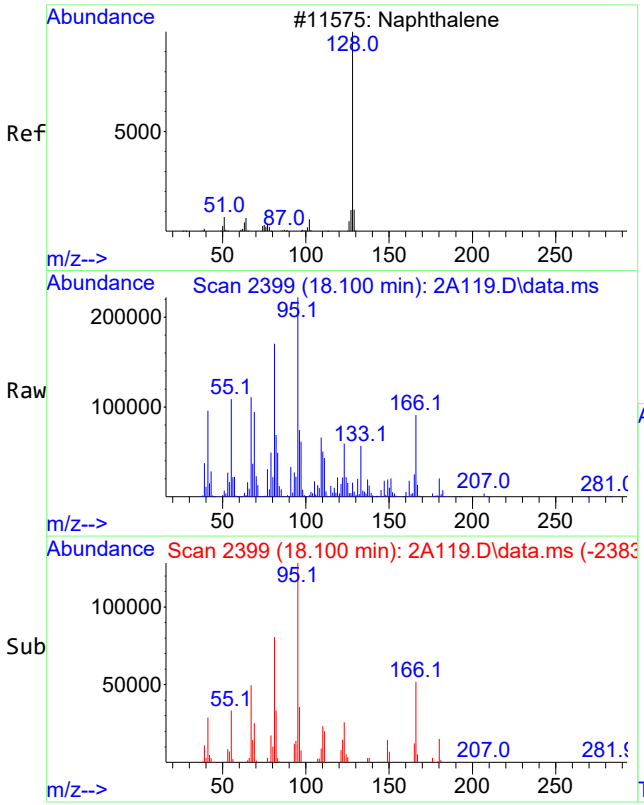
Ion	Ratio	Lower	Upper
91	100		
92	11.7	26.8	86.8#
134	0.0	0.4	60.4#



#80 BEFORE analyst DELETION
1,2,4-Trichlorobenzene
Concen: 0.44 ug/L
RT: 17.777 min Scan# 2346
Delta R.T. 0.049 min
Lab File: 2A119.D
Acq: 05 Feb 2024 16:33

Tgt Ion:180 Resp: 9053

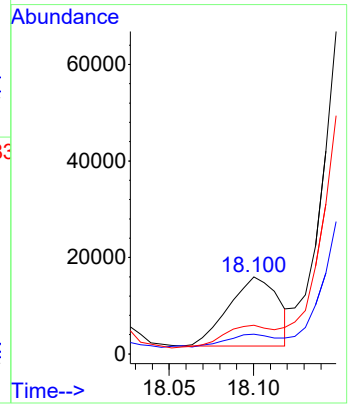
Ion	Ratio	Lower	Upper
180	100		
182	0.0	66.2	126.2#

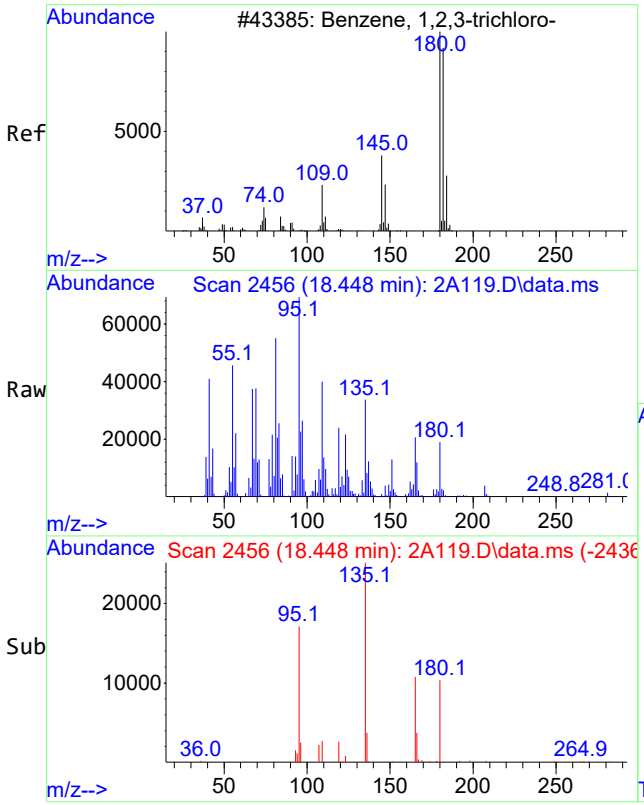


#82 BEFORE analyst DELETION
Naphthalene
Concen: 0.71 ug/L
RT: 18.100 min Scan# 2399
Delta R.T. -0.000 min
Lab File: 2A119.D
Acq: 05 Feb 2024 16:33

Tgt Ion:128 Resp: 29416

Ion	Ratio	Lower	Upper
128	100		
127	17.9	0.0	43.5
129	32.1	0.0	41.5

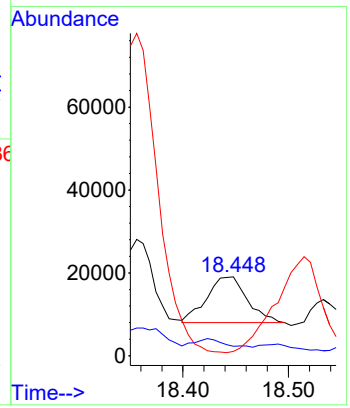


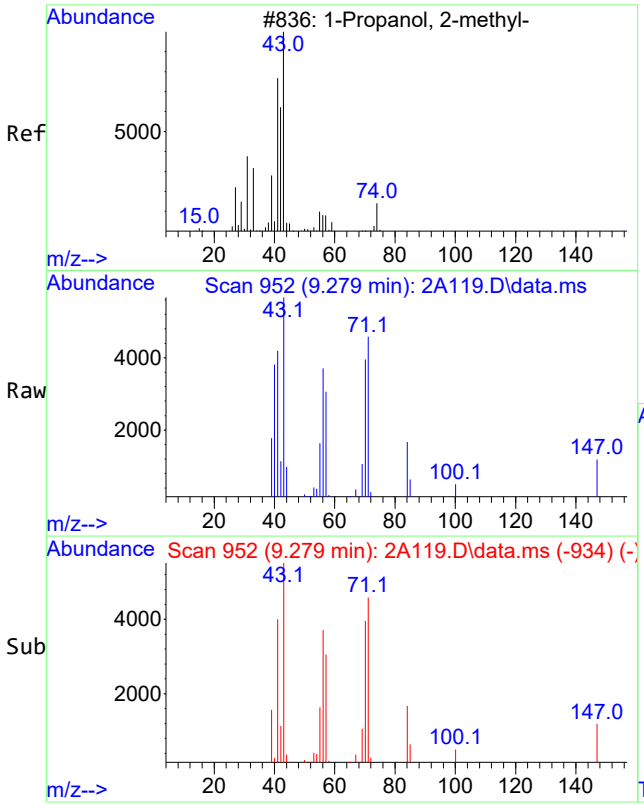


#83 BEFORE analyst DELETION
1,2,3-Trichlorobenzene
Concen: 1.54 ug/L
RT: 18.448 min Scan# 2456
Delta R.T. 0.024 min
Lab File: 2A119.D
Acq: 05 Feb 2024 16:33

Tgt Ion:180 Resp: 29409

Ion	Ratio	Lower	Upper
180	100		
182	12.2	65.5	125.5#
145	0.0	1.2	61.2#

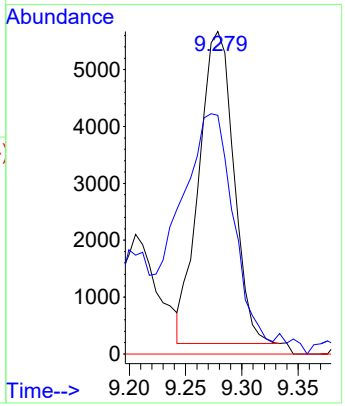


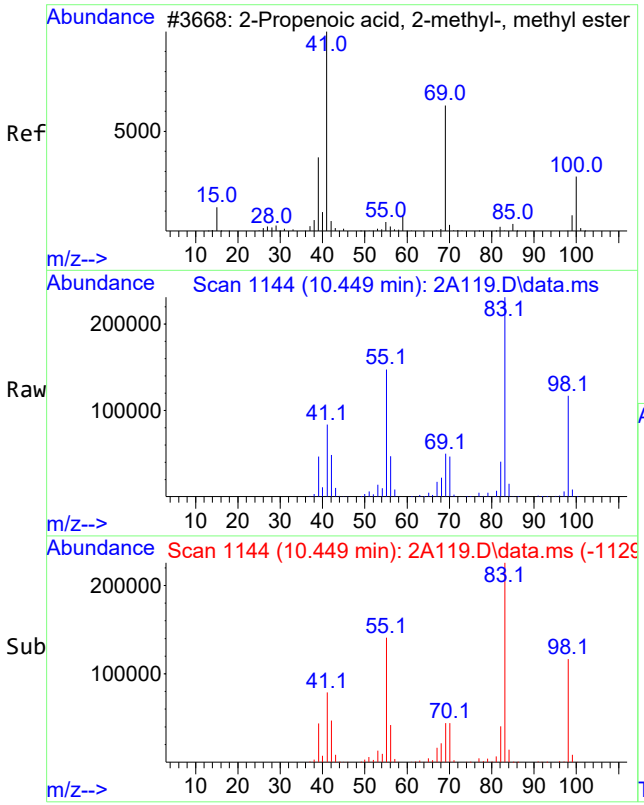


#98 BEFORE analyst DELETION
Isobutyl alcohol
Concen: 19.38 ug/L
RT: 9.279 min Scan# 952
Delta R.T. 0.012 min
Lab File: 2A119.D
Acq: 05 Feb 2024 16:33

Tgt Ion: 43 Resp: 11780

Ion	Ratio	Lower	Upper
43	100		
41	113.2	46.4	106.4#
74	0.0	0.0	33.4

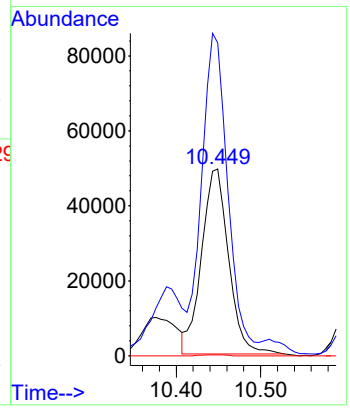


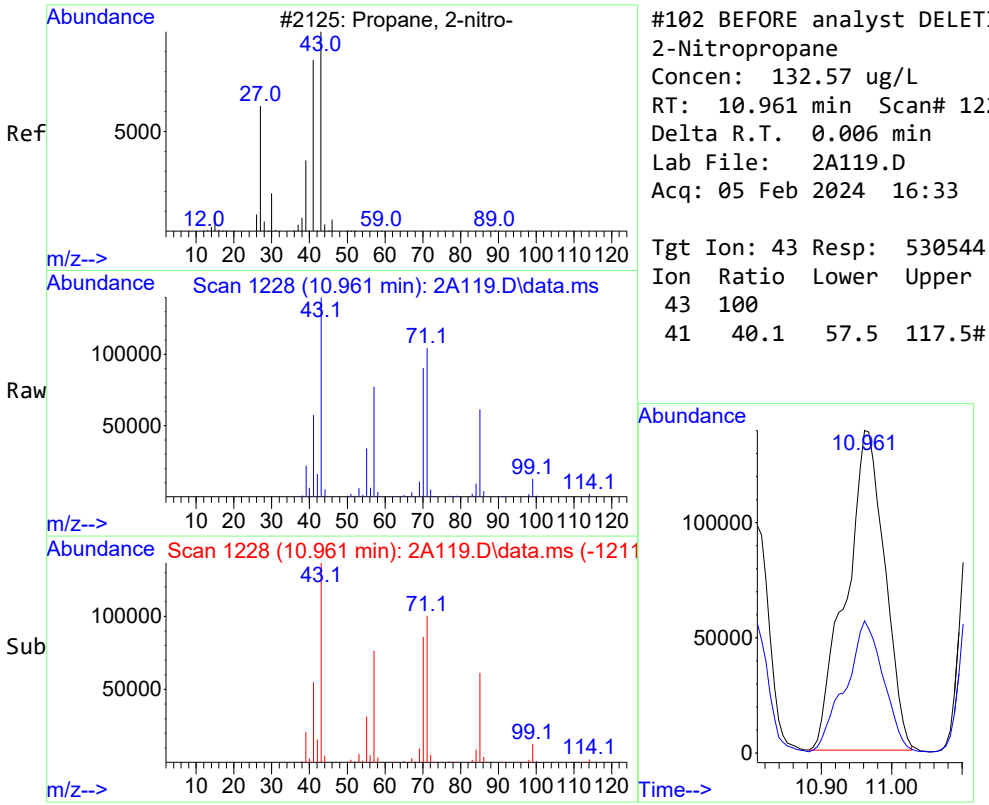


#100 BEFORE analyst DELETION
Methyl methacrylate
Concen: 11.41 ug/L
RT: 10.449 min Scan# 1144
Delta R.T. -0.006 min
Lab File: 2A119.D
Acq: 05 Feb 2024 16:33

Tgt Ion: 69 Resp: 109867

Ion	Ratio	Lower	Upper
69	100		
41	151.7	80.7	140.7#
100	0.5	11.2	71.2#

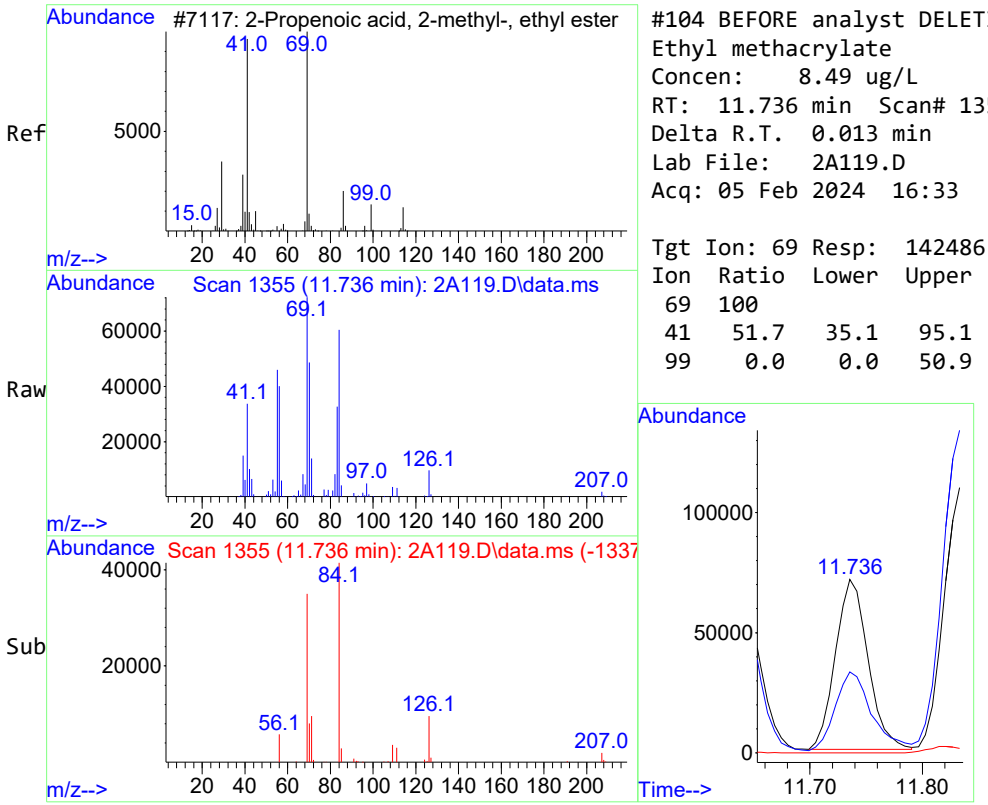




#102 BEFORE analyst DELETION
2-Nitropropane
Concen: 132.57 ug/L
RT: 10.961 min Scan# 1228
Delta R.T. 0.006 min
Lab File: 2A119.D
Acq: 05 Feb 2024 16:33

Tgt Ion: 43 Resp: 530544

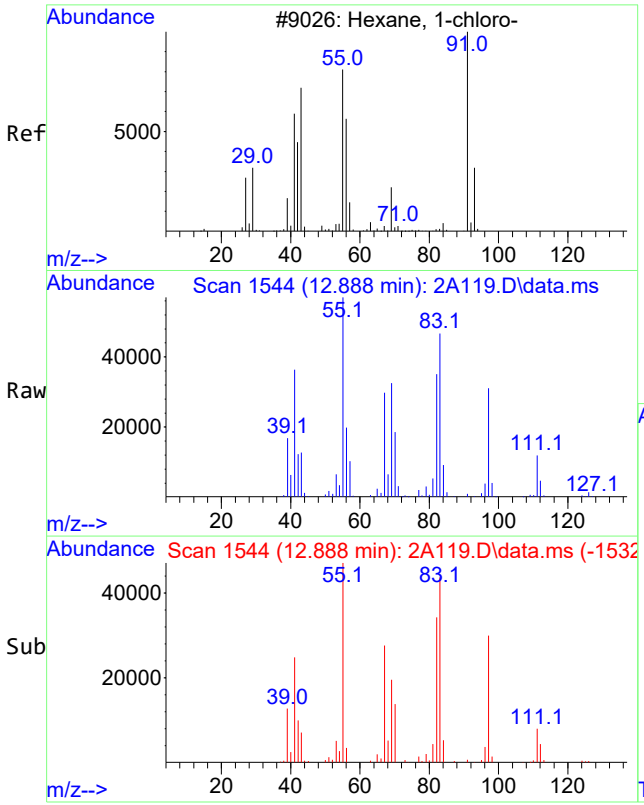
Ion	Ratio	Lower	Upper
43	100		
41	40.1	57.5	117.5#



#104 BEFORE analyst DELETION
Ethyl methacrylate
Concen: 8.49 ug/L
RT: 11.736 min Scan# 1355
Delta R.T. 0.013 min
Lab File: 2A119.D
Acq: 05 Feb 2024 16:33

Tgt Ion: 69 Resp: 142486

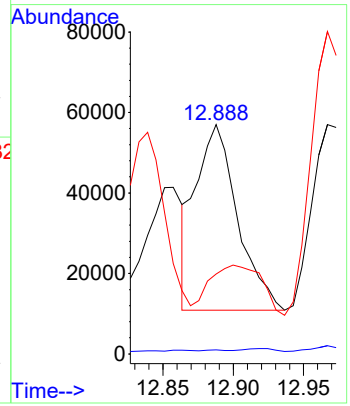
Ion	Ratio	Lower	Upper
69	100		
41	51.7	35.1	95.1
99	0.0	0.0	50.9

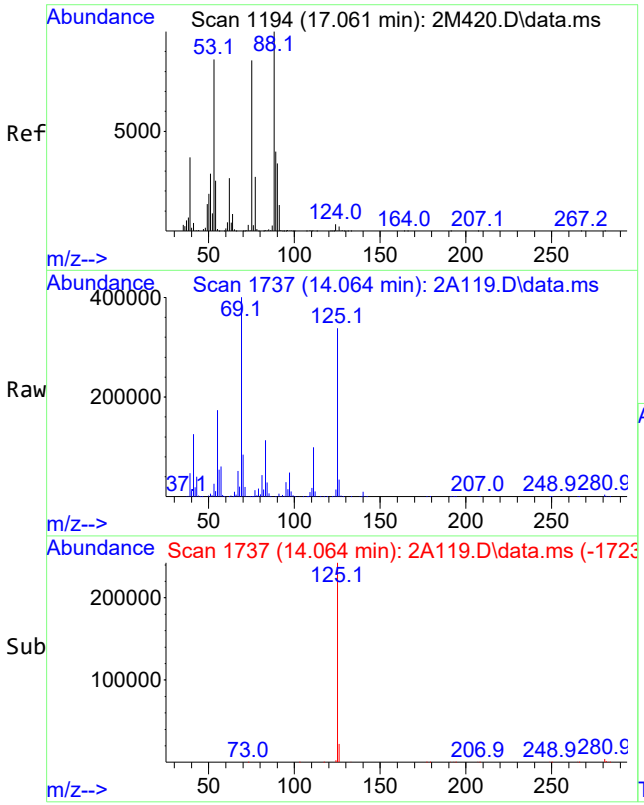


#106 BEFORE analyst DELETION
1-Chlorohexane
Concen: 11.75 ug/L
RT: 12.888 min Scan# 1544
Delta R.T. -0.024 min
Lab File: 2A119.D
Acq: 05 Feb 2024 16:33

Tgt Ion: 55 Resp: 95495

Ion	Ratio	Lower	Upper
55	100		
91	1.1	129.0	189.0#
56	33.7	28.2	88.2

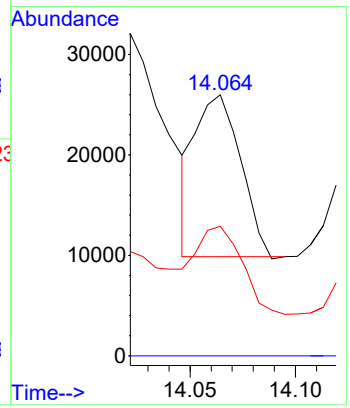


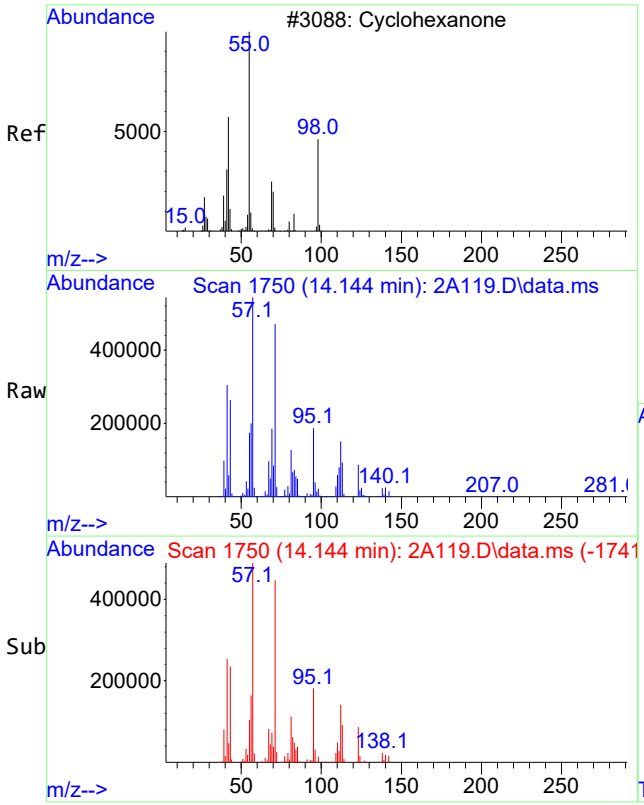


#107 BEFORE analyst DELETION
cis-1,4-Dichloro-2-butene
Concen: 6.81 ug/L
RT: 14.064 min Scan# 1737
Delta R.T. -0.013 min
Lab File: 2A119.D
Acq: 05 Feb 2024 16:33

Tgt Ion: 53 Resp: 23998

Ion	Ratio	Lower	Upper
53	100		
88	0.0	112.9	172.9#
77	55.1	8.2	68.2

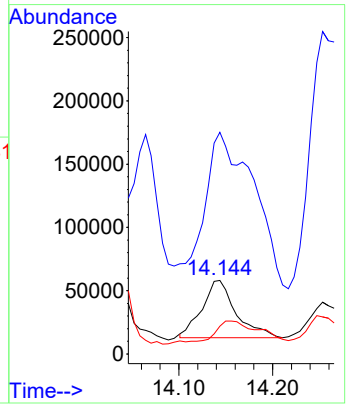


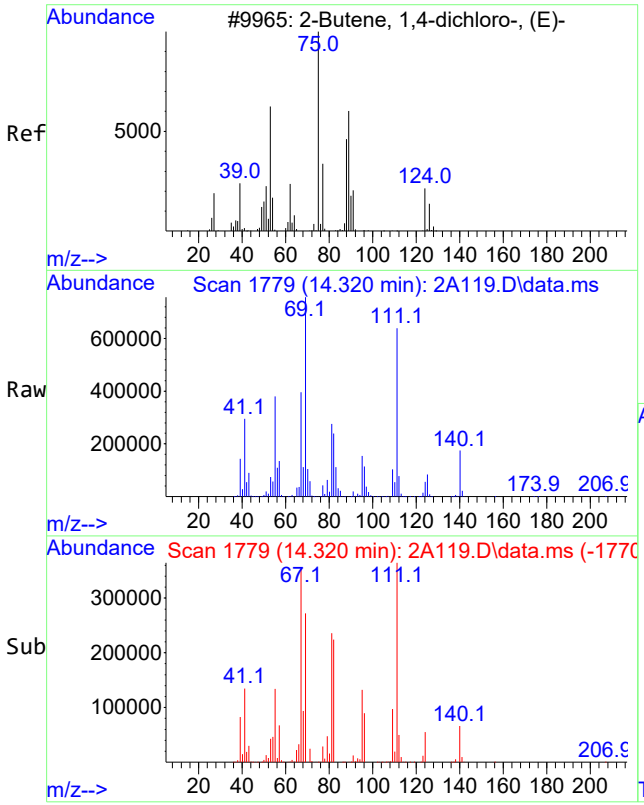


#108 BEFORE analyst DELETION
Cyclohexanone
Concen: 361.95 ug/L
RT: 14.144 min Scan# 1750
Delta R.T. -0.042 min
Lab File: 2A119.D
Acq: 05 Feb 2024 16:33

Tgt Ion: 42 Resp: 113615

Ion	Ratio	Lower	Upper
42	100		
55	395.7	96.3	156.3#
98	43.8	39.0	99.0

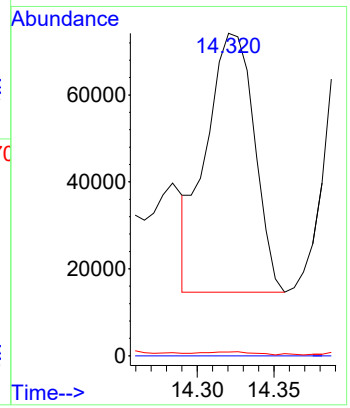


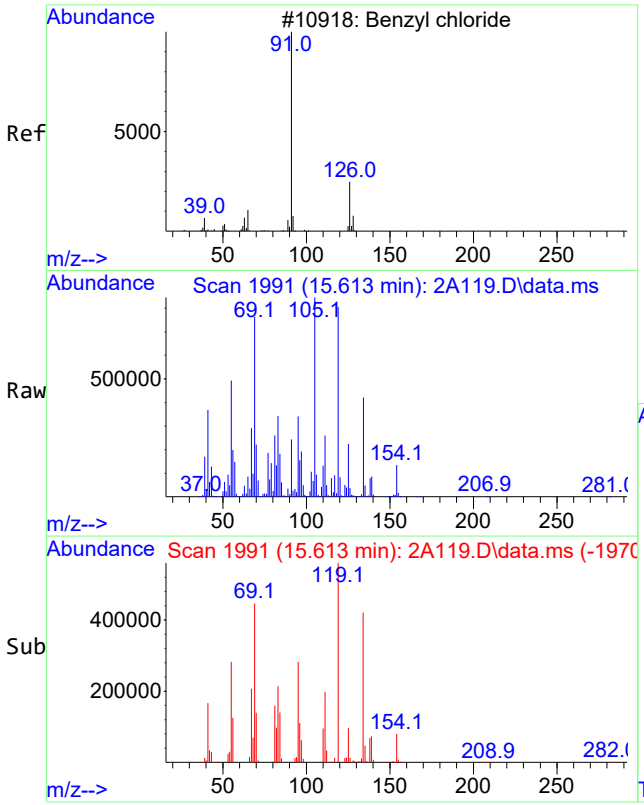


#109 BEFORE analyst DELETION
trans-1,4-Dichloro-2-butene
Concen: 41.90 ug/L
RT: 14.320 min Scan# 1779
Delta R.T. -0.043 min
Lab File: 2A119.D
Acq: 05 Feb 2024 16:33

Tgt Ion: 53 Resp: 130245

Ion	Ratio	Lower	Upper
53	100		
88	0.0	38.5	98.5#
75	1.2	116.0	176.0#

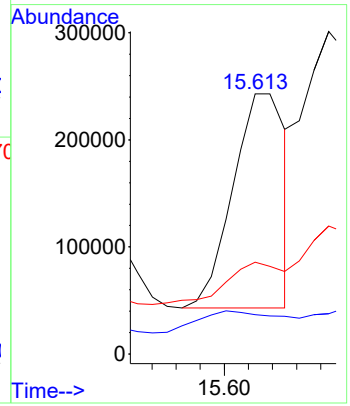


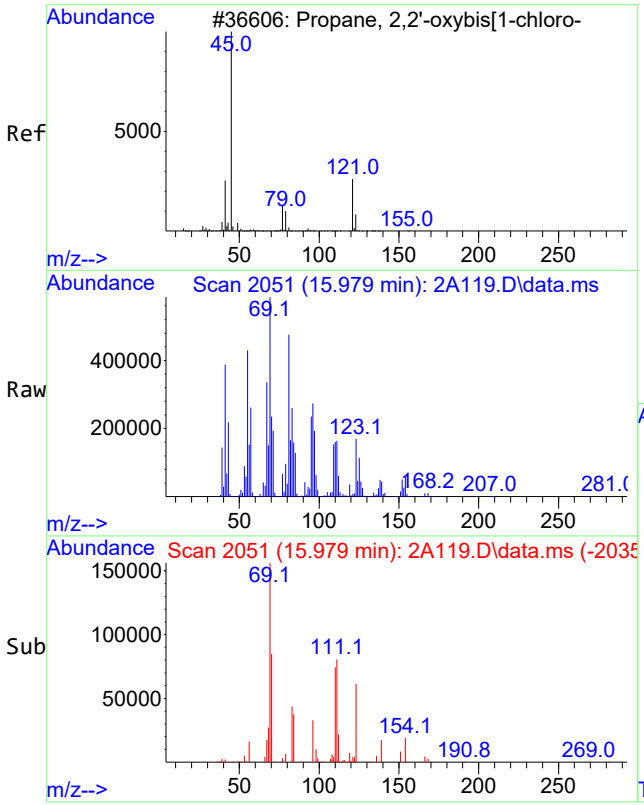


#111 BEFORE analyst DELETION
Benzyl chloride
Concen: 15.13 ug/L
RT: 15.613 min Scan# 1991
Delta R.T. 0.031 min
Lab File: 2A119.D
Acq: 05 Feb 2024 16:33

Tgt Ion: 91 Resp: 304947

Ion	Ratio	Lower	Upper
91	100		
126	16.6	0.0	57.6
65	21.4	0.0	46.0

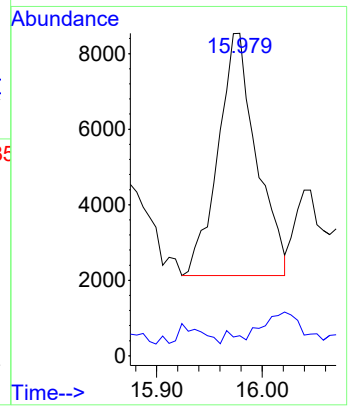




#112 BEFORE analyst DELETION
bis(2-Chloroisopropyl)ether
Concen: 10.04 ug/L
RT: 15.979 min Scan# 2051
Delta R.T. -0.000 min
Lab File: 2A119.D
Acq: 05 Feb 2024 16:33

Tgt Ion:121 Resp: 16188

Ion	Ratio	Lower	Upper
121	100		
45	0.0	252.0	312.0#



Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2024-366**	**Date Collected:**	**01/24/2024 09:40**	**Matrix:**	**SO**
Lab Sample ID:	**652948002**	**Date Received:**	**01/26/2024 09:40**	**%Moisture:**	**6.4**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289603**	**Method:**	**SW846 8260D**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**2563673**	**Inst:**	**VOA2.I**	**Dilution:**	**1**
Run Date:	**02/05/2024 16:59**	**Analyst:**	**AXH5**	**Purge Vol:**	**5 mL**
Prep Date:	**02/05/2024 12:55**	**Aliquot:**	**5.84 g**	**Final Volume:**	**5 mL**
Data File:	**020524V2\2A120.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	0.304	ug/kg	0.304	0.914
108-88-3	Toluene	U	0.304	ug/kg	0.304	0.914
100-41-4	Ethylbenzene	U	0.304	ug/kg	0.304	0.914
1330-20-7	Xylenes (total)	U	0.914	ug/kg	0.914	2.74

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	47.5	50.0	ug/L	95	(74%-128%)
Toluene-d8	47.0	50.0	ug/L	94	(81%-120%)
1,2-Dichloroethane-d4	49.6	50.0	ug/L	99	(77%-127%)

Quantitation Report
GEL Laboratories, LLC

AH 02/06/2024

Data Path : D:\MSDCHEM\1\Data\020524V2\
Data File : 2A120.D
Acq On : 05 Feb 2024 16:59
Operator : AXH5
InstName : VOA2
Sample : |652948002|2563673|1|VOAF|1|VOA8260D_S|
Misc : TNSL 5.8G N/A SOIL
ALS Vial : 20 Sample Multiplier: 1

MA 02/06/2024

Quant Time: Feb 06 08:29:51 2024
Quant Method : D:\MSDCHEM\1\Data\011524V2_ICAL\VOA2-8260D-011524_ICAL.M
Quant Title : Volatile Organics SubList :
QLast Update : Tue Jan 16 08:55:30 2024
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards								Dev(Min)
1) Fluorobenzene	96	9.833	9.827	1.000	2940506	50.00	ug/L	0.00
43) Chlorobenzene-d5	117	13.016	13.016	1.000	2588715	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	15.436	15.436	1.000	1513053	50.00	ug/L	0.00
84) B Fluorobenzene	96	9.833	9.834	1.000	2943653	50.00	ug/L	0.00
103) B Chlorobenzene-d5	117	13.016	13.016	1.000	2588715	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	15.436	15.430	1.000	1513484	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	9.486	9.492	0.965	565177	49.58	ug/L	0.00
45) Toluene-d8	98	11.479	11.480	0.882	2916390	47.04	ug/L	0.00
63) Bromofluorobenzene	95	14.217	14.217	0.921	1237061	47.49	ug/L	0.00

Compound	Amount	Range	Recovery
30) 1,2-Dichloroethane-d4	50.000	77 - 127	99%
45) Toluene-d8	50.000	81 - 120	94%
63) Bromofluorobenzene	50.000	74 - 128	95%

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.224	0.000	0	N.D.		
3) Chloromethane	50	4.603	4.619	0.468	135	N.D.		
4) Vinyl chloride		0.000	4.801	0.000	0	N.D.		
5) Bromomethane	94	5.234	5.401	0.532	157	N.D.		
6) Chloroethane		0.000	5.492	0.000	0	N.D.		
7) Trichlorofluoromethane		0.000	5.828	0.000	0	N.D.		
8) Ethyl ether	59	6.176	6.182	0.628	5820	0.48	ug/L	98
9) Acetone	43	6.578	6.572	0.669	6260	N.D.		
10) 1,1-Dichloroethylene		0.000	6.548	0.000	0	N.D.		
11) Iodomethane		0.000	6.791	0.000	0	N.D.		
12) Acetonitrile		0.000	6.938	0.000	0m	N.D.	d	
13) Methyl acetate	74	6.962	6.956	0.708	217	N.D.		
14) Carbon disulfide	76	6.907	6.913	0.702	133	N.D.		
15) Methylene chloride	84	7.133	7.133	0.725	48182	N.D.		
16) tert-Butyl methyl ether	73	7.401	7.413	0.753	112	N.D.		
17) trans-1,2-Dichloroethy...		0.000	7.462	0.000	0	N.D.		
18) Hexane	57	7.730	7.730	0.786	3809	N.D.		
19) Vinyl acetate	43	7.931	7.919	0.807	113	N.D.		
20) 1,1-Dichloroethane		0.000	7.956	0.000	0	N.D.		
21) 2-Butanone		0.000	8.559	0.000	0	N.D.		
22) cis-1,2-Dichloroethylene		0.000	8.596	0.000	0	N.D.		
23) 2,2-Dichloropropane		0.000	8.614	0.000	0	N.D.		
24) Bromochloromethane		0.000	8.870	0.000	0	N.D.		
25) Chloroform	83	8.907	8.913	0.906	1364	N.D.		
26) 1,1,1-Trichloroethane		0.000	9.169	0.000	0	N.D.		
27) Cyclohexane		0.000	9.248	0.000	0	N.D.		
28) 1,1-Dichloropropene		0.000	9.328	0.000	0	N.D.		
29) Carbon tetrachloride		0.000	9.352	0.000	0	N.D.		
31) 1,2-Dichloroethane	62	9.577	9.571	0.974	257	N.D.		
32) Benzene	78	9.577	9.571	0.974	973	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MSDCHEM\1\Data\020524V2\
Data File : 2A120.D
Acq On : 05 Feb 2024 16:59
Operator : AXH5
InstName : VOA2
Sample : |652948002|2563673|1|VOAF|1|VOA8260D_S|
Misc : TNSL 5.8G N/A SOIL
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Feb 06 08:29:51 2024
Quant Method : D:\MSDCHEM\1\Data\011524V2_ICAL\VOA2-8260D-011524_ICAL.M
Quant Title : Volatile Organics SubList :
QLast Update : Tue Jan 16 08:55:30 2024
Response via : Initial Calibration
Integrator: RTE

	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
33)	Cyclohexene	67	9.663	9.675	0.983	252	N.D.	
34)	n-Butyl alcohol		0.000	9.955	0.000	0	N.D.	
35)	Trichloroethylene	95	10.193	10.211	1.037	341	N.D.	
36)	2-Pentanone	43	10.327	10.321	1.050	1657	N.D.	
37)	1,2-Dichloropropane		0.000	10.474	0.000	0	N.D.	
38)	Methylcyclohexane	83	10.437	10.443	1.061	546	N.D.	
39)	Dibromomethane		0.000	10.608	0.000	0	N.D.	
40)	Bromodichloromethane		0.000	10.724	0.000	0	N.D.	
41)	2-Chloroethylvinyl ether		0.000	10.955	0.000	0	N.D.	
42)	cis-1,3-Dichloropropylene		0.000	11.175	0.000	0	N.D.	
44)	4-Methyl-2-pentanone	43	11.278	11.278	0.867	1209	N.D.	
46)	Toluene	91	11.553	11.553	0.888	1009	N.D.	
47)	trans-1,3-Dichloroprop...		0.000	11.730	0.000	0	N.D.	
48)	1,1,2-Trichloroethane	97	11.930	11.949	0.917	2648	N.D.	
49)	2-Hexanone	43	12.138	12.132	0.933	260	N.D.	
50)	1,3-Dichloropropane		0.000	12.138	0.000	0	N.D.	
51)	Tetrachloroethylene		0.000	12.138	0.000	0	N.D.	
52)	Dibromochloromethane	129	12.327	12.406	0.947	137	N.D.	
53)	1,2-Dibromoethane		0.000	12.571	0.000	0	N.D.	
54)	Chlorobenzene	112	13.046	13.046	1.002	426	N.D.	
55)	1,1,1,2-Tetrachloroethane		0.000	13.107	0.000	0	N.D.	
56)	Ethylbenzene	91	13.113	13.107	1.007	979	N.D.	
57)	m,p-Xylenes	106	13.223	13.217	1.016	740	N.D.	
58)	o-Xylene	106	13.656	13.656	1.049	481	N.D.	
59)	Styrene	104	13.668	13.662	1.050	1592	N.D.	
61)	Bromoform		0.000	13.924	0.000	0	N.D.	
62)	Isopropylbenzene	105	14.015	14.016	0.908	1018	N.D.	
64)	1,1,2,2-Tetrachloroethane	83	14.320	14.308	0.928	4713	N.D.	
65)	1,2,3-Trichloropropane		0.000	14.400	0.000	0m	N.D.	d
66)	Bromobenzene		0.000	14.424	0.000	0	N.D.	
67)	n-Propylbenzene	91	14.442	14.442	0.936	526	N.D.	
68)	1,3,5-Trimethylbenzene	105	14.595	14.595	0.945	19087	N.D.	
69)	2-Chlorotoluene	126	14.631	14.589	0.948	3077	N.D.	
70)	4-Chlorotoluene	126	14.698	14.692	0.952	1658	N.D.	
71)	tert-Butylbenzene	134	14.960	14.967	0.969	703	N.D.	
72)	1,2,4-Trimethylbenzene	105	15.009	15.009	0.972	1915	N.D.	
73)	sec-Butylbenzene	105	15.192	15.186	0.984	293	N.D.	
74)	4-Isopropyltoluene	119	15.308	15.314	0.992	5845	N.D.	
75)	1,3-Dichlorobenzene	146	15.369	15.375	0.996	565	N.D.	
76)	1,4-Dichlorobenzene	146	15.466	15.460	1.002	1423	N.D.	
77)	n-Butylbenzene	91	15.783	15.741	1.023	2953	N.D.	
78)	1,2-Dichlorobenzene	146	15.875	15.875	1.028	428	N.D.	
79)	1,2-Dibromo-3-chloropr...		0.000	16.729	0.000	0	N.D.	
80)	1,2,4-Trichlorobenzene	180	17.716	17.728	1.148	612	N.D.	
81)	Hexachlorobutadiene		0.000	17.887	0.000	0	N.D.	
82)	Naphthalene	128	18.094	18.100	1.172	7370	N.D.	
83)	1,2,3-Trichlorobenzene		0.000	18.423	0.000	0m	N.D.	d
85)	Acrolein		0.000	6.401	0.000	0	N.D.	
86)	Trichlorotrifluoroethane		0.000	6.535	0.000	0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MSDCHEM\1\Data\020524V2\
Data File : 2A120.D
Acq On : 05 Feb 2024 16:59
Operator : AXH5
InstName : VOA2
Sample : |652948002|2563673|1|VOAF|1|VOA8260D_S|
Misc : TNSL 5.8G N/A SOIL
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Feb 06 08:29:51 2024
Quant Method : D:\MSDCHEM\1\Data\011524V2_ICAL\VOA2-8260D-011524_ICAL.M
Quant Title : Volatile Organics SubList :
QLast Update : Tue Jan 16 08:55:30 2024
Response via : Initial Calibration
Integrator: RTE

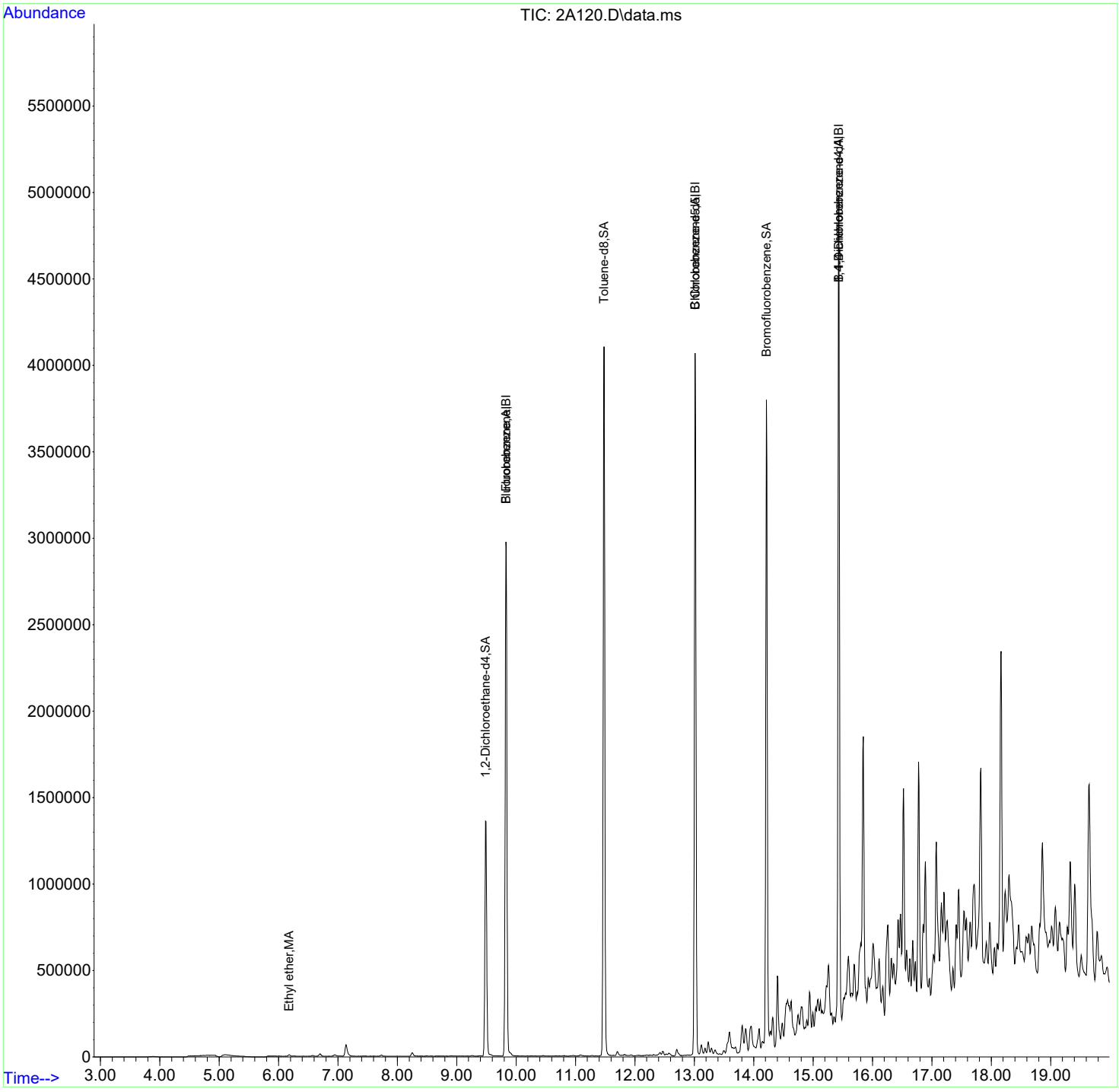
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
87) Isopropyl Alcohol	45	6.700	6.663	0.681	5910	N.D.	
88) Allyl chloride		0.000	6.993	0.000	0	N.D.	
89) tert-Butyl Alcohol	59	7.145	7.157	0.727	4780	N.D.	
90) Acrylonitrile		0.000	7.419	0.000	0	N.D.	
91) Isopropyl ether		0.000	7.925	0.000	0	N.D.	
92) 2-Chloro-1,3-butadiene		0.000	8.059	0.000	0	N.D.	
93) Ethyl tert-butyl ether		0.000	8.334	0.000	0	N.D.	
94) Ethyl acetate		0.000	8.566	0.000	0	N.D.	
95) Propionitrile		0.000	8.657	0.000	0	N.D.	
96) Methacrylonitrile		0.000	8.828	0.000	0	N.D.	
97) Tetrahydrofuran		0.000	8.919	0.000	0	N.D.	
98) Isobutyl alcohol		0.000	9.267	0.000	0	N.D.	
99) Methyl tert-amyl ether		0.000	9.590	0.000	0	N.D.	
100) Methyl methacrylate		0.000	10.455	0.000	0	N.D.	
101) 1,4-Dioxane		0.000	10.565	0.000	0	N.D.	
102) 2-Nitropropane	43	10.967	10.955	1.115	1982	N.D.	
104) Ethyl methacrylate	69	11.735	11.723	0.902	930	N.D.	
106) 1-Chlorohexane	55	12.888	12.912	0.835	1067	N.D.	
107) cis-1,4-Dichloro-2-butene	53	14.064	14.077	0.911	1251	N.D.	
108) Cyclohexanone	42	14.180	14.186	0.919	701	N.D.	
109) trans-1,4-Dichloro-2-b...		0.000	14.363	0.000	0m	N.D.	d
110) Pentachloroethane		0.000	15.040	0.000	0	N.D.	
111) Benzyl chloride	91	15.552	15.582	1.008	8880	N.D.	
112) bis(2-Chloroisopropyl)...	121	15.972	15.979	1.035	2227	N.D.	

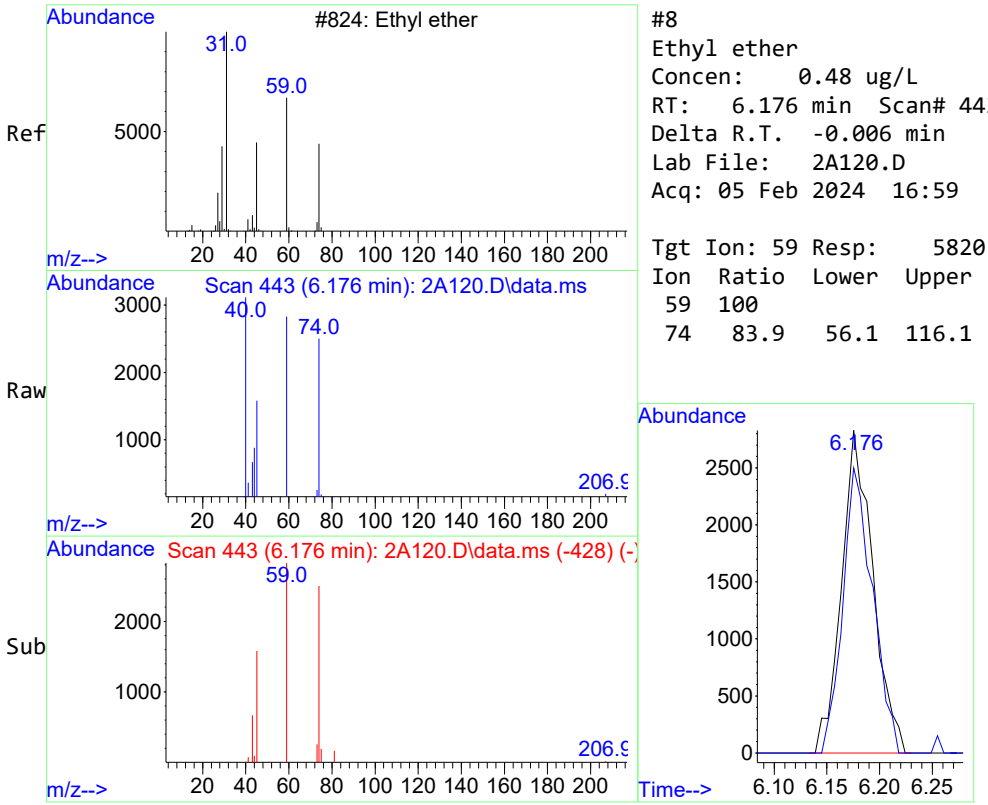
(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MSDCHEM\1\Data\020524V2\
Data File : 2A120.D
Acq On : 05 Feb 2024 16:59
Operator : AXH5
InstName : VOA2
Sample : |652948002|2563673|1|VOAF|1|VOA8260D_S|
Misc : TNSL 5.8G N/A SOIL
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Feb 06 08:29:51 2024
Quant Method : D:\MSDCHEM\1\Data\011524V2_ICAL\VOA2-8260D-011524_ICAL.M
Quant Title : Volatile Organics SubList :
QLast Update : Tue Jan 16 08:55:30 2024
Response via : Initial Calibration
Integrator: RTE

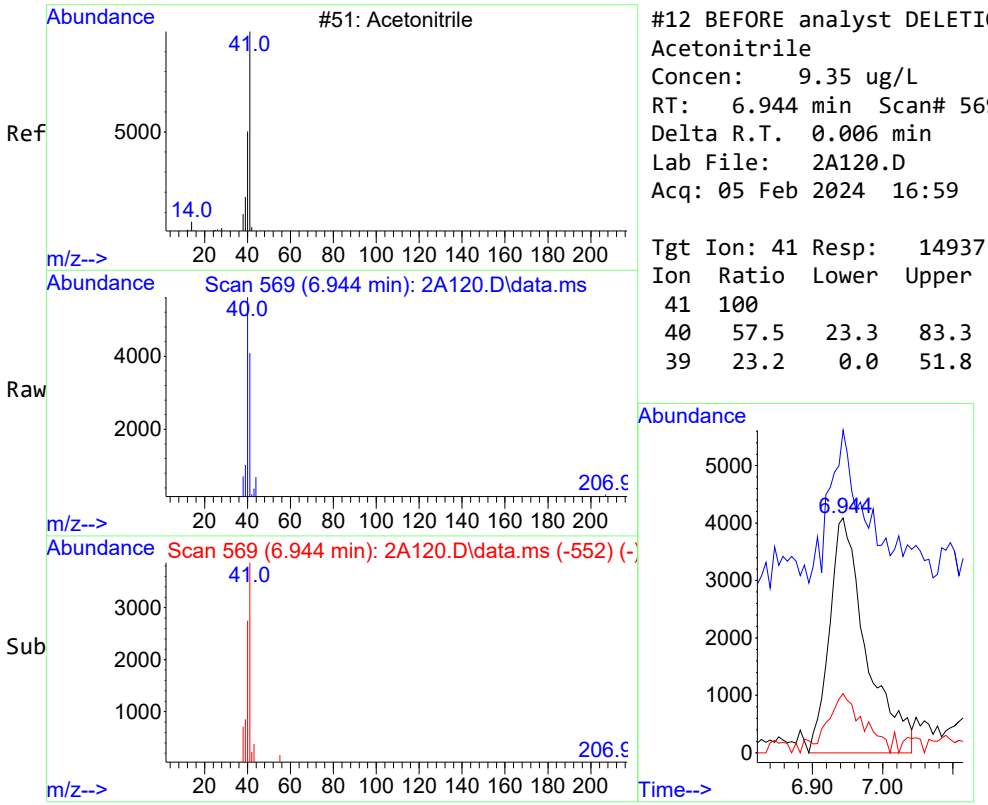




#8
Ethyl ether
Concen: 0.48 ug/L
RT: 6.176 min Scan# 443
Delta R.T. -0.006 min
Lab File: 2A120.D
Acq: 05 Feb 2024 16:59

Tgt Ion: 59 Resp: 5820

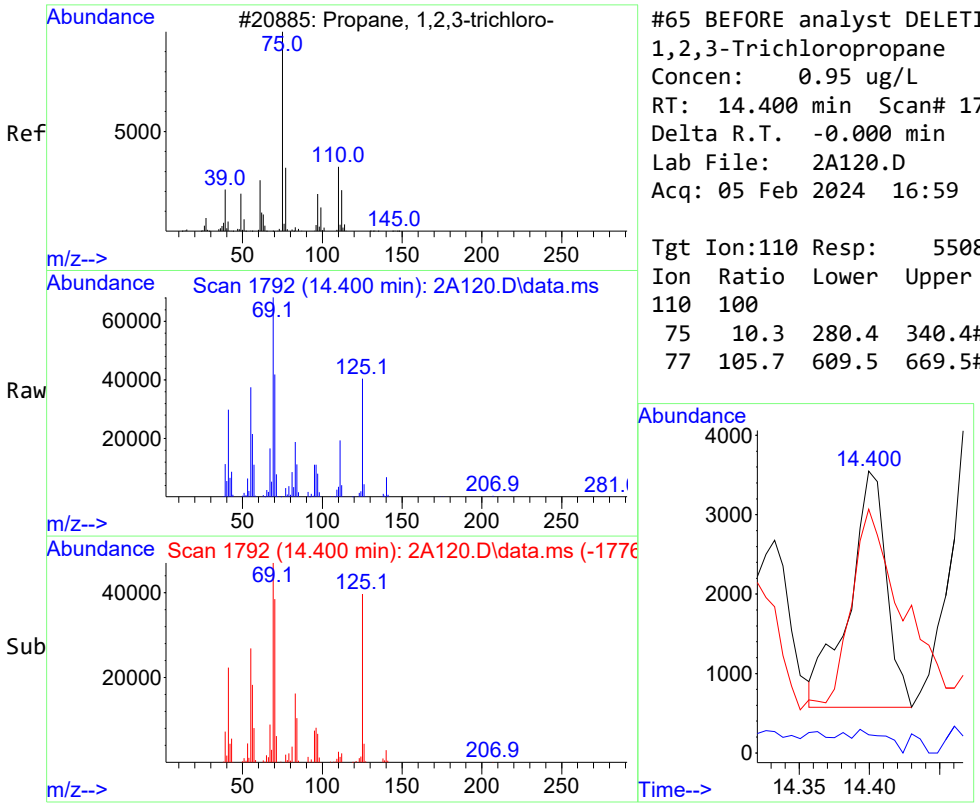
Ion	Ratio	Lower	Upper
59	100		
74	83.9	56.1	116.1



#12 BEFORE analyst DELETION
Acetonitrile
Concen: 9.35 ug/L
RT: 6.944 min Scan# 569
Delta R.T. 0.006 min
Lab File: 2A120.D
Acq: 05 Feb 2024 16:59

Tgt Ion: 41 Resp: 14937

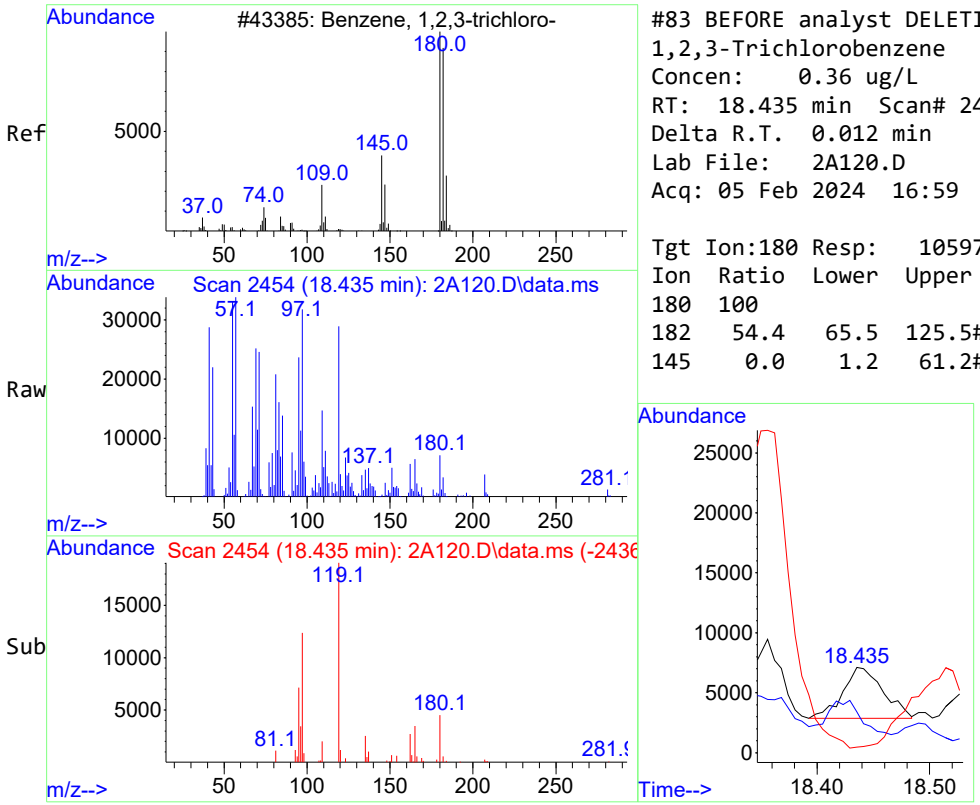
Ion	Ratio	Lower	Upper
41	100		
40	57.5	23.3	83.3
39	23.2	0.0	51.8



#65 BEFORE analyst DELETION
1,2,3-Trichloropropane
Concen: 0.95 ug/L
RT: 14.400 min Scan# 1792
Delta R.T. -0.000 min
Lab File: 2A120.D
Acq: 05 Feb 2024 16:59

Tgt Ion:110 Resp: 5508

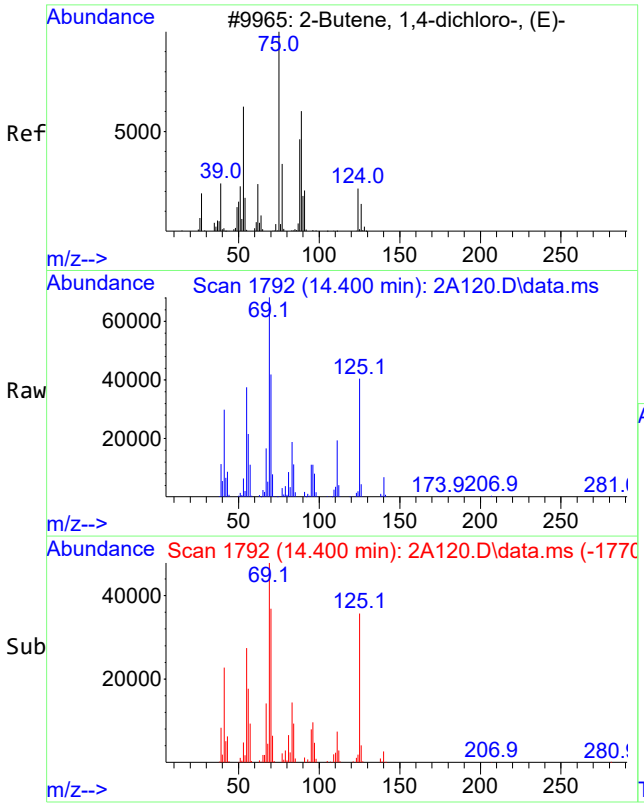
Ion	Ratio	Lower	Upper
110	100		
75	10.3	280.4	340.4#
77	105.7	609.5	669.5#



#83 BEFORE analyst DELETION
1,2,3-Trichlorobenzene
Concen: 0.36 ug/L
RT: 18.435 min Scan# 2454
Delta R.T. 0.012 min
Lab File: 2A120.D
Acq: 05 Feb 2024 16:59

Tgt Ion:180 Resp: 10597

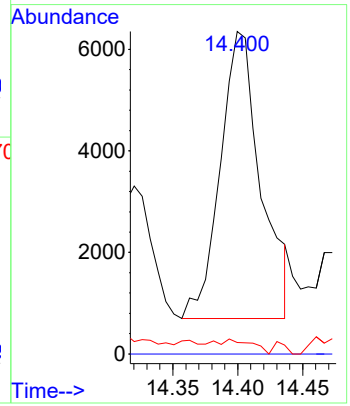
Ion	Ratio	Lower	Upper
180	100		
182	54.4	65.5	125.5#
145	0.0	1.2	61.2#



#109 BEFORE analyst DELETION
trans-1,4-Dichloro-2-butene
Concen: 2.57 ug/L
RT: 14.400 min Scan# 1792
Delta R.T. 0.037 min
Lab File: 2A120.D
Acq: 05 Feb 2024 16:59

Tgt Ion: 53 Resp: 12299

Ion	Ratio	Lower	Upper
53	100		
88	0.0	38.5	98.5#
75	4.6	116.0	176.0#



Miscellaneous

Prep Logbook

Volatile Organic Compounds (VOC) by Gas Chromatograph/Mass Spectrometer

Batch ID: 2563670 **Verified by:** _____
Analyst: Alexsys Hamilton
Method: SW846 5030

Lab SOP: GL-OA-E-038 REV# 29
Instrument: VOAB-003 OH AUS Balance

Sample ID	Prep Date	Sample Wt (g)	Preserved In Field	Preservative	Final Volume (mL)	Prep Factor (mL/g)	Scanned Container
1205640996 LCS	05-FEB-2024 08:00:00	5	N	DI WATER	5	1	NA
1205640997 MB	05-FEB-2024 08:00:00	5	N	DI WATER	5	1	NA
652948001	05-FEB-2024 12:55:00	5.1	N	DI WATER	5	0.98039	652948001.01
1205640998 PS (652948001)	05-FEB-2024 12:55:00	5.04	N	DI WATER	5	0.99206	NA
1205640999 PSD (652948001)	05-FEB-2024 12:55:00	5.61	N	DI WATER	5	0.89127	NA
652948002	05-FEB-2024 12:55:00	5.84	N	DI WATER	5	0.85616	652948002.01

Type	Sample Id	Description	Serial Number	Spike Amt	Units

Comments:

ORGANIC RUN LOG - INSTRUMENT ID#VOA2

AH 01/16/2024

Date: 1/15/2024 Method 8260C/D 624.1 Operator: AXH5

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 50

Daily Instrument Readings:
Multiplier Voltage: 1271

GEL 01/16/2024

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 12/27/2023

(See pg. 001-002 for ICAL Std. Ids)

Cl test lot #

Sequence Number: 011524V2

Daily Standard

Volume Added for Purge (ul)

Solution ID#		Blk/ Smpl	CCV	MS/ LCS	BFB
CCV[A]			5		
IS	IVM240108-02	5	5	5	
SS	IVM231220-01	5	5	5	
LCS[A]				5	
BFB	IVM240102-01				1
CCV[B]			5		
LCS[B]				5	

Purge Amount

5ML	Water Purge Vol:
5.0G	Soil Purge Wt.
N/A	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
X	Heated Purge

Analysis Date	Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable(O/X)	Comments
1/15/2024	8:39	2X101.D	IVM240102-01	GEL	BFB	10ML	1	N/A	1	w	AXH5	N/A	O	
1/15/2024	9:04	2X102.D	W2VM240115-01	VSTD0005	ICAL	5UL/5ML	1	N/A	2	w	AXH5	N/A	O	MIX[A]UVM231130-01B/UVM231009-09C/UVM231222-09 8
1/15/2024	9:30	2X103.D	W2VM240115-02	VSTD001	ICAL	5UL/5ML	1	N/A	3	w	AXH5	N/A	O	MIX[A]UVM231130-02B/UVM231009-10C/UVM231222-10 1
1/15/2024	9:55	2X104.D	W2VM240115-03	VSTD002	ICAL	5UL/5ML	1	N/A	4	w	AXH5	N/A	O	MIX[A]UVM231130-03B/UVM231009-11C/UVM231222-11 2
1/15/2024	10:21	2X105.D	W2VM240115-04	VSTD005	ICAL	5UL/5ML	1	N/A	5	w	AXH5	N/A	O	MIX[A]UVM231130-04B/UVM231009-13C/UVM231222-12 10PPM GASES 3
1/15/2024	10:46	2X106.D	W2VM240115-05	VSTD010	ICAL	5UL/5ML	1	N/A	6	w	AXH5	N/A	O	MIX[A]UVM231130-05B/UVM231009-13C/UVM231222-13 4
1/15/2024	11:12	2X107.D	W2VM240115-06	VSTD020	ICAL	5UL/5ML	1	N/A	7	w	AXH5	N/A	O	MIX[A]UVM231130-06B/UVM231009-14C/UVM231222-14 5
1/15/2024	11:37	2X108.D	W2VM240115-07	VSTD050	ICAL	5UL/5ML	1	N/A	8	w	AXH5	N/A	O	MIX[A]UVM231130-07B/UVM231009-15C/UVM231222-15 6
1/15/2024	12:03	2X109.D	W2VM240115-08	VSTD080	ICAL	4UL/5ML	1	N/A	9	w	AXH5	N/A	O	MIX[A]UVM231130-08B/UVM231009-16C/UVM231222-16 9
1/15/2024	12:28	2X110.D	W2VM240115-09	VSTD100	ICAL	5UL/5ML	1	N/A	10	w	AXH5	N/A	O	MIX[A]UVM231130-08B/UVM231009-16C/UVM231222-16 7
1/15/2024	12:54	2X111.D	BLANK	BLANK	BLANK	5ML	1	N/A	11	w	AXH5	N/A	X	RINSE
1/15/2024	13:20	2X112.D	W2VM240115-10	ICV050	ICV	5UL/5ML	1	N/A	12	w	AXH5	N/A	O	MIX[A]UVM230907-10D/UVM231013-10E/UVM231130-09D
1/15/2024	13:46	2X113.D	W2VM240115-11	VSTD005	ICAL	5UL/5ML	1	N/A	13	w	AXH5	N/A	O	MIX[B]UVM231214-01A/UVM231222-01
1/15/2024	14:13	2X114.D	W2VM240115-12	VSTD010	ICAL	5UL/5ML	1	N/A	14	w	AXH5	N/A	O	MIX[B]UVM231214-02A/UVM231222-02
1/15/2024	14:40	2X115.D	W2VM240115-13	VSTD025	ICAL	5UL/5ML	1	N/A	15	w	AXH5	N/A	O	MIX[B]UVM231214-03A/UVM231222-03
1/15/2024	15:05	2X116.D	W2VM240115-14	VSTD050	ICAL	5UL/5ML	1	N/A	16	w	AXH5	N/A	O	MIX[B]UVM231214-04A/UVM231222-04
1/15/2024	15:31	2X117.D	W2VM240115-15	VSTD100	ICAL	5UL/5ML	1	N/A	17	w	AXH5	N/A	O	MIX[B]UVM231214-05A/UVM231222-05
1/15/2024	15:56	2X118.D	W2VM240115-16	VSTD250	ICAL	5UL/5ML	1	N/A	18	w	AXH5	N/A	O	MIX[B]UVM231214-06A/UVM231222-06
1/15/2024	16:22	2X119.D	W2VM240115-17	VSTD300	ICAL	3UL/5ML	1	N/A	19	w	AXH5	N/A	O	MIX[B]UVM231214-07A/UVM231222-07
1/15/2024	16:47	2X120.D	W2VM240115-18	VSTD500	ICAL	5UL/5ML	1	N/A	20	w	AXH5	N/A	O	MIX[B]UVM231214-07A/UVM231222-07
1/15/2024	17:13	2X121.D	BLANK	BLANK	BLANK	5ML	1	N/A	21	w	AXH5	N/A	X	RINSE
1/15/2024	17:38	2X122.D	W2VM240115-19	ICV250	ICV	5UL/5ML	1	N/A	22	w	AXH5	N/A	O	MIX[B]UVM231214-08C/UVM231222-08B
1/15/2024	18:04	2X123.D	BLANK	BLANK	BLANK	5ML	1	N/A	23	w	AXH5	N/A	X	RINSE

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA2

AH 02/06/2024

Date: 2/5/2024 Method 8260C/D 624.1 Operator: AXH5

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 50

Daily Instrument Readings: LA 02/06/2024

Multiplier Voltage: 1271

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 1/15/2024

(See pg. 001-002 for ICAL Std. Ids)

CI test lot #

Sequence Number: 020524V2

Daily Standard / Volume Added for Purge (ul)

Solution ID#		Blk/ Smpl	CCV	MS/ LCS	BFB
CCV[A]	W2VM240205-04			5	
IS	IVM240108-02	5	5	5	
SS	IVM231220-01	5	5	5	
LCS[A]	W2VM240205-04			5	
BFB	IVM240201-05				1
CCV[B]	W2VM240205-03			5	
LCS[B]	W2VM240205-03			5	

Purge Amount

5ML	Water Purge Vol:
5.0G	Soil Purge Wt.
N/A	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
X	Heated Purge

Analysis Date	Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	CI test (Y/N)	Acceptable(O/X)	Comments
2/5/2024	8:19	2A101.D	IVM240201-05	GEL	BFB	10ML	1	N/A	1	w	AXH5	N/A	O	
2/5/2024	8:44	2A102.D	W2VM240205-01	GEL	CCV	5ML	1	N/A	2	w	AXH5	N/A	X	MIX[A]UVM230914-07E/UVM230907-07J/UVM230203-17F
2/5/2024	9:09	2A103.D	W2VM240205-02	GEL	LCS	5ML	1	N/A	3	w	AXH5	N/A	X	MIX[A]UVM231130-09F/UVM231222-18C/UVM230907-10G
2/5/2024	9:35	2A104.D	W2VM240205-03	GEL	CCV/LCS	5ML	1	N/A	4	w	AXH5	N/A	O	MIX[B]UVM231214-08D/UVM240119-08A
2/5/2024	10:00	2A105.D	W2VM240205-04	GEL	CCV/LCS	5ML	1	N/A	5	w	AXH5	N/A	O	MIX[A]UVM231130-09F/UVM230907-10G/UVM231222-18D
2/5/2024	10:26	2A106.D	BLANK	BLANK	BLANK	5ML	1	N/A	6	w	AXH5	N/A	X	
2/5/2024	10:51	2A107.D	BLANK	BLANK	BLANK	5ML	1	N/A	7	w	AXH5	N/A	O	
2/5/2024	11:52	2A108.D	653342002	LLNL	2563549	5ML	1	PH7	8	w	AXH5	N	O	
2/5/2024	12:17	2A109.D	653458001	FRNP	2563549	5ML	1	PH7	9	w	AXH5	N	O	
2/5/2024	12:43	2A110.D	653458003	FRNP	2563549	5ML	1	PH7	10	w	AXH5	N	O	
2/5/2024	13:09	2A111.D	653458005	FRNP	2563549	5ML	1	PH7	11	w	AXH5	N	O	
2/5/2024	13:34	2A112.D	653458007	FRNP	2563549	5ML	1	PH7	12	w	AXH5	N	O	
2/5/2024	14:00	2A113.D	653458009	FRNP	2563549	5ML	1	PH7	13	w	AXH5	N	O	
2/5/2024	14:25	2A114.D	653458011	FRNP	2563549	5ML	1	PH7	14	w	AXH5	N	O	
2/5/2024	14:51	2A115.D	653458013	FRNP	2563549	5ML	1	PH7	15	w	AXH5	N	O	
2/5/2024	15:17	2A116.D	653458014	FRNP	2563549	5ML	1	PH7	16	w	AXH5	N	O	
2/5/2024	15:42	2A117.D	653458015	FRNP	2563549	5ML	1	PH7	17	w	AXH5	N	O	
2/5/2024	16:08	2A118.D	BLANK	BLANK	BLANK	5ML	1	N/A	18	w	AXH5	N	X	RINSE
2/5/2024	16:33	2A119.D	652948001	TNSL	2563673	5.1G	1	N/A	19	s	AXH5	N/A	O	SOIL
2/5/2024	16:59	2A120.D	652948002	TNSL	2563673	5.8G	1	N/A	20	s	AXH5	N/A	O	SOIL
2/5/2024	17:24	2A121.D	1205640743	FRNP	2563549	5ML	1	PH7	21	w	AXH5	N	O	MIX[A]UVM230907-10G/UVM231222-18D 653458007PS
2/5/2024	17:51	2A122.D	1205640744	FRNP	2563549	5ML	1	PH7	22	w	AXH5	N	O	MIX[A]UVM230907-10G/UVM231222-18D 653458007PSD
2/5/2024	18:18	2A123.D	1205640998	TNSL	2563673	5G	1	N/A	23	s	AXH5	N/A	O	SOIL SURROGATE FAILUREC CONFIRMED.MIX[A]UVM230907-10G/UVM231222-18D 652948001PS
2/5/2024	18:44	2A124.D	1205640999	TNSL	2563673	5.6G	1	N/A	24	s	AXH5	N/A	O	SOIL MIX[A]UVM230907-10G/UVM231222-18D 652948001PSD
2/5/2024	19:10	2A125.D	BLANK	BLANK	BLANK	5ML	1	N/A	25	w	AXH5	N/A	X	RINSE

FID Diesel Range Organics Analysis

Case Narrative

Diesel Range Organics
Technical Case Narrative
Triad National Security, LLC
SDG #: 2024-366
Work Order #: 652948

Product: **Analysis of Diesel Range Organics by Flame Ionization Detector**
Analytical Method: SW846 3541/8015D
Analytical Procedure: GL-OA-E-003 REV# 33
Analytical Batch: 2559265

Preparation Method: SW846 3541
Preparation Procedure: GL-OA-E-066 REV# 9
Preparation Batch: 2559264

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
652948001	RLUOB-23-289602
652948002	RLUOB-23-289603
1205632858	Method Blank (MB)
1205632859	Laboratory Control Sample (LCS)
1205632860	652948001(RLUOB-23-289602) Matrix Spike (MS)
1205632861	652948001(RLUOB-23-289602) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Quality Control (QC) Information

Surrogate Recoveries
Samples (See Below) failed to meet surrogate recovery acceptance criteria due to dilution.

Sample	Analyte	Value
1205632860 (RLUOB-23-289602MS)	o-Terphenyl	0* (37%-123%)
1205632861 (RLUOB-23-289602MSD)	o-Terphenyl	0* (37%-123%)
652948001 (RLUOB-23-289602)	o-Terphenyl	0* (37%-123%)

Matrix Spike (MS/MSD) Recovery Statement
The MS and MSD (See Below) did not meet spike recovery acceptance limits due to dilution and high level of target analytes in the parent sample.

Sample	Analyte	Value
1205632860 (RLUOB-23-289602MS)	Diesel Range Organics	423* (28%-129%)

1205632861 (RLUOB-23-289602MSD)	Diesel Range Organics	574* (28%-129%)
	Motor Oil	177* (44%-137%)

Technical Information

Sample Dilutions
Sample 652948002 (RLUOB-23-289603) was diluted prior to analysis due to thick and oily matrix of the extract. Samples 1205632860 (RLUOB-23-289602MS), 1205632861 (RLUOB-23-289602MSD) and 652948001 (RLUOB-23-289602) were diluted due to the presence of over-range target analytes.

Miscellaneous Information

Manual Integrations
Samples 1205632859 (LCS) and 652948002 (RLUOB-23-289603) required manual integration to correctly position the baseline as set in the calibration standard injections.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report
for

TNSL001 Triad National Security, LLC (620266)

Client SDG: 2024-366 GEL Work Order: 652948

The Qualifiers in this report are defined as follows:

* A quality control analyte recovery is outside of specified acceptance criteria
** Analyte is a surrogate compound
J Value is estimated
U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

DL Indicates that sample is diluted.
RA Indicates that sample is re-analyzed without re-extraction.
RE Indicates that sample is re-extracted.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: Jimin Cao **Name: Jimin Cao**

Date: 05 FEB 2024 **Title: Data Validator**

Sample Data Summary

FID Diesel Range Organics
Certificate of Analysis
Sample Summary

SDG Number:	**2024-366**	**Date Collected:**	**01/24/2024 09:36**	**Matrix:**	**SO**
Lab Sample ID:	**652948001**	**Date Received:**	**01/26/2024 09:40**	**%Moisture:**	**7.4**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289602**	**Method:**	**SW846 3541/8015D**	**SOP Ref:**	**GL-OA-E-003**
Batch ID:	**2559265**	**Inst:**	**FIDC.I**	**Dilution:**	**50**
Run Date:	**02/01/2024 11:34**	**Analyst:**	**RXC1**	**Inj. Vol:**	**1 uL**
Prep Date:	**01/29/2024 07:58**	**Aliquot:**	**30.69 g**	**Final Volume:**	**1 mL**
Data File:	**020124DROMO\FCB0106.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	Motor Oil		581	mg/kg	114	352
68334-30-5	Diesel Range Organics		3640	mg/kg	114	352

Surrogate/Tracer recovery	Result	Nominal		Recovery%		Acceptable Limits
o-Terphenyl	0.000	0.704	mg/kg	0	*	(37%-123%)

FID Diesel Range Organics
Certificate of Analysis
Sample Summary

SDG Number:	**2024-366**	**Date Collected:**	**01/24/2024 09:40**	**Matrix:**	**SO**
Lab Sample ID:	**652948002**	**Date Received:**	**01/26/2024 09:40**	**%Moisture:**	**6.4**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289603**	**Method:**	**SW846 3541/8015D**	**SOP Ref:**	**GL-OA-E-003**
Batch ID:	**2559265**	**Inst:**	**FIDC.I**	**Dilution:**	**10**
Run Date:	**02/01/2024 13:29**	**Analyst:**	**RXC1**	**Inj. Vol:**	**1 uL**
Prep Date:	**01/29/2024 07:58**	**Aliquot:**	**30.46 g**	**Final Volume:**	**1 mL**
Data File:	**020124DROMO\FCB0109.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	Motor Oil	J	38.9	mg/kg	22.8	70.1
68334-30-5	Diesel Range Organics		163	mg/kg	22.8	70.1

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
o-Terphenyl	0.582	0.701	mg/kg	83	(37%-123%)

Quality Control Summary

FID Diesel Range Organics

Surrogate Recovery Report

SDG Number: 2024-366

Matrix Type: SOLID

Sample ID	Client ID	OTP %REC	
1205632858	MB for batch 2559264	72	
1205632859	LCS for batch 2559264	107	
652948001	RLUOB-23-289602	0 *	D
1205632860	RLUOB-23-289602MS	0 *	D
1205632861	RLUOB-23-289602MSD	0 *	D
652948002	RLUOB-23-289603	83	D

Surrogate	Acceptance Limits
OTP = o-Terphenyl	(37%-123%)

* Recovery outside Acceptance Limits
# Column to be used to flag recovery values
D Sample Diluted

FID Diesel Range Organics

Quality Control Summary
Spike Recovery Report

SDG Number: **2024-366**
Sample Type: **Laboratory Control Sample**
Client ID: **LCS for batch 2559264**
Matrix: **SOIL**
Lab Sample ID: **1205632859**
Instrument: **FIDC.I**
Analysis Date: **01/31/2024 01:59**
Dilution: **1**
Analyst: **RXC1**
Prep Batch ID: **2559264**
Inj. Vol: **1 uL**
Batch ID: **2559265**

CAS No.		Parmname	Amount Added mg/kg	Sample Conc. mg/kg	Spike Conc. mg/kg	Recovery %	Acceptance Limits
68334-30-5	LCS	Diesel Range Organics	65.7	0.0	61.2	93	51-125
	LCS	Motor Oil	65.7	0.0	66.4	101	59-132

FID Diesel Range Organics

Quality Control Summary
Spike Recovery Report

SDG Number: **2024-366**
Client ID: **RLUOB-23-289602MS**
Lab Sample ID: **1205632860**
Instrument: **FIDC.I**
Analyst: **RXC1**
Inj. Vol: **1 uL**

Sample Type: **Matrix Spike**
Matrix: **SO**
%Moisture: **7.4**
Analysis Date: **02/01/2024 12:12**
Prep Batch ID: **2559264**
Batch ID: **2559265**
Dilution: **50**

CAS No.		Parmname	Amount Added mg/kg	Sample Conc. mg/kg	Spike Conc. mg/kg	Recovery %	Acceptance Limits
68334-30-5	MS	Diesel Range Organics	71.9	3640	3940	423	28-129
	MS	Motor Oil	71.9	581	633	72	44-137

FID Diesel Range Organics

Quality Control Summary
Spike Recovery Report

SDG Number: **2024-366**
Client ID: **RLUOB-23-289602MSD**
Lab Sample ID: **1205632861**
Instrument: **FIDC.I**
Analyst: **RXC1**
Inj. Vol: **1 uL**

Sample Type: **Matrix Spike Duplicate**
Matrix: **SO**
%Moisture: **7.4**
Analysis Date: **02/01/2024 12:50**
Dilution: **50**
Prep Batch ID: **2559264**
Batch ID: **2559265**

CAS No.		Parmname	Amount Added mg/kg	Sample Conc. mg/kg	Spike Conc. mg/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
68334-30-5	MSD	Diesel Range Organics	71.8	3640	4050	574	28-129	3	0-72
	MSD	Motor Oil	71.8	581	708	177	44-137	11	0-30

Method Blank Summary

SDG Number:	**2024-366**	**Client:**	**TNSL001**	**Matrix:**	**SOIL**
Client ID:	**MB for batch 2559264**	**Instrument ID:**	**FIDC.I**	**Data File:**	**013024DROMO\FCa3027.D**
Lab Sample ID:	**1205632858**	**Prep Date:**	**01/29/2024 07:58**	**Analyzed:**	**01/31/24 01:21**
Column:	**DB-5ms**				

This method blank applies to the following samples and quality control samples:

	Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01	LCS for batch 2559264	1205632859	013024DROMO\FCa3028.D	01/31/24	0159
02	RLUOB-23-289602	652948001	020124DROMO\FCB0106.D	02/01/24	1134
03	RLUOB-23-289602MS	1205632860	020124DROMO\FCB0107.D	02/01/24	1212
04	RLUOB-23-289602MSD	1205632861	020124DROMO\FCB0108.D	02/01/24	1250
05	RLUOB-23-289603	652948002	020124DROMO\FCB0109.D	02/01/24	1329

Sample Data

FID Diesel Range Organics
Certificate of Analysis
Sample Summary

SDG Number:	**2024-366**	**Date Collected:**	**01/24/2024 09:36**	**Matrix:**	**SO**
Lab Sample ID:	**652948001**	**Date Received:**	**01/26/2024 09:40**	**%Moisture:**	**7.4**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289602**	**Method:**	**SW846 3541/8015D**	**SOP Ref:**	**GL-OA-E-003**
Batch ID:	**2559265**	**Inst:**	**FIDC.I**	**Dilution:**	**50**
Run Date:	**02/01/2024 11:34**	**Analyst:**	**RXC1**	**Inj. Vol:**	**1 uL**
Prep Date:	**01/29/2024 07:58**	**Aliquot:**	**30.69 g**	**Final Volume:**	**1 mL**
Data File:	**020124DROMO\FCB0106.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	Motor Oil		581	mg/kg	114	352
68334-30-5	Diesel Range Organics		3640	mg/kg	114	352

Surrogate/Tracer recovery	Result	Nominal		Recovery%		Acceptable Limits
o-Terphenyl	0.000	0.704	mg/kg	0	*	(37%-123%)

02/02/2024

JC
02/04/2024

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MSDCHEM\1\Data\020124DROMO\
Data File : FCB0106.D
Signal(s) : FID1A.ch
Acq On : 01 Feb 2024 11:34
Operator : RXC1 InstName : FIDC
Sample : |652948001|2559265|50|DROQ|1|TNSL|||
Misc : |FIDD415D_S|SOIL|RLUOB-23-289602|MIX[A,D]||
ALS Vial : 6 Sample Multiplier: 50

Integration File: autoint1.e
Quant Time: Feb 01 13:10:09 2024
Quant Method : D:\MSDCHEM\1\Data\020124DROMO\FIDCNW_013024.m
Quant Title : DRO TPH SubList :
QLast Update : Tue Jan 30 17:44:16 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : DB-5MS
Signal Info : 30m x 250um x 0.25um

Compound	Exp	R.T.	Delta	Response	Conc	Units	
System Monitoring Compounds							
4) SD o-Terphenyl	14.232	14.221	-0.011	17912946	N.D.	mg/L	d

Compound	Amount	Range	Recovery
4) o-Terphenyl	20.000	No Limits	0%

Target Compounds						
1) HA Diesel Range Organics	Range	8.061 - 14.705	2616808355	2066.955	mg/L	m
2) HA Motor Oil	Range	14.705 - 22.641	514575207	330.472	mg/L	

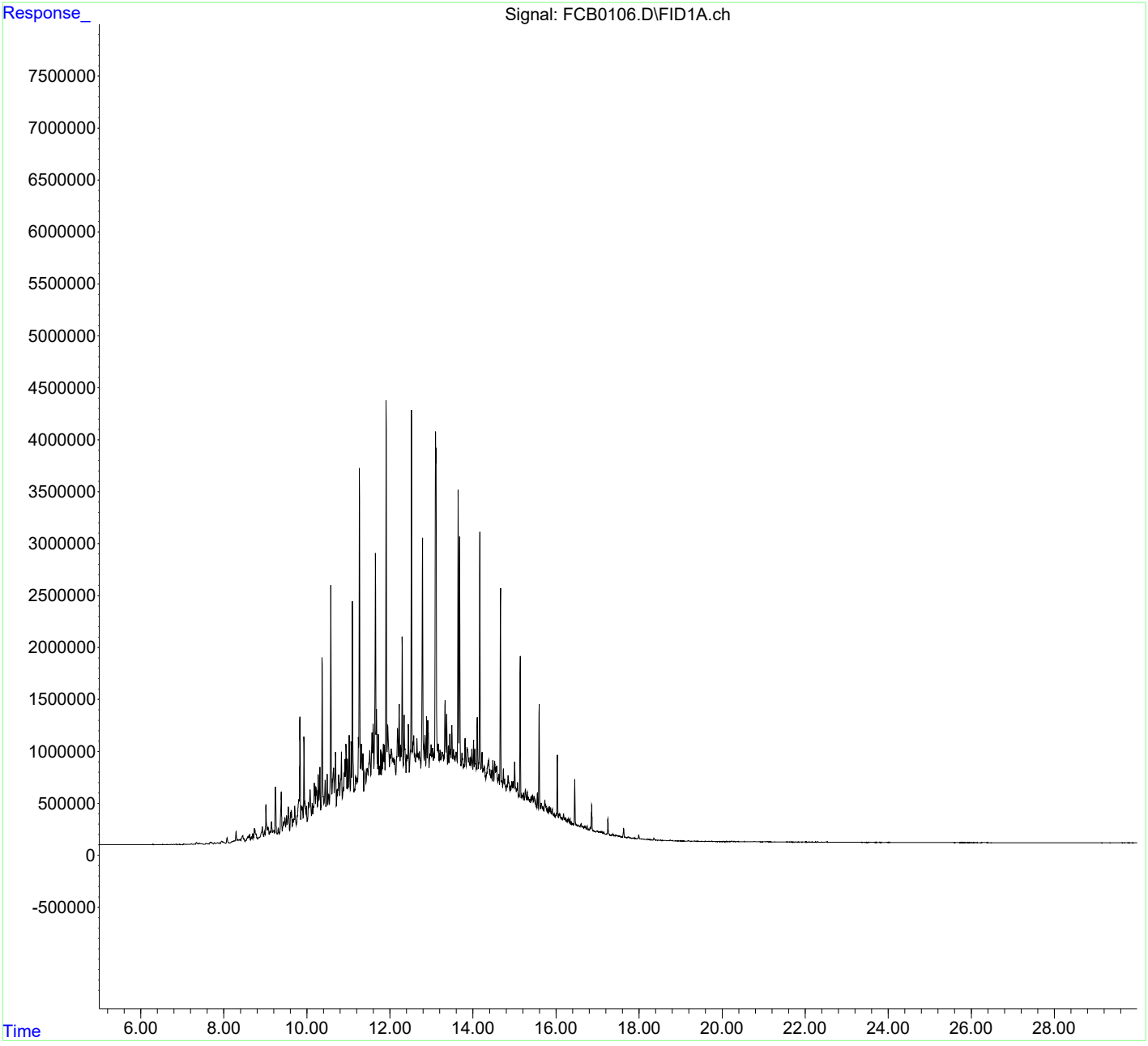
(f)=RT Delta > 1/2 Window (A) = Over the calibration range (d) = deleted (m)=manual int.

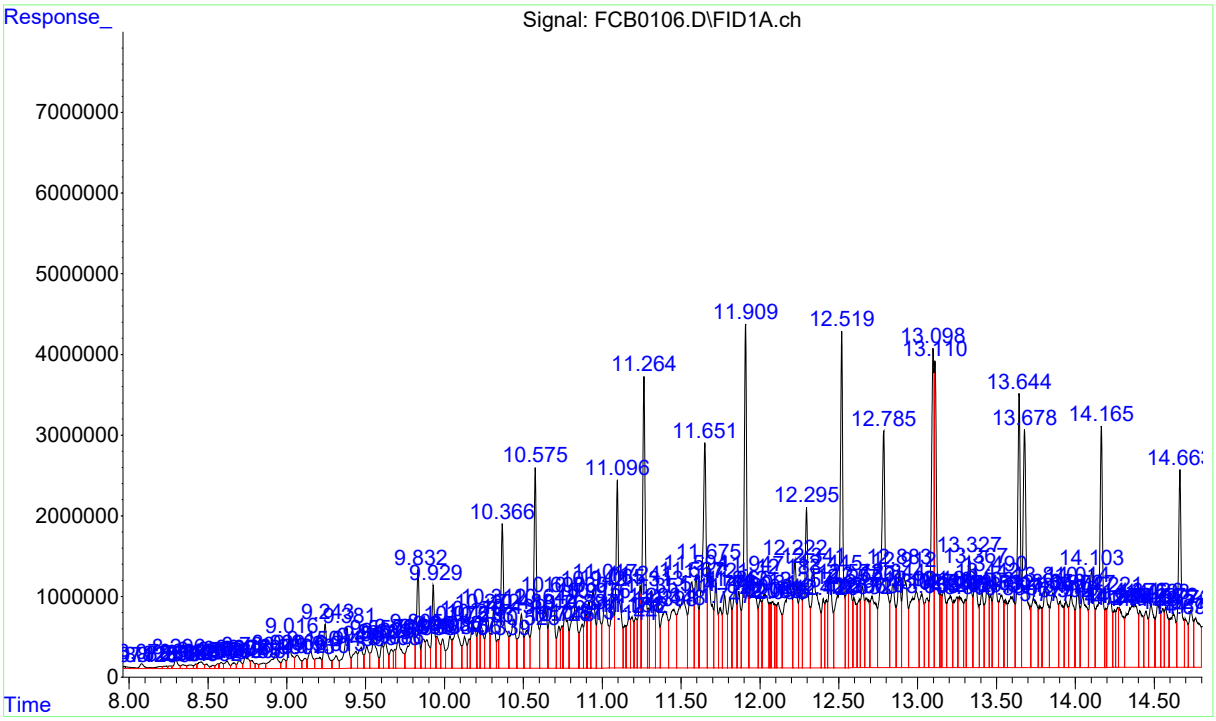
Quantitation Report
GEL Laboratories, LLC

DaData Path : D:\MSDCHEM\1\Data\020124DROMO\
DaData File : FCB0106.D
Signal(s) : FID1A.ch
Acq On : 01 Feb 2024 11:34
Operator : RXC1 InstName : FIDC
Sample : |652948001|2559265|50|DROQ|1|TNSL|||
Misc : |FIDD415D_S|SOIL|RLUOB-23-289602|MIX[A,D]||
ALS Vial : 6 Sample Multiplier: 50

Integration File: autoint1.e
Quant Time: Feb 01 13:10:09 2024
Quant Method : D:\MSDCHEM\1\Data\020124DROMO\FIDCNW_013024.m
Quant Title : DRO TPH SubList :
QLast Update : Tue Jan 30 17:44:16 2024
Response via : Initial Calibration
Integrator: ChemStation

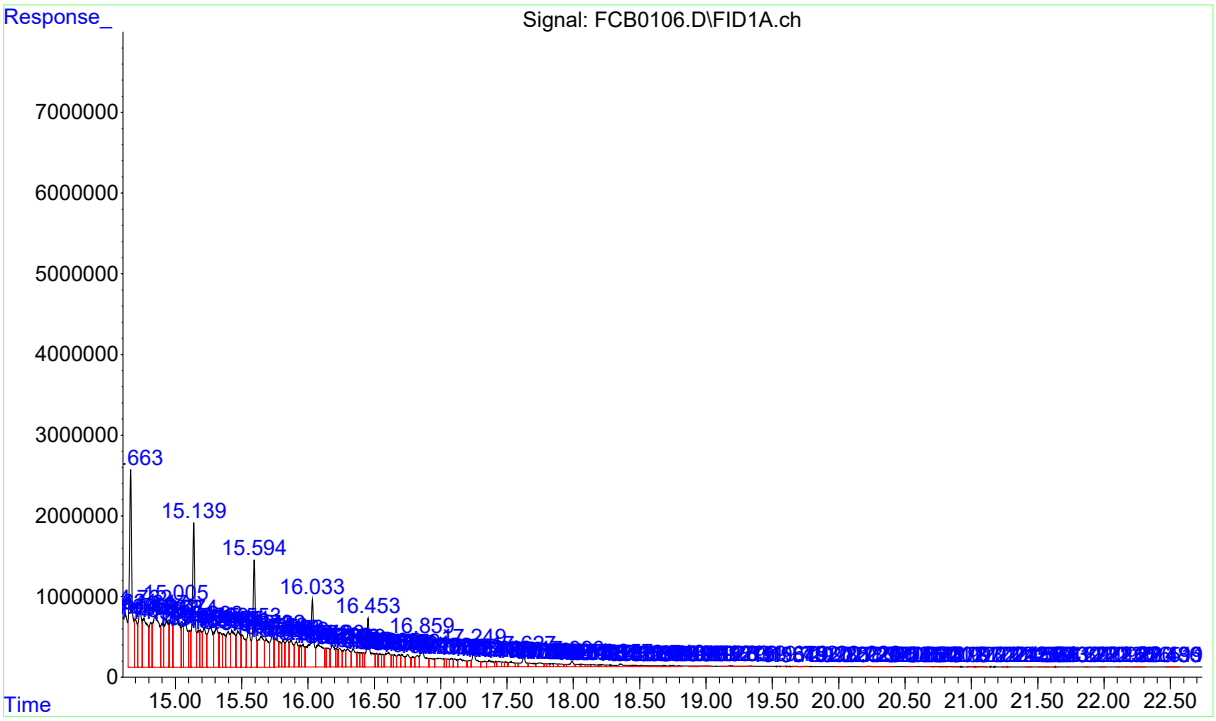
Volume Inj. : 1 ul
Signal Phase : DB-5MS
Signal Info : 30m x 250um x 0.25um





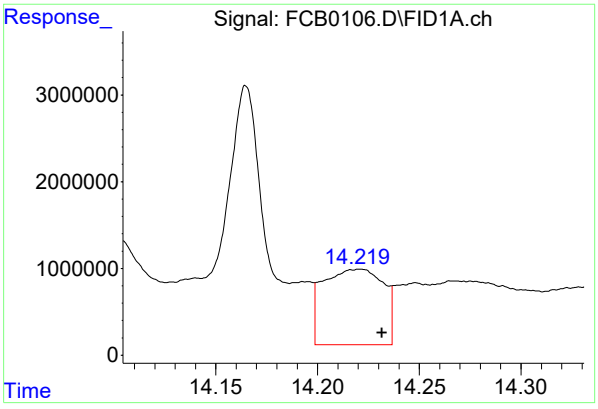
Compound: Diesel Range Organics

RT Range:	8.061: 14.705
Total TPH Resp:	2616808355
Total SMC/ISTD Resp:	0
Final Resp:	2616808355

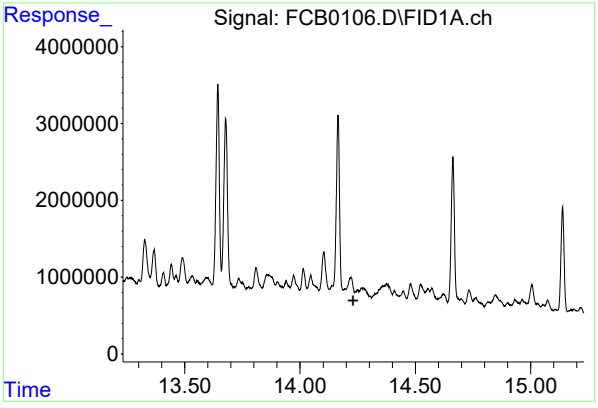


Compound: Motor Oil

RT Range: 14.705: 22.641
Total TPH Resp: 514575207
Total SMC/ISTD Resp: 0
Final Resp: 514575207



#4 BEFORE analyst DELETION
o-Terphenyl PPS
R.T.: 14.221 min
Delta R.T.: -0.011 min
Response: 17912946
Conc: 507.96 mg/L



#4 AFTER analyst DELETION
o-Terphenyl
R.T.: 0.000 min
Exp R.T. : 14.232 min
Response: 0
Conc: N.D. DELETED

FID Diesel Range Organics
Certificate of Analysis
Sample Summary

SDG Number:	**2024-366**	**Date Collected:**	**01/24/2024 09:40**	**Matrix:**	**SO**
Lab Sample ID:	**652948002**	**Date Received:**	**01/26/2024 09:40**	**%Moisture:**	**6.4**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289603**	**Method:**	**SW846 3541/8015D**	**SOP Ref:**	**GL-OA-E-003**
Batch ID:	**2559265**	**Inst:**	**FIDC.I**	**Dilution:**	**10**
Run Date:	**02/01/2024 13:29**	**Analyst:**	**RXC1**	**Inj. Vol:**	**1 uL**
Prep Date:	**01/29/2024 07:58**	**Aliquot:**	**30.46 g**	**Final Volume:**	**1 mL**
Data File:	**020124DROMO\FCB0109.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	Motor Oil	J	38.9	mg/kg	22.8	70.1
68334-30-5	Diesel Range Organics		163	mg/kg	22.8	70.1

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
o-Terphenyl	0.582	0.701	mg/kg	83	(37%-123%)

02/02/2024

JC
02/04/2024

Quantitation Report
GEL Laboratories, LLC

Data Path : D:\MSDCHEM\1\Data\020124DROMO\
Data File : FCB0109.D
Signal(s) : FID1A.ch
Acq On : 01 Feb 2024 13:29
Operator : RXC1 InstName : FIDC
Sample : |652948002|2559265|10|DROQ|1|TNSL|||
Misc : |FIDD415D_S|SOIL|RLUOB-23-289603|MIX[A,D]||
ALS Vial : 9 Sample Multiplier: 10

Integration File: autoint1.e
Quant Time: Feb 01 14:18:12 2024
Quant Method : D:\MSDCHEM\1\Data\020124DROMO\FIDCNW_013024.m
Quant Title : DRO TPH SubList :
QLast Update : Tue Jan 30 17:44:16 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : DB-5MS
Signal Info : 30m x 250um x 0.25um

Compound	Exp	R.T.	Delta	Response	Conc	Units
System Monitoring Compounds						
4) SD o-Terphenyl		14.232	14.222 -0.010	2918632	16.553	mg/L m

Compound	Amount	Range	Recovery
4) o-Terphenyl	20.000	No Limits	83%

Target Compounds					
1) HA Diesel Range Organics	Range	8.061 - 14.705	588148684	464.565	mg/L m
2) HA Motor Oil	Range	14.705 - 22.641	172947159	111.071	mg/L

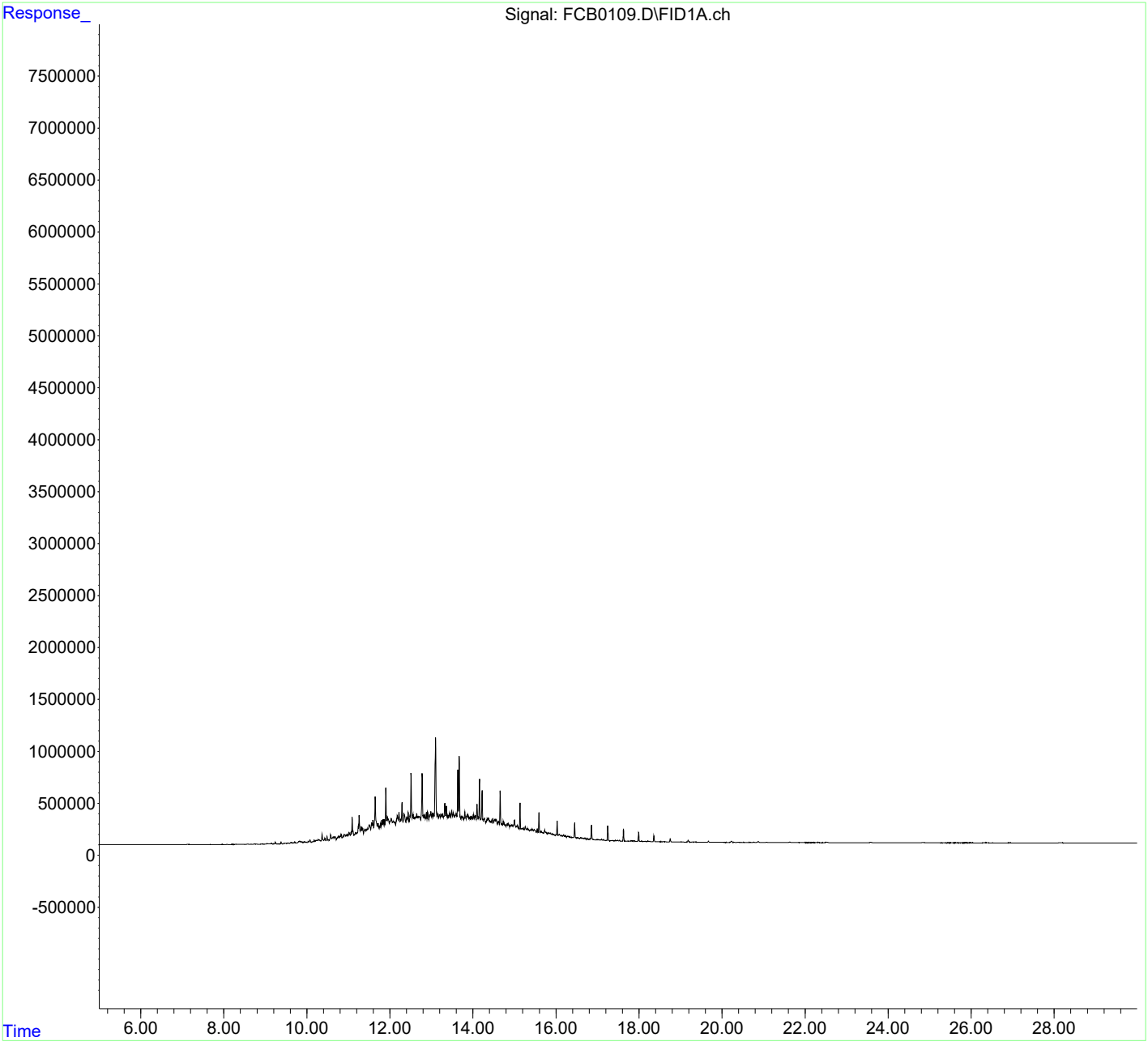
(f)=RT Delta > 1/2 Window (A) = Over the calibration range (d) = deleted (m)=manual int.

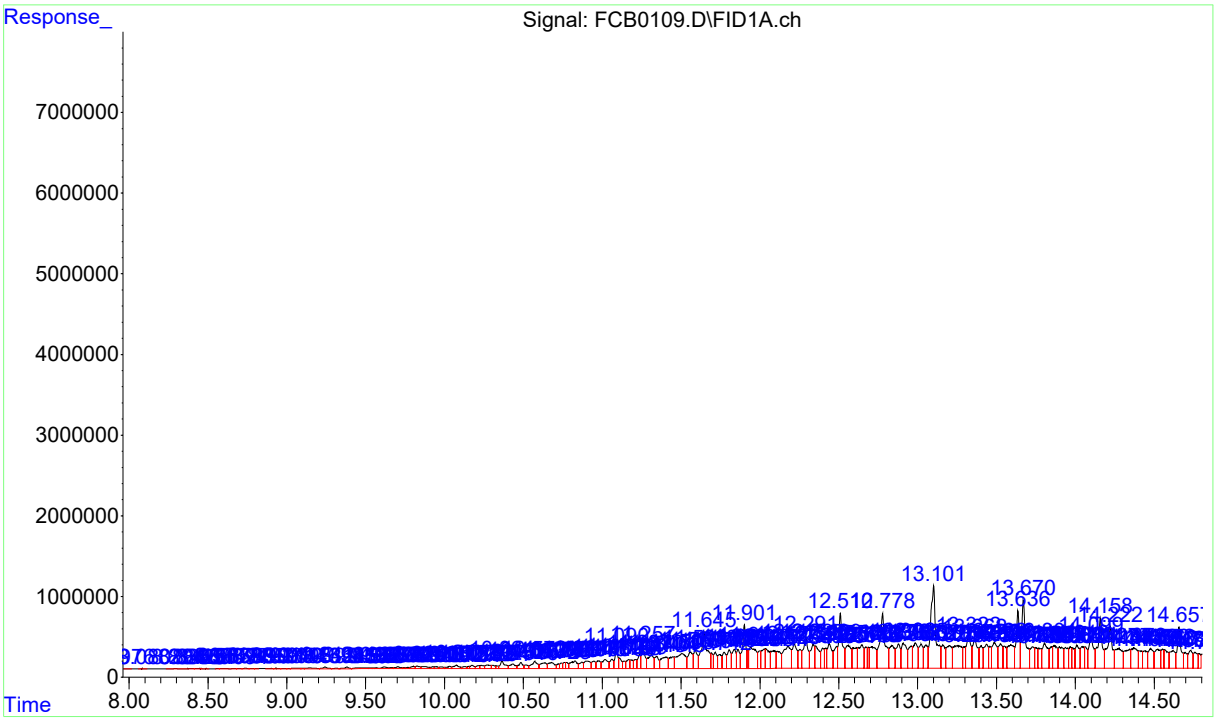
Quantitation Report
GEL Laboratories, LLC

DaData Path : D:\MSDCHEM\1\Data\020124DROMO\
DaData File : FCB0109.D
Signal(s) : FID1A.ch
Acq On : 01 Feb 2024 13:29
Operator : RXC1 InstName : FIDC
Sample : |652948002|2559265|10|DROQ|1|TNSL|||
Misc : |FIDD415D_S|SOIL|RLUOB-23-289603|MIX[A,D]||
ALS Vial : 9 Sample Multiplier: 10

Integration File: autoint1.e
Quant Time: Feb 01 14:18:12 2024
Quant Method : D:\MSDCHEM\1\Data\020124DROMO\FIDCNW_013024.m
Quant Title : DRO TPH SubList :
QLast Update : Tue Jan 30 17:44:16 2024
Response via : Initial Calibration
Integrator: ChemStation

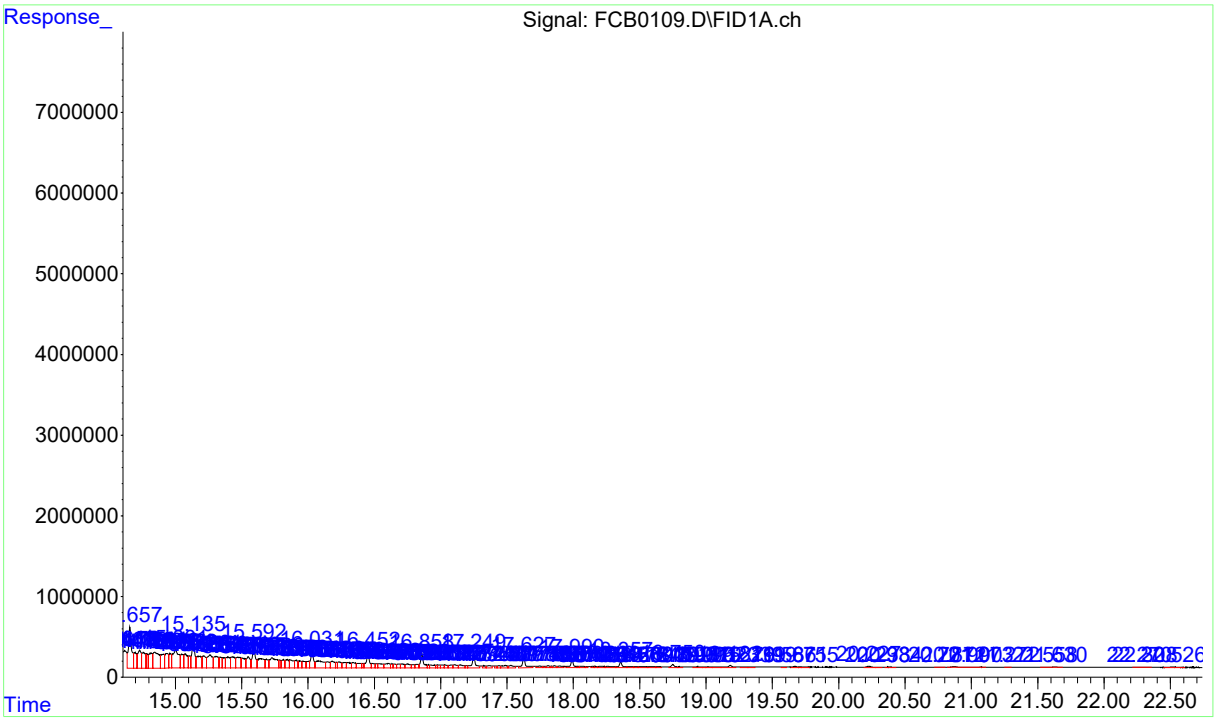
Volume Inj. : 1 ul
Signal Phase : DB-5MS
Signal Info : 30m x 250um x 0.25um





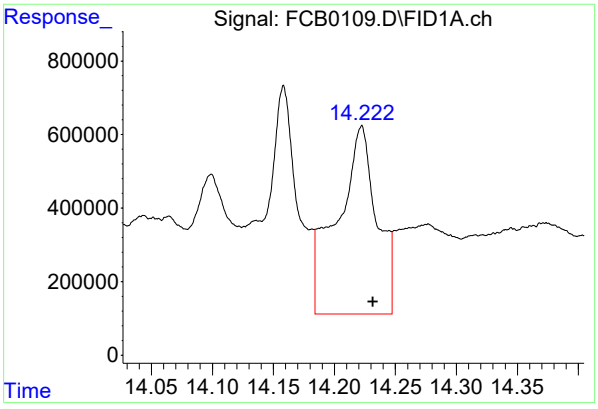
Compound: Diesel Range Organics

RT Range:	8.061: 14.705
Total TPH Resp:	591067316
Total SMC/ISTD Resp:	2918632
Final Resp:	588148684

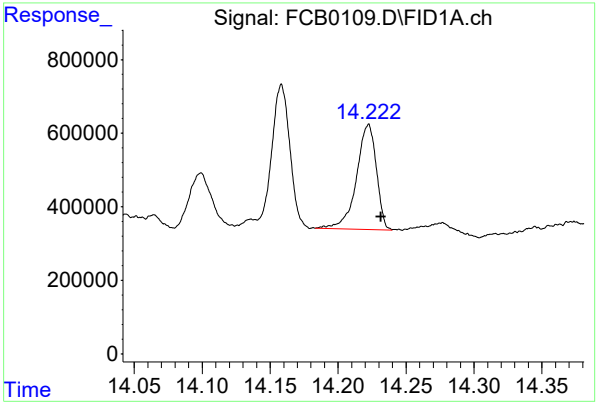


Compound: Motor Oil

RT Range: 14.705: 22.641
Total TPH Resp: 172947159
Total SMC/ISTD Resp: 0
Final Resp: 172947159



#4 BEFORE analyst INTEGRATION
o-Terphenyl
R.T.: 14.222 min
Delta R.T.: -0.009 min
Response: 11495173
Conc: 65.19 mg/L



#4 AFTER analyst INTEGRATION
o-Terphenyl AB
R.T.: 14.222 min
Delta R.T.: -0.009 min
Response: 2918632
Conc: 16.55 mg/L MANUALLY INTEGRATED

Miscellaneous

Prep Logbook

Automated Soxhlet Extraction

Batch ID: **2559264** **Verified by:** _____
Analyst: **Carlethea Bing**
Method: **SW846 3541**

Lab SOP: **GL-OA-E-066 REV# 9**
Instrument: **Semi-Volatiles Manual**

Sample ID	Prep Date	Aliquot (g)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1205632858 MB	29-JAN-2024 07:58:00	30.31	1	0.03299
1205632859 LCS	29-JAN-2024 07:58:00	30.44	1	0.03285
652948001	29-JAN-2024 07:58:00	30.69	1	0.03258
1205632860 MS (652948001)	29-JAN-2024 07:58:00	30.04	1	0.03329
1205632861 MSD (652948001)	29-JAN-2024 07:58:00	30.06	1	0.03327
652948002	29-JAN-2024 07:58:00	30.46	1	0.03283

Type	Sample Id	Description	Serial Number	Spike Amt	Units
LCS	1205632859	AZDRO SPIKE LCS STD,4000ug/ml	WE240119-06	1	mL
MS	1205632860	AZDRO SPIKE LCS STD,4000ug/ml	WE240119-06	1	mL
MSD	1205632861	AZDRO SPIKE LCS STD,4000ug/ml	WE240119-06	1	mL
SURR	All	20 ppm surrogate	WE231216-07	1	mL
REGNT	All	Sand pure 40-100 mesh	4066681-A	30	g
REGNT	All	Methylene Chloride	4071777	120	mL

Comments:

Soxtherm Unit:: 6
Logbook Reviewer: JG
Final Solvent: Methylene Chloride
Start Time:: 08:04
End Time:: 09:09
Verified by: JG

ORGANIC RUN LOG - INSTRUMENT ID#FIDC

GEL ORGANIC RUN LOG INSTRUMENT BATCH: 013024DROMO

DATE: 30-Jan-24 METHOD: See Data OPERATOR: RXC1 Sequence Number: 013024DROMO

Solvent Lot: 230706

Injection Volume: 1.0 uL

Calibration Information:
Initial Calibration Dates: See Calibration History
Initial Calibration Std ID's: See Associated Data and Run Log
FID Analysis of GEL SOP: GL-OA-E-003

Analysis Date Time	Data File	Lab Sample ID	Client	Batch #	Dil. Factor	AS Slot #	Analyst	Comme
01/30/2024 09:16	FCa3001.D	WFI240119-98	IBLK	BLANK	1	1	RXC1	use
01/30/2024 09:54	FCa3002.D	WFI240115-99	FID_RT	RTCHECK	1	2	RXC1	use
01/30/2024 10:33	FCa3003.D	WFI240119-30	DRO-MO-1	ICAL	1	3	RXC1	use
01/30/2024 11:11	FCa3004.D	WFI240119-31	DRO-MO-2	ICAL	1	4	RXC1	use
01/30/2024 11:49	FCa3005.D	WFI240119-32	DRO-MO-3	ICAL	1	5	RXC1	use
01/30/2024 12:28	FCa3006.D	WFI240119-33	DRO-MO-4	ICAL	1	6	RXC1	use
01/30/2024 13:06	FCa3007.D	WFI240119-34	DRO-MO-5	ICAL	1	7	RXC1	use
01/30/2024 13:44	FCa3008.D	WFI240115-36	RO-MO-IC	ICV	1	8	RXC1	pass
01/30/2024 14:22	FCa3009.D	WFI240115-99	FID_RT	RTCHECK	1	2	RXC1	use
01/30/2024 15:00	FCa3010.D	UFI231109-20	KER-1	ICAL	1	9	RXC1	use
01/30/2024 15:34	FCa3011.D	UFI231109-21	KER-2	ICAL	1	10	RXC1	use
01/30/2024 16:06	FCa3012.D	UFI231109-22	KER-3	ICAL	1	11	RXC1	use
01/30/2024 16:40	FCa3013.D	UFI231109-23	KER-4	ICAL	1	12	RXC1	use
01/30/2024 17:12	FCa3014.D	UFI231109-24	KER-5	ICAL	1	13	RXC1	use
01/30/2024 17:45	FCa3015.D	UFI231003-25.8	KER-ICV	ICV	1	14	RXC1	pass 20%
01/30/2024 18:18	FCa3016.D	WFI240115-99	FID_RT	RTCHECK	1	2	RXC1	use
01/30/2024 18:58	FCa3017.D	WFI240119-98	IBLK	BLANK	1	15	RXC1	use
01/30/2024 19:37	FCa3018.D	1205631455	MB	2558414	1	16	RXC1	use
01/30/2024 20:15	FCa3019.D	1205631456	LCS	2558414	1	17	RXC1	use
01/30/2024 20:53	FCa3020.D	652569001	LLNL	2558414	1	18	RXC1	use
01/30/2024 21:31	FCa3021.D	1205631457	MS	2558414	1	19	RXC1	use
01/30/2024 22:10	FCa3022.D	1205631458	MSD	2558414	1	20	RXC1	use
01/30/2024 22:48	FCa3023.D	652569002	LLNL	2558414	1	21	RXC1	use
01/30/2024 23:26	FCa3024.D	652569003	LLNL	2558414	1	22	RXC1	use
01/31/2024 00:05	FCa3025.D	WFI240115-36	RO-MO-CC	CCV	1	23	RXC1	pass
01/31/2024 00:43	FCa3026.D	WFI240119-98	IBLK	BLANK	1	24	RXC1	use
01/31/2024 01:21	FCa3027.D	1205632858	MB	2559265	1	25	RXC1	use
01/31/2024 01:59	FCa3028.D	1205632859	LCS	2559265	1	26	RXC1	use
01/31/2024 02:38	FCa3029.D	652948001	TNSL	2559265	10	27	RXC1	RR @ 50x
01/31/2024 03:16	FCa3030.D	1205632860	MS	2559265	10	28	RXC1	RR @ 50x
01/31/2024 03:54	FCa3031.D	1205632861	MSD	2559265	10	29	RXC1	RR @ 50x
01/31/2024 04:32	FCa3032.D	652948002	TNSL	2559265	10	30	RXC1	RR

GEL ORGANIC RUN LOG INSTRUMENT BATCH: 013024DROMO

01/31/2024 05:11	FCa3033.D	WFI240115-36	RO-MO-CC	CCV	1	31	RXC1	pass
01/31/2024 05:49	FCa3034.D	WFI240119-98	IBLK	BLANK	1	32	RXC1	use

ORGANIC RUN LOG - INSTRUMENT ID#FIDC

GEL ORGANIC RUN LOG INSTRUMENT BATCH: 020124DROMO

DATE: 1-Feb-24 METHOD: See Data OPERATOR: RXC1 Sequence Number: 020124DROMO

Solvent Lot: 230706

Injection Volume: 1.0 uL

Calibration Information:
Initial Calibration Dates: See Calibration History
Initial Calibration Std ID's: See Associated Data and Run Log
FID Analysis of GEL SOP: GL-OA-E-003

Analysis Date	Time	Data File	Lab Sample ID	Client	Batch #	Dil. Factor	AS Slot #	Analyst	Comme
02/01/2024	08:23	FCB0101.D	WFI240119-98	IBLK	BLANK	1	1	RXC1	USE
02/01/2024	09:01	FCB0102.D	WFI240115-99	FID_RT	RTCHECK	1	2	RXC1	USE
02/01/2024	09:39	FCB0103.D	WFI240115-36	RO-MO-CC	CCV	1	3	RXC1	PASS
02/01/2024	10:17	FCB0104.D	UFI231003-26.2	DRO-CCV	CCV	1	4	RXC1	PASS
02/01/2024	10:56	FCB0105.D	WFI240119-98	IBLK	BLANK	1	5	RXC1	USE
02/01/2024	11:34	FCB0106.D	652948001	TNSL	2559265	50	6	RXC1	USE
02/01/2024	12:12	FCB0107.D	1205632860	MS	2559265	50	7	RXC1	USE
02/01/2024	12:50	FCB0108.D	1205632861	MSD	2559265	50	8	RXC1	USE
02/01/2024	13:29	FCB0109.D	652948002	TNSL	2559265	10	9	RXC1	USE
02/01/2024	14:07	FCB0110.D	WFI240115-36	RO-MO-CC	CCV	1	10	RXC1	PASS
02/01/2024	14:45	FCB0111.D	WFI240119-98	IBLK	BLANK	1	11	RXC1	USE
02/01/2024	15:23	FCB0112.D	1205635008	MB	2560409	1	12	RXC1	USE
02/01/2024	16:01	FCB0113.D	1205635009	LCS	2560409	1	13	RXC1	USE
02/01/2024	16:39	FCB0114.D	1205636142	LCSD	2560409	1	14	RXC1	USE
02/01/2024	17:17	FCB0115.D	653001001	LLNL	2560409	1	15	RXC1	USE
02/01/2024	17:55	FCB0116.D	653001002	LLNL	2560409	1	16	RXC1	USE
02/01/2024	18:33	FCB0117.D	653001003	LLNL	2560409	1	17	RXC1	USE
02/01/2024	19:11	FCB0118.D	WFI240115-36	RO-MO-CC	CCV	1	18	RXC1	PASS
02/01/2024	19:49	FCB0119.D	UFI231003-26.2	DRO-CCV	CCV	1	19	RXC1	PASS
02/01/2024	20:27	FCB0120.D	WFI240119-98	IBLK	BLANK	1	20	RXC1	USE
02/01/2024	21:04	FCB0121.D	1205635013	MB	2560411	1	21	RXC1	USE
02/01/2024	21:42	FCB0122.D	1205635014	LCS	2560411	1	22	RXC1	USE
02/01/2024	22:20	FCB0123.D	653066001	N3BL	2560411	1	23	RXC1	USE
02/01/2024	22:58	FCB0124.D	1205635015	MS	2560411	1	24	RXC1	USE
02/01/2024	23:36	FCB0125.D	1205635016	MSD	2560411	1	25	RXC1	USE
02/02/2024	00:13	FCB0126.D	UFI231003-26.2	DRO-CCV	CCV	1	26	RXC1	PASS
02/02/2024	00:51	FCB0127.D	WFI240119-98	IBLK	BLANK	1	27	RXC1	USE

GC Volatiles (GRO) Analysis

Case Narrative

GC Volatiles (GRO)
Technical Case Narrative
Triad National Security, LLC
SDG #: 2024-366
Work Order #: 652948

Product: **Volatile Total Petroleum Hydrocarbons by Flame Ionization Detector**
Analytical Method: SW846 8015D
Analytical Procedure: GL-OA-E-004 REV# 32
Analytical Batch: 2561825

Preparation Method: SW846 5035A
Preparation Procedure: GL-OA-E-004 REV# 32
Preparation Batch: 2561824

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
652948001	RLUOB-23-289602
652948002	RLUOB-23-289603
1205637524	Laboratory Control Sample (LCS)
1205637525	Method Blank (MB)
1205637526	652948001(RLUOB-23-289602) Post Spike (PS)
1205637527	652948001(RLUOB-23-289602) Post Spike Duplicate (PSD)
1205637530	High Blank (HB)

The samples in this SDG were analyzed on a "dry weight" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Sample Dilutions
Samples were analyzed using a methanol extraction procedure at 1:50 dilution. The samples were analyzed at the lowest dilution possible when using a methanol extraction procedure.

Miscellaneous Information

Additional Comments
Sample 652948001 (RLUOB-23-289602) in this SDG had peaks that were identified within the GRO Range that do not match the typical GRO pattern.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report
for

TNSL001 Triad National Security, LLC (620266)

Client SDG: 2024-366 GEL Work Order: 652948

The Qualifiers in this report are defined as follows:

* A quality control analyte recovery is outside of specified acceptance criteria
** Analyte is a surrogate compound
U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

DL Indicates that sample is diluted.
RA Indicates that sample is re-analyzed without re-extraction.
RE Indicates that sample is re-extracted.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: Erin Haubert **Name: Erin Haubert**

Date: 02 FEB 2024 **Title: Data Validator**

Sample Data Summary

GC Volatiles (GRO)
Certificate of Analysis
Sample Summary

SDG Number:	**2024-366**	**Date Collected:**	**01/24/2024 09:36**	**Matrix:**	**SO**
Lab Sample ID:	**652948001**	**Date Received:**	**01/26/2024 09:40**	**%Moisture:**	**7.4**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289602**	**Method:**	**SW846 8015D**	**SOP Ref:**	**GL-OA-E-004**
Batch ID:	**2561825**	**Inst:**	**VOC4A.I**	**Dilution:**	**50**
Run Date:	**02/01/2024 12:13**	**Analyst:**	**JEB**	**Inj. Vol:**	**1 uL**
Prep Date:	**02/01/2024 09:07**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**0020124\4F409.D**	**Column:**	**DB-MTBE**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
8006-61-9	Gasoline Range Organics		18600	ug/kg	1800	10800

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	5280	50.0	ug/kg	98	(62%-127%)

GC Volatiles (GRO)
Certificate of Analysis
Sample Summary

SDG Number:	**2024-366**	**Date Collected:**	**01/24/2024 09:40**	**Matrix:**	**SO**
Lab Sample ID:	**652948002**	**Date Received:**	**01/26/2024 09:40**	**%Moisture:**	**6.4**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289603**	**Method:**	**SW846 8015D**	**SOP Ref:**	**GL-OA-E-004**
Batch ID:	**2561825**	**Inst:**	**VOC4A.I**	**Dilution:**	**50**
Run Date:	**02/01/2024 12:38**	**Analyst:**	**JEB**	**Inj. Vol:**	**1 uL**
Prep Date:	**02/01/2024 09:08**	**Aliquot:**	**5.1 g**	**Final Volume:**	**10 mL**
Data File:	**0020124\4F410.D**	**Column:**	**DB-MTBE**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
8006-61-9	Gasoline Range Organics	U	1750	ug/kg	1750	10500

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	5490	50.0	ug/kg	105	(62%-127%)

Quality Control Summary

GC Volatiles (GRO)

Surrogate Recovery Report

SDG Number: 2024-366

Matrix Type: SOLID

Sample ID	Client ID	BFB %REC	
1205637524	LCS for batch 2561824	97	
1205637525	MB for batch 2561824	99	
1205637530	HB for batch 2561824	103	D
652948001	RLUOB-23-289602	98	D
652948002	RLUOB-23-289603	105	D
1205637526	RLUOB-23-289602PS	93	D
1205637527	RLUOB-23-289602PSD	94	D

Surrogate		Acceptance Limits
BFB	= Bromofluorobenzene	(62%-127%)

* Recovery outside Acceptance Limits
# Column to be used to flag recovery values
D Sample Diluted

GC Volatiles (GRO)

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-366
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 2561824
Matrix: SOIL
Lab Sample ID: 1205637524
Instrument: VOC4A.I
Analysis Date: 02/01/2024 09:42
Dilution: 1
Analyst: JEB
Prep Batch ID: 2561824
Inj. Vol: 1 uL
Batch ID: 2561825

CAS No.		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
8006-61-9	LCS	Gasoline Range Organics	500	0.0	517	103	77-124

GC Volatiles (GRO)

Quality Control Summary
Spike Recovery Report

SDG Number: **2024-366**
Client ID: **RLUOB-23-289602PS**
Lab Sample ID: **1205637526**
Instrument: **VOC4A.I**
Analyst: **JEB**
Inj. Vol: **1 uL**

Sample Type: **Post Spike**
Matrix: **SO**
%Moisture: **7.4**
Analysis Date: **02/01/2024 15:33**
Prep Batch ID: **2561824**
Batch ID: **2561825**
Dilution: **50**

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L	Spike Conc. ug/L	Recovery %	Acceptance Limits
8006-61-9	PS	Gasoline Range Organics	500	172	644	94	72-122

GC Volatiles (GRO)

Quality Control Summary
Spike Recovery Report

SDG Number: 2024-366
Client ID: RLUOB-23-289602PSD
Lab Sample ID: 1205637527
Instrument: VOC4A.I
Analyst: JEB
Inj. Vol: 1 uL

Sample Type: Post Spike Duplicate
Matrix: SO
%Moisture: 7.4
Analysis Date: 02/01/2024 15:58
Dilution: 50
Prep Batch ID: 2561824
Batch ID: 2561825

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L	Spike Conc. ug/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
8006-61-9	PSD	Gasoline Range Organics	500	172	688	103	72-122	7	0-32

Method Blank Summary

SDG Number:	**2024-366**	**Client:**	**TNSL001**	**Matrix:**	**SOIL**
Client ID:	**MB for batch 2561824**	**Instrument ID:**	**VOC4A.I**	**Data File:**	**0020124\4F404LL.D**
Lab Sample ID:	**1205637525**	**Prep Date:**	**02/01/2024 07:04**	**Analyzed:**	**02/01/24 10:07**
Column:	**DB-MTBE**				

This method blank applies to the following samples and quality control samples:

	Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01	LCS for batch 2561824	1205637524	0020124\4F403LL.D	02/01/24	0942
02	HB for batch 2561824	1205637530	0020124\4F405.D	02/01/24	1032
03	RLUOB-23-289602	652948001	0020124\4F409.D	02/01/24	1213
04	RLUOB-23-289603	652948002	0020124\4F410.D	02/01/24	1238
05	RLUOB-23-289602PS	1205637526	0020124\4F417.D	02/01/24	1533
06	RLUOB-23-289602PSD	1205637527	0020124\4F418.D	02/01/24	1558

Sample Data

GC Volatiles (GRO)
Certificate of Analysis
Sample Summary

SDG Number:	**2024-366**	**Date Collected:**	**01/24/2024 09:36**	**Matrix:**	**SO**
Lab Sample ID:	**652948001**	**Date Received:**	**01/26/2024 09:40**	**%Moisture:**	**7.4**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289602**	**Method:**	**SW846 8015D**	**SOP Ref:**	**GL-OA-E-004**
Batch ID:	**2561825**	**Inst:**	**VOC4A.I**	**Dilution:**	**50**
Run Date:	**02/01/2024 12:13**	**Analyst:**	**JEB**	**Inj. Vol:**	**1 uL**
Prep Date:	**02/01/2024 09:07**	**Aliquot:**	**5 g**	**Final Volume:**	**10 mL**
Data File:	**0020124\4F409.D**	**Column:**	**DB-MTBE**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
8006-61-9	Gasoline Range Organics		18600	ug/kg	1800	10800

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	5280	50.0	ug/kg	98	(62%-127%)

JEB 02/02/2024

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\0020124\
Data File : 4F409.D
Signal(s) : FID1A.CH
Acq On : 01 Feb 2024 12:13
Operator : JEB InstName : VOC4A
Sample : |652948001|2561825|50|GROF|1|VOC8015D_L|
Misc : TNSL 100UL N/A SOIL 5.0G/10ML
ALS Vial : 9 Sample Multiplier: 1

GEL 02/02/2024

Integration File: events.e
Quant Time: Feb 01 13:23:18 2024
Quant Method : C:\msdchem\1\data\0020124\VOC8015C110823.m
Quant Title : GRO TPH SubList :
QLast Update : Wed Nov 08 12:33:08 2023
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 5 mL Purge Volume
Signal Phase : Durabond 30m x 0.53 ID x 3 um
Signal Info : DB-MTBE

Compound	Exp	R.T.	Delta	Response	Conc	Units
System Monitoring Compounds						
4) S Bromofluorobenzene	10.217	10.215	-0.002	15847612	48.922	ug/L

Compound	Amount	Range	Recovery
4) Bromofluorobenzene	50.000	62 - 127	98%

Target Compounds						
3) H Gasoline Range Organics	Range	3.418 - 11.634		61843545	172.255	ug/L
SemiQuant Compounds - Not Calibrated on this Instrument						
1) 2-Methylpentane	3.471	0.000	-3.471	0	N.D.	ug/L
2) 1,2,4-Trimethylbenzene	11.620	0.000	-11.620	0	N.D.	ug/L

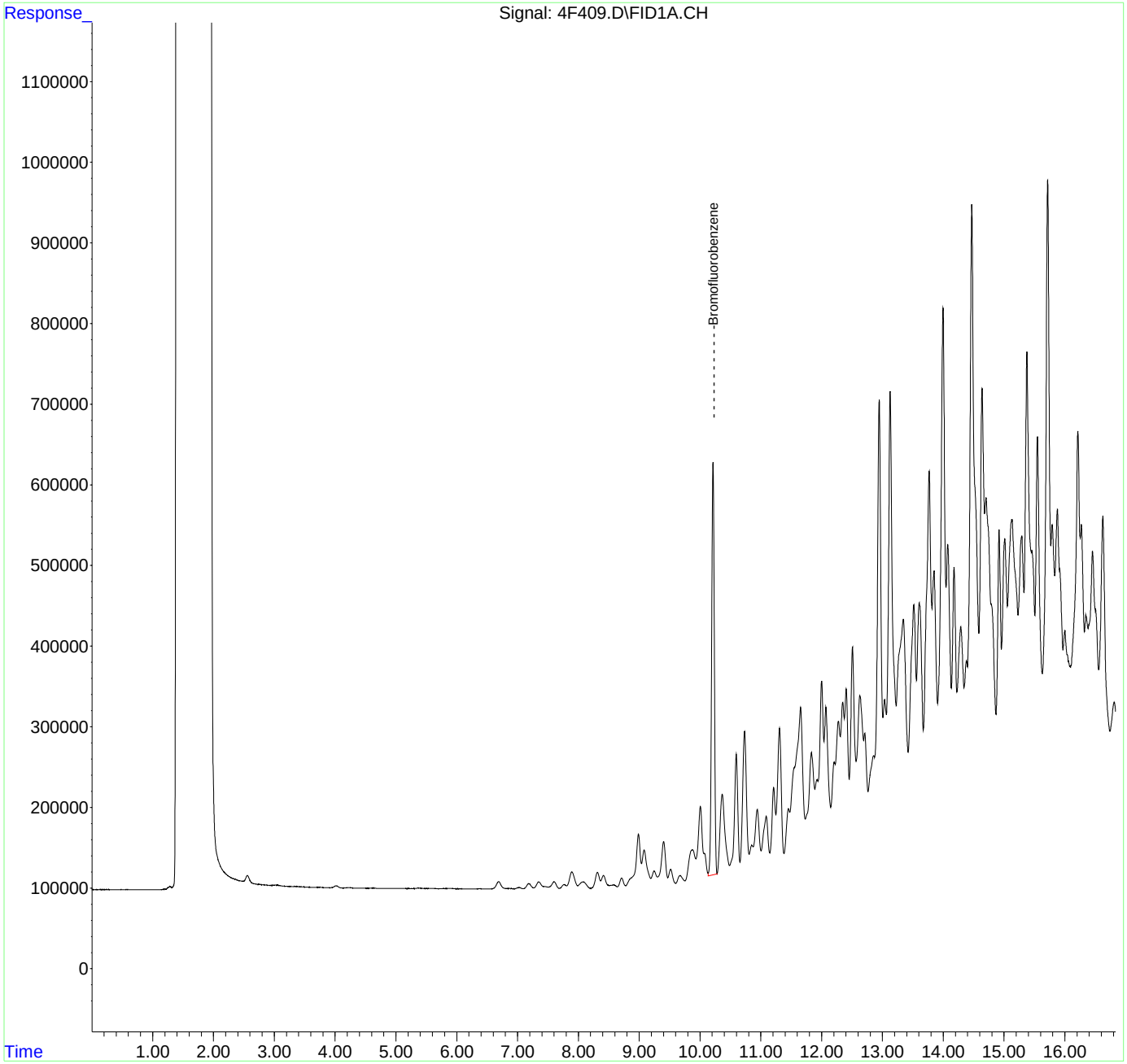
(f)=RT Delta > 1/2 Window (A) = Over the calibration range (d) = deleted (m)=manual int.

Quantitation Report
GEL Laboratories, LLC

DaData Path : C:\msdchem\1\data\0020124\
DaData File : 4F409.D
Signal(s) : FID1A.CH
Acq On : 01 Feb 2024 12:13
Operator : JEB InstName : VOC4A
Sample : |652948001|2561825|50|GROF|1|VOC8015D_L|
Misc : TNSL 100UL N/A SOIL 5.0G/10ML
ALS Vial : 9 Sample Multiplier: 1

Integration File: events.e
Quant Time: Feb 01 13:23:18 2024
Quant Method : C:\msdchem\1\data\0020124\VOC8015C110823.m
Quant Title : GRO TPH SubList :
QLast Update : Wed Nov 08 12:33:08 2023
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 5 mL Purge Volume
Signal Phase : Durabond 30m x 0.53 ID x 3 um
Signal Info : DB-MTBE



GC Volatiles (GRO)
Certificate of Analysis
Sample Summary

SDG Number:	**2024-366**	**Date Collected:**	**01/24/2024 09:40**	**Matrix:**	**SO**
Lab Sample ID:	**652948002**	**Date Received:**	**01/26/2024 09:40**	**%Moisture:**	**6.4**
		Client:	**TNSL001**	**Project:**	**TNSL00100**
Client ID:	**RLUOB-23-289603**	**Method:**	**SW846 8015D**	**SOP Ref:**	**GL-OA-E-004**
Batch ID:	**2561825**	**Inst:**	**VOC4A.I**	**Dilution:**	**50**
Run Date:	**02/01/2024 12:38**	**Analyst:**	**JEB**	**Inj. Vol:**	**1 uL**
Prep Date:	**02/01/2024 09:08**	**Aliquot:**	**5.1 g**	**Final Volume:**	**10 mL**
Data File:	**0020124\4F410.D**	**Column:**	**DB-MTBE**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
8006-61-9	Gasoline Range Organics	U	1750	ug/kg	1750	10500

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
Bromofluorobenzene	5490	50.0	ug/kg	105	(62%-127%)

JEB 02/02/2024

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\0020124\
Data File : 4F410.D
Signal(s) : FID1A.CH
Acq On : 01 Feb 2024 12:38
Operator : JEB InstName : VOC4A
Sample : |652948002|2561825|50|GROF|1|VOC8015D_L|
Misc : TNSL 100UL N/A SOIL 5.1G/10ML
ALS Vial : 10 Sample Multiplier: 1

GEL 02/02/2024

Integration File: events.e
Quant Time: Feb 01 13:23:47 2024
Quant Method : C:\msdchem\1\data\0020124\VOC8015C110823.m
Quant Title : GRO TPH SubList :
QLast Update : Wed Nov 08 12:33:08 2023
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 5 mL Purge Volume
Signal Phase : Durabond 30m x 0.53 ID x 3 um
Signal Info : DB-MTBE

Compound	Exp	R.T.	Delta	Response	Conc	Units
System Monitoring Compounds						
4) S Bromofluorobenzene	10.217	10.215	-0.002	16993745	52.460	ug/L

Compound	Amount	Range	Recovery
4) Bromofluorobenzene	50.000	62 - 127	105%

Target Compounds						
3) H Gasoline Range Organics	Range	3.418 - 11.634		5077105	<MDL	ug/L
SemiQuant Compounds - Not Calibrated on this Instrument						
1) 2-Methylpentane	3.471	0.000	-3.471	0	N.D.	ug/L
2) 1,2,4-Trimethylbenzene	11.620	0.000	-11.620	0	N.D.	ug/L

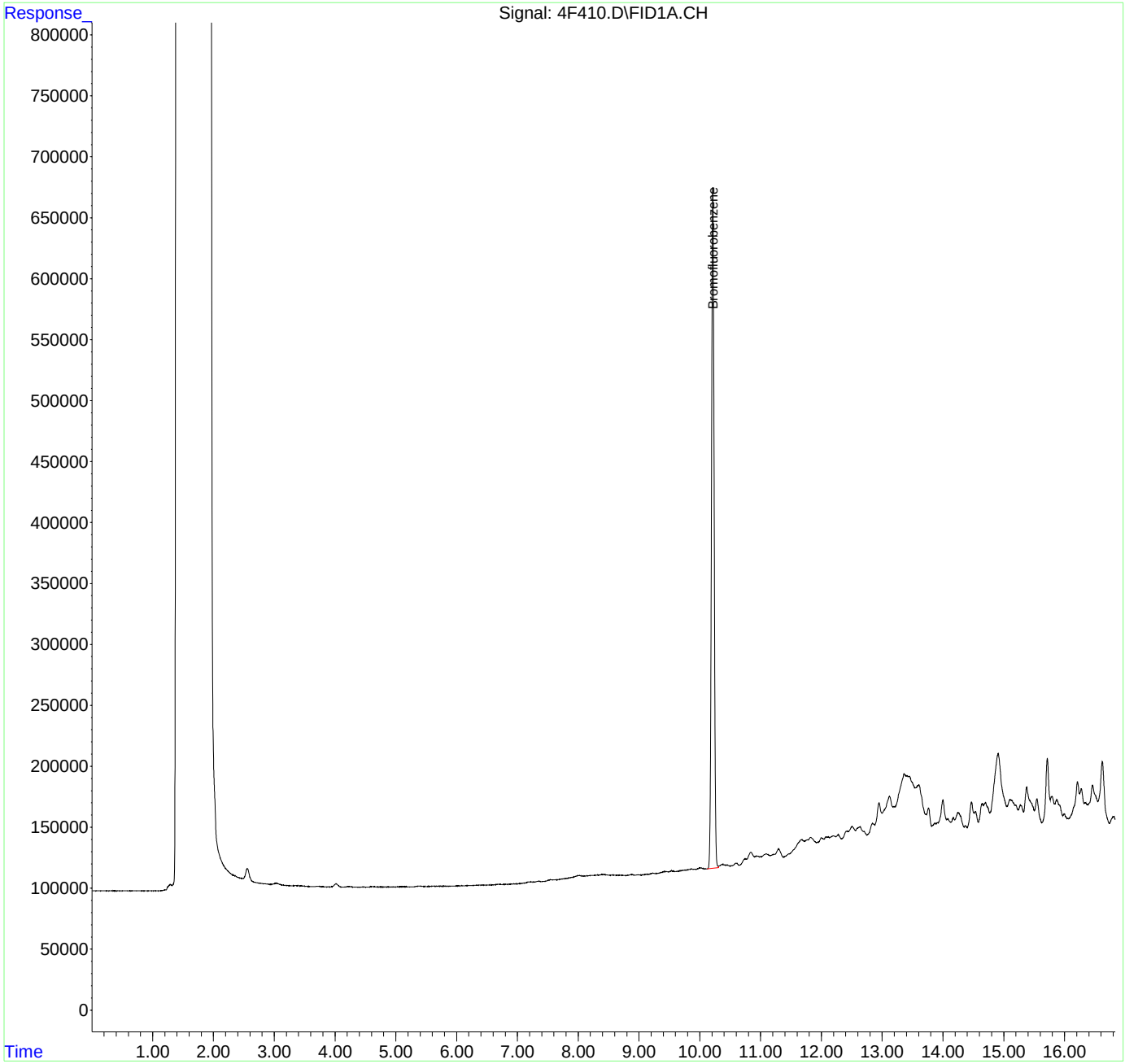
(f)=RT Delta > 1/2 Window (A) = Over the calibration range (d) = deleted (m)=manual int.

Quantitation Report
GEL Laboratories, LLC

DaData Path : C:\msdchem\1\data\0020124\
DaData File : 4F410.D
Signal(s) : FID1A.CH
Acq On : 01 Feb 2024 12:38
Operator : JEB InstName : VOC4A
Sample : |652948002|2561825|50|GROF|1|VOC8015D_L|
Misc : TNSL 100UL N/A SOIL 5.1G/10ML
ALS Vial : 10 Sample Multiplier: 1

Integration File: events.e
Quant Time: Feb 01 13:23:47 2024
Quant Method : C:\msdchem\1\data\0020124\VOC8015C110823.m
Quant Title : GRO TPH SubList :
QLast Update : Wed Nov 08 12:33:08 2023
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 5 mL Purge Volume
Signal Phase : Durabond 30m x 0.53 ID x 3 um
Signal Info : DB-MTBE



Miscellaneous

Prep Logbook

Volatile Total Petroleum Hydrocarbons by Flame Ionization Detector

Batch ID: **2561824**
Analyst: John Bell, Jr.
Method: SW846 5035A
Lab SOP: GL-OA-E-004 REV# 32
Instrument: VOAB-003 OH AUS Balance

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units

Sample ID	Prep Date	Matrix	Initial Weight (g)	Final Volume (mL)	Prep Factor (mL/g)
1205637524 LCS	01-FEB-2024 07:04:00	Soil	5	5	1
1205637525 MB	01-FEB-2024 07:04:00	Soil	5	5	1
652569001	01-FEB-2024 09:04:00	Soil	5	10	2
652569002	01-FEB-2024 09:05:00	Soil	5	10	2
652569003	01-FEB-2024 09:06:00	Soil	5.1	10	1.96078
652948001	01-FEB-2024 09:07:00	Soil	5	10	2
1205637526 PS (652948001)	01-FEB-2024 09:07:00	Soil	5	10	2
1205637527 PSD (652948001)	01-FEB-2024 09:07:00	Soil	5	10	2
652948002	01-FEB-2024 09:08:00	Soil	5.1	10	1.96078
653001001	01-FEB-2024 09:09:00	Soil	5.1	10	1.96078
653001002	01-FEB-2024 09:10:00	Soil	5.1	10	1.96078
653001003	01-FEB-2024 09:11:00	Soil	5	10	2
653066001	01-FEB-2024 09:12:00	Soil	5.2	10	1.92308
1205637528 PS (653066001)	01-FEB-2024 09:12:00	Soil	5.2	10	1.92308
1205637529 PSD (653066001)	01-FEB-2024 09:12:00	Soil	5.2	10	1.92308
653342001	01-FEB-2024 09:13:00	Soil	5	10	2
1205637530 HB	01-FEB-2024 09:14:00	Soil	5	10	2

Reagent/Solvent Lot ID	Description	Amount
UVG231116-01B	GC GRO Surrogate	.0025 mL

Comments:

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOC4A

JEB 11/08/2023

KP 11/09/2023

Date: 11/8/2023 Method 8015/TPHGx Operator: JEB

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 1 Daily Instrument Readings:

Multiplier Voltage: N/A

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 11/8/2023

(See pg. 1 for ICAL Std. Ids)

NaHSO4 lot # N/A

Cl test lot # N/A

Sequence Number: 110823VG

Daily Standard Solution ID#		Volume Added for Purge (ul) Blk/ Smpl	CCV	MS/ LCS	RT
CCV	N/A		5		
IS	N/A				
SS	UVG230829-01D	2.5	2.5	2.5	2.5
LCS/MS	N/A			5	
RTCHECK	WVG231108-01,05,10				5+5

Purge Amount	
5mL	Water Purge Vol:
N/A	Soil Purge Wt.
N/A	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
X	Heated Purge

Analysis Date Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable(O/X)	Comments
11/8/2023 8:07	4D301.D	WVG231108-01	RT	RTCHECK	5ML	1	N/A	1	w	JEB	N/A	O	UVM220529-01A/UVG230317-01B
11/8/2023 8:32	4D302.D	1205----------	GEL	BLK	5ML	1	N/A	2	w	JEB	N/A	X	
11/8/2023 8:58	4D303.D	WVG231108-02	VSTD100	ICAL	5ML	1	N/A	3	w	JEB	N/A	O	IVM231030-01
11/8/2023 9:23	4D304.D	WVG231108-03	VSTD250	ICAL	5ML	1	N/A	4	w	JEB	N/A	O	IVM231030-01
11/8/2023 9:48	4D305.D	WVG231108-04	VSTD500	ICAL	5ML	1	N/A	5	w	JEB	N/A	O	IVM231030-01
11/8/2023 10:14	4D306.D	WVG231108-05	RT	RTCHECK	5ML	1	N/A	6	w	JEB	N/A	O	UVM220529-01A/UVG230317-01B
11/8/2023 10:39	4D307.D	WVG231108-06	VSTD750	ICAL	5ML	1	N/A	7	w	JEB	N/A	O	IVM231030-01
11/8/2023 11:04	4D308.D	WVG231108-07	VSTD1000	ICAL	5ML	1	N/A	8	w	JEB	N/A	O	IVM231030-01
11/8/2023 11:29	4D309.D	WVG231108-08	VSTD2000	ICAL	5ML	1	N/A	9	w	JEB	N/A	O	IVM231030-01
11/8/2023 11:55	4D310.D	1205----------	GEL	BLK	5ML	1	N/A	10	w	JEB	N/A	X	
11/8/2023 12:20	4D311.D	WVG231108-09	VSTD500	ICV	5ML	1	N/A	11	w	JEB	N/A	O	IVM231030-02
11/8/2023 12:45	4D312.D	WVG231108-10	RT	RTCHECK	5ML	1	N/A	12	w	JEB	N/A	O	UVM220529-01A/UVG230317-01B

ORGANIC RUN LOG - INSTRUMENT ID#VOC4A

JEB 02/02/2024

Date: 2/1/2024 Method 8015/TPHGx Operator: JEB

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 1

Daily Instrument Readings:
Multiplier Voltage: N/A

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 11/8/2023

(See pg. 1 for ICAL Std. Ids)

NaHSO4 lot # N/A

Cl test lot # N/A

Sequence Number: 020224VG

Daily Standard Volume Added for Purge (ul)

	Solution ID#	Blk/ Smpl	CCV	MS/ LCS	RT
CCV	WVG240201-02,04,05		5		
IS	N/A				
SS	UVG231116-01A	2.5	2.5	2.5	2.5
LCS/MS	WVG240201-03			5	
RTCHECK	WVG240201-01				5+5

Purge Amount

5mL	Water Purge Vol:
N/A	Soil Purge Wt.
N/A	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
X	Heated Purge

Analysis Date Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable(O/X)	Comments
2/1/2024 8:52	4F401.D	WVG240201-01	GEL	RTCHECK	5ML	1	N/A	1	w	JEB	N/A	O	UVM220529-01A/UVG230317-01B
2/1/2024 9:17	4F402.D	WVG240201-02	GEL	CCV	5ML	1	N/A	2	w	JEB	N/A	O	IVM240108-02
2/1/2024 9:42	4F403.D	WVG240201-03	GEL	LCS	5G	1	N/A	3	s	JEB	N/A	O	IVM240108-02
2/1/2024 10:07	4F404.D	12056----------	GEL	BLK	5G	1	N/A	4	s	JEB	N/A	O	SOIL
2/1/2024 10:32	4F405.D	1205637530	GEL	2561825	100UL	50	N/A	5	s	JEB	N/A	O	SOIL
2/1/2024 10:57	4F406.D	652569001	LLNL	2561825	100UL	50	N/A	6	s	JEB	N/A	O	SOIL 5G/10ML
2/1/2024 11:22	4F407.D	652569002	LLNL	2561825	100UL	50	N/A	7	s	JEB	N/A	O	SOIL 5G/10ML
2/1/2024 11:47	4F408.D	652569003	LLNL	2561825	100UL	50	N/A	8	s	JEB	N/A	O	SOIL 5.1G/10ML
2/1/2024 12:13	4F409.D	652948001	TNSL	2561825	100UL	50	N/A	9	s	JEB	N/A	O	SOIL 5.0G/10ML
2/1/2024 12:38	4F410.D	652948002	TNSL	2561825	100UL	50	N/A	10	s	JEB	N/A	O	SOIL 5.1G/10ML
2/1/2024 13:03	4F411.D	653001001	LLNL	2561825	100UL	50	N/A	11	s	JEB	N/A	O	SOIL 5.1G/10ML
2/1/2024 13:28	4F412.D	653001002	LLNL	2561825	100UL	50	N/A	12	s	JEB	N/A	O	SOIL 5.1G/10ML
2/1/2024 13:53	4F413.D	653001003	LLNL	2561825	100UL	50	N/A	13	s	JEB	N/A	O	SOIL 5.0G/10ML
2/1/2024 14:18	4F414.D	653066001	N3BL	2561825	100UL	50	N/A	14	s	JEB	N/A	O	SOIL 5.2G/10ML
2/1/2024 14:43	4F415.D	WVG240201-04	GEL	CCV	5ML	1	N/A	15	w	JEB	N/A	O	IVM240108-02
2/1/2024 15:08	4F416.D	653342001	LLNL	2561825	100UL	50	N/A	16	s	JEB	N/A	O	SOIL 5.0G/10ML
2/1/2024 15:33	4F417.D	1205637526	TNSL	2561825	100UL	50	N/A	17	s	JEB	N/A	O	SOIL 5.0G/10ML 652948001MS
2/1/2024 15:58	4F418.D	1205637527	TNSL	2561825	100UL	50	N/A	18	s	JEB	N/A	O	SOIL 5.0G/10ML 652948001MSD
2/1/2024 16:23	4F419.D	1205637528	N3BL	2561825	100UL	50	N/A	19	s	JEB	N/A	O	SOIL 5.0G/10ML 653066001MS
2/1/2024 16:48	4F420.D	1205637529	N3BL	2561825	100UL	50	N/A	20	s	JEB	N/A	O	SOIL 5.0G/10ML 653066001MSD
2/1/2024 17:13	4F421.D	WVG240201-05	GEL	CCV	5ML	1	N/A	21	w	JEB	N/A	O	IVM240108-02

Appendix H

Compaction Testing Results

Soils / Aggregates

Report Date: November 07, 2023

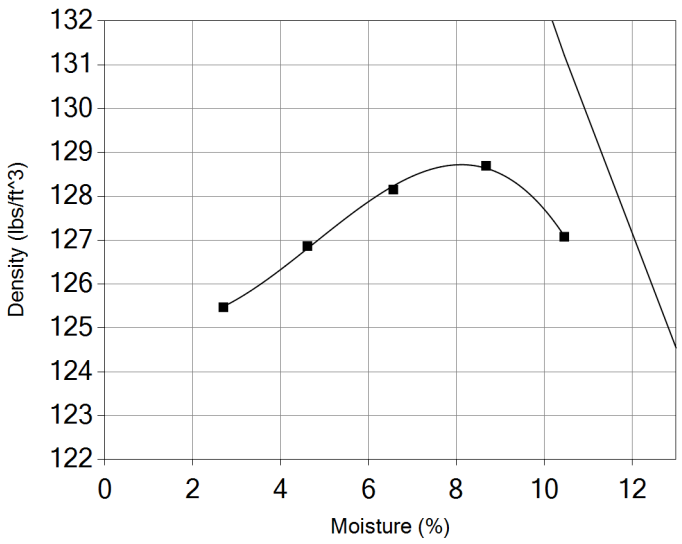
Client		Project	
Name:	GCon, Inc.	**Name:**	(23-519-00744) Diesel Tank Project
Address:	1606 W. Whispering Wind Drive Phoenix, AZ 85085	**Address:**	Los Alamos, NM
Attention:	Karen Curtiss	**Phase:**	**Task:**
PO Number:		**Manager:**	Hugo Carreon
Sample Date:	10/26/2023 by Zachary Taylor	**Lab/Ref. #:**	23-0710
Source:	Native, 50' S. & 50' W. of Bldg. 55-0400 SE corner	**Description:**	Light Grayish-Brown Poorly Graded Sand w/Silt & Gravel, Trace Tuff, Coarse to Fine Grain, No PI

Type of Specification: No project specification was provided.

Sieve Analysis: (ASTM C117-17/C136-19)

200 Wash Procedure: A

	Sieve Size	Passing	Specification Min	Specification Max
Coarse Portion:	1 1/4in.	100%		
	1in.	99%		
	3/4in.	96%		
	1/2in.	85%		
	3/8in.	77%		
	1/4in.	70%		
	#4	66%		
Fine Portion:	#8	59%		
	#10	58%		
	#16	52%		
	#30	42%		
	#40	34%		
	#50	25%		
	#100	13%		
	#200	8.4%		



Plasticity Index (ASTM D4318-10) PI Air Dried.

Preparation Method: Wet **Liquid Limit Method:** A

Soil Classification (ASTM D2487-17) SP-SM--Poorly Graded Sand-Silty Sand

		Specification Min	Specification Max
Liquid Limit:	NV		
Plastic Limit:	NV		
Plasticity Index:	NP		

Moisture Density Relationship: (ASTM D1557-12) Method: C

Preparation Method: Dry **Rammer Type:** Mechanical

Specific Gravity: 2.7 Assumed

Maximum Density (lbs/ft^3): 128.7

Optimum Moisture (%): 8.1

Remarks:

Distribution: Wayland Damon, Jr., Karen Curtiss

Reviewed By: Hugo Carreon

This report relates only to the items inspected/tested and shall not be reproduced, except in full, without prior written consent

WSP - 4221 Balloon Park Rd NE - Albuquerque, NM 87109 phone: (505) 821-1801

Soils / Aggregates

Report Date: November 07, 2023

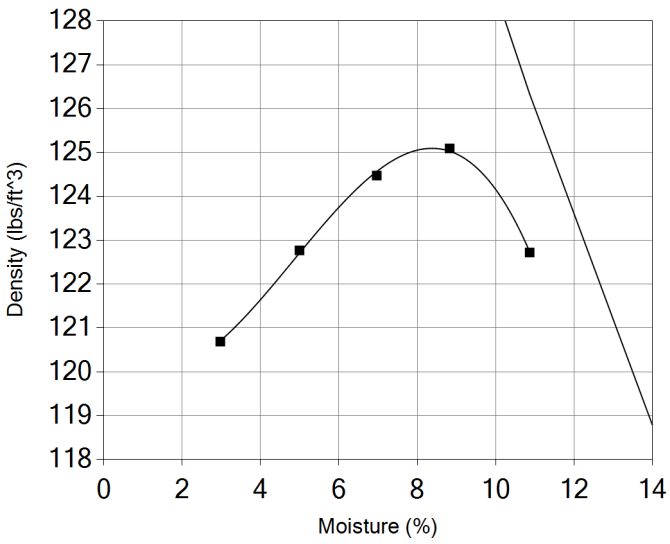
Client		Project	
Name:	GCon, Inc.	**Name:**	(23-519-00744) Diesel Tank Project
Address:	1606 W. Whispering Wind Drive Phoenix, AZ 85085	**Address:**	Los Alamos, NM
Attention:	Karen Curtiss	**Phase:**	**Task:**
PO Number:		**Manager:**	Hugo Carreon
Sample Date:	10/26/2023 by Zachary Taylor	**Lab/Ref. #:**	23-0711
Source:	Native, 50' S. & 100' W. of Bldg. 55-0400 SE corner	**Description:**	Reddish-Brown Poorly Graded Sand w/Silt and Gravel, Trace Tuff, Coarse to Fine Grain, No PI

Type of Specification: No project specification was provided.

Sieve Analysis: (ASTM C117-17/C136-19)

200 Wash Procedure: A

	Sieve Size	Passing	Specification Min	Specification Max
Coarse Portion:	1 1/4in.	100%		
	1in.	99%		
	3/4in.	94%		
	1/2in.	87%		
	3/8in.	84%		
	1/4in.	81%		
	#4	79%		
Fine Portion:	#8	69%		
	#10	67%		
	#16	58%		
	#30	44%		
	#40	34%		
	#50	25%		
	#100	16%		
	#200	11%		



Plasticity Index (ASTM D4318-10) PI Air Dried.

Preparation Method: Wet **Liquid Limit Method:** A

Soil Classification (ASTM D2487-17) SP-SM--Poorly Graded Sand-Silty Sand

		Specification Min	Specification Max
Liquid Limit:	NV		
Plastic Limit:	NV		
Plasticity Index:	NP		

Moisture Density Relationship: (ASTM D1557-12) Method: C

Preparation Method: Dry **Rammer Type:** Mechanical

Specific Gravity: 2.6 Assumed

Maximum Density (lbs/ft^3): 125.1

Optimum Moisture (%): 8.4

Remarks:

Distribution: Wayland Damon, Jr., Karen Curtiss

Reviewed By: Hugo Carreon

This report relates only to the items inspected/tested and shall not be reproduced, except in full, without prior written consent

WSP - 4221 Balloon Park Rd NE - Albuquerque, NM 87109 phone: (505) 821-1801

Proctor Pick up

Report Date: November 02, 2023

Client		Project	
Name:	GCon, Inc.	**Name:**	(23-519-00744) Diesel Tank Project
Address:	1606 W. Whispering Wind Drive Phoenix, AZ 85085	**Address:**	Los Alamos, NM
Attention:	Karen Curtiss	**Phase:**	**Task:**
PO Number:		**Manager:**	Hugo Carreon
Inspection Date:	10/26/2023	**Reference #:**	NS642067
Inspector(s):	Zachary Taylor	**Contractor:**	

Work Performed:	Proctor Sample Pick-up	**Test Hours:**		**Retest Hours:**	
Weather:	**Temperature:**	**Travel Hours:**		**Standby Hours:**	
Equipment on Site:				**Total Hours:**	0

Summary Of Observations, Testing and Recommendations

Proctor Sample Pick-up

- Services Requested By: Wayland Damon Jr.

- Sample Date: 10/26/2023

- Sample Description: (23-0710)- Light Grayish Brown Silty Sand with Travel and Trace Tuff. (23-0711)- Reddish Brown Silty Sand w/Gravel and Trace Tuff

- Sample Source: Native material

- Sample Location: (23-0710)- 50' S. & 50. N. of Bldg. 55-0400 SE Corner. (23-0711)- 50' S. & 100' W. of Bldg. 55-0400 SE Corner

- Summary: Two (2) samples of native material were retrieved and transported to our laboratory for further testing.

Distribution: Wayland Damon, Jr., Karen Curtiss

Reviewed By: Hugo Carreon

Hugo Carreon

This report relates only to the items inspected/tested and shall not be reproduced, except in full, without prior written consent

WSP - 4221 Balloon Park Rd NE - Albuquerque, NM 87109 phone: (505) 821-1801

Field Density Soils Results

Report Date: November 12, 2023

Client		Project	
Name:	GCon, Inc.	**Name:**	(23-519-00744) Diesel Tank Project
Address:	1606 W. Whispering Wind Drive Phoenix, AZ 85085	**Address:**	Los Alamos, NM
Attention:	Karen Curtiss	**Phase:**	**Task:**
PO Number:		**Manager:**	Hugo Carreon
Date Tested:	11/6/2023 by Macedonio Landin	**Reference #:**	NS646321
General Description (Material/Location):	W. Side trench backfill in front of Dock1 Building 400		

FIELD DENSITY TEST USING NUCLEAR DENSITY GAUGE (ASTM D6938-17)

Moisture Density Curves Used

Lab/Ref. #	Maximum Density	Optimum Moisture	Test Type/ Method	Description	Source
23-0710	128.7	8.1	ASTM D1557-12/C	Light Grayish-Brown Poorly Graded Sand w/Silt & Gravel, Trace Tuff, Coarse to Fine Grain, No PI	Project: 23-519-00744

Nuclear Density Gauge

Make: Troxler
Model #: 3440
Serial #: 32169

Standard Count

	Calibration	Field
Density:	1764	1748
Moisture:	693	699

					% Moisture						% Compaction		
						Required						Required	
Test #	Location	Elevation	Test Mode	Probe Depth (in.)	Actual	(-)	(+)	Wet Density (lbs/ft^3)	Dry Density (lbs/ft^3)	Maximum Density (lbs/ft^3)	Actual	Min	Max
01	30' S. & 24' W. of S.E corner of Dock 1 (Building 400)	-1.0' FSG	D	6	7.7	2	2	140.6	130.5	128.7	101	95	
02	31' S. & 36' W. of S.E corner of Dock 1 (Building 400)	FSG	D	6	8.3	2	2	139.9	129.2	128.7	100	95	

BTSB=Below Top of Subbase, BTOF= Below Top of Fill, FSG = Finished Subgrade, FBC = Finished Base Course, BOP = Bottom of Pipe, BOB = Bottom of Base, BOF = Bottom of Footing, OGP = Original Ground Prep, TOA = TOP Of Asphalt, BG = Below Grade
Test Mode = D for Direct Transmission and B for Backscatter Modes

Distribution: Wayland Damon, Jr., Karen Curtiss

Reviewed By: Hugo Carreon

Hugo Carreon

This report relates only to the items inspected/tested and shall not be reproduced, except in full, without prior written consent

WSP - 4221 Balloon Park Rd NE - Albuquerque, NM 87109 phone: (505) 821-1801

Field Density Soils Results

Report Date: November 12, 2023

Client		Project	
Name:	GCon, Inc.	**Name:**	(23-519-00744) Diesel Tank Project
Address:	1606 W. Whispering Wind Drive Phoenix, AZ 85085	**Address:**	Los Alamos, NM
Attention:	Karen Curtiss	**Phase:**	**Task:**
PO Number:		**Manager:**	Hugo Carreon
Date Tested:	11/7/2023 by Macedonio Landin	**Reference #:**	NS646643
General Description (Material/Location):	E. Side trench backfill in front of Dock1 Building 400.		

FIELD DENSITY TEST USING NUCLEAR DENSITY GAUGE (ASTM D6938-17)

Moisture Density Curves Used

Lab/Ref. #	Maximum Density	Optimum Moisture	Test Type/ Method	Description	Source
23-0711	125.1	8.4	ASTM D1557-12/C	Reddish-Brown Poorly Graded Sand w/Silt and Gravel, Trace Tuff, Coarse to Fine Grain, No PI	Project: 23-519-00744
23-0710	128.7	8.1	ASTM D1557-12/C	Light Grayish-Brown Poorly Graded Sand w/Silt & Gravel, Trace Tuff, Coarse to Fine Grain, No PI	Project: 23-519-00744

Nuclear Density Gauge

Make: Troxler
Model #: 3440
Serial #: 32169

Standard Count

	Calibration	Field
Density:	1764	1767
Moisture:	693	695

					% Moisture						% Compaction		
						Required						Required	
Test #	Location	Elevation	Test Mode	Probe Depth (in.)	Actual	(-)	(+)	Wet Density (lbs/ft^3)	Dry Density (lbs/ft^3)	Maximum Density (lbs/ft^3)	Actual	Min	Max
01	20' W. & 45' S. of S.E. corner of Bldg. 400 (E. Side Trench)	FSG	D	6	6.8	2	2	128.2	120.0	125.1	96	95	
02	28' W. & 46' S. of S.E. corner of Bldg. 400 (E. Side Trench)	FSG	D	6	7.5	2	2	132.7	123.5	125.1	99	95	
03	30' S. & 3' E. of S.E. corner of Dock 1 (E. Dock Trench)	-1.0' FSG	D	6	6.6	2	2	131.4	123.3	128.7	96	95	
04	31' S. & 12' E. of S.E. corner of Dock 1 (E. Dock Trench)	FSG	D	6	7.8	2	2	139.3	129.2	128.7	100	95	

BTSB=Below Top of Subbase, BTOF= Below Top of Fill, FSG = Finished Subgrade, FBC = Finished Base Course, BOP = Bottom of Pipe, BOB = Bottom of Base, BOF = Bottom of Footing, OGP = Original Ground Prep, TOA = TOP Of Asphalt, BG = Below Grade
Test Mode = D for Direct Transmission and B for Backscatter Modes

Distribution: Wayland Damon, Jr., Karen Curtiss

Reviewed By: Hugo Carreon

Hugo Carreon

This report relates only to the items inspected/tested and shall not be reproduced, except in full, without prior written consent

WSP - 4221 Balloon Park Rd NE - Albuquerque, NM 87109 phone: (505) 821-1801

Field Density Soils Results

Report Date: November 13, 2023

Client		Project	
Name:	GCon, Inc.	**Name:**	(23-519-00744) Diesel Tank Project
Address:	1606 W. Whispering Wind Drive Phoenix, AZ 85085	**Address:**	Los Alamos, NM
Attention:	Karen Curtiss	**Phase:**	**Task:**
PO Number:		**Manager:**	Hugo Carreon
Date Tested:	11/8/2023 by Macedonio Landin	**Reference #:**	NS647385
General Description (Material/Location):	E. Side trench backfill E. of Dock1 Building 400. (Landscape)		

FIELD DENSITY TEST USING NUCLEAR DENSITY GAUGE (ASTM D6938-17)

Moisture Density Curves Used

Lab/Ref. #	Maximum Density	Optimum Moisture	Test Type/ Method	Description	Source
23-0710	128.7	8.1	ASTM D1557-12/C	Light Grayish-Brown Poorly Graded Sand w/Silt & Gravel, Trace Tuff, Coarse to Fine Grain, No PI	Project: 23-519-00744

Nuclear Density Gauge

Make: Troxler
Model #: 3440
Serial #: 32169

Standard Count

	Calibration	Field
Density:	1764	1754
Moisture:	693	696

					% Moisture							% Compaction		
						Required							Required	
Test #	Location	Elevation	Test Mode	Probe Depth (in.)	Actual	(-)	(+)	Wet Density (lbs/ft^3)	Dry Density (lbs/ft^3)	Maximum Density (lbs/ft^3)	Actual	Min	Max
02	31' S. & 28' E. of S.E corner of Dock 1 (Landscape)	FSG	D	6	7.2	2	2	129.6	120.9	128.7	94	90	

BTSB=Below Top of Subbase, BTOF= Below Top of Fill, FSG = Finished Subgrade, FBC = Finished Base Course, BOP = Bottom of Pipe, BOB = Bottom of Base, BOF = Bottom of Footing, OGP = Original Ground Prep, TOA = TOP Of Asphalt, BG = Below Grade
Test Mode = D for Direct Transmission and B for Backscatter Modes

Distribution: Wayland Damon, Jr., Karen Curtiss

Reviewed By: Hugo Carreon

Hugo Carreon

This report relates only to the items inspected/tested and shall not be reproduced, except in full, without prior written consent

WSP - 4221 Balloon Park Rd NE - Albuquerque, NM 87109 phone: (505) 821-1801

Field Report

Report Date: January 18, 2024

Client		Project	
Name:	GCon, Inc.	**Name:**	(23-519-00744) Diesel Tank Project
Address:	1606 W. Whispering Wind Drive Phoenix, AZ 85085	**Address:**	Los Alamos, NM
Attention:	Karen Curtiss	**Phase:**	**Task:**
PO Number:		**Manager:**	Hugo Carreon
Inspection Date:	1/2/2024	**Reference #:**	NS657013
Inspector(s):	Zachary Taylor	**Contractor:**	

Work Performed:	Stand by report	**Test Hours:**		**Retest Hours:**	
Weather:	**Temperature:**	**Travel Hours:**		**Standby Hours:**	
Equipment on Site:				**Total Hours:**	0

Summary of Stand by report

Project Overview:
Field Representative/Title: Zachary Taylor CMT Technician
Services: Concrete Testing & Observation
Weather Conditions: Cloudy Skies and Cool
General Contractor: GCON
Superintendent: Wayland Damon, Jr.

Report:
• WSP representative was called out to the Diesel Tank Project site to perform density field testing. WSP was scheduled on-site at approximately 08:00 am.
• WSP representative arrived on-site at approximately 08:00 am. On arrival, the WSP representative met with Wayland Damon, Jr. representative with GCON to discuss the days operations
• At approximately 12:00 pm, Wayland Damon, Jr., Superintendent with GCON advised no testing will be needed for the day. The WSP representative left the site at approximately 12:30 pm.

Distribution: Wayland Damon, Jr., Karen Curtiss

Reviewed By: Hugo Carreon

Hugo Carreon

This report relates only to the items inspected/tested and shall not be reproduced, except in full, without prior written consent

WSP - 4221 Balloon Park Rd NE - Albuquerque, NM 87109 phone: (505) 821-1801

Field Density Soils Results

Report Date: January 09, 2024

Client		Project	
Name:	GCon, Inc.	**Name:**	(23-519-00744) Diesel Tank Project
Address:	1606 W. Whispering Wind Drive Phoenix, AZ 85085	**Address:**	Los Alamos, NM
Attention:	Karen Curtiss	**Phase:**	**Task:**
PO Number:		**Manager:**	Hugo Carreon
Date Tested:	1/3/2024 by Zachary Taylor	**Reference #:**	NS657309
General Description (Material/Location):	Backfill for landscape area at the SE Corner of TA-55 building 0400		

FIELD DENSITY TEST USING NUCLEAR DENSITY GAUGE (ASTM D6938-17)

Moisture Density Curves Used

Lab/Ref. #	Maximum Density	Optimum Moisture	Test Type/ Method	Description	Source
LANL 23-130	119.8	10.5	ASTM D-1557	Clean Fill Material	Sigma Mesa On-site Stockpile
23-0710	128.7	8.1	ASTM D1557-12/C	Light Grayish-Brown Poorly Graded Sand w/Silt & Gravel, Trace Tuff, Coarse to Fine Grain, No PI	Project: 23-519-00744

Nuclear Density Gauge

Make: Troxler
Model #: 3440
Serial #: 37041

Standard Count

	Calibration	Field
Density:	2129	2203
Moisture:	732	743

					% Moisture							% Compaction		
						Required							Required	
Test #	Location	Elevation	Test Mode	Probe Depth (in.)	Actual	(-)	(+)	Wet Density (lbs/ft^3)	Dry Density (lbs/ft^3)	Maximum Density (lbs/ft^3)	Actual	Min	Max
01	50' S. & 30' W. of bldg. 0400 SE Corner	-4.0' FSG	D	6	6.9	2	2	131.4	122.9	128.7	95	90	
02	45' S. & 20' W. of bldg. 0400 SE Corner	-4.0' FSG	D	6	8.6	2	2	132.1	121.6	128.7	94	90	
03	50' S. & 30' W. of bldg. 0400 SE Corner	-3.0' FSG	D	6	10.2	2	2	118.7	107.8	119.8	90	90	
04	43' S. & 20' W. of bldg. 0400 SE Corner	-3.0' FSG	D	6	11.1	2	2	121.5	109.4	119.8	91	90	
05	40' S. & 10' W. of bldg. 0400 SE Corner	-3.0' FSG	D	6	10.5	2	2	122.1	110.6	119.8	92	90	
06	50' S. & 30' W. of bldg. 0400 SE Corner	-2.0' FSG	D	6	9.5	2	2	119.6	109.2	119.8	91	90	
07	43' S. & 20' W. of bldg. 0400 SE Corner	-2.0' FSG	D	6	10.2	2	2	120.0	108.9	119.8	91	90	
08	40' S. & 10' W. of bldg. 0400 SE Corner	-2.0' FSG	D	6	8.9	2	2	118.4	108.8	119.8	91	90	
09	50' S. & 30' W. of bldg. 0400 SE Corner	-1.0' FSG	D	6	10.4	2	2	121.3	109.9	119.8	92	90	
10	45' S. & 20' W. of bldg. 0400 SE Corner	-1.0' FSG	D	6	9.7	2	2	126.8	115.6	119.8	96	90	
11	40' S. & 10' W. of bldg. 0400 SE Corner	-1.0' FSG	D	6	10.5	2	2	122.6	110.9	119.8	93	90	

Test #	Location	Elevation	Test Mode	Probe Depth (in.)	% Moisture Actual	% Moisture Required (-)	% Moisture Required (+)	Wet Density (lbs/ft^3)	Dry Density (lbs/ft^3)	Maximum Density (lbs/ft^3)	% Compaction Actual	% Compaction Required Min	% Compaction Required Max
12	40' S. & 10' W. of bldg. 0400 SE Corner	FSG	D	6	9.0	2	2	124.5	114.2	119.8	95	90	

BTSB=Below Top of Subbase, BTOF= Below Top of Fill, FSG = Finished Subgrade, FBC = Finished Base Course, BOP = Bottom of Pipe, BOB = Bottom of Base, BOF = Bottom of Footing, OGP = Original Ground Prep, TOA = TOP Of Asphalt, BG = Below Grade
Test Mode = D for Direct Transmission and B for Backscatter Modes

Distribution: Wayland Damon, Jr., Karen Curtiss

Reviewed By: Hugo Carreon

Hugo Carreon

This report relates only to the items inspected/tested and shall not be reproduced, except in full, without prior written consent

WSP - 4221 Balloon Park Rd NE - Albuquerque, NM 87109 phone: (505) 821-1801

Field Density Soils Results

Report Date: January 18, 2024

Client		Project	
Name:	GCon, Inc.	**Name:**	(23-519-00744) Diesel Tank Project
Address:	1606 W. Whispering Wind Drive Phoenix, AZ 85085	**Address:**	Los Alamos, NM
Attention:	Karen Curtiss	**Phase:**	**Task:**
PO Number:		**Manager:**	Hugo Carreon
Date Tested:	1/10/2024 by Zachary Taylor	**Reference #:**	NS658316
General Description (Material/Location):	Backfill for landscape area at the SE Corner of TA-55 building 0400		

FIELD DENSITY TEST USING NUCLEAR DENSITY GAUGE (ASTM D6938-17)

Moisture Density Curves Used

Lab/Ref. #	Maximum Density	Optimum Moisture	Test Type/ Method	Description	Source
23-130	119.8	10.5	ASTM D-1557	Clean Fill Material	Sigma Mesa On-site stockpile

Nuclear Density Gauge

Make: Troxler
Model #: 3440
Serial #: 37041

Standard Count

	Calibration	Field
Density:	2129	2211
Moisture:	732	733

					% Moisture						% Compaction		
						Required						Required	
Test #	Location	Elevation	Test Mode	Probe Depth (in.)	Actual	(-)	(+)	Wet Density (lbs/ft^3)	Dry Density (lbs/ft^3)	Maximum Density (lbs/ft^3)	Actual	Min	Max
01	45' S. & 20' W. of building 0400 SE Corner	FSG	D	6	11.7	2	2	125.3	112.1	119.8	94	90	
02	50' S. & 30' W. of building 0400 SE Corner	FSG	D	6	11.3	2	2	125.7	112.9	119.8	94	90	

BTSB=Below Top of Subbase, BTOF= Below Top of Fill, FSG = Finished Subgrade, FBC = Finished Base Course, BOP = Bottom of Pipe, BOB = Bottom of Base, BOF = Bottom of Footing, OGP = Original Ground Prep, TOA = TOP Of Asphalt, BG = Below Grade
Test Mode = D for Direct Transmission and B for Backscatter Modes

Distribution: Wayland Damon, Jr., Karen Curtiss

Reviewed By: Hugo Carreon

Hugo Carreon

This report relates only to the items inspected/tested and shall not be reproduced, except in full, without prior written consent

WSP - 4221 Balloon Park Rd NE - Albuquerque, NM 87109 phone: (505) 821-1801

Appendix I

Industrial Hygiene Monitoring Data

IH Monitoring Plan and Results					
Hazardous Condition	**Instrument**	**Procedure**	**Location and Frequency of Monitoring**	**Exposure Value(s) / Rationale**	**Results and Action(s) –**
Noise	3M/Quest Technologies NoisePro DLX Dosimeter / SL M or equivalent	Manufacturer manuals and calibration procedures	Perform noise survey to characterize operations, delineate areas where postings and hearing protection are required, and confirm adequacy of hearing protection. Conduct noise dosimetry when the 8-hour time- weighted average (TWA) is greater than 85 dBa. Boundary for 85dBA limit around concrete breaking	>85 dBa 8 hr. TWA >140 dBC Instantaneous sound	Assessment of mitigation methods to attenuate noise level – results: PASS **no exceedances or un protected exposures. High level – instantaneous sound =concrete breaking @114dBC** Operator in cab using roll-down and door closed with ~35dB Attenuation. Spotter within 15 feet using roll-down earplugs + Over-the ear cups during breaking with ~40dB attenuation
Heat Stress	TSI Quest Wet Bulb Globe Thermometer	Manufacturer manuals and calibration procedures	Deployment in immediate work area.	Based on NIOSH work / rest rotation guidelines	Alter work / rest rotations **Heat stress did not reach a hazardous level during the job, sunscreen used for high UV**
Volatile Organic Compounds (VOCs)	RAE systems MultiRae photoionization detector (PID)	Manufacturer manuals and calibration procedures	Perform real-time measurement in worker breathing zone (BZ) during any drilling or other activities which have the potential for soil disturbance	Will base readings on lowest ACGIH TLV-TWA or OSHA limit value applicable to possible organic compound present. If indicated by real time measurements, passive total VOC and chemical specific sampling badges may be utilized to assess eight-hour time weighted average.	Assessment of mitigation methods to control personal exposure. **Airborne VOC levels did not exceed ACGIH TLV-TWA based upon real-time readings with PID during the excavation of the most heavily contaminated soil.** **Respirators were not required.**

Hazardous Condition	Instrument	Procedure	Location and Frequency of Monitoring	Exposure Value(s) / Rationale	Results and Action(s)
Nuisance Dust	MIE (Thermo-Scientific) Model pDR-1000, Personal Data-Logging Real Time Aerosol Monitor or equivalent	Manufacturer manuals and calibration procedures	Monitor for respirable particulates in workers breathing zone (BZ) to characterize exposure.	3.0 mg/m3 for a continuous 2-minute period Rationale: ACGIH TLV for respirable particulates not otherwise classified (8-hour TWA = 3.0 mg/m3).	**The workers eliminated visible dust levels by wetting soils. This method kept continuous aerosol monitor readings well below ACGIH TLV for respirable particulates not otherwise classified (8-hour TWA = 3.0 mg/m3). action level. 3.0mg/m3, Only 2 pause works were initiated to re calibrate the monitor.**
Airborne exposure to respirable silica during soil disturbance activity and concrete breaking	SKC AirCheck 52 active sampling low-high flow pump	Manufacturer manuals and calibration procedures	Monitor for respirable particulates in workers BZ to characterize exposure.	Action Level- 0.025 mg/m^3 OSHA PEL- 0.05 mg/m^3 Rationale: The current OSHA respirable silica standard is more protective/conservative than ACGIH TLV-TWAs.	**The workers eliminated respirable dust levels by wetting soils. This method kept continuous aerosol monitor readings well below ACGIH TLV for respirable particulates not otherwise classified (8-hour TWA = 3.0 mg/m3). action level. 3.0mg/m3, Only 2 pause works were initiated to re calibrate the monitor.**